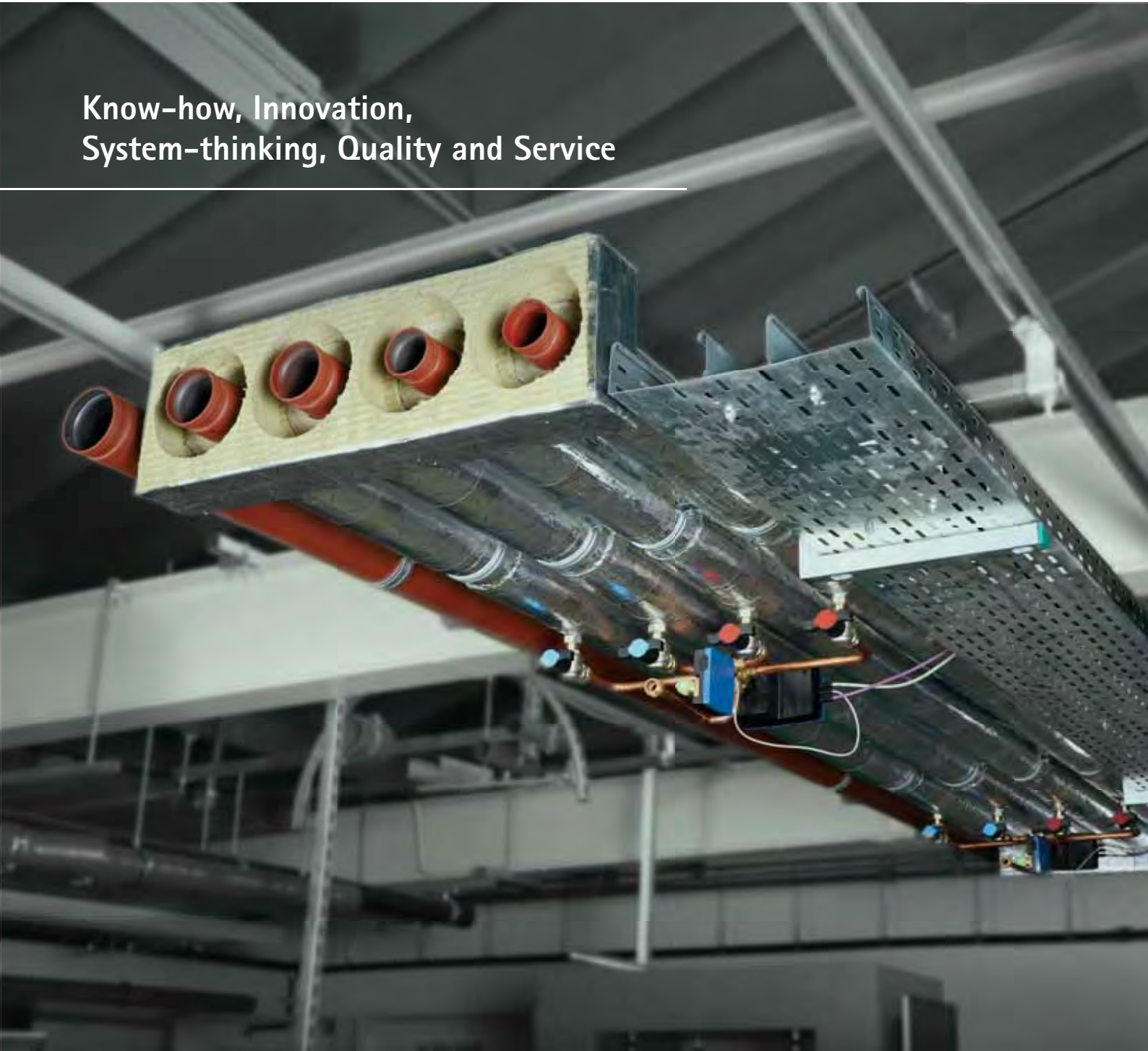


Know-how, Innovation,
System-thinking, Quality and Service



Walraven Catalogue

HVAC

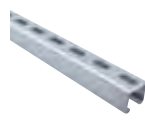


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Walraven Group



Walraven

Walraven is a manufacturer of a wide range of technical installation materials, with an emphasis on fixing systems, fire protection systems and sanitary systems. Since its founding in 1942, the family business has grown into an international company with more than 1000 skilled employees and its own sales and production sites in various countries in Europe.

Our employees think in solutions and are happy to assist you with well grounded advice and technical support. All this in close collaboration with specialised wholesale partners and distributors. Thanks to them Walraven products always close by and available at the right time in Europe, North and South America Middle East, Asia and Australia.

Head office

J. van Walraven Holding B.V.
Mijdrecht (NL)

19 Sales companies

Mijdrecht (NL)

Walraven B.V.
The Netherlands

Mijdrecht (NL)

Walraven International
Other countries

Tienen (BE)

Walraven BVBA
Belgium - Luxembourg

Bayreuth (DE)

Walraven GmbH
Germany - Austria - Switzerland
Italy - South East Europe

Grenoble (FR)

Walraven France Eurl
France

Banbury (UK)

Walraven Ltd.
United Kingdom - Ireland

Mladá Boleslav (CZ)

Walraven s.r.o.
Czech republic - Slovak republic

Kraków (PL)

Walraven Sp. z o.o.
Poland - Lithuania - Latvia
Estonia

Kyiv (UA)

Walraven Ltd.
Ukraine

Barcelona (ES)

Walraven Iberia S.L.
Spain - Portugal

Danville (US)

Walraven, Inc.
United States of America

Shanghai (CN)

Walraven Shanghai, Ltd.
China

Malmö (SE)

Walraven Nordic AB
Sweden - Denmark - Norway -
Finland - Iceland

Dubai (AE)

Hira Walraven
Middle East

Budapest (HU)

Walraven Kft.
Hungary - Romania

Mumbai (IN)

Diamond Walraven
India

Burlington (CA)

Taylor Walraven
Canada

Moscow (RU)

Walraven LLC
Russia

Singapore (SG)

Walraven Pte. Ltd.
Singapore - Indonesia - Malaysia
Thailand - Vietnam - Cambodia - Brunei



Head office	Market served by:
J. van Walraven Holding B.V. Mijdrecht (NL)	■ Walraven companies ■ Agents

12 Production / assembly companies

Mijdrecht (NL) J. van Walraven B.V.	Cista (CZ) Suchánek & Walraven s.r.o.	Horka (CZ) Suchánek & Walraven s.r.o.	Barcelona (ES) Walraven Iberia S.L.	Banbury (UK) Walraven Ltd.	Istanbul (TR) Jefleks Plastik Kauçuk
Gramsbergen (NL) Loko Gramsbergen B.V.	Horka (CZ) SWO Tooling s.r.o.	Changshu (CN) Walraven Metal Products (Changshu) Co. Ltd	Danville (US) Walraven, Inc.	Mumbai (IN) Diamond Walraven	Burlington (CA) Taylor Walraven

Quality

Production

The Walraven Group has production facilities in various countries, with modern machines which are often designed in-house. Each production company has its own speciality so that products can be manufactured in the most efficient manner.

Almost all of our tooling and moulds are produced in our own tool making facility. Walraven then manages the entire process - from product development to manufacture - and can quickly respond to developments in the market.

Innovation

The development of new products is always our priority. With our primary focus being on customer satisfaction. Think of comfort, time-saving during assembly and the highest degree of reliability when operational. A large number of innovations and patents is the result. Our innovation is not just limited to product development. Also our marketing is pushing the boundaries.

We develop and produce customer-specific or project-related products too. In addition, many of our standard products can be supplied in a special size or with a special surface treatment.

Quality

Our organization is ISO 9001:2015 certified. This way we continuously improve operational processes, and thus the quality of the entire organization.

Our products meet the highest quality standards and are approved by many international institutes, such as:



kiwa

Our fire protection products meet the highest international quality standards and are approved by many European certification institutes.



CSTB



Our frames have been tested for load capacity and corrosion resistance in accordance with European standards.



RAL – Safe Connection

RAL-Quality hallmark

Walraven is one of the initiators of the 'Gütegemeinschaft Röhrbefestigung' (Safe Connection). The most important producers of pipe fixing systems have set up univocal product quality guidelines in this quality association. The 'Gütegemeinschaft Röhrbefestigung' has become acknowledged in 2003 by the RAL, the German institute for quality guarantees.

Benefits

The technical properties of the products, like the maximum safe working load, are established and published by means of a standardised measuring method.

Within the measuring method the maximum allowed load is calculated, taking a maximum deflection into consideration.

With the RAL-mark the quality of the pipe fixing products, like clamps and fixing rails of the participating manufacturers becomes clear and are easily comparable.

Currently four measuring methods for the load capacity of pipe fixing products under normal temperatures have been published:

- pipe clamps (RAL-GZ 655/B)
- fixing rail (RAL-GZ 655/C)
- rail accessoires (RAL-GZ 655/D)
- cantilever arms (RAL-GZ 655/E)

Also one measuring method for the load capacity of pipe clamps during fire:

- pipe clamps (RAL-GZ 656)

The maximum safe working loads which are mentioned in the tables are based on:










- 1) A Walraven developed measuring method;
- 2) The measuring method prescribed in the testing prescriptions RAL-GZ 655 and RAL-GZ 656, which is set up by the 'Gütegemeinschaft Röhrbefestigung'. If the product is provided with the 'RAL-Gütezeichen', the test results are checked by an independent testing institute.

The 'RAL-Gütezeichen' is exclusively given to products which satisfy high quality standards and is an evidence of quality. This gives the users of pipe fixings certainty and trust!

Certified products are recognisable by:



RAL-GZ 655 and 656 Certified Products

								
		Part No.	Connection nut	Catalogue page	Dimension (mm)	RAL-GZ 655/B Cert. No.	Dimension (mm)	RAL-GZ 656 Cert. No.
	BISMAT® Flash Zinc plated	337 3 XXX	M8	A 05 04	15 - 63	2010-23	15 - 63	2011-09
		337 4 XXX	M8/10	A 05 04	15 - 63	2010-23	15 - 63	2011-09
		-	-	-	-	-	-	-
	BISMAT® 2000 'S' Zinc plated	341 4 0XX	M8	A 05 32	15 - 63	2005-08	15 - 63	2011-11
		340 4 0XX	M8/10	A 05 32	15 - 63	2005-08	15 - 63	2011-11
		-	-	-	-	-	-	-
	BISMAT® 2000 Zinc plated	341 3 0XX	M8	A 05 16	15 - 63	2010-22	15 - 63	2011-10
		340 3 XXX	M8/10	A 05 16	15 - 63	2010-22	15 - 63	2011-10
		340 3 XXX	M8/10	A 05 24	57 - 141	2005-08	57 - 114	2011-10
	BIS HD1501 BIS UltraProtect® 1000	3313 8 0XX	M8/10	A 10 04	15 - 64	2011-12a	15 - 64	2011-14
		3314 8 XXX	M10/12	A 10 04	65 - 227	2011-12a	65 - 227	2011-14
		3316 8 XXX	M16	A 10 06	159 - 509	2011-12a	159 - 227	2011-14
		3317 8 XXX	G½"	A 10 09	15 - 509	2011-12a	15 - 227	2011-14
	BISMAT® 5000 Zinc plated	348 3 0XX	M8	A 25 05	16 - 50	2010-24	-	-
		-	-	-	-	-	-	-
		-	-	-	-	-	-	-
	BIS HD500 BIS UltraProtect® 1000	3303 8 0XX	M8/10	B 10 04	15 - 71	2011-13a	15 - 71	2011-05
		3304 8 XXX	M10/12	B 10 04	72 - 227	2011-13a	72 - 227	2011-05
		3306 8 XXX	M16	B 10 06	159 - 509	2011-13a	-	-
		3307 8 XXX	G½"	B 10 09	15 - 509	2011-13a	15 - 227	2011-05
	BIS Bifix® 300 SSt. Stainless Steel	301 7 XXX	M8	M 10 05	72 - 118	2004-09	-	-
		302 7 XXX	M10	M 10 05	62 - 219	2004-09	-	-
		-	-	-	-	-	-	-

For the max. allowed load (Fa,z) per part number and RAL-certificate we refer to the product page or our webcatalogue on www.walraven.com.



						RAL-GZ	
						Cert. No.	
		Part No.	Dimension (mm)	For Rail	Catalogue page		
	BIS RapidRail® Fixing Rail Pre-galvanized	650 5 X00	WM0 (27 x 18 x 1.20)	-	G 04 05	655/C	2012-03
		650 5 X01	WM1 (30 x 15 x 2.00)	-	G 04 05	655/C	2012-03
		650 5 51X	WM1 (30 x 15 x 2.00)	-	G 04 05	655/C	2012-03
		650 5 X15	WM15 (30 x 20 x 1.75)	-	G 04 05	655/C	2012-03
		650 5 X02	WM2 (30 x 30 x 2.00)	-	G 04 05	655/C	2012-03
		650 5 X30	WM30 (30 x 45 x 2.00)	-	G 04 05	655/C	2012-03
	BIS RapidStrut® Fixing Rail Pre-galvanized	650 5 X24	41 x 21 x 1.5	-	H 04 10	655/C	2012-04
		650 5 X22	41 x 21 x 2.0	-	H 04 10	655/C	2012-04
		650 5 X25	41 x 21 x 2.5	-	H 04 10	655/C	2012-04
		650 5 X44	41 x 41 x 1.5	-	H 04 10	655/C	2012-04
		650 5 X42	41 x 41 x 2.0	-	H 04 10	655/C	2012-04
		650 5 X45	41 x 41 x 2.5	-	H 04 10	655/C	2012-04
	BIS RapidStrut® Fixing Rail BIS UltraProtect® 1000	6501 8 X27	41 x 21 x 2.5	-	H 04 13	655/C	2015-02
		6501 8 X42	41 x 41 x 2.0	-	H 04 13	655/C	2015-02
		6501 8 X47	41 x 41 x 2.5	-	H 04 13	655/C	2015-02
	BIS RapidRail® Stainless Steel Fixing Rail Stainless steel	650 7 002	WM2 (30 x 30 x 2.0)	-	M 20 05	655/C	2012-07
		-	-	-	-	-	-
	BIS RapidRail® Ball Swivel Hangers Zinc plated	652 0 X00	M8	WM1, 2, 15, 30	G 30 60	655/D	2012-11
		652 0 X10	M10	WM1, 2, 15, 30	G 30 60	655/D	2012-11
		-	-	-	-	-	-
	BIS RapidRail® Connector Zinc plated	654 3 001	200 mm	WM1, 2, 15, 30	G 35 35	655/D	2012-08
		-	-	-	-	-	-
		-	-	-	-	-	-
	BIS RapidRail® T-Connector Zinc plated	658 4 090	-	WM1, 2, 15, 30	G 35 45	655/D	2012-08
		-	-	-	-	-	-
		-	-	-	-	-	-
	BIS RapidRail® X-Connector Zinc plated	658 4 091	-	WM1, 2, 15, 30	G 35 45	655/D	2012-08
		-	-	-	-	-	-
		-	-	-	-	-	-
	BIS RapidRail® Connectors 90° Zinc plated	658 4 00X	WM0 - 35	WM1, 2, 15, 30	G 35 05	655/D	2012-09
		658 4 011	WM0 - 35	WM1, 2, 15, 30	G 35 05	655/D	2012-09
		-	-	-	-	-	-
	BIS RapidRail® Connectors 135° Zinc plated	658 4 05X	WM0 - 35	WM1, 2, 15, 30	G 35 10	655/D	2012-09
		-	-	-	-	-	-
	BIS RapidRail® Cross Connectors Zinc plated	658 4 150	27 x 18	WM0, 1, 15	G 35 50	655/D	2012-10
		658 4 151	30 x 15	WM0, 1, 15	G 35 50	655/D	2012-10
		658 4 152	30 x 20	WM0, 1, 15	G 35 50	655/D	2012-10
	BIS RapidRail® Rail Suspension Bracket Zinc plated	679 3 008	M8	WM1, 2, 15, 30	G 20 40	655/D	2012-09
		-	-	-	-	-	-
		-	-	-	-	-	-
RAL-GZ 655/C: for the max. allowed load (Fa,z) per part number and RAL-certificate we refer to the product page, the loading tables or our webcatalogue on www.walraven.com							
RAL-GZ 655/D: for the max. allowed load (Fa,z) per part number and RAL-certificate we refer to the product page or our webcatalogue on www.walraven.com							

Introducing Walraven for smart installation solutions

Walraven has been in the M&E fixings business for 75 years. Our products are known for their quality and are considered by our customers to be innovative and market leading. Our products are designed to work together to offer total system solutions to installers.

Pipe Clamps

starQuick®, BIS Bifix®
and BIS Heavy Duty Clamps



Rail

BIS RapidRail®, BIS RapidStrut®
and Maxx Rail



Rooftop Supports

BIS Yeti® 480, BIS Yeti® 335
and BIS Ursus®



Fixing Accessories

Rail Accessories,
Light and Heavy Duty Anchors



Britclips®

Beam Clips, Cable Run Clips
and Conduit Clips



Fire Protection

Pacifyre® MK II, Pacifyre® EFC and
Pacifyre® A and S



To find out more, visit walraven.com

Explanation Max. Allowed Load

Maximum allowed load:

From most of our products a maximum allowed load is included in the article tables. Stated values are determined by:

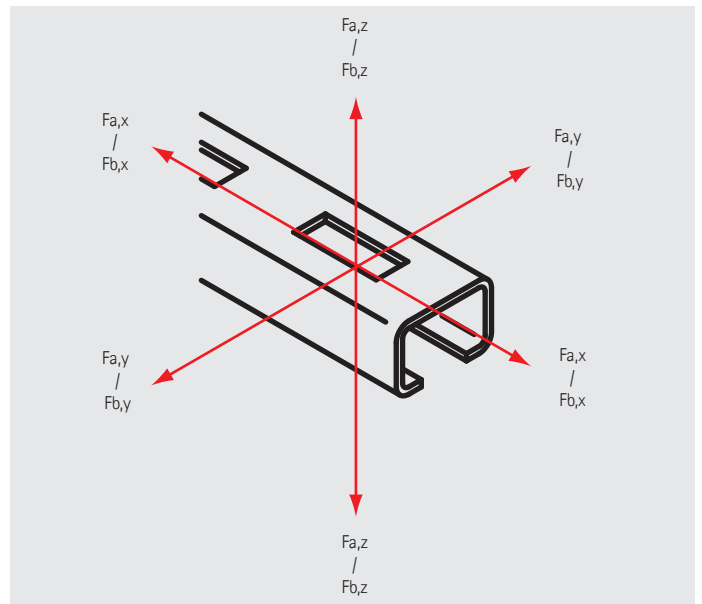
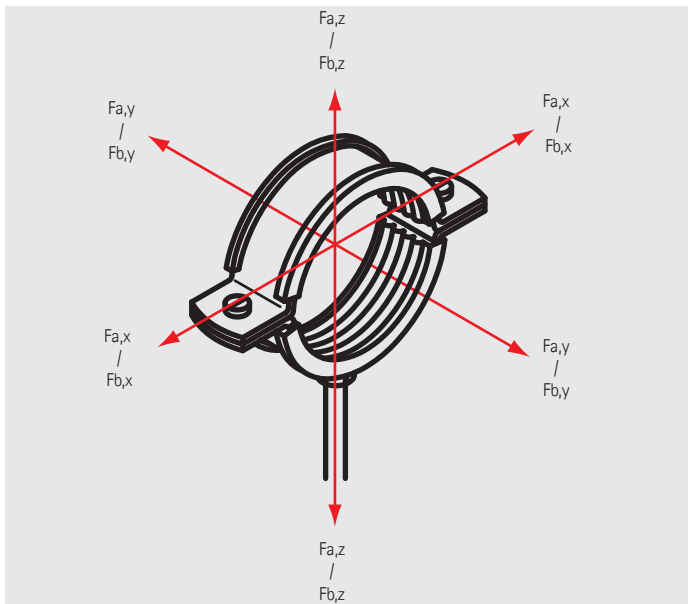
- a by Walraven developed measuring method
- the measuring method described in the testing prescriptions RAL-GZ 655, which is set up by the 'Gütegemeinschaft Rohrbefestigung'. If the product is provided with the 'RAL-Gütezeichen', the test results are checked by an independent testing institute.

For plastic clamps the breaking load is included.

Force directions (F) x, y and z (at 20 °C)

Fa = maximum allowed load

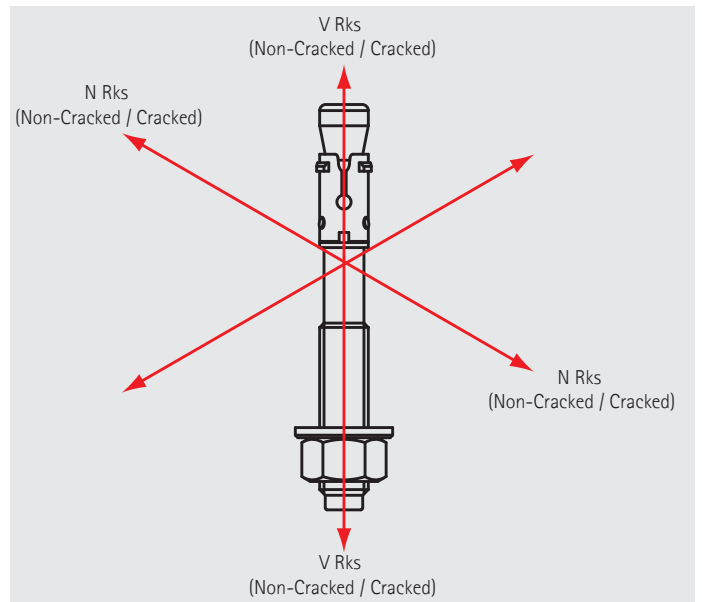
Fb = breaking load



Force directions Anchoring

V Rks = Characteristic resistance value in non cracked or cracked concrete (kN) shear load with standard embedment depth

N Rks = Characteristic resistance value in non cracked or cracked concrete (kN) tension load with standard embedment depth



BIS UltraProtect® 1000

Support system for indoor and outdoor use



Corrosion resistance

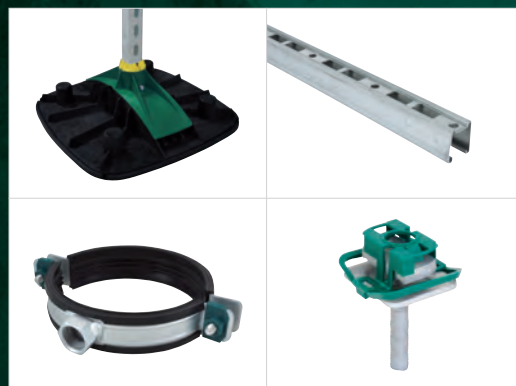
- C1 - C4 / ISO 12944-2

Salt spray test

- 1000 hours / ISO 9227*

Complementary system

- Perfectly combines with other products



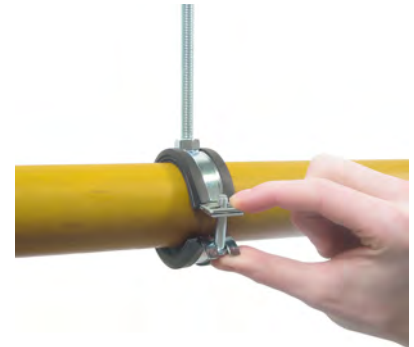
* Until the occurrence of maximum 5% red rust.

BISMAT[®] Flash

for metal pipes 15 - 63 mm

M8 - M8/10

(A 05 04)



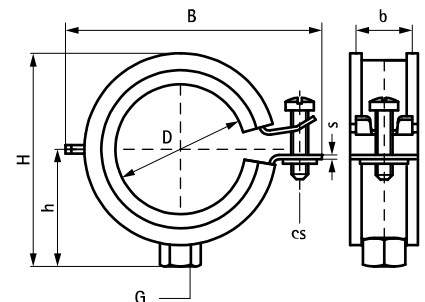
Features and Benefits

- single screw clamp
- with BISMAT[®] Flash quick locking system
- clamp easy to close with one hand
- the locking screw can be secured without use of tools
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109
- optimised noise insulation due to soft closing without tools
- noise reduction according to ISO 3822-1 up to 23 dB(A)
- tested for fire safety



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
3373018	15 - 18	3/8	10	M8	49	38	22	20 x 1.00	M6	500	RAL ²	50
3373023	20 - 23	1/2	15	M8	54	39	23	20 x 1.00	M6	500	RAL ²	50
3373028	25 - 28	3/4	20	M8	59	44	26	20 x 1.00	M6	500	RAL ²	50
3373035	32 - 35	1	25	M8	65	51	30	20 x 1.00	M6	500	RAL ²	50
3373043	40 - 43	1 1/4	32	M8	74	60	34	20 x 1.25	M6	700	RAL ²	50
3373051	48 - 51	1 1/2	40	M8	82	66	37	20 x 1.25	M6	700	RAL ²	50
3373056	53 - 56	-	-	M8	85	76	42	20 x 1.25	M6	700	RAL ²	50
3373063	57 - 63	2	50	M8	91	82	45	20 x 1.25	M6	700	RAL ²	50
3374018	15 - 18	3/8	10	M8/10	49	44	30	20 x 1.00	M6	500	RAL ²	50
3374023	20 - 23	1/2	15	M8/10	54	47	31	20 x 1.00	M6	500	RAL ²	50
3374028	25 - 28	3/4	20	M8/10	59	52	34	20 x 1.00	M6	500	RAL ²	50
3374035	32 - 35	1	25	M8/10	65	59	38	20 x 1.00	M6	500	RAL ²	50
3374043	40 - 43	1 1/4	32	M8/10	74	68	42	20 x 1.25	M6	700	RAL ²	50
3374051	48 - 51	1 1/2	40	M8/10	82	74	45	20 x 1.25	M6	700	RAL ²	50
3374056	53 - 56	-	-	M8/10	85	84	50	20 x 1.25	M6	700	RAL ²	50
3374063	57 - 63	2	50	M8/10	91	90	53	20 x 1.25	M6	700	RAL ²	50

RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656. For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

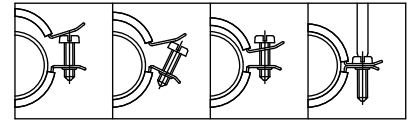
- 169 BIS RapidRail[®] Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

BISMAT[®] 2000

(A 05 16)

for metal pipes 11 - 63 mm

M8 - M8/10



Features and Benefits

- single screw clamp
- with BISMAT[®] quick locking system
- clamp easy to close with one hand
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109
- noise reduction according to ISO 3822-1 up to 23 dB(A)
- tested for fire safety



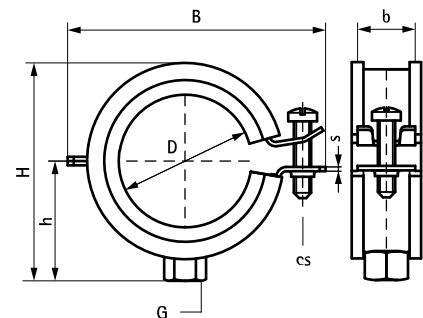
RAL-GZ 655/B
Cert.Nr. 2010-22



RAL-GZ 656
Cert.Nr. 2011-10a

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
3413014	11 - 14	1/4	8	M8	48	32	20	20 x 1.00	M6	600	-	50
3413018	15 - 18	3/8	10	M8	48	36	22	20 x 1.00	M6	600	RAL ²	50
3413023	20 - 23	1/2	15	M8	55	39	23	20 x 1.00	M6	600	RAL ²	50
3413028	25 - 28	3/4	20	M8	60	44	26	20 x 1.00	M6	600	RAL ²	50
3413035	31 - 35	1	25	M8	67	51	30	20 x 1.00	M6	600	RAL ²	50
3413039	36 - 39	-	-	M8	75	56	32	20 x 1.25	M6	600	-	50
3413043	40 - 43	1 1/4	32	M8	75	60	34	20 x 1.25	M6	800	RAL ²	50
3413045	44 - 45	-	-	M8	85	63	35	20 x 1.25	M6	800	-	50
3413053	48 - 51	1 1/2	40	M8	85	66	37	20 x 1.25	M6	800	RAL ²	50
3413054	53 - 56	-	-	M8	89	72	40	20 x 1.25	M6	800	RAL ²	50
3413063	57 - 63	2	50	M8	94	78	43	20 x 1.25	M6	800	RAL ²	50
3403018	15 - 18	3/8	10	M8/10	48	44	30	20 x 1.00	M6	600	RAL ²	50
3403023	20 - 23	1/2	15	M8/10	55	47	31	20 x 1.00	M6	600	RAL ²	50
3403028	25 - 28	3/4	20	M8/10	60	52	34	20 x 1.00	M6	600	RAL ²	50
3403035	31 - 35	1	25	M8/10	67	59	38	20 x 1.00	M6	600	RAL ²	50
3403043	40 - 43	1 1/4	32	M8/10	75	68	42	20 x 1.25	M6	800	RAL ²	50
3403053	48 - 51	1 1/2	40	M8/10	85	74	45	20 x 1.25	M6	800	RAL ²	50
3403054	53 - 56	-	-	M8/10	89	80	48	20 x 1.25	M6	800	RAL ²	50
3403063	57 - 63	2	50	M8/10	94	86	51	20 x 1.25	M6	800	RAL ²	50

RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656. For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

- 169 BIS RapidRail[®] Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Alternative

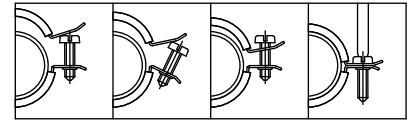
- 11 BISMAT[®] Flash

BISMAT[®] 2000

for metal pipes 57 - 219 mm

M8/10 - M10

(A 05 24)



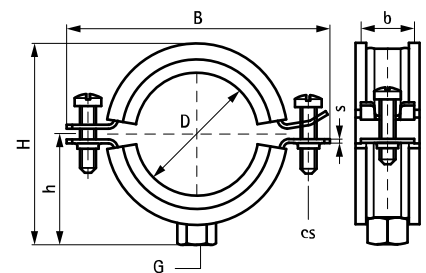
Features and Benefits

- two-screw clamp
- with BISMAT[®] quick locking system
- from Ø 159 mm: with quick locking system
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109
- noise reduction according to ISO 3822-1 up to 23 dB(A)
- tested for fire safety



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
3403064	57 - 64	2	50	M8/10	107	90	52	23 x 2.00	M6	520	RAL ²	50
3403070	64 - 70	-	-	M8/10	115	99	56	23 x 2.00	M6	520	RAL ²	50
3403080	73 - 80	2½	65	M8/10	126	109	61	23 x 2.00	M6	520	RAL ²	50
3403091	83 - 91	3	80	M8/10	137	121	67	25 x 2.50	M6	935	RAL ²	25
3403105	100 - 105	-	-	M8/10	152	135	74	25 x 2.50	M6	935	RAL ²	25
3403114	108 - 114	4	100	M8/10	160	144	79	25 x 2.50	M6	935	RAL ²	25
3403119	116 - 119	-	-	M8/10	165	149	81	25 x 2.50	M6	935	RAL ¹	25
3403125	122 - 125	-	-	M8/10	173	157	85	25 x 2.50	M6	935	RAL ¹	25
3403141	133 - 141	5	125	M8/10	189	170	92	25 x 2.50	M6	935	RAL ¹	25
3423168	159 - 168	6	150	M10	233	198	102	25 x 3.00	M8	1,220	-	10
3423210	200 - 210	-	-	M10	273	239	122	25 x 3.00	M8	1,220	-	10
3423219	210 - 219	8	200	M10	284	250	128	25 x 3.00	M8	1,220	-	10

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.
 RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656.
 From Ø 159 mm: with quick locking system.
 For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

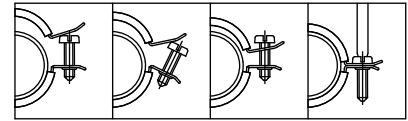
- 169 BIS RapidRail[®] Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

BISMAT[®] 2000 'S'

for steam pipes 15 - 63 mm

M8/10

(A 05 32)



Features and Benefits

- single screw clamp
- with BISMAT[®] quick locking system
- clamp easy to close with one hand
- material: steel
- zinc plated
- noise insulating lining of silicone rubber, reddish brown, heat resistant up to 200 °C
- age resistant lining
- sound insulating lining according DIN 4109
- tested for fire safety



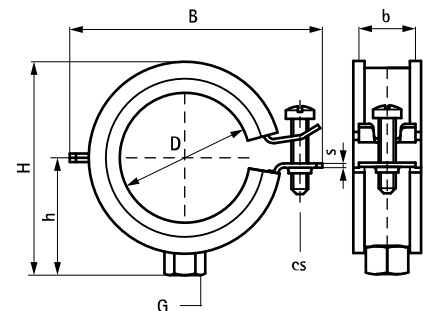
RAL-GZ 655/B
Cert.Nr. 2010-22



RAL-GZ 656
Cert.Nr. 2011-11

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
3404018	15 - 18	3/8	10	M8/10	48	44.0	30	20 x 1.00	M6	600	RAL ²	50
3404023	20 - 23	1/2	15	M8/10	55	47.0	31	20 x 1.00	M6	600	RAL ²	50
3404028	25 - 28	3/4	20	M8/10	60	52.0	34	20 x 1.00	M6	600	RAL ²	50
3404035	31 - 35	1	25	M8/10	67	59.0	38	20 x 1.00	M6	600	RAL ²	50
3404043	40 - 43	1 1/4	32	M8/10	75	68.0	42	20 x 1.25	M6	800	RAL ²	50
3404053	48 - 53	1 1/2	40	M8/10	85	74.0	45	20 x 1.25	M6	800	RAL ²	50
3404063	57 - 63	2	50	M8/10	94	86.0	51	20 x 1.25	M6	800	RAL ²	50

RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656.
For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

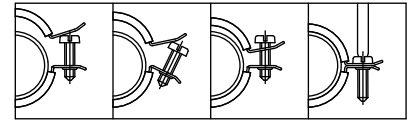
- 169 BIS RapidRail[®] Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

BISMAT[®] 2000 'S'

for steam pipes 73 - 168 mm

M8/10

(A 05 36)

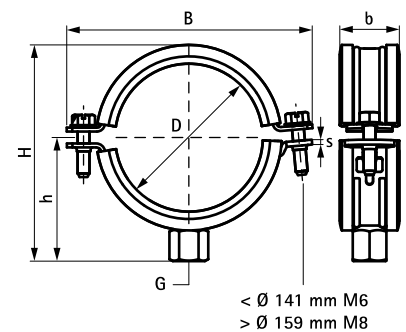


Features and Benefits

- two-screw clamp
- with BISMAT[®] quick locking system
- clamp easy to close with one hand
- from Ø 159 mm: with quick locking system
- material: steel
- zinc plated
- noise insulating lining of silicone rubber, reddish brown, heat resistant up to 200 °C
- age resistant lining
- sound insulating lining according DIN 4109
- tested for fire safety



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
3404080	73 - 80	2½	65	M8/10	126	109	61	23 x 2.00	930	50
3404091	83 - 91	3	80	M8/10	137	121	67	25 x 2.50	930	25
3404114	108 - 114	4	100	M8/10	160	141	79	25 x 2.50	930	25
3404141	133 - 141	5	125	M8/10	189	170	92	25 x 2.50	930	25
3404168	159 - 168	6	150	M8/10	233	198	99	25 x 3.00	1,500	10



Complementary

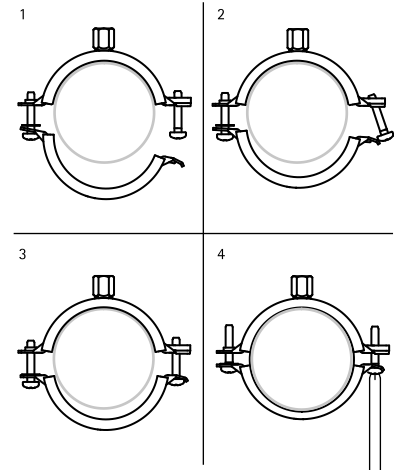
- 169 BIS RapidRail[®] Fixing System
- 399 BIS Fixing Accessories

Bifix® G2 with Lining (M8) (BUP1000)

(A 05 44)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 83 mm

M8

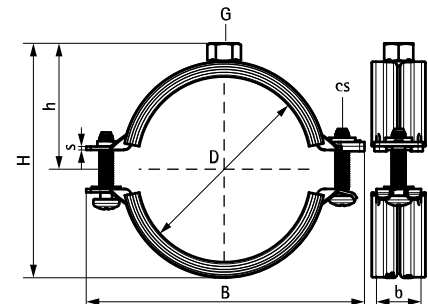


Features and Benefits

- two-screw clamp
- quick closing mechanism for easy locking of the clamp with one hand
- 2 component rubber lining provides easy positioning of the pipe during installation
- when the clamp is closed, the pipe rests on soft black rubber lining for increased noise reduction
- suitable for steel, copper, cast iron and plastic (multilayer) pipe
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature resistance from -30 °C to +120 °C
- sound insulating lining according DIN 4109
- noise reduction according to ISO 3822-1 up to 23 dB(A)



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
31185014	10 - 14	1/4	8	M8	59	34	21	20 x 1.25	M6	700	50
31185019	15 - 19	3/8	10	M8	63	38	23	20 x 1.25	M6	700	50
31185023	20 - 23	1/2	15	M8	68	43	25	20 x 1.25	M6	700	50
31185028	25 - 28	3/4	20	M8	74	49	28	20 x 1.25	M6	700	50
31185035	31 - 35	1	25	M8	80	55	31	20 x 1.25	M6	700	50
31185039	36 - 39	-	-	M8	84	59	33	20 x 1.25	M6	700	50
31185045	40 - 45	1 1/4	32	M8	91	66	37	20 x 1.25	M6	700	50
31185052	48 - 52	1 1/2	40	M8	97	72	40	20 x 1.25	M6	700	50
31185058	54 - 58	-	-	M8	104	79	33	20 x 1.25	M6	700	50
31185064	60 - 64	2	50	M8	109	84	46	20 x 1.25	M6	700	50
31185070	66 - 70	-	-	M8	118	92	50	20 x 1.50	M6	800	50
31185079	75 - 79	2 1/2	65	M8	125	100	54	20 x 1.50	M6	800	50
31185083	80 - 83	-	-	M8	131	106	57	20 x 1.50	M6	800	50

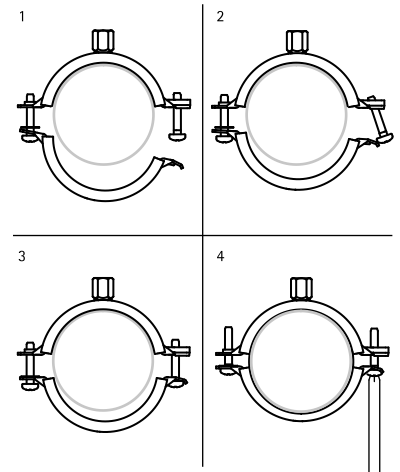


Bifix® G2 with Lining (M8/10) (BUP1000)

(A 05 52)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 169 mm

M8/10

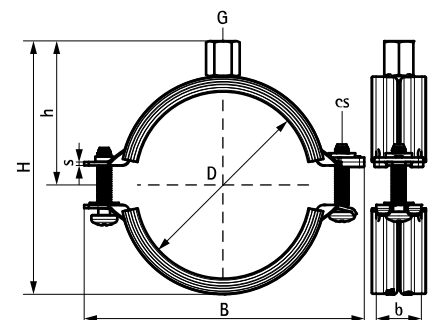


Features and Benefits

- two-screw clamp
- quick closing mechanism for easy locking of the clamp with one hand
- 2 component rubber lining provides easy positioning of the pipe during installation
- when the clamp is closed, the pipe rests on soft black rubber lining for increased noise reduction
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature resistance from -30 °C to +120 °C
- sound insulating lining according DIN 4109
- noise reduction according to ISO 3822-1 up to 23 dB(A)



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
31085014	10 - 14	1/4	8	M8/10	59	42	30	20 x 1.25	M6	700	50
31085019	15 - 19	3/8	10	M8/10	63	46	31	20 x 1.25	M6	700	50
31085023	20 - 23	1/2	15	M8/10	68	51	33	20 x 1.25	M6	700	50
31085028	25 - 28	3/4	20	M8/10	74	57	36	20 x 1.25	M6	700	50
31085035	31 - 35	1	25	M8/10	80	63	39	20 x 1.25	M6	700	50
31085039	36 - 39	-	-	M8/10	84	67	41	20 x 1.25	M6	700	50
31085045	40 - 45	1 1/4	32	M8/10	91	74	45	20 x 1.25	M6	700	50
31085052	48 - 52	1 1/2	40	M8/10	97	80	48	20 x 1.25	M6	700	50
31085058	54 - 58	-	-	M8/10	104	87	51	20 x 1.25	M6	700	50
31085064	60 - 64	2	50	M8/10	109	92	54	20 x 1.25	M6	700	50
31085070	66 - 70	-	-	M8/10	118	100	58	20 x 1.50	M6	800	50
31085079	75 - 79	2 1/2	65	M8/10	125	108	62	20 x 1.50	M6	800	50
31085083	80 - 83	-	-	M8/10	131	114	65	20 x 1.50	M6	800	50
31085091	88 - 91	3	80	M8/10	142	123	70	23 x 2.00	M6	1,700	25
31085097	92 - 97	-	-	M8/10	147	132	73	23 x 2.00	M6	1,700	25
31085105	100 - 105	-	-	M8/10	155	137	77	23 x 2.00	M6	1,700	25
31085115	108 - 115	4	100	M8/10	163	145	81	23 x 2.00	M6	1,700	25
31085130	125 - 130	-	-	M8/10	180	162	89	23 x 2.00	M6	1,700	25
31085140	133 - 140	5	125	M8/10	189	171	94	23 x 2.00	M6	1,700	25
31085160	152 - 160	-	-	M8/10	208	190	102	23 x 2.00	M6	1,700	25
31085169	165 - 169	6	150	M8/10	225	203	111	25 x 2.50	M8	2,000	10

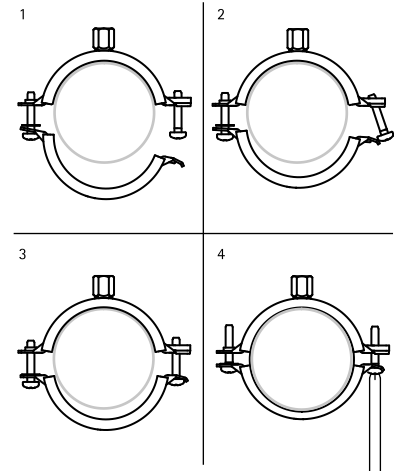


Bifix® G2 with Lining (M10) (BUP1000)

(A 05 72)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 225 mm

M10

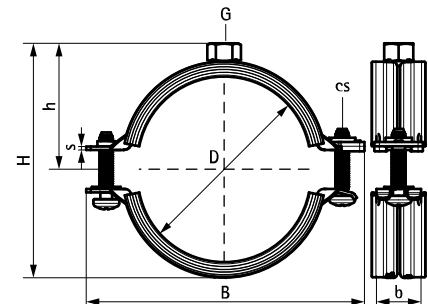


Features and Benefits

- two-screw clamp
- quick closing mechanism for easy locking of the clamp with one hand
- 2 component rubber lining provides easy positioning of the pipe during installation
- when the clamp is closed, the pipe rests on soft black rubber lining for increased noise reduction
- suitable for steel, copper, cast iron and plastic (multilayer) pipe
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature resistance from -30 °C to +120 °C
- sound insulating lining according DIN 4109
- noise reduction according to ISO 3822-1 up to 23 dB(A)



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
31285014	10 - 14	¼	8	M10	59	34	21	20 x 1.25	M6	800	50
31285019	15 - 19	⅜	10	M10	63	38	23	20 x 1.25	M6	800	50
31285023	20 - 23	½	15	M10	68	43	25	20 x 1.25	M6	800	50
31285028	25 - 28	¾	20	M10	74	49	28	20 x 1.25	M6	800	50
31285035	31 - 35	1	25	M10	80	55	31	20 x 1.25	M6	800	50
31285039	36 - 39	-	-	M10	84	59	33	20 x 1.25	M6	800	50
31285045	40 - 45	1¼	32	M10	91	66	37	20 x 1.25	M6	800	50
31285052	48 - 52	1½	40	M10	97	72	40	20 x 1.25	M6	800	50
31285058	54 - 58	-	-	M10	104	79	43	20 x 1.25	M6	800	50
31285064	60 - 64	2	50	M10	109	84	46	20 x 1.25	M6	800	50
31285070	66 - 70	-	-	M10	118	92	52	20 x 1.50	M6	1,000	50
31285079	75 - 79	2½	65	M10	125	100	56	20 x 1.50	M6	1,000	50
31285083	80 - 83	-	-	M10	131	106	59	20 x 1.50	M6	1,000	50
31285091	88 - 91	3	80	M10	142	115	64	23 x 2.00	M6	1,800	25
31285097	92 - 98	-	-	M10	147	123	73	23 x 2.00	M6	1,800	25
31285105	100 - 105	-	-	M10	155	129	71	23 x 2.00	M6	1,800	25
31285115	108 - 115	4	100	M10	163	137	75	23 x 2.00	M6	1,800	25
31285130	125 - 130	-	-	M10	180	154	83	23 x 2.00	M6	1,800	25
31285140	133 - 140	5	125	M10	189	163	88	23 x 2.00	M6	1,800	25
31285160	152 - 160	-	-	M10	208	182	97	23 x 2.00	M6	1,800	25
31285169	165 - 169	6	150	M10	225	195	103	25 x 2.50	M8	2,500	10
31285180	176 - 180	-	-	M10	238	201	109	25 x 2.50	M8	2,500	15
31285200	192 - 200	-	-	M10	257	230	119	25 x 2.50	M8	2,500	15
31285210	205 - 210	-	-	M10	269	241	125	25 x 2.50	M8	2,500	10
31285225	219 - 225	8	200	M10	283	257	132	25 x 2.50	M8	2,500	10

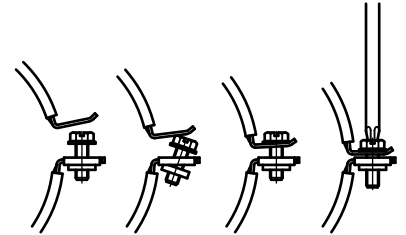


BIS KSB1 Clamp

for metal pipes 13 - 63 mm

M8 - M8/10

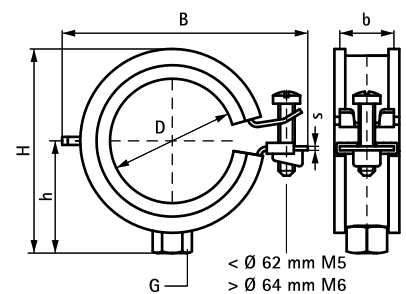
(A 05 108)



Features and Benefits

- single screw clamp
- with quick locking system, type KSB
- clamp easy to close with one hand
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
3363014	13 - 14	1/4	8	M8	46	38	23	20 x 1.00	450	100
3363018	15 - 18	3/8	10	M8	46	38	23	20 x 1.00	450	100
3363023	20 - 23	1/2	15	M8	51	43	25	20 x 1.00	450	100
3363028	25 - 28	3/4	20	M8	57	48	28	20 x 1.00	450	100
3363035	32 - 35	1	25	M8	63	55	31	20 x 1.00	450	100
3363043	40 - 43	1 1/4	32	M8	72	63	35	20 x 1.25	600	100
3363051	48 - 51	1 1/2	40	M8	80	71	39	20 x 1.25	600	50
3363054	53 - 56	-	-	M8	85	76	42	20 x 1.25	600	50
3363062	59 - 62	2	50	M8	91	82	45	20 x 1.25	600	50
3362018	15 - 18	3/8	10	M8/10	46	46	31	20 x 1.00	450	100
3362023	20 - 23	1/2	15	M8/10	51	51	33	20 x 1.00	450	100
3362028	25 - 28	3/4	20	M8/10	57	56	36	20 x 1.00	450	100
3362035	32 - 35	1	25	M8/10	63	63	39	20 x 1.00	450	100
3362043	40 - 43	1 1/4	32	M8/10	72	71	43	20 x 1.25	600	100
3362051	48 - 51	1 1/2	40	M8/10	80	79	47	20 x 1.25	600	50
3362054	53 - 56	-	-	M8/10	85	84	50	20 x 1.25	600	50
3362062	59 - 63	2	50	M8/10	91	90	53	20 x 1.25	600	50



Complementary

- 169 BIS RapidRail® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Alternative

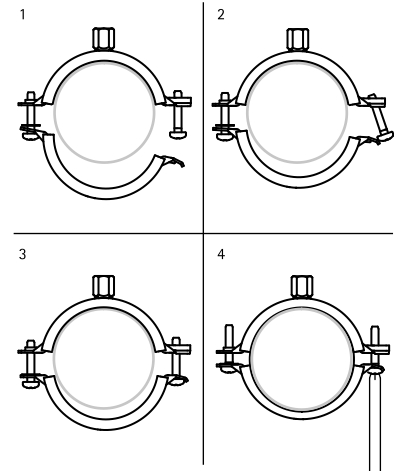
- 12 BISMAT® 2000

KSB2 Clamp

(A 05 116)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 225 mm

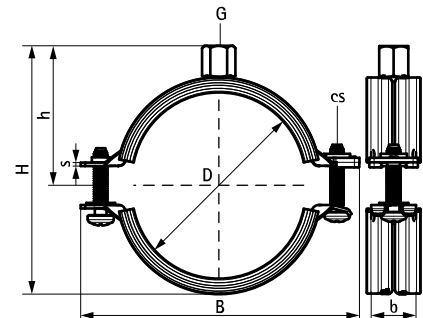
M8/10



Features and Benefits

- two-screw clamp
- quick closing mechanism for easy locking of the clamp with one hand
- full range from 10 to 225 mm
- material: steel
- zinc plated
- temperature resistance from -30 °C to +120 °C
- age resistant lining
- noise insulating lining, EPDM rubber, black and green
- sound insulating lining according DIN 4109
- noise reduction according to ISO 3822-1 up to 21 dB(A)

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
3396014	10 - 14	1/8 - 1/4	8	M8/10	59	42	30	20 x 1.25	M6	400	RAL ¹	100
3396019	15 - 19	3/8	10	M8/10	63	46	31	20 x 1.25	M6	400	RAL ¹	100
3396023	20 - 23	1/2	15	M8/10	68	51	33	20 x 1.25	M6	400	RAL ¹	100
3396028	25 - 28	3/4	20	M8/10	74	57	36	20 x 1.25	M6	400	RAL ¹	100
3396035	31 - 35	1	25	M8/10	80	63	39	20 x 1.25	M6	400	RAL ¹	100
3396039	36 - 39	-	-	M8/10	84	67	41	20 x 1.25	M6	400	RAL ¹	100
3396045	40 - 45	1 1/4	32	M8/10	91	74	45	20 x 1.25	M6	400	RAL ¹	100
3396052	48 - 52	1 1/2	40	M8/10	97	80	48	20 x 1.25	M6	400	RAL ¹	50
3396058	54 - 58	-	-	M8/10	104	87	51	20 x 1.25	M6	400	RAL ¹	50
3396064	60 - 64	2	50	M8/10	109	92	54	20 x 1.25	M6	400	RAL ¹	50
3396070	66 - 70	-	-	M8/10	118	100	58	20 x 1.50	M6	400	RAL ¹	50
3396079	75 - 79	2 1/2	65	M8/10	125	108	62	20 x 1.50	M6	715	RAL ¹	50
3396083	80 - 83	-	-	M8/10	132	114	65	20 x 1.50	M6	715	RAL ¹	50
3396091	88 - 91	3	80	M8/10	142	123	70	23 x 2.00	M6	715	RAL ¹	50
3396105	100 - 105	-	-	M8/10	155	137	77	23 x 2.00	M6	1,230	RAL ¹	50
3396115	108 - 115	4	100	M8/10	164	145	81	23 x 2.00	M6	1,230	RAL ¹	25
3396130	125 - 130	-	-	M8/10	181	162	89	23 x 2.00	M6	1,230	RAL ¹	25
3396140	133 - 140	5	125	M8/10	189	171	94	23 x 2.00	M6	1,230	RAL ¹	25
3396160	152 - 160	-	-	M8/10	209	190	102	23 x 2.00	M6	1,230	RAL ¹	25
3396169	165 - 169	6	150	M8/10	225	203	111	25 x 2.50	M8	2,390	RAL ¹	20
3396180	176 - 180	-	-	M8/10	238	209	117	25 x 2.50	M8	2,390	RAL ¹	15
3396200	192 - 200	-	-	M8/10	257	238	127	25 x 2.50	M8	2,390	RAL ¹	15
3396210	205 - 210	-	-	M8/10	269	249	133	25 x 2.50	M8	2,390	RAL ¹	10
3396225	219 - 225	8	200	M8/10	283	265	140	25 x 2.50	M8	2,390	RAL ¹	10

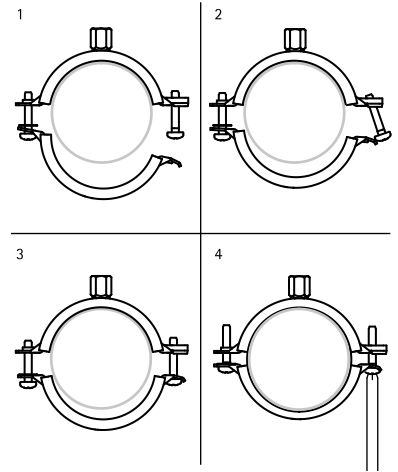


KSB2 Clamp

(A 05 118)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 225 mm

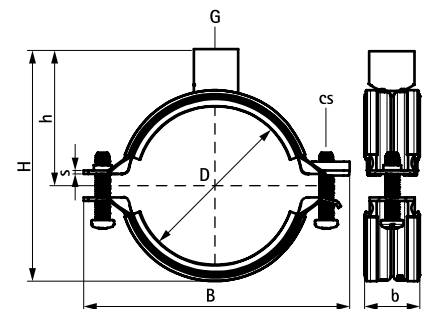
M8/M10/1/2"



Features and Benefits

- two-screw clamp
- quick closing mechanism for easy locking of the clamp with one hand
- full range from 10 to 225 mm
- material: steel
- zinc plated
- temperature resistance from -30 °C to +120 °C
- age resistant lining
- noise insulating lining, EPDM rubber, black and green
- sound insulating lining according to DIN 4109
- noise reduction according to ISO 3822-1 up to 21 dB(A)

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
33965014	10 - 14	1/8 - 1/4	8	M8/M10/1/2"	59	42	30	20 x 1.25	M6	400	100
33965019	15 - 19	3/8	10	M8/M10/1/2"	63	46	31	20 x 1.25	M6	400	100
33965023	20 - 23	1/2	15	M8/M10/1/2"	68	51	33	20 x 1.25	M6	400	100
33965028	25 - 28	3/4	20	M8/M10/1/2"	74	57	36	20 x 1.25	M6	400	100
33965035	31 - 35	1	25	M8/M10/1/2"	80	63	39	20 x 1.25	M6	400	100
33965039	36 - 39	-	-	M8/M10/1/2"	84	67	41	20 x 1.25	M6	400	100
33965045	40 - 45	1 1/4	32	M8/M10/1/2"	91	74	45	20 x 1.25	M6	400	100
33965052	48 - 52	1 1/2	40	M8/M10/1/2"	97	80	48	20 x 1.25	M6	400	50
33965058	54 - 58	-	-	M8/M10/1/2"	104	87	51	20 x 1.25	M6	400	50
33965064	60 - 64	2	50	M8/M10/1/2"	109	92	54	20 x 1.25	M6	400	50
33965070	66 - 70	-	-	M8/M10/1/2"	118	100	58	20 x 1.50	M6	400	50
33965079	75 - 79	2 1/2	65	M8/M10/1/2"	125	108	62	20 x 1.50	M6	715	50
33965083	80 - 83	-	-	M8/10/G1/2"	132	114	65	20 x 1.50	M6	715	50
33965091	88 - 91	3	80	M8/M10/1/2"	142	123	70	23 x 2.00	M6	715	50
33965105	100 - 105	-	-	M8/M10/1/2"	155	137	77	23 x 2.00	M6	1,230	50
33965115	108 - 115	4	100	M8/M10/1/2"	164	145	81	23 x 2.00	M6	1,230	25
33965130	125 - 130	-	-	M8/M10/1/2"	181	162	89	23 x 2.00	M6	1,230	25
33965140	133 - 140	5	125	M8/M10/1/2"	189	171	94	23 x 2.00	M6	1,230	25
33965160	152 - 160	-	-	M8/M10/1/2"	209	190	102	23 x 2.00	M6	1,230	25
33965169	165 - 169	6	150	M8/M10/1/2"	225	203	111	25 x 2.50	M8	2,390	20
33965180	176 - 180	-	-	M8/M10/1/2"	238	209	117	25 x 2.50	M8	2,390	15
33965200	192 - 200	-	-	M8/M10/1/2"	257	238	127	25 x 2.50	M8	2,390	15
33965210	205 - 210	-	-	M8/M10/1/2"	269	249	133	25 x 2.50	M8	2,390	10
33965225	219 - 225	8	200	M8/M10/1/2"	283	265	140	25 x 2.50	M8	2,390	10



BIS Thread Adaptor for KSB2 Clamp (M8/M10/1/2")

(A 05 119)

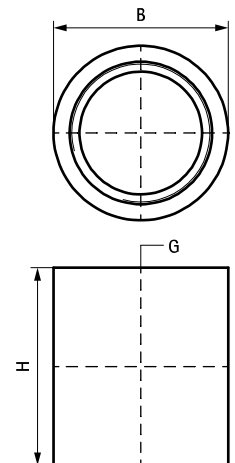
only to be used in combination with KSB2 Clamp (M8/M10/1/2")



Features and Benefits

- zinc plated

Part No.	Model	G	B (mm)	H (mm)	Pack 1
6479421	Female Thread	1/2" x 1/2"	26.5	30.0	25

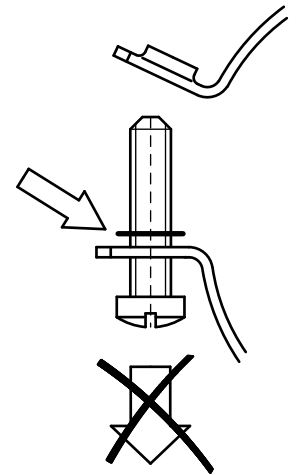


2S Clamp with Lining (M8)

(A 05 132)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 67 mm

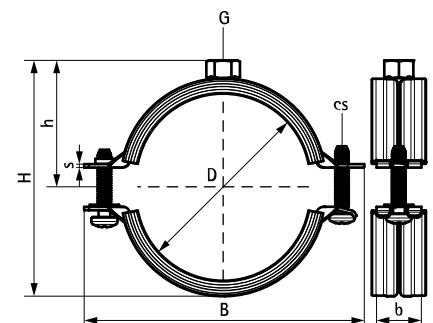
M8



Features and Benefits

- gapless range
- rubber lining grips in steel parts to prevent sliding of the lining
- anti loss washers prevent screws from falling out during installation
- material: steel
- zinc plated
- temperature resistance from -30 °C to +120 °C
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33335014	10 - 14	1/8 - 1/4	6 - 8	M8	51	32	20	20 x 1.00	M5	330	RAL ¹	50
33335019	15 - 19	3/8	10	M8	56	37	22	20 x 1.00	M5	330	RAL ¹	50
33335024	20 - 24	1/2	15	M8	62	43	25	20 x 1.00	M5	330	RAL ¹	50
33335030	25 - 30	3/4	20	M8	69	50	29	20 x 1.00	M5	330	RAL ¹	50
33335037	31 - 37	1	25	M8	75	56	32	20 x 1.00	M5	330	RAL ¹	50
33335046	38 - 46	1 1/4	32	M8	84	66	37	20 x 1.25	M5	500	RAL ¹	50
33335052	47 - 52	1 1/2	40	M8	93	75	41	20 x 1.25	M5	500	RAL ¹	50
33335061	53 - 61	2	50	M8	99	81	44	20 x 1.25	M5	500	RAL ¹	50
33335067	62 - 67	-	-	M8	106	87	47	20 x 1.25	M5	500	RAL ¹	50

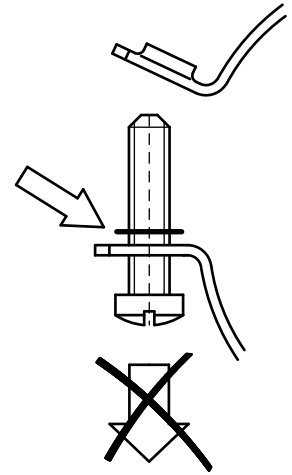


2S Clamp with Lining (M8/10)

(A 05 136)

for steel, copper, cast iron and plastic (multilayer) pipe 10 - 225 mm

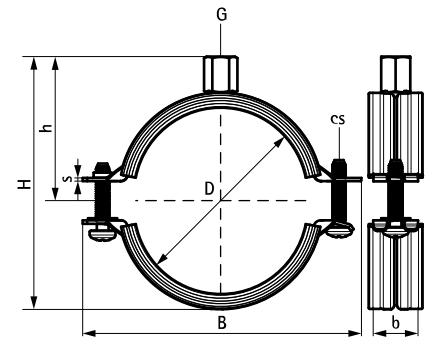
M8/10



Features and Benefits

- gapless range
- rubber lining grips in steel parts to prevent sliding of the lining
- anti loss washers prevent screws from falling out during installation
- material: steel
- zinc plated
- temperature resistance from -30 °C to +120 °C
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33435014	10 - 14	1/8 - 1/4	6 - 8	M8/10	51	40	28	20 x 1.00	M5	330	RAL ¹	50
33435019	15 - 19	3/8	10	M8/10	56	45	30	20 x 1.00	M5	330	RAL ¹	50
33435024	20 - 24	1/2	15	M8/10	62	51	33	20 x 1.00	M5	330	RAL ¹	50
33435030	25 - 30	3/4	20	M8/10	69	58	37	20 x 1.00	M5	330	RAL ¹	50
33435037	31 - 37	1	25	M8/10	75	64	40	20 x 1.00	M5	330	RAL ¹	50
33435046	38 - 46	1 1/4	32	M8/10	84	74	45	20 x 1.25	M5	500	RAL ¹	50
33435052	47 - 52	1 1/2	40	M8/10	93	83	49	20 x 1.25	M5	500	RAL ¹	50
33435061	53 - 61	2	50	M8/10	99	89	52	20 x 1.25	M5	500	RAL ¹	50
33435067	62 - 67	-	-	M8/10	106	95	55	20 x 1.25	M5	500	RAL ¹	50
33435074	68 - 74	-	-	M8/10	118	103	60	20 x 1.50	M6	850	RAL ¹	50
33435081	75 - 81	2 1/2	65	M8/10	124	109	63	20 x 1.50	M6	850	RAL ¹	50
33435087	82 - 87	-	-	M8/10	130	115	66	20 x 1.50	M6	850	RAL ¹	50
33435095	88 - 95	3	80	M8/10	143	127	72	23 x 2.00	M6	1,000	RAL ¹	50
33435103	96 - 103	-	-	M8/10	153	136	76	23 x 2.00	M6	1,000	RAL ¹	50
33435112	104 - 112	-	-	M8/10	159	142	79	23 x 2.00	M6	1,000	RAL ¹	25
33435118	113 - 118	4	100	M8/10	168	151	84	23 x 2.00	M6	1,000	RAL ¹	25
33435127	119 - 127	-	-	M8/10	178	161	89	23 x 2.00	M6	1,000	RAL ¹	25
33435137	128 - 137	-	-	M8/10	185	168	92	23 x 2.00	M6	1,000	RAL ¹	25
33435144	138 - 144	5	125	M8/10	194	177	97	23 x 2.00	M6	1,000	RAL ¹	25
33435153	145 - 153	-	-	M8/10	203	186	101	23 x 2.00	M6	1,000	RAL ¹	25
33435162	154 - 162	-	-	M8/10	211	194	105	23 x 2.00	M6	1,000	RAL ¹	15
33435172	163 - 172	6	150	M8/10	227	210	114	25 x 2.50	M6	2,350	RAL ¹	15
33435183	173 - 183	-	-	M8/10	239	221	120	25 x 2.50	M6	2,350	RAL ¹	15
33435194	184 - 194	-	-	M8/10	249	232	125	25 x 2.50	M6	2,350	RAL ¹	15
33435205	195 - 205	-	-	M8/10	260	243	130	25 x 2.50	M6	2,350	RAL ¹	15
33435216	206 - 216	-	-	M8/10	271	253	136	25 x 2.50	M6	2,350	RAL ¹	10
33435225	217 - 225	8	200	M8/10	279	261	140	25 x 2.50	M6	2,350	RAL ¹	10



BIS Heavy Duty Clamp HD1501 (BUP1000)

(A 1004)

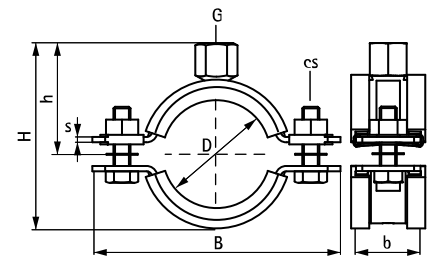
for metal pipes 15 - 227 mm

M8/10 - M10/12



Features and Benefits

- two-part clamp with two locking bolts
- up to and including 5": locking nut is captive, hidden in plastic holder
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- also available: noise insulating lining of silicone rubber (reddish brown), heat resistant up to +200 °C (A 35 15)
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- noise insulating lining, EPDM rubber, black
- age resistant lining



Part No.	D (mm)	DN (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33138019	15 - 19	3/8	10	M8/10	81	55	35	30 x 2.5	M8	1,500	RAL ²	25
33138023	19 - 23	1/2	15	M8/10	84	58	37	30 x 2.5	M8	1,500	RAL ²	25
33138029	25 - 29	3/4	20	M8/10	91	64	40	30 x 2.5	M8	1,500	RAL ²	25
33138035	30 - 35	1	25	M8/10	98	70	43	30 x 2.5	M8	1,500	RAL ²	25
33138045	40 - 45	1 1/4	32	M8/10	109	80	48	30 x 2.5	M8	1,500	RAL ²	25
33138051	46 - 51	1 1/2	40	M8/10	115	86	51	30 x 2.5	M8	1,500	RAL ²	25
33138059	53 - 59	-	-	M8/10	122	93	55	30 x 2.5	M8	1,500	RAL ²	25
33138064	59 - 64	2	50	M8/10	129	99	57	30 x 2.5	M8	1,500	RAL ²	25
33148071	65 - 71	-	-	M10/12	136	116	71	30 x 3.0	M8	2,300	RAL ²	25
33148078	72 - 78	2 1/2	65	M10/12	144	123	74	30 x 3.0	M8	2,300	RAL ²	25
33148085	79 - 85	-	-	M10/12	152	130	78	30 x 3.0	M8	2,300	RAL ²	25
33148092	86 - 92	3	80	M10/12	159	136	81	30 x 3.0	M8	2,300	RAL ²	25
33148109	101 - 109	-	-	M10/12	175	154	90	30 x 3.0	M8	2,300	RAL ²	25
33148116	108 - 116	4	100	M10/12	182	160	93	30 x 3.0	M8	2,300	RAL ²	25
33148133	125 - 133	-	-	M10/12	200	178	102	30 x 3.0	M8	2,300	RAL ²	25
33148140	132 - 140	5	125	M10/12	207	184	104	30 x 3.0	M8	2,300	RAL ²	15
33148169	159 - 169	6	150	M10/12	254	223	124	38 x 4.0	M10	3,800	RAL ²	15
33148188	178 - 188	-	-	M10/12	274	242	133	38 x 4.0	M10	3,800	RAL ²	15
33148204	194 - 204	-	-	M10/12	290	258	141	38 x 4.0	M10	3,800	RAL ²	15
33148213	203 - 213	-	-	M10/12	299	267	146	38 x 4.0	M10	3,800	RAL ²	15
33148227	217 - 227	8	200	M10/12	322	282	152	38 x 4.0	M12	3,800	RAL ²	2

RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656.
 For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Complementary

- 40 BIS Silicone Profile

BIS Heavy Duty Clamp HD1501 (BUP1000)

(A 10 06)

for metal pipes 159 - 509 mm

M16



Features and Benefits

- two-part clamp with two locking bolts
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- noise insulating lining, EPDM rubber, black
- also available: noise insulating lining of silicone rubber (reddish brown), heat resistant up to +200 °C (A 35 15)
- age resistant lining
- sound insulating lining according DIN 4109
- tested for fire safety



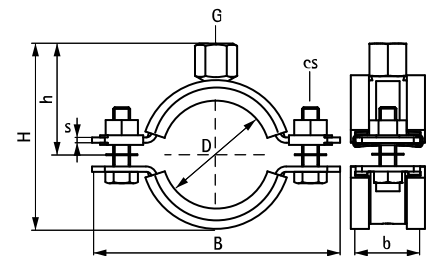
Cert.Nr. 2011-12a



Cert.Nr. 2011-14

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33168169	159 - 169	6	150	M16	254	220	120	38 x 4.0	M10	3,800	RAL ²	15
33168188	178 - 188	-	-	M16	274	239	130	38 x 4.0	M10	3,800	RAL ²	15
33168204	194 - 204	-	-	M16	290	255	138	38 x 4.0	M10	3,800	RAL ²	15
33168213	203 - 213	-	-	M16	299	264	143	38 x 4.0	M10	3,800	RAL ²	15
33168227	217 - 227	8	200	M16	322	278	150	38 x 4.0	M12	3,800	RAL ²	2
33168250	240 - 250	-	-	M16	345	302	163	38 x 4.0	M12	3,800	RAL ¹	2
33168275	265 - 275	10	250	M16	367	327	175	48 x 5.0	M12	9,200	RAL ¹	2
33168325	315 - 325	12	300	M16	414	374	198	48 x 5.0	M12	9,200	RAL ¹	2
33168364	354 - 364	14	350	M16	453	412	217	48 x 5.0	M12	9,200	RAL ¹	2
33168408	398 - 408	16	400	M16	497	456	239	48 x 5.0	M12	9,200	RAL ¹	2
33168458	448 - 458	18	450	M16	548	506	264	48 x 5.0	M12	9,200	RAL ¹	2
33168509	499 - 509	20	500	M16	599	557	289	48 x 5.0	M12	9,200	RAL ¹	2

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.
 RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656.
 For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Complementary

- 40 BIS Silicone Profile

BIS Heavy Duty Clamp HD1501 (BUP1000)

(A 10 09)

for metal pipes 15 - 509 mm

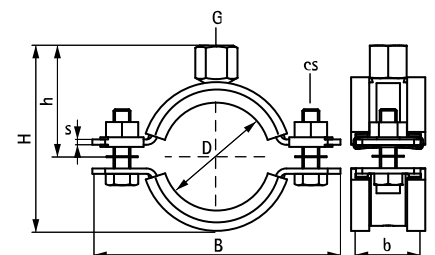
G $\frac{1}{2}$ "



Features and Benefits

- two-part clamp with two locking bolts
- up to and including 5": locking nut is captive, hidden in plastic holder
- heavy design
- bolts secured with anti-loss washer
- with CO $_2$ welded connection nut
- material: steel

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F $_{a,z}$ (N)	RAL	Pack 1
33178019	15 - 19	3/8	10	G $\frac{1}{2}$ "	81	50	30	30 x 2.5	M8	1,500	RAL ²	25
33178023	19 - 23	1/2	15	G $\frac{1}{2}$ "	84	53	32	30 x 2.5	M8	1,500	RAL ²	25
33178029	25 - 29	3/4	20	G $\frac{1}{2}$ "	91	59	35	30 x 2.5	M8	1,500	RAL ²	25
33178035	30 - 35	1	25	G $\frac{1}{2}$ "	98	65	38	30 x 2.5	M8	1,500	RAL ²	25
33178045	40 - 45	1 1/4	32	G $\frac{1}{2}$ "	109	75	43	30 x 2.5	M8	1,500	RAL ²	25
33178051	46 - 51	1 1/2	40	G $\frac{1}{2}$ "	115	81	46	30 x 2.5	M8	1,500	RAL ²	25
33178059	53 - 59	-	-	G $\frac{1}{2}$ "	122	88	50	30 x 2.5	M8	1,500	RAL ²	25
33178064	59 - 64	2	50	G $\frac{1}{2}$ "	129	94	53	30 x 2.5	M8	1,500	RAL ²	25
33178071	65 - 71	-	-	G $\frac{1}{2}$ "	136	102	57	30 x 3.0	M8	2,300	RAL ²	25
33178078	72 - 78	2 1/2	65	G $\frac{1}{2}$ "	144	109	60	30 x 3.0	M8	2,300	RAL ²	25
33178085	79 - 85	-	-	G $\frac{1}{2}$ "	152	116	64	30 x 3.0	M8	2,300	RAL ²	25
33178092	86 - 92	3	80	G $\frac{1}{2}$ "	159	123	68	30 x 3.0	M8	2,300	RAL ²	25
33178109	101 - 109	-	-	G $\frac{1}{2}$ "	175	140	74	30 x 3.0	M8	2,300	RAL ²	25
33178116	108 - 116	4	100	G $\frac{1}{2}$ "	182	147	79	30 x 3.0	M8	2,300	RAL ²	25
33178133	125 - 133	-	-	G $\frac{1}{2}$ "	200	164	86	30 x 3.0	M8	2,300	RAL ²	25
33178140	132 - 140	5	125	G $\frac{1}{2}$ "	207	171	91	30 x 3.0	M8	2,300	RAL ²	15
33178169	159 - 169	6	150	G $\frac{1}{2}$ "	254	210	110	38 x 4.0	M10	3,800	RAL ²	15
33178188	178 - 188	-	-	G $\frac{1}{2}$ "	274	229	120	38 x 4.0	M10	3,800	RAL ²	15
33178204	194 - 204	-	-	G $\frac{1}{2}$ "	290	245	128	38 x 4.0	M10	3,800	RAL ²	15
33178213	203 - 213	-	-	G $\frac{1}{2}$ "	299	254	133	38 x 4.0	M10	3,800	RAL ²	15
33178227	217 - 227	8	200	G $\frac{1}{2}$ "	322	268	140	38 x 4.0	M10	3,800	RAL ²	2
33178250	240 - 250	-	-	G $\frac{1}{2}$ "	345	292	153	38 x 4.0	M12	3,800	RAL ¹	2
33178275	265 - 275	10	250	G $\frac{1}{2}$ "	367	317	165	48 x 5.0	M12	9,200	RAL ¹	2
33178325	315 - 325	12	300	G $\frac{1}{2}$ "	414	364	188	48 x 5.0	M12	9,200	RAL ¹	2
33178364	354 - 364	14	350	G $\frac{1}{2}$ "	453	402	207	48 x 5.0	M12	9,200	RAL ¹	2
33178408	398 - 408	16	400	G $\frac{1}{2}$ "	497	446	229	48 x 5.0	M12	9,200	RAL ¹	2
33178458	448 - 458	18	450	G $\frac{1}{2}$ "	548	496	254	48 x 5.0	M12	9,200	RAL ¹	2
33178509	499 - 509	20	500	G $\frac{1}{2}$ "	599	547	279	48 x 5.0	M12	9,200	RAL ¹	2



RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.
 RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656.
 For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

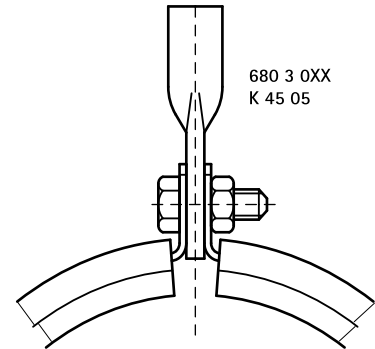
Complementary

- 40 BIS Silicone Profile
- 474 BIS Threaded Tube

BIS Single Band Pipe Clamp

for metal pipes 12 - 114 mm

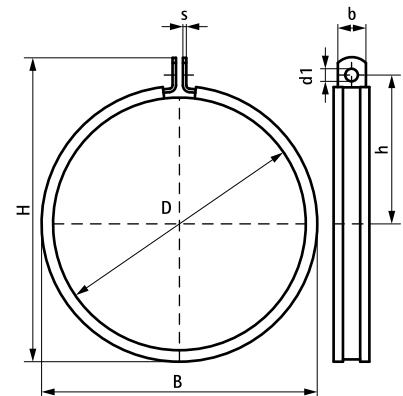
(A 10 25)



Features and Benefits

- one-part clamp
- fixing by using suspension eye (not included)
- clamp is locked by the mounting system (no other projections)
- space saving
- tube insulation can easily be fitted
- material: steel 1.0226
- pre-galvanized
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (")	DN	B (mm)	H (mm)	h (mm)	b x s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1
3385012	12	-	-	24	41	19	15 x 1.0	Ø 7	600	50
3385016	16	-	-	28	45	21	15 x 1.0	Ø 7	600	50
3385018	18	3/8	10	30	47	22	15 x 1.0	Ø 7	600	50
3385022	22	1/2	15	34	51	24	15 x 1.0	Ø 7	600	50
3385028	28	3/4	20	41	58	28	15 x 1.0	Ø 7	600	50
3385036	36	-	-	48	65	31	15 x 1.0	Ø 7	600	50
3385042	42	1 1/4	32	54	71	34	15 x 1.0	Ø 7	600	50
3385048	48	1 1/2	40	62	78	37	20 x 1.0	Ø 7	600	50
3385057	57	-	-	73	94	46	20 x 1.0	Ø 9	600	25
3385060	60	2	50	76	96	47	20 x 1.0	Ø 9	600	25
3385070	70	-	-	87	107	51	25 x 1.5	Ø 9	750	25
3385076	76	2 1/2	65	93	113	58	25 x 1.5	Ø 9	750	25
3385089	89	3	80	106	126	62	25 x 1.5	Ø 9	750	25
3385108	108	-	-	124	152	75	25 x 2.0	Ø 11	1,000	25
3385114	114	4	100	130	158	78	25 x 2.0	Ø 11	1,000	25



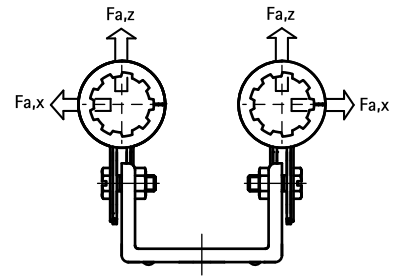
Complementary

- 241 BIS RapidStrut® Fixing System
- 493 BIS Fastenings
- 445 BIS Suspension Eye (Female Threaded)

BIS Duplo Double Clamp with Lining

(A 15 05)

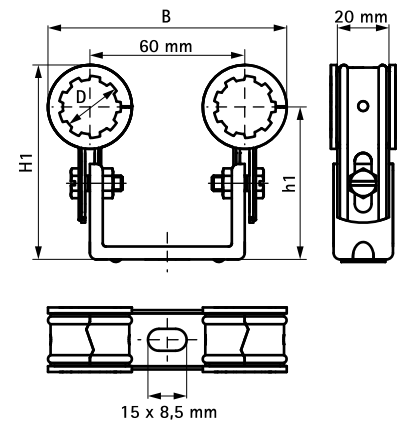
for metal heating pipes 15 - 33 mm



Features and Benefits

- two clamps on connection bracket
- for fixing of two pipes
- space saving
- clampshells reinforced
- two parts of the clamp interlock
- bracket reinforced for extra strength
- tube insulation can easily be fitted
- adjustable distance between pipe and wall
- material: steel
- pre-galvanized
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (")	DN	B (mm)	H1 (mm)	h1 (mm)	Colour	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3211015	15	-	-	82	58 - 74	48 - 64	White, TPE	100	200	25
3211022	22	1/2	15	89	65 - 81	51 - 67	White, TPE	110	330	25
3215015	15	-	-	82	58 - 74	48 - 64	Black, EPDM	100	200	25
3215017	18	3/8	10	85	61 - 77	51 - 67	Black, EPDM	100	200	25
3215021	22	1/2	15	89	65 - 81	51 - 67	Black, EPDM	110	330	25
3215027	28	3/4	20	95	71 - 87	54 - 70	Black, EPDM	110	330	25
3215033	33	1	25	104	76 - 92	57 - 73	Black, EPDM	110	330	25



Complementary

615 BIS Under Floor / Radiator Brackets

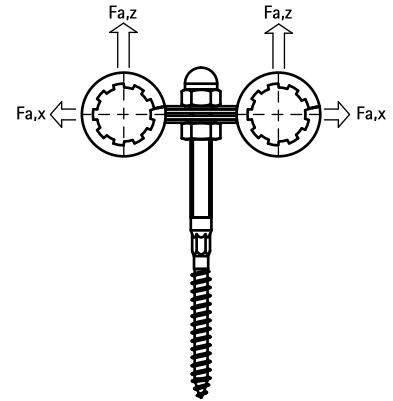
Alternative

96 BIS Duplo KS

BIS Double Wall Clamp with Lining

(A 15 10)

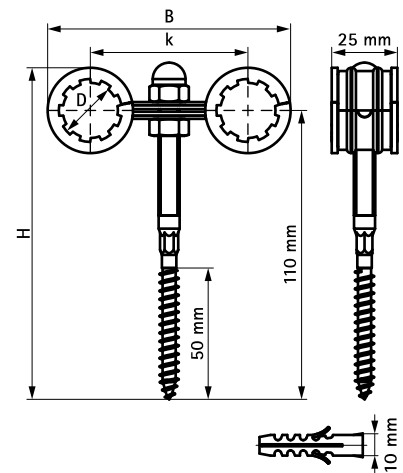
for metal heating pipes 15 - 33 mm



Features and Benefits

- for fixing of two pipes
- two parts of the clamp interlock
- bolt-wood screw with shoulder, making a lock nut unnecessary
- material: steel
- pre-galvanized
- age resistant lining
- sound insulating lining according to DIN 4109

Part No.	D (mm)	D (°)	DN	B (mm)	H (mm)	k (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3535015	15	-	-	87	124	60	230	200	25
3535017	18	3/8	10	89	125	60	230	200	25
3535021	22	1/2	15	93	126	60	230	330	25
3535027	28	3/4	20	98	129	60	230	330	25
3535033	33	1	25	115	133	70	230	330	25



Complementary

615 BIS Under Floor / Radiator Brackets

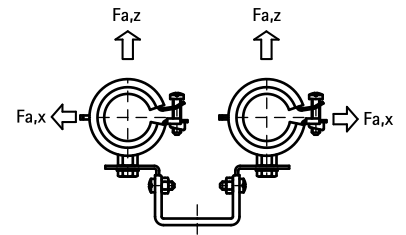
Alternative

29 BIS Duplo Double Clamp with Lining

BIS Duplo KSB1

for metal heating pipes 15 - 35 mm

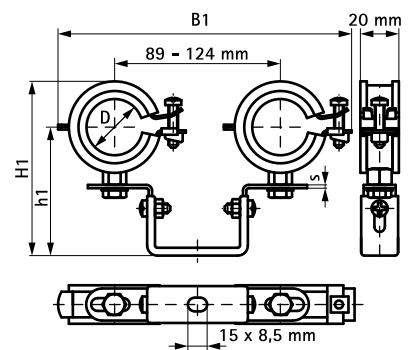
(A 15 15)



Features and Benefits

- two clamps on connection bracket
- clamp with quick locking system, type KSB
- for fixing of two pipes
- bracket reinforced for extra strength
- centre distance and distance between wall and clamp adjustable
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (°)	DN	s (mm)	b x s (mm)	H1 (mm)	h1 (mm)	B1 (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3393218	15 - 18	3/8	10	2.0	20 x 2.0	82 - 94	67 - 79	142 - 165	210	110	25
3393223	20 - 23	1/2	15	2.0	20 x 2.0	93 - 105	70 - 82	142 - 177	210	110	25
3393228	25 - 28	3/4	20	2.0	20 x 2.0	96 - 108	73 - 85	150 - 180	210	110	25
3393235	32 - 35	1	25	2.0	20 x 2.0	100 - 112	77 - 89	152 - 188	210	110	25

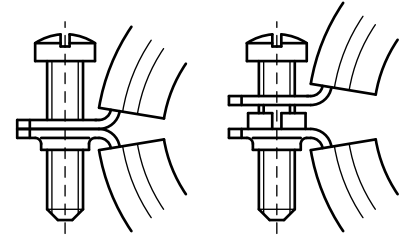


BISMAT[®] 5000

for plastic pipes 16 - 50 mm

M8

(A 25 05)



Features and Benefits

- single screw clamp
- with BISMAT[®] quick locking system
- with removable spacer washers, making the clamp suitable for either sliding or anchoring
- suitable for plastic pipe
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, green
- lining: very suitable for applications with plastic pipes
- inner part of lining is flush to improve sliding of pipe in clamp
- age resistant lining
- sound insulating lining according DIN 4109

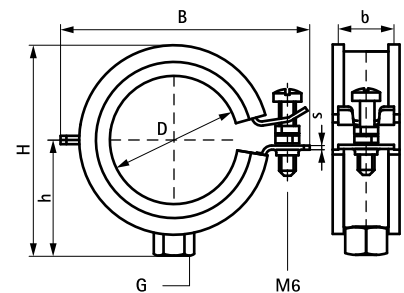


RAL-GZ 655/B
Cert.Nr. 2010-24

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	RAL	Pack 1
3483018	16	M8	48	40	22	20 x 1.00	350	RAL ¹	50
3483023	20	M8	55	43	23	20 x 1.00	350	RAL ¹	50
3483028	25	M8	60	48	26	20 x 1.00	350	RAL ¹	50
3483035	32	M8	67	57	30	20 x 1.00	350	RAL ¹	50
3483043	40	M8	75	66	34	20 x 1.25	420	RAL ¹	50
3483053	50	M8	85	75	37	20 x 1.25	420	RAL ¹	50

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

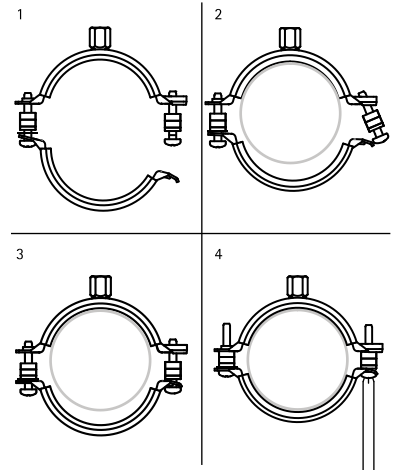
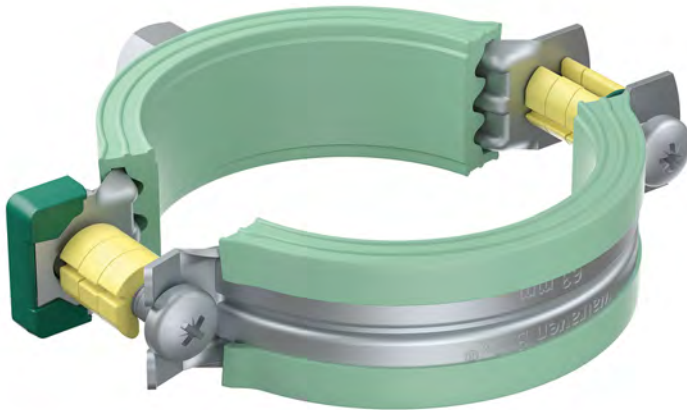
- 169 BIS RapidRail[®] Fixing System
- 493 BIS Fastenings
- 440 BIS Pipe Reinforcement

Bifix® 5000 G2 (BUP1000)

for plastic pipes 16 - 200 mm

M8/10

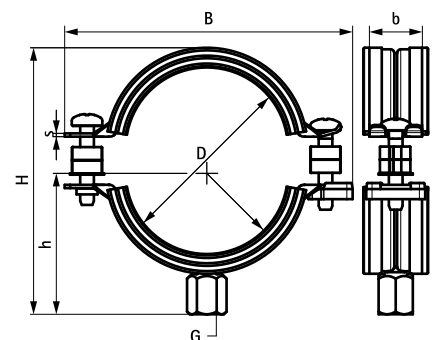
(A 25 09)



Features and Benefits

- two-screw clamp
- with quick locking system
- with removable spacer washers, making the clamp suitable for either sliding or anchoring
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- noise insulating lining, EPDM rubber, green
- lining: very suitable for applications with plastic pipes
- inner part of lining is flush to improve sliding of pipe in clamp
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
3188016	16	M8/10	63	50	31	20 x 1.25	600	50
3188020	20	M8/10	68	54	33	20 x 1.25	600	50
3188025	25	M8/10	74	59	36	20 x 1.25	600	50
3188032	32	M8/10	80	61	39	20 x 1.25	600	50
3188040	40	M8/10	91	73	45	20 x 1.25	600	50
3188050	50	M8/10	97	84	48	20 x 1.25	600	50
3188056	56	M8/10	104	90	51	20 x 1.25	600	50
3188058	58	M8/10	109	91	54	20 x 1.25	600	50
3188063	63	M8/10	109	99	54	20 x 1.25	600	50
3188075	75	M8/10	125	109	62	20 x 1.50	600	50
3188078	78	M8/10	132	111	65	20 x 1.50	600	25
3188090	90	M8/10	142	128	70	23 x 2.00	1,400	25
3188110	110	M8/10	164	144	81	23 x 2.00	1,400	25
3188125	125	M8/10	181	159	89	23 x 2.00	1,400	25
3188135	135	M8/10	189	169	94	23 x 2.00	1,400	25
3188160	160	M8/10	225	196	111	25 x 2.50	1,700	10
3188200	200	M8/10	269	237	125	25 x 2.50	1,700	10



Complementary

- 169 BIS RapidRail® Fixing System
- 440 BIS Pipe Reinforcement

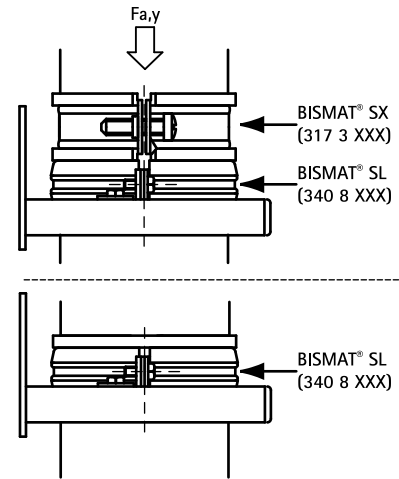
Alternative

- 32 BISMAT® 5000

BIS Stand Pipe Bracket

for stand pipes DN 70 - DN 200

(A 30 05)

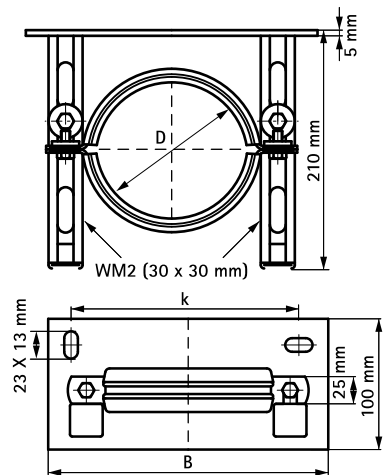


Features and Benefits

- one-part console set with BISMAT® SL Guidance clamp
- fixing free of tension throughout infinite adjustment
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- lining with unique noise insulating profile at the outside edges
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	DN	B (mm)	k (mm)	F _{a,y} (N)	Pack 1
4323070	78	70	189	144	3,000	125
4323080	83	80	194	149	3,000	125
4323100	110	100	219	174	3,000	120
4323125	135	125	246	201	3,000	100
4323150	160	150	269	224	3,000	100
4323200	210	200	319	274	3,000	80

Max. allowed load (F_{a,y1}): distance between wall and centre of clamp during test 130 mm. When used in combination with the BISMAT® SX-Socket Clamp the max. allowed load is determined by the SX Clamp (page A 30 15).



Complementary

- 36 BISMAT® SX Socket Clamp
- 37 BISMAT® SL Guidance Clamp

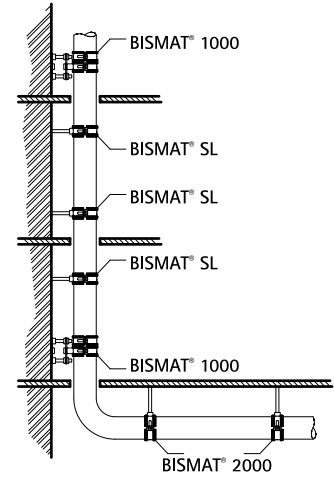
Alternative

- 35 BISMAT® 1000 Stand Pipe Clamp

BISMAT[®] 1000 Stand Pipe Clamp

(A 30 10)

for stand pipes DN 70 - DN 200

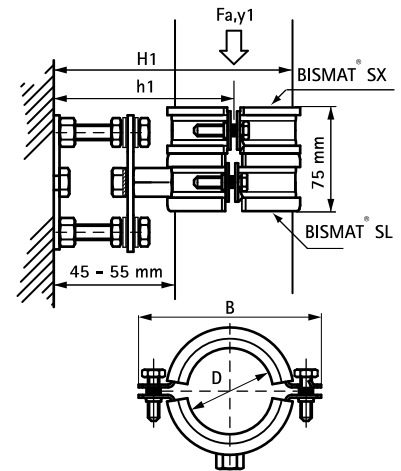


Features and Benefits

- adjustable wall plate with BISMAT[®] SL Guidance clamp and BISMAT[®] SX Socket clamp
- unique set for the installation of cast iron or plastic stand pipes
- to be mounted every second floor, height 3.0 m (from Ø 125 mm, one each floor)
- fixing free of tension throughout infinite adjustment
- adjustable distance between pipe and wall
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- noise insulation tested according to DIN 4109 (insulation exceeds standards)

Part No.	D (mm)	DN	Type	B (mm)	H1 (mm)	h1 (mm)	F _{a,y} (N)	Pack 1
3363070	75	70	KA	144	140 - 150	93 - 102	650	5
3363075	78	70	GA	154	140 - 150	93 - 103	650	5
3363080	83	80	GA	144	143 - 153	94 - 104	820	5
3363090	89	80	-	164	147 - 154	102 - 109	820	5
3363100	110	100	KA / GA	176	175 - 185	110 - 120	820	5
3363125	125	125	KA	192	190 - 200	118 - 128	820	5
3363137	135	125	GA	192	200 - 210	123 - 133	820	5
3363150	160	150	KA / GA	233	235 - 245	137 - 147	820	5
3363200	210	200	GA	284	280 - 290	162 - 172	820	5

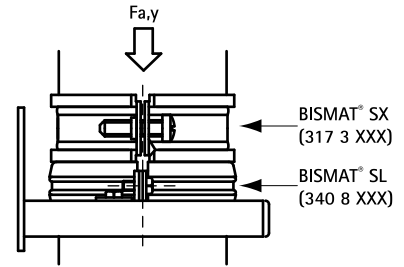
KA = Plastic drain pipe, GA = cast iron drain pipe



BISMAT[®] SX Socket Clamp

for stand pipes DN 70 - DN 200

(A 30 15)

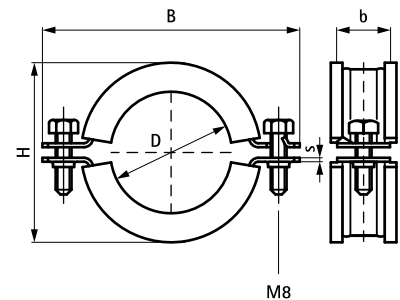


Features and Benefits

- two-screw clamp
- with quick locking system
- alternative for cast iron socket clamp or plastic drain pipes
- ideal for application in combination with BIS Stand pipe brackets (Part No. 4323XXX)
- material: steel
- zinc plated
- EPDM rubber lining, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	DN	Type	B (mm)	H (mm)	b x s (mm)	F _{a,y} (N)	Pack 1
3173075	75	70	KA	149	104	25 x 2.5	650	10
3173078	78	70	GA	154	109	25 x 2.5	650	10
3173085	83	80	GA	159	114	25 x 2.5	700	10
3173116	110	100	KA / GA	184	139	25 x 2.5	1,000	10
3173132	125	125	KA	199	154	25 x 2.5	1,100	10
3173141	137	125	GA	211	166	25 x 2.5	1,250	10
3173168	160	150	KA / GA	234	189	25 x 2.5	1,500	10
3173219	210	200	GA	284	239	25 x 2.5	1,500	5

KA = Plastic drain pipe, GA = cast iron drain pipe

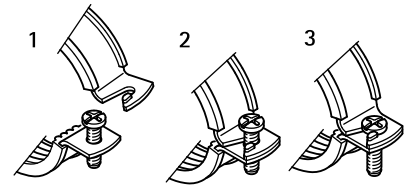


BISMAT[®] SL Guidance Clamp

(A 30 20)

for stand pipes DN 70 - DN 200

M10

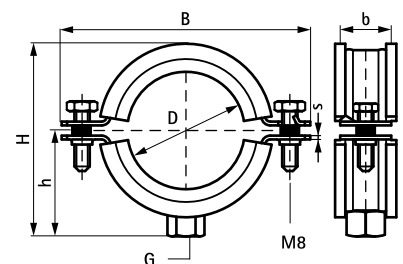


Features and Benefits

- two-screw clamp
- with quick locking system
- the inside diameter of the clamp is designed for noise isolating plastic pipes (e.g. Friaphon[®], As[®], Raupiano[®]) and cast iron drain pipes
- suitable for plastic pipe
- spacer washers between the flanges guarantee a limited grip to protect the rubber from crushing
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- lining with unique noise insulating profile at the outside edges
- age resistant lining
- sound insulating lining according DIN 4109

Part No.	D (mm)	DN	Type	G	B (mm)	H (mm)	h (mm)	b x s (mm)	Pack 1
3408050	50	50	KA	M10	124	96	58	25 x 3.0	10
3408070	78	70	GA	M10	154	133	75	25 x 3.0	10
3408075	75	70	KA	M10	149	129	74	25 x 3.0	10
3408090	90	80	KA	M10	164	143	81	25 x 3.0	10
3408100	110	100	KA / GA	M10	184	164	91	25 x 3.0	10
3408125	125	125	KA	M10	199	179	99	25 x 3.0	10
3408137	135	125	GA	M10	211	190	104	25 x 3.0	10
3408150	160	150	KA / GA	M10	234	214	116	25 x 3.0	10
3408200	210	200	GA	M10	284	254	132	25 x 3.0	5

KA = Plastic drain pipe, GA = cast iron drain pipe



BIS Rubber Profile

(A 35 05)

noise insulation clamp lining

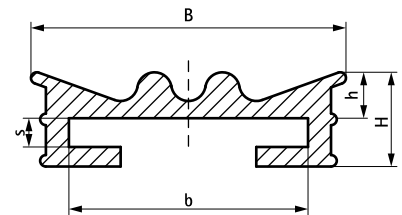


Features and Benefits

- extruded profile
- to make noise insulating clamp lining
- material: EPDM rubber, black
- chlorine free and resistant to ageing
- resistant to ozone, UV, weather and sea water
- shore A hardness 45 ± 5
- temperature resistance from -30 °C to $+110\text{ °C}$
- sound insulating lining according DIN 4109

Part No.	L	B (mm)	H (mm)	h (mm)	b x s (mm)	Pack 1	App.
0840204	180 m	26	8.0	4.0	20.0 x 4.0	180	m.
0840254	140 m	31	8.5	4.0	25.0 x 4.0	140	m.
0840304	120 m	47	10.5	4.0	30.0 x 4.0	120	m.

Other profiles and dimensions available on request.



BIS Rubber Moulding Part

(A 35 10)

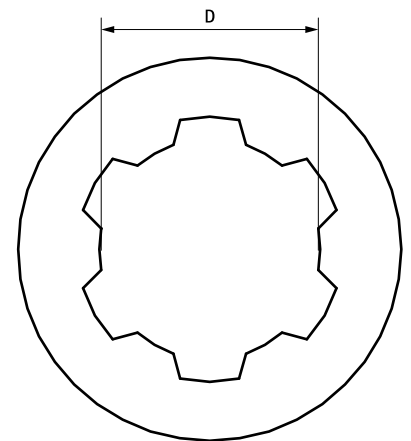
noise insulation clamp lining 15 - 22 mm



Features and Benefits

- injection moulding piece
- to make noise insulating clamp lining
- material: PVC (polyvinylchloride), transparent
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (")	DN	Colour	Pack 1	Pack 2
0840051	15	-	-	Transparent	100	-
0840052	22	1/2	15	Transparent	100	-



BIS Silicone Profile

(A 35 15)

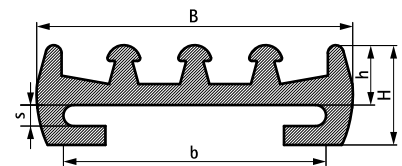
heat-resistant noise insulation clamp lining



Features and Benefits

- extruded profile
- to make noise insulating, heat resistant clamp lining
- material: silicon rubber, reddish brown
- chlorine free and resistant to ageing
- resistant to ozone, UV, weather and sea water
- shore A hardness 45 ± 5
- temperature resistance from -30 °C to $+210\text{ °C}$
- sound insulating lining according DIN 4109

Part No.	L	B (mm)	H (mm)	h (mm)	b x s (mm)	Pack 1	App.
0845205	50 m	25.0	7.5	4.0	20 x 1.5	50	m.
0846205	100 m	25.0	7.5	4.0	20 x 1.5	100	m.
0845255	50 m	30.0	9.5	5.5	25 x 2.0	50	m.
0845304	50 m	35.4	8.7	4.0	30 x 3.0	50	m.
0845408	50 m	44.0	14.0	8.0	40 x 4.0	50	m.
0845506	50 m	57.0	14.0	7.0	52 x 4.5	50	m.



B BIS Metal Pipe Clamps



BIS Clamps

Bifix® G2 (M8/10) (BUP1000)	42
2S Clamp (M8)	43
2S Clamp (M8/10)	44



BIS Industrial Clamps

BIS Heavy Duty Clamp HD500 (M8/10, M10/12) (BUP1000)	45
BIS Heavy Duty Clamp HD500 (M16) (BUP1000)	46
BIS Heavy Duty Clamp HD500 (1/2") (BUP1000)	47
BIS Heavy Duty Clamp HD500 (1") (BUP1000)	49
BIS U-Clamp (DIN 3570)	50
BIS U-Clamp	51
BIS U-Clamp (long)	52
BIS U-Bolt Support	53



BIS Sprinkler Clamps

BIS Sprinkler Clamp HD500 (BUP1000)	54
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BIS Industrial Saddles

BIS Split Band Clip DIN 3567	55
BIS Split Band Clip DIN 3567 (hdg)	56



BIS Double Clamps

BIS Duplo Double Clamp	57
BIS Double Wall Clamp	58



BIS Nail-in Clamps

BIS Nail-in Clamp	59
BIS Pipe Hook	60



BIS Light Duty Clamps and Saddles

BIS Pipe Saddle (Copper)	61
BIS Decorative Pipe Clamp (Brass)	62



BIS Clamps for Plastic Pipe

BIS 4000 (BUP1000)	63
BIS 4000 (zp)	64
BIS 434 Clamp for PE-Pipe	65
BIS Metal Liner 434 Clamp	66
BIS Lining 434 Clamp	67



BIS Clamps for Rain Water Pipe

BIS Hinged Pipe Clamp 400 (Round)	68
BIS Hinged Pipe Clamp 400 (Square)	69
BIS Intruder Deterrent Clamp	70



BIS Foundation Clamp

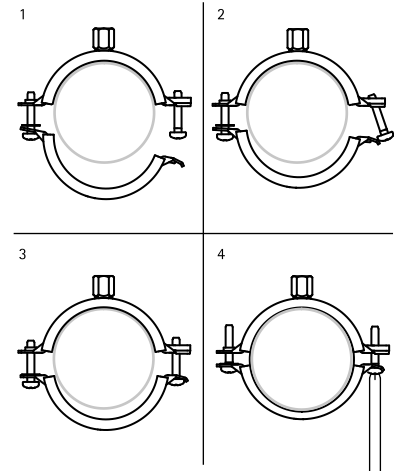
BIS Funderingsbeugel	71
BIS Combibeugel	72
BIS Fixeringskap	73
BIS Klemschuif	74
BIS Funderingshaak	75

Bifix® G2 (M8/10) (BUP1000)

(B 05 04)

for insulated pipe, steel, copper, cast iron and plastic (multilayer) pipe 10 - 225 mm

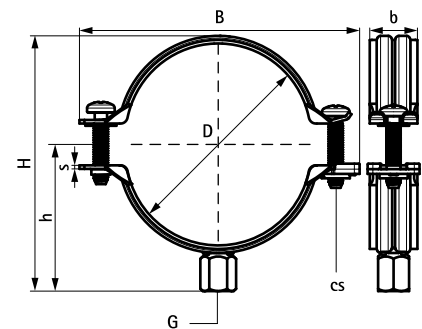
M8/10



Features and Benefits

- two-screw clamp
- with quick locking system
- perfect solution for pipe supports, also for outdoor installations
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
3008014	10 - 14	¼	8	M8/10	52	35	26	20 x 1.25	1,200	50
3008019	15 - 19	⅜	10	M8/10	59	42	29	20 x 1.25	1,200	50
3008023	20 - 23	½	15	M8/10	63	46	31	20 x 1.25	1,200	50
3008028	25 - 28	¾	20	M8/10	68	51	33	20 x 1.25	1,200	50
3008035	31 - 35	1	25	M8/10	74	57	36	20 x 1.25	1,200	50
3008039	36 - 39	-	-	M8/10	80	63	40	20 x 1.25	1,200	50
3008045	40 - 45	1¼	32	M8/10	84	67	41	20 x 1.25	1,200	50
3008052	48 - 52	1½	40	M8/10	91	74	45	20 x 1.25	1,200	50
3008058	54 - 58	-	-	M8/10	97	80	48	20 x 1.25	1,200	50
3008064	60 - 64	2	50	M8/10	104	87	51	20 x 1.25	1,200	50
3008070	66 - 70	-	-	M8/10	110	92	54	20 x 1.50	1,200	50
3008079	75 - 79	2½	65	M8/10	118	100	58	20 x 1.50	1,300	50
3008083	80 - 83	-	-	M8/10	125	108	62	20 x 1.50	1,300	50
3008091	88 - 91	3	80	M8/10	133	114	66	23 x 2.00	1,800	50
3008105	100 - 105	-	-	M8/10	147	123	73	23 x 2.00	1,800	50
3008115	108 - 115	4	100	M8/10	155	137	77	23 x 2.00	1,800	25
3008130	125 - 130	-	-	M8/10	172	145	85	23 x 2.00	1,800	25
3008140	133 - 140	5	125	M8/10	180	162	89	23 x 2.00	1,800	25
3008160	152 - 160	-	-	M8/10	201	171	100	23 x 2.00	1,800	25
3008169	165 - 169	6	150	M8/10	217	190	107	25 x 2.50	3,600	25
3008180	176 - 180	-	-	M8/10	229	203	113	25 x 2.50	3,600	15
3008200	192 - 200	-	-	M8/10	248	209	123	25 x 2.50	3,600	15
3008210	205 - 210	-	-	M8/10	261	238	129	25 x 2.50	3,600	15
3008225	219 - 225	8	200	M8/10	275	249	136	25 x 2.50	3,600	15

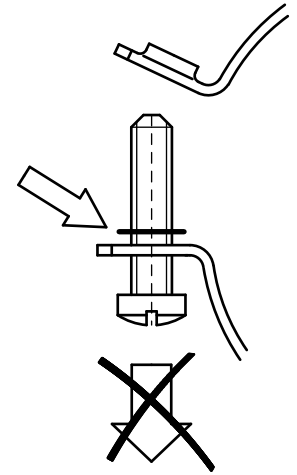


2S Clamp (M8)

(B 05 23)

for insulated pipe, steel, copper, cast iron and plastic (multilayer) pipe 10 - 67 mm

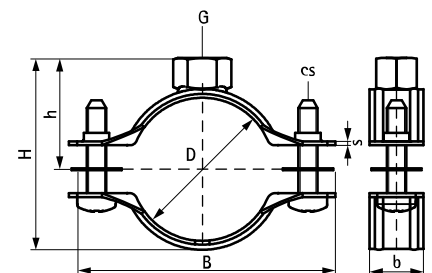
M8



Features and Benefits

- gapless range
- anti loss washers prevent screws from falling out during installation
- perfect solution for insulated pipe supports
- material: steel
- zinc plated

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33025014	10 - 14	1/8 - 1/4	6 - 8	M8	46	27	17	20 x 1.00	M5	700	RAL ¹	50
33025019	15 - 19	3/8	10	M8	51	32	20	20 x 1.00	M5	700	RAL ¹	50
33025024	20 - 24	1/2	15	M8	56	37	22	20 x 1.00	M5	700	RAL ¹	50
33025030	25 - 30	3/4	20	M8	62	43	25	20 x 1.00	M5	700	RAL ¹	50
33025037	31 - 37	1	25	M8	69	50	29	20 x 1.00	M5	700	RAL ¹	50
33025046	38 - 46	1 1/4	32	M8	78	60	34	20 x 1.25	M5	950	RAL ¹	50
33025052	47 - 52	1 1/2	40	M8	84	66	37	20 x 1.25	M5	950	RAL ¹	50
33025061	53 - 61	2	50	M8	93	75	41	20 x 1.25	M5	950	RAL ¹	50
33025067	62 - 67	-	-	M8	99	81	44	20 x 1.25	M5	950	RAL ¹	50

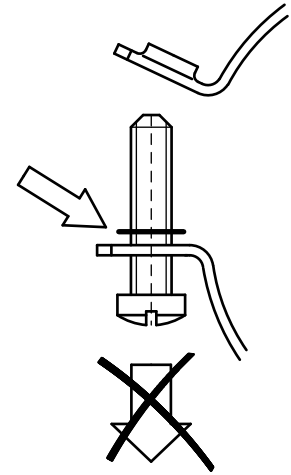


2S Clamp (M8/10)

(B 05 24)

for insulated pipe, steel, copper, cast iron and plastic (multilayer) pipe 10 - 225 mm

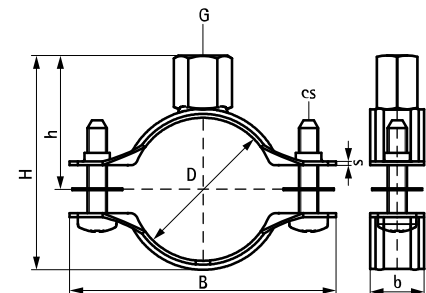
M8/10



Features and Benefits

- gapless range
- anti loss washers prevent screws from falling out during installation
- perfect solution for insulated pipe supports
- material: steel
- zinc plated

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33035014	10 - 14	1/8 - 1/4	6 - 8	M8/10	46	35	25	20 x 1.00	M5	700	RAL ¹	50
33035019	15 - 19	3/8	10	M8/10	51	40	28	20 x 1.00	M5	700	RAL ¹	50
33035024	20 - 24	1/2	15	M8/10	56	45	30	20 x 1.00	M5	700	RAL ¹	50
33035030	25 - 30	3/4	20	M8/10	62	51	33	20 x 1.00	M5	700	RAL ¹	50
33035037	31 - 37	1	25	M8/10	69	58	37	20 x 1.00	M5	700	RAL ¹	50
33035046	38 - 46	1 1/4	32	M8/10	78	68	42	20 x 1.25	M5	950	RAL ¹	50
33035052	47 - 52	1 1/2	40	M8/10	84	74	45	20 x 1.25	M5	950	RAL ¹	50
33035061	53 - 61	2	50	M8/10	93	83	49	20 x 1.25	M5	950	RAL ¹	50
33035067	62 - 67	-	-	M8/10	99	89	53	20 x 1.25	M5	950	RAL ¹	50
33035074	68 - 74	-	-	M8/10	111	96	56	20 x 1.50	M6	1,400	RAL ¹	50
33035081	75 - 81	2 1/2	65	M8/10	118	103	60	20 x 1.50	M6	1,400	RAL ¹	50
33035087	82 - 87	-	-	M8/10	124	109	63	20 x 1.50	M6	1,400	RAL ¹	50
33035095	88 - 95	3	80	M8/10	136	119	68	23 x 2.00	M6	2,000	RAL ¹	50
33035103	96 - 103	-	-	M8/10	143	127	72	23 x 2.00	M6	2,000	RAL ¹	50
33035112	104 - 112	-	-	M8/10	153	136	76	23 x 2.00	M6	2,000	RAL ¹	25
33035118	113 - 118	4	100	M8/10	159	142	79	23 x 2.00	M6	2,000	RAL ¹	25
33035127	119 - 127	-	-	M8/10	168	151	84	23 x 2.00	M6	2,000	RAL ¹	25
33035137	128 - 137	-	-	M8/10	178	161	89	23 x 2.00	M6	2,000	RAL ¹	25
33035144	138 - 144	5	125	M8/10	185	168	92	23 x 2.00	M6	2,000	RAL ¹	25
33035153	145 - 153	-	-	M8/10	194	177	97	23 x 2.00	M6	2,000	RAL ¹	25
33035162	154 - 162	-	-	M8/10	203	186	101	23 x 2.00	M6	2,000	RAL ¹	25
33035172	163 - 172	6	150	M8/10	217	199	109	25 x 2.50	M6	3,300	RAL ¹	25
33035183	173 - 183	-	-	M8/10	227	210	114	25 x 2.50	M6	3,300	RAL ¹	15
33035194	184 - 194	-	-	M8/10	239	221	120	25 x 2.50	M6	3,300	RAL ¹	15
33035205	195 - 205	-	-	M8/10	249	232	125	25 x 2.50	M6	3,300	RAL ¹	15
33035216	206 - 216	-	-	M8/10	260	243	130	25 x 2.50	M6	3,300	RAL ¹	15
33035225	217 - 225	8	200	M8/10	271	253	136	25 x 2.50	M6	3,300	RAL ¹	10



BIS Heavy Duty Clamp HD500 (BUP1000)

(B 10 04)

for steel pipes 15 - 227 mm

M8/10 - M10/12



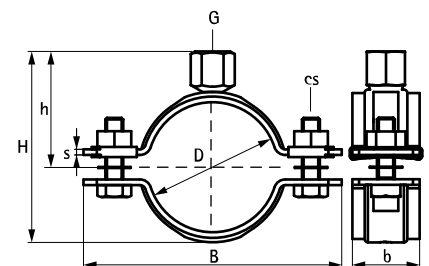
Features and Benefits

- two-part clamp with two locking bolts
- up to and including 5": locking nut is captive, hidden in plastic holder
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- also available: noise insulating lining of silicone rubber (reddish brown), heat resistant up to +200 °C (A 35 15)
- tested for fire safety



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33038019	15 - 19	3/8	10	M8/10	75	46	32	30 x 2.5	M8	2,100	RAL ²	25
33038023	19 - 23	1/2	15	M8/10	78	50	34	30 x 2.5	M8	2,100	RAL ²	25
33038030	25 - 30	3/4	20	M8/10	84	57	38	30 x 2.5	M8	2,100	RAL ²	25
33038036	31 - 36	1	25	M8/10	91	63	41	30 x 2.5	M8	2,100	RAL ²	25
33038042	37 - 42	-	-	M8/10	98	69	44	30 x 2.5	M8	2,100	RAL ²	25
33038045	40 - 45	1 1/4	32	M8/10	101	72	45	30 x 2.5	M8	2,100	RAL ²	25
33038052	47 - 52	1 1/2	40	M8/10	109	79	49	30 x 2.5	M8	2,100	RAL ²	25
33038058	53 - 58	-	-	M8/10	115	85	52	30 x 2.5	M8	2,100	RAL ²	25
33038065	59 - 65	2	50	M8/10	122	92	55	30 x 2.5	M8	2,100	RAL ²	25
33038071	66 - 71	-	-	M8/10	129	98	58	30 x 2.5	M8	2,100	RAL ²	25
33048078	72 - 78	2 1/2	65	M10/12	136	115	70	30 x 3.0	M8	4,000	RAL ²	25
33048085	79 - 85	-	-	M10/12	144	122	75	30 x 3.0	M8	4,000	RAL ²	25
33048092	86 - 92	3	80	M10/12	152	129	78	30 x 3.0	M8	4,000	RAL ²	25
33048106	98 - 106	-	-	M10/12	165	143	85	30 x 3.0	M8	4,000	RAL ²	25
33048116	108 - 116	4	100	M10/12	175	153	90	30 x 3.0	M8	4,000	RAL ²	25
33048123	116 - 123	-	-	M10/12	182	160	94	30 x 3.0	M8	4,000	RAL ²	25
33048133	125 - 133	-	-	M10/12	193	170	99	30 x 3.0	M8	4,000	RAL ²	25
33048140	132 - 140	5	125	M10/12	200	177	102	30 x 3.0	M8	4,000	RAL ²	25
33048154	148 - 154	-	-	M10/12	215	191	109	30 x 3.0	M8	4,000	RAL ²	15
33048169	159 - 169	6	150	M10/12	240	207	117	38 x 4.0	M10	8,200	RAL ²	15
33048183	173 - 183	-	-	M10/12	254	221	124	38 x 4.0	M10	8,200	RAL ²	15
33048202	192 - 202	-	-	M10/12	274	240	133	38 x 4.0	M10	8,200	RAL ²	15
33048219	208 - 219	-	-	M10/12	290	256	141	38 x 4.0	M10	8,200	RAL ²	15
33048227	217 - 227	8	200	M10/12	299	265	146	38 x 4.0	M10	8,200	RAL ²	2

RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656. For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Complementary

- 40 BIS Silicone Profile
- 141 BIS dB-FIX® 80 Fixing Point Assembly

Alternative

- 25 BIS Heavy Duty Clamp HD1501 (BUP1000)

BIS Heavy Duty Clamp HD500 (BUP1000)

(B 10 06)

for steel pipes 159 - 509 mm

M16



Features and Benefits

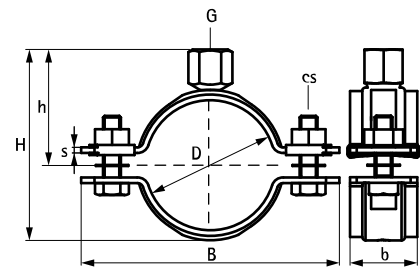
- two-part clamp with two locking bolts
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- also available: noise insulating lining of silicone rubber (reddish brown), heat resistant up to +200 °C (A 35 15)
- tested for fire safety



Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33068169	159 - 169	6	150	M16	241	193	103	38 x 4.0	M10	8,200	RAL ¹	15
33068183	173 - 183	-	-	M16	255	207	110	38 x 4.0	M10	8,200	RAL ¹	15
33068202	192 - 202	-	-	M16	274	226	130	38 x 4.0	M10	8,200	RAL ¹	15
33068227	217 - 227	8	200	M16	299	263	144	38 x 4.0	M10	8,200	RAL ¹	2
33068241	229 - 241	-	-	M16	322	277	151	38 x 4.0	M12	8,200	RAL ¹	2
33068254	244 - 254	-	-	M16	335	290	158	38 x 4.0	M12	8,200	RAL ¹	2
33068264	254 - 264	-	-	M16	345	300	163	38 x 4.0	M12	8,200	RAL ¹	2
33068279	267 - 279	10	250	M16	360	315	170	38 x 4.0	M12	8,200	RAL ¹	2
33068289	279 - 289	-	-	M16	367	324	175	48 x 5.0	M12	12,000	RAL ¹	2
33068302	292 - 302	-	-	M16	380	337	181	48 x 5.0	M12	12,000	RAL ¹	2
33068325	315 - 325	12	300	M16	403	358	193	48 x 5.0	M12	12,000	RAL ¹	2
33068360	350 - 360	14	350	M16	439	395	210	48 x 5.0	M12	12,000	RAL ¹	2
33068374	364 - 374	-	-	M16	453	409	217	48 x 5.0	M12	12,000	RAL ¹	2
33068389	379 - 389	-	-	M16	468	424	225	48 x 5.0	M12	12,000	RAL ¹	2
33068408	398 - 408	16	400	M16	487	443	234	48 x 5.0	M12	12,000	RAL ¹	2
33068418	408 - 418	-	-	M16	498	441	227	48 x 5.0	M12	12,000	RAL ¹	2
33068436	424 - 436	-	-	M16	515	471	248	48 x 5.0	M12	12,000	RAL ¹	2
33068458	448 - 458	18	450	M16	537	493	259	48 x 5.0	M12	12,000	RAL ¹	2
33068509	499 - 509	20	500	M16	588	544	285	48 x 5.0	M12	12,000	RAL ¹	2

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Complementary

- 40 BIS Silicone Profile

Alternative

- 26 BIS Heavy Duty Clamp HD1501 (BUP1000)

BIS Heavy Duty Clamp HD500 (BUP1000)

(B 10 09)

for steel pipes 15 - 564 mm

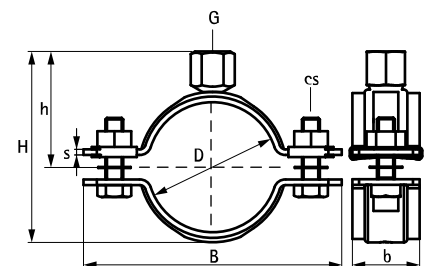
G1/2"



Features and Benefits

- two-part clamp with two locking bolts
- up to and including 5": locking nut is captive, hidden in plastic holder
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- tested for fire safety
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	RAL	Pack 1
33078019	15 - 19	3/8	10	G1/2"	75	43	29	30 x 2.5	M8	2,100	RAL ²	25
33078023	19 - 23	1/2	15	G1/2"	78	47	31	30 x 2.5	M8	2,100	RAL ²	25
33078030	25 - 30	3/4	20	G1/2"	84	54	35	30 x 2.5	M8	2,100	RAL ²	25
33078036	31 - 36	1	25	G1/2"	91	60	38	30 x 2.5	M8	2,100	RAL ²	25
33078042	37 - 42	-	-	G1/2"	98	66	40	30 x 2.5	M8	2,100	RAL ²	25
33078045	40 - 45	1 1/4	32	G1/2"	101	69	42	30 x 2.5	M8	2,100	RAL ²	25
33078052	47 - 52	1 1/2	40	G1/2"	109	76	46	30 x 2.5	M8	2,100	RAL ²	25
33078058	53 - 58	-	-	G1/2"	115	82	48	30 x 2.5	M8	2,100	RAL ²	25
33078065	59 - 65	2	50	G1/2"	122	89	52	30 x 2.5	M8	2,100	RAL ²	25
33078071	66 - 71	-	-	G1/2"	129	95	55	30 x 2.5	M8	2,100	RAL ²	25
33078078	72 - 78	2 1/2	65	G1/2"	136	103	59	30 x 3.0	M8	4,000	RAL ²	25
33078085	79 - 85	-	-	G1/2"	144	110	63	30 x 3.0	M8	4,000	RAL ²	25
33078092	86 - 92	3	80	G1/2"	152	117	66	30 x 3.0	M8	4,000	RAL ²	25
33078106	98 - 106	-	-	G1/2"	165	131	73	30 x 3.0	M8	4,000	RAL ²	25
33078116	108 - 116	4	100	G1/2"	175	141	78	30 x 3.0	M8	4,000	RAL ²	25
33078133	125 - 133	-	-	G1/2"	193	158	87	30 x 3.0	M8	4,000	RAL ²	25
33078140	132 - 140	5	125	G1/2"	200	165	90	30 x 3.0	M8	4,000	RAL ²	25
33078154	148 - 154	-	-	G1/2"	215	179	97	30 x 3.0	M8	4,000	RAL ²	15
33078183	173 - 183	-	-	G1/2"	254	209	112	38 x 4.0	M10	8,200	RAL ²	15
33078202	192 - 202	-	-	G1/2"	274	228	122	38 x 4.0	M10	8,200	RAL ²	15
33078219	208 - 219	-	-	G1/2"	290	244	130	38 x 4.0	M10	8,200	RAL ²	15
33078227	217 - 227	8	200	G1/2"	299	253	134	38 x 4.0	M10	8,200	RAL ²	2
33078254	244 - 254	-	-	G1/2"	335	280	148	38 x 4.0	M12	8,200	RAL ¹	2
33078279	267 - 279	10	250	G1/2"	360	305	160	38 x 4.0	M12	8,200	RAL ¹	2
33078289	279 - 289	-	-	G1/2"	367	314	165	48 x 5.0	M12	12,000	RAL ¹	2
33078325	315 - 325	12	300	G1/2"	403	348	183	48 x 5.0	M12	12,000	RAL ¹	2
33078360	350 - 360	-	-	G1/2"	439	385	200	48 x 5.0	M12	12,000	RAL ¹	2
33078408	398 - 408	16	400	G1/2"	487	433	224	48 x 5.0	M12	12,000	RAL ¹	2
33078436	424 - 436	-	-	G1/2"	515	461	238	48 x 5.0	M12	12,000	RAL ¹	2
33078458	448 - 458	18	450	G1/2"	537	483	249	48 x 5.0	M12	12,000	RAL ¹	2
33078509	499 - 509	20	500	G1/2"	588	534	275	48 x 5.0	M12	12,000	RAL ¹	2
33078564	554 - 564	-	-	G1/2"	643	589	302	48 x 5.0	M12	12,000	RAL ¹	2



RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.
 RAL² = tested, certified and monitored by a third party according to RAL-GZ 655/B and RAL-GZ 656.
 For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Complementary



- 40 BIS Silicone Profile
- 474 BIS Threaded Tube

Alternative

- 27 BIS Heavy Duty Clamp HD1501 (BUP1000)

RAL Information BIS HD500

Max. allowed load (Fa,z) according to RAL-GZ 655/B and RAL-GZ 656

				 Cert. No. 2011-13a	 Cert. No. 2011-05							
Part No.	Ø (mm)	Conne- tion nut	Cata- logue page	RAL-GZ 655/B	RAL-GZ 656							
				F0	F30		F60		F90		F120	
				Fa,z (N)	Fa,z (N)	Defor- mation (mm)	Fa,z (N)	Defor- mation (mm)	Fa,z (N)	Defor- mation (mm)	Fa,z (N)	Defor- mation (mm)
3303 8 0XX	15 - 71	M8/10	B 10 04	2,100	940	30	380	61	-	-	-	-
3304 8 XXX	72 - 154	M10/12	B 10 04	4,000	1,980	41	910	83	-	-	-	-
3304 8 XXX	159 - 227	M10/12	B 10 04	8,200	1,850	70	1,310	78	-	-	-	-
3306 8 XXX	159 - 279	M16	B 10 06	8,200	1,850*	70*	1,310*	78*	-	-	-	-
3306 8 XXX	279 - 509	M16	B 10 06	12,000	-	-	-	-	-	-	-	-
3307 8 XXX	15 - 71	G½"	B 10 09	2,100	940	30	380	61	-	-	-	-
3307 8 XXX	72 - 154	G½"	B 10 09	4,000	1,980	41	910	83	-	-	-	-
3307 8 XXX	159 - 279	G½"	B 10 09	8,000	1,850*	70*	1,310*	78*	-	-	-	-
3307 8 XXX	279 - 509	G½"	B 10 09	12,000	-	-	-	-	-	-	-	-

* up to 227 mm.

The max. allowed load (Fa,z) according to RAL-GZ 655/B is calculated using specific statistical methods related to the breaking load and taking into account a deflection of 1,5 mm or 2% of the maximum nominal clamp diameter.

According to the RAL requirements, the test results from above mentioned RAL certified articles are monitored by an independent test institute.

BIS Heavy Duty Clamp HD500 (BUP1000)

(B 10 19)

for steel pipes 159 - 564 mm

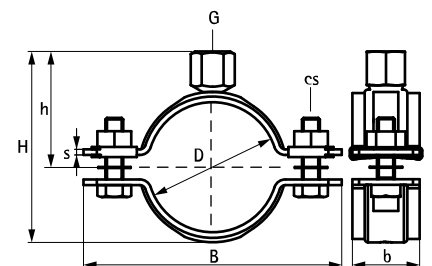
G1"



Features and Benefits

- two-part clamp with two locking bolts
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- also available: noise insulating lining of silicone rubber (reddish brown), heat resistant up to +200 °C (A 35 15)

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
33088169	159 - 169	6	-	G1"	241	200	38 x 4.0	M10	8,200	15
33088183	173 - 183	-	-	G1"	255	214	38 x 4.0	M10	8,200	15
33088202	192 - 202	-	-	G1"	274	233	38 x 4.0	M10	8,200	15
33088227	217 - 227	8	200	G1"	299	258	38 x 4.0	M10	8,200	2
33088254	244 - 254	-	-	G1"	335	258	38 x 4.0	M12	8,200	2
33088289	279 - 289	10	-	G1"	368	319	48 x 5.0	M12	12,000	2
33088325	315 - 325	12	300	G1"	404	355	48 x 5.0	M12	12,000	2
33088360	350 - 360	14	350	G1"	440	390	48 x 5.0	M12	12,000	2
33088408	398 - 408	16	400	G1"	488	438	48 x 5.0	M12	12,000	2
33088458	448 - 458	18	450	G1"	538	488	48 x 5.0	M12	12,000	2
33088509	499 - 509	20	500	G1"	589	539	48 x 5.0	M12	12,000	2
33088564	554 - 564	-	-	G1"	644	594	48 x 5.0	M12	12,000	2



Complementary

- 241 BIS RapidStrut® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

Complementary

- 40 BIS Silicone Profile
- 474 BIS Threaded Tube

BIS U-Clamp (DIN 3570)

(B 10 23)

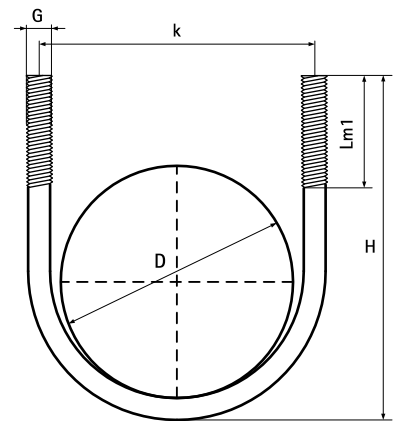
for steel pipes 26.9 - 323.9 mm



Features and Benefits

- U-clamp with thread
- according to DIN 3570
- material: steel
- zinc plated

Part No.	D (mm)	D (")	DN	G	H (mm)	Lm1 (mm)	k (mm)	Pack 1
2081310020	26.9	3/4	20	M10	69	40	40	100
2081310025	33.7	1	25	M10	76	40	47	100
2081310032	42.4	1 1/4	32	M10	85	50	56	100
2081310040	48.3	1 1/2	40	M10	91	50	62	100
2081312050	60.3	2	50	M12	109	50	76	25
2081312065	76.1	2 1/2	65	M12	125	50	94	25
2081312080	88.9	3	80	M12	135	50	105	25
2081316100	114.3	4	100	M16	170	60	136	25
2081316125	139.7	5	125	M16	196	60	164	25
2081316150	168.3	6	150	M16	224	60	192	10
2081320200	219.1	8	200	M20	283	70	248	10
2081320250	273.0	10	250	M20	337	70	302	10
2081320300	323.9	12	300	M20	390	70	352	10



BIS U-Clamp

for steel pipes 17.2 - 273.0 mm

(B 10 25)

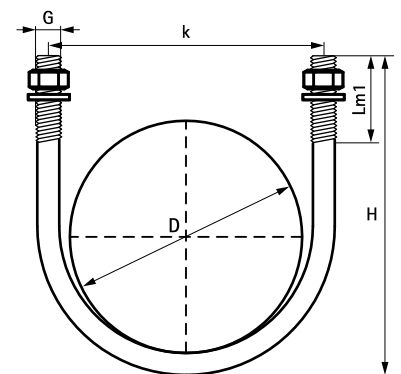


Features and Benefits

- U-clamp with thread
- including nuts and washers
- material: steel
- zinc plated

Part No.	D (mm)	D (")	DN	G	H (mm)	Lm1 (mm)	k (mm)	Pack 1
2084306017	17.2	3/8	10	M6	42	19	24	100
2084306021	21.5	1/2	15	M6	48	25	28	100
2084306027	26.9	3/4	20	M6	63	30	35	50
2084306034	33.7	1	25	M6	71	30	42	50
2084308027	26.9	3/4	20	M8	63	30	35	100
2084308034	33.7	1	25	M8	71	30	42	100
2084308042	42.4	1 1/4	32	M8	79	30	51	100
2084308049	48.3	1 1/2	40	M8	80	30	57	100
2084308060	60.3	2	50	M8	92	30	69	25
2084308076	76.1	2 1/2	65	M8	108	30	85	25
2084310090	88.9	3	80	M10	131	40	99	25
2084310114	114.3	4	100	M10	167	50	127	25
2084310140	140.0	5	125	M10	188	55		20
2084310168	168.0	6	150	M10	215	55		20
2084310220	220.0	8	200	M10	268	55		20
2084312140	139.7	5	125	M12	191	50	152	25
2084314168	168.3	6	150	M14	219	50	180	10
2084316219	219.1	8	200	M16	282	60	236	10
2084316273	273.0	10	250	M16	336	60	290	10

Also available in stainless steel.



Alternative

- 548 BIS Stainless Steel U-Clamp
- 52 BIS U-Clamp (long)

BIS U-Clamp (long)

for steel pipes 21.5 - 168.3 mm

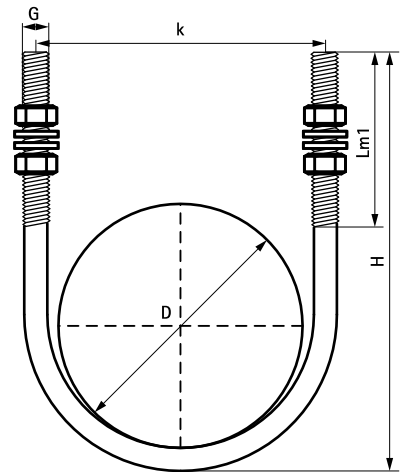
(B 10 30)



Features and Benefits

- U-clamp with thread
- including nuts and washers
- material: steel
- zinc plated

Part No.	D (mm)	D (")	DN	G	H (mm)	Lm1 (mm)	k (mm)	Pack 1
2085306021	21.5	1/2	15	M6	90	70	30	100
2085308027	26.9	3/4	20	M8	100	70	35	100
2085308034	33.7	1	25	M8	107	70	42	100
2085308042	42.4	1 1/4	32	M8	134	90	55	100
2085308049	48.3	1 1/2	40	M8	143	90	57	100
2085308060	60.3	2	50	M8	154	90	69	25
2085308076	76.1	2 1/2	65	M8	171	90	89	25
2085310090	88.9	3	80	M10	187	90	100	25
2085310114	114.3	4	100	M10	210	90	125	25
2085312140	139.7	5	125	M12	235	90	152	25
2085314168	168.3	6	150	M14	268	90	180	10



Alternative
51 BIS U-Clamp

BIS U-Bolt Support

for steel pipes

(B 10 32)



Features and Benefits

- easy and rapid installation
- fixing of steel pipes by U-Bolts
- material: steel
- zinc plated

Part No.	L	L2 (mm)	H (mm)	s (mm)	S (mm)	Pack 1
2084300100	174 mm	100 mm	100	5.0	85	25

BIS Sprinkler Clamp HD500 (BUP1000)

(B 12 05)

for sprinkler pipes 19 - 219 mm

M8 - M10 - M12 - M16



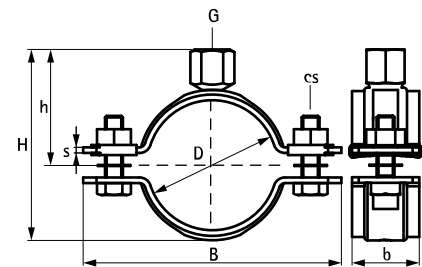
Features and Benefits

- two-part clamp with two locking bolts
- up to and including 5": locking nut is captive, hidden in plastic holder
- heavy design
- bolts secured with anti-loss washer
- with CO₂ welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- with VdS approval - certificate number G 4060019



Cert.Nr.
G 4060019

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	VdS	Pack 1
4503023	19 - 23	1/2	15	M8/10	78.5	50.0	34.0	30 x 2.5	M8	2,700	VdS	25
4503027	25 - 30	3/4	20	M8/10	85.0	57.0	37.5	30 x 2.5	M8	2,700	VdS	25
4503033	31 - 36	1	25	M8/10	90.5	63.0	40.5	30 x 2.5	M8	2,700	VdS	25
4503038	37 - 42	-	-	M8/10	97.6	69.0	43.5	30 x 2.5	M8	2,700	VdS	25
4503042	40 - 45	1 1/4	32	M8/10	101.7	71.0	45.0	30 x 2.5	M8	2,700	VdS	25
4503048	47 - 52	1 1/2	40	M8/10	108.8	78.0	48.5	30 x 2.5	M8	2,700	VdS	25
4503058	53 - 58	-	-	M8/10	114.0	84.0	51.5	30 x 2.5	M8	2,700	VdS	25
4503060	59 - 65	2	50	M8/10	120.8	89.5	55.0	30 x 2.5	M8	2,700	VdS	25
4503076	72 - 78	2 1/2	65	M10/12	137.0	112.0	71.0	30 x 3.0	M8	5,000	VdS	25
4503085	79 - 85	-	-	M10/12	144.1	119.0	74.5	30 x 3.0	M8	5,000	VdS	25
4503089	86 - 92	3	80	M10/12	151.1	126.0	78.0	30 x 3.0	M8	5,000	VdS	25
4503106	98 - 106	-	-	M10/12	164.8	141.5	85.0	30 x 3.0	M8	5,000	VdS	25
4503114	108 - 116	4	100	M10/12	174.8	151.0	90.0	30 x 3.0	M8	5,000	VdS	25
4503139	132 - 140	5	125	M12	199.0	164.0	93.0	30 x 3.0	M8	5,000	VdS	25
4503168	159 - 169	6	150	M12	240.5	192.0	105.0	38 x 4.0	M10	5,800	VdS	15
4503183	173 - 183	-	-	M12	254.6	204.0	110.0	38 x 4.0	M10	5,800	VdS	15
4503202	192 - 202	-	-	M12	273.7	222.5	119.5	38 x 4.0	M10	5,800	VdS	15
4503219	208 - 219	8	200	M16	290.8	249.0	134.0	38 x 4.0	M10	5,800	VdS	15



Complementary

- 420 BIS Beam Clamp Model C
- 427 BIS Roofing Sheet Hanger VdS

BIS Split Band Clip DIN 3567

(B 15 10)

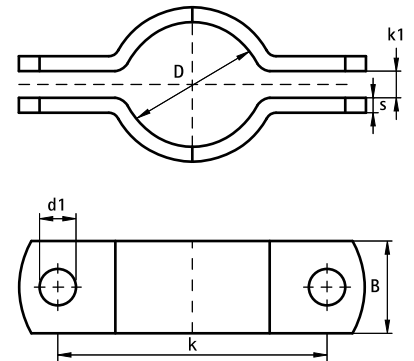
20 - 324 mm



Features and Benefits

- two equal clamp halfparts
- material: steel 1.0332
- no treatment

Part No.	D (mm)	B (mm)	s (mm)	d1 (mm)	k (mm)	k1 (mm)	Pack 1
4620020	20	30	5.0	11.5	57	7	1
4620022	22	30	5.0	11.5	59	7	1
4620025	25	30	5.0	11.5	62	7	1
4620027	27	30	5.0	11.5	66	7	1
4620030	30	30	5.0	11.5	68	7	10
4620034	34	30	5.0	11.5	72	7	1
4620038	38	30	5.0	11.5	76	7	1
4620043	43	30	5.0	11.5	82	7	1
4620045	45	30	5.0	11.5	84	7	1
4620049	49	30	5.0	11.5	88	7	10
4620057	57	40	6.0	14.0	104	9	1
4620061	61	40	6.0	14.0	108	9	1
4620077	77	40	6.0	14.0	122	9	1
4620089	89	40	6.0	14.0	136	9	1
4620108	108	50	8.0	18.0	172	11	1
4620115	115	50	8.0	18.0	178	11	1
4620133	133	50	8.0	18.0	196	11	1
4620140	140	50	8.0	18.0	204	11	1
4620159	159	50	8.0	18.0	222	11	1
4620169	169	50	8.0	18.0	232	11	1
4620194	194	50	8.0	18.0	258	11	1
4620216	216	50	8.0	18.0	280	11	1
4620220	220	50	8.0	18.0	284	11	1
4620267	267	60	8.0	23.0	342	14	1
4620273	273	60	8.0	23.0	348	14	1
4620318	318	60	8.0	23.0	392	14	1
4620324	324	60	8.0	23.0	398	14	1



BIS Split Band Clip DIN 3567 (hdg)

(B 15 15)

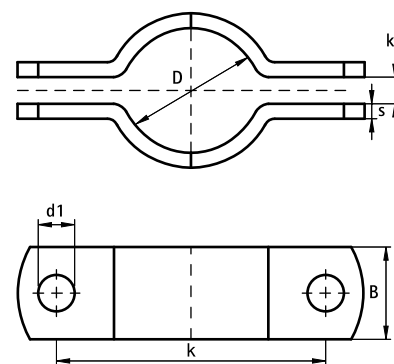
20 - 324 mm



Features and Benefits

- two equal clamp halfparts
- hot dip galvanized
- material: steel 1.0332

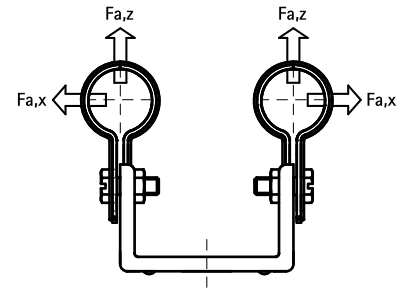
Part No.	D (mm)	B (mm)	s (mm)	d1 (mm)	k (mm)	k1 (mm)	Pack 1
4621020	20	30	5.0	11.5	57	7	1
4621022	22	30	5.0	11.5	59	7	1
4621027	27	30	5.0	11.5	66	7	1
4621030	30	30	5.0	11.5	68	7	1
4621034	34	30	5.0	11.5	72	7	1
4621038	38	30	5.0	11.5	76	7	1
4621043	43	30	5.0	11.5	82	7	1
4621045	45	30	5.0	11.5	84	7	1
4621049	49	30	5.0	11.5	88	7	1
4621057	57	40	6.0	14.0	104	9	1
4621061	61	40	6.0	14.0	108	9	1
4621077	77	40	6.0	14.0	122	9	1
4621089	89	40	6.0	14.0	136	9	1
4621108	108	50	8.0	18.0	172	11	1
4621115	115	50	8.0	18.0	178	11	1
4621133	133	50	8.0	18.0	196	11	1
4621140	140	50	8.0	18.0	204	11	1
4621159	159	50	8.0	18.0	222	11	1
4621169	169	50	8.0	18.0	232	11	1
4621220	220	50	8.0	18.0	284	11	1
4621273	273	60	8.0	23.0	348	14	1
4621324	324	60	8.0	23.0	398	14	1



BIS Duplo Double Clamp

for steel heating pipes 15.0 - 33.7 mm

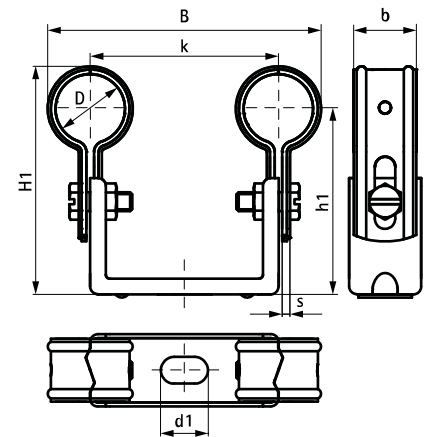
(B 20 05)



Features and Benefits

- two clamps on connection bracket
- for fixing of two pipes
- space saving
- two parts of the clamp interlock
- bracket reinforced for extra strength
- tube insulation can easily be fitted
- adjustable distance between pipe and wall
- material: steel
- pre-galvanized

Part No.	D (mm)	D (°)	DN	B (mm)	b (mm)	s (mm)	d1 (mm)	k (mm)	H1 (mm)	h1 (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3205015	15.0	-	-	79	20	1.5	8.5 x 15	60	58 - 74	48 - 64	100	200	50
3205022	22.0	1/2	15	89	20	1.5	8.5 x 15	60	65 - 81	51 - 67	100	200	50
3205028	28.0	3/4	20	93	20	2.0	8.5 x 15	60	52 - 68	68 - 84	110	330	25
3205033	33.7	1	25	98	20	2.0	8.5 x 15	60	78 - 94	57 - 73	110	330	25



Complementary

615 BIS Under Floor / Radiator Brackets

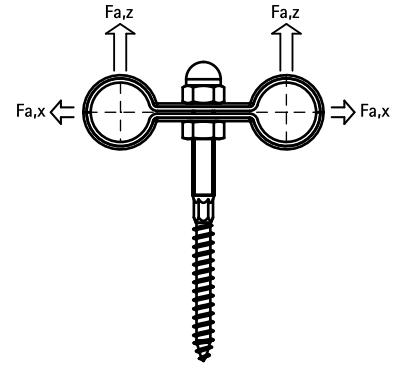
Alternative

29 BIS Duplo Double Clamp with Lining
96 BIS Duplo KS

BIS Double Wall Clamp

for steel heating pipes 15 - 28 mm

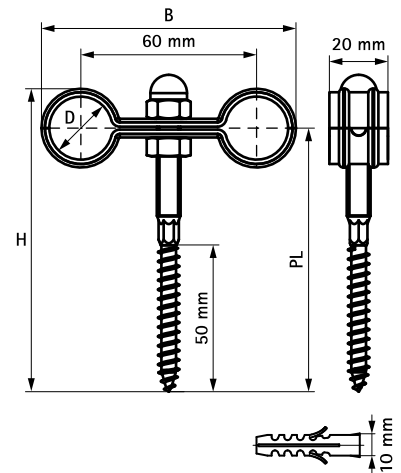
(B 20 15)



Features and Benefits

- for fixing of two pipes
- two parts of the clamp interlock
- bolt-wood screw with shoulder, making a lock nut unnecessary
- pre-galvanized
- material: steel

Part No.	D (mm)	D (°)	DN	B (mm)	H (mm)	PL (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3505015	15	-	-	80	100	90	230	200	50
3505022	22	1/2	15	87	104	90	230	200	50
3505028	28	3/4	20	93	107	90	230	330	50
3515015	15	-	-	80	120	110	230	200	25
3515022	22	1/2	15	87	124	110	230	200	25
3515028	28	3/4	20	93	127	110	230	330	25

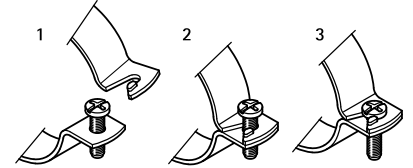


Alternative

- 30 BIS Double Wall Clamp with Lining
- 57 BIS Duplo Double Clamp

BIS Nail-in Clamp

(B 25 05)

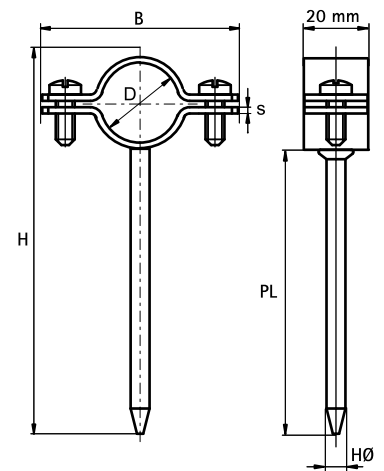


Features and Benefits

- two-screw clamp on hammer-in stud
- clamp with quick locking system
- type ST: for gas-pipe and conduit-pipe
- type KA: for plastic pipe
- material: steel
- zinc plated

Part No.	D (")	DN	Type	B (mm)	H (mm)	s (mm)	PL (mm)	HØ (mm)	Pack 1
3861021	-	15	ST	55	109	1.15	80	5	100
3861027	3/4	20	ST	63	116	1.15	80	5	100
3861033	1	25	ST	66	120	1.15	80	5	100
3861043	1 1/4	32	ST	75	131	1.15	80	6	50
3861061	2	50	ST	97	152	2.00	80	6	50
3862040	-	40	KA	72	129	2.00	80	6	100
3862050	-	50	KA	86	139	2.00	80	6	100
3862070	-	70	KA	116	183	1.50	100	6	50
3862100	-	100	KA	144	217	1.50	100	6	25

ST = gas-pipe and conduit-pipe
 KA = Plastic drain pipe.
 Type ST also available with stud 150 mm (Part No. 3871XXX).
 Other dimensions up to DN 200 can be supplied quickly.



BIS Pipe Hook

for steel pipes 17 - 63 mm

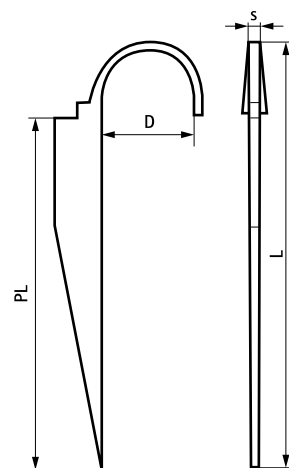
(B 25 10)



Features and Benefits

- one-part hammer-in clamp
- material: steel

Part No.	D (mm)	D (")	DN	L	s (mm)	PL (mm)	ST	Pack 1	Pack 2
0860017	17	3/8	10	69 mm	2.0	59	self colour	100	1,000
0860021	21	1/2	15	80 mm	2.0	62	self colour	100	1,000
0860027	27	3/4	20	93 mm	2.0	75	self colour	100	1,000
0861017	17	3/8	10	69 mm	2.0	59	zinc plated	100	1,000
0861021	21	1/2	15	80 mm	2.0	62	zinc plated	100	1,000
0861027	27	3/4	20	93 mm	2.0	75	zinc plated	100	1,000
0861033	35	1	25	111 mm	2.0	90	zinc plated	100	1,000
0861043	44	1 1/4	32	125 mm	2.0	74	zinc plated	100	500
0861048	52	1 1/2	40	140 mm	2.0	77	zinc plated	100	500
0861061	63	2	50	152 mm	3.5	86	zinc plated	100	500



BIS Pipe Saddle (Copper)

(B 30 15)

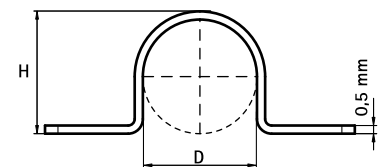
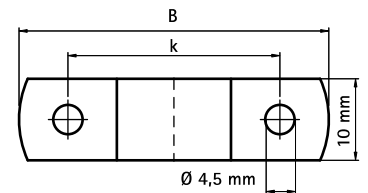
for copper pipes 8 - 28 mm



Features and Benefits

- one-part saddle
- material: copper 2.0060

Part No.	D (mm)	B (mm)	H (mm)	k (mm)	F _{a,z} (N)	Pack 1	Pack 2
4200008	8	34	9	22	1,500	100	500
4200010	10	38	11	26	25	100	500
4200012	12	40	13	28	50	100	500
4200015	15	43	16	31	65	100	500
4200018	18	46	18	34	80	100	500
4200022	22	50	23	38	100	100	500
4200028	28	56	29	44	150	100	500



BIS Decorative Pipe Clamp (Brass)

(B 30 35)

for copper pipes 12 - 35 mm

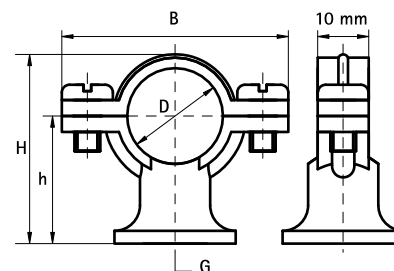
M6



Features and Benefits

- two-screw clamp
- material: brass

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	F _{a,z} (N)	Pack 1	Pack 2
0828012	12	M6	33	26	17	700	100	1,500
0828015	15	M6	36	30	20	700	100	1,000
0828022	22	M6	48	38	24	700	50	500
0828028	28	M6	56	46	29	700	50	400
0828035	35	M6	63	56	35	700	25	250



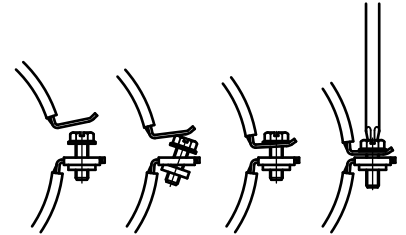
Alternative
79 starQuick® Clamp (Grey)

BIS 4000 (BUP1000)

for plastic pipes 32 - 200 mm

M8

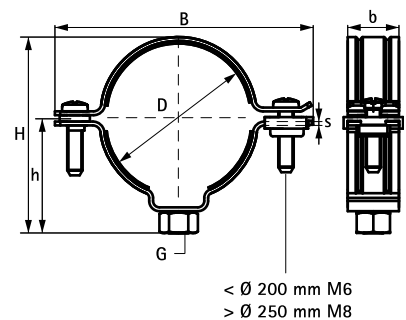
(B 35 05)



Features and Benefits

- two-screw clamp
- with quick locking system; will not open during installation
- with removable spacer washers, making the clamp suitable for either sliding or anchoring
- inside clamp diameter larger than outside pipe diameter for expansion or contraction of the pipe
- inside profile to protect pipes from damage
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	D (mm)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4448032	32	25	M8	76	54	34	20 x 1.5	910	50
4448040	40	32	M8	83	61	37	20 x 1.5	910	50
4448050	50	40	M8	95	71	41	20 x 1.5	910	50
4448056	56	50	M8	101	77	45	20 x 1.5	910	50
4448063	63	57	M8	108	84	49	20 x 1.5	910	50
4448070	70	-	M8	114	91	52	20 x 1.5	910	50
4448075	75	70	M8	119	96	55	20 x 1.5	910	50
4448080	80	-	M8	124	101	57	20 x 1.5	910	50
4448090	90	80	M8	134	111	62	20 x 1.5	910	50
4448100	100	-	M8	144	121	67	20 x 1.5	910	50
4448110	110	100	M8	158	132	73	23 x 2.0	2,200	25
4448125	125	125	M8	173	148	81	23 x 2.0	2,200	25
4448160	160	150	M8	208	184	99	23 x 2.0	2,200	25
4448200	200	200	M8	248	225	120	23 x 2.0	2,200	25

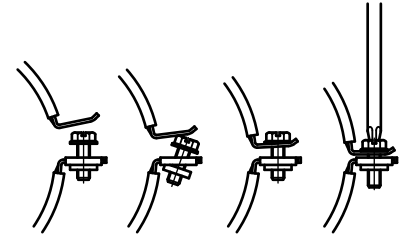


BIS 4000 (zp)

for plastic pipes 32 - 200 mm

M8

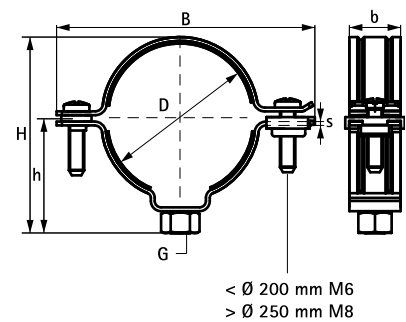
(B 35 10)



Features and Benefits

- two-screw clamp
- with quick locking system; will not open during installation
- with removable spacer washers, making the clamp suitable for either sliding or anchoring
- inside clamp diameter larger than outside pipe diameter for expansion or contraction of the pipe
- inside profile to protect pipes from damage
- material: steel 1.0332
- zinc plated

Part No.	D (mm)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4443032	32	25	M8	76	54	34	20 x 1.5	910	50
4443040	40	32	M8	83	61	37	20 x 1.5	910	50
4443050	50	40	M8	95	71	41	20 x 1.5	910	50
4443056	56	50	M8	101	77	45	20 x 1.5	910	50
4443063	63	57	M8	108	84	49	20 x 1.5	910	50
4443070	70	-	M8	114	91	52	20 x 1.5	910	50
4443075	75	70	M8	119	96	55	20 x 1.5	910	50
4443080	80	-	M8	124	101	57	20 x 1.5	910	50
4443090	90	80	M8	134	111	62	20 x 1.5	910	50
4443100	100	-	M8	144	121	67	20 x 1.5	910	50
4443110	110	100	M8	158	132	73	23 x 2.0	2,200	25
4443125	125	125	M8	173	148	81	23 x 2.0	2,200	25
4443160	160	150	M8	208	184	99	23 x 2.0	2,200	25
4443200	200	200	M8	248	225	120	23 x 2.0	2,200	25

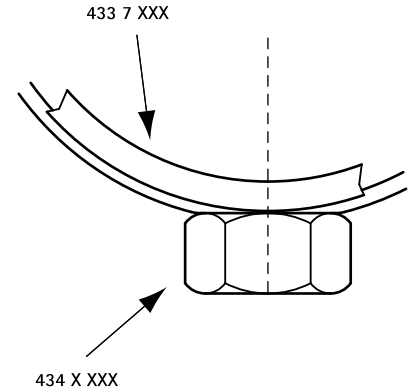


BIS 434 Clamp for PE-Pipe

(B 35 25)

for PE-pipes 25 - 315 mm

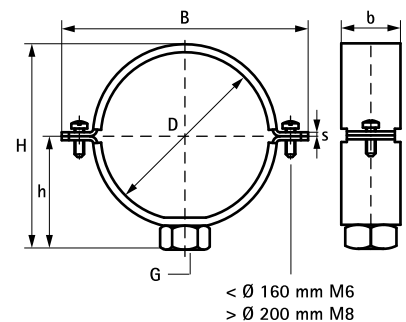
M10 - G1/2" - G1"



Features and Benefits

- two-screw clamp
- as guiding clamp for PE-Pipe
- for rigid fixing point fastening it is necessary to use metal clamp liners (Part No. 4337XXX)
- screws secured with anti-loss washer
- material: steel
- zinc plated

Part No.	D (mm)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4343025	25	-	M10	66	48	27	30 x 3.0	1,100	50
4343032	32	25	M10	75	55	35	30 x 3.0	1,100	50
4343040	40	32	M10	82	63	37	30 x 3.0	1,100	50
4343050	50	40	M10	92	73	42	30 x 3.0	1,100	50
4343056	56	50	M10	98	79	45	30 x 3.0	1,100	50
4343063	63	57	M10	105	86	48	30 x 3.0	1,100	50
4343075	75	70	M10	117	98	54	30 x 3.0	1,100	25
4343080	82	-	M10	122	102	58	30 x 3.0	1,100	25
4343090	90	80	M10	132	113	62	30 x 3.0	1,100	25
4343100	102	-	M10	142	122	67	30 x 3.0	1,100	25
4343110	110	100	M10	152	133	72	30 x 3.0	1,100	25
4343125	125	125	M10	167	148	79	30 x 3.0	1,100	25
4343160	160	150	M10	202	185	98	30 x 3.0	1,100	25
4343200	200	200	M10	278	223	117	38 x 4.0	6,200	12
4343225	225	-	M10	269	248	129	38 x 4.0	6,200	12
4343250	250	250	M10	328	273	142	38 x 4.0	6,200	8
4343315	315	315	M10	393	338	174	38 x 4.0	6,200	8
4383032	32	25	G1/2"	75	60	40	30 x 3.0	1,100	50
4383040	40	32	G1/2"	82	68	42	30 x 3.0	1,100	50
4383050	50	40	G1/2"	92	78	47	30 x 3.0	1,100	50
4383056	56	50	G1/2"	98	84	50	30 x 3.0	1,100	50
4383063	63	57	G1/2"	105	91	53	30 x 3.0	1,100	50
4383075	75	70	G1/2"	117	103	59	30 x 3.0	1,100	25
4383090	90	80	G1/2"	132	118	67	30 x 3.0	1,100	25
4383110	110	100	G1/2"	152	138	77	30 x 3.0	1,100	25
4383125	125	125	G1/2"	167	153	84	30 x 3.0	1,100	25
4383140	140	-	G1/2"	182	163	87	30 x 3.0	1,100	25
4383160	160	150	G1/2"	202	188	102	30 x 3.0	1,100	25
4383161	160	150	G1"	237	187	101	38 x 4.0	6,200	15
4383200	200	200	G1"	278	230	123	38 x 4.0	6,200	12
4383225	225	-	G1"	303	254	135	38 x 4.0	6,200	12
4383250	250	250	G1"	325	280	153	38 x 4.0	6,200	8
4383315	315	300	G1"	393	345	181	38 x 4.0	6,200	8



Complementary

- 399 BIS Fixing Accessories
- 493 BIS Fastenings
- 66 BIS Metal Liner 434 Clamp

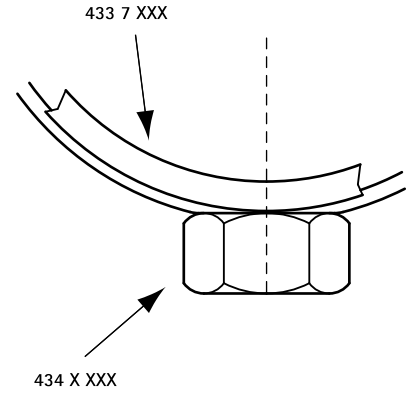
Complementary

- 67 BIS Lining 434 Clamp

BIS Metal Liner 434 Clamp

40 - 315 mm

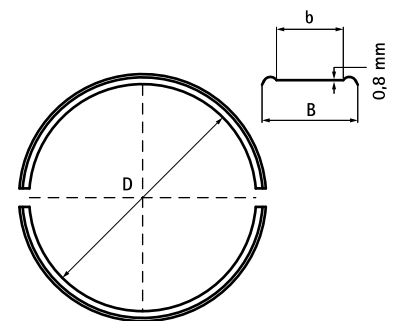
(B 35 30)



Features and Benefits

- two-part identical clamp liners
- to create a rigid fixing point, suitable for pipe clamp for PE pipe type 434
- profiled
- material: chrome steel 1.4016 (AISI 430)

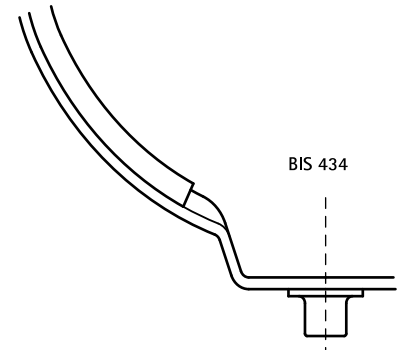
Part No.	D (mm)	DN	B (mm)	b (mm)	Pack 1
4337040	40	32	42	30	25
4337050	50	40	42	30	25
4337056	56	50	42	30	25
4337063	63	57	42	30	25
4337075	75	70	42	30	25
4337090	90	80	42	30	25
4337110	110	100	42	30	25
4337125	125	125	42	30	25
4337160	160	150	42	30	25
4337200	200	200	54	38	10
4337250	250	250	54	38	10
4337315	315	300	54	38	10



BIS Lining 434 Clamp

(B 35 35)

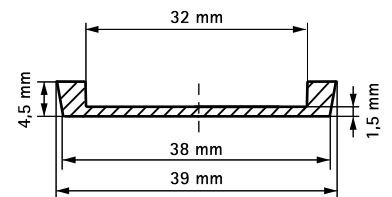
to be used in combination with BIS Clamp 434 up to and including D = 160 mm



Features and Benefits

- to avoid damage to the pipe
- material: PVC (polyvinylchloride), black (with small addition of plasticizers)
- temperature resistance up to +55 °C

Part No.	L	Pack 1	App.
4389930	10 m	10	roll



BIS Hinged Pipe Clamp 400 (Round)

(B 40 05)

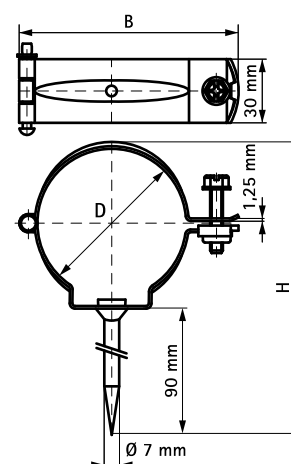
for rain water pipes 80 - 100 mm



Features and Benefits

- with quick locking system, type KSB
- for fixing of round rain water pipes
- locking screw: combi slot screw
- material: steel
- locking screw(s) from stainless steel
- clamp: hot dip galvanized

Part No.	D (mm)	B (mm)	H (mm)	Pack 1
4001080	80	115	179	25
4001100	100	135	201	20



BIS Hinged Pipe Clamp 400 (Square)

(B 40 10)

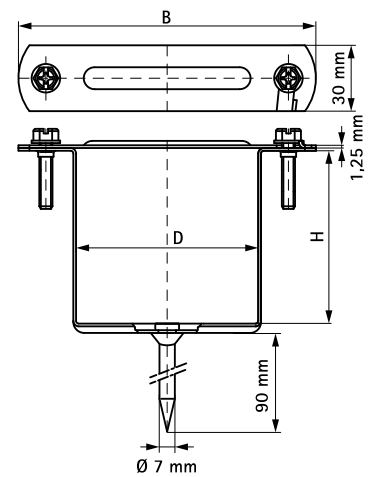
for rain water pipes 80 - 100 mm



Features and Benefits

- with quick locking system
- for fixing of square rain water pipe
- locking screws: 2 combi slot screws
- material: steel
- locking screw(s) from stainless steel
- clamp: hot dip galvanized

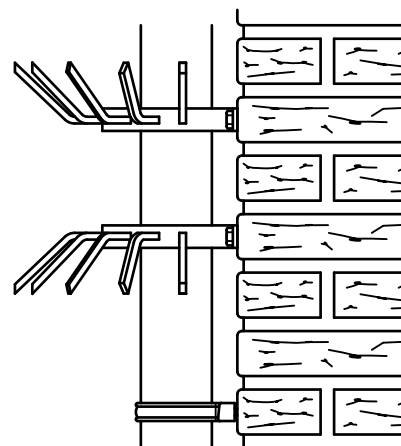
Part No.	D (mm)	B (mm)	H (mm)	Pack 1
4031080	80	136	183	20
4031100	100	155	202	20



BIS Intruder Deterrent Clamp

deters climbing by using a rain water downpipe 110 mm

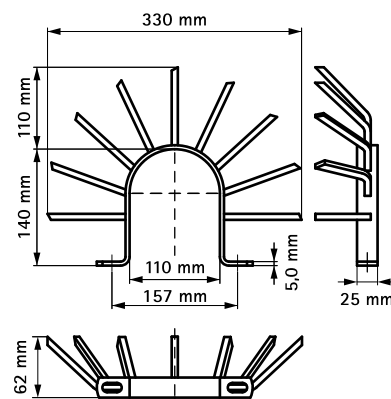
(B 40 20)



Features and Benefits

- mounting per 2 clamps around the pipe (one clamp with claws pointed upwards, the other one with claws downwards)
- hot dip galvanized
- material: steel

Part No.	Pack 1
4191810	10



BIS Funderingsbeugel

50 - 125 mm

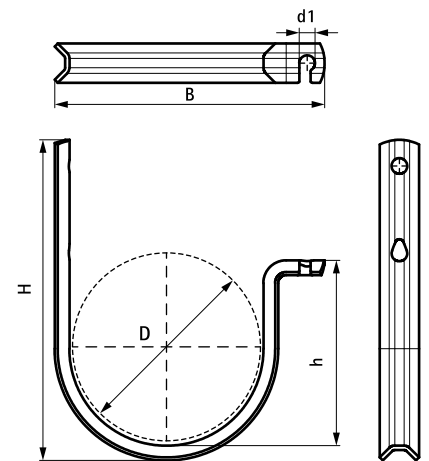
(B 55 06)



Features and Benefits

- voor het snel en gemakkelijk monteren van de rioleringsleiding
- ronde profilering voorkomt beschadiging van de rioleringsbuis
- te gebruiken i.c.m. de funderingshaak, klemschuif en fixeringskap
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	D (mm)	B (mm)	H (mm)	h (mm)	d1 (mm)	Pack 1
4708030	50	89	130	59	9.0	50
4708024	75	120	149	71	9.0	50
4708005	110	155	184	106	9.0	25
4708006	125	170	199	121	9.0	25



Complementary

- 72 BIS Combibeugel
- 73 BIS Fixeringskap
- 74 BIS Klemschuif

Complementary

- 75 BIS Funderingshaak

BIS Combibeugel

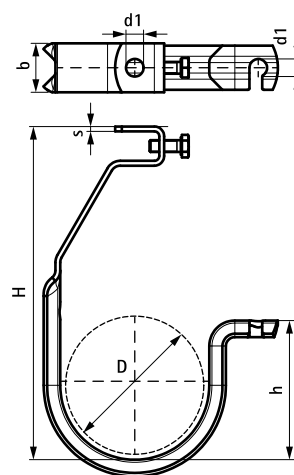
(B 55 11)

50 - 110 mm

Features and Benefits

- voor het snel en gemakkelijk monteren van de rioleringsleiding
- voor het 'oversteken' onder de vloer
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	D (mm)	H (mm)	h (mm)	b (mm)	s1 (mm)	d1 (mm)	Pack 1
4718050	50	135	59	25	2.5	9.0	50
4718075	75	170	71	25	2.5	9.0	25
4718110	110	235	106	25	2.5	9.0	25



Complementary

- 71 BIS Funderingsbeugel
- 73 BIS Fixeringskap
- 74 BIS Klemschuif

Complementary

- 75 BIS Funderingshaak

BIS Fixeringskap

50 - 125 mm

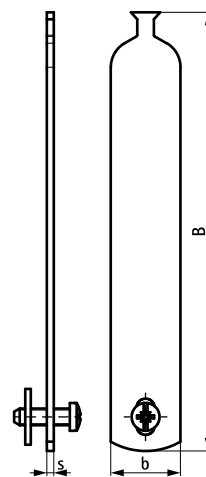
(B 55 16)



Features and Benefits

- te gebruiken i.c.m. de funderingshaak, klamschuif en fixeringskap
- ter voorkoming dat rioleringsleiding door opwaartse druk buiten de beugel komt
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	D (mm)	B (mm)	b (mm)	s (mm)	Pack 1
4708031	50	92	25	2.5	50
4708028	75	123	25	2.5	50
4708009	110	158	25	2.5	50
4708010	125	173	25	2.5	50



Complementary

- 72 BIS Combibeugel
- 71 BIS Funderingsbeugel

BIS Klemschuif

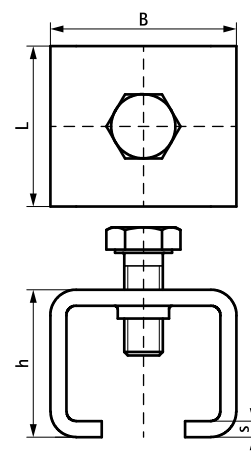
(B 55 21)



Features and Benefits

- voor de verbinding tussen de funderingshaak en de funderingsbeugel
- mogelijkheid om de leiding onder afschot te plaatsen
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B (mm)	h (mm)	s (mm)	Pack 1	App.
4708003	25 mm	29	23	2.5	25	pc.



Complementary

- 71 BIS Funderingsbeugel
- 72 BIS Combibeugel

BIS Funderingshaak

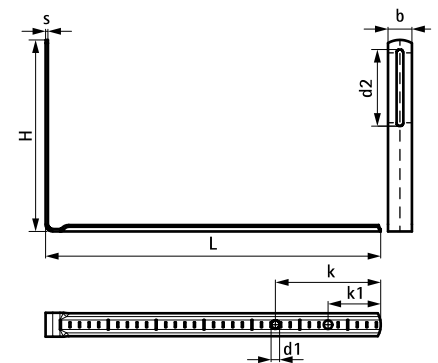
(B 55 26)



Features and Benefits

- voor bevestiging aan de funderingsbalk
- voorzien van gaten om bevestiging met korte zijde naar beneden mogelijk te maken (i.v.m. ruimtegebrek)
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	H	b	s	d1	d2	k	k1	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
4708001	350 mm	200	25	2.5	9.0	80 x 7.0	110	55	20
4708011	700 mm	200	25	2.5	9.0	80 x 7.0	110	55	20



Complementary

- 71 BIS Funderingsbeugel
- 72 BIS Combibeugel

C BIS Plastic Pipe Clamps



starQuick®

starQuick® Clamp (Grey)	79
starQuick® Clamp (Grey) - Ø 71 - 115 mm	80
starQuick® Clamp - V0 fire rated	81
starQuick® Clamp (White)	82
starQuick® Clamp (Copper Colour)	83
starQuick® Clamp - M6 (Grey)	84
starQuick® Duo Wall Plate	85
starQuick® Threaded Rod Adaptor	86
starQuick® Distance Block	87
starQuick® Hammer-in Screw	88
starQuick® Rail	89
starQuick® Rail Adaptor	90
starQuick® Universal Rail Adaptor	91
starQuick® Fixing Nut	92
starQuick® Push Plug	93
starQuick® Hammerfix	94



BIS Clamps and Clips

BIS ARAYTUB	95
BIS Duplo KS	96



BIS Accessories for PVC Pipe Clamps

BIS Nail Fixing	97
BIS Threaded Connector	98
BIS Expansion Joint Bracket (BUP1000)	99



BIS Leaf Traps

BIS Leaf Trap	100
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starQuick®

For heating and plumbing installations

starQuick®

- Self-closing clamp: quick and easy pipe fixing
- For all pipe types in Ø 10 - 65 mm
- For heating and plumbing installations
- Plastic clamps and accessories are corrosion free
- Full range of accessories for easy fixing to all surfaces, strut and threaded rod
- A versatile solution



Push pipe into clamp. Done!



Done!

starQuick® Clamp (Grey)

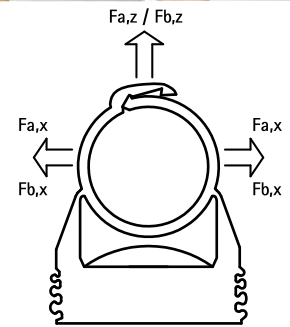
(C 05 05)

to fix pipes for electrical and mechanical installations to wall, floor or ceiling 10 - 65 mm



Features and Benefits

- one-part clamp
- clamp closes by applying pressure to the pipe
- for outdoor use and installations in swimming pool environments, chemical factories, zinc factories, etc.
- due to a patented profile it is possible to tack several clamps to each other
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C



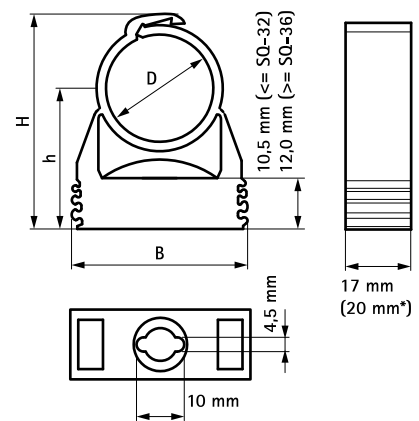
kiwa



(UL 1565)



Part No.	D (mm)	D (")	DN	Type	B (mm)	H (mm)	h (mm)	h2 (mm)	F _{a,z} (N)	F _{b,z} (N)	KIWA A	UL	UPC	Pack 1	Pack 2
0854010	10 - 12	1/8	6	SQ-10	29	32	23	10.5	170	500	-	UL	UPC	100	1,200
0854012	12 - 14	1/4	8	SQ-12	29	34	23	10.5	180	550	KIWA	UL	UPC	100	1,200
0854015	14 - 16	-	-	SQ-15	29	36	24	10.5	200	600	KIWA	UL	UPC	100	1,200
0854018	16 - 20	3/8	10	SQ-17	29	40	26	10.5	230	700	KIWA	UL	UPC	100	800
0854022	20 - 23	1/2	15	SQ-20	29	44	27	10.5	270	800	KIWA	UL	UPC	50	600
0854028	24 - 28	3/4	20	SQ-25	40	50	31	10.5	280	850	KIWA	UL	UPC	50	600
0854031	28 - 32	-	-	SQ-28	40	53	32	10.5	300	900	KIWA	UL	UPC	50	400
0854035	32 - 35	1	25	SQ-32	43	57	34	10.5	330	1,000	KIWA	UL	UPC	50	400
0854038	35 - 40	-	-	SQ-36	47	66	41	12.0	370	1,100	KIWA	UL	UPC	25	300
0854042	40 - 44	1 1/4	32	SQ-40	52	70	42	12.0	400	1,200	KIWA	UL	UPC	25	200
0854050	44 - 50	-	-	SQ-47	57	76	45	12.0	430	1,300	-	UL	UPC	25	200
0854054	48 - 55	1 1/2	40	SQ-51	63	81	47	12.0	470	1,400	-	UL	UPC	15	180
0854063	59 - 65	2	50	SQ-59	74	94	55	12.0	500	1,500	-	UL	UPC	15	180



* BIS starQuick® Ø 59 - 65 mm

$$F_{a,x} = F_{a,z} / F_{b,x} = F_{b,z}$$

Maximum allowed load at a temperature of +21 °C (+70 °F) and fixing with M6 BIS starQuick® nut + M6 steel threaded rod.

The values are recommended values and based on our nowadays technical knowledge, experience and statements in the literature as well as testing under laboratory circumstances. They do not relieve the user of own testing of the end product due to the big number of parameter of influence in the mounting process and the application. A legal confirmed assurance of properties or the suitability for a specific application cannot be based on our specifications.

Complementary

- 85 starQuick® Duo Wall Plate
- 88 starQuick® Hammer-in Screw
- 92 starQuick® Fixing Nut

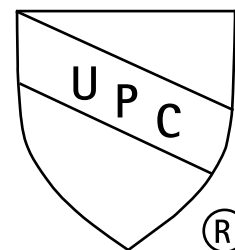
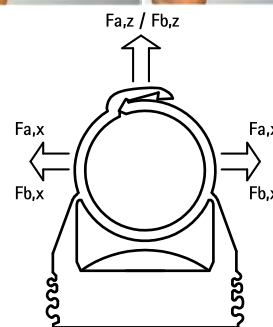
Alternative

- 84 starQuick® Clamp - M6 (Grey)

starQuick® Clamp (Grey)

(C 05 07)

to fix pipes for electrical and mechanical installations to wall, floor or ceiling 71 - 115 mm



Features and Benefits

- one-part clamp
- clamp closes by applying pressure to the pipe, use hands for full closing
- clamp can be mounted to wall, floor or ceiling by use of two bolts (outer slots) or by using a standard Walraven slide nut (middle hole) and screwing the clamp on a threaded rod
- for outdoor use and installations in swimming pool environments, chemical factories, zinc factories, etc.
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

Part No.	D (mm)	D (°)	DN	B (mm)	H (mm)	h (mm)	d1 (mm)	d2 (mm)	h2 (mm)	F _{a,z} (N)	Pack 1
08541075	71 - 76	2½	65	105	116	75	Ø 10.5	13 x 8.3	28	650	50
08541090	88 - 93	3	80	115	133	85	Ø 13.0	13 x 8.3	32	730	40
08541110	109 - 115	4	100	145	165	105	Ø 13.0	15 x 10.5	35	1,200	25

Part no. 08541075: use M8 bolts (for outer slots) or M10 Walraven slide nut to connect to M10 threaded rods (for middle hole).

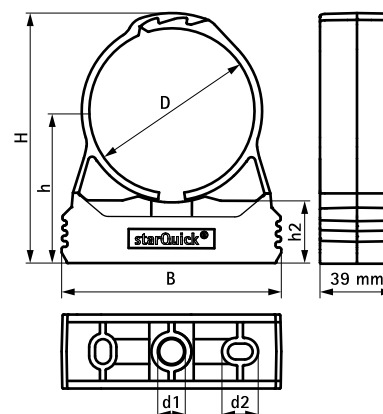
Part no. 08541090: use M8 bolts (for outer slots) or M12 Walraven slide nut to connect to M12 threaded rods (for middle hole).

Part no. 08541110: use M10 bolts (for outer slots) or M12 Walraven slide nut to connect to M12 threaded rods (for middle hole).

$$F_{0,x} = F_{0,z} / F_{0,x} = F_{0,z}$$

Maximum allowed load at a temperature of +21 °C (+70 °F) and fixing with BIS Strut Slide Nut M12 + BIS Threaded Rod M12.

The values are recommended values and based on our nowadays technical knowledge, experience and statements in the literature as well as testing under laboratory circumstances. They do not relieve the user of own testing of the end product due to the big number of parameter of influence in the mounting process and the application. A legal confirmed assurance of properties or the suitability for a specific application cannot be based on our specifications.



Complementary

- 276 BIS Strut Slide Nut (zp)
- 277 BIS Strut Slide Nut (hdg)
- 246 BIS RapidStrut® Fixing Rail (pg)

Complementary

- 275 BIS Strut Slide Nut (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

starQuick® Clamp – V0 fire rated

(C 05 207)

14 - 16 mm



Features and Benefits

- suitable for indoor and outdoor use
- for use with all pipe materials
- one-part clamp closes by applying pressure to the pipe
- due to a patented profile it is possible to tack several clamps to each other
- material: PA (polyamide - nylon)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -104 °F to approx. +194 °F constant, approx. 266°F peak (Note: temperature must be above 15°F during installation process)

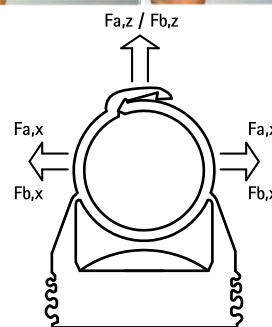


Part No.	D (mm)	Pack 1
0854015S	14 - 16	100

starQuick® Clamp (White)

(C 05 10)

to fix pipes for electrical and mechanical installations to wall, floor or ceiling 10 - 65 mm



Features and Benefits

- one-part clamp
- clamp closes by applying pressure to the pipe
- for outdoor use and installations in swimming pool environments, chemical factories, zinc factories, etc.
- due to a patented profile it is possible to tack several clamps to each other
- material: modified PA6 (polyamide), white (according to RAL 9003)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

kiwa

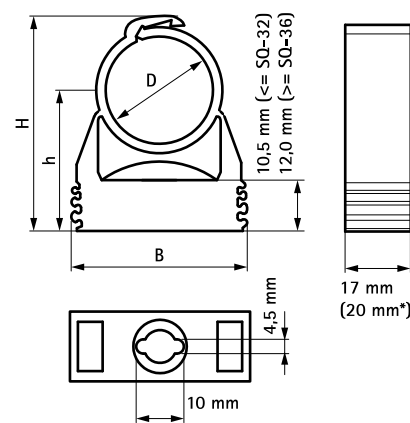


Part No.	D (mm)	D (°)	DN	Type	B (mm)	H (mm)	h (mm)	h2 (mm)	F _{a,z} (N)	F _{b,z} (N)	KIWA	UPC	Pack 1	Pack 2
0855010	10 - 12	1/8	6	SQ-10	29	32	23	10.5	170	500	-	UPC	100	1,200
0855012	12 - 14	1/4	8	SQ-12	29	34	23	10.5	180	550	KIWA	UPC	100	1,200
0855015	14 - 16	-	-	SQ-15	29	36	24	10.5	200	600	KIWA	UPC	100	1,200
0855018	16 - 20	3/8	10	SQ-17	29	40	26	10.5	230	700	KIWA	UPC	100	800
0855022	20 - 23	1/2	15	SQ-20	29	44	27	10.5	270	800	KIWA	UPC	50	600
0855028	24 - 28	3/4	20	SQ-25	40	50	31	10.5	280	850	KIWA	UPC	50	600
0855031	28 - 32	-	-	SQ-28	40	53	32	10.5	300	900	KIWA	UPC	50	400
0855035	32 - 35	1	25	SQ-32	43	57	34	10.5	330	1,000	KIWA	UPC	50	400
0855038	35 - 40	-	-	SQ-36	47	66	41	12.0	370	1,100	KIWA	UPC	25	300
0855042	40 - 44	1 1/4	32	SQ-40	52	70	42	12.0	400	1,200	KIWA	UPC	25	200
0855050	44 - 50	-	-	SQ-47	57	76	45	12.0	430	1,300	-	UPC	25	200
0855054	48 - 55	1 1/2	40	SQ-51	63	81	47	12.0	470	1,400	-	UPC	15	180
0855063	59 - 65	2	50	SQ-59	74	94	55	12.0	500	1,500	-	UPC	15	180

$F_{a,x} = F_{a,z} / F_{b,x} = F_{b,z}$

Maximum allowed load at a temperature of +21 °C (+70 °F) and fixing with M6 BIS starQuick® nut + M6 steel treaded rod.

The values are recommended values and based on our nowadays technical knowledge, experience and statements in the literature as well as testing under laboratory circumstances. They do not relieve the user of own testing of the end product due to the big number of parameter of influence in the mounting process and the application. A legal confirmed assurance of properties or the suitability for a specific application cannot be based on our specifications.



* BIS starQuick® Ø 59 - 65 mm

Complementary

- 85 starQuick® Duo Wall Plate
- 88 starQuick® Hammer-in Screw
- 92 starQuick® Fixing Nut

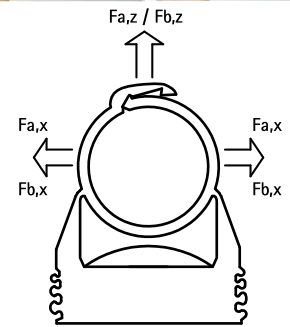
Alternative

- 79 starQuick® Clamp (Grey)

starQuick® Clamp (Copper Colour)

(C 05 12)

to fix pipes for electrical and mechanical installations to wall, floor or ceiling 12 - 32 mm



Features and Benefits

- one-part clamp
- clamp closes by applying pressure to the pipe
- for outdoor use and installations in swimming pool environments, chemical factories, zinc factories, etc.
- due to a patented profile it is possible to tack several clamps to each other
- material: modified PA6 (polyamide), copper colour
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

kiwa

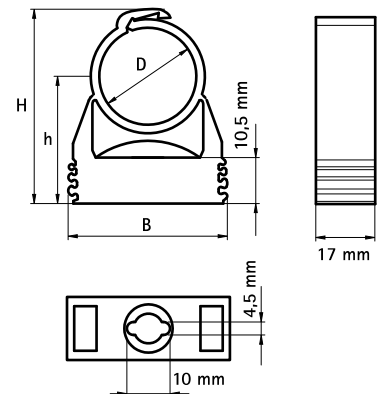


Part No.	D (mm)	D (°)	DN	Type	B (mm)	H (mm)	h (mm)	F _{a,z} (N)	F _{b,z} (N)	KIWA	UPC	Pack 1	Pack 2
0855812	12 - 14	1/4	8	SQ-12	29	34	23	180	550	KIWA	UPC	100	1,200
0855815	14 - 16	-	-	SQ-15	29	36	24	200	600	KIWA	UPC	100	1,200
0855818	16 - 20	3/8	10	SQ-17	29	40	26	230	700	KIWA	UPC	100	800
0855822	20 - 23	1/2	15	SQ-20	29	44	27	270	800	KIWA	UPC	50	600
0855828	24 - 28	3/4	20	SQ-25	40	50	31	280	850	KIWA	UPC	50	600
0855831	28 - 32	-	-	SQ-28	40	53	32	300	900	KIWA	UPC	50	400

$$F_{a,x} = F_{a,z} / F_{b,x} = F_{b,z}$$

Maximum allowed load at a temperature of +21 °C (+70 °F) and fixing with M6 BIS starQuick® nut + M6 steel treaded rod.

The values are recommended values and based on our nowadays technical knowledge, experience and statements in the literature as well as testing under laboratory circumstances. They do not relieve the user of own testing of the end product due to the big number of parameter of influence in the mounting process and the application. A legal confirmed assurance of properties or the suitability for a specific application cannot be based on our specifications.



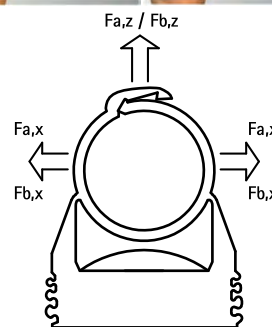
Complementary

- 88 starQuick® Hammer-in Screw
- 92 starQuick® Fixing Nut

starQuick® Clamp – M6 (Grey)

(C 05 15)

to fix pipes for electrical and mechanical installations to wall, floor or ceiling 12 - 55 mm



Features and Benefits

- one-part clamp
- clamp closes by applying pressure to the pipe
- for outdoor use and installations in swimming pool environments, chemical factories, zinc factories, etc.
- due to a patented profile it is possible to tack several clamps to each other
- with pre-assembled connection nut M6
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

kiwa

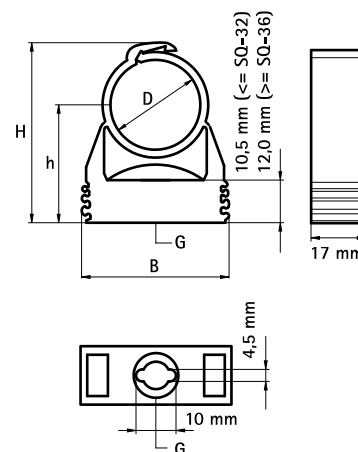


Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	F _{a,z} (N)	F _{b,z} (N)	KIWA	UL	UPC	Pack 1	Pack 2
0854612	12 - 14	1/4	8	M6	29	34	23	180	550	KIWA	UL	UPC	100	1,200
0854615	14 - 16	-	-	M6	29	36	24	200	600	KIWA	UL	UPC	100	1,200
0854618	16 - 20	3/8	10	M6	29	40	26	230	700	KIWA	UL	UPC	100	800
0854622	20 - 23	1/2	15	M6	29	44	27	270	800	KIWA	UL	UPC	50	600
0854628	24 - 28	3/4	20	M6	40	50	31	280	850	KIWA	UL	UPC	50	600
0854631	28 - 32	-	-	M6	40	53	32	300	900	KIWA	UL	UPC	50	400
0854635	32 - 35	1	25	M6	43	57	34	330	1,000	KIWA	UL	UPC	50	400
0854638	35 - 40	-	-	M6	47	66	41	370	1,100	KIWA	UL	UPC	25	300
0854642	40 - 44	1 1/4	32	M6	52	70	42	400	1,200	KIWA	UL	UPC	25	200
0854650	44 - 50	-	-	M6	57	76	45	430	1,300	-	UL	UPC	25	200
0854654	48 - 55	1 1/2	40	M6	63	81	47	470	1,400	-	UL	UPC	15	180

$$F_{a,x} = F_{a,z} / F_{b,x} = F_{b,z}$$

Maximum allowed load at a temperature of +21 °C (+70 °F) and fixing with M6 BIS starQuick® nut + M6 steel threaded rod.

The values are recommended values and based on our nowadays technical knowledge, experience and statements in the literature as well as testing under laboratory circumstances. They do not relieve the user of own testing of the end product due to the big number of parameter of influence in the mounting process and the application. A legal confirmed assurance of properties or the suitability for a specific application cannot be based on our specifications.



Complementary

- 493 BIS Fastenings
- 93 starQuick® Push Plug
- 368 Britclips® FC M6 x 9

starQuick® Duo Wall Plate

(C 05 20)

accessories BIS starQuick® Pipe Clamps without Nut

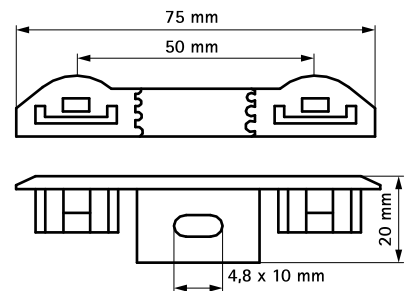


Features and Benefits

- for fixing of two pipes with starQuick® Clamps
- suitable for starQuick® Clamps up to SQ-20
- the distance between the pipe and the wall is equal to that of a single clip
- material: modified PA6 (polyamide), grey or white
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

Part No.	Model	Colour	F _{a,z} (N)	Pack 1	Pack 2
0854000	-	Grey (RAL 7035)	600	100	1,200
0855000	-	White (RAL 9003)	600	100	1,200
0854300	With hammer-in screw	Grey (RAL 7035)	600	50	600

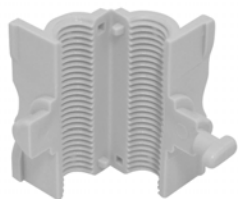
Hammer-in screw: suitable for fixing into concrete, aerated concrete, brick.



starQuick® Threaded Rod Adaptor

(C 05 25)

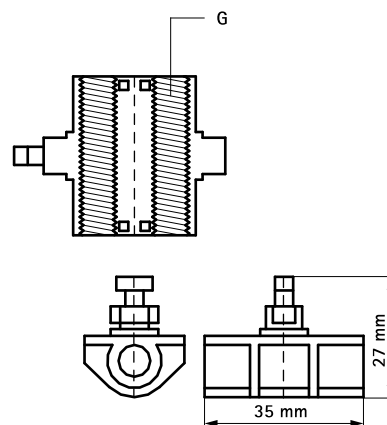
accessories BIS starQuick® Pipe Clamps without Nut



Features and Benefits

- to fix a starQuick® Clamp to a threaded rod
- to add pipework quickly and simply to an existing installation
- suitable for SQ-10 up to SQ-51
- material: PA (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

Part No.	Model	G	Pack 1	Pack 2
0854356	SQ10 - SQ51	M6	100	1,200
0854358	SQ10 - SQ51	M8	100	1,200
0854359	SQ10 - SQ32	3/8"	25	250



starQuick® Distance Block

(C 05 30)

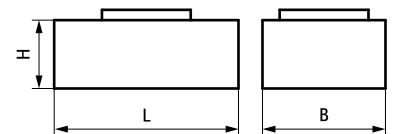
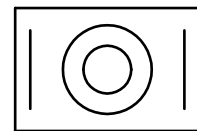
accessories BIS starQuick® Pipe Clamps without Nut



Features and Benefits

- for clamp fixing with a distance to the structure
- for screwing a clip to a distance block, use a screw of at least 55 mm
- suitable for SQ-10 up to SQ-36
- a starQuick® Clip can easily be stacked to a distance block
- for a larger stand off, distance blocks can be clicked together
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ozone and chemicals
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

Part No.	L	B (mm)	H (mm)	Pack 1	Pack 2
0854510	27 mm	17	10	25	250



starQuick® Hammer-in Screw

(C 05 35)

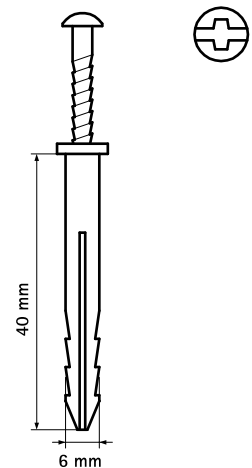
accessories BIS starQuick® Pipe Clamps without Nut



Features and Benefits

- for fixing of starQuick® Clamps without nut
- suitable for fixing onto concrete, aerated concrete, brick
- material: screw made of steel, plug made of PA (polyamide), grey

Part No.	Pack 1	Pack 2
0854301	25	250



starQuick® Rail

(C 05 45)

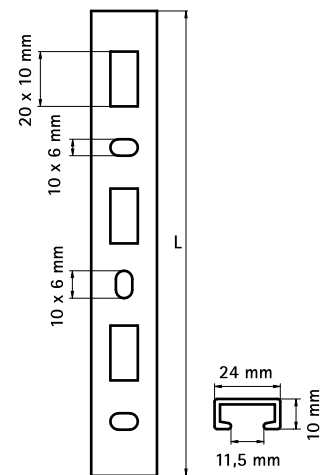
accessories BIS starQuick® Pipe Clamps without Nut



Features and Benefits

- for fixing of two or more pipes with starQuick® Clamps without nut
- the starQuick® Clamp is fixed to the rail by mean of the starQuick® Rail Adaptor (Part No. 0854313)
- material: PVC (polyvinylchloride), grey (according to RAL 7035)

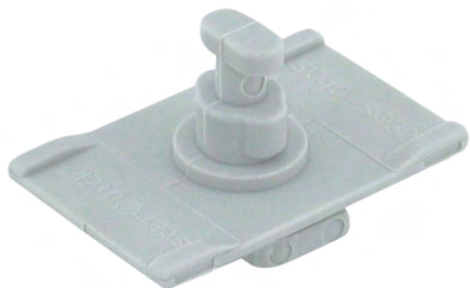
Part No.	L	Pack 1	Pack 2
0854316	150 mm	50	400
0854325	1 m	25	-



starQuick® Rail Adaptor

(C 05 50)

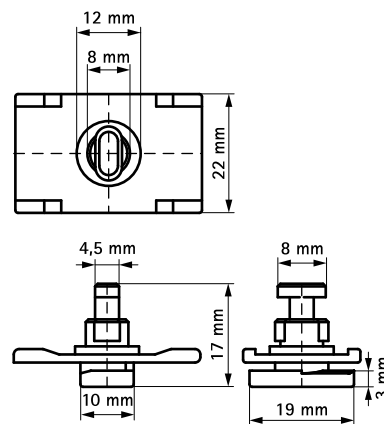
accessories BIS starQuick® Rail



Features and Benefits

- suitable for starQuick® Clamps up to SQ-32
- for fixing of a starQuick® Clamp (without nut) on a starQuick® Rail or on a Strut-Adaptor (Part No. 0854331)
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

Part No.	For	Pack 1	Pack 2
0854313	BIS starQuick®	20	200



starQuick® Universal Rail Adaptor

(C 05 57)

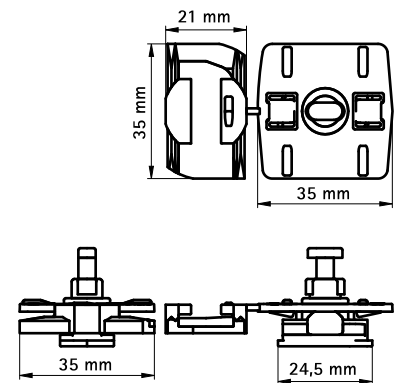
accessories BIS starQuick® Pipe Clamps without Nut



Features and Benefits

- for fixing starQuick® Clamps to BIS RapidRail® or Strut Rail
- to add pipework quickly and simply to an existing installation
- suitable for SQ-10 up to SQ-51
- suitable for rail WM0, 1, 15, 2, 30, 35 + Strut
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

Part No.	For Rail	Pack 1	Pack 2
0854332	WM0 - 35 + Strut	50	600



starQuick® Fixing Nut

(C 05 65)

accessories BIS starQuick® Pipe Clamps without Nut



085 4 XXX



085 5 006

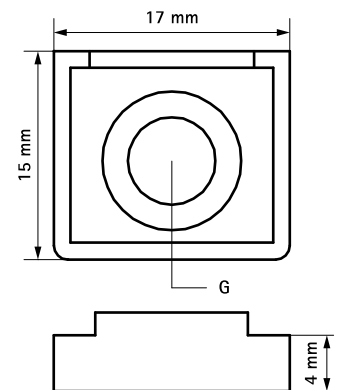


Features and Benefits

- to make a threaded connection in a starQuick® Clamp
- entirely integrated in clamp (not protruding)
- material: PC (polycarbonate), grey or white
- no corrosion
- temperature resistance from approx. -35 °C to approx. +110 °C (constant); short to approx. +125 °C

Part No.	G	Colour	Pack 1	Pack 2
0854006	M6	Grey (RAL 7035)	100	1,000
0855006	M6	White (RAL 9003)	100	1,000
0854007	M7B	Grey (RAL 7035)	100	1,000
0854307	M7F	Grey (RAL 7035)	100	1,000
0854308	M8	Grey (RAL 7035)	100	1,000

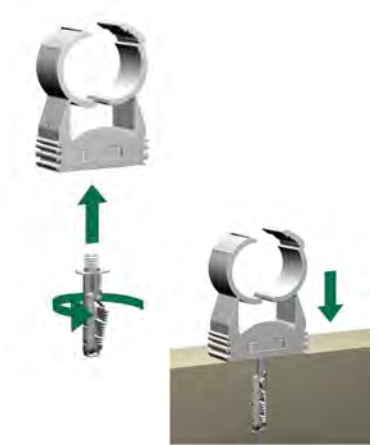
M7B: pitch = M7 x 1 mm.
M7F: pitch = M7 x 1.5mm.



starQuick® Push Plug

(C 05 75)

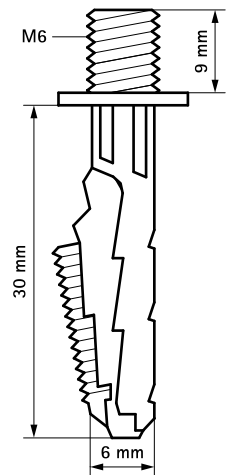
accessories BIS starQuick® Pipe Clamps with Nut



Features and Benefits

- for fixing of a starQuick® Clamp or other clamp with thread connection M6
- pre-drill hole Ø 6 mm and insert plug
- material: modified PA6 (polyamide), grey (according to RAL 7035)
- resistant to UV, ageing, oil and petrol
- no corrosion, recyclable, halogen free
- temperature resistance from approx. -40 °C to approx. +90 °C (constant); short to approx. +130 °C

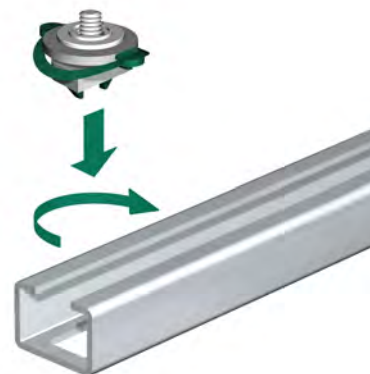
Part No.	Pack 1	Pack 2
6101063	50	500



starQuick® Hammerfix

accessories BIS starQuick® Pipe Clamps with Nut

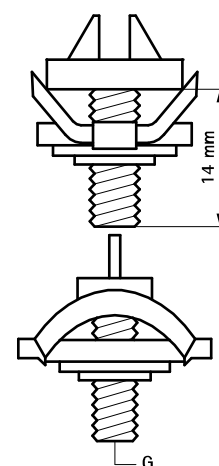
(C 05 80)



Features and Benefits

- Part No. 0854338: for fixing of a BIS starQuick® Clamp on steel rail with a 15 mm slot (e.g. WMO, 1, 15, 2, 30 or 35)
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

Part No.	G	For Rail	Pack 1	Pack 2
0854338	M8	WMO - 35	50	600



BIS ARAYTUB

for all pipes 16 - 25 mm

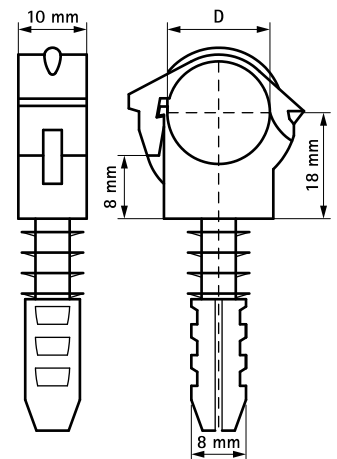
(C 10 35)



Features and Benefits

- clamp with integral plug
- locking with double tooting for extra security
- easy and quick to use
- for massive and hollow materials
- the plug can be expanded with a screw \varnothing 3.5 - 4.5 mm or a nail to get a better pull-out resistance (important in hollow materials)
- material: PA (polyamide), grey

Part No.	D (mm)	Pack 1	Pack 2
08505216	16	100	500
08505220	20	100	500
08506120	20	200	2,000
08505225	25	100	500



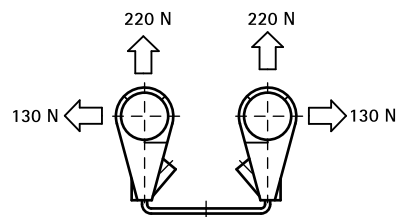
Alternative

79 starQuick® Clamp (Grey)

BIS Duplo KS

for metal pipes 15 - 22 mm

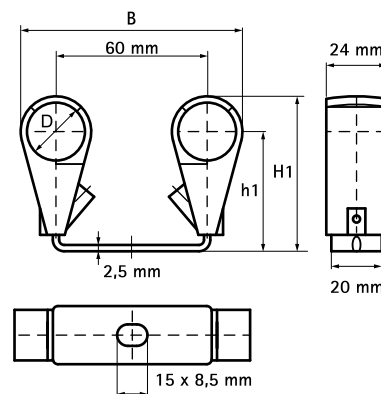
(C 10 55)



Features and Benefits

- two clamps on connection bracket
- clamps can be repositioned when open or closed - only fixed when finally secured
- plastic clamp prevents noises which arise from expansion or contraction of the pipe
- adjustable distance between pipe and wall
- locking screw connected to band, which makes it impossible to lose screw
- material: connection bracket made of steel; connector made of PP (polypropylene), white
- fire class B2
- recyclable, resistant to UV and ageing
- zinc plated
- temperature resistance from approx. -30 °C to approx. +90 °C (constant); short to approx. +110 °C

Part No.	D (mm)	D (")	DN	B (mm)	H1 (mm)	h1 (mm)	Colour	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3225015	15	-	-	82	57 - 69	45 - 57	White (RAL 9018)	220	130	50
3225022	22	1/2	15	89	64 - 76	49 - 61	White (RAL 9018)	220	130	50



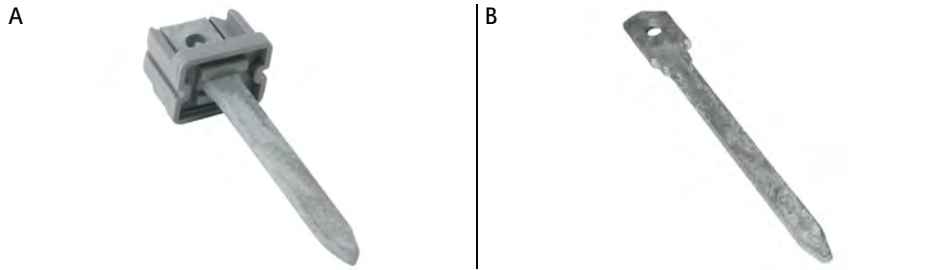
Complementary

- 493 BIS Fastenings
- 615 BIS Under Floor / Radiator Brackets

BIS Nail Fixing

accessories BIS PVC pipe clamps

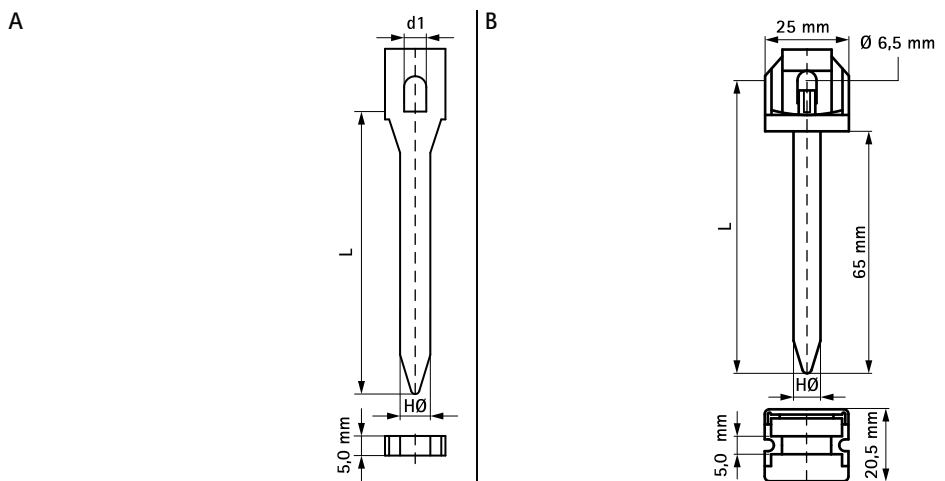
(C 30 05)



Features and Benefits

- material: nail made of steel (hot dip galvanized); housing made of PA (polyamide)

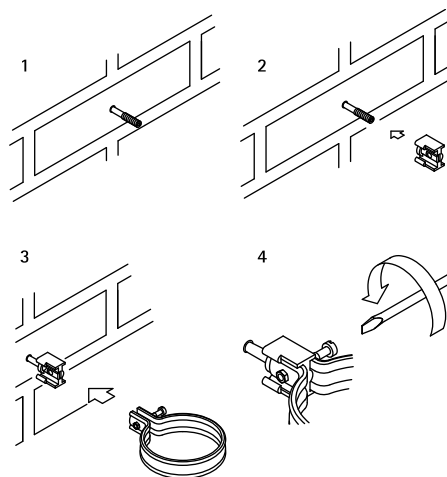
Part No.	Type	L	d1 (mm)	HØ (mm)	Pack 1	Pack 2
A 1401065	B	80 mm	Ø 6.5	7	25	250
B 1411065	R2	65 mm	9 x 6	6	25	250



BIS Threaded Connector

accessories BIS PVC pipe clamps

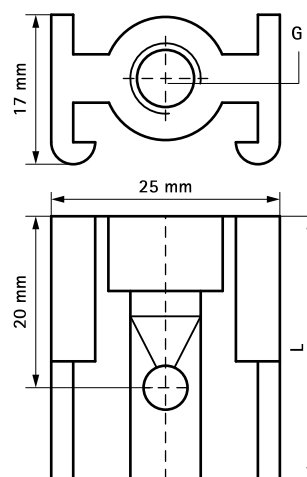
(C 30 10)



Features and Benefits

- with 'claws' which grip on to the band
- material: threaded connector made of PC (polycarbonate)
- impact-resistant

Part No.	G	L	Colour	Pack 1	Pack 2
1452006	M6	25.5 mm	Grey (RAL 7035)	25	250
1452008	M8	30.0 mm	Grey (RAL 7035)	25	250



BIS Expansion Joint Bracket (BUP1000)

(C 30 15)

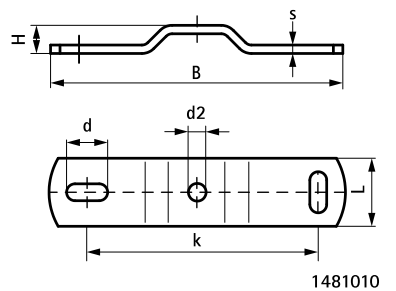
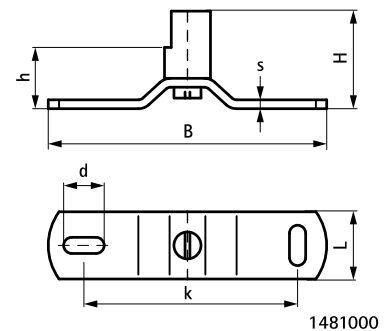
accessories BIS PVC pipe clamps



Features and Benefits

- for fixing of rain water pipe over expansion joints
- with 'claws' which grip on to the band
- material: connection bracket made of steel; connector made of PC (polycarbonate), grey
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Model	L	B	H	h	s	d1	d2	k	Colour	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
1481000	Steel, with threaded connector	25 mm	104	36	25	3	15 x 6	-	80	Grey	50
1481010	Steel	25 mm	104	10	-	3	15 x 6	8.5	80	-	50



BIS Leaf Trap

(C 45 05)

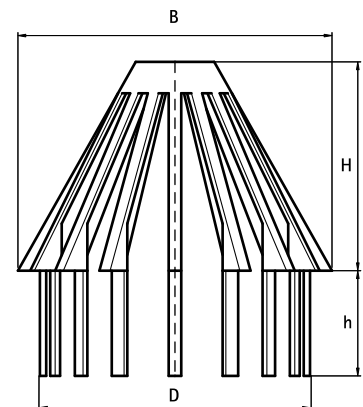
deters climbing by using a rain water downpipe 60 - 100 mm



Features and Benefits

- prevents blockage of down pipe caused by leaves and other debris in the gutter
- material: PP (polypropylene), grey (according to RAL 7035)

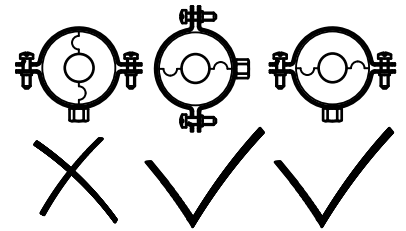
Part No.	D (mm)	B (mm)	H (mm)	h (mm)	Pack 1
5952060	60 - 75	83	43	25	50
5952080	80 - 100	103	64	34	50



BISOFIX[®] E13

for insulated pipes 8.0 - 168.3 mm

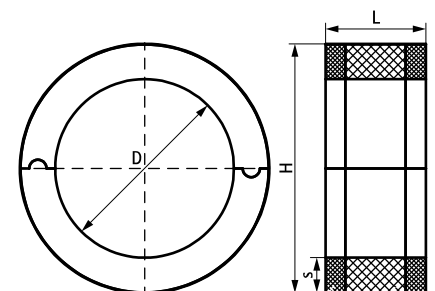
(D 03 02)



Features and Benefits

- for combination with elastomeric foam insulation
- temperature range -45 °C - +105 °C
- vapourproof glueable with pipe insulation
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]

Part No.	D (mm)	D (°)	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I130000008	8.0	-	-	50 mm	34.6	13.3	100	25
I130000010	10.2	-	-	50 mm	36.8	13.3	100	25
I130000012	12.0	-	-	50 mm	38.6	13.3	100	25
I130000015	15.0	-	-	50 mm	41.6	13.3	100	25
I130000018	17.2 - 18.0	3/8	10	50 mm	44.6	13.3	100	25
I130000022	21.3 - 22.0	1/2	15	50 mm	48.6	13.3	100	25
I130000028	26.9 - 28.0	3/4	20	50 mm	55.0	13.5	100	25
I130000035	33.7 - 35.0	1	25	50 mm	61.6	13.3	100	25
I130000042	42.4	1 1/4	32	50 mm	69.0	13.3	150	25
I130000048	48.3	1 1/2	40	50 mm	74.9	13.3	225	25
I130000054	54.0	-	-	50 mm	80.6	13.3	225	25
I130000057	57.0	-	-	50 mm	83.6	13.3	350	25
I130000060	60.3	2	50	50 mm	88.1	13.9	350	25
I130000064	64.0	-	-	50 mm	100.0	18.0	350	25
I130000070	70.0	-	-	50 mm	102.6	16.3	425	25
I130000076	76.1	2 1/2	65	50 mm	108.7	16.3	575	25
I130000089	88.9	3	80	50 mm	124.7	17.9	875	25
I130000102	101.6	-	-	50 mm	134.2	16.3	1,000	25
I130000108	108.0	-	-	50 mm	140.6	16.3	1,075	25
I130000114	114.3	4	100	50 mm	152.1	18.9	1,250	25
I130000133	133.0	-	-	100 mm	165.6	16.3	1,475	25
I130000140	139.7	5	125	100 mm	176.1	18.2	1,700	5
I130000160	159.0 - 160.0	-	-	100 mm	192.6	16.3	1,950	5
I130000168	168.3	6	150	100 mm	200.9	16.3	2,125	5



EN-SG 02/2022 - Subject to modifications

Complementary

- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)
- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

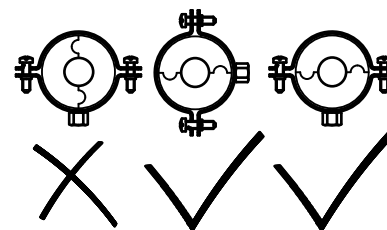
Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)

BISOFIX® E13 + 2S

for insulated pipes 8.0 - 168.3 mm

(D 03 04)



Features and Benefits

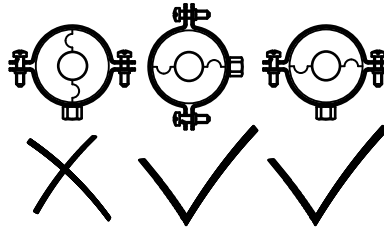
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I133303008	I130000008 + 33035037	8.0	BISOFIX® E13 + 2S Clamp	100	50
I133303010	I130000010 + 33035037	10.2	BISOFIX® E13 + 2S Clamp	100	50
I133303012	I130000012 + 33035046	12.0	BISOFIX® E13 + 2S Clamp	100	50
I133303015	I130000015 + 33035046	15.0	BISOFIX® E13 + 2S Clamp	100	50
I133303018	I130000018 + 33035046	17.2 - 18.0	BISOFIX® E13 + 2S Clamp	100	50
I133303022	I130000022 + 33035052	21.3 - 22.0	BISOFIX® E13 + 2S Clamp	100	50
I133303028	I130000028 + 33035061	26.9 - 28.0	BISOFIX® E13 + 2S Clamp	100	50
I133303035	I130000035 + 33035067	33.7 - 35.0	BISOFIX® E13 + 2S Clamp	100	50
I133303042	I130000042 + 33035074	42.4	BISOFIX® E13 + 2S Clamp	150	50
I133303048	I130000048 + 33035081	48.3	BISOFIX® E13 + 2S Clamp	225	50
I133303054	I130000054 + 33035087	54.0	BISOFIX® E13 + 2S Clamp	225	50
I133303057	I130000057 + 33035087	57.0	BISOFIX® E13 + 2S Clamp	350	50
I133303060	I130000060 + 33035095	60.3	BISOFIX® E13 + 2S Clamp	350	50
I133303064	I130000064 + 33035103	64.0	BISOFIX® E13 + 2S Clamp	350	50
I133303070	I130000070 + 33035103	70.0	BISOFIX® E13 + 2S Clamp	425	50
I133303076	I130000076 + 33035112	76.1	BISOFIX® E13 + 2S Clamp	575	25
I133303089	I130000089 + 33035127	88.9	BISOFIX® E13 + 2S Clamp	875	25
I133303102	I130000102 + 33035137	101.6	BISOFIX® E13 + 2S Clamp	1,000	25
I133303108	I130000108 + 33035144	108.0	BISOFIX® E13 + 2S Clamp	1,075	25
I133303114	I130000114 + 33035153	114.3	BISOFIX® E13 + 2S Clamp	1,250	25
I133303133	I130000133 + 33035172	133.0	BISOFIX® E13 + 2S Clamp	1,475	25
I133303140	I130000140 + 33035183	139.7	BISOFIX® E13 + 2S Clamp	1,700	5
I133303160	I130000160 + 33035194	159.0 - 160.0	BISOFIX® E13 + 2S Clamp	1,950	5
I133303168	I130000168 + 33035205	168.3	BISOFIX® E13 + 2S Clamp	2,125	5

BISOFIX[®] E13 + Bifix[®] G2

(D 03 06)

for insulated pipes 8.0 - 160.0 mm



Features and Benefits

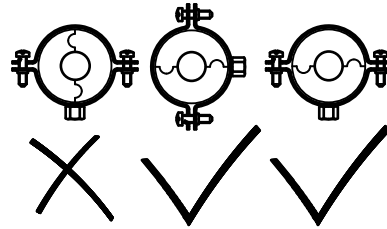
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with Bifix[®] G2 clamp
- Bifix[®] G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I133008008	I130000008 + 3008039	8.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008010	I130000010 + 3008039	10.2	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008012	I130000012 + 3008039	12.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008015	I130000015 + 3008045	15.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008018	I130000018 + 3008045	17.2 - 18.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008022	I130000022 + 3008052	21.3 - 22.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008028	I130000028 + 3008058	26.9 - 28.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008035	I130000035 + 3008064	33.7 - 35.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	100	50
I133008042	I130000042 + 3008070	42.4	BISOFIX [®] E13 + Bifix [®] G2 Clamp	150	50
I133008048	I130000048 + 3008079	48.3	BISOFIX [®] E13 + Bifix [®] G2 Clamp	225	50
I133008054	I130000054 + 3008083	54.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	225	50
I133008057	I130000057 + 3008083	57.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	350	50
I133008060	I130000060 + 3008091	60.3	BISOFIX [®] E13 + Bifix [®] G2 Clamp	350	50
I133008064	I130000064 + 3008105	64.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	350	50
I133008070	I130000070 + 3008105	70.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	425	50
I133008076	I130000076 + 3008115	76.1	BISOFIX [®] E13 + Bifix [®] G2 Clamp	575	25
I133008089	I130000089 + 3008130	88.9	BISOFIX [®] E13 + Bifix [®] G2 Clamp	875	25
I133008102	I130000102 + 3008140	101.6	BISOFIX [®] E13 + Bifix [®] G2 Clamp	1,000	25
I133008108	I130000108 + 3008140	108.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	1,075	25
I133008114	I130000114 + 3008160	114.3	BISOFIX [®] E13 + Bifix [®] G2 Clamp	1,250	25
I133008133	I130000133 + 3008169	133.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	1,475	25
I133008140	I130000140 + 3008180	139.7	BISOFIX [®] E13 + Bifix [®] G2 Clamp	1,700	5
I133008160	I130000160 + 3008200	159.0 - 160.0	BISOFIX [®] E13 + Bifix [®] G2 Clamp	1,950	5

BISOFIX® E13 + HD500

(D 03 08)

for insulated pipes 8.0 - 168.3 mm



Features and Benefits

- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

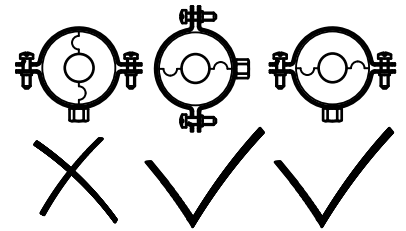
Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I133304008	I130000008 + 33038036	8.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304010	I130000010 + 33038036	10.2	BISOFIX® E13 + HD500 Clamp	100	25
I133304012	I130000012 + 33038036	12.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304015	I130000015 + 33038042	15.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304018	I130000018 + 33038045	17.2 - 18.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304022	I130000022 + 33038052	21.3 - 22.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304028	I130000028 + 33038058	26.9 - 28.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304035	I130000035 + 33038065	33.7 - 35.0	BISOFIX® E13 + HD500 Clamp	100	25
I133304042	I130000042 + 33038071	42.4	BISOFIX® E13 + HD500 Clamp	150	25
I133304048	I130000048 + 33048078	48.3	BISOFIX® E13 + HD500 Clamp	225	25
I133304054	I130000054 + 33048085	54.0	BISOFIX® E13 + HD500 Clamp	225	25
I133304057	I130000057 + 33048085	57.0	BISOFIX® E13 + HD500 Clamp	350	25
I133304060	I130000060 + 33048092	60.3	BISOFIX® E13 + HD500 Clamp	350	25
I133304064	I130000064 + 33048106	64.0	BISOFIX® E13 + HD500 Clamp	350	25
I133304070	I130000070 + 33048106	70.0	BISOFIX® E13 + HD500 Clamp	425	25
I133304076	I130000076 + 33048116	76.1	BISOFIX® E13 + HD500 Clamp	575	25
I133304089	I130000089 + 33048133	88.9	BISOFIX® E13 + HD500 Clamp	875	25
I133304102	I130000102 + 33048140	101.6	BISOFIX® E13 + HD500 Clamp	1,000	25
I133304108	I130000108 + 33048140	108.0	BISOFIX® E13 + HD500 Clamp	1,075	25
I133304114	I130000114 + 33048154	114.3	BISOFIX® E13 + HD500 Clamp	1,250	15
I133304133	I130000133 + 33048169	133.0	BISOFIX® E13 + HD500 Clamp	1,475	15
I133304140	I130000140 + 33048183	139.7	BISOFIX® E13 + HD500 Clamp	1,700	5
I133304160	I130000160 + 33048202	159.0 - 160.0	BISOFIX® E13 + HD500 Clamp	1,950	5
I133304168	I130000168 + 33048202	168.3	BISOFIX® E13 + HD500 Clamp	2,125	5

EN-SG 02/2022 - Subject to modifications

BISOFIX[®] E19

for insulated pipes 12.0 - 323.9 mm

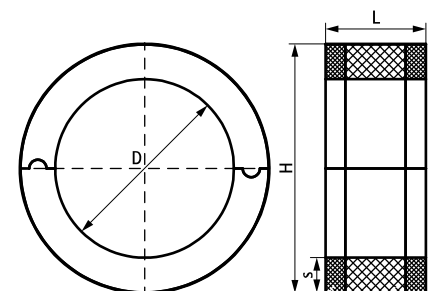
(D 03 14)



Features and Benefits

- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (")	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I190000012	12.0	-	-	50 mm	50.6	19.3	100	25
I190000015	15.0	-	-	50 mm	54.0	19.5	100	25
I190000018	17.2 - 18.0	3/8	10	50 mm	56.6	19.3	100	25
I190000022	21.3 - 22.0	1/2	15	50 mm	60.6	19.3	100	25
I190000028	26.9 - 28.0	3/4	20	50 mm	66.6	19.3	100	25
I190000035	33.7 - 35.0	1	25	50 mm	74.8	19.9	100	25
I190000042	42.4	1 1/4	32	50 mm	81.0	19.3	150	25
I190000048	48.3	1 1/2	40	50 mm	88.1	19.9	225	25
I190000054	54.0	-	-	50 mm	100.0	23.0	225	25
I190000057	57.0	-	-	50 mm	103.0	23.0	225	25
I190000060	60.3	2	50	50 mm	100.1	19.9	350	25
I190000064	64.0	-	-	50 mm	114.6	25.3	350	25
I190000070	70.0	-	-	50 mm	124.6	27.3	425	25
I190000076	76.1	2 1/2	65	50 mm	126.7	25.3	575	25
I190000089	88.9	3	80	50 mm	139.5	25.3	875	25
I190000102	101.6	-	-	50 mm	152.2	25.3	1,000	25
I190000108	108.0	-	-	50 mm	158.6	25.3	1,075	25
I190000114	114.3	4	100	50 mm	164.9	25.3	1,250	25
I190000133	133.0	-	-	100 mm	192.0	29.5	1,475	5
I190000140	139.7	5	125	100 mm	192.1	26.2	1,700	5
I190000160	159.0 - 160.0	-	-	100 mm	210.6	25.3	1,950	5
I190000168	168.3	6	150	100 mm	218.9	25.3	2,125	5
I190000219	219.1	8	200	100 mm	269.7	25.3	3,525	3
I190000324	323.9	12	300	100 mm	374.5	25.3	3,525	5



EN-SG 02/2022 - Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

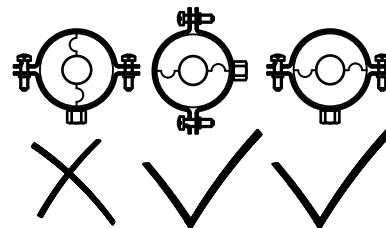
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® E19 + 2S

for insulated pipes 12.0 - 168.3 mm

(D 03 16)



Features and Benefits

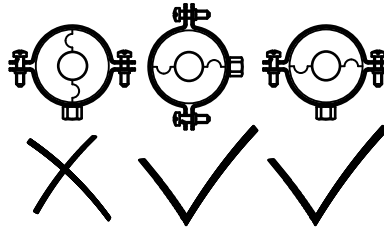
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I193303012	I190000012 + 33035052	12.0	BISOFIX® E19 + 2S Clamp	100	50
I193303015	I190000015 + 33035061	15.0	BISOFIX® E19 + 2S Clamp	100	50
I193303018	I190000018 + 33035061	17.2 - 18.0	BISOFIX® E19 + 2S Clamp	100	50
I193303022	I190000022 + 33035061	21.3 - 22.0	BISOFIX® E19 + 2S Clamp	100	50
I193303028	I190000028 + 33035067	26.9 - 28.0	BISOFIX® E19 + 2S Clamp	100	50
I193303035	I190000035 + 33035081	33.7 - 35.0	BISOFIX® E19 + 2S Clamp	100	50
I193303042	I190000042 + 33035081	42.4	BISOFIX® E19 + 2S Clamp	150	50
I193303048	I190000048 + 33035095	48.3	BISOFIX® E19 + 2S Clamp	225	50
I193303054	I190000054 + 33035103	54.0	BISOFIX® E19 + 2S Clamp	225	50
I193303057	I190000057 + 33035103	57.0	BISOFIX® E19 + 2S Clamp	225	50
I193303060	I190000060 + 33035103	60.3	BISOFIX® E19 + 2S Clamp	350	50
I193303064	I190000064 + 33035118	64.0	BISOFIX® E19 + 2S Clamp	350	25
I193303070	I190000070 + 33035127	70.0	BISOFIX® E19 + 2S Clamp	425	25
I193303076	I190000076 + 33035127	76.1	BISOFIX® E19 + 2S Clamp	575	25
I193303089	I190000089 + 33035144	88.9	BISOFIX® E19 + 2S Clamp	875	25
I193303102	I190000102 + 33035153	101.6	BISOFIX® E19 + 2S Clamp	1,000	25
I193303108	I190000108 + 33035162	108.0	BISOFIX® E19 + 2S Clamp	1,075	25
I193303114	I190000114 + 33035172	114.3	BISOFIX® E19 + 2S Clamp	1,250	25
I193303133	I190000133 + 33035194	133.0	BISOFIX® E19 + 2S Clamp	1,475	5
I193303140	I190000140 + 33035194	139.7	BISOFIX® E19 + 2S Clamp	1,700	5
I193303160	I190000160 + 33035216	159.0 - 160.0	BISOFIX® E19 + 2S Clamp	1,950	5
I193303168	I190000168 + 33035225	168.3	BISOFIX® E19 + 2S Clamp	2,125	5

BISOFIX® E19 + Bifix® G2

(D 03 18)

for insulated pipes 12.0 - 168.3 mm



Features and Benefits

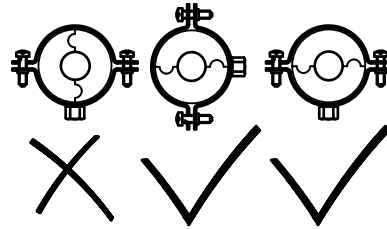
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with Bifix® G2 clamp
- Bifix® G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I193008012	I190000012 + 3008052	12.0	BISOFIX® E19 + Bifix® G2 Clamp	100	50
I193008015	I190000015 + 3008058	15.0	BISOFIX® E19 + Bifix® G2 Clamp	100	50
I193008018	I190000018 + 3008058	17.2 - 18.0	BISOFIX® E19 + Bifix® G2 Clamp	100	50
I193008022	I190000022 + 3008064	21.3 - 22.0	BISOFIX® E19 + Bifix® G2 Clamp	100	50
I193008028	I190000028 + 3008070	26.9 - 28.0	BISOFIX® E19 + Bifix® G2 Clamp	100	50
I193008035	I190000035 + 3008079	33.7 - 35.0	BISOFIX® E19 + Bifix® G2 Clamp	100	50
I193008042	I190000042 + 3008083	42.4	BISOFIX® E19 + Bifix® G2 Clamp	150	50
I193008048	I190000048 + 3008091	48.3	BISOFIX® E19 + Bifix® G2 Clamp	225	50
I193008054	I190000054 + 3008105	54.0	BISOFIX® E19 + Bifix® G2 Clamp	225	50
I193008057	I190000057 + 3008105	57.0	BISOFIX® E19 + Bifix® G2 Clamp	225	50
I193008060	I190000060 + 3008105	60.3	BISOFIX® E19 + Bifix® G2 Clamp	350	50
I193008064	I190000064 + 3008115	64.0	BISOFIX® E19 + Bifix® G2 Clamp	350	25
I193008070	I190000070 + 3008130	70.0	BISOFIX® E19 + Bifix® G2 Clamp	425	25
I193008076	I190000076 + 3008130	76.1	BISOFIX® E19 + Bifix® G2 Clamp	575	25
I193008089	I190000089 + 3008140	88.9	BISOFIX® E19 + Bifix® G2 Clamp	875	25
I193008102	I190000102 + 3008160	101.6	BISOFIX® E19 + Bifix® G2 Clamp	1,000	25
I193008108	I190000108 + 3008160	108.0	BISOFIX® E19 + Bifix® G2 Clamp	1,075	25
I193008114	I190000114 + 3008169	114.3	BISOFIX® E19 + Bifix® G2 Clamp	1,250	25
I193008133	I190000133 + 3008200	133.0	BISOFIX® E19 + Bifix® G2 Clamp	1,475	5
I193008140	I190000140 + 3008200	139.7	BISOFIX® E19 + Bifix® G2 Clamp	1,700	5
I193008160	I190000160 + 3008210	159.0 - 160.0	BISOFIX® E19 + Bifix® G2 Clamp	1,950	5
I193008168	I190000168 + 3008225	168.3	BISOFIX® E19 + Bifix® G2 Clamp	2,125	5

BISOFIX® E19 + HD500

(D 03 20)

for insulated pipes 12.0 - 219.1 mm



Features and Benefits

- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

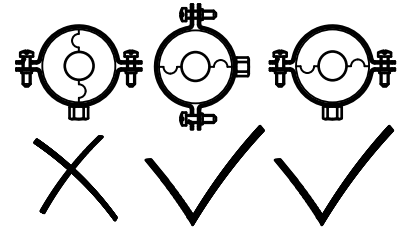
Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I193304012	I190000012 + 33038052	12.0	BISOFIX® E19 + HD500 Clamp	100	25
I193304015	I190000015 + 33038058	15.0	BISOFIX® E19 + HD500 Clamp	100	25
I193304018	I190000018 + 33038058	17.2 - 18.0	BISOFIX® E19 + HD500 Clamp	100	25
I193304022	I190000022 + 33038065	21.3 - 22.0	BISOFIX® E19 + HD500 Clamp	100	25
I193304028	I190000028 + 33038071	26.9 - 28.0	BISOFIX® E19 + HD500 Clamp	100	25
I193304035	I190000035 + 33048078	33.7 - 35.0	BISOFIX® E19 + HD500 Clamp	100	25
I193304042	I190000042 + 33048085	42.4	BISOFIX® E19 + HD500 Clamp	150	25
I193304048	I190000048 + 33048092	48.3	BISOFIX® E19 + HD500 Clamp	225	25
I193304054	I190000054 + 33048106	54.0	BISOFIX® E19 + HD500 Clamp	225	25
I193304057	I190000057 + 33048106	57.0	BISOFIX® E19 + HD500 Clamp	225	25
I193304060	I190000060 + 33048106	60.3	BISOFIX® E19 + HD500 Clamp	350	25
I193304064	I190000064 + 33048116	64.0	BISOFIX® E19 + HD500 Clamp	350	25
I193304070	I190000070 + 33048133	70.0	BISOFIX® E19 + HD500 Clamp	425	25
I193304076	I190000076 + 33048133	76.1	BISOFIX® E19 + HD500 Clamp	575	25
I193304089	I190000089 + 33048140	88.9	BISOFIX® E19 + HD500 Clamp	875	25
I193304102	I190000102 + 33048154	101.6	BISOFIX® E19 + HD500 Clamp	1,000	15
I193304108	I190000108 + 33048169	108.0	BISOFIX® E19 + HD500 Clamp	1,075	15
I193304114	I190000114 + 33048169	114.3	BISOFIX® E19 + HD500 Clamp	1,250	15
I193304133	I190000133 + 33048202	133.0	BISOFIX® E19 + HD500 Clamp	1,475	5
I193304140	I190000140 + 33048202	139.7	BISOFIX® E19 + HD500 Clamp	1,700	5
I193304160	I190000160 + 33048219	159.0 - 160.0	BISOFIX® E19 + HD500 Clamp	1,950	5
I193304168	I190000168 + 33048219	168.3	BISOFIX® E19 + HD500 Clamp	2,125	5
I193304219	I190000219 + 33068279	219.1	BISOFIX® E19 + HD500 Clamp	3,525	2

EN-SG 02/2022 - Subject to modifications

BISOFIX[®] E25

(D 03 26)

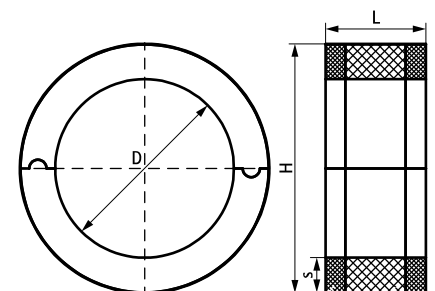
for insulated pipes 12.0 - 219.1 mm



Features and Benefits

- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (")	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I250000012	12.0	-	-	50 mm	62.6	25.3	100	25
I250000015	15.0	-	-	50 mm	66.0	25.5	100	25
I250000018	17.2 - 18.0	3/8	10	50 mm	68.6	25.3	100	25
I250000022	21.3 - 22.0	1/2	15	50 mm	75.4	26.7	100	25
I250000028	26.9 - 28.0	3/4	20	50 mm	78.6	25.3	100	25
I250000035	33.7 - 35.0	1	25	50 mm	88.0	26.5	100	25
I250000042	42.4	1 1/4	32	50 mm	100.0	28.8	150	25
I250000048	48.3	1 1/2	40	50 mm	100.1	25.9	225	25
I250000054	54.0	-	-	50 mm	104.6	25.3	225	25
I250000057	57.0	-	-	50 mm	107.6	25.3	225	25
I250000060	60.3	2	50	50 mm	110.9	25.3	350	25
I250000064	64.0	-	-	50 mm	128.6	32.3	350	25
I250000070	70.0	-	-	50 mm	134.6	32.3	425	25
I250000076	76.1	2 1/2	65	50 mm	140.7	32.3	575	25
I250000089	88.9	3	80	50 mm	153.5	32.3	875	25
I250000102	101.6	-	-	50 mm	166.2	32.3	1,000	25
I250000108	108.0	-	-	50 mm	176.0	34.0	1,075	5
I250000114	114.3	4	100	50 mm	178.9	32.3	1,250	5
I250000133	133.0	-	-	100 mm	197.6	32.3	1,475	5
I250000140	139.7	5	125	100 mm	205.1	32.7	1,700	5
I250000160	159.0 - 160.0	-	-	100 mm	224.6	32.3	1,950	5
I250000168	168.3	6	150	100 mm	232.9	32.3	2,125	3
I250000219	219.1	8	200	100 mm	283.7	32.3	3,525	3



EN-SG 02/2022 - Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

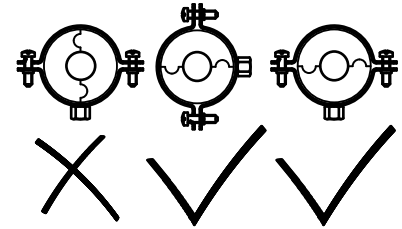
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® E25 + 2S

for insulated pipes 12.0 - 160.0 mm

(D 03 28)



Features and Benefits

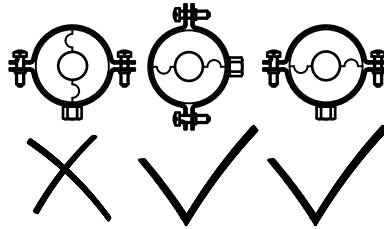
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I253303012	I250000012 + 33035067	12.0	BISOFIX® E25 + 2S Clamp	100	50
I253303015	I250000015 + 33035067	15.0	BISOFIX® E25 + 2S Clamp	100	50
I253303018	I250000018 + 33035074	17.2 - 18.0	BISOFIX® E25 + 2S Clamp	100	50
I253303022	I250000022 + 33035081	21.3 - 22.0	BISOFIX® E25 + 2S Clamp	100	50
I253303028	I250000028 + 33035081	26.9 - 28.0	BISOFIX® E25 + 2S Clamp	100	50
I253303035	I250000035 + 33035095	33.7 - 35.0	BISOFIX® E25 + 2S Clamp	100	50
I253303042	I250000042 + 33035103	42.4	BISOFIX® E25 + 2S Clamp	150	50
I253303048	I250000048 + 33035103	48.3	BISOFIX® E25 + 2S Clamp	225	50
I253303054	I250000054 + 33035112	54.0	BISOFIX® E25 + 2S Clamp	225	25
I253303057	I250000057 + 33035112	57.0	BISOFIX® E25 + 2S Clamp	225	25
I253303060	I250000060 + 33035112	60.3	BISOFIX® E25 + 2S Clamp	350	25
I253303064	I250000064 + 33035137	64.0	BISOFIX® E25 + 2S Clamp	350	25
I253303070	I250000070 + 33035137	70.0	BISOFIX® E25 + 2S Clamp	425	25
I253303076	I250000076 + 33035144	76.1	BISOFIX® E25 + 2S Clamp	575	25
I253303089	I250000089 + 33035153	88.9	BISOFIX® E25 + 2S Clamp	875	25
I253303102	I250000102 + 33035172	101.6	BISOFIX® E25 + 2S Clamp	1,000	25
I253303108	I250000108 + 33035183	108.0	BISOFIX® E25 + 2S Clamp	1,075	5
I253303114	I250000114 + 33035183	114.3	BISOFIX® E25 + 2S Clamp	1,250	5
I253303133	I250000133 + 33035205	133.0	BISOFIX® E25 + 2S Clamp	1,475	5
I253303140	I250000140 + 33035205	139.7	BISOFIX® E25 + 2S Clamp	1,700	5
I253303160	I250000160 + 33035225	159.0 - 160.0	BISOFIX® E25 + 2S Clamp	1,950	5

BISOFIX® E25 + Bifix® G2

(D 03 30)

for insulated pipes 12.0 - 160.0 mm



Features and Benefits

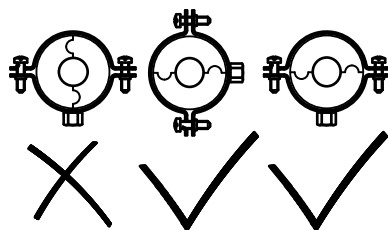
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with Bifix® G2 clamp
- Bifix® G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I253008012	I250000012 + 3008064	12.0	BISOFIX® E25 + Bifix® G2 Clamp	100	50
I253008015	I250000015 + 3008070	15.0	BISOFIX® E25 + Bifix® G2 Clamp	100	50
I253008018	I250000018 + 3008070	17.2 - 18.0	BISOFIX® E25 + Bifix® G2 Clamp	100	50
I253008022	I250000022 + 3008079	21.3 - 22.0	BISOFIX® E25 + Bifix® G2 Clamp	100	50
I253008028	I250000028 + 3008079	26.9 - 28.0	BISOFIX® E25 + Bifix® G2 Clamp	100	50
I253008035	I250000035 + 3008091	33.7 - 35.0	BISOFIX® E25 + Bifix® G2 Clamp	100	50
I253008042	I250000042 + 3008105	42.4	BISOFIX® E25 + Bifix® G2 Clamp	150	50
I253008048	I250000048 + 3008105	48.3	BISOFIX® E25 + Bifix® G2 Clamp	225	50
I253008054	I250000054 + 3008105	54.0	BISOFIX® E25 + Bifix® G2 Clamp	225	50
I253008057	I250000057 + 3008115	57.0	BISOFIX® E25 + Bifix® G2 Clamp	225	25
I253008060	I250000060 + 3008115	60.3	BISOFIX® E25 + Bifix® G2 Clamp	350	25
I253008064	I250000064 + 3008130	64.0	BISOFIX® E25 + Bifix® G2 Clamp	350	25
I253008070	I250000070 + 3008140	70.0	BISOFIX® E25 + Bifix® G2 Clamp	425	25
I253008076	I250000076 + 3008140	76.1	BISOFIX® E25 + Bifix® G2 Clamp	575	25
I253008089	I250000089 + 3008160	88.9	BISOFIX® E25 + Bifix® G2 Clamp	875	25
I253008102	I250000102 + 3008169	101.6	BISOFIX® E25 + Bifix® G2 Clamp	1,000	25
I253008108	I250000108 + 3008180	108.0	BISOFIX® E25 + Bifix® G2 Clamp	1,075	5
I253008114	I250000114 + 3008180	114.3	BISOFIX® E25 + Bifix® G2 Clamp	1,250	5
I253008133	I250000133 + 3008200	133.0	BISOFIX® E25 + Bifix® G2 Clamp	1,475	5
I253008140	I250000140 + 3008210	139.7	BISOFIX® E25 + Bifix® G2 Clamp	1,700	5
I253008160	I250000160 + 3008225	159.0 - 160.0	BISOFIX® E25 + Bifix® G2 Clamp	1,950	5

BISOFIX® E25 + HD500

(D 03 32)

for insulated pipes 12.0 - 219.1 mm



Features and Benefits

- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

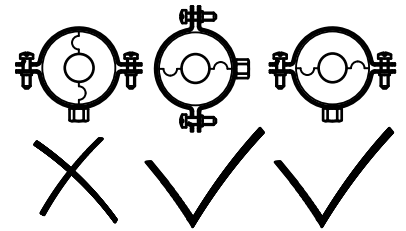
Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I253304012	I250000012 + 33038065	12.0	BISOFIX® E25 + HD500 Clamp	100	25
I253304015	I250000015 + 33038071	15.0	BISOFIX® E25 + HD500 Clamp	100	25
I253304018	I250000018 + 33038071	17.2 - 18.0	BISOFIX® E25 + HD500 Clamp	100	25
I253304022	I250000022 + 33048078	21.3 - 22.0	BISOFIX® E25 + HD500 Clamp	100	25
I253304028	I250000028 + 33048085	26.9 - 28.0	BISOFIX® E25 + HD500 Clamp	100	25
I253304035	I250000035 + 33048092	33.7 - 35.0	BISOFIX® E25 + HD500 Clamp	100	25
I253304042	I250000042 + 33048106	42.4	BISOFIX® E25 + HD500 Clamp	150	25
I253304048	I250000048 + 33048106	48.3	BISOFIX® E25 + HD500 Clamp	225	25
I253304054	I250000054 + 33048106	54.0	BISOFIX® E25 + HD500 Clamp	225	25
I253304057	I250000057 + 33048116	57.0	BISOFIX® E25 + HD500 Clamp	225	25
I253304060	I250000060 + 33048116	60.3	BISOFIX® E25 + HD500 Clamp	350	25
I253304064	I250000064 + 33048133	64.0	BISOFIX® E25 + HD500 Clamp	350	25
I253304070	I250000070 + 33048140	70.0	BISOFIX® E25 + HD500 Clamp	425	25
I253304076	I250000076 + 33048140	76.1	BISOFIX® E25 + HD500 Clamp	575	25
I253304089	I250000089 + 33048154	88.9	BISOFIX® E25 + HD500 Clamp	875	15
I253304102	I250000102 + 33048169	101.6	BISOFIX® E25 + HD500 Clamp	1,000	15
I253304108	I250000108 + 33048183	108.0	BISOFIX® E25 + HD500 Clamp	1,075	5
I253304114	I250000114 + 33048183	114.3	BISOFIX® E25 + HD500 Clamp	1,250	5
I253304133	I250000133 + 33048202	133.0	BISOFIX® E25 + HD500 Clamp	1,475	5
I253304140	I250000140 + 33048202	139.7	BISOFIX® E25 + HD500 Clamp	1,700	5
I253304160	I250000160 + 33048227	159.0 - 160.0	BISOFIX® E25 + HD500 Clamp	1,950	5
I253304168	I250000168 + 33068241	168.3	BISOFIX® E25 + HD500 Clamp	2,125	3
I253304219	I250000219 + 33068289	219.1	BISOFIX® E25 + HD500 Clamp	3,525	3

EN-SG 02/2022 - Subject to modifications

BISOFIX[®] E32

(D 03 38)

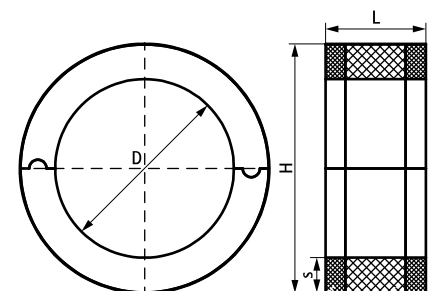
for insulated pipes 12.0 - 273.1 mm



Features and Benefits

- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (")	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I320000012	12.0	-	-	50 mm	76.6	32.3	100	25
I320000015	15.0	-	-	50 mm	80.0	32.5	100	25
I320000018	17.2 - 18.0	3/8	10	50 mm	82.6	32.3	100	25
I320000022	21.3 - 22.0	1/2	15	50 mm	88.0	33.0	100	25
I320000028	27.0 - 28.0	3/4	20	50 mm	100.0	36.0	100	25
I320000035	33.7 - 35.0	1	25	50 mm	100.0	32.5	100	25
I320000042	42.4	1 1/4	32	50 mm	108.0	32.8	150	25
I320000048	48.3	1 1/2	40	50 mm	112.9	32.3	225	25
I320000054	54.0	-	-	50 mm	124.6	35.3	225	25
I320000060	60.3	2	50	50 mm	124.9	32.3	350	25
I320000064	64.0	-	-	50 mm	152.0	44.0	350	15
I320000070	70.0	-	-	50 mm	152.0	41.0	425	15
I320000076	76.1	2 1/2	65	50 mm	156.7	40.3	575	15
I320000089	88.9	3	80	50 mm	176.1	43.6	875	5
I320000102	101.6	-	-	50 mm	192.0	45.2	1,000	5
I320000108	108.0	-	-	50 mm	192.0	42.0	1,075	5
I320000114	114.3	4	100	50 mm	194.9	40.3	1,250	5
I320000133	133.0	-	-	100 mm	218.4	42.7	1,475	5
I320000140	139.7	5	125	100 mm	220.3	40.3	1,700	5
I320000160	159.0 - 160.0	-	-	100 mm	241.0	40.5	1,950	3
I320000168	168.3	6	150	100 mm	248.9	40.3	2,125	3
I320000219	219.1	8	200	100 mm	315.1	48.0	3,525	3
I320000273	273.1	10	250	100 mm	353.6	40.3	4,925	3



EN-56 02/2022 - Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

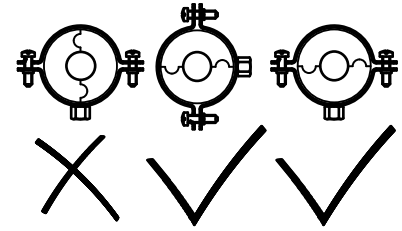
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® E32 + 2S

for insulated pipes 12.0 - 140.0 mm

(D 03 40)



Features and Benefits

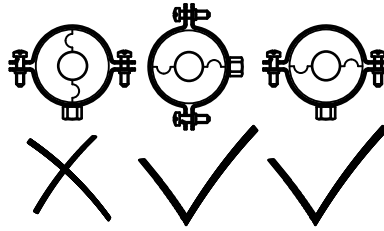
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I323303012	I320000012 + 33035081	12.0	BISOFIX® E32 + 2S Clamp	100	50
I323303015	I320000015 + 33035081	15.0	BISOFIX® E32 + 2S Clamp	100	50
I323303018	I320000018 + 33035087	17.2 - 18.0	BISOFIX® E32 + 2S Clamp	100	50
I323303022	I320000022 + 33035095	21.3 - 22.0	BISOFIX® E32 + 2S Clamp	100	50
I323303028	I320000028 + 33035103	27.0 - 28.0	BISOFIX® E32 + 2S Clamp	100	50
I323303035	I320000035 + 33035103	33.7 - 35.0	BISOFIX® E32 + 2S Clamp	100	50
I323303042	I320000042 + 33035112	42.4	BISOFIX® E32 + 2S Clamp	150	25
I323303048	I320000048 + 33035118	48.3	BISOFIX® E32 + 2S Clamp	225	25
I323303054	I320000054 + 33035127	54.0	BISOFIX® E32 + 2S Clamp	225	25
I323303060	I320000060 + 33035127	60.3	BISOFIX® E32 + 2S Clamp	350	25
I323303064	I320000064 + 33035153	64.0	BISOFIX® E32 + 2S Clamp	350	15
I323303070	I320000070 + 33035153	70.0	BISOFIX® E32 + 2S Clamp	425	15
I323303076	I320000076 + 33035162	76.1	BISOFIX® E32 + 2S Clamp	575	15
I323303089	I320000089 + 33035183	88.9	BISOFIX® E32 + 2S Clamp	875	5
I323303102	I320000102 + 33035194	102.0	BISOFIX® E32 + 2S Clamp	1,000	5
I323303108	I320000108 + 33035194	108.0	BISOFIX® E32 + 2S Clamp	1,075	5
I323303114	I320000114 + 33035205	114.0	BISOFIX® E32 + 2S Clamp	1,250	5
I323303133	I320000133 + 33035225	133.0	BISOFIX® E32 + 2S Clamp	1,475	5
I323303140	I320000140 + 33035225	140.0	BISOFIX® E32 + 2S Clamp	1,700	5

BISOFIX[®] E32 + Bifix[®] G2

(D 03 42)

for insulated pipes 12.0 - 140.0 mm



Features and Benefits

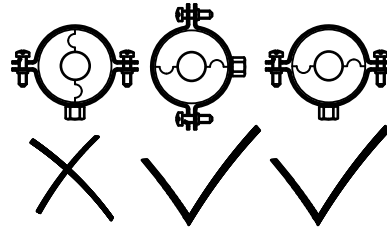
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with Bifix[®] G2 clamp
- Bifix[®] G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I323008012	I320000012 + 3008079	12.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	100	50
I323008015	I320000015 + 3008083	15.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	100	50
I323008018	I320000018 + 3008083	17.2 - 18.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	100	50
I323008022	I320000022 + 3008091	21.3 - 22.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	100	50
I323008028	I320000028 + 3008105	27.0 - 28.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	100	50
I323008035	I320000035 + 3008105	33.7 - 35.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	100	50
I323008042	I320000042 + 3008115	42.4	BISOFIX [®] E32 + Bifix [®] G2 Clamp	150	25
I323008048	I320000048 + 3008115	48.3	BISOFIX [®] E32 + Bifix [®] G2 Clamp	225	25
I323008054	I320000054 + 3008130	54.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	225	25
I323008060	I320000060 + 3008130	60.3	BISOFIX [®] E32 + Bifix [®] G2 Clamp	350	25
I323008064	I320000064 + 3008160	64.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	350	15
I323008070	I320000070 + 3008160	70.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	425	15
I323008076	I320000076 + 3008160	76.1	BISOFIX [®] E32 + Bifix [®] G2 Clamp	575	15
I323008089	I320000089 + 3008180	88.9	BISOFIX [®] E32 + Bifix [®] G2 Clamp	875	5
I323008102	I320000102 + 3008200	102.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	1,000	5
I323008108	I320000108 + 3008200	108.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	1,075	5
I323008114	I320000114 + 3008200	114.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	1,250	5
I323008133	I320000133 + 3008225	133.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	1,475	5
I323008140	I320000140 + 3008225	140.0	BISOFIX [®] E32 + Bifix [®] G2 Clamp	1,700	5

BISOFIX® E32 + HD500

(D 03 44)

for insulated pipes 12.0 - 273.0 mm



Features and Benefits

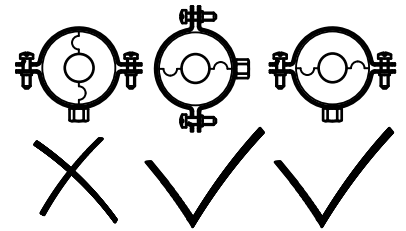
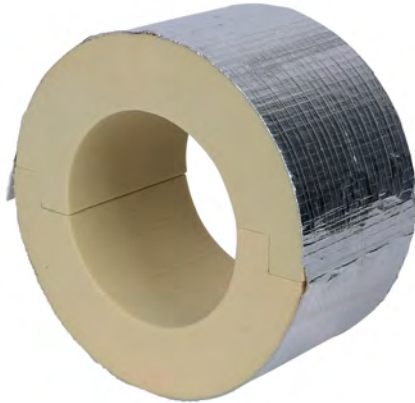
- for combination with elastomeric foam insulation
- vapourproof glueable with pipe insulation
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I323304012	I320000012 + 33048085	12.0	BISOFIX® E32 + HD500 Clamp	100	25
I323304015	I320000015 + 33048085	15.0	BISOFIX® E32 + HD500 Clamp	100	25
I323304018	I320000018 + 33048085	17.2 - 18.0	BISOFIX® E32 + HD500 Clamp	100	25
I323304022	I320000022 + 33048092	21.3 - 22.0	BISOFIX® E32 + HD500 Clamp	100	25
I323304028	I320000028 + 33048106	27.0 - 28.0	BISOFIX® E32 + HD500 Clamp	100	25
I323304035	I320000035 + 33048106	33.7 - 35.0	BISOFIX® E32 + HD500 Clamp	100	25
I323304042	I320000042 + 33048116	42.4	BISOFIX® E32 + HD500 Clamp	150	25
I323304048	I320000048 + 33048116	48.3	BISOFIX® E32 + HD500 Clamp	225	25
I323304054	I320000054 + 33048133	54.0	BISOFIX® E32 + HD500 Clamp	225	25
I323304060	I320000060 + 33048133	60.3	BISOFIX® E32 + HD500 Clamp	350	25
I323304064	I320000064 + 33048154	64.0	BISOFIX® E32 + HD500 Clamp	350	15
I323304070	I320000070 + 33048154	70.0	BISOFIX® E32 + HD500 Clamp	425	15
I323304076	I320000076 + 33048154	76.1	BISOFIX® E32 + HD500 Clamp	575	15
I323304089	I320000089 + 33048183	88.9	BISOFIX® E32 + HD500 Clamp	875	5
I323304102	I320000102 + 33048202	102.0	BISOFIX® E32 + HD500 Clamp	1,000	5
I323304108	I320000108 + 33048202	108.0	BISOFIX® E32 + HD500 Clamp	1,075	5
I323304114	I320000114 + 33048202	114.0	BISOFIX® E32 + HD500 Clamp	1,250	5
I323304133	I320000133 + 33048227	133.0	BISOFIX® E32 + HD500 Clamp	1,475	2
I323304140	I320000140 + 33048227	140.0	BISOFIX® E32 + HD500 Clamp	1,700	2
I323304160	I320000160 + 33068241	159.0 - 160.0	BISOFIX® E32 + HD500 Clamp	1,950	2
I323304168	I320000168 + 33068254	168.0	BISOFIX® E32 + HD500 Clamp	2,125	2
I323304219	I320000219 + 33068325	219.1	BISOFIX® E32 + HD500 Clamp	3,525	2
I323304273	I320000273 + 33068360	273.0	BISOFIX® E32 + HD500 Clamp	4,925	5

BISOFIX[®] PIR20

for insulated pipes 12.0 - 273.1 mm

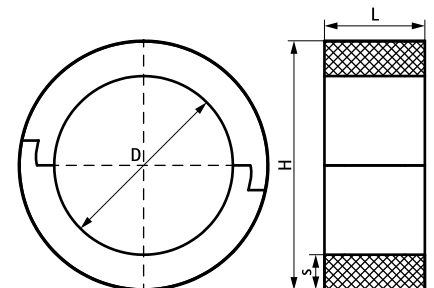
(D 03 50)



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <108mm = 80kg/m³
- PIR density >108mm = 120kg/m³
- PIR density 80kg/m³ => 0,027 [W/m*K]
- PIR density 120kg/m³ => = 0,040 [W/m*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (°)	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I200000012	12.0	-	-	75 mm	52.0	20.0	120	25
I200000015	15.0 - 16.0	-	-	75 mm	55.0	20.0	160	25
I200000018	17.2 - 18.0	3/8	10	75 mm	58.0	20.0	170	25
I200000022	21.3 - 22.0	1/2	15	75 mm	62.0	20.0	180	25
I200000028	26.9 - 28.0	3/4	20	75 mm	68.0	20.0	200	25
I200000034	33.7 - 35.0	-	-	75 mm	75.0	20.0	220	25
I200000042	42.4	1 1/4	32	75 mm	82.4	20.0	280	25
I200000048	48.3	1 1/2	40	75 mm	88.3	20.0	300	25
I200000054	54.0	-	-	75 mm	94.0	20.0	320	25
I200000057	56.0 - 57.0	-	-	75 mm	97.0	20.0	330	25
I200000060	60.3	2	50	75 mm	100.3	20.0	340	25
I200000064	64.0	-	-	75 mm	104.0	20.0	350	25
I200000070	70.0	-	-	75 mm	110.0	20.0	370	25
I200000076	76.1	2 1/2	65	75 mm	116.1	20.0	390	25
I200000089	88.9	3	80	75 mm	128.9	20.0	430	25
I200000102	101.6	-	-	75 mm	141.6	20.0	450	25
I200000108	108.0	-	-	75 mm	148.0	20.0	500	25
I200000114	114.3	4	100	100 mm	154.3	20.0	1,110	15
I200000133	133.0	-	-	100 mm	173.0	20.0	1,360	5
I200000140	139.7	5	125	100 mm	179.7	20.0	1,410	5
I200000160	159.0 - 160.0	-	-	100 mm	200.0	20.0	1,520	5
I200000168	168.3	6	150	100 mm	208.3	20.0	1,570	5
I200000219	219.1	8	200	100 mm	259.1	20.0	1,620	6
I200000273	273.1	-	-	100 mm	313.0	20.0	1,670	2



EN-SG 02/2022 - Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

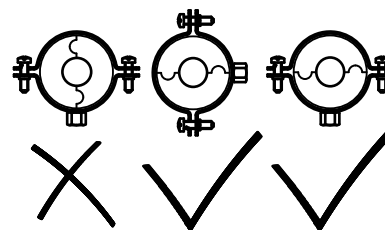
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX[®] PIR20 + 2S

(D 03 52)

for insulated pipes 12.0 - 168.3 mm



Features and Benefits

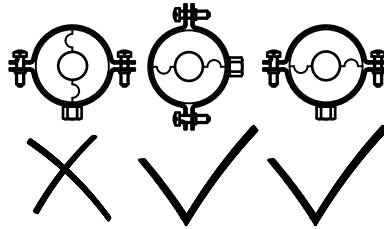
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I203303012	I200000012 + 33035052	12.0	BISOFIX [®] PIR20 + 2S Clamp	120	50
I203303015	I200000015 + 33035061	15.0 - 16.0	BISOFIX [®] PIR20 + 2S Clamp	160	50
I203303018	I200000018 + 33035061	17.2 - 18.0	BISOFIX [®] PIR20 + 2S Clamp	170	50
I203303022	I200000022 + 33035061	21.3 - 22.0	BISOFIX [®] PIR20 + 2S Clamp	180	50
I203303028	I200000028 + 33035067	26.9 - 28.0	BISOFIX [®] PIR20 + 2S Clamp	200	50
I203303034	I200000034 + 33035074	33.7 - 35.0	BISOFIX [®] PIR20 + 2S Clamp	220	50
I203303042	I200000042 + 33035087	42.4	BISOFIX [®] PIR20 + 2S Clamp	280	50
I203303048	I200000048 + 33035095	48.3	BISOFIX [®] PIR20 + 2S Clamp	300	50
I203303054	I200000054 + 33035095	54.0	BISOFIX [®] PIR20 + 2S Clamp	320	50
I203303057	I200000057 + 33035103	56.0 - 57.0	BISOFIX [®] PIR20 + 2S Clamp	330	50
I203303060	I200000060 + 33035103	60.3	BISOFIX [®] PIR20 + 2S Clamp	340	50
I203303064	I200000064 + 33035112	64.0	BISOFIX [®] PIR20 + 2S Clamp	350	25
I203303070	I200000070 + 33035112	70.0	BISOFIX [®] PIR20 + 2S Clamp	370	25
I203303076	I200000076 + 33035118	76.1	BISOFIX [®] PIR20 + 2S Clamp	390	25
I203303089	I200000089 + 33035137	88.9	BISOFIX [®] PIR20 + 2S Clamp	430	25
I203303102	I200000102 + 33035144	101.6	BISOFIX [®] PIR20 + 2S Clamp	450	25
I203303108	I200000108 + 33035153	108.0	BISOFIX [®] PIR20 + 2S Clamp	500	25
I203303114	I200000114 + 33035162	114.3	BISOFIX [®] PIR20 + 2S Clamp	1,110	15
I203303133	I200000133 + 33035183	133.0	BISOFIX [®] PIR20 + 2S Clamp	1,360	5
I203303140	I200000140 + 33035183	139.7	BISOFIX [®] PIR20 + 2S Clamp	1,410	5
I203303160	I200000160 + 33035205	159.0 - 160.0	BISOFIX [®] PIR20 + 2S Clamp	1,520	5
I203303168	I200000168 + 33035216	168.3	BISOFIX [®] PIR20 + 2S Clamp	1,570	5

BISOFIX[®] PIR20 + Bifix[®] G2

(D 03 54)

for insulated pipes 12.0 - 168.3 mm



Features and Benefits

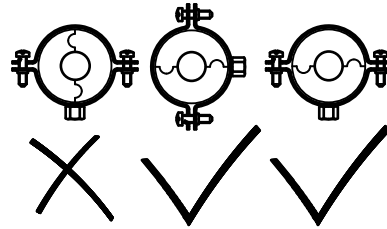
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with Bifix[®] G2 clamp
- Bifix[®] G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I203008012	I200000012 + 3008052	12.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	120	50
I203008015	I200000015 + 3008058	15.0 - 16.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	160	50
I203008018	I200000018 + 3008058	17.2 - 18.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	170	50
I203008022	I200000022 + 3008064	21.3 - 22.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	180	50
I203008028	I200000028 + 3008070	26.9 - 28.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	200	50
I203008034	I200000034 + 3008079	33.7 - 35.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	220	50
I203008042	I200000042 + 3008083	42.4	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	280	50
I203008048	I200000048 + 3008091	48.3	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	300	50
I203008054	I200000054 + 3008091	54.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	320	50
I203008057	I200000057 + 3008105	56.0 - 57.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	330	50
I203008060	I200000060 + 3008105	60.3	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	340	50
I203008064	I200000064 + 3008105	64.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	350	50
I203008070	I200000070 + 3008115	70.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	370	25
I203008076	I200000076 + 3008115	76.1	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	390	25
I203008089	I200000089 + 3008130	88.9	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	430	25
I203008102	I200000102 + 3008140	101.6	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	450	25
I203008108	I200000108 + 3008160	108.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	500	25
I203008114	I200000114 + 3008160	114.3	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	1,110	15
I203008133	I200000133 + 3008180	133.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	1,360	5
I203008140	I200000140 + 3008180	139.7	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	1,410	5
I203008160	I200000160 + 3008200	159.0 - 160.0	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	1,520	5
I203008168	I200000168 + 3008210	168.3	BISOFIX [®] PIR20 + Bifix [®] G2 Clamp	1,570	5

BISOFIX® PIR20 + HD500

(D 03 56)

for insulated pipes 12.0 - 273.1 mm



Features and Benefits

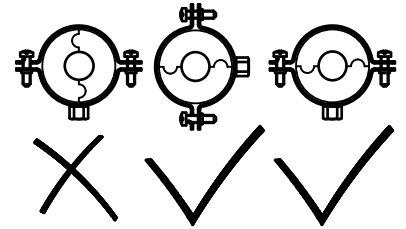
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I203304012	I200000012 + 33038052	12.0	BISOFIX® PIR20 + HD500 Clamp	120	25
I203304015	I200000015 + 33038058	15.0 - 16.0	BISOFIX® PIR20 + HD500 Clamp	160	25
I203304018	I200000018 + 33038058	17.2 - 18.0	BISOFIX® PIR20 + HD500 Clamp	170	25
I203304022	I200000022 + 33038065	21.3 - 22.0	BISOFIX® PIR20 + HD500 Clamp	180	25
I203304028	I200000028 + 33038071	26.9 - 28.0	BISOFIX® PIR20 + HD500 Clamp	200	25
I203304034	I200000034 + 33048078	33.7 - 35.0	BISOFIX® PIR20 + HD500 Clamp	220	25
I203304042	I200000042 + 33048085	42.4	BISOFIX® PIR20 + HD500 Clamp	280	25
I203304048	I200000048 + 33048092	48.3	BISOFIX® PIR20 + HD500 Clamp	300	25
I203304054	I200000054 + 33048092	54.0	BISOFIX® PIR20 + HD500 Clamp	320	25
I203304057	I200000057 + 33048106	56.0 - 57.0	BISOFIX® PIR20 + HD500 Clamp	330	25
I203304060	I200000060 + 33048106	60.3	BISOFIX® PIR20 + HD500 Clamp	340	25
I203304064	I200000064 + 33048106	64.0	BISOFIX® PIR20 + HD500 Clamp	350	25
I203304070	I200000070 + 33048116	70.0	BISOFIX® PIR20 + HD500 Clamp	370	25
I203304076	I200000076 + 33048116	76.1	BISOFIX® PIR20 + HD500 Clamp	390	25
I203304089	I200000089 + 33048133	88.9	BISOFIX® PIR20 + HD500 Clamp	430	25
I203304102	I200000102 + 33048140	101.6	BISOFIX® PIR20 + HD500 Clamp	450	25
I203304108	I200000108 + 33048154	108.0	BISOFIX® PIR20 + HD500 Clamp	500	15
I203304114	I200000114 + 33048154	114.3	BISOFIX® PIR20 + HD500 Clamp	1,110	15
I203304133	I200000133 + 33048183	133.0	BISOFIX® PIR20 + HD500 Clamp	1,360	5
I203304140	I200000140 + 33048183	139.7	BISOFIX® PIR20 + HD500 Clamp	1,410	5
I203304160	I200000160 + 33048202	159.0 - 160.0	BISOFIX® PIR20 + HD500 Clamp	1,520	5
I203304168	I200000168 + 33048219	168.3	BISOFIX® PIR20 + HD500 Clamp	1,570	5
I203304219	I200000219 + 33068264	219.1	BISOFIX® PIR20 + HD500 Clamp	1,620	2
I203304273	I200000273 + 33068325	273.1	BISOFIX® PIR20 + HD500 Clamp	1,670	2

BISOFIX[®] PIR30

for insulated pipes 12.0 - 323.9 mm

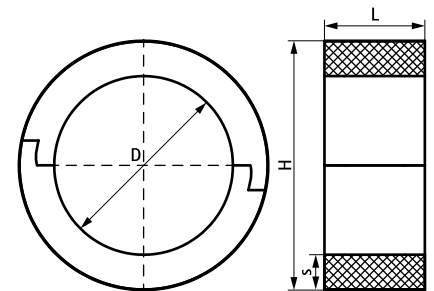
(D 03 60)



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <108mm = 80kg/m³
- PIR density >108mm = 120kg/m³
- PIR density 80kg/m³ => 0,027 [W/m*K]
- PIR density 120kg/m³ => = 0,040 [W/m*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (°)	DN	L	H (mm)	s (mm)	F _{b,z} (N)	Pack 1
I300000012	12.0	-	-	75 mm	72.0	30.0	130	25
I300000015	15.0 - 16.0	-	-	75 mm	75.0	30.0	170	25
I300000018	17.2 - 18.0	3/8	10	75 mm	78.0	30.0	190	25
I300000022	21.3 - 22.0	1/2	15	75 mm	82.0	30.0	230	25
I300000034	33.7 - 35.0	-	-	75 mm	95.0	30.0	320	25
I300000042	42.4	1 1/4	32	75 mm	102.4	30.0	350	25
I300000048	48.3	1 1/2	40	75 mm	108.3	30.0	370	25
I300000054	54.0	-	-	75 mm	114.0	30.0	380	25
I300000057	56.0 - 57.0	-	-	75 mm	117.0	30.0	390	25
I300000060	60.3	2	50	75 mm	120.3	30.0	410	25
I300000064	64.0	-	-	75 mm	124.0	30.0	420	25
I300000070	70.0	-	-	75 mm	130.0	30.0	440	25
I300000076	76.1	2 1/2	65	75 mm	136.1	30.0	460	25
I300000089	88.9	3	80	75 mm	148.9	30.0	500	15
I300000102	101.6	-	-	100 mm	161.6	30.0	550	15
I300000108	108.0	-	-	100 mm	168.0	30.0	620	15
I300000114	114.3	4	100	100 mm	174.3	30.0	1,370	15
I300000133	133.0	-	-	100 mm	193.0	30.0	1,520	5
I300000140	139.7	5	125	100 mm	199.7	30.0	1,570	5
I300000160	159.0 - 160.0	-	-	100 mm	220.0	30.0	1,720	5
I300000168	168.3	6	150	100 mm	228.3	30.0	2,720	8
I300000219	219.1	8	200	150 mm	279.1	30.0	4,210	2
I300000273	273.1	-	-	150 mm	333.0	30.0	5,020	2
I300000324	323.9	-	-	150 mm	384.0	30.0	5,790	2



EN-SG 02/2022- Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

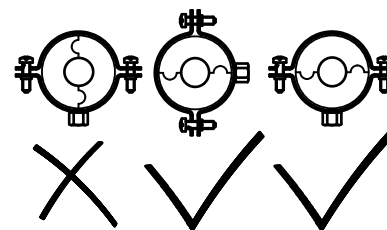
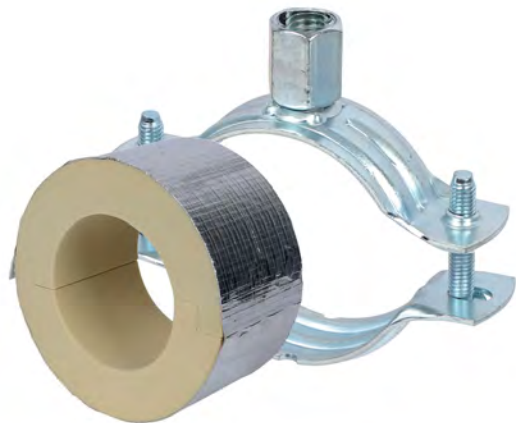
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® PIR30 + 2S

for insulated pipes 12.0 - 160.0 mm

(D 03 62)



Features and Benefits

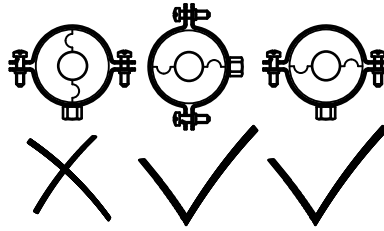
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I303303012	I300000012 + 33035081	12.0	BISOFIX® PIR30 + 2S Clamp	130	50
I303303015	I300000015 + 33035081	15.0 - 16.0	BISOFIX® PIR30 + 2S Clamp	170	50
I303303018	I300000018 + 33035081	17.2 - 18.0	BISOFIX® PIR30 + 2S Clamp	190	50
I303303022	I300000022 + 33035087	21.3 - 22.0	BISOFIX® PIR30 + 2S Clamp	230	50
I303303028	I300000028 + 33035095	26.9 - 28.0	BISOFIX® PIR30 + 2S Clamp	300	50
I303303034	I300000034 + 33035095	33.7 - 35.0	BISOFIX® PIR30 + 2S Clamp	320	50
I303303042	I300000042 + 33035103	42.4	BISOFIX® PIR30 + 2S Clamp	350	50
I303303048	I300000048 + 33035112	48.3	BISOFIX® PIR30 + 2S Clamp	370	25
I303303054	I300000054 + 33035118	54.0	BISOFIX® PIR30 + 2S Clamp	380	25
I303303057	I300000057 + 33035118	56.0 - 57.0	BISOFIX® PIR30 + 2S Clamp	390	25
I303303060	I300000060 + 33035127	60.3	BISOFIX® PIR30 + 2S Clamp	410	25
I303303064	I300000064 + 33035127	64.0	BISOFIX® PIR30 + 2S Clamp	420	25
I303303070	I300000070 + 33035137	70.0	BISOFIX® PIR30 + 2S Clamp	440	25
I303303076	I300000076 + 33035137	76.1	BISOFIX® PIR30 + 2S Clamp	460	25
I303303089	I300000089 + 33035153	88.9	BISOFIX® PIR30 + 2S Clamp	500	15
I303303102	I300000102 + 33035162	101.6	BISOFIX® PIR30 + 2S Clamp	550	15
I303303108	I300000108 + 33035172	108.0	BISOFIX® PIR30 + 2S Clamp	620	15
I303303114	I300000114 + 33035183	114.3	BISOFIX® PIR30 + 2S Clamp	1,370	15
I303303133	I300000133 + 33035194	133.0	BISOFIX® PIR30 + 2S Clamp	1,520	5
I303303140	I300000140 + 33035205	139.7	BISOFIX® PIR30 + 2S Clamp	1,570	5
I303303160	I300000160 + 33035225	159.0 - 160.0	BISOFIX® PIR30 + 2S Clamp	1,720	5

BISOFIX[®] PIR30 + Bifix[®] G2

(D 03 64)

for insulated pipes 12.0 - 160.0 mm



Features and Benefits

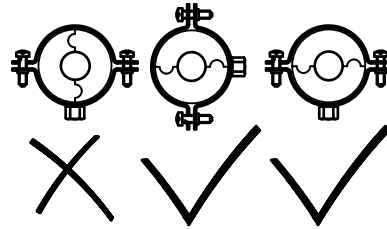
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with Bifix[®] G2 clamp
- Bifix[®] G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I303008012	I30000012 + 3008070	12.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	130	50
I303008015	I30000015 + 3008079	15.0 - 16.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	170	50
I303008018	I30000018 + 3008079	17.2 - 18.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	190	50
I303008022	I30000022 + 3008083	21.3 - 22.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	230	50
I303008028	I30000028 + 3008091	26.9 - 28.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	300	50
I303008034	I30000034 + 3008091	33.7 - 35.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	320	50
I303008042	I30000042 + 3008105	42.4	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	350	50
I303008048	I30000048 + 3008115	48.3	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	370	25
I303008054	I30000054 + 3008115	54.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	380	25
I303008057	I30000057 + 3008115	56.0 - 57.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	390	25
I303008060	I30000060 + 3008130	60.3	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	410	25
I303008064	I30000064 + 3008130	64.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	420	25
I303008070	I30000070 + 3008130	70.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	440	25
I303008076	I30000076 + 3008140	76.1	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	460	25
I303008089	I30000089 + 3008160	88.9	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	500	15
I303008102	I30000102 + 3008160	101.6	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	550	15
I303008108	I30000108 + 3008169	108.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	620	15
I303008114	I30000114 + 3008180	114.3	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	1,370	15
I303008133	I30000133 + 3008200	133.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	1,520	5
I303008140	I30000140 + 3008200	139.7	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	1,570	5
I303008160	I30000160 + 3008225	159.0 - 160.0	BISOFIX [®] PIR30 + Bifix [®] G2 Clamp	1,720	5

BISOFIX® PIR30 + HD500

(D 03 66)

for insulated pipes 12.0 - 323.9 mm



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

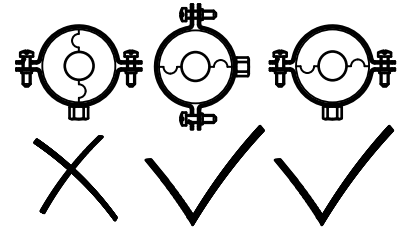
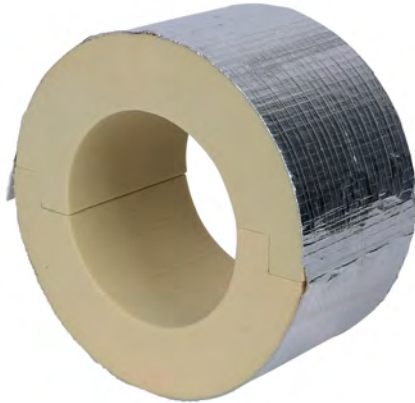
Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I303304012	I300000012 + 33048078	12.0	BISOFIX® PIR30 + HD500 Clamp	130	25
I303304015	I300000015 + 33048078	15.0 - 16.0	BISOFIX® PIR30 + HD500 Clamp	170	25
I303304018	I300000018 + 33048078	17.2 - 18.0	BISOFIX® PIR30 + HD500 Clamp	190	25
I303304022	I300000022 + 33048085	21.3 - 22.0	BISOFIX® PIR30 + HD500 Clamp	230	25
I303304028	I300000028 + 33048092	26.9 - 28.0	BISOFIX® PIR30 + HD500 Clamp	300	25
I303304034	I300000034 + 33048092	33.7 - 35.0	BISOFIX® PIR30 + HD500 Clamp	320	25
I303304042	I300000042 + 33048106	42.4	BISOFIX® PIR30 + HD500 Clamp	350	25
I303304048	I300000048 + 33048116	48.3	BISOFIX® PIR30 + HD500 Clamp	370	25
I303304054	I300000054 + 33048116	54.0	BISOFIX® PIR30 + HD500 Clamp	380	25
I303304057	I300000057 + 33048116	56.0 - 57.0	BISOFIX® PIR30 + HD500 Clamp	390	25
I303304060	I300000060 + 33048123	60.3	BISOFIX® PIR30 + HD500 Clamp	410	25
I303304064	I300000064 + 33048123	64.0	BISOFIX® PIR30 + HD500 Clamp	420	25
I303304070	I300000070 + 33048133	70.0	BISOFIX® PIR30 + HD500 Clamp	440	25
I303304076	I300000076 + 33048140	76.1	BISOFIX® PIR30 + HD500 Clamp	460	25
I303304089	I300000089 + 33048154	88.9	BISOFIX® PIR30 + HD500 Clamp	500	15
I303304102	I300000102 + 33048169	101.6	BISOFIX® PIR30 + HD500 Clamp	550	15
I303304108	I300000108 + 33048169	108.0	BISOFIX® PIR30 + HD500 Clamp	620	15
I303304114	I300000114 + 33048183	114.3	BISOFIX® PIR30 + HD500 Clamp	1,370	15
I303304133	I300000133 + 33048202	133.0	BISOFIX® PIR30 + HD500 Clamp	1,520	5
I303304140	I300000140 + 33048202	139.7	BISOFIX® PIR30 + HD500 Clamp	1,570	5
I303304160	I300000160 + 33048219	159.0 - 160.0	BISOFIX® PIR30 + HD500 Clamp	1,720	5
I303304168	I300000168 + 33048227	168.3	BISOFIX® PIR30 + HD500 Clamp	2,720	2
I303304219	I300000219 + 33068289	219.1	BISOFIX® PIR30 + HD500 Clamp	4,210	2
I303304273	I300000273 + 33068325	273.1	BISOFIX® PIR30 + HD500 Clamp	5,020	2
I303304324	I300000324 + 33068389	323.9	BISOFIX® PIR30 + HD500 Clamp	5,790	2

EN-SG 02/2022 - Subject to modifications

BISOFIX[®] PIR40

for insulated pipes 12.0 - 406.4 mm

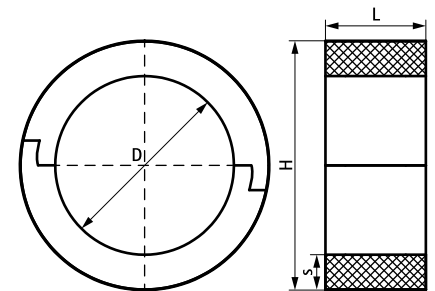
(D 03 70)



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <108mm = 80kg/m³
- PIR density >108mm = 120kg/m³
- PIR density 80kg/m³ => 0,027 [W/m*K]
- PIR density 120kg/m³ => = 0,040 [W/m*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (°)	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I400000012	12.0	-	-	75 mm	92.0	40.0	300	25
I400000015	15.0 - 16.0	-	-	75 mm	95.0	40.0	320	25
I400000018	17.2 - 18.0	3/8	10	75 mm	98.0	40.0	340	25
I400000022	21.3 - 22.0	1/2	15	75 mm	102.0	40.0	350	25
I400000028	26.9 - 28.0	3/4	20	75 mm	108.0	40.0	350	25
I400000034	33.7 - 35.0	-	-	75 mm	115.0	40.0	370	25
I400000042	42.4	1 1/4	32	75 mm	122.4	40.0	410	25
I400000048	48.3	1 1/2	40	75 mm	128.3	40.0	430	25
I400000054	54.0	-	-	75 mm	134.0	40.0	440	25
I400000057	56.0 - 57.0	-	-	75 mm	137.0	40.0	460	25
I400000060	60.3	2	50	75 mm	140.3	40.0	470	25
I400000064	64.0	-	-	75 mm	144.0	40.0	490	25
I400000070	70.0	-	-	75 mm	150.0	40.0	510	15
I400000076	76.1	2 1/2	65	75 mm	156.1	40.0	530	15
I400000089	88.9	3	80	75 mm	168.9	40.0	620	15
I400000102	101.6	-	-	100 mm	181.6	40.0	650	15
I400000108	108.0	-	-	100 mm	188.0	40.0	690	15
I400000114	114.3	4	100	100 mm	194.3	40.0	1,530	5
I400000133	133.0	-	-	100 mm	213.0	40.0	1,670	5
I400000140	139.7	5	125	100 mm	219.7	40.0	1,730	5
I400000160	159.0 - 160.0	-	-	100 mm	240.0	40.0	2,850	8
I400000168	168.3	6	150	100 mm	248.3	40.0	2,960	8
I400000219	219.1	8	200	150 mm	299.1	40.0	4,510	2
I400000273	273.1	-	-	150 mm	353.0	40.0	5,320	2
I400000324	323.9	-	-	150 mm	404.0	40.0	6,090	2
I400000406	406.4	-	-	150 mm	486.4	40.0	6,150	2



EN-SG 02/2022 - Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

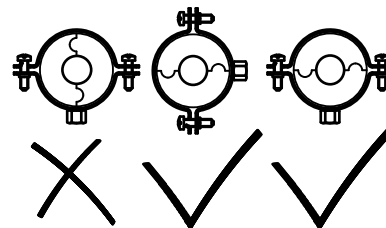
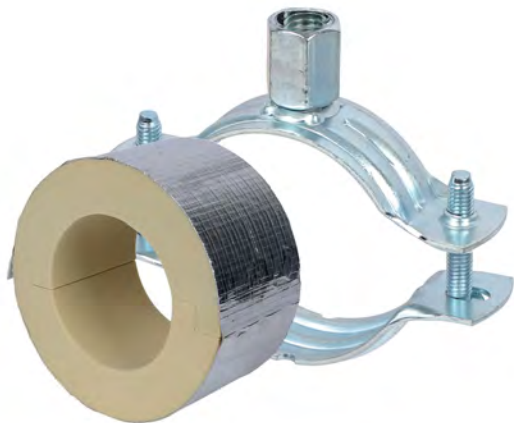
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® PIR40 + 2S

for insulated pipes 12.0 - 139.7 mm

(D 03 72)



Features and Benefits

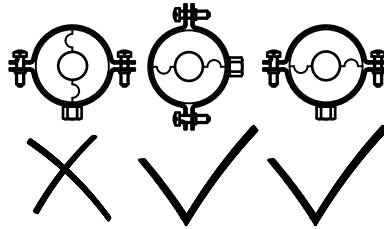
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I403303012	I400000012 + 33035095	12.0	BISOFIX® PIR40 + 2S Clamp	300	50
I403303015	I400000015 + 33035095	15.0 - 16.0	BISOFIX® PIR40 + 2S Clamp	320	50
I403303018	I400000018 + 33035103	17.2 - 18.0	BISOFIX® PIR40 + 2S Clamp	340	50
I403303022	I400000022 + 33035103	21.3 - 22.0	BISOFIX® PIR40 + 2S Clamp	350	50
I403303028	I400000028 + 33035112	26.9 - 28.0	BISOFIX® PIR40 + 2S Clamp	350	25
I403303034	I400000034 + 33035118	33.7 - 35.0	BISOFIX® PIR40 + 2S Clamp	370	25
I403303042	I400000042 + 33035127	42.4	BISOFIX® PIR40 + 2S Clamp	410	25
I403303048	I400000048 + 33035137	48.3	BISOFIX® PIR40 + 2S Clamp	430	25
I403303054	I400000054 + 33035137	54.0	BISOFIX® PIR40 + 2S Clamp	440	25
I403303057	I400000057 + 33035137	56.0 - 57.0	BISOFIX® PIR40 + 2S Clamp	460	25
I403303060	I400000060 + 33035144	60.3	BISOFIX® PIR40 + 2S Clamp	470	25
I403303064	I400000064 + 33035144	64.0	BISOFIX® PIR40 + 2S Clamp	490	25
I403303070	I400000070 + 33035153	70.0	BISOFIX® PIR40 + 2S Clamp	510	15
I403303076	I400000076 + 33035162	76.1	BISOFIX® PIR40 + 2S Clamp	530	15
I403303089	I400000089 + 33035172	88.9	BISOFIX® PIR40 + 2S Clamp	620	15
I403303102	I400000102 + 33035183	101.6	BISOFIX® PIR40 + 2S Clamp	650	15
I403303108	I400000108 + 33035194	108.0	BISOFIX® PIR40 + 2S Clamp	690	15
I403303114	I400000114 + 33035194	114.3	BISOFIX® PIR40 + 2S Clamp	1,530	5
I403303133	I400000133 + 33035216	133.0	BISOFIX® PIR40 + 2S Clamp	1,670	5
I403303140	I400000140 + 33035225	139.7	BISOFIX® PIR40 + 2S Clamp	1,730	5

BISOFIX[®] PIR40 + Bifix[®] G2

(D 03 74)

for insulated pipes 12.0 - 139.7 mm



Features and Benefits

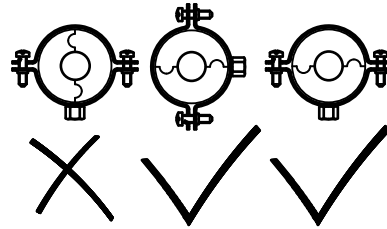
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with Bifix[®] G2 clamp
- Bifix[®] G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I403008012	I40000012 + 3008091	12.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	300	50
I403008015	I40000015 + 3008105	15.0 - 16.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	320	50
I403008018	I40000018 + 3008105	17.2 - 18.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	340	50
I403008022	I40000022 + 3008105	21.3 - 22.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	350	50
I403008028	I40000028 + 3008115	26.9 - 28.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	350	25
I403008034	I40000034 + 3008115	33.7 - 35.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	370	25
I403008042	I40000042 + 3008130	42.4	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	410	25
I403008048	I40000048 + 3008130	48.3	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	430	25
I403008054	I40000054 + 3008140	54.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	440	25
I403008057	I40000057 + 3008140	56.0 - 57.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	460	25
I403008060	I40000060 + 3008140	60.3	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	470	25
I403008064	I40000064 + 3008140	64.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	490	25
I403008070	I40000070 + 3008160	70.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	510	15
I403008076	I40000076 + 3008160	76.1	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	530	15
I403008089	I40000089 + 3008180	88.9	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	620	15
I403008102	I40000102 + 3008180	101.6	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	650	15
I403008108	I40000108 + 3008200	108.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	690	15
I403008114	I40000114 + 3008200	114.3	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	1,530	5
I403008133	I40000133 + 3008210	133.0	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	1,670	5
I403008140	I40000140 + 3008225	139.7	BISOFIX [®] PIR40 + Bifix [®] G2 Clamp	1,730	5

BISOFIX® PIR40 + HD500

(D 03 76)

for insulated pipes 12.0 - 323.9 mm



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

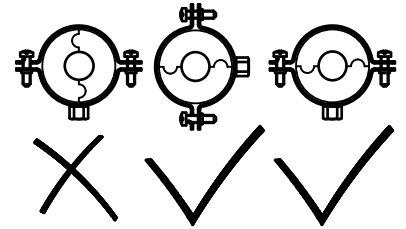
Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I403304012	I400000012 + 33048092	12.0	BISOFIX® PIR40 + HD500 Clamp	300	25
I403304015	I400000015 + 33048092	15.0 - 16.0	BISOFIX® PIR40 + HD500 Clamp	320	25
I403304018	I400000018 + 33048106	17.2 - 18.0	BISOFIX® PIR40 + HD500 Clamp	340	25
I403304022	I400000022 + 33048106	21.3 - 22.0	BISOFIX® PIR40 + HD500 Clamp	350	25
I403304028	I400000028 + 33048116	26.9 - 28.0	BISOFIX® PIR40 + HD500 Clamp	350	25
I403304034	I400000034 + 33048116	33.7 - 35.0	BISOFIX® PIR40 + HD500 Clamp	370	25
I403304042	I400000042 + 33048123	42.4	BISOFIX® PIR40 + HD500 Clamp	410	25
I403304048	I400000048 + 33048133	48.3	BISOFIX® PIR40 + HD500 Clamp	430	25
I403304054	I400000054 + 33048133	54.0	BISOFIX® PIR40 + HD500 Clamp	440	25
I403304057	I400000057 + 33048140	56.0 - 57.0	BISOFIX® PIR40 + HD500 Clamp	460	25
I403304060	I400000060 + 33048140	60.3	BISOFIX® PIR40 + HD500 Clamp	470	25
I403304064	I400000064 + 33048140	64.0	BISOFIX® PIR40 + HD500 Clamp	490	25
I403304070	I400000070 + 33048154	70.0	BISOFIX® PIR40 + HD500 Clamp	510	15
I403304076	I400000076 + 33048154	76.1	BISOFIX® PIR40 + HD500 Clamp	530	15
I403304089	I400000089 + 33048169	88.9	BISOFIX® PIR40 + HD500 Clamp	620	15
I403304102	I400000102 + 33048183	101.6	BISOFIX® PIR40 + HD500 Clamp	650	15
I403304108	I400000108 + 33048183	108.0	BISOFIX® PIR40 + HD500 Clamp	690	15
I403304114	I400000114 + 33048202	114.3	BISOFIX® PIR40 + HD500 Clamp	1,530	5
I403304133	I400000133 + 33048219	133.0	BISOFIX® PIR40 + HD500 Clamp	1,670	5
I403304140	I400000140 + 33048219	139.7	BISOFIX® PIR40 + HD500 Clamp	1,730	5
I403304160	I400000160 + 33068241	159.0 - 160.0	BISOFIX® PIR40 + HD500 Clamp	2,850	2
I403304168	I400000168 + 33068254	168.3	BISOFIX® PIR40 + HD500 Clamp	2,960	2
I403304219	I400000219 + 33068302	219.1	BISOFIX® PIR40 + HD500 Clamp	4,510	2
I403304273	I400000273 + 33068360	273.1	BISOFIX® PIR40 + HD500 Clamp	5,320	2
I403304324	I400000324 + 33068408	323.9	BISOFIX® PIR40 + HD500 Clamp	6,090	2

EN-SG 02/2022 - Subject to modifications

BISOFIX[®] PIR50

for insulated pipes 12.0 - 406.4 mm

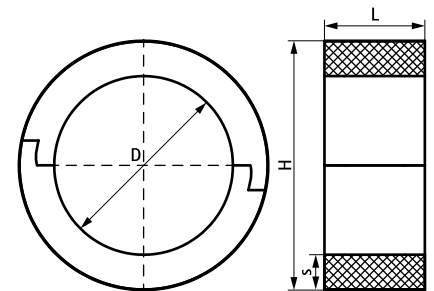
(D 03 80)



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <108mm = 80kg/m³
- PIR density >108mm = 120kg/m³
- PIR density 80kg/m³ => 0,027 [W/m*K]
- PIR density 120kg/m³ => = 0,040 [W/m*K]
- temperature range -45 °C - +105 °C

Part No.	D (mm)	D (°)	DN	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
I500000012	12.0	-	-	75 mm	112.0	50.0	220	25
I500000015	15.0 - 16.0	-	-	75 mm	115.0	50.0	250	25
I500000018	17.2 - 18.0	3/8	10	75 mm	118.0	50.0	300	25
I500000022	21.3 - 22.0	1/2	15	75 mm	122.0	50.0	340	25
I500000028	26.9 - 28.0	3/4	20	75 mm	128.0	50.0	350	25
I500000034	33.7 - 35.0	-	-	75 mm	135.0	50.0	370	25
I500000042	42.4	1 1/4	32	75 mm	142.4	50.0	470	25
I500000048	48.3	1 1/2	40	75 mm	148.3	50.0	500	15
I500000054	54.0	-	-	75 mm	154.0	50.0	520	15
I500000057	56.0 - 57.0	-	-	75 mm	157.0	50.0	520	15
I500000060	60.3	2	50	75 mm	160.3	50.0	540	15
I500000064	64.0	-	-	75 mm	164.0	50.0	550	15
I500000070	70.0	-	-	75 mm	170.0	50.0	600	15
I500000076	76.1	2 1/2	65	75 mm	176.1	50.0	650	15
I500000089	88.9	3	80	75 mm	188.9	50.0	690	15
I500000102	101.6	-	-	100 mm	201.6	50.0	720	5
I500000108	108.0	-	-	100 mm	208.0	50.0	760	5
I500000114	114.3	4	100	100 mm	214.3	50.0	1,680	5
I500000133	133.0	-	-	100 mm	233.0	50.0	2,780	8
I500000140	139.7	5	125	100 mm	239.7	50.0	2,860	8
I500000160	159.0 - 160.0	-	-	100 mm	260.0	50.0	3,090	8
I500000168	168.3	6	150	100 mm	268.3	50.0	3,200	8
I500000219	219.1	8	200	150 mm	319.1	50.0	4,810	2
I500000273	273.1	-	-	150 mm	373.1	50.0	5,620	2
I500000324	323.9	-	-	150 mm	424.0	50.0	6,390	2
I500000406	406.4	-	-	150 mm	506.4	50.0	6,410	2



EN-SG 02/2022 - Subject to modifications

Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 44 2S Clamp (M8/10)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

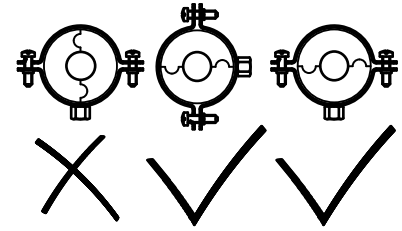
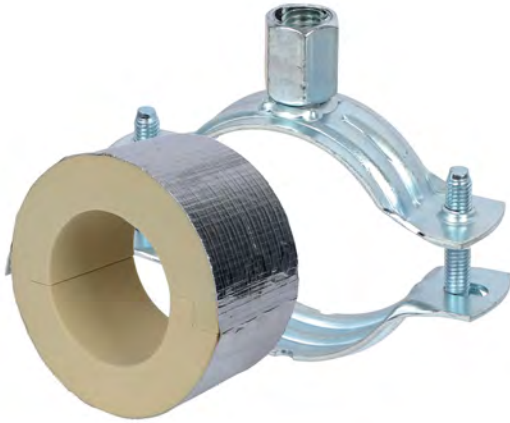
Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® PIR50 + 2S

for insulated pipes 12.0 - 114.3 mm

(D 03 82)



Features and Benefits

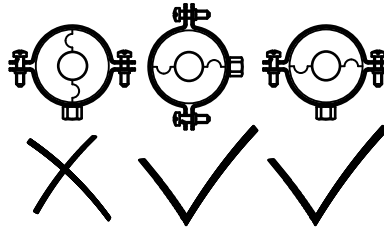
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with 2S clamp
- 2S clamp with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- clamp: zinc plated
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I503303012	I500000012 + 33035112	12.0	BISOFIX® PIR50 + 2S Clamp	220	25
I503303015	I500000015 + 33035118	15.0 - 16.0	BISOFIX® PIR50 + 2S Clamp	250	25
I503303018	I500000018 + 33035118	17.2 - 18.0	BISOFIX® PIR50 + 2S Clamp	300	25
I503303022	I500000022 + 33035127	21.3 - 22.0	BISOFIX® PIR50 + 2S Clamp	340	25
I503303028	I500000028 + 33035137	26.9 - 28.0	BISOFIX® PIR50 + 2S Clamp	350	25
I503303034	I500000034 + 33035137	33.7 - 35.0	BISOFIX® PIR50 + 2S Clamp	370	25
I503303042	I500000042 + 33035144	42.4	BISOFIX® PIR50 + 2S Clamp	470	25
I503303048	I500000048 + 33035153	48.3	BISOFIX® PIR50 + 2S Clamp	500	15
I503303054	I500000054 + 33035162	54.0	BISOFIX® PIR50 + 2S Clamp	520	15
I503303057	I500000057 + 33035162	56.0 - 57.0	BISOFIX® PIR50 + 2S Clamp	520	15
I503303060	I500000060 + 33035162	60.3	BISOFIX® PIR50 + 2S Clamp	540	15
I503303064	I500000064 + 33035172	64.0	BISOFIX® PIR50 + 2S Clamp	550	15
I503303070	I500000070 + 33035172	70.0	BISOFIX® PIR50 + 2S Clamp	600	15
I503303076	I500000076 + 33035183	76.1	BISOFIX® PIR50 + 2S Clamp	650	15
I503303089	I500000089 + 33035194	88.9	BISOFIX® PIR50 + 2S Clamp	690	15
I503303102	I500000102 + 33035205	101.6	BISOFIX® PIR50 + 2S Clamp	720	5
I503303108	I500000108 + 33035216	108.0	BISOFIX® PIR50 + 2S Clamp	760	5
I503303114	I500000114 + 33035216	114.3	BISOFIX® PIR50 + 2S Clamp	1,680	5

BISOFIX[®] PIR50 + Bifix[®] G2

(D 03 84)

for insulated pipes 12.0 - 114.3 mm



Features and Benefits

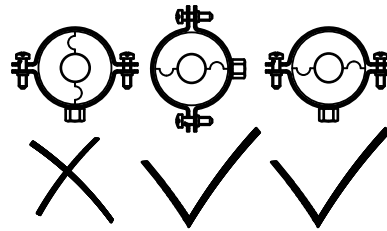
- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with Bifix[®] G2 clamp
- Bifix[®] G2 with M8/M10 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m²*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m²*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I503008012	I500000012 + 3008115	12.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	220	25
I503008015	I500000015 + 3008115	15.0 - 16.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	250	25
I503008018	I500000018 + 3008115	17.2 - 18.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	300	25
I503008022	I500000022 + 3008130	21.3 - 22.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	340	25
I503008028	I500000028 + 3008130	26.9 - 28.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	350	25
I503008034	I500000034 + 3008140	33.7 - 35.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	370	25
I503008042	I500000042 + 3008140	42.4	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	470	25
I503008048	I500000048 + 3008140	48.3	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	500	15
I503008054	I500000054 + 3008160	54.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	520	15
I503008057	I500000057 + 3008160	56.0 - 57.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	520	15
I503008060	I500000060 + 3008160	60.3	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	540	15
I503008064	I500000064 + 3008169	64.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	550	15
I503008070	I500000070 + 3008169	70.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	600	15
I503008076	I500000076 + 3008180	76.1	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	650	15
I503008089	I500000089 + 3008200	88.9	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	690	15
I503008102	I500000102 + 3008200	101.6	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	720	15
I503008108	I500000108 + 3008210	108.0	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	760	15
I503008114	I500000114 + 3008210	114.3	BISOFIX [®] PIR50 + Bifix [®] G2 Clamp	1,680	15

BISOFIX[®] PIR50 + HD500

(D 03 86)

for insulated pipes 12.0 - 406.4 mm



Features and Benefits

- for combination with rigid foam insulation
- cover joints with aluminium tape
- insulating pipe support with HD500 clamp
- HD500 clamp with M8/M10 and M10/M12 connection nut
- does not contain CFC, HCFC, formaldehyde or cadmium
- fire class B2
- PIR density <80mm = 80kg/m³
- PIR density >80mm = 120kg/m³
- PIR density 80kg/m³ => 0,024-0,026 [W/m*K]
- PIR density 120kg/m³ => 0,030-0,032 [W/m*K]
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature range -45 °C - +105 °C

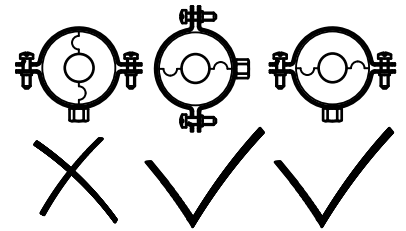
Part No.	Consists Of	D (mm)	Model	F _{a,z} (N)	Pack 1
I503304012	I500000012 + 33048116	12.0	BISOFIX [®] PIR50 + HD500 Clamp	220	25
I503304015	I500000015 + 33048116	15.0 - 16.0	BISOFIX [®] PIR50 + HD500 Clamp	250	25
I503304018	I500000018 + 33048123	17.2 - 18.0	BISOFIX [®] PIR50 + HD500 Clamp	300	25
I503304022	I500000022 + 33048123	21.3 - 22.0	BISOFIX [®] PIR50 + HD500 Clamp	340	25
I503304028	I500000028 + 33048133	26.9 - 28.0	BISOFIX [®] PIR50 + HD500 Clamp	350	25
I503304034	I500000034 + 33048140	33.7 - 35.0	BISOFIX [®] PIR50 + HD500 Clamp	370	25
I503304042	I500000042 + 33048140	42.4	BISOFIX [®] PIR50 + HD500 Clamp	470	25
I503304048	I500000048 + 33048154	48.3	BISOFIX [®] PIR50 + HD500 Clamp	500	15
I503304054	I500000054 + 33048154	54.0	BISOFIX [®] PIR50 + HD500 Clamp	520	15
I503304057	I500000057 + 33048154	56.0 - 57.0	BISOFIX [®] PIR50 + HD500 Clamp	520	15
I503304060	I500000060 + 33048169	60.3	BISOFIX [®] PIR50 + HD500 Clamp	540	15
I503304064	I500000064 + 33048169	64.0	BISOFIX [®] PIR50 + HD500 Clamp	550	15
I503304070	I500000070 + 33048169	70.0	BISOFIX [®] PIR50 + HD500 Clamp	600	15
I503304076	I500000076 + 33048183	76.1	BISOFIX [®] PIR50 + HD500 Clamp	650	15
I503304089	I500000089 + 33048183	88.9	BISOFIX [®] PIR50 + HD500 Clamp	690	15
I503304102	I500000102 + 33048202	101.6	BISOFIX [®] PIR50 + HD500 Clamp	720	5
I503304108	I500000108 + 33048219	108.0	BISOFIX [®] PIR50 + HD500 Clamp	760	5
I503304114	I500000114 + 33048219	114.3	BISOFIX [®] PIR50 + HD500 Clamp	1,680	5
I503304133	I500000133 + 33068241	133.0	BISOFIX [®] PIR50 + HD500 Clamp	2,780	2
I503304140	I500000140 + 33068241	139.7	BISOFIX [®] PIR50 + HD500 Clamp	2,860	2
I503304160	I500000160 + 33068264	159.0 - 160.0	BISOFIX [®] PIR50 + HD500 Clamp	3,090	2
I503304168	I500000168 + 33068279	168.3	BISOFIX [®] PIR50 + HD500 Clamp	3,200	2
I503304219	I500000219 + 33068325	219.1	BISOFIX [®] PIR50 + HD500 Clamp	4,810	2
I503304273	I500000273 + 33068374	273.1	BISOFIX [®] PIR50 + HD500 Clamp	5,620	2
I503304324	I500000324 + 33068436	323.9	BISOFIX [®] PIR50 + HD500 Clamp	6,390	2
I503304406	I500000406 + 33068509	406.4	BISOFIX [®] E13 + HD500 Clamp	6,410	2

EN-SG 02/2022 - Subject to modifications

BISOFIX[®] E13 + Cold Block s1s2

(D 05 140)

for insulated pipes 18 - 219 mm

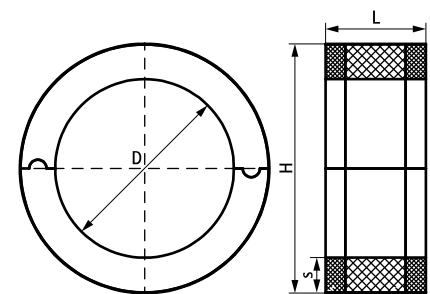


Features and Benefits

- pipe clamp with insulation shell
- for fixing of thermal isolated pipe of steel, copper or stainless steel
- to combine with Bifix[®] G2 without lining and HD500 Clamps
- effective prevention of corrosion
- reduced smoke development in case of fire by intumescent sheet
- vapour proof glueing to pipe insulation
- when installing the pipe support, always align the contact areas of the insulation shells horizontally (to prevent tensile and pressure forces)
- with intumescent and self-adhesive INCERAM cladding for easy closure of the pipe support
- material: pipe support made of PIR foam (core), synthetic rubber (sides) and a vapour-proof layer of black PVC
- Dichte PIR-Kern Raumgewicht 80 / 120 kg / m³
- does not contain CFC, HCFC, formaldehyde or cadmium
- excellent thermal, mechanical and smoke reducing properties
- Storage and processing temperature ≥ +10 °C
- building material / Euro class according to DIN EN 13501-1 BL-s1, d0 or BL-s2, d0
- application temperature from -50 °C to + 110 °C



Part No.	D (mm)	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
220100171	18	50 mm	44	13	100	32
220100211	22	50 mm	48	13	100	32
220100271	28	50 mm	54	13	100	40
220100351	35	50 mm	61	13	100	30
220100421	42	50 mm	68	13	150	46
220100481	48	50 mm	74	13	225	34
220100541	54	50 mm	80	13	225	32
220100601	60	50 mm	86	13	350	56
220100761	76	50 mm	102	13	575	40
220100891	89	50 mm	115	13	875	30
220101141	114	50 mm	140	13	1,250	18
220101401	140	100 mm	166	13	1,250	14
220101681	168	100 mm	194	13	1,250	12
220102191	219	100 mm	245	13	1,250	4



EN-SG 02/2022- Subject to modifications

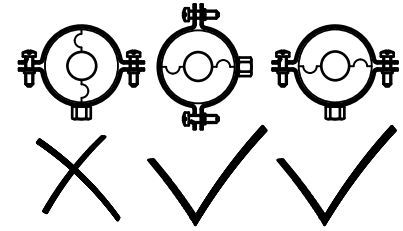
Complementary

- 42 Bifix[®] G2 (M8/10) (BUP1000)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® E19 + Cold Block s1s2

(D 05 141)

for insulated pipes 18 - 219 mm

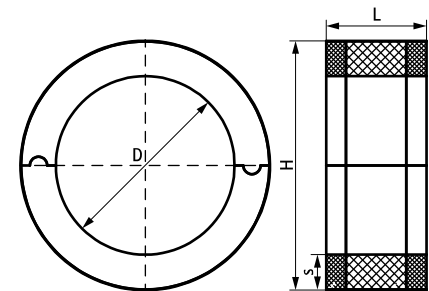


Features and Benefits

- pipe clamp with insulation shell
- for fixing of thermal isolated pipe of steel, copper or stainless steel
- to combine with Bifix® G2 without lining and HD500 Clamps
- effective prevention of corrosion
- reduced smoke development in case of fire by intumescent sheet
- vapour proof glueing to pipe insulation
- when installing the pipe support, always align the contact areas of the insulation shells horizontally (to prevent tensile and pressure forces)
- with intumescent and self-adhesive INCERAM cladding for easy closure of the pipe support
- material: pipe support made of PIR foam (core), synthetic rubber (sides) and a vapour-proof layer of black PVC
- Dichte PIR-Kern Raumgewicht 80 / 120 kg / m³
- does not contain CFC, HCFC, formaldehyde or cadmium
- excellent thermal, mechanical and smoke reducing properties
- Storage and processing temperature ≥ +10 °C
- building material / Euro class according to DIN EN 13501-1 BL-s1, d0 or BL-s2, d0
- application temperature from -50 °C to +110 °C



Part No.	D (mm)	L	H (mm)	s (mm)	F _{a,z} (N)	Pack 1
220200171	18	50 mm	56	19	100	20
220200211	22	50 mm	60	19	100	32
220200271	28	50 mm	66	19	100	24
220200351	35	50 mm	73	19	100	38
220200421	42	50 mm	80	19	150	32
220200481	48	50 mm	86	19	225	28
220200541	54	50 mm	92	19	225	48
220200601	60	50 mm	98	19	350	44
220200761	76	50 mm	114	19	575	30
220200891	89	50 mm	127	19	875	26
220201141	114	50 mm	152	19	1,250	16
220201401	140	100 mm	178	19	1,700	12
220201681	168	100 mm	206	19	2,125	8
220202191	219	100 mm	257	19	3,525	4



Complementary

- 42 Bifix® G2 (M8/10) (BUP1000)
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)

BISOFIX® 88

(D 05 40)

for insulated pipes 15.8 - 609.8 mm

M8/M10/1/2" - M12/1/2" - M16/3/4"



0880060

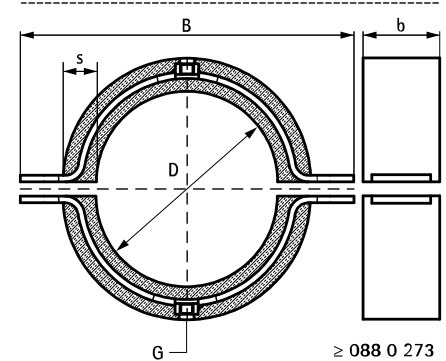
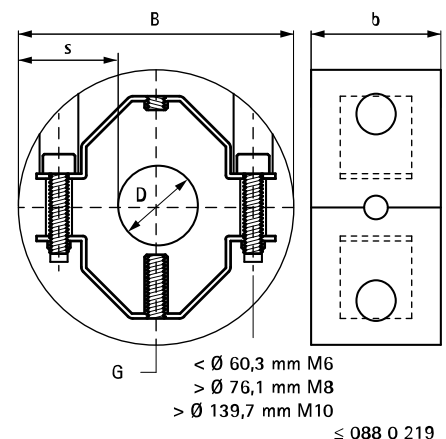
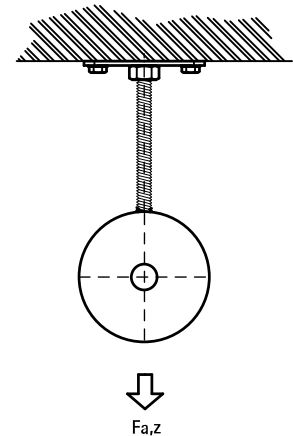


0880273

Features and Benefits

- two-screw clamp integrated in PUR foam
- for fixing of thermal isolated pipe of steel, copper or stainless steel
- no adhesion necessary due to Inda rubber inlay
- vapour proof glueing to pipe insulation
- suitable for heavy applications (for example with bigger spans), waste stacks, etc.
- the whole is smoothly completed for a better connection with the pipe insulation
- the foam prevents the forming of a thermal bridge and prevents the steel parts from corrosion
- material: clamp of steel; insulation shell made of PUR closed cell solid foam
- good resistant to chemicals influences
- excellent thermal and mechanical properties
- clamp: zinc plated
- working temperature from -50 °C to +105 °C

Part No.	D (mm)	D (")	DN	G	B (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
0880015	15.8	-	-	M8/10/G1/2"	87	40 x 30	270	10
0880017	17.2	3/8	10	M8/10/G1/2"	87	40 x 30	270	10
0880018	18.0	-	-	M8/10/G1/2"	87	40 x 30	280	10
0880021	21.3	1/2	15	M8/10/G1/2"	87	40 x 30	330	10
0880022	22.0	-	-	M8/10/G1/2"	87	40 x 30	340	10
0880027	26.9	3/4	20	M8/10/G1/2"	87	40 x 30	420	10
0880028	28.0	-	-	M8/10/G1/2"	87	40 x 30	440	10
0880033	33.7	1	25	M8/10/G1/2"	96	40 x 30	530	10
0880035	35.0	-	-	M8/10/G1/2"	96	40 x 30	550	10
0880042	42.4	1 1/4	32	M8/10/G1/2"	103	40 x 30	660	10
0880048	48.3	1 1/2	40	M8/10/G1/2"	108	40 x 30	750	10
0880054	54.0	-	-	M8/10/G1/2"	117	40 x 30	870	10
0880057	57.0	-	-	M8/10/G1/2"	117	40 x 30	890	10
0880060	60.3	2	50	M8/10/G1/2"	120	50 x 30	1,200	10
0880076	76.1	2 1/2	65	M8/10/G1/2"	136	50 x 30	1,480	10
0880089	88.9	3	80	M8/10/G1/2"	149	50 x 30	1,730	10
0880108	108.0	-	-	M8/10/G1/2"	188	60 x 40	2,530	10
0880114	114.3	4	100	M8/10/G1/2"	195	60 x 40	2,670	3
0880133	133.0	-	-	M8/10/G1/2"	219	60 x 40	3,110	5
0880139	139.7	5	125	M8/10/G1/2"	219	60 x 40	3,270	5
0880159	159.0	-	-	M12 - G1/2"	239	60 x 40	3,720	5
0880168	168.3	6	150	M12 - G1/2"	248	60 x 40	4,400	5
0880219	219.1	8	200	M16	340	100 x 60	5,260	5
0880273	273.2	10	250	M16	493	100 x 60	14,100	2
0880324	324.3	12	300	M20	576	100 x 60	16,800	2
0880355	355.6	14	350	M20	576	100 x 60	18,400	1
0880368	368.0	-	350	M20	580	120 x 60	18,800	1
0880406	406.4	16	400	M24	646	120 x 60	20,480	1
0880458	457.0	18	450	M24	697	120 x 60	28,500	1
0880508	508.0	20	500	M24	748	120 x 60	31,600	1
0880609	609.8	24	600	M24	848	140 x 60	44,300	1



EN-SG 02/2022 - Subject to modifications

Complementary

- 169 BIS RapidRail® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

E BIS Fixing Points and Sliding Devices



BIS Fixing Points

BISOFIX® CF Cold FixPoint Clamp	139
BIS dB-FiX® 40 Noise Insulating Fixing Point	140
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Fixing Points and Sliding Devices

The expansion and contraction of pipes usually occurs under the influence of temperature changes. Fixing points are applied to pipes with considerable expansion. The fixing point is made to a neutral point so that the pipe can expand in both directions.

Slides are applied in between the fixing points, so that the pipe is free to expand and contract.

To select the appropriate fixing point it is necessary to know:

- the pipe material
- the diameter and thickness of the pipe
- the minimum and maximum temperature
- the maximum pressure in the pipe

The expansion and contraction of the pipe can be accommodated:

- in a natural way, in existing bends or expansion loops
- in a designed way, for example by using a com-pensator

When a compensator is being used, consideration must be given to the pressure in the pipe. Therefore, it is preferable to accommodate the expansion in a natural way. The fixing point is used to ensure that the expansion is directed to the expansion loop or compensator where the force and movement is controlled. The pipe fixings between the fixing point and the expansion loop, only guide the pipe. At these 'guiding points' it is important that the friction resistance is by the fixing point.

When an expansion loop is being used, the distance between the first guiding clamp and the loop is important. The smaller this distance, the bigger the force to bend the pipe and the bigger the expansion to loose in the bend. This force is transferred to the fixing point.

The occurring force on a fixing point F_f when using an expansion loop:

1. The friction force caused by the slides F_w ;
2. The force caused by the bending of the expansion loop F_b .

$$F_f = F_w + F_b$$

To determine the bending force F_b , first determine the length of the expansion loop. The length of this loop depends on the change in length of the pipe. The change of length of the pipe ΔL depends on the length between the fix point and the expansion bend, the co-efficient of expansion L of the pipe material and the difference in temperature ΔT .

$$\Delta L = L \times \alpha \times \Delta T$$

The length of the expansion bend L_b depends on the expansion ΔL , the outside diameter of the pipe D_b and the material properties of the pipe K .

K depends on the elasticity modulus of the pipe material E and the maximum allowable/acceptable tension in the material σ .

$$K = \sqrt{(1.5 \times E)/\sigma}$$

$$L_b = K \sqrt{(D_b \times \Delta L)}$$

The bending force F_b depends on the moment of inertia I of the pipe, the length of the expansion bend L_b and the wall thickness of the pipe $D_b - D_i$.

$$F_b = \frac{\sigma \times \pi (D_b^4 - D_i^4)}{32 \times D_b \times L_b}$$

The friction force F_w depends on the co-efficient of friction μ of the slides and the loads F to the slides. The load consists of the weight of the pipe and the content F_p .

$$F_w = F_p \times \mu$$

Legend

F_f	force to the fixing point	N
F_w	friction force	N
F_p	weight of the pipe plus content	N
F_b	force to bend the expansion bend	N
D_b	outside diameter of the pipe	mm
D_i	inside diameter of the pipe	mm
I	moment of inertia of the pipe	mm ⁴
E	elasticity modulus of the pipe material	N/mm ²

K	material constant	
L_b	length of the expansion bend	mm
ΔL (<i>Delta L</i>)	change of length of the pipe	mm
ΔT (<i>Delta T</i>)	change max. and min. temperature	°C
α (<i>Alfa</i>)	linear expansion co-efficient of the pipe material	mm/m°C
μ (<i>Mu</i>)	friction co-efficient of the slide	
σ (<i>Sigma</i>)	maximum acceptable tension in the pipe	N/mm ²
π (<i>Pi</i>)	mathematic number 3.142	

BISOFIX® CF Cold FixPoint Clamp

(E 05 03)

76.1 - 273.0 mm



Installation

Features and Benefits

- insulated cold clamps made of pressure-resistant Polyurethane foam
- integral foam inner recess for mounting of the pressure flange
- outer link plates (galvanized) for connection to two piece set by crossbars
- high axial force absorption by the site welded to the pipe pressure flange
- durable materials ensure a long-term and reliable operation security
- PUR foam density ca. 250 kg/m³
- flammability class B2 (DIN 4102)
- K value 0.042 W/mK at 0 °C
- Part No. 0881XXX: temperature range from -50 °C to +105 °C



088 1 XXX BISOFIX® CF

Part No.	D (mm)	Model	For	F _{a,y} (N)	Pack 1
0881076	76.1	Cold FixPoint Clamp	6698206 + 609831120	2,500	1 *
0881088	88.9	Cold FixPoint Clamp	6698206 + 609831120	3,000	1 *
0881114	114.3	Cold FixPoint Clamp	6698206 + 609831120	4,000	1 *
0881133	133.0	Cold FixPoint Clamp	6698206 + 609831120	4,500	1 *
0881139	139.7	Cold FixPoint Clamp	6698206 + 609831120	4,500	1 *
0881159	159.0	Cold FixPoint Clamp	6698206 + 609831120	6,000	1 *
0881168	168.3	Cold FixPoint Clamp	6698206 + 609831120	6,000	1 *
0881219	219.1	Cold FixPoint Clamp	6698208 + 609831160	9,000	1 *
0881273	273.0	Cold FixPoint Clamp	6698208 + 609831160	12,000	1 *
0881323	323.9	Cold FixPoint Clamp	6698208 + 609831160	15,000	1 *
0881355	355.6	Cold FixPoint Clamp	6698208 + 609831160	17,000	1 *
0881368	368.0	Cold FixPoint Clamp	6698208 + 609831160	17,000	1 *
0881406	406.4	Cold FixPoint Clamp	6698208 + 609831160	19,000	1 *

*The calculation was made of the maximum acceptable axial forces and the dimensioning of the anchor under the following conditions: quality of the concrete: C20/25 cracked concrete (tensile zone); concrete edges: without border impact; area reinforcement: without/ normal; edge reinforcement: without.

0881XXX: BISOFIX® CF Cold FixPoint Clamp is delivered including a weld ring (pressure flange) and closure as well as connecting screws.

Other dimensions on request.

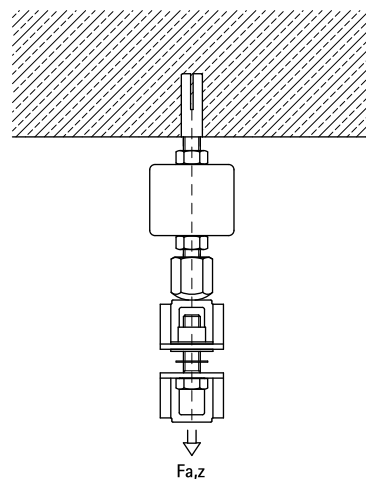
Note! Clamps, Console and Anchors are to be ordered separately.

Console can be found on page E 05 49 / E 05 51 / E 05 54.

BIS dB-FiX[®] 40 Noise Insulating Fixing Point

(E 05 10)

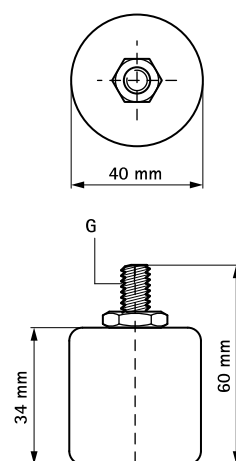
for noise insulation fixing point



Features and Benefits

- noise insulating single fixing point
- material: stainless steel 1.4301 (AISI 304)
- sound insulating lining according DIN 4109
- noise insulation by moulded TPE rubber

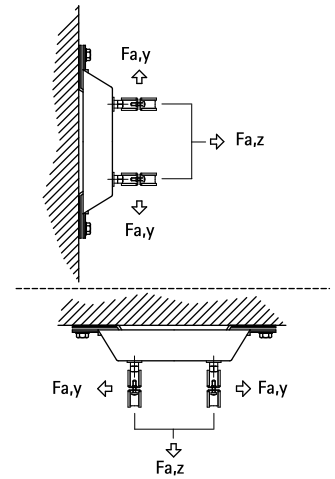
Part No.	G	F _{a,z} (N)	Pack 1
6697005	M10	500	25



BIS dB-FiX[®] 80 Fixing Point Assembly

(E 05 20)

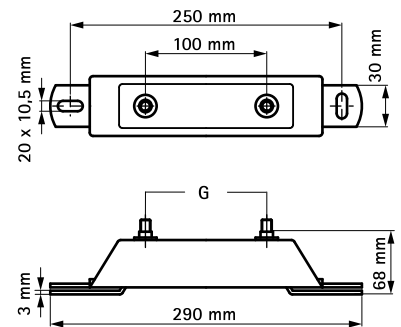
for noise insulation fixing point



Features and Benefits

- noise insulating fixing point for pipes up to Ø 2" (clamp BIS HD500 Ø 59 - 65 mm)
- zinc plated
- noise insulation by moulded EPDM rubber
- very stable
- material: steel
- sound insulating lining according to DIN 4109

Part No.	G	F _{a,z} (N)	F _{a,y} (N)	Pack 1
6693008	M10	3,000	2,700	10



Complementary

- 241 BIS RapidStrut[®] Fixing System
- 145 BIS dB-FiX[®] 80 / 200 Mounting Kit

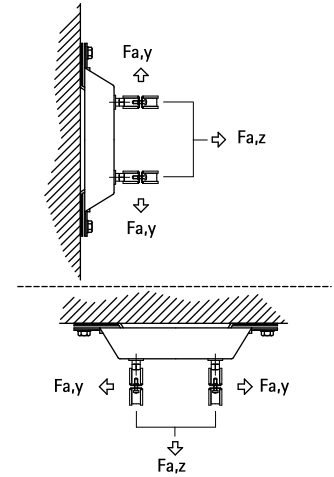
Alternative

- 142 BIS dB-FiX[®] 200 Fixing Point Assembly

BIS dB-FiX[®] 200 Fixing Point Assembly

(E 05 25)

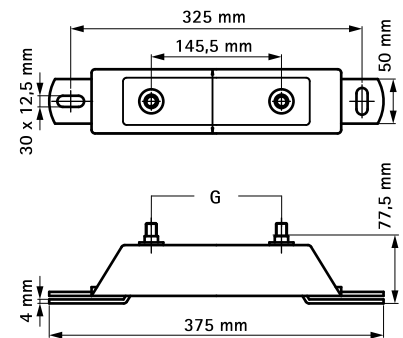
for noise insulation fixing point



Features and Benefits

- noise insulating fixing point for pipes up to Ø 8" (clamp BIS HD500 Ø 217 - 227 mm)
- zinc plated
- noise insulation by moulded EPDM rubber
- very stable
- material: steel
- sound insulating lining according DIN 4109

Part No.	G	F _{a,z} (N)	F _{a,y} (N)	Pack 1
6693020	M12	7,000	6,600	5



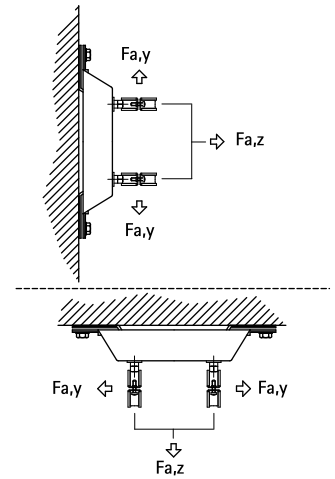
Complementary

- 241 BIS RapidStrut[®] Fixing System
- 145 BIS dB-FiX[®] 80 / 200 Mounting Kit
- 147 BIS dB-FiX[®] 200 Stand-off Fixing Kit

BIS dB-FiX[®] 80 Fixing Point Assembly Kit

(E 05 30)

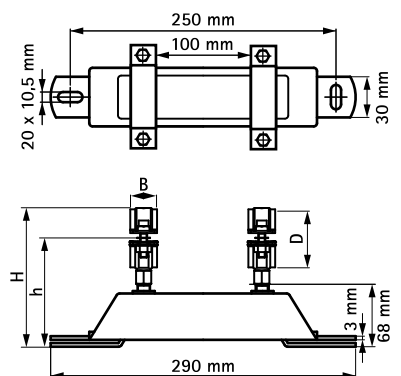
for noise insulation fixing point 15 - 65 mm



Features and Benefits

- very stable
 - material: steel
 - zinc plated
 - noise insulation by moulded EPDM rubber
 - sound insulating lining according to DIN 4109
- consists of:
 - 1 Fixing point assembly BIS dB-FiX[®] 80 (Part No. 669 3 008)
 - 2 Heavy Duty Clamps HD500

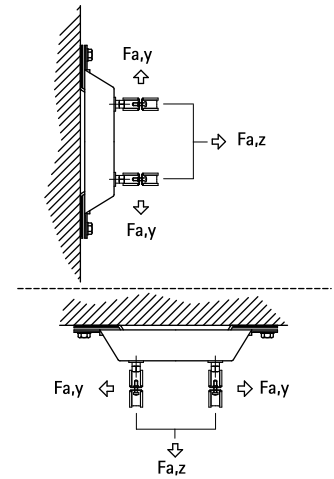
Part No.	D (mm)	D (°)	DN	H (mm)	h (mm)	F _{a,z} (N)	F _{a,y} (N)	Pack 1
2622010	15 - 19	3/8	10	108	93	3,000	2,700	1
2622015	19 - 23	1/2	15	112	95	3,000	2,700	1
2622020	25 - 30	3/4	20	119	98	3,000	2,700	1
2622025	31 - 36	1	25	131	109	3,000	2,700	1
2622032	40 - 45	1 1/4	32	140	114	3,000	2,700	1
2622040	47 - 52	1 1/2	40	147	118	3,000	2,700	1
2622050	59 - 65	2	50	160	123	3,000	2,700	1



BIS dB-FiX[®] 200 Fixing Point Assembly Kit

(E 05 35)

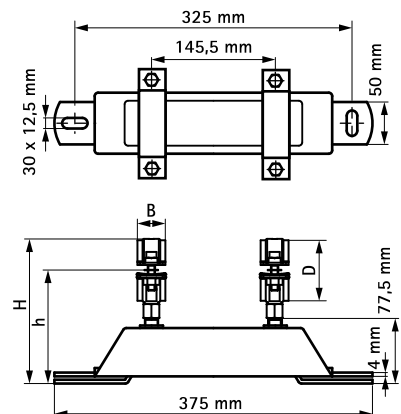
for noise insulation fixing point 72 - 169 mm



Features and Benefits

- very stable
- material: steel
- zinc plated
- noise insulation by moulded EPDM rubber
- sound insulating lining according DIN 4109
- consists of:
 - 1 Fixing point assembly BIS dB-FiX[®] 200 (Part No. 669 3 020)
 - 2 Heavy Duty Clamps HD500

Part No.	D (mm)	D (°)	DN	H (mm)	h (mm)	F _{a,z} (N)	F _{a,y} (N)	Pack 1
2622065	72 - 78	2½	65	192	147	7,000	6,600	1
2622070	79 - 85	-	-	199	152	7,000	6,600	1
2622080	86 - 92	3	80	206	155	7,000	6,600	1
2622100	108 - 116	4	100	226	164	7,000	6,600	1
2622125	132 - 140	5	125	252	178	7,000	6,600	1
2622150	159 - 169	6	150	284	194	7,000	6,600	1



BIS dB-FiX[®] 80 / 200 Mounting Kit

(E 05 40)

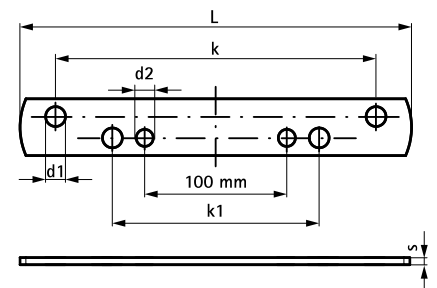
for noise insulation fixing point



Features and Benefits

- kit for pipe fixing between 2 BIS dB-FiX[®] Fixpoint Assemblies
- clamps fixed to plates by their flanges
- suitable for all diameters and specially for clamps > Ø 114 mm
- also used if extra stability is required
- space saving
- material: steel
- zinc plated
- consists of:
 - 2 Mounting plates
 - 4 Hexagon nuts M10
 - 4 Hexagon nuts M12

Part No.	s (mm)	d1 (mm)	d2 (mm)	k (mm)	k1 (mm)	Pack 1	Pack 2
6693100	5.0	14.0	12.0	225.5	145.5	1	25



Complementary

- 141 BIS dB-FiX[®] 80 Fixing Point Assembly
- 142 BIS dB-FiX[®] 200 Fixing Point Assembly

BIS dB-FiX[®] 80 Stand-off Fixing Kit

(E 05 45)

for noise insulation fixing point



Features and Benefits

- for mounting a BIS dB-FiX[®] fixing point console at a distance from a wall or ceiling
- material: steel
- zinc plated
- Part No. 6693808:
 - 4 Distance brackets
 - 1 dB-Fix 80 Bottom plate 1"
 - 1 Wall plate 1"
 - 2 Bolts, Nuts, Washers M10
 - 8 Hexagon nuts M12
 - 8 Washers M12

Part No.	For	Pack 1
6693808	dB-FiX [®] 80	5

Complementary

- 141 BIS dB-FiX[®] 80 Fixing Point Assembly
- 142 BIS dB-FiX[®] 200 Fixing Point Assembly
- 472 BIS Threaded Rod

Complementary

- 474 BIS Threaded Tube

BIS dB-FiX[®] 200 Stand-off Fixing Kit

(E 05 46)

for noise insulation fixing point



Features and Benefits

- for mounting a BIS dB-FiX[®] fixing point console at a distance from a wall or ceiling
- material: steel
- zinc plated
- Part No. 6693820:
 - 4 Adjustable support brackets
 - 1 dB-Fix 200 Bottom plate 1"
 - 1 Wall plate 1"
 - 2 Bolts, Nuts, Washers M12
 - 8 Hexagon nuts M16
 - 8 Washers M16

Part No.	For	Pack 1
6693820	dB-FiX [®] 200	3

Complementary

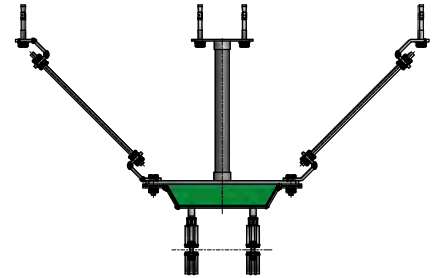
- 142 BIS dB-FiX[®] 200 Fixing Point Assembly
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)
- 472 BIS Threaded Rod

Complementary

- 474 BIS Threaded Tube

BIS dB-FiX[®] 80 / 200 Support Plate

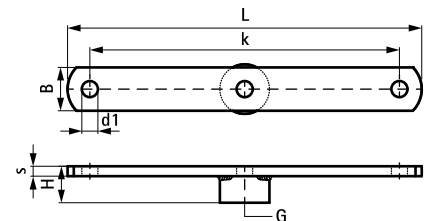
(E 05 47)



Features and Benefits

- for mounting a BIS dB-FiX[®] fixing point at a distance from a wall or ceiling
- material: steel 1.0332
- zinc plated
- to be used in combination with BIS Wall Plate CO₂ welded (Part No: 6719033)
- axial support by threaded rods in combination with BIS Adjustable Support (BUP1000)(Part No. 66588818) or BIS Threaded Rod Support (Part No. 6698015)
- CO₂ welded

Part No.	G	L	B (mm)	H (mm)	s (mm)	d1 (mm)	k (mm)	For	Pack 1
6698030	G1"	286 mm	35	38	8.0	13.0	250	BIS dB-FiX [®] 80	25
6698035	G1"	361 mm	35	38	8.0	13.0	325	BIS dB-FiX [®] 200	25



Complementary

- 141 BIS dB-FiX[®] 80 Fixing Point Assembly
- 142 BIS dB-FiX[®] 200 Fixing Point Assembly
- 411 BIS Wall Plate Resistance Welded

Complementary

- 474 BIS Threaded Tube
- 152 BIS Threaded Rod Support
- 472 BIS Threaded Rod

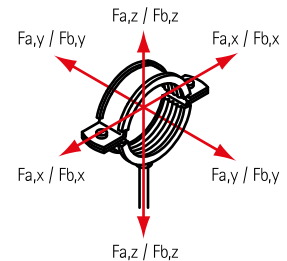
BIS Fixpoint Console 'Light' (BUP1000)

(E 05 49)



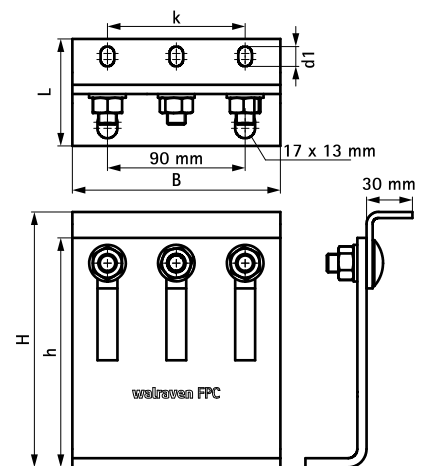
Features and Benefits

- flexible use console module for high forces up to 5 KN (depending on the situation, detailed design by technical service)
- tested as a sound-insulated fixed point with lined heavy duty clamps
- can be used as a pipe connection point in conjunction with 2 or 3 heavy-duty clamps type HD500 (up to 140 mm) or HD1501 (up to 154 mm)
- tightening torque 75 Nm for the console fixing screws
- connection to the building is recommended with metal anchors M12
- infinitely adjustable height and inclination, high corrosion protection
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	L	B	H	h	d1	k	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	
6698204	70 mm	136	110 - 167	150	13 x 9	90	1 *

** Depending on the situation, please contact Walraven Technical Support for advice on safe loads. Note! Console, Clamps and Anchors are to be ordered separately.*



Complementary

- 25 BIS Heavy Duty Clamp HD1501 (BUP1000)
- 26 BIS Heavy Duty Clamp HD1501 (BUP1000)
- 27 BIS Heavy Duty Clamp HD1501 (BUP1000)

Complementary

- 45 BIS Heavy Duty Clamp HD500 (BUP1000)
- 46 BIS Heavy Duty Clamp HD500 (BUP1000)
- 47 BIS Heavy Duty Clamp HD500 (BUP1000)

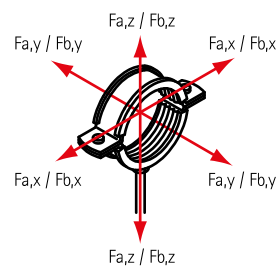
BIS Fixpoint Console 'Medium' (BUP1000)

(E 05 51)



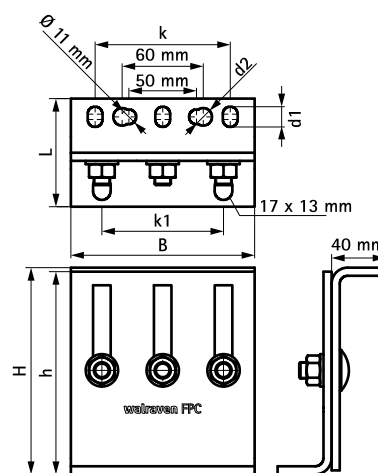
Features and Benefits

- suitable for BISOFIX® Cold FixPoint Clamps (see E 05 03)
- flexible use console module for high forces (depending on the situation, detailed design by technical service)
- can be used as a pipe connection point in conjunction with 2 or 3 heavy-duty clamps type HD500 up to max. 227 mm
- tightening torque 75 Nm for the console fixing screws
- connection to the building is recommended with metal anchors M12
- infinitely adjustable height and inclination, high corrosion protection
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	L	B	H	h	d1	d2	k	k1	F _{a,z}	F _{a,y}	F _{a,x}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(N)	
6698206	80 mm	136	153 - 268	150	15 x 11	∅ 13.0	100	90	14,300	11,500	3,200	1 *

* Depending on the situation, please contact Walraven Technical Support for advice on safe loads. Note! Console, Clamps and Anchors are to be ordered separately.



Complementary

- 139 BISOFIX® CF Cold FixPoint Clamp
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)
- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

Complementary

- 47 BIS Heavy Duty Clamp HD500 (BUP1000)
- 502 WTB1 Throughbolt Anchor
- 494 WD11 Drop-in Anchor

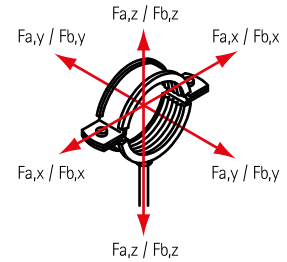
BIS Fixpoint Console 'Heavy' (BUP1000)

(E 05 54)



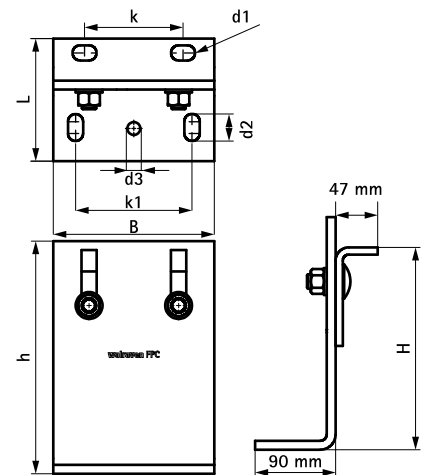
Features and Benefits

- suitable for BISOFIX® Cold FixPoint Clamps (see E 05 03)
- flexible use console module for high forces (depending on the situation, detailed design by technical service)
- can be used as a pipe connection point in conjunction with 2 heavy duty clamps type HD500 from 229 mm up to max. 564 mm
- tightening torque 120 Nm for the console fixing screws
- connection to the building is recommended with metal anchors M16
- infinitely adjustable height and inclination, high corrosion protection
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	L	B	H	h	d1	d2	d3	k	k1	F _{a,z}	F _{a,y}	F _{a,x}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(N)	
6698208	137 mm	180	226 - 333	260	27 x 17	30 x 17	∅ 17.0	110	130	10,000	9,300	3,700	1 *

** Depending on the situation, please contact Walraven Technical Support for advice on safe loads. Note! Console, Clamps and Anchors are to be ordered separately.*



Complementary

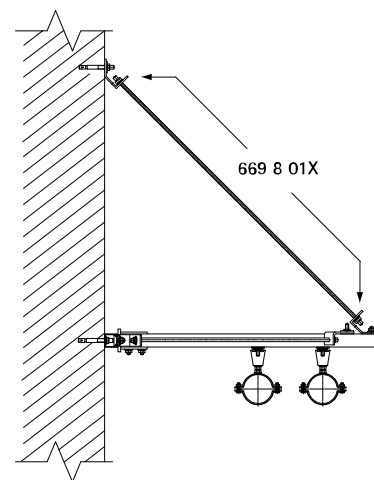
- 139 BISOFIX® CF Cold FixPoint Clamp
- 45 BIS Heavy Duty Clamp HD500 (BUP1000)
- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

Complementary

- 47 BIS Heavy Duty Clamp HD500 (BUP1000)
- 502 WT1 Throughbolt Anchor
- 494 WD11 Drop-in Anchor

BIS Threaded Rod Support

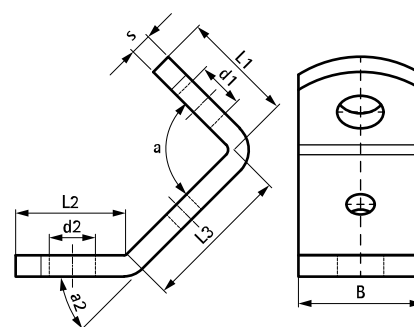
(E 05 60)



Features and Benefits

- for strengthening rail constructions with the aid of threaded rods
- also suitable for bracing cantilever arms
- material: steel 1.0332
- zinc plated

Part No.	L1 (mm)	L2 (mm)	L3 (mm)	B (mm)	s (mm)	d1 (mm)	d2 (mm)	a (°)	a2 (°)	F _{a,z} (N)	Pack 1
6698013	31	31	42	35	6.0	Ø 13.0	Ø 13.0	90	45	3,000	25
<i>Max. allowed load (F_{a,z}) under an angle of 45°.</i>											

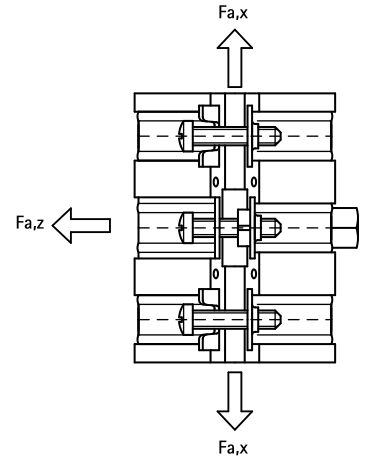


BIS Cu-FiX Fixing Point for Copper Pipe

(E 05 65)

for copper pipes 15 - 54 mm

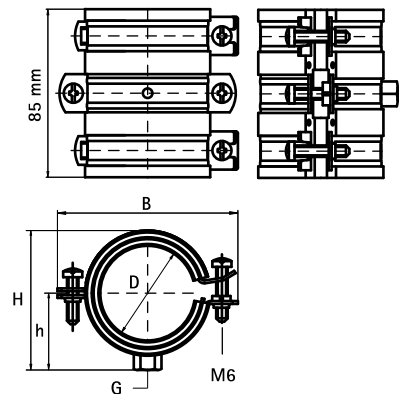
M10



Features and Benefits

- to make noise insulating fixpoint for a copper pipe
- material: steel
- zinc plated
- temperature resistance up to +120 °C
- noise insulating lining, EPDM rubber, reddish brown
- sound insulating lining according DIN 4109
- consists of:
 - 2 Clamps BISMAT® 2000 (fixing)
 - 1 Clamps BIS Bifix® 1301 (guiding)
- see also: benefits and features BISMAT® 2000 and BIS Bifix® 1301

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1
3368015	15	M10	55	34	21	1,110	60	10
3368018	18	M10	58	37	22	1,110	140	10
3368022	22	M10	63	43	25	1,110	160	10
3368028	28	M10	68	47	27	1,110	230	10
3368035	35	M10	75	55	31	1,110	340	10
3368042	42	M10	83	62	35	1,240	380	10
3368054	54	M10	92	71	39	1,240	500	10



BIS Ball Swivel Hanger

(E 10 05)

hinging fixing point

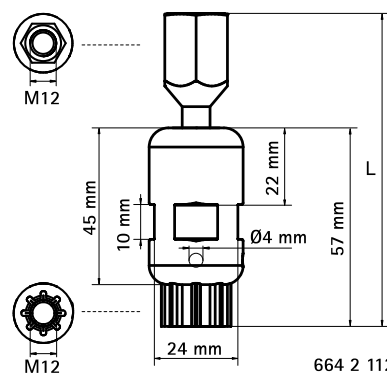
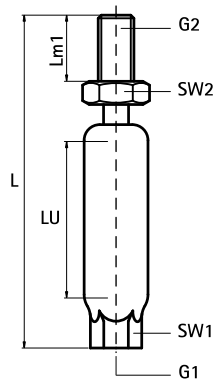
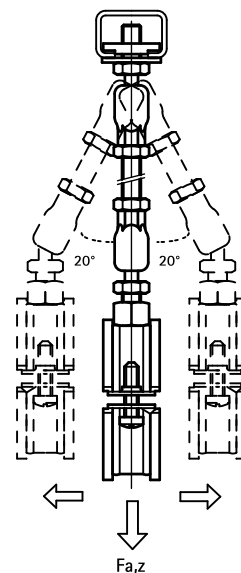


Features and Benefits

- for fastening hanging pipes with thermal expansion
- allows axial and radial pipe movements
- particularly suitable for larger distances to the ceiling
- with inspection hole to check screw-in depth (attention: when the threaded rod is screwed-in too deep, the ball swivel is blocked)
- screw-in depth is continuously variable (see LU)
- material: steel
- zinc plated

Part No.	L	LU (mm)	G1	G2	Lm1 (mm)	SW1 (mm)	SW2 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6642008	49 mm	7	M8	M8	15	13	10	3,100	50	250
6642010	49 mm	7	M10	M10	15	13	12	3,100	50	250
6644010	64 mm	7	M10	M10	30	13	12	3,100	50	500
6642108	74 mm	32	M8	M8	15	13	10	3,100	25	250
6642110	74 mm	32	M10	M10	15	13	12	3,100	25	250
6642112	90 mm	30	M12	M12	-	24	19	5,000	10	100

Please note. Always use 2 ball swivel hangers and secure by additional hexagon nut (see application picture). The maximum length change that can be dealt with, depends on the fixing distance (ceiling - pipe). The height difference that occurs as a result, needs to be taken into consideration. To be used in combination with BIS RapidRail® or BIS RapidStrut® Ball Swivel Hangers. Product can be found on page G 30 60 / H 24 75.



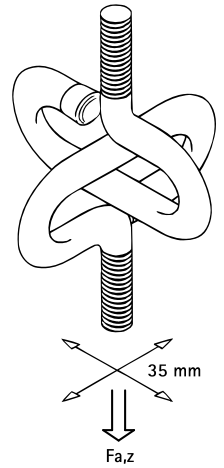
Complementary

- 493 BIS Fastenings
- 205 BIS RapidRail® Ball Swivel Hanger
- 286 BIS RapidStrut® Ball Swivel Hanger

BIS Sliding Stirrup

hinging fixing point

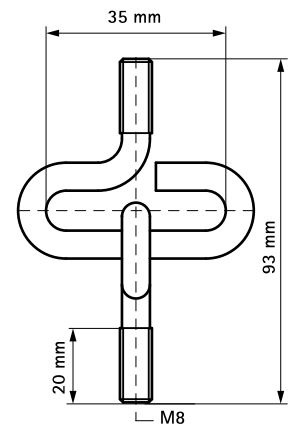
(E 10 10)



Features and Benefits

- for guiding linear expansion or contraction
- especially recommended for plastic pipes
- material: steel
- zinc plated

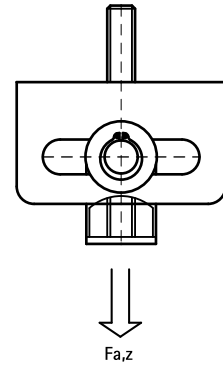
Part No.	Model	$F_{a,z}$ (N)	Pack 1
6653008	2 directions	520	25



BIS Expansion Joint

fixing with sliding assemblies

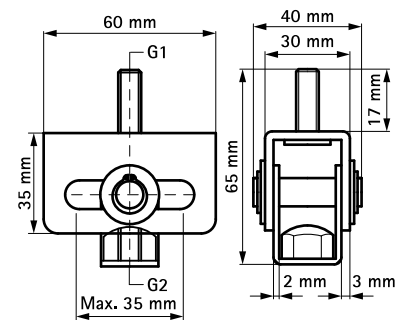
(E 10 15)



Features and Benefits

- for installations with a length extension, for guiding pipe clamps
- low space requirement for the ceiling; can only be used for ceiling mounting (hanging)
- economical solution when low expansion
- compatible with all Walraven rail systems
- material: steel
- zinc plated

Part No.	G1	G2	F _{a,z} (N)	Pack 1
6653310	M10	M8/10	1,500	50



Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod
- 494 WDI1 Drop-in Anchor

Complementary

- 505 WCS1N Concrete Screw
- 524 WCA1 Ceiling Anchor

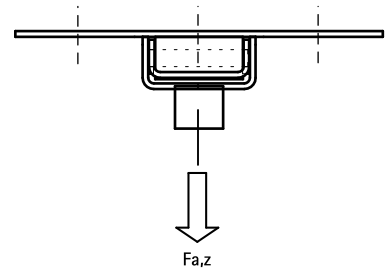
Alternative

- 157 BIS Expansion Device (BUP1000)
- 158 BIS Expansion Device

BIS Expansion Device (BUP1000)

(E 10 35)

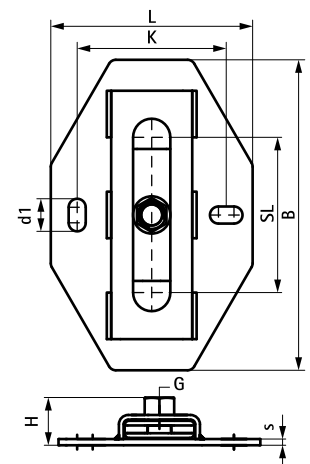
fixing with sliding assemblies



Features and Benefits

- single support for pipe expansion
- secure parts ensure mechanism will not slide out
- fix directly on the building structure or in combination with rail systems
- suitable for ceiling mounting (suspended) and floor mounting (standing mounted)
- very low installation height, useful in small spaces
- a variety of connection possibilities, can be combined with Bifix® G2 or HD1501 Pipe Clamps
- material: metal parts made of steel; plastic parts made of POM (polyoxymethylene)
- friction coefficient $\mu = 0.18$; Sliding friction coefficient $\mu = 0.14$
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature resistance up to +120 °C

Part No.	Model	G	L	B	H	s	d1	k	SL (max.)	F _{a,z} (N)	Pack 1
6668310	Single	M8/10	130 mm	200	30.5	4.0	21 x 11	96	100	3,500	5
6668312	Single	M10/12	130 mm	200	32.5	4.0	21 x 11	96	100	4,800	5
6668316	Single	M16	130 mm	200	30.5	4.0	21 x 11	96	100	4,800	5



Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod
- 502 WTB1 Throughbolt Anchor

Alternative

- 159 BIS Expansion Guide Assembly (BUP1000)

BIS Expansion Device

(E 10 22)

fixing with sliding assemblies



666 3 410



666 3 412



666 3 416



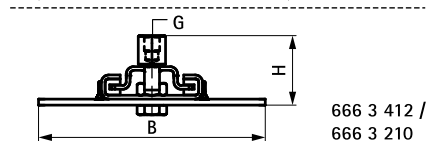
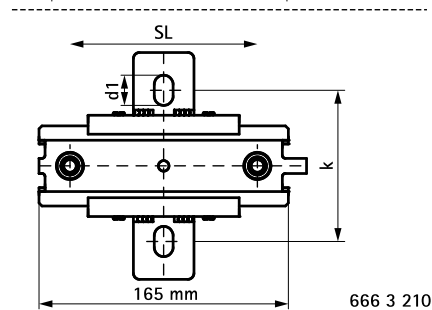
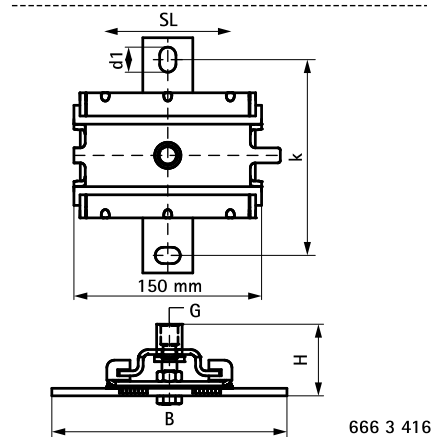
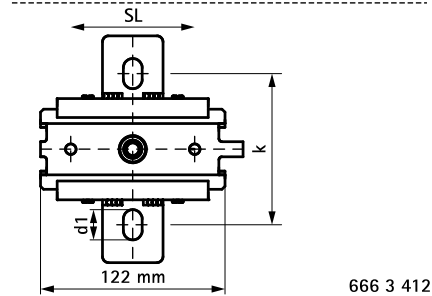
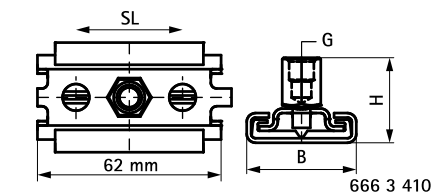
666 3 210

Features and Benefits

- single and double brackets for pipe extensions
- friction coefficient $\mu = 0.18$; Sliding friction coefficient $\mu = 0.14$
- zinc plated
- temperature resistance up to $+120\text{ }^\circ\text{C}$
- Part No. 6663416: temperature resistance up to $+240\text{ }^\circ\text{C}$
- fix directly on the building structure or in combination with rail systems
- suitable for ceiling mounting (suspended) and floor mounting (standing mounted)
- a variety of connection possibilities, can be combined with all pipe clamps
- material: metal parts made of steel; plastic parts made of POM (polyoxymethylene) / PPS (polyamphenylensulfid)

Part No.	Model	G	B	H	d1	k	SL (max.)	F _{a,z}	F _{a,z 2}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	
6663410	Single	M8/10	37	29	8.4	-	42	700	700	50
6663412	Single	M10/12	150	46	20 x 12.5	100	80	2,300	2,300	10
6663416	Single	M12/16	188	57	20 x 12.5	157	120	9,000	5,000	10
6663210	Double	M10/12	150	46	20 x 12.5	100	140	2,300	2,300	10

F_{a,z} = standing mounted; F_{a,z 2} = suspended.



Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod
- 494 WDI1 Drop-in Anchor

Complementary

- 502 WT B1 Throughbolt Anchor

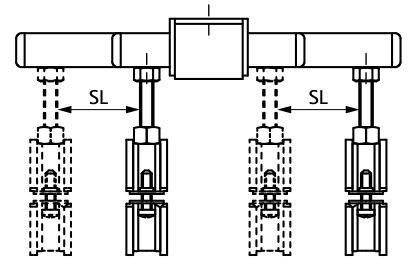
Alternative

- 157 BIS Expansion Device (BUP1000)
- 159 BIS Expansion Guide Assembly (BUP1000)

BIS Expansion Guide Assembly (BUP1000)

(E 10 40)

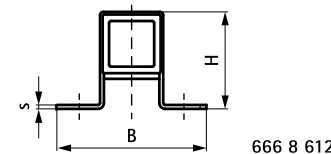
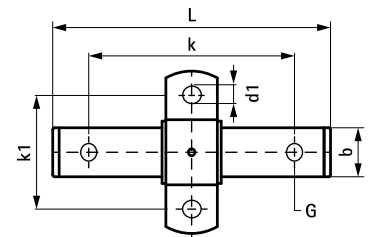
fixing with sliding assemblies



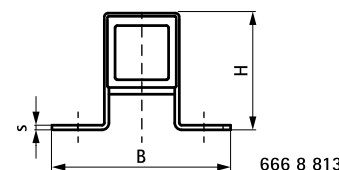
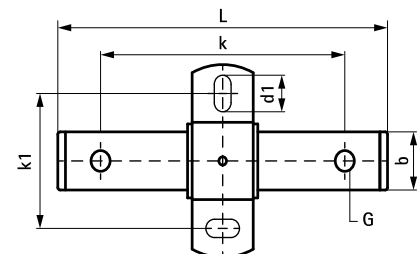
Features and Benefits

- stable and safe double support for pipe expansion
- fix directly on the building structure or in combination with rail systems
- suitable for ceiling mounting (suspended) and floor mounting (standing mounted)
- tapped with different sized threads on opposing faces
- a variety of connection possibilities, can be combined with Bifix® G2 or HD1501 Pipe Clamps
- material: metal parts made of steel; plastic parts made of PE
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Type	G	L	B	H	b	s	d1	k	k1	SL (max.)	F _{a,z}	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	
6668612	FG2	M10/12	170 mm	135	46	35	3.0	∅ 13	120	100	60	1,500	5
6668813	FG3	∅ 13.0 mm / 17.0 mm	255 mm	146	90	40	5.0	20 x 13	200	100	120	7,500	5



666 8 612



666 8 813

Complementary

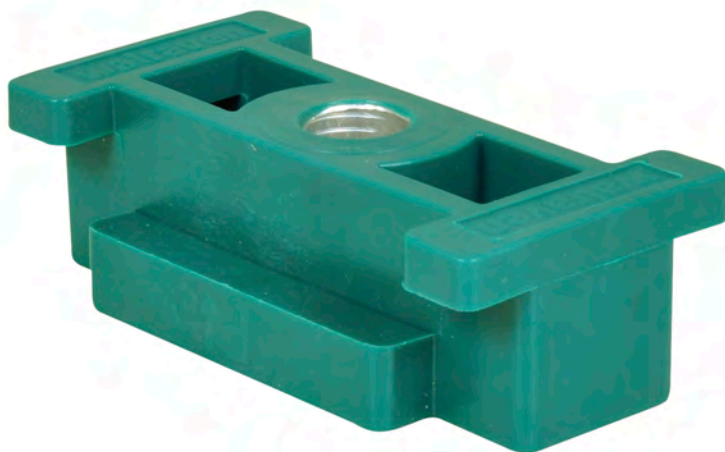
- 470 BIS Stud Bolt
- 472 BIS Threaded Rod
- 502 WT B1 Throughbolt Anchor

Alternative

- 157 BIS Expansion Device (BUP1000)

BIS Slide Block GFRP (BUP1000)

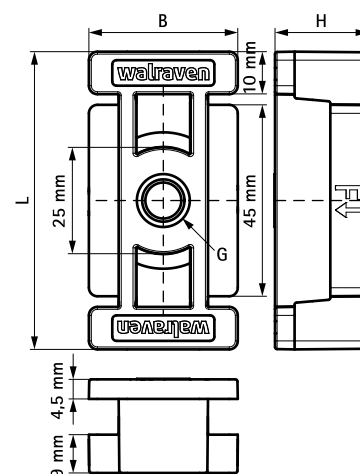
(E 10 45)



Features and Benefits

- flexible sliding element for pipe extensions
- can also be used as a cross-slide
- suitable for all BIS RapidStrut® Fixing Rail excluding DS5
- suitable for ceiling mounting (hanging) and floor mounting (standing mounted)
- very low installation height, little space requirement
- movement freely selectable, limitations and securing by U-washers
- material: hanger nut made of steel; plastic part made of Polyamide 6 (PA6), 30% glass fiber reinforced
- sliding friction coefficient $\mu = 0,30$
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- temperature resistance from -30 °C to +90 °C

Part No.	G	L	B (mm)	H (mm)	F _{a,z} (N)	Pack 1
6662810	M10	70 mm	35	22	1,550	20



Complementary

- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 246 BIS RapidStrut® Fixing Rail (pg)
- 289 BIS Strut Washer - U-shaped (BUP1000)

Alternative

- 158 BIS Expansion Device
- 156 BIS Expansion Joint

F BIS Suspension Components for Air Ducts



BIS Clamps with Lining for Spiral Ducts

BIS Aero®	162
Spiral Duct Clamp with Lining	163
BIS Support Bracket Rectangular Ductwork	164
BIS Support Bracket Round Ductwork	165



BIS Clamps for Spiral Ducts

BIS Aluminium Clamp for Spiral Ducts	166
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BIS Supports for Spiral Ducts

BIS Supports for Spiral Duct	167
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BIS Ventilation Duct Connectors

BIS Ventilation Duct Connector	168
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BIS Aero[®]

for spiral ducts 80 - 1,250 mm

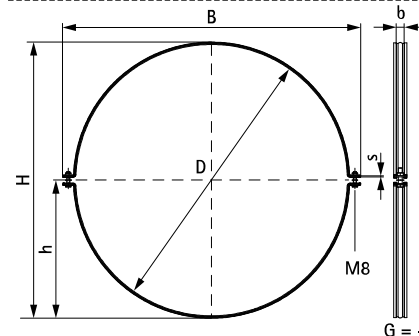
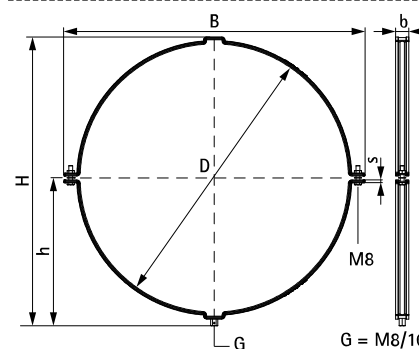
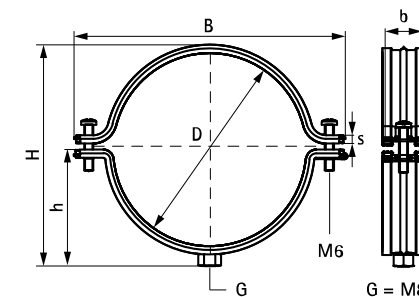
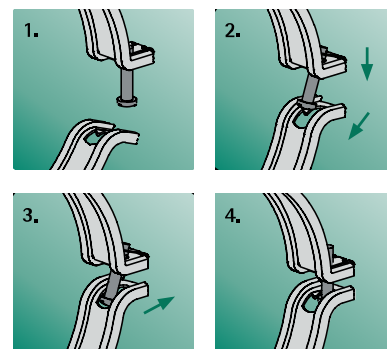
M8 - M8/10

(F05 03)



Features and Benefits

- with quick locking system
- patented design
- rubber lining is conjoined with the clamp (lining stays attached when sliding the spiral duct)
- material: pipe clamp made of steel
- pre-galvanized
- noise insulating lining made of TPE rubber, black



Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	b (mm)	s (mm)	F _{a,z} (N)	Pack 1
4115080	80	M8	134	84	54	25	1.25	700	25
4115100	100	M8	155	115	64	25	1.25	700	25
4115125	125	M8	179	139	76	25	1.25	700	20
4115140	140	M8	197	162	85	25	1.25	720	20
4115150	150	M8	205	164	88	25	1.25	720	20
4115160	160	M8	215	175	93	25	1.25	720	20
4115180	180	M8	238	202	105	25	1.25	720	20
4115200	200	M8	255	215	114	25	1.25	720	20
4115225	225	M8	280	246	126	25	1.25	720	20
4115250	250	M8	306	265	138	25	1.25	720	20
4115280	280	M8	336	302	154	25	1.25	720	25
4115300	300	M8	356	322	164	25	1.25	720	25
4115315	315	M8	371	332	172	25	1.25	720	25
4115355	355	M8	411	371	192	25	1.25	720	25
4115400	400	M8	457	423	214	25	1.25	720	20
4115450	450	M8/10	524	498	256	25	2.00	1,150	3
4115500	500	M8/10	574	548	281	25	2.00	1,150	3
4115560	560	M8/10	634	608	311	25	2.00	1,150	3
4115600	600	M8/10	675	649	332	25	2.00	1,150	3
4115630	630	M8/10	705	679	347	25	2.00	1,150	3
4115710	710	-	785	732	366	25	2.00	1,150	3
4115800	800	-	875	817	409	25	2.00	1,150	3
4115900	900	-	975	917	459	25	2.00	1,150	3
4115999	1,000	-	1,076	1,018	509	25	2.00	1,150	3
4115997	1,120	-	1,196	1,138	569	25	2.00	1,150	3
4115998	1,250	-	1,326	1,268	634	25	2.00	1,150	3

D ≥ 450 mm locking: 2 hexagon head bolts with nut.

D ≥ 710 mm without connection nut.

The max. allowed load (F_{a,z}) is calculated using specific statistical methods related to the breaking load, taking into account a deflection of 1.5 mm or 2% of the maximum nominal clamp diameter.

Spiral Duct Clamp with Lining

(F05 06)

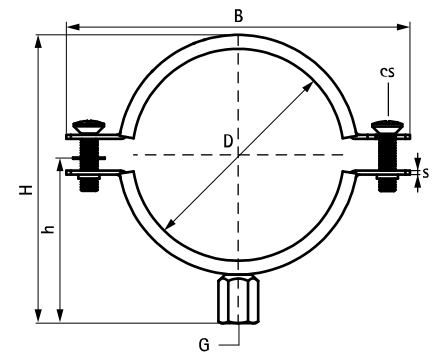
for spiral ducts 80 - 630 mm



Features and Benefits

- two-screw clamp
- with quick lock
- material: steel
- zinc plated
- sound insulating lining according DIN 4109
- sound insulating lining of aging resistant EPDM rubber, black

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
4103080	80	M8/10	125	109	57	20 x 1.50	M6	500	40
4103100	100	M8/10	149	129	67	20 x 1.50	M6	500	30
4103112	112	M8/10	163	141	74	20 x 1.50	M6	500	30
4103125	125	M8/10	180	154	78	20 x 1.50	M6	500	25
4103140	140	M8/10	189	169	86	20 x 1.50	M6	500	35
4103150	150	M8/10	202	179	92	20 x 1.50	M6	500	30
4103160	160	M8/10	222	189	98	20 x 1.50	M6	500	25
4103180	180	M8/10	243	209	108	20 x 1.50	M6	500	20
4103200	200	M8/10	259	229	117	20 x 1.50	M6	500	20
4103225	225	M8/10	288	253	132	20 x 1.50	M6	500	20
4103250	250	M8/10	304	279	145	20 x 1.50	M6	500	20
4103280	280	M8/10	358	309	160	20 x 1.50	M6	500	20
4103300	300	M8/10	373	329	171	20 x 1.50	M6	500	20
4103315	315	M8/10	386	344	178	20 x 1.50	M6	500	20
4103355	355	M8/10	445	384	198	20 x 1.50	M6	500	15
4103400	400	M8/10	493	429	221	20 x 1.50	M6	500	10
4103450	450	M8/10	540	483	246	25 x 2.00	M6	1,100	15
4103500	500	M8/10	591	532	271	25 x 2.00	M6	1,100	10
4103560	560	M8/10	635	591	300	25 x 2.50	M10	1,300	10
4103600	600	M8/10	675	631	320	25 x 2.50	M10	1,300	10
4103630	630	M8/10	706	664	335	25 x 2.50	M10	1,300	8



Complementary

- 164 BIS Support Bracket Rectangular Ductwork
- 165 BIS Support Bracket Round Ductwork
- 167 BIS Supports for Spiral Duct

Alternative

- 162 BIS Aero®

BIS Support Bracket Rectangular Ductwork

(F05 15)

for air ducts



412 5 001

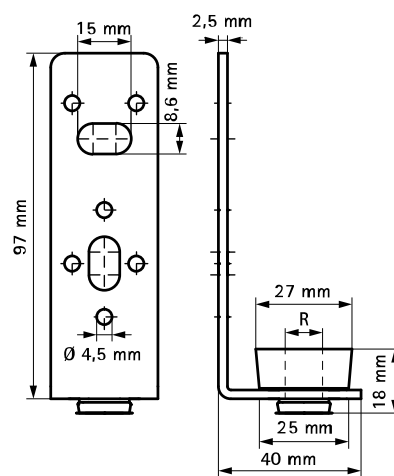


412 5 003

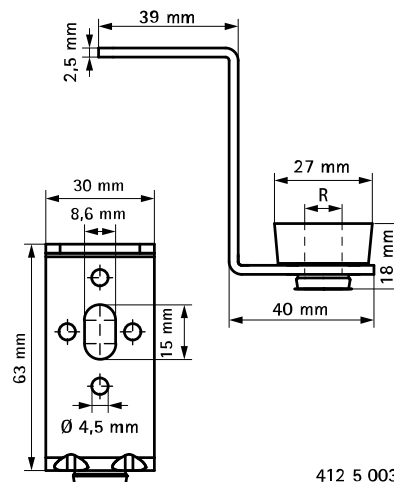
Features and Benefits

- for fixing of rectangular air ducts
- with hole \varnothing 4.5 mm for pop-rivet connection
- material: metal parts made of steel; silent block made of TPE rubber, black
- zinc plated
- sound insulating lining according DIN 4109

Part No.	Type	R	F _{a,z} (N)	Pack 1
4125001	L	M10	490	50
4125003	Z	M10	230	50



412 5 001



412 5 003

Complementary

- 493 BIS Fastenings
- 427 BIS Roofing Sheet Hanger VdS

BIS Support Bracket Round Ductwork

(F05 20)

for air ducts



412 5 004

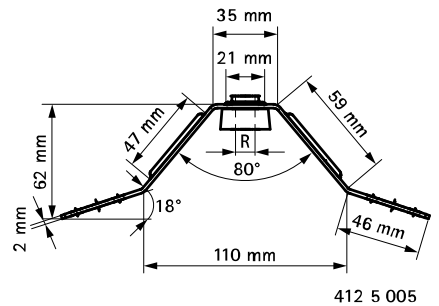
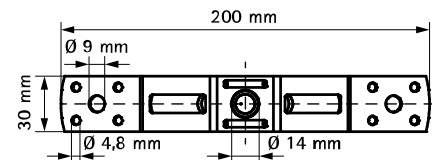
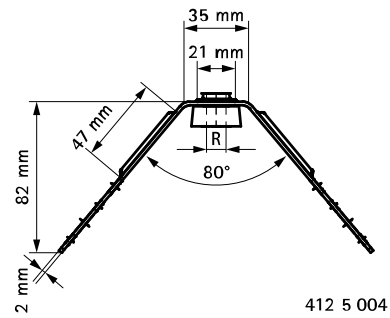
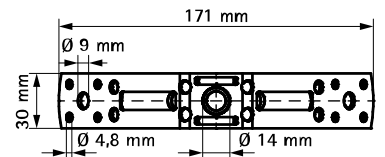


412 5 005

Features and Benefits

- for fixing of round air ducts
- with hole \varnothing 4.8 mm for pop-rivet connection
- material: metal parts made of steel; silent block made of TPE rubber, black
- zinc plated
- sound insulating lining according DIN 4109

Part No.	Type	R	F _{a,z} (N)	Pack 1
4125004	V	M10	490	50
4125005	A	M10	490	50

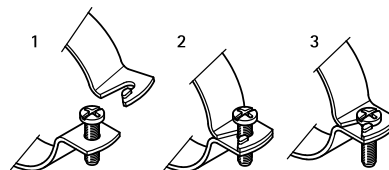


BIS Aluminium Clamp for Spiral Ducts

(F 15 15)

for spiral ducts \varnothing 80 - 300 mm

M8

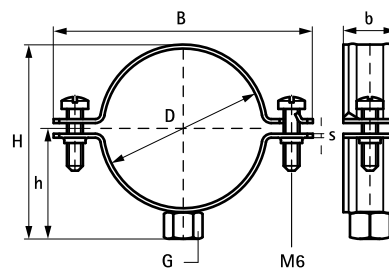


Features and Benefits

- two-screw clamp
- with quick locking system
- material: aluminium 3.0255

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4120080	80	M8	127	99	54	25 x 1.5	850	25
4120090	90	M8	137	109	59	25 x 1.5	850	25
4120100	100	M8	147	119	64	25 x 1.5	850	25
4120110	110	M8	158	131	70	25 x 1.5	850	25
4120130	130	M8	177	149	79	25 x 1.5	850	25
4120150	150	M8	197	169	89	25 x 1.5	850	25
4120180	180	M8	227	199	104	25 x 1.5	850	25
4120200	200	M8	247	219	114	25 x 1.5	850	25

Other dimensions on request.



Complementary

- 169 BIS RapidRail® Fixing System
- 399 BIS Fixing Accessories
- 493 BIS Fastenings

BIS Supports for Spiral Duct

supports of spiral ducts 0.0 mm

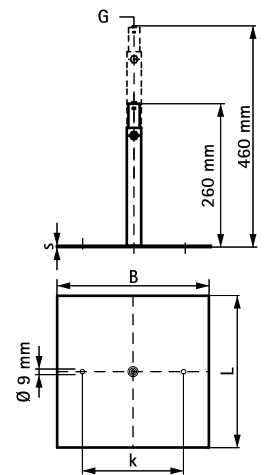
(F25 05)



Features and Benefits

- the spiral tube can be connected to the support by use of suspension band
- with height-adjustable stand with M8-connection (male thread)
- material: steel
- base plate pre-galvanized; stand zinc plated

Part No.	D (mm)	Model	G	L	B (mm)	s (mm)	k (mm)	Pack 1
4125031	0.0	Base plate small	M8	100 mm	150	2.0	100	5
4125036	0.0	Base plate large	M8	300 mm	300	2.0	200	5



BIS Ventilation Duct Connector

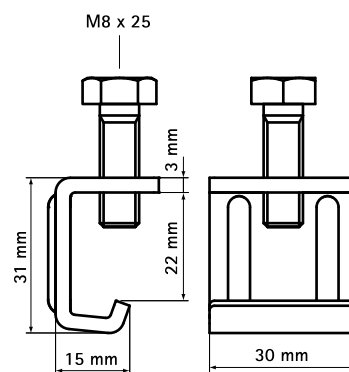
(F30 05)



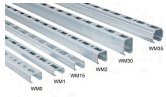
Features and Benefits

- material: steel 1.0332
- zinc plated

Part No.	Pack 1
4125020	200



G BIS RapidRail® Fixing System



BIS Fixing Rail

BIS RapidRail® Fixing Rail	173
BIS Fixing Rail	175
BIS Fixing Rail	176
BIS Fixing Rail - WM3	177
BIS Fixing Rail - U-shaped	178
BIS Fixing Rail - L-shaped	179



BIS Cantilever Arms

BIS RapidRail® Cantilever Arm (BUP1000)	180
BIS Cantilever Arm - WM3 (BUP1000)	181
BIS Cantilever Arm - U-shaped	182



BIS Wall Plates

BIS RapidRail® Wall Plate	183
BIS RapidRail® Wall Plate (Hinged)	184
BIS Wall Plate - WM3	185



BIS Rail Props and Brackets

BIS Rail Prop	186
BIS Rail Prop - WM3	187
BIS RapidRail Construction Bracket (zp)	188
BIS Rail Junction Angle Bracket (hdg)	189
BIS RapidRail Corner Bracket (zp)	190
BIS Rail Junction Assembly	191
BIS RapidRail® Rail Suspension Bracket	192



BIS Console Kits and Gasmeter Holder

BIS Console Kit ISO	193
BIS Console Kit ISO - with Bridging	194
BIS Console Kit Clim ISO	195
BIS Gas Meter Holder	196



BIS Rail Accessories for Pipe Fixing

BIS RapidRail® Slide Nut	197
BIS Slide Nut 651	198
BIS Slide Nut 651D - WM3	199
BIS Square Slide Nut	200
BIS Angle Formed Slide Nut	201
BIS Double Slide Nut	202
BIS Double Slide Nut - WM3	203
BIS RapidRail® Hammerfix	204
BIS RapidRail® Ball Swivel Hanger	205
BIS Tee-Bolt Assembly	206
BIS Tee-Bolt Assembly - WM3	207
BIS Washer (Flat) (BUP1000)	208
BIS Washer (Flat)	209
BIS Washer (Flat) - WM3	210
BIS Washer (U-shaped)	211
BIS Washer (U-shaped) - WM3	212
BIS RapidRail® Basket Retainer Clip	213



BIS Rail Connectors

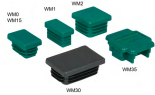
BIS RapidRail® Connector 90°	214
BIS RapidRail® Connector 135°	215
BIS Rail Connector with Slide Nuts	216
BIS Rail Connector 90° with Slide Nut - WM3	217
BIS Rail Connector	218
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BIS RapidRail® Connector	220
BIS Rail Connector - WM3	221
BIS RapidRail® T- and X-Connector	222
BIS RapidRail® Cross Connector	223



BIS Beam Clamps and Rail Fixing Sets

BIS RapidRail® Beam Clamp	225
BIS Rail Beam Clamp	226
BIS Rail Beam Clamp - WM3	227
BIS 'Light Duty' Beam Clamp	228
BIS Rail WM0 'Light Duty' Set	229
BIS Rail WM1 'Light Duty' Set	230

G BIS RapidRail® Fixing System



BIS Rail Finish Material

BIS Rail End Cap	231
BIS Rubber Strip	232
BIS Rail End Cap - WM3	233

BIS RapidRail®

Fast and easy fixing



Insert, lock, done

The accessories are pre-assembled and delivered 'ready to use' to site. The plastic spring allows the slide nut to be fixed easily into the rail, saving up to 40% fixing time.



Complete range

The BIS RapidRail® System offers a complete and effective range of rail profiles, cantilever arms and accessories for pipe fixing and rail construction.



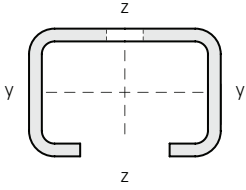
Fast and easy fixing

BIS RapidRail® WM15, WM30 and WM35 have a unique hole pattern allowing the accessories to be fitted on both sides of the rail quickly and easily.



System BIS RapidRail®

Table of rail section properties



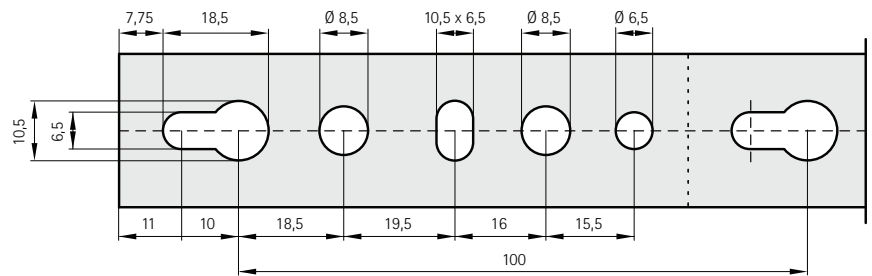
Type	Weight (kg / m)	Moment of inertia cm ⁴		Section modulus cm ³	
		I _y	I _z	W _y	W _z
WM0	0.58	0.28	0.91	0.30	0.67
WM1	0.85	0.28	1.47	0.35	0.98
WM15	0.77	0.49	1.66	0.49	1.10
WM2	1.31	1.71	2.65	1.08	1.76
WM30	1.67	4.57	3.79	2.03	2.53
WM35	1.65	3.62	5.03	1.81	2.65

See Rail load tables for safe working loads.

Perforation pattern for fixing to ceiling or wall.

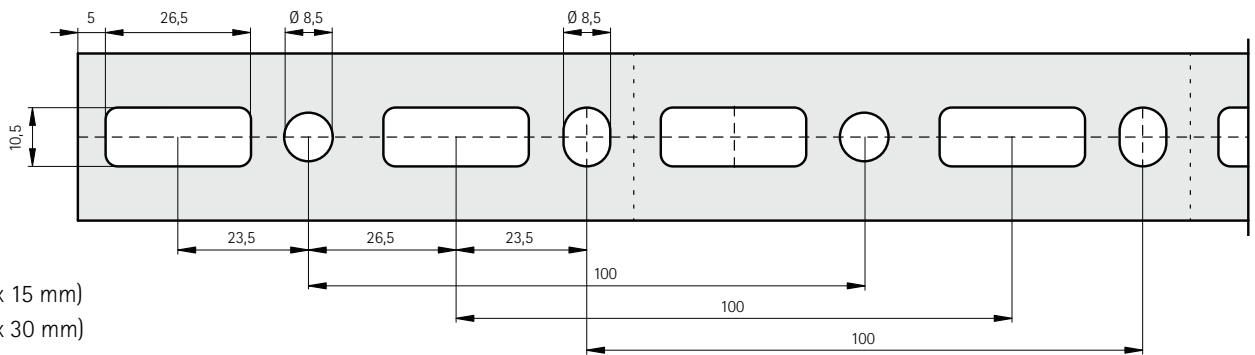
Distance between rail end and first hole is always equal. All sizes in mm.

WM0 (27 x 18 mm)



WM1 (30 x 15 mm)

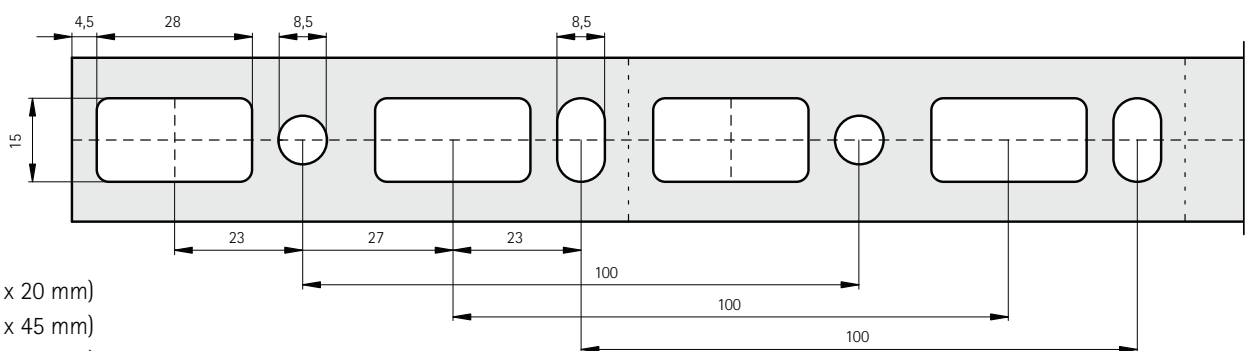
WM2 (30 x 30 mm)



WM15 (30 x 20 mm)

WM30 (30 x 45 mm)

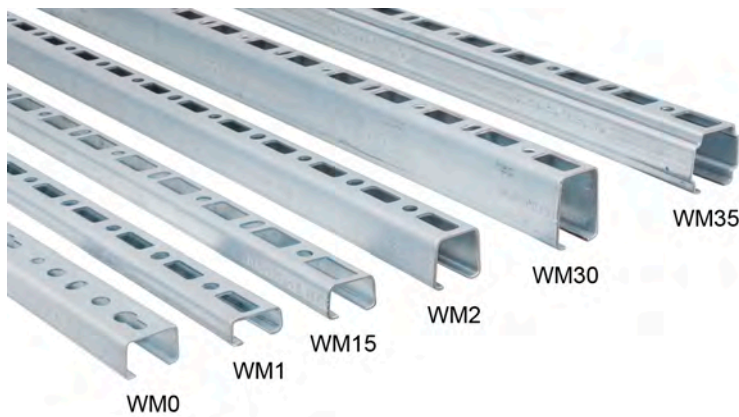
WM35 (38 x 40 mm)



RapidRail® Fixing Rail

suspension and support

(G 04 05)

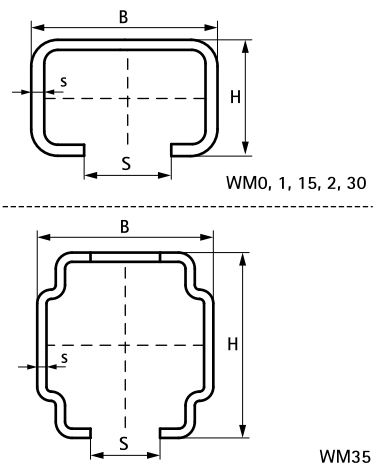


Features and Benefits

- C-profile
- for a quick and easy fixing
- with continuous perforation
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- unique perforation on rail WM15, WM30 and WM35 allows for hanging on both sides
- material: steel 1.0242
- pre-galvanized
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'



Part No.	Type	L	B (mm)	H (mm)	s (mm)	S (mm)	RAL	BndS	BndL	App.
6505000	WM0	2 m	27	18	1.20	15	RAL ¹	20	400	m.
6505300	WM0	3 m	27	18	1.20	15	RAL ¹	30	600	m.
6505600	WM0	6 m	27	18	1.20	15	RAL ¹	60	1.200	m.
6505001	WM1	2 m	30	15	2.00	15	RAL ¹	20	480	m.
6505301	WM1	3 m	30	15	2.00	15	RAL ¹	30	720	m.
6505601	WM1	6 m	30	15	2.00	15	RAL ¹	60	720	m.
6505515	WM1	0.5 m	30	15	2.00	15	RAL ¹	1	-	pc.
6505015	WM15	2 m	30	20	1.75	15	RAL ¹	20	480	m.
6505315	WM15	3 m	30	20	1.75	15	RAL ¹	30	720	m.
6505615	WM15	6 m	30	20	1.75	15	RAL ¹	60	720	m.
6505002	WM2	2 m	30	30	2.00	15	RAL ¹	20	400	m.
6505302	WM2	3 m	30	30	2.00	15	RAL ¹	30	600	m.
6505602	WM2	6 m	30	30	2.00	15	RAL ¹	60	600	m.
6505030	WM30	2 m	30	45	2.00	15	RAL ¹	20	240	m.
6505630	WM30	6 m	30	45	2.00	15	RAL ¹	60	360	m.
6505235	WM35	2 m	38	40	2.00	15	-	20	100	m.
6505335	WM35	3 m	38	40	2.00	15	-	30	150	m.
6505635	WM35	6 m	38	40	2.00	15	-	60	300	m.



RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/C.
 For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.
 For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'.

Complementary

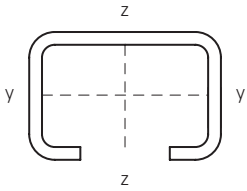
- 197 BIS RapidRail® Slide Nut
- 204 BIS RapidRail® Hammerfix
- 231 BIS Rail End Cap

Complementary

- 214 BIS RapidRail® Connector 90°
- 215 BIS RapidRail® Connector 135°

Technical Details Rail WM3

System WM3 - Table of rail section properties

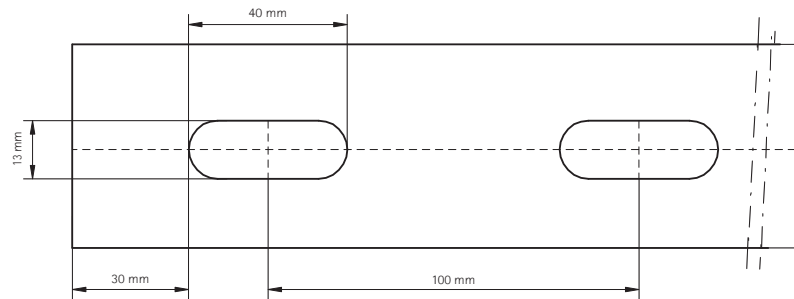


Type	Weight (kg / m)	Moment of inertia cm ⁴		Section modulus cm ³	
		I _y	I _z	W _y	W _z
WM3	3.22	8.17	15.95	3.95	6.38
See Rail load tables for safe working loads.					

Perforation pattern for fixing to ceiling or wall.

Distance between rail end and first hole is always equal.

WM3 (50 x 40 mm)



BIS Fixing Rail

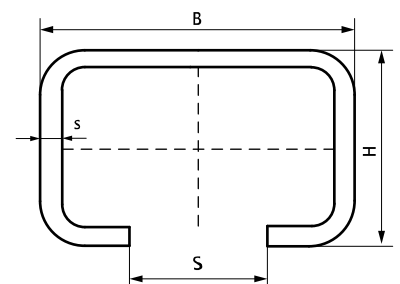
(G 04 07)



Features and Benefits

- C-profile
 - for a quick and easy fixing
 - with continuous perforation
 - distance between rail end and first hole is always equal
 - a continuous graduated centimetre scale on one side
- material: steel 1.0226
 - yield strength 240 N/mm²

Part No.	L	B	H	s	S	BndS	BndL	App.
		(mm)	(mm)	(mm)	(mm)			
6505017	2 m	28	30	1.75	15	20	400	m.
6505317	3m	28	30	1.75	15	30	600	m.



BIS Fixing Rail

(G 04 15)

suspension and support



Features and Benefits

- for a quick and easy fixing
- with continuous perforation
- distance between rail end and first hole is always equal

Part No.	L	s (mm)	S (mm)	From Rail	ST	BndS	App.
6504020	2 m	1.00	10.5	20x10	pre-galvanized	24	m.
6504025	2 m	1.50	16.5	35x18	pre-galvanized	24	m.
6504028	2 m	1.50	23.0	40x20	pre-galvanized	24	m.
<i>Part No. 6504XXX: pre-galvanized.</i>							

BIS Fixing Rail – WM3

(G 04 40)

suspension and support

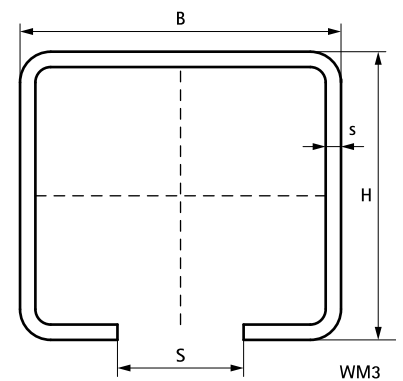


Features and Benefits

- C-profile
 - for a quick and easy fixing
 - with continuous perforation
 - distance between rail end and first hole is always equal
 - pre-galvanized
- material: steel 1.0242

Part No.	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL	App.
6505003	3 m	50	40	3.0	18	3	192	m.
6505603	6 m	50	40	3.0	18	6	384	m.

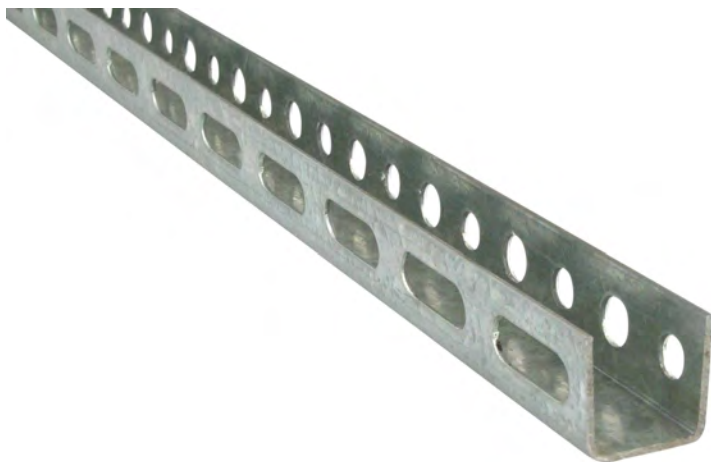
For more information about the max. allowed load ($F_{0,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'.



BIS Fixing Rail – U-shaped

(G 04 45)

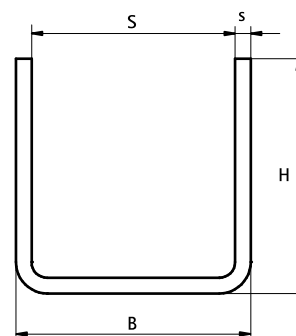
suspension and support



Features and Benefits

- for a quick and easy fixing
- with continuous perforation
- a continuous graduated centimetre scale on one side
- material: steel
- pre-galvanized

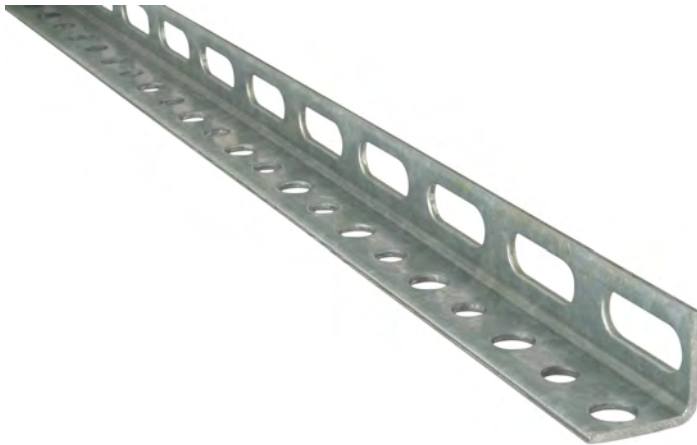
Part No.	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL	App.
6505293	2 m	30	30	2.0	26	16	480	m.
6505294	2 m	30	30	3.0	24	16	480	m.



BIS Fixing Rail – L-shaped

(G 04 50)

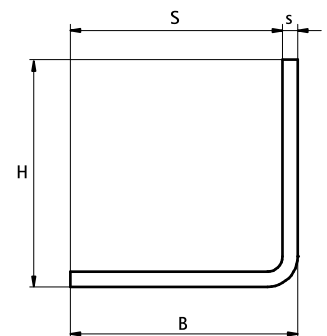
suspension and support



Features and Benefits

- for a quick and easy fixing
- with continuous perforation
- a continuous graduated centimetre scale on one side
- pre-galvanized
- material: steel

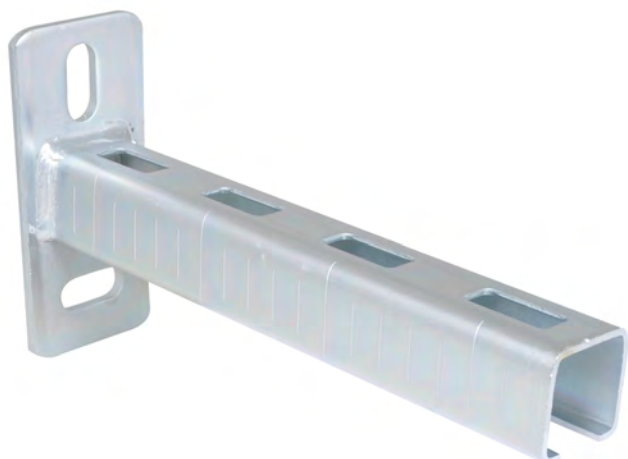
Part No.	Type	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL	App.
6505297		2 m	30	30	2.0	28	16	720	m.
6505298		2 m	30	30	3.0	27	16	720	m.



BIS RapidRail® Cantilever Arm (BUP1000)

(G 10 05)

fixing to wall or ceiling

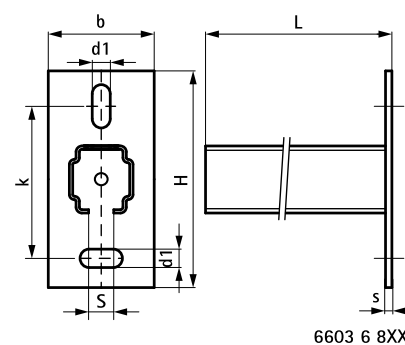
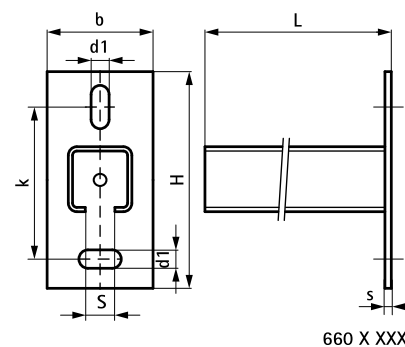


Features and Benefits

- wall plate with welded C-profile
- perfectly suitable for hanging to the ceiling
- slots at 90° to each other to simplify fixing
- CO₂ welded
- a continuous graduated centimetre scale on one side
- unique perforation on rail WM15, WM30 and WM35 allows for hanging on both sides
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	s	d1	S	k	From Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6603015	150 mm	38	110	4.0	25 x 11	15	70	WM0 - 27x18	20
6603019	200 mm	38	110	4.0	25 x 11	15	70	WM0 - 27x18	20
6603030	300 mm	38	110	4.0	25 x 11	15	70	WM0 - 27x18	20
6603050	500 mm	38	110	4.0	25 x 11	15	70	WM0 - 27x18	20
6603115	150 mm	48	110	5.0	25 x 11	15	70	WM1 - 30x15	20
6603120	200 mm	48	110	5.0	25 x 11	15	70	WM1 - 30x15	20
6603125	250 mm	48	110	5.0	25 x 11	15	70	WM1 - 30x15	20
6603130	300 mm	48	110	5.0	25 x 11	15	70	WM1 - 30x15	20
6603715	150 mm	38	110	4.0	25 x 11	15	70	WM15 - 30x20	20
6603720	200 mm	38	110	4.0	25 x 11	15	70	WM15 - 30x20	20
6603725	250 mm	38	110	4.0	25 x 11	15	70	WM15 - 30x20	20
6603215	150 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	20
6603220	200 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	10
6603225	250 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	10
6603230	300 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	10
6603240	400 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	20
6603245	450 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	20
6603250	500 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	20
66036820	200 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	10
66036825	250 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	10
66036835	350 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	10
66036840	400 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	10
66036850	500 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	10
66036860	600 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	1
66036875	750 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	1
66036805	1,050 mm	48	130	5.0	25 x 11	15	90	WM35 - 38x40	1

For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'.



Complementary

- 186 BIS Rail Prop
- 197 BIS RapidRail® Slide Nut
- 204 BIS RapidRail® Hammerfix

Complementary

- 206 BIS Tee-Bolt Assembly
- 231 BIS Rail End Cap
- 450 BIS Washer (BUP1000)

BIS Cantilever Arm – WM3 (BUP1000)

(G 10 15)

fixing to wall or ceiling

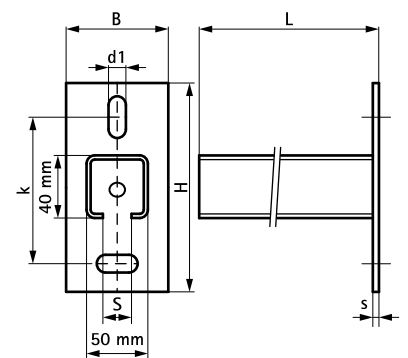


Features and Benefits

- wall plate with welded C-profile
- perfectly suitable for hanging to the ceiling
- slots at 90° to each other to simplify fixing
- CO₂ welded
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	s	d1	S	k	From Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6603335	350 mm	70	160	8.0	26 x 14	18	115	WM3 - 50x40	10
6603355	550 mm	70	160	8.0	26 x 14	18	115	WM3 - 50x40	1

For more information about the max. allowed load (F_{o,z}) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'.



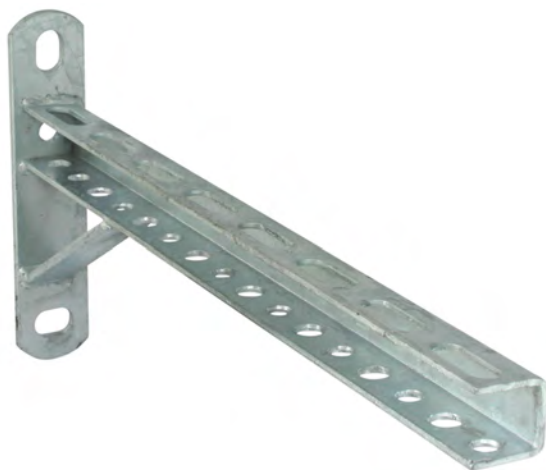
Complementary

- 187 BIS Rail Prop - WM3
- 233 BIS Rail End Cap - WM3

BIS Cantilever Arm – U-shaped

(G 10 20)

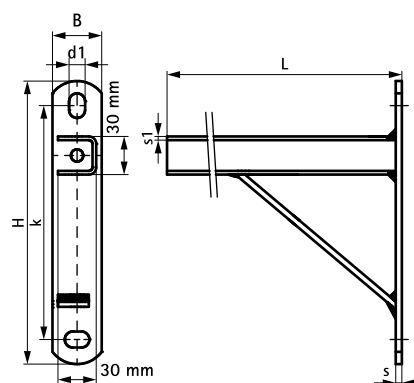
fixing to wall or ceiling



Features and Benefits

- U-profile welded on wall plate
- slots at 90° to each other to simplify fixing
- material: steel
- hot dip galvanized

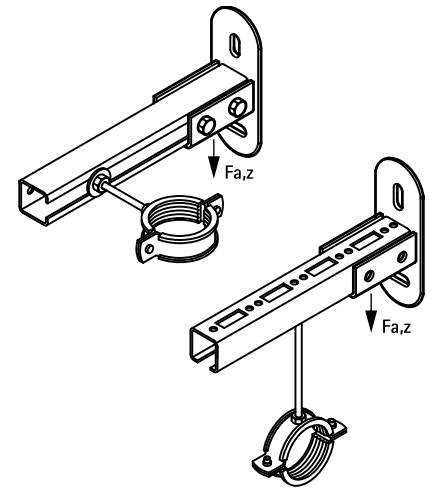
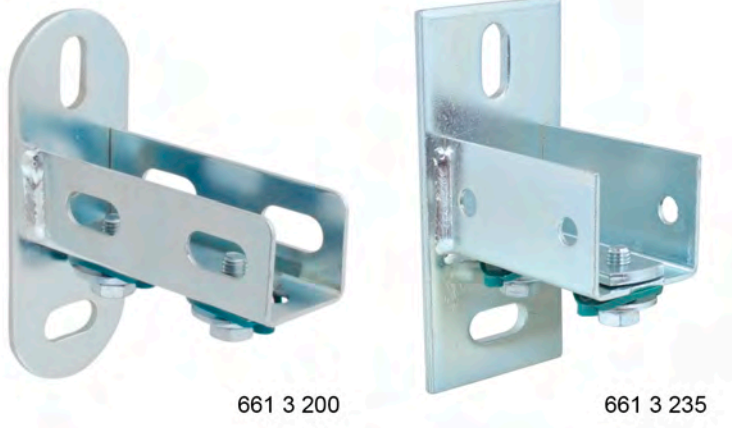
Part No.	Model	L	B	H	s	s1	d1	k	From Rail	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6601911	With prop	255 mm	40	230	5.0	3.0	20 x 13	190	U-rail	5
6601912	With prop	305 mm	40	230	5.0	3.0	20 x 13	190	U-rail	5
6601913	With prop	405 mm	40	230	5.0	3.0	20 x 13	190	U-rail	5
6601914	With prop	605 mm	40	230	5.0	3.0	20 x 13	190	U-rail	5
6601915	With prop	805 mm	40	400	5.0	3.0	20 x 13	360	U-rail	5



BIS RapidRail® Wall Plate

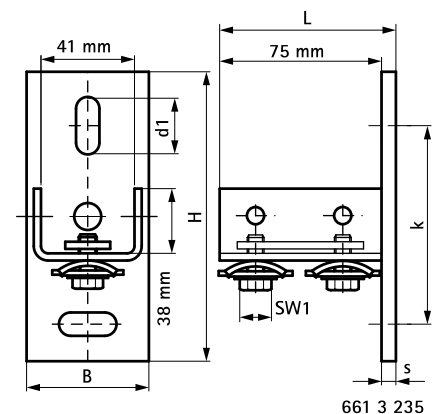
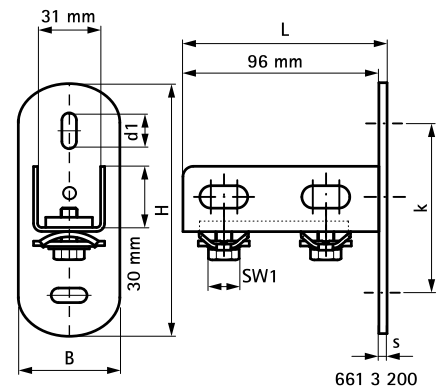
fixing to wall

(G 15 05)



Features and Benefits

- flexible base plate for rails
- for wall fixing of rail
- rail can be fixed with slot downwards or sideways
- Part No. 6613200: suitable for WM0, 1, 15, 2, 30
- Part No. 6613235: suitable for WM35
- slots at 90° to each other to simplify fixing
- CO₂ welded
- with pre-assembled BIS RapidRail® Sliding nut(s) for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

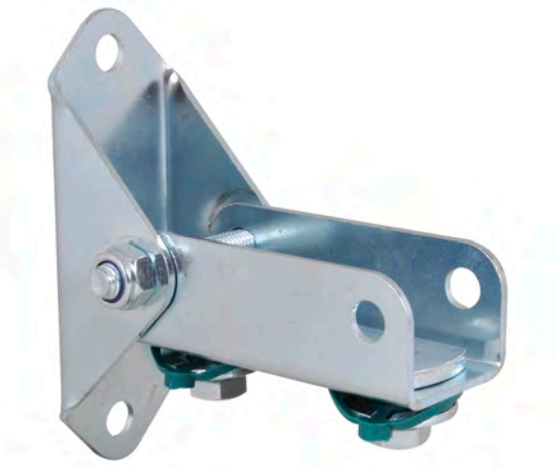


Part No.	L	B	H	s	d1	k	SW1	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1
6613200	100 mm	50 (mm)	123 (mm)	4.0 (mm)	25 x 11 (mm)	83 (mm)	13 (mm)	15.0	WM0 - 30	2,850	25
6613235	80 mm	60 (mm)	133 (mm)	5.0 (mm)	25 x 11 (mm)	93 (mm)	13 (mm)	15.0	WM35	2,850	25

BIS RapidRail® Wall Plate (Hinged)

(G 15 10)

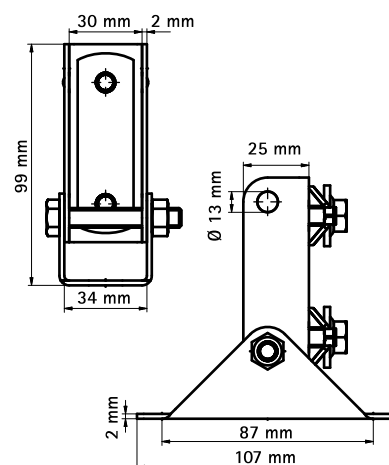
fixing to wall



Features and Benefits

- wall plate with hinging U-profile
- also used to strengthen rail constructions
- for fixing of rail to sloping walls
- Part No. 6613250: suitable for WM1, 15, 2, 30
- material: steel
- zinc plated

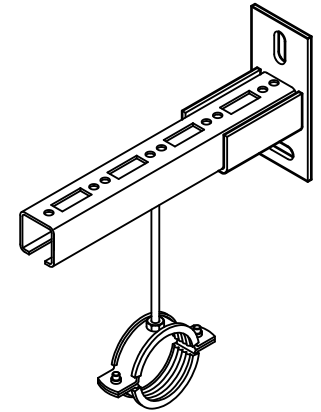
Part No.	T _(max.) (Nm)	For Rail	Pack 1
6613250	15.0	WM1 - 30	20



BIS Wall Plate – WM3

(G 15 20)

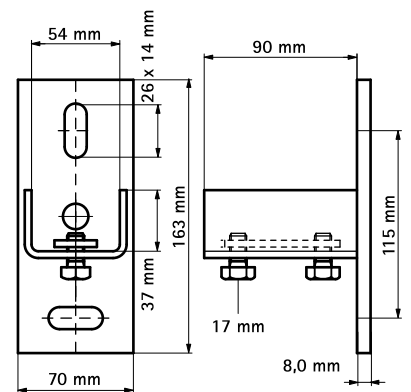
fixing to wall



Features and Benefits

- flexible base plate for rails
- slots at 90° to each other to simplify fixing
- with pre-assembled slide nuts
- material: steel
- zinc plated

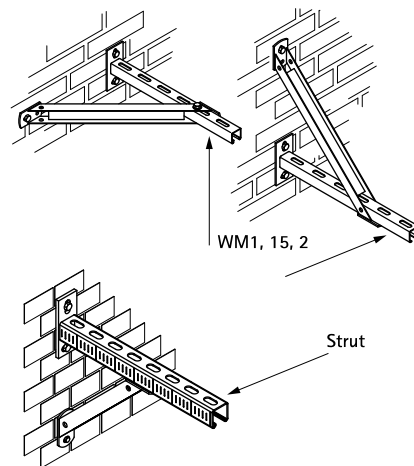
Part No.	For Rail	Pack 1
6613300	WM3	10



BIS Rail Prop

reinforcement of cantilever arm

(G 20 05)

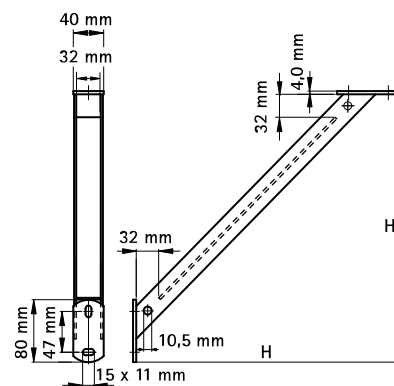


Features and Benefits

- 45° support bracket
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- cantilever arm of WM30 not suitable for 'run-through fixing'
- suitable for rail WM0, 1, 15, 2, 30
- CO₂ welded
- material: steel
- zinc plated

Part No.	H (mm)	For Rail	Pack 1
6628220	250	WM0 - 30	10
6628230	350	WM0 - 30	10

Rail Props for WM35 Rail? See Part No. 66288530.



Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Rail Prop – WM3

reinforcement of cantilever arm

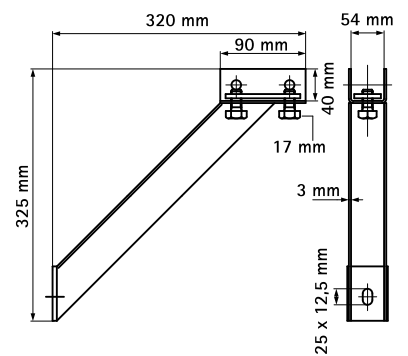
(G 20 10)



Features and Benefits

- 45° support bracket
- material: steel
- for fixing support under, top or on side of a cantilever arm
- zinc plated
- also used to strengthen rail constructions
- CO₂ welded

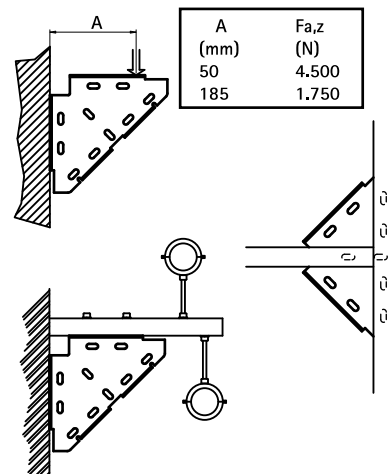
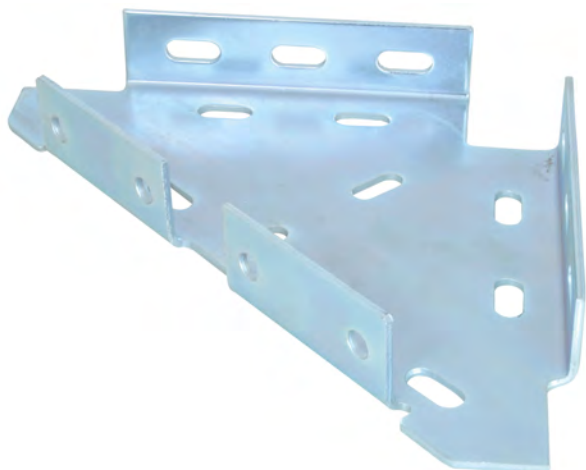
Part No.	For Rail	Pack 1
6623326	WM3	8



BIS RapidRail Construction Bracket (zp)

(G 20 15)

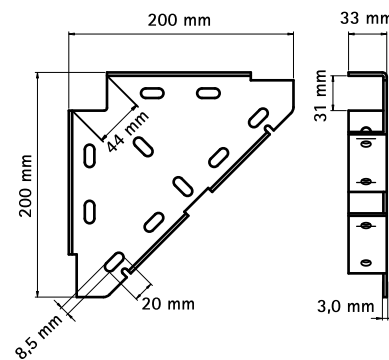
to make BIS RapidRail® fabrications



Features and Benefits

- one-part support
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- suitable for rail WM0, 1, 15, 2, 30
- material: steel
- zinc plated

Part No.	For Rail	Pack 1
6593010	WM0 - 30	10
<i>Rail Junction Angle Bracket for WM35 Rail? See Part No. 65938020 (page H 16 20).</i>		



BIS Rail Junction Angle Bracket (hdg)

(G 20 20)

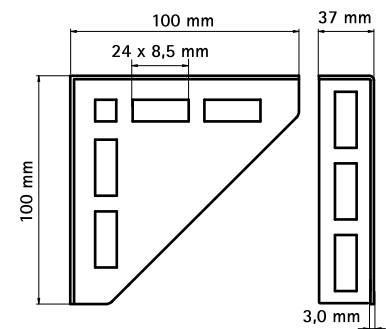
to make BIS RapidRail® fabrications



Features and Benefits

- one-part support
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- suitable for rail WM1, 15, 2, 30
- material: steel
- hot dip galvanized

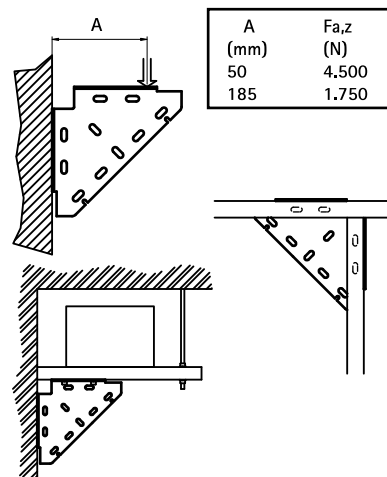
Part No.	For Rail	Pack 1
6661110	WM1 - 30	25



BIS RapidRail Corner Bracket (zp)

(G 20 25)

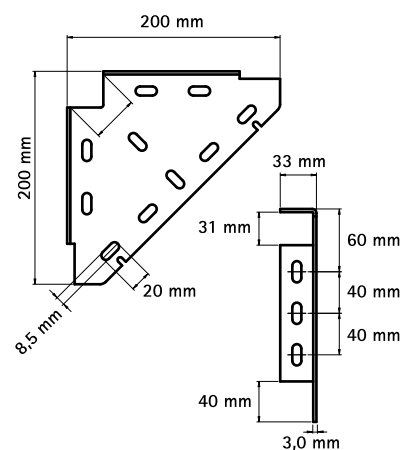
to make BIS RapidRail® fabrications



Features and Benefits

- one-part support
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- suitable for rail WM0, 1, 15, 2, 30
- material: steel
- zinc plated

Part No.	For Rail	Pack 1
6603010	WM0 - 30	10
<i>Corner Bracket for WM35 Rail? See Part No. 6603020 (page H 16 40).</i>		



BIS Rail Junction Assembly

(G 20 35)

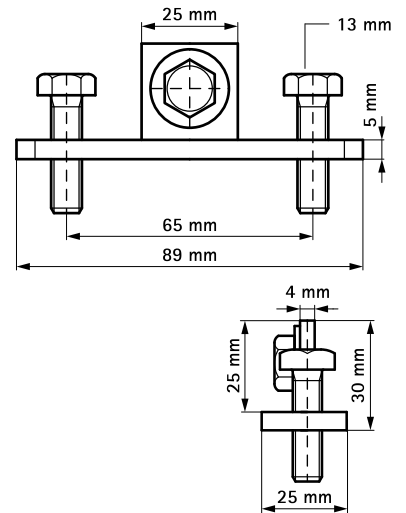
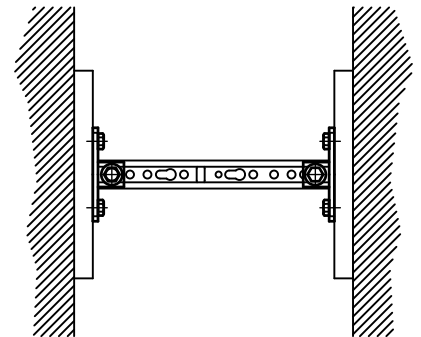
fixing to steel beam



Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- always use 2 beam clamps per fixing
- also suitable for fixing in risershafts
- suitable for rail WMO, 1, 15, 2, 30, 35
- material: steel
- zinc plated

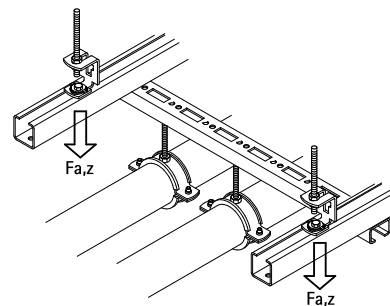
Part No.	T _(max.) (Nm)	For Rail	Pack 1
6613820	15.0	WMO - 35	50



BIS RapidRail® Rail Suspension Bracket

(G 20 40)

fixing of rail to stud bolt



Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- suitable for rail WM0, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- with pre-assembled BIS RapidRail® Sliding nut(s) for a quick fixing, and retains assembly in place before final tightening
- stud bolt with upturned nut hooked in easily because of cross-shaped hole
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

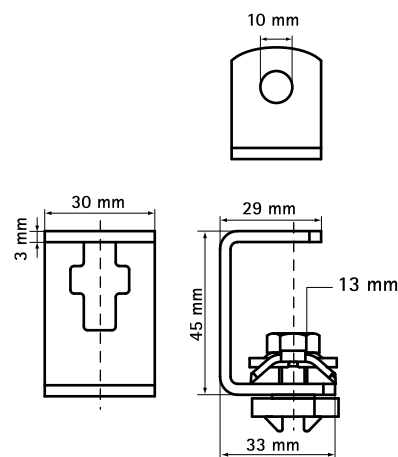


RAL-GZ 655/D
Cert.Nr. 2012-09

Part No.	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	RAL	Pack 1
6793008	15.0	WM0 - 35	1,600	79	RAL ¹	50

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



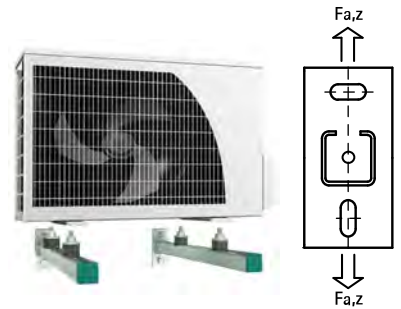
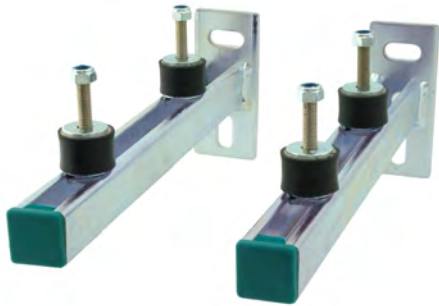
Complementary

173 RapidRail® Fixing Rail

BIS Console Kit ISO

wall fixing of appliances

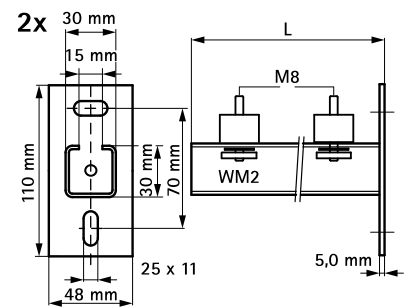
(G 25 05)



Features and Benefits

- universal fixing kit
- for wall fixing of water pumps, compressors and other light duty machinery
- vibration isolators pre-assembled with slide nut, washer and hexagon head lock-nut
- material: steel
- zinc plated
- noise insulation by use of vibration isolators (support made of vulcanized rubber)
- consists of:
 - 2 Cantilever arms
 - 4 Vibration isolators
 - 2 Rail End Caps
 - 1 Mounting kit

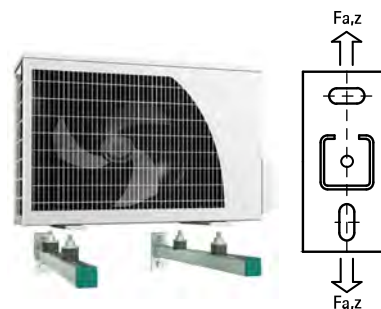
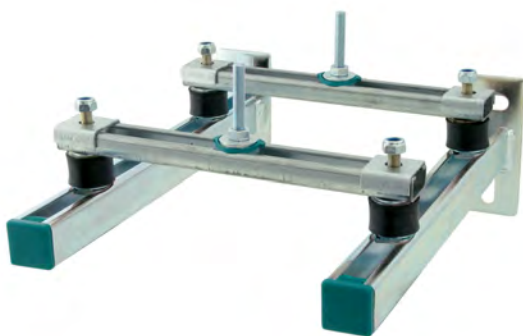
Part No.	L	T _(max.) (Nm)	From Rail	F _{a,z} (N)	Pack 1
6923230	300 mm	15.0	WM2	1,200	4
6923240	400 mm	15.0	WM2	700	6
6923250	500 mm	15.0	WM2	500	1



BIS Console Kit ISO – with Bridging

(G 25 10)

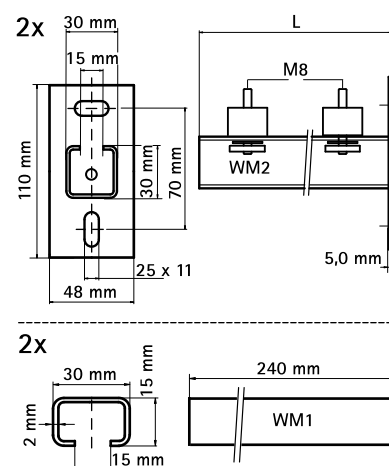
wall fixing of appliances



Features and Benefits

- universal fixing kit
- for wall fixing of water pumps, compressors and other light duty machinery
- bridging rail for fixing of devices with 2 fixing holes
- vibration isolators pre-assembled with slide nut, washer and hexagon head lock-nut
- material: steel
- zinc plated
- noise insulation by use of vibration isolators (support made of vulcanized rubber)
- consists of:
 - 2 Cantilever arms
 - 2 bridgings of rail WM1 (30x15 mm)
 - 4 Vibration isolators
 - 2 Slide tee-bolt assemblies
 - 2 Rail End Caps
 - 1 Mounting kit

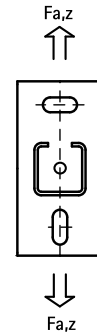
Part No.	L	T _(max.) (Nm)	From Rail	F _{a,z} (N)	Pack 1
6923235	300 mm	15.0	WM2	1,200	4
6923245	400 mm	15.0	WM2	700	6



BIS Console Kit Clim ISO

(G 25 15)

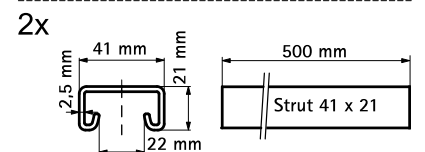
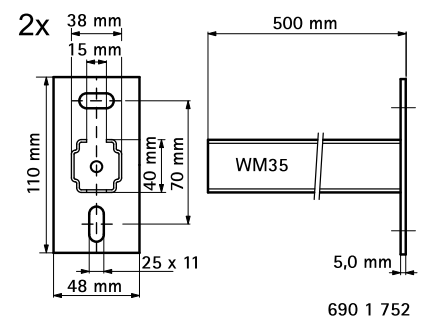
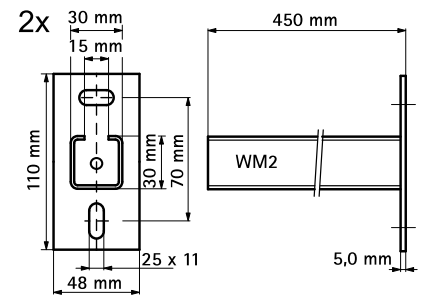
wall fixing of appliances



Features and Benefits

- universal fixing kit
- for wall fixing of airconditioners, heaters, compressors and other heavy duty material
- wall rail for extra height adjustability and/or simplifying fixing to unequal surface
- vibration isolators pre-assembled with slide nut, washer and hexagon head lock-nut
- material: steel
- zinc plated
- noise insulation by use of vibration isolators (support made of vulcanized rubber)
- consists of:
 - 2 Cantilever arms
 - 2 lengths of Strut 41x21
 - 4 Vibration isolators
 - 2 Rail End Caps
 - 1 Mounting kit

Part No.	L	T _(max.) (Nm)	From Rail	F _{a,z} (N)	Pack 1
6901745	450 mm	15.0	WM2	600	4
6901752	500 mm	15.0	WM35	1,000	1



BIS Gas Meter Holder

(G 25 20)

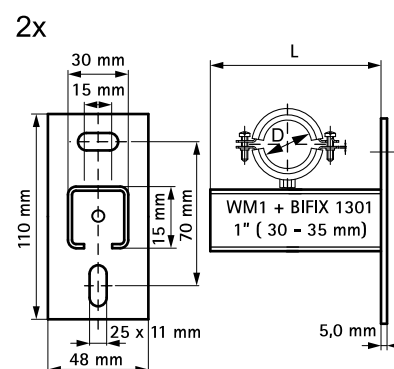
fixing of gas meter 30 - 35 mm



Features and Benefits

- universal fixing kit
 - for wall fixing of a gas meter
 - slots at 90° to each other to simplify fixing
 - cantilever arm: CO₂ welded
 - material: steel
 - zinc plated
- consists of:
 - 2 Cantilever arms
 - 2 Clamps BIS Bifix® 1301 with lining
 - 4 Star plugs
 - 1 Mounting kit

Part No.	D (mm)	D (°)	L	From Rail	Pack 1
4923035	30 - 35	1	200 mm	WM0 - 27x18	1
4923135	30 - 35	1	200 mm	WM1 - 30x15	1



BIS RapidRail® Slide Nut

(G 30 05)

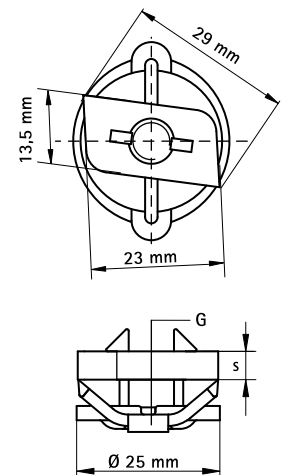
fixing to BIS RapidRail®



Features and Benefits

- slide nut with washer and BIS RapidRail® spring
- suitable for rail WM0, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1	Pack 2
6513106	M6	4.0	7.5	WM0 - 35	2,000	50	500
6513108	M8	5.0	15.0	WM0 - 35	2,700	50	500
6513110	M10	5.0	15.0	WM0 - 35	2,900	50	500



Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

Alternative

- 204 BIS RapidRail® Hammerfix

BIS Slide Nut 651

(G 30 10)

fixing to BIS RapidRail®

A



B



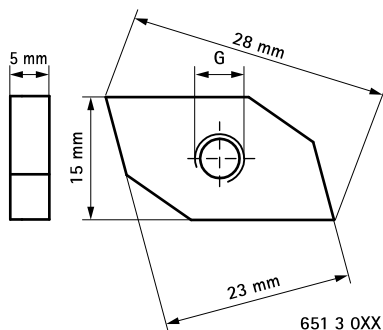
Features and Benefits

- suitable for rail WM0, 1, 15, 2, 30, 35
- Part No. 65130XX: because of shape the nut fits in rail
- Part No. 65190XX: narrowing fits in slot of rail (locking against revolving in the same direction)
- material: steel
- zinc plated

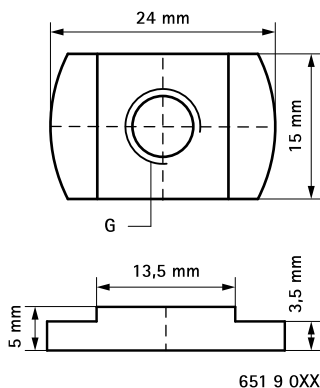
Part No.	Type	G	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1	Pack 2
A 6513006	651A	M6	7.5	WM0 (1 - 35)	-	100	2,000
A 6513008	651A	M8	15.0	WM0 (1 - 35)	-	100	2,000
A 6513010	651A	M10	15.0	WM0 (1 - 35)	-	100	2,000
B 6519006	651C	M6	7.5	WM0 - 35	3,100	50	1,000
B 6519008	651C	M8	15.0	WM0 - 35	3,100	50	2,000
B 6519010	651C	M10	15.0	WM0 - 35	3,100	50	1,000

Part No. 65130XX recommended for WM0. Moderately suitable for other railtypes.

A



B



Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

Alternative

- 197 BIS RapidRail® Slide Nut

BIS Slide Nut 651D - WM3

(G 30 15)

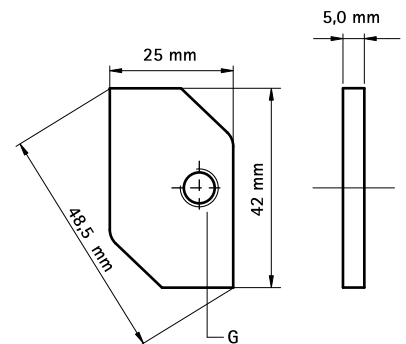
fixing to BIS WM3



Features and Benefits

- material: steel
- zinc plated

Part No.	G	For Rail	F _{a,z} (N)	Pack 1	Pack 2
6515008	M8	WM3	3,000	50	250
6515010	M10	WM3	3,000	50	250
6515012	M12	WM3	3,000	50	250



Complementary

- 177 BIS Fixing Rail - WM3
- 181 BIS Cantilever Arm - WM3 (BUP1000)

BIS Square Slide Nut

(G 30 20)

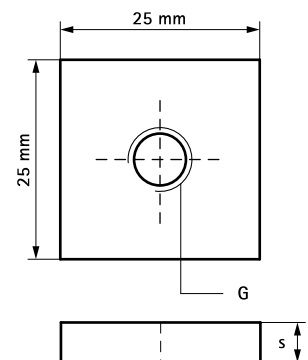
fixing to BIS RapidRail®



Features and Benefits

- suitable for rail WM1, 15, 2, 30, 35
- because of shape the nut fits in rail
- material: steel 1.0332
- zinc plated

Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	Pack 1	Pack 2
6519910	M6	4.0	7.5	WM1 - 35	50	250
6519911	M8	4.0	15.0	WM1 - 35	50	250
6519912	M10	5.0	15.0	WM1 - 35	50	250
6519913	M12	5.0	-	WM1 - 35	50	250



Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Angle Formed Slide Nut

(G 30 25)

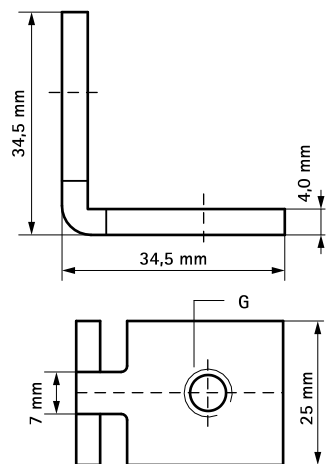
fixing to BIS RapidRail®



Features and Benefits

- suitable for rail WM1, 15, 2, 30, 35
- zinc plated
- material: steel

Part No.	G	T _(max.) (Nm)	For Rail	Pack 1	Pack 2
6513709	M8	15.0	WM1 - 35	25	250



Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Double Slide Nut

fixing to BIS RapidRail®

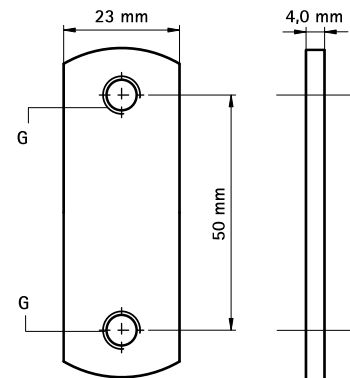
(G 30 30)



Features and Benefits

- suitable for rail WM0, 1, 15, 2, 30, 35
- zinc plated
- material: steel

Part No.	G	T _(max.) (Nm)	For Rail	Pack 1	Pack 2
6513208	M8	15.0	WM0 - 35	50	250



Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Double Slide Nut – WM3

(G 30 35)

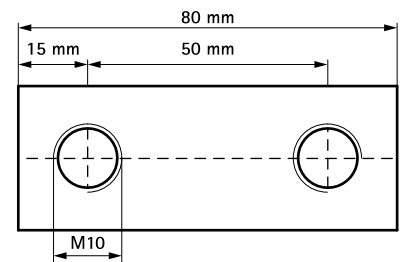
fixing to BIS WM3



Features and Benefits

- material: steel 1.0332
- zinc plated

Part No.	G	For Rail	Pack 1
6515210	M10	WM3	100



BIS RapidRail® Hammerfix

(G 30 50)

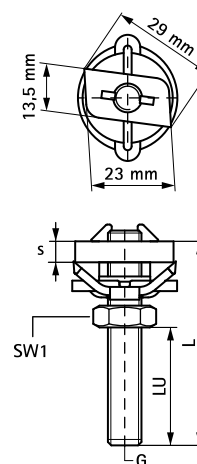
fixing to BIS RapidRail®



Features and Benefits

- slide nut with stud bolt, washer and BIS RapidRail® spring
- suitable for rail WMO, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

Part No.	G	L	LU (mm)	s (mm)	SW1 (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1	Pack 2
6523602	M6	20 mm	5	4.0	10	7.5	WMO - 35	2,000	25	250
6523603	M6	30 mm	15	4.0	10	7.5	WMO - 35	2,000	25	250
6523604	M6	40 mm	25	4.0	10	7.5	WMO - 35	2,000	25	250
6523802	M8	25 mm	7	5.0	13	15.0	WMO - 35	2,700	25	250
6523803	M8	30 mm	12	5.0	13	15.0	WMO - 35	2,700	25	250
6523804	M8	40 mm	22	5.0	13	15.0	WMO - 35	2,700	25	250
6523805	M8	50 mm	32	5.0	13	15.0	WMO - 35	2,700	25	250
6523806	M8	60 mm	42	5.0	13	15.0	WMO - 35	2,700	25	250
6523807	M8	70 mm	52	5.0	13	15.0	WMO - 35	2,700	25	250
6523808	M8	80 mm	62	5.0	13	15.0	WMO - 35	2,700	25	250
6523809	M8	90 mm	72	5.0	13	15.0	WMO - 35	2,700	25	250
6523810	M8	100 mm	82	5.0	13	15.0	WMO - 35	2,700	25	250
6523812	M8	120 mm	102	5.0	13	15.0	WMO - 35	2,700	25	250
6523815	M8	150 mm	132	5.0	13	15.0	WMO - 35	2,700	25	250
6523818	M8	180 mm	162	5.0	13	15.0	WMO - 35	2,700	25	125
6523820	M8	200 mm	182	5.0	13	15.0	WMO - 35	2,700	25	125
6523002	M10	25 mm	7	5.0	17	15.0	WMO - 35	2,900	25	250
6523003	M10	30 mm	12	5.0	17	15.0	WMO - 35	2,900	25	250
6523004	M10	40 mm	22	5.0	17	15.0	WMO - 35	2,900	25	250
6523005	M10	50 mm	32	5.0	17	15.0	WMO - 35	2,900	25	250
6523006	M10	60 mm	42	5.0	17	15.0	WMO - 35	2,900	25	250
6523008	M10	80 mm	62	5.0	17	15.0	WMO - 35	2,900	25	250
6523010	M10	100 mm	82	5.0	17	15.0	WMO - 35	2,900	25	250
6523016	M10	160 mm	142	5.0	17	15.0	WMO - 35	2,900	25	125



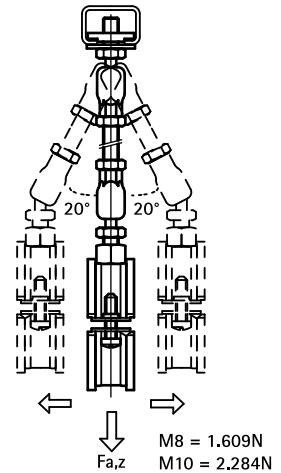
Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS RapidRail® Ball Swivel Hanger

fixing to BIS RapidRail®

(G 30 60)



RAL-GZ 655/D
Cert.Nr. 2012-11

Features and Benefits

- slide nut with ball swivel hanger, washer and BIS RapidRail® spring
- recommended for metal pipes up to DN 50, plastic pipes up to DN 100
- suitable for rail WMO, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- with inspection hole to check screw-in depth (attention: when the threaded rod is screwed-in too deep, the ball swivel is blocked)
- screw-in depth is continuously variable (see LU)
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

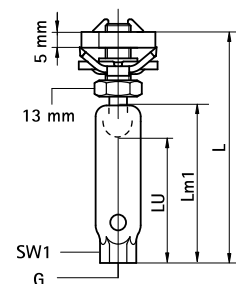
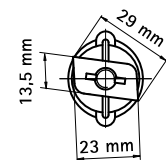
Part No.	G	L	LU (mm)	Lm1 (mm)	SW1 (mm)	T _(max.) (Nm)	For Rail	F _{a,x} (N)	RAL	Pack 1	Pack 2
6520100	M8	45 mm	18	25	10	15.0	WMO - 35	182	RAL ¹	25	250
6520200	M8	70 mm	43	50	10	15.0	WMO - 35	182	RAL ¹	25	250
6520110	M10	45 mm	18	25	12	15.0	WMO - 35	226	RAL ¹	25	250
6520210	M10	70 mm	43	50	12	15.0	WMO - 35	226	RAL ¹	25	250

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

Please note. Always use 2 ball swivel hangers and secure by additional hexagon nut (see application picture). The maximum length change that can be dealt with, depends on the fixing distance (ceiling - pipe). The height difference that occurs as a result, needs to be taken into consideration.

To be used in combination with BIS Ball Swivel Hangers. Product can be found on page E 10 05.



Complementary

- 154 BIS Ball Swivel Hanger
- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Tee-Bolt Assembly

(G 30 68)

fixing to BIS RapidRail®



Features and Benefits

- slide nut with stud bolt and washer
- suitable for rail WM0, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: steel 1.0332
- zinc plated

Part No.	G	L	LU	s	SW1	T _(max.)	For Rail	F _{a,z}	F _{a,z}	Pack 1	Pack 2	App.
			(mm)	(mm)	(mm)	(Nm)		(N)	(kg)			
6523903	M7F	30 mm	10	4.0	10	7.5	WM0 - 35	2,000	200	25	250	pc.

M7F: pitch = M7 x 1.5mm.

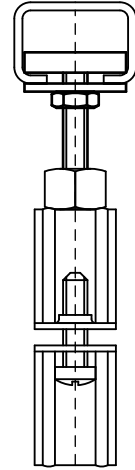
Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Tee-Bolt Assembly - WM3

(G 30 70)

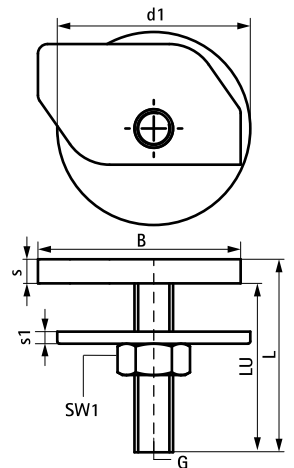
fixing to BIS WM3



Features and Benefits

- slide nut with stud bolt and washer
- zinc plated
- material: steel

Part No.	G	L	LU	B	s	s1	d1	SW1	For Rail	F _{az} (N)	Pack 1	Pack 2
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)				
6525803	M8	30 mm	25	42	5.0	2.5	40	13	WM3	3,000	25	250
6525804	M8	40 mm	35	42	5.0	2.5	40	13	WM3	3,000	25	250
6525806	M8	60 mm	55	42	5.0	2.5	40	13	WM3	3,000	25	250
6525004	M10	40 mm	35	42	5.0	2.5	40	17	WM3	3,000	25	250
6525203	M12	30 mm	25	42	5.0	2.5	40	19	WM3	3,000	25	125



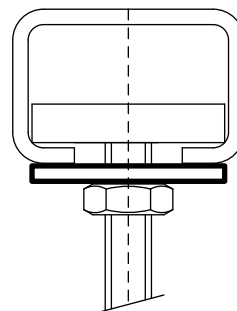
Complementary

- 177 BIS Fixing Rail - WM3
- 181 BIS Cantilever Arm - WM3 (BUP1000)

BIS Washer (Flat) (BUP1000)

(G 30 74)

fixing to BIS RapidRail®



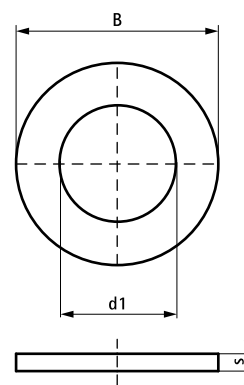
Features and Benefits

- suitable for rail WMO, 1, 15, 2, 30, 35
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	B (mm)	s (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
65381008	25	2.5	Ø 8.4	WMO - 35	100	2,500
65381010	25	2.5	Ø 10.5	WMO - 35	100	2,500
65381012	25	2.5	Ø 13.0	WMO - 35	100	2,500
65381016	30	2.5	Ø 17.0	WMO - 35	50	-

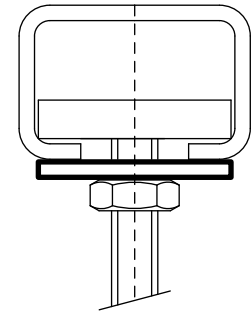
Tested for fire safety.



BIS Washer (Flat)

fixing to BIS RapidRail®

(G 30 75)



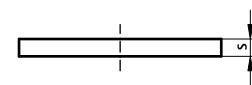
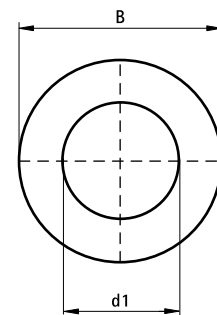
Features and Benefits

- suitable for rail WMO, 1, 15, 2, 30, 35
- material: steel
- zinc plated
- tested for fire safety

Part No.	B (mm)	s (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
6533306	25	2.5	Ø 6.4	WMO - 35	100	2,500
6533308	25	2.5	Ø 8.4	WMO - 35	100	1,000
6533310	25	2.5	Ø 10.5	WMO - 35	100	1,000
6533312	25	2.5	Ø 13.0	WMO - 35	100	2,500
6533316	30	3.0	Ø 17.0	WMO - 35	50	-

Tested for fire safety.

Part No. 6533306 not tested for fire safety.



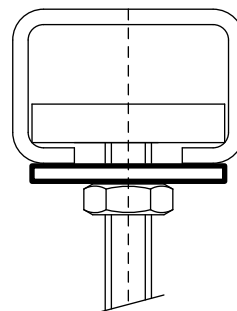
Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Washer (Flat) – WM3

(G 30 80)

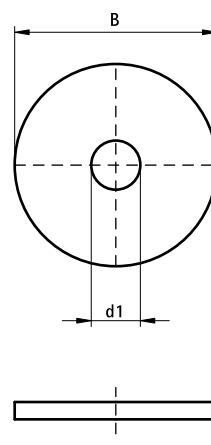
fixing to BIS WM3



Features and Benefits

- material: steel
- zinc plated
- tested for fire safety

Part No.	B (mm)	s (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
6533408	35	2.5	Ø 8.5	WM3	100	500
6533410	35	2.5	Ø 10.5	WM3	100	500
6533412	35	2.5	Ø 12.5	WM3	50	250



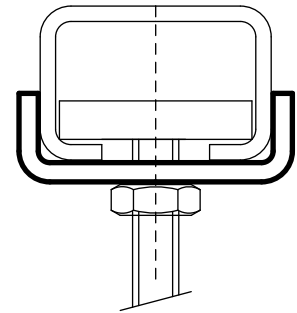
Complementary

- 177 BIS Fixing Rail - WM3
- 181 BIS Cantilever Arm - WM3 (BUP1000)

BIS Washer (U-shaped)

fixing to BIS RapidRail®

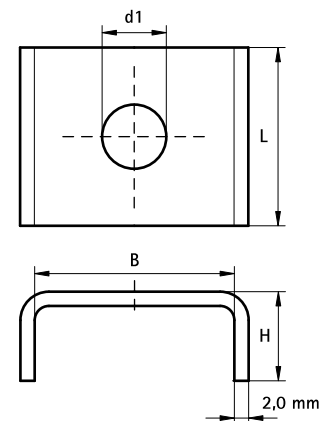
(G 30 85)



Features and Benefits

- U-shaped washer
- U-shaped for extra stability
- Part No. 65350XX: suitable for WM0
- Part No. 65351XX: suitable for WM1, 15, 2, 30, 35
- material: steel
- pre-galvanized

Part No.	L	B (mm)	H (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
6535008	25 mm	28.0	10.5	Ø 9.0	WM0	50	250
6535010	25 mm	28.0	10.5	Ø 11.0	WM0	50	250
6535109	25 mm	30.5	9.0	Ø 9.0	WM1 - 35	50	250
6535110	25 mm	30.5	9.0	Ø 10.5	WM1 - 35	50	250
6535112	25 mm	30.5	9.0	Ø 12.5	WM1 - 35	50	250



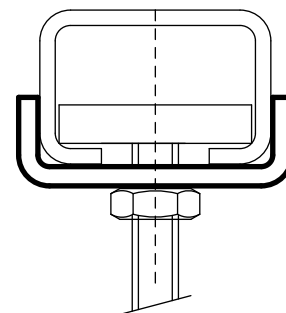
Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Washer (U-shaped) – WM3

(G 30 90)

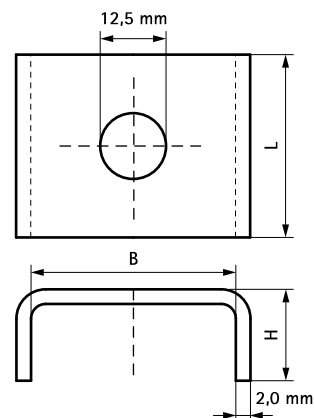
fixing to BIS WM3



Features and Benefits

- U-shaped washer
- U-shaped for extra stability
- material: steel
- pre-galvanized

Part No.	L	B (mm)	H (mm)	For Rail	Pack 1
6535312	70 mm	51	19.0	WM3	50



BIS RapidRail® Basket Retainer Clip

(G 30 100)

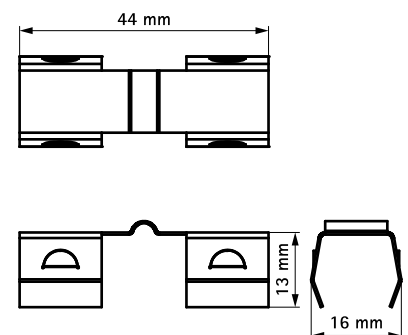
for securing cable basket to BIS RapidRail®



Features and Benefits

- push fit for quick and easy installation
- suitable for all type of wire basket (Ø 4-5mm)
- suitable for BIS RapidRail®
- not designed as a load bearing support
- material: spring steel (type CS70)
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Pack 1
6553945	100



BIS RapidRail® Connector 90°

(G 35 05)

to make BIS RapidRail® fabrications



RAL-GZ 655/D
Cert.Nr. 2012-09

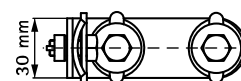
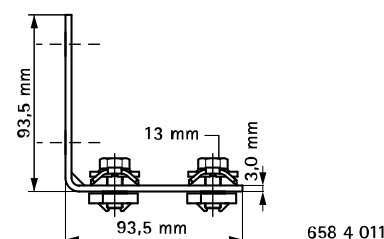
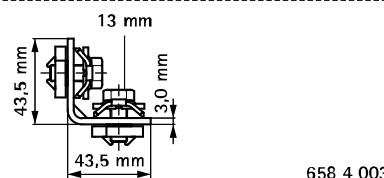
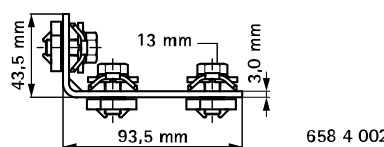
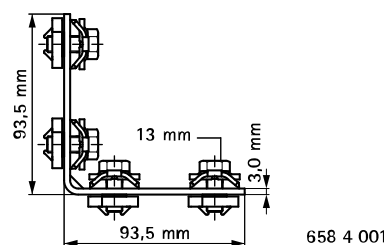
Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- suitable for rail WM0, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

Part No.	Model	a (°)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	RAL	Pack 1
6584001	Long / long	90°	15.0	WM0 - 35	1,562	720	RAL ¹	25
6584002	Short / long	90°	15.0	WM0 - 35	1,336	448	RAL ¹	25
6584003	Short / short	90°	15.0	WM0 - 35	1,336	448	RAL ¹	25
6584011	Long / long	90°	15.0	WM0 - 35	1,562	720	RAL ¹	25

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



BIS RapidRail® Connector 135°

(G 35 10)

to make BIS RapidRail® fabrications



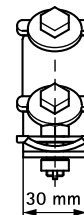
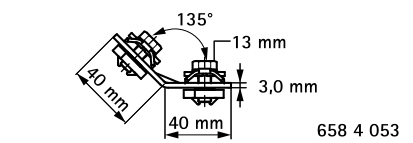
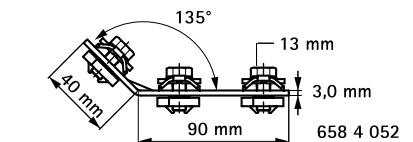
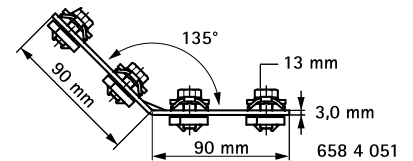
Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- suitable for rail WM0, 1, 15, 2, 30, 35
- with pre-assembled BIS RapidRail® Sliding nut(s) for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated



Part No.	Model	a (°)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	RAL	Pack 1
6584051	Long / long	135°	15.0	WM0 - 35	1,562	1,109	RAL ¹	25
6584052	Short / long	135°	15.0	WM0 - 35	1,336	448	RAL ¹	25
6584053	Short / short	135°	15.0	WM0 - 35	1,336	448	RAL ¹	25

*RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.
For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.*



BIS Rail Connector with Slide Nuts

(G 35 15)

to make BIS RapidRail® fabrications

A



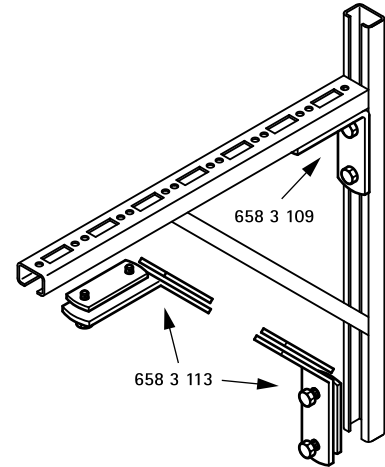
B



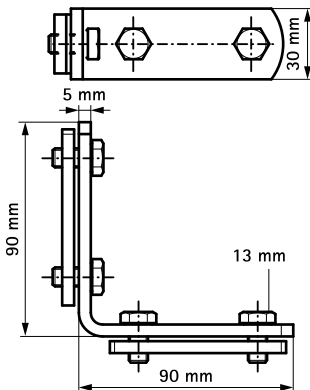
Features and Benefits

- to make rail fabrications
- suitable for rail WMO, 1, 15, 2, 30, 35
- with pre-assembled double slide nut
- material: steel
- zinc plated

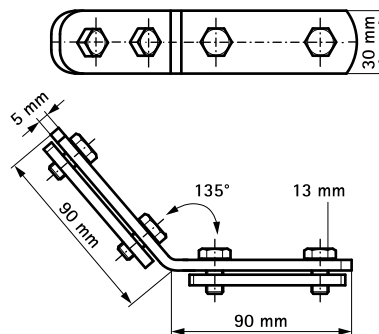
Part No.	a (°)	T _(max.) (Nm)	For Rail	Pack 1
A 6583109	90°	15.0	WMO - 35	25
B 6583113	135°	15.0	WMO - 35	25



A



B



Complementary

173 RapidRail® Fixing Rail

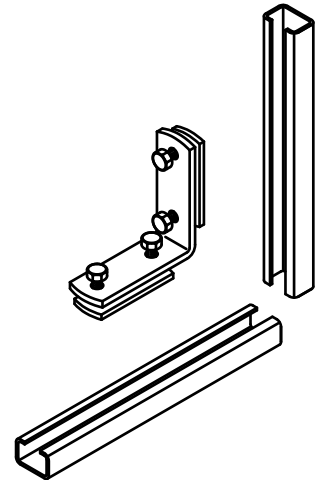
Alternative

214 BIS RapidRail® Connector 90°

BIS Rail Connector 90° with Slide Nut – WM3

(G 35 20)

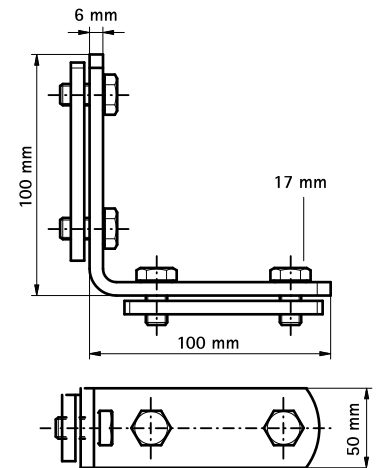
to make BIS WM3 fabrications



Features and Benefits

- to make rail fabrications
- material: steel
- with pre-assembled double slide nut
- zinc plated

Part No.	a (°)	For Rail	Pack 1
6583309	90°	WM3	20



BIS Rail Connector

(G 35 25)

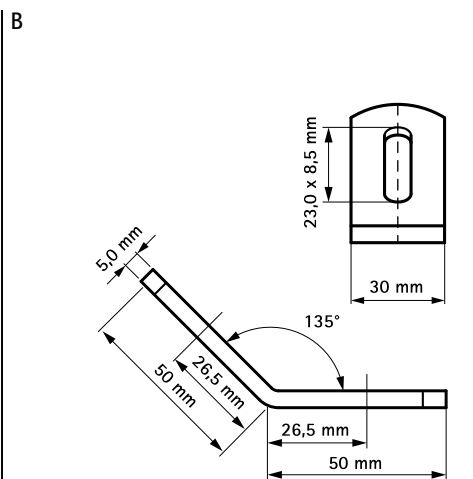
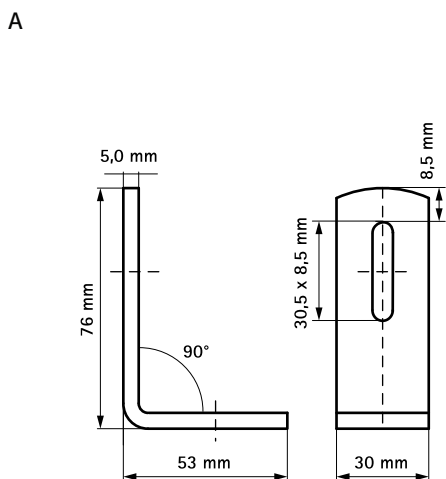
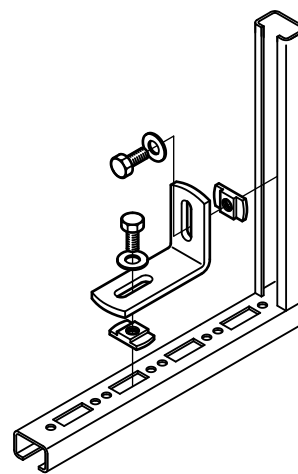
to make BIS RapidRail® fabrications



Features and Benefits

- to make rail fabrications
- suitable for rail WMO, 1, 15, 2, 30, 35
- material: steel
- zinc plated

Part No.	a (°)	T _(max.) (Nm)	For Rail	Pack 1
A 6585090	90°	15.0	WMO - 35	50
B 6585135	135°	15.0	WMO - 35	50



Complementary
173 RapidRail® Fixing Rail

Alternative
214 BIS RapidRail® Connector 90°

BIS Rail Connector 90° – WM3

(G 35 30)

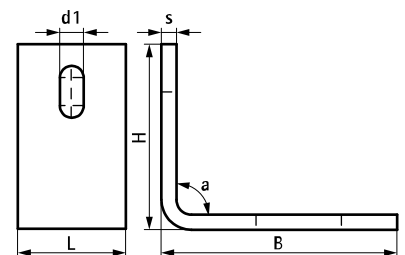
to make BIS WM3 fabrications



Features and Benefits

- to make rail fabrications
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	s	d1	a	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(°)		
6591090	50 mm	94	74	6	23 x 13	90°	WM3	50



BIS RapidRail® Connector

(G 35 35)

to make BIS RapidRail® fabrications



Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- suitable for rail WM0, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

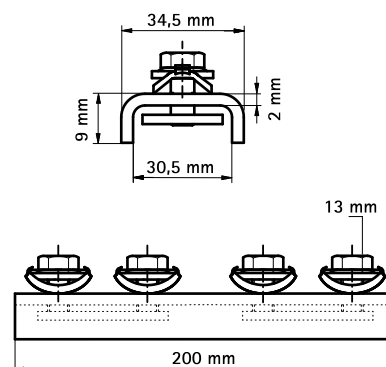


RAL-GZ 655/D
Cert.Nr. 2012-08

Part No.	T _(max.) (Nm)	For Rail	F _{a,x} (N)	RAL	Pack 1
6543001	15.0	WM0, 1, 15, 2, 30, 35	1,547	RAL ¹	25

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



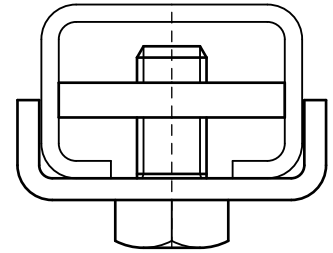
Complementary

173 RapidRail® Fixing Rail

BIS Rail Connector – WM3

(G 35 40)

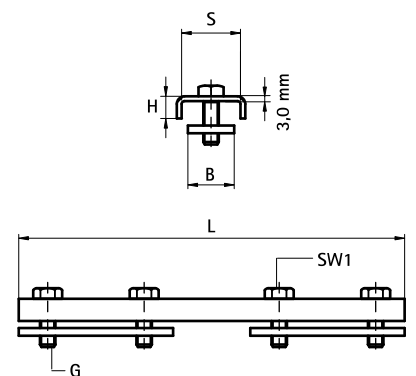
to make BIS WM3 fabrications



Features and Benefits

- to make rail fabrications
- with pre-assembled double slide nut
- material: steel
- zinc plated

Part No.	L	B	H	S	SW1	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)		
6543004	250 mm	40	12	50	17	WM3	20



BIS RapidRail® T- and X-Connector

(G 35 45)

to make BIS RapidRail® fabrications

A



B

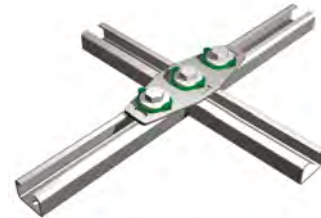


Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- suitable for rail WM0, 1, 15, 2, 30, 35
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated



658 4 090



658 4 091

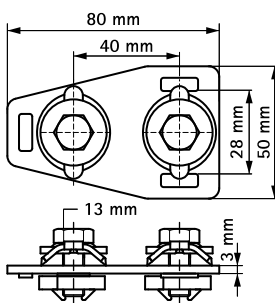
Part No.	Type	T _(max.) (Nm)	For Rail	F _{a,x} (N)	RAL	Pack 1
A 6584090	T	15.0	WM0 - 35	345	RAL ¹	25
B 6584091	X	15.0	WM0 - 35	345	RAL ¹	25

*RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.
For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.*

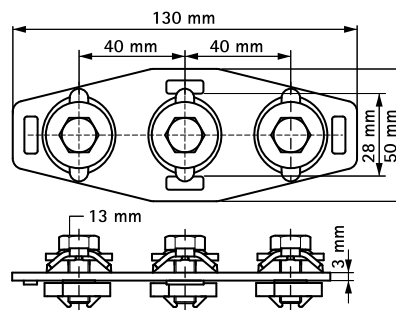


RAL-GZ 655/D
Cert.Nr. 2012-08

A



B



Complementary
173 RapidRail® Fixing Rail

BIS RapidRail® Cross Connector

(G 35 50)

to make BIS RapidRail® fabrications



Features and Benefits

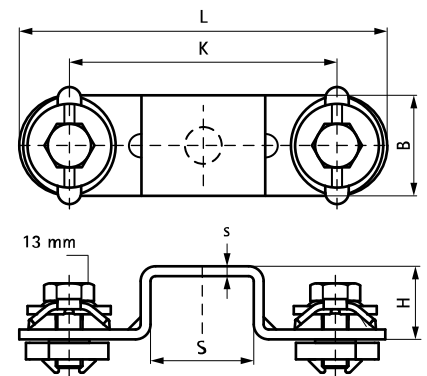
- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated



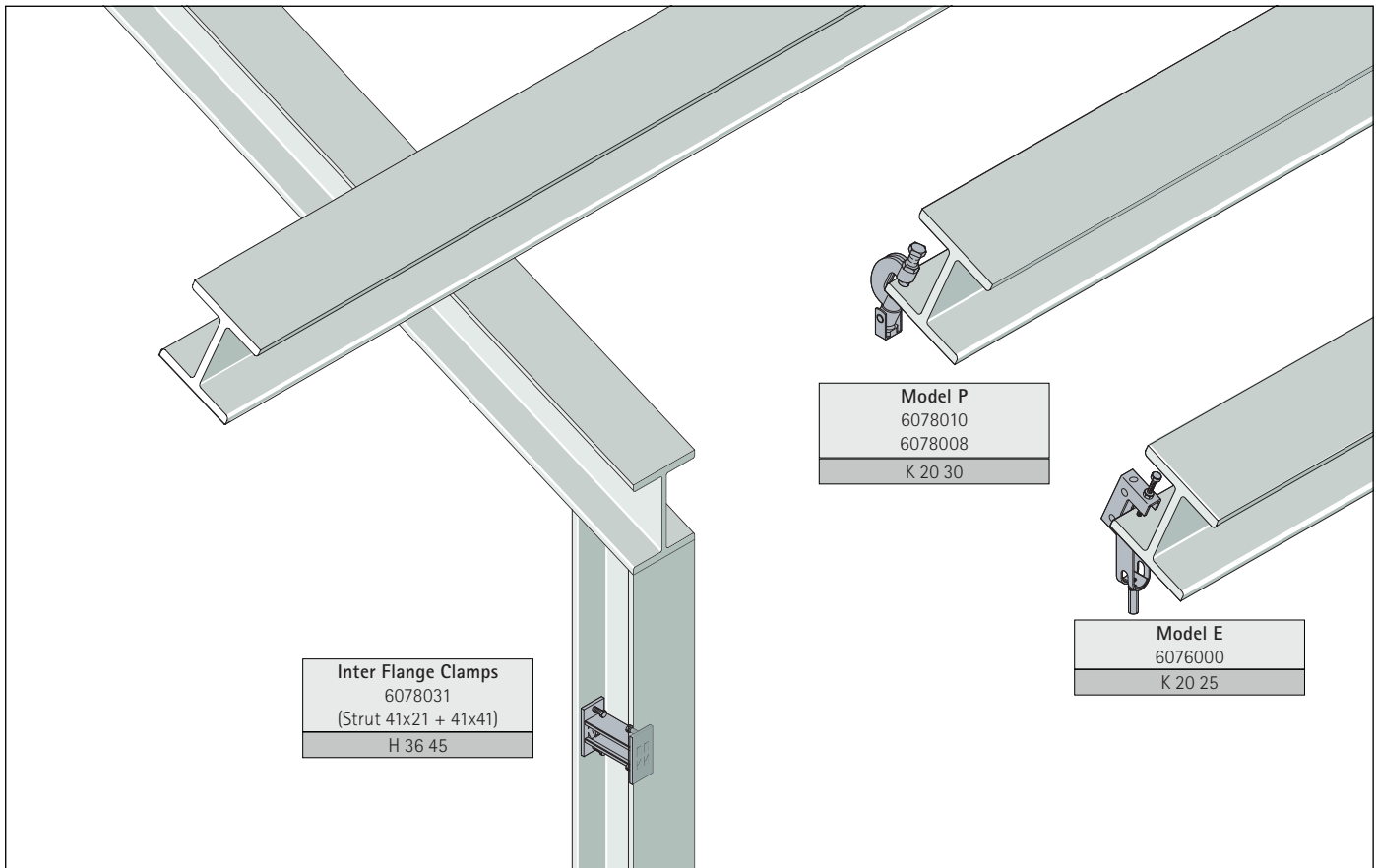
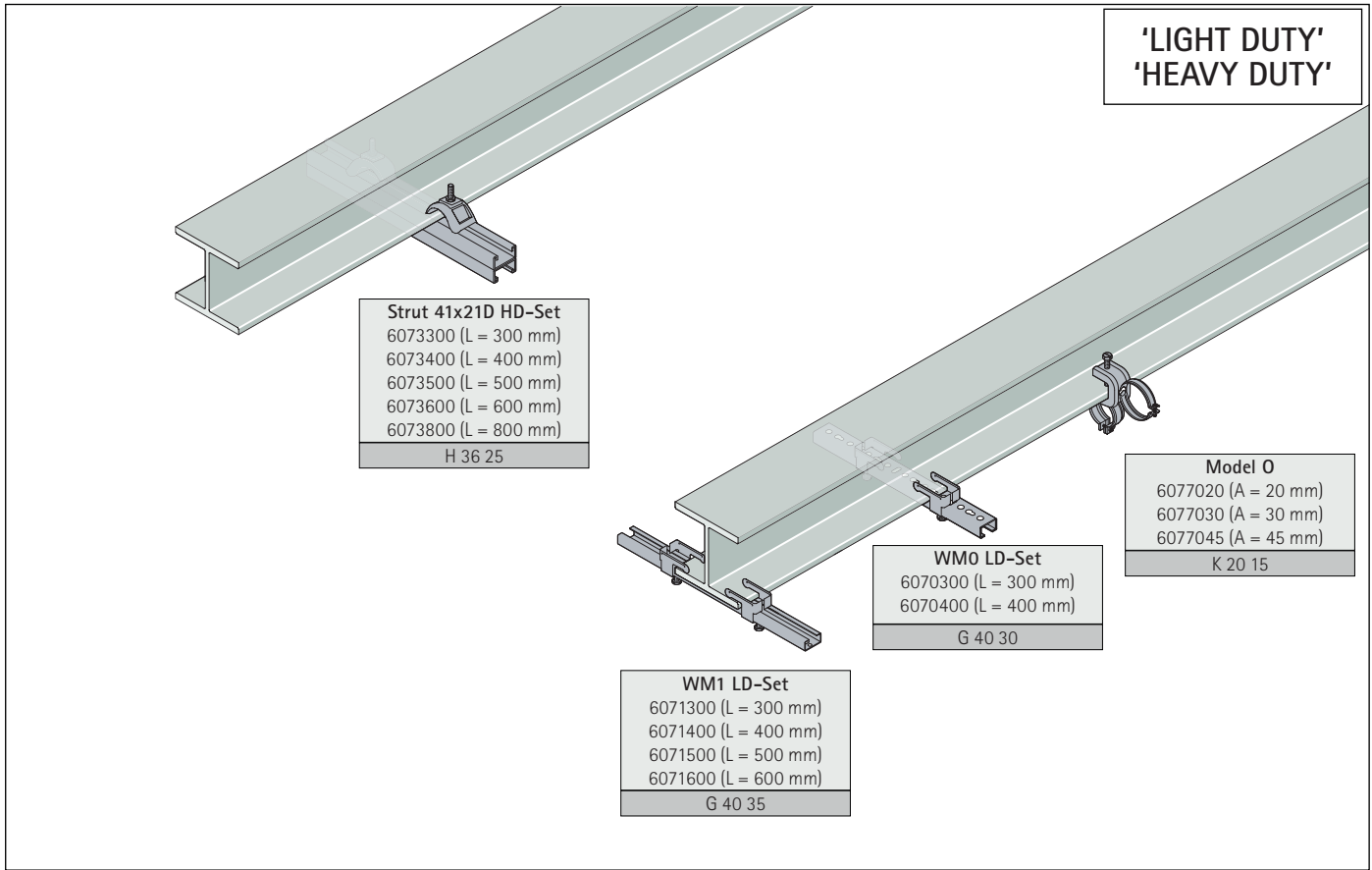
RAL-GZ 655/D
Cert.Nr. 2012-10

Part No.	L	B	H	s	S	k	T _(max.)	For Rail	F _{a,z}	F _{a,x}	RAL	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)		(N)	(N)		
6584150	104 mm	30	20	3.0	28	74	15.0	WM0	1,226	689	RAL ¹	25
6584151	112 mm	30	17	3.0	31	82	15.0	WM1	1,226	689	RAL ¹	25
6584152	109 mm	30	22	3.0	31	79	15.0	WM15	1,226	689	RAL ¹	25
6584153	97 mm	30	32	3.0	31	67	15.0	WM2	1,226	689	-	25
6584156	117 mm	30	42	3.0	39	87	15.0	WM35	1,226	689	-	25

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/D in combination with Rail WM1, 2, 15 and 30.
For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



BIS Rail Fixing Sets (Electrical)



BIS RapidRail® Beam Clamp

(G 40 05)

fixing to steel beam

A



B

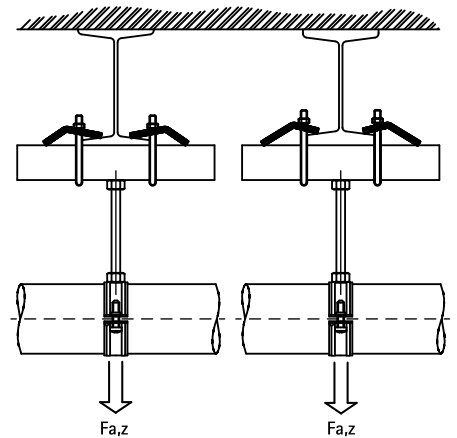


Features and Benefits

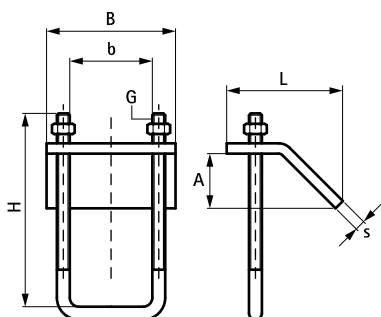
- for a solid fixing to steel construction without the need for welding or drilling
- always use 2 beam clamps per fixing
- material: steel
- zinc plated

Part No.	A (mm)	G	L	B (mm)	H (mm)	b (mm)	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1
A 6585011	< 16	M6	45 mm	50	75	31	4.0	15.0	WM0 - 30	2,500	50
B 6585014	< 20	M8	60.9 mm	80	100	44	4.0	15.0	WM35	2,000	50

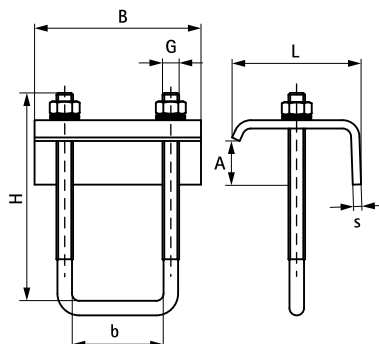
Note! Safe load (F_{a,z}) is only per set of beamclamps, per loading situation the max. allowed load of the rail must be calculated.



A



B



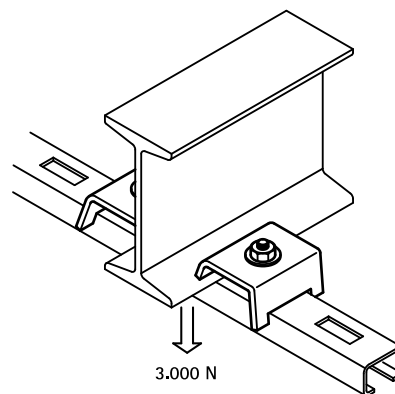
Complementary

173 RapidRail® Fixing Rail

BIS Rail Beam Clamp

fixing to steel beam

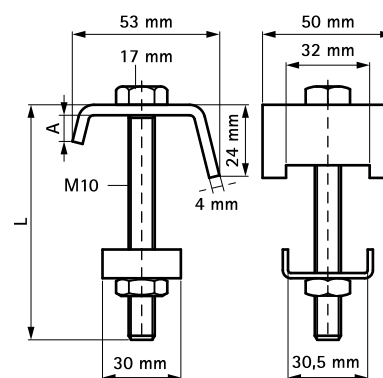
(G 40 10)



Features and Benefits

- beam clamp
- for a solid fixing to steel construction without the need for welding or drilling
- always use 2 beam clamps per fixing
- Part No. 6583060: suitable for WM1, 15, 2
- Part No. 6583090: suitable for WM1, 15, 2, 30
- material: steel
- zinc plated

Part No.	A (mm)	L	For Rail	F _{a,z} (N)	Pack 1
6583060	< 11	60 mm	WM1, 15, 2	3,000	50
6583090	< 11	90 mm	WM1 - 30	3,000	50



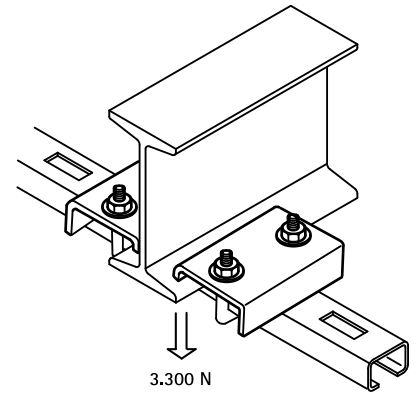
Alternative

225 BIS RapidRail® Beam Clamp

BIS Rail Beam Clamp – WM3

fixing to steel beam

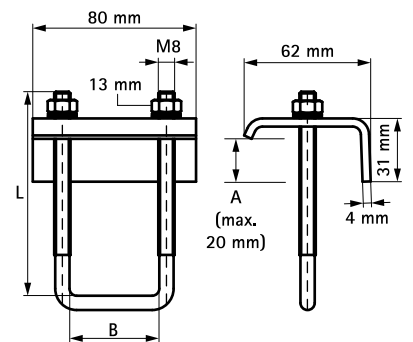
(G 40 15)



Features and Benefits

- for a solid fixing to steel construction
- zinc plated
- without the need for welding or drilling
- always use 2 beam clamps per fixing
- material: steel

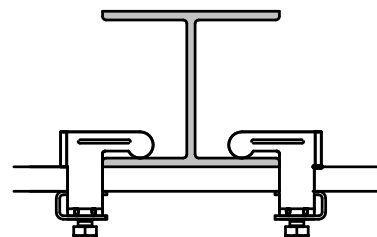
Part No.	A (mm)	L	B (mm)	For Rail	F _{a,z} (N)	Pack 1
6585003	< 20	118 mm	50	WM3	3,300	50



BIS 'Light Duty' Beam Clamp

fixing to steel beam

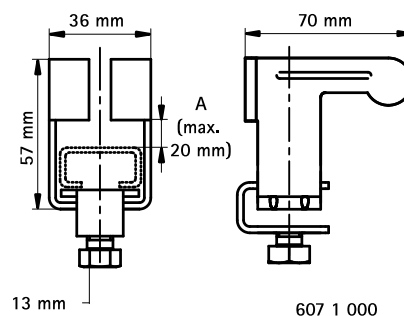
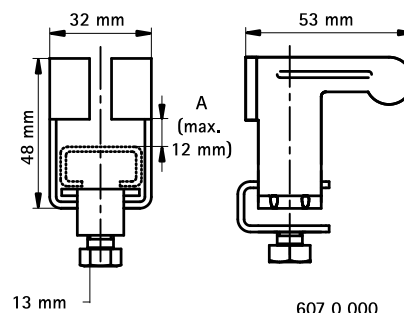
(G 40 20)



Features and Benefits

- for suspension of light components like cable trays, duct work, etc. onto beams
- material: steel
- zinc plated
- for fixing of rail to a steel beam

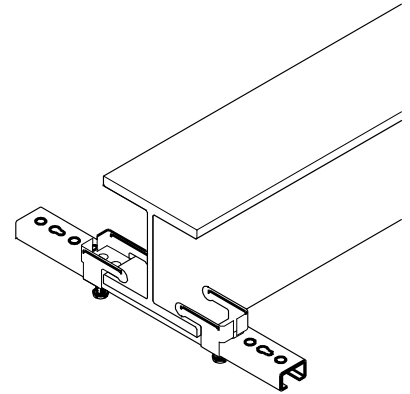
Part No.	A (mm)	T _(max.) (Nm)	For Rail	Pack 1
6070000	< 12	15.0	WM0	50
6071000	< 20	15.0	WM1	50



BIS Rail WMO 'Light Duty' Set

(G 40 30)

fixing to steel beam up to flange thickness 12 mm



Features and Benefits

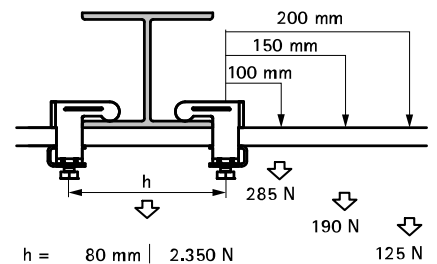
- for suspension of light components like cable trays, duct work, etc. onto beams without welding or drilling
- up to flange thickness 12 mm
- material: beam clamp made of steel; rail made of steel 1.0242
- beam clamp: zinc plated; rail: pre-galvanized
- consists of:
 - 1 length of rail WMO (27x18 mm)
 - 2 Beam clamps WMO (Part No. 607 0 000)
 - 2 Rail End Caps
 - beam clamp also available loose

Part No.	A (mm)	L	T _(max.) (Nm)	From Rail	CSTB	Pack 1
6070300	< 12	300 mm	15.0	WMO	CSTB	20
6070400	< 12	400 mm	15.0	WMO	CSTB	20

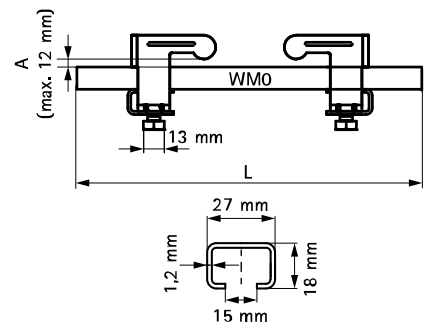
CSTB

le futur en construction

Rapport de test n°EEM11 26035356



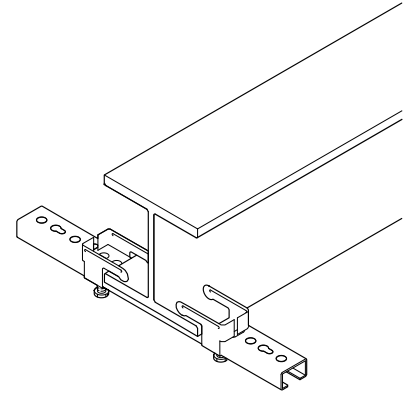
h	Force
80 mm	2.350 N
120 mm	1.575 N
160 mm	1.175 N



BIS Rail WM1 'Light Duty' Set

(G 40 35)

fixing to steel beam up to flange 20 mm



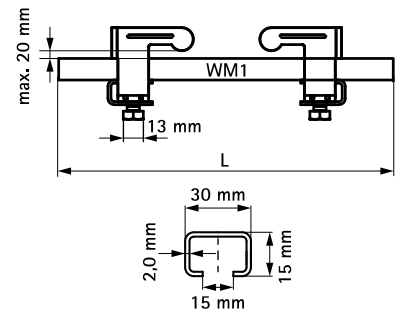
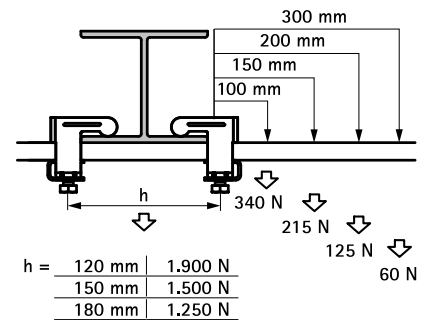
Features and Benefits

- for suspension of light components like cable trays, duct work, etc. onto beams without welding or drilling
- up to flange thickness 20 mm
- material: beam clamp made of steel; rail made of steel 1.0242
- beam clamp also available loose
- beam clamp: zinc plated; rail: pre-galvanized
- consists of:
 - 1 length of rail WM1 (30x15 mm)
 - 2 Beam clamps WM1 (Part No. 607 1 000)
 - 2 Rail End Caps

Part No.	A (mm)	L	T _(max.) (Nm)	From Rail	CSTB	Pack 1
6071300	< 20	300 mm	15.0	WM1	CSTB	20
6071400	< 20	400 mm	15.0	WM1	CSTB	20
6071500	< 20	500 mm	15.0	WM1	CSTB	15
6071600	< 20	600 mm	15.0	WM1	CSTB	15



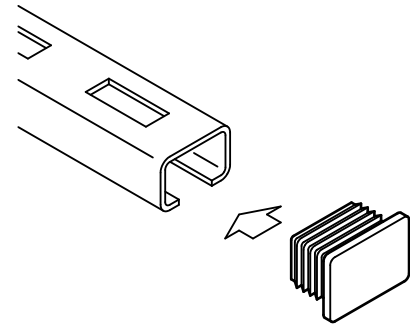
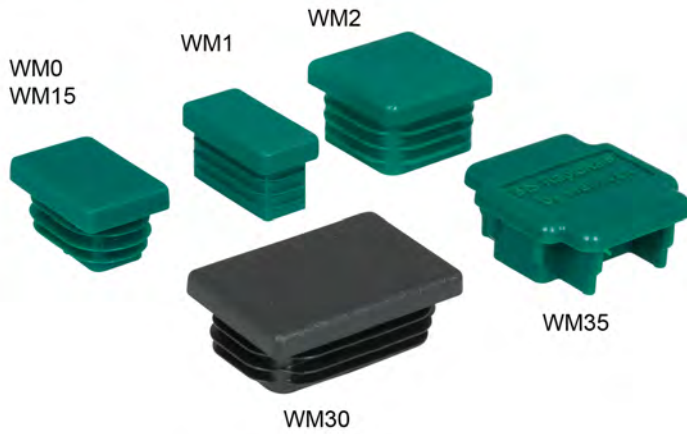
Rapport de test n°EEM11 26035356



BIS Rail End Cap

finishing of BIS RapidRail®

(G 45 05)



Features and Benefits

- for clean finishing of rail end, covers all burrs
- material: PE (polyethylene)
- easy to fix securely

Part No.	For Rail	Colour	Pack 1	Pack 2
6566000	WM0 (27x18 mm), WM15 (30x20 mm)	Green	50	250
6566001	WM1 (30x15 mm)	Green	50	250
6566002	WM2 (30x30 mm)	Green	25	250
6566030	WM30 (30x45 mm)	Black	20	200
6566035	WM35 (38x40 mm)	Green	20	200

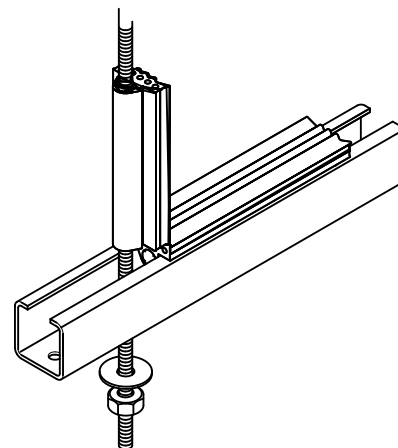
Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Rubber Strip

noise insulation lining for rail

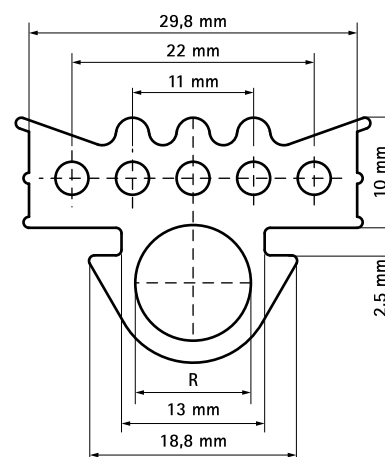
(G 45 10)



Features and Benefits

- noise insulating lining for rail
- also usable for threaded rod M6, M8 or M10
- suitable for rail WM0, 1, 15, 2, 30, 35
- material: EPDM rubber, black
- building material class B2 according to DIN 4102-1 and class E according to EN 13501-1
- sound insulating lining according DIN 4109

Part No.	R	L	For Rail	Pack 1	App.
6568001	M6 - M10	30 m	WM0 - 35	30	m.



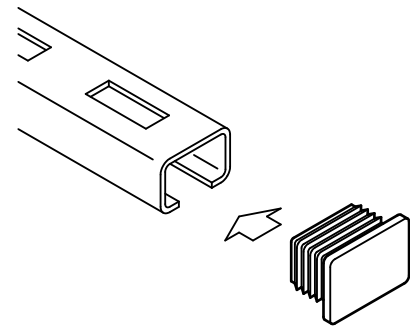
Complementary

- 173 RapidRail® Fixing Rail
- 180 BIS RapidRail® Cantilever Arm (BUP1000)

BIS Rail End Cap – WM3

finishing of BIS WM3 Rail

(G 45 20)



Features and Benefits

- for clean finishing of rail end, covers all burrs
- material: PE (polyethylene)
- easy to fix securely

Part No.	For Rail	Pack 1	Pack 2
6566003	WM3 (50x40 mm)	15	150

Calculation method

The published safe working loads are calculated with perforated (slotted) rail.

Loads are calculated taking into consideration a maximum deflection (f) of L/200 (according to RAL-GZ 655/B) and a maximum bending stress of 160 N/mm² (see picture 1).

1 N (Newton) = 0,102 kg
1 kg = 9,8 N (Newton)

Fixing of rails to walls or ceilings

The strength of the anchoring of the rail has not been taken into consideration. The installer must verify that the bolts and wall plugs used are suitable for the maximum permitted loading of the rail.

Reading the rail loading tables

The stated values are only valid for the fixing rail. The maximum safe load of all other construction parts have to be verified. The stated maximum safe load is calculated for a static load at free bending support (see picture 2).

Where the segment is marked with a hyphen, the stated length cannot be safely loaded.

Special conditions

In case of doubt or for special conditions not stated in the loading tables, please do not hesitate to contact our technical department for their advice.

Hanging of rails from the ceiling

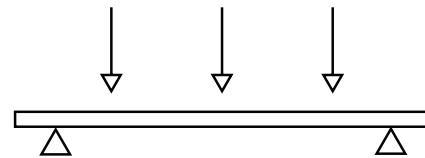
When hanging rails from the ceiling we recommend the use of U-formed washers on the open side of the rail (see picture 3).

Methods of loading

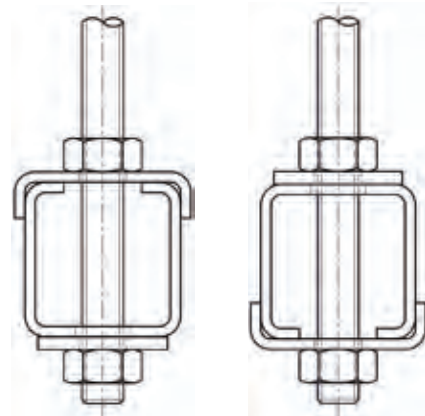
Where loads are suspended beneath rails (e.g. hanging pipes), the load must not exceed the relevant safe load of the slide nut. To increase rigidity of the installation we recommend the use of a U-formed washer (see picture 4).



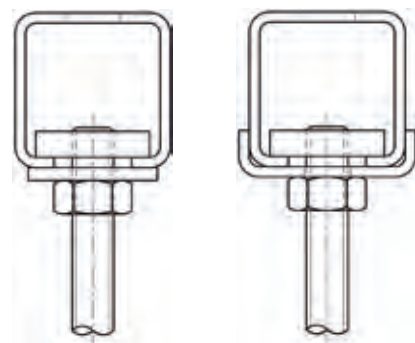
Picture 1



Picture 2

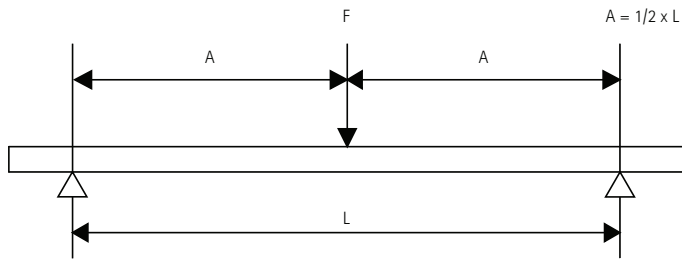


Picture 3



Picture 4

BIS RapidRail® Fixing rail: suspension on 1 point



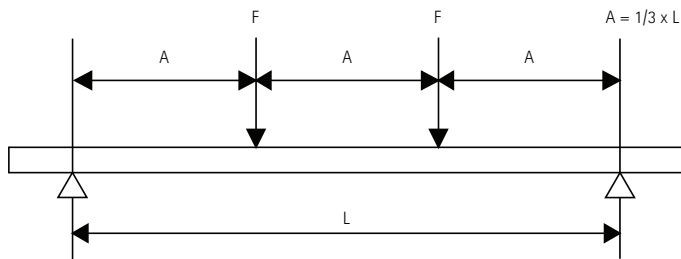
L (mm)						
	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)
250	758	899	1,249	3,238	5,199	4,821
300	631	749	1,041	2,698	4,333	4,018
350	541	642	892	2,313	3,714	3,444
400	474	562	781	2,023	3,250	3,013
450	421	499	694	1,799	2,889	2,679
500	379	449	625	1,619	2,600	2,411
600	316	358	521	1,349	2,166	2,009
700	266	263	446	1,156	1,857	1,722
800	204	202	348	1,012	1,625	1,507
900	161	159	275	899	1,444	1,339
1,000	130	129	223	780	1,300	1,205
1,200	91	90	155	542	1,083	1,004
1,400	67	66	114	398	928	841
1,600	51	50	87	305	812	644
1,800	40	40	69	241	643	509
2,000	33	32	56	195	521	412
2,250	26	25	44	154	412	326
2,500	21	21	36	125	333	264
2,750	17	17	29	103	275	218
3,000	14	14	25	87	231	183
3,250	12	12	21	74	197	156
3,500	11	11	18	64	170	135
3,750	-	-	16	55	148	117
4,000	-	-	14	49	130	103
4,250	-	-	12	43	115	91
4,500	-	-	11	39	103	81
4,750	-	-	-	35	92	73
5,000	-	-	-	31	83	66
5,250	-	-	-	28	76	60
5,500	-	-	-	26	69	55
5,750	-	-	-	24	63	50
6,000	-	-	-	22	58	46


Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Fixing rail: 2 equal loads



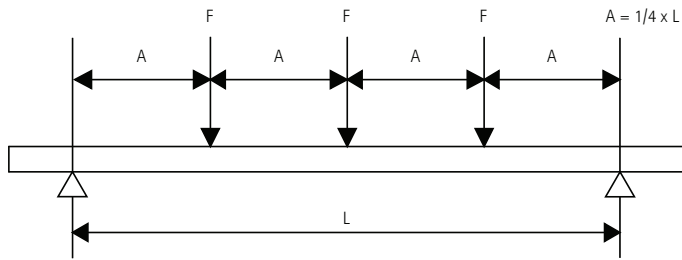
L (mm)						
	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)
250	568	674	937	2,428	3,900	3,616
300	474	562	781	2,023	3,250	3,013
350	406	481	669	1,734	2,785	2,583
400	355	421	586	1,518	2,437	2,260
450	316	374	521	1,349	2,166	2,009
500	284	303	468	1,214	1,950	1,808
600	213	210	363	1,012	1,625	1,507
700	156	155	267	867	1,393	1,291
800	120	118	204	715	1,219	1,130
900	95	94	161	565	1,083	1,004
1,000	77	76	131	458	975	904
1,200	53	53	91	318	812	672
1,400	39	39	67	234	624	494
1,600	30	30	51	179	478	378
1,800	24	23	40	141	377	299
2,000	19	19	33	114	306	242
2,250	15	15	26	90	242	191
2,500	12	12	21	73	196	155
2,750	10	10	17	61	162	128
3,000	-	-	15	51	136	108
3,250	-	-	12	43	116	92
3,500	-	-	11	37	100	79
3,750	-	-	-	33	87	69
4,000	-	-	-	29	76	60
4,250	-	-	-	25	68	54
4,500	-	-	-	23	60	48
4,750	-	-	-	20	54	43
5,000	-	-	-	18	49	39
5,250	-	-	-	17	44	35
5,500	-	-	-	15	40	32
5,750	-	-	-	14	37	29
6,000	-	-	-	13	34	27

Max. allowed load in N. per suspension point (F).

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Fixing rail: 3 equal loads



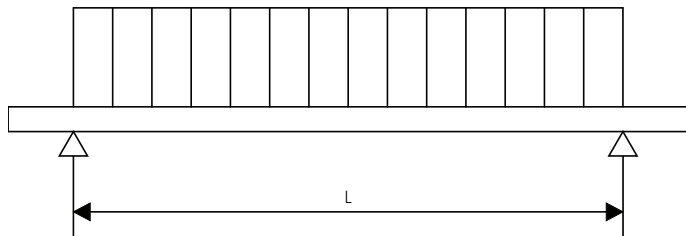
L (mm)						
	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)
250	379	449	625	1,619	2,600	2,411
300	316	374	521	1,349	2,166	2,009
350	271	321	446	1,156	1,857	1,722
400	237	281	390	1,012	1,625	1,507
450	210	250	347	899	1,444	1,339
500	189	217	312	809	1,300	1,205
600	153	151	260	674	1,083	1,004
700	112	111	191	578	928	861
800	86	85	147	506	812	753
900	68	67	116	406	722	670
1,000	55	54	94	328	650	603
1,200	38	38	65	228	542	482
1,400	28	28	48	168	448	354
1,600	21	21	37	128	343	271
1,800	17	17	29	101	271	214
2,000	14	14	23	82	219	174
2,250	11	11	19	65	173	137
2,500	-	-	15	53	140	111
2,750	-	-	12	43	116	92
3,000	-	-	10	36	97	77
3,250	-	-	-	31	83	66
3,500	-	-	-	27	72	57
3,750	-	-	-	23	62	49
4,000	-	-	-	21	55	43
4,250	-	-	-	18	49	38
4,500	-	-	-	16	43	34
4,750	-	-	-	15	39	31
5,000	-	-	-	13	35	28
5,250	-	-	-	12	32	25
5,500	-	-	-	11	29	23
5,750	-	-	-	-	27	21
6,000	-	-	-	-	24	19





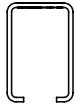

Max. allowed load in N. per suspension point (F).

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Fixing rail: Uniformly distributed load



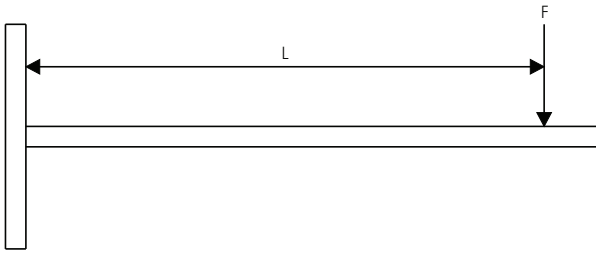
L (mm)						
	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)
250	1,516	1,797	2,499	6,475	10,399	9,643
300	1,263	1,498	2,082	5,396	8,666	8,036
350	1,083	1,284	1,785	4,625	7,428	6,888
400	947	1,123	1,562	4,047	6,499	6,027
450	842	998	1,388	3,597	5,777	5,357
500	758	826	1,249	3,238	5,199	4,821
600	580	574	990	2,698	4,333	4,018
700	426	421	727	2,313	3,714	3,444
800	326	323	557	1,950	3,250	3,013
900	258	255	440	1,541	2,889	2,679
1,000	209	206	356	1,248	2,600	2,411
1,200	145	143	248	867	2,166	1,832
1,400	106	105	182	637	1,701	1,346
1,600	82	81	139	488	1,302	1,031
1,800	64	64	110	385	1,029	814
2,000	52	52	89	312	833	660
2,250	41	41	70	247	658	521
2,500	33	33	57	200	533	422
2,750	28	27	47	165	441	349
3,000	23	23	40	139	370	293
3,250	20	20	34	118	316	250
3,500	17	17	29	102	272	215
3,750	15	15	25	89	237	188
4,000	13	13	22	78	208	165
4,250	12	11	20	69	185	146
4,500	10	10	18	62	165	130
4,750	-	-	16	55	148	117
5,000	-	-	14	50	133	106
5,250	-	-	13	45	121	96
5,500	-	-	12	41	110	87
5,750	-	-	11	38	101	80
6,000	-	-	-	35	93	73






Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Cantilever arms: Suspension on 1 point



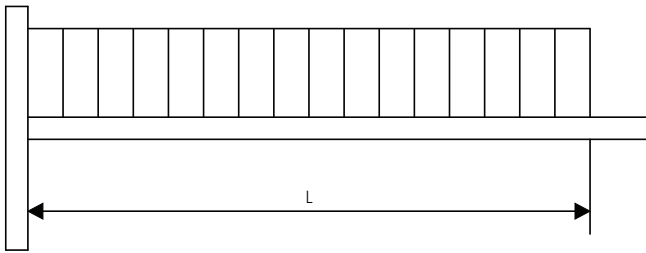
L (mm)					
	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	WM2 (30 x 30)	WM35 (38 x 40)
150	316	358	521	1,349	2,009
200	204	202	348	1,012	1,507
250	130	129	223	780	1,205
300	91	90	155	542	1,004
350	67	66	114	398	841
400	51	50	87	305	644
500	33	32	56	195	412
600	23	22	39	135	286
700	17	16	28	100	210
800	13	13	22	76	161
900	10	-	17	60	127
1,000	-	-	14	49	103






Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Cantilever arms: Uniformly distributed load



L (mm)					
	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	WM2 (30 x 30)	WM35 (38 x 40)
150	631	749	1,041	2,698	4,018
200	474	538	781	2,023	3,013
250	348	344	594	1,619	2,411
300	242	239	413	1,349	2,009
350	177	176	303	1,061	1,722
400	136	134	232	813	1,507
500	87	86	149	520	1,099
600	60	60	103	361	763
700	44	44	76	265	561
800	34	34	58	203	429
900	27	27	46	161	339
1,000	22	22	37	130	275

Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

H BIS RapidStrut® Fixing System



BIS Fixing Rail

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BIS RapidStrut® Fixing Rail Double (hdg)	250



BIS Cantilever Arms

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BIS Rail Accessories for Pipe Fixing

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H BIS RapidStrut® Fixing System



BIS Rail Connectors

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BIS RapidStrut®

For all medium rail applications



Fast and easy

The accessories are pre-assembled and delivered 'ready to use' on site. The plastic spring allows the slide nut to be fixed easily into the rail, retaining the assembly in place before final tightening.

For indoor and outdoor use

Extreme corrosion resistance. For more information about the BIS UltraProtect® 1000 System, see walraven.com



Extensive system

The BIS RapidStrut® fixing system offers an extensive choice for rail profiles and cantilever arms. A broad range of accessories are also available including: slide nuts, T-bolt assemblies and swivel hangers.

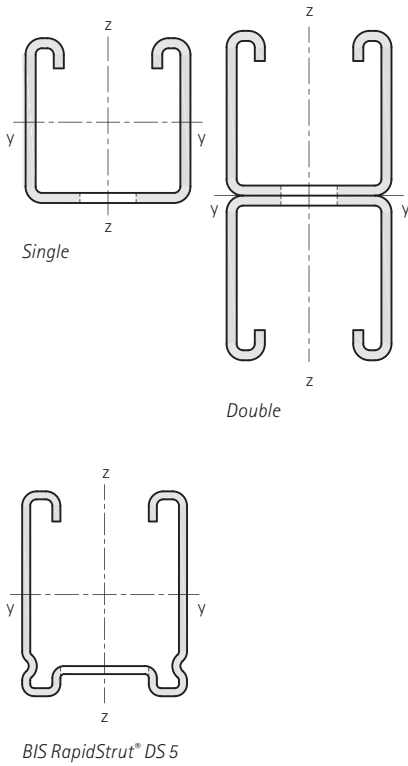


BIS RapidStrut® Fixing Rail DS 5

The DS 5 has a unique hole pattern allowing BIS RapidStrut® Accessories to be mounted quickly on both sides of the rail.



System BIS RapidStrut® - Table of rail section properties



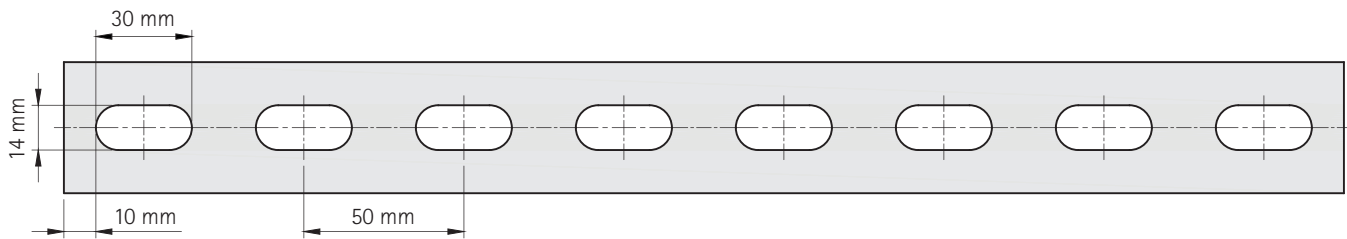
Type	Weight (kg / m)	Moment of inertia cm ⁴		Section modulus cm ³	
		I _y	I _z	W _y	W _z
41x21 - 1.5	1.15	0.78	3.70	0.72	1.80
41x21 - 2.0	1.34	0.90	4.59	0.84	2.22
41x21 - 2.5	1.78	1.01	5.40	0.93	2.61
41x41 - 1.5	1.65	4.46	6.20	2.12	3.00
41x41 - 2.0	2.35	5.34	7.79	2.56	3.77
41x41 - 2.5	2.45	6.26	9.30	2.97	4.50
41x51 - 2.0 (DS 5)	2.62	8.81	9.49	3.44	4.60
41x62 - 2.5	3.33	18.03	13.20	5.75	6.39
41x82 - 2.5	4.08	37.31	16.89	9.00	8.18
41x21D - 2.5	3.56	5.70	10.76	2.77	5.21
41x41D - 2.5	4.90	36.79	18.56	8.91	8.99
41x62D - 2.5	6.66	111.21	26.37	17.94	12.77
41x82D - 2.5	8.16	240.93	33.90	29.38	16.42

See Rail load tables for safe working loads.

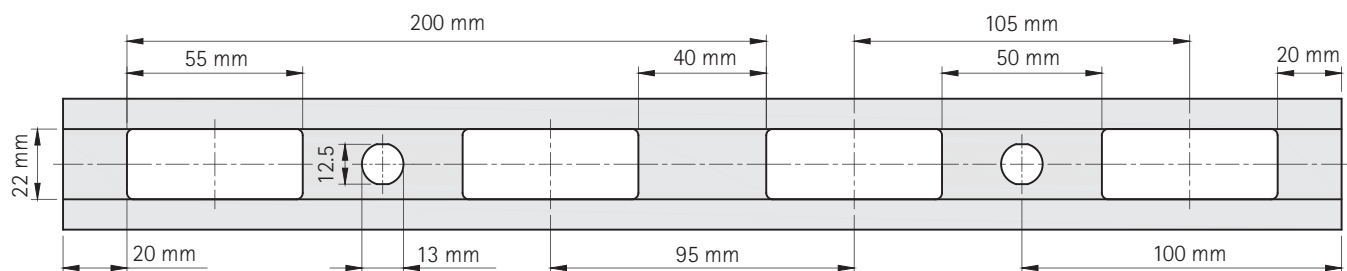
Perforation pattern of rails

Distance between rail end and first hole is always equal.

BIS RapidStrut® - 1.5 / 2.0 / 2.5 mm



BIS RapidStrut® DS 5 - 2.0 mm



BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

(H 04 05)

suspension and support

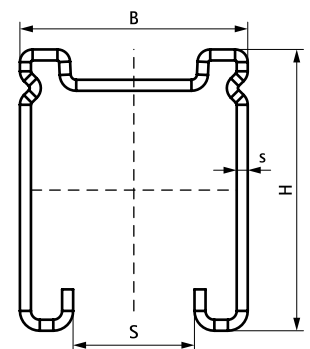


Features and Benefits

- for a quick and easy fixing
- unique hole pattern, allowing BIS RapidStrut® Accessories to be mounted on both sides of the rail
- very high corrosion resistance (BIS UltraProtect® 1000)
- corrosion protection remains intact after cutting
- strength minimal equal to Strut 41x41x2.5 mm
- with continuous perforation
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- material: steel 1.0242
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'

Part No.	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL	App.
65058252	2 m	41	51	2.0	22	20	80	m.
65058352	3 m	41	51	2.0	22	30	120	m.
65058652	6 m	41	51	2.0	22	60	240	m.

For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



Complementary

- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)
- 290 BIS RapidStrut® Rail Connector 90° G2 (BUP1000)
- 295 BIS RapidStrut® Rail Connector 135° G2 (BUP1000)

Complementary

- 298 BIS RapidStrut® Rail Connector G2 (BUP1000)
- 300 BIS RapidStrut® Rail Connector -
- 302 BIS RapidStrut® Rail

BIS RapidStrut® Fixing Rail (pg)

(H 04 10)

suspension and support



6505224 6505242 6505365 6505385

Features and Benefits

- universal rail system
- with continuous perforation
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0242
- Part No. 6505X85 (41x82) material: steel 1.0332
- pre-galvanized
- strut 41x41x2.5 and above tested for fire safety
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'

Part No.	Type	L	B (mm)	H (mm)	s (mm)	S (mm)	RAL	BndS	BndL	App.
6505224	21 L	2 m	41	21	1.50	22	RAL ¹	20	200	m.
6505324	21 L	3 m	41	21	1.50	22	RAL ¹	30	300	m.
6505624	21 L	6 m	41	21	1.50	22	RAL ¹	60	600	m.
6505222	21 M	2 m	41	21	2.00	22	RAL ¹	20	200	m.
6505322	21 M	3 m	41	21	2.00	22	RAL ¹	30	300	m.
6505622	21 M	6 m	41	21	2.00	22	RAL ¹	60	600	m.
6505225	21 H	2 m	41	21	2.50	22	RAL ¹	20	200	m.
6505325	21 H	3 m	41	21	2.50	22	RAL ¹	30	300	m.
6505625	21 H	6 m	41	21	2.50	22	RAL ¹	60	600	m.
6505244	41 L	2 m	41	41	1.50	22	RAL ¹	20	100	m.
6505344	41 L	3 m	41	41	1.50	22	RAL ¹	30	150	m.
6505644	41 L	6 m	41	41	1.50	22	RAL ¹	60	300	m.
6505242	41 M	2 m	41	41	2.00	22	RAL ¹	20	100	m.
6505342	41 M	3 m	41	41	2.00	22	RAL ¹	30	150	m.
6505642	41 M	6 m	41	41	2.00	22	RAL ¹	60	300	m.
6505245	41 H	2 m	41	41	2.50	22	RAL ¹	20	100	m.
6505345	41 H	3 m	41	41	2.50	22	RAL ¹	30	150	m.
6505645	41 H	6 m	41	41	2.50	22	RAL ¹	60	300	m.
65056453	-	6 m	41	41	3.00	22	-	-	300	m.
6505365	62 H	3 m	41	62	2.50	22	-	30	90	m.
6505665	62 H	6 m	41	62	2.50	22	-	60	180	m.
65056653	-	6 m	41	62	3.00	22	-	-	180	m.
6505385	82 H	3 m	41	82	2.50	22	-	30	90	m.
6505685	82 H	6 m	41	82	2.50	22	-	60	180	m.
6505620	21 H	6 m	41	21	2.50	22	-	60	600	m. *
6505640	41 H	6 m	41	41	2.50	22	-	60	300	m. *

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/C.

Strut 41x41x2.5 and above tested for fire safety.

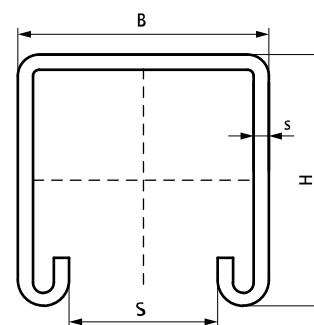
* Unslotted

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



RAL-GZ 655/C
Cert.Nr. 2012-04



Complementary

- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)
- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 320 BIS Strut Clamp with Lining

Alternative

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Fixing Rail (BUP1000)

(H 04 13)

suspension and support

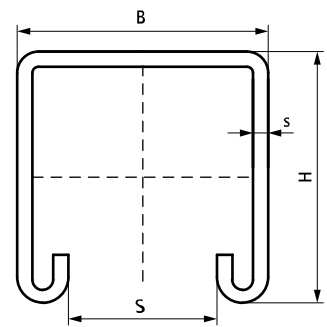


Features and Benefits

- universal rail system
- corrosion protection remains intact after cutting
- with continuous perforation
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0242
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- strut 41x41x2.5 and above tested for fire safety
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'



Part No.	Type	L	B	H	s	S	RAL	BndS	BndL	App.
			(mm)	(mm)	(mm)	(mm)				
65018227	21 H	2 m	41	21	2.50	22	RAL ¹	20	200	m.
65018327	21 H	3 m	41	21	2.50	22	RAL ¹	30	300	m.
65018627	21 H	6 m	41	21	2.50	22	RAL ¹	60	600	m.
65018242	41 M	2 m	41	41	2.00	22	RAL ¹	20	100	m.
65018342	41 M	3 m	41	41	2.00	22	RAL ¹	30	150	m.
65018642	41 M	6 m	41	41	2.00	22	RAL ¹	60	300	m.
65018247	41 H	2 m	41	41	2.50	22	RAL ¹	20	100	m.
65018347	41 H	3 m	41	41	2.50	22	RAL ¹	30	150	m.
65018647	41 H	6 m	41	41	2.50	22	RAL ¹	60	300	m.
65018367	62 H	3 m	41	62	2.50	22	-	90	-	m.
65018667	62 H	6 m	41	62	2.50	22	-	36	216	m.
65018387	82 H	3 m	41	82	2.50	22	-	90	-	m.
65018687	82 H	6 m	41	82	2.50	22	-	-	180	m.
65018640	41 H	6 m	41	41	2.50	22	-	60	300	m.



RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/C.
Strut 41x41x2.5 and above tested for fire safety.

* Unslotted

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.

Complementary

- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)
- 348 BIS Yeti® 130 Support System

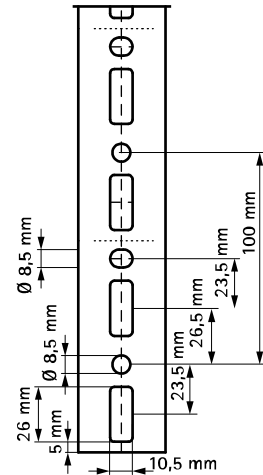
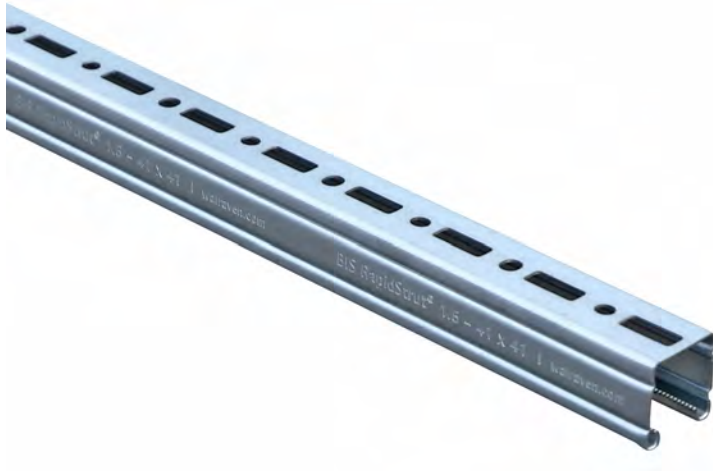
Alternative

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Fixing Rail with Anchor Holes (pg)

(H 04 17)

suspension and support

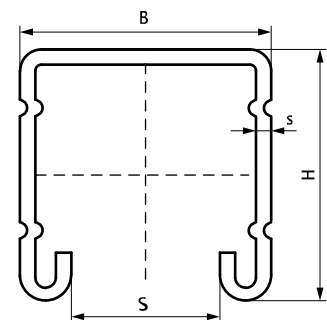


Features and Benefits

- universal rail system
- with continuous perforation
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0242
- pre-galvanized
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'

Part No.	Model	L	B	H	s	S	BndS	BndL	App.
			(mm)	(mm)	(mm)	(mm)			
65059224	Perforated	2 m	41	21	1.50	22	20	200	m.
65059324	Perforated	3 m	41	21	1.50	22	30	300	m.
65059624	Perforated	6 m	41	21	1.50	22	60	600	m.
65059244	Perforated	2 m	41	41	1.50	22	20	100	m.
65059344	Perforated	3 m	41	41	1.50	22	30	150	m.
65059644	Perforated	6 m	41	41	1.50	22	60	300	m.
6505944050	Perforated	0.5 m	41	41	1.50	22	-	-	pc.
6505944100	Perforated	1 m	41	41	1.50	22	-	-	pc.

For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



Complementary

- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)
- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 320 BIS Strut Clamp with Lining

Complementary

- 275 BIS Strut Slide Nut (BUP1000)

Alternative

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Fixing Rail Double (pg)

(H 04 40)

suspension and support



Features and Benefits

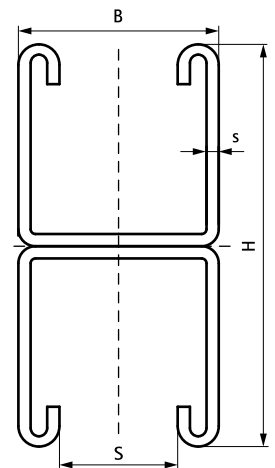
- universal rail system
- with continuous perforation
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0332
- pre-galvanized
- strut 41x41x2.5 and above tested for fire safety
- for more information about the max. allowed load ($F_{a,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'



Part No.	L	B	H	s	S	BndS	BndL	App.
		(mm)	(mm)	(mm)	(mm)			
6505626	6 m	41	42 (21 x 2)	2.50	22	6	150	m.
6505646	6 m	41	82 (41 x 2)	2.50	22	6	300	m.
6505666	6 m	41	124 (62 x 2)	2.50	22	6	90	m.
6505686	6 m	41	164 (82 x 2)	2.50	22	6	180	m.

Strut 82 (41x2) and above tested for fire safety.

For more information about the max. allowed load ($F_{a,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



Complementary

320 BIS Strut Clamp with Lining

Alternative

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Fixing Rail Double (hdg)

(H 04 45)

suspension and support



Features and Benefits

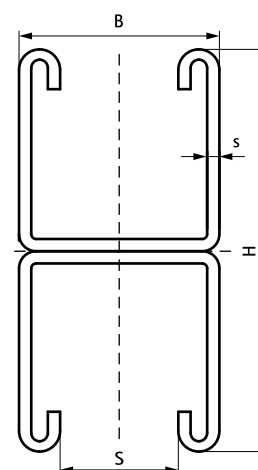
- universal rail system
- with continuous perforation
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0332
- hot dip galvanized
- strut 41x41x2.5 and above tested for fire safety
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'



Part No.	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL	App.
6501646	6 m	41	82 (41x2)	2.50	22	6	150	m.
6501666	6 m	41	124 (62x2)	2.50	22	60	90	m.
6501686	6 m	41	164 (82x2)	2.50	22	6	90	m.

Strut 82 (41x2) and above tested for fire safety.

For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



Complementary

277 BIS Strut Slide Nut (hdg)

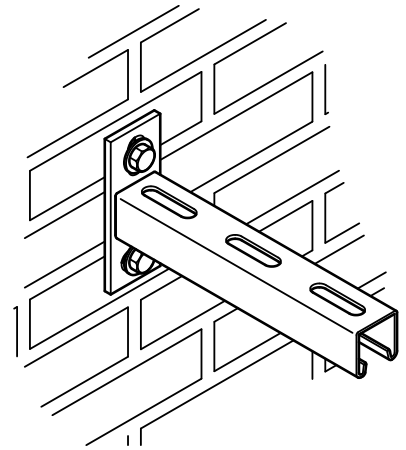
Alternative

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Cantilever Arm (BUP1000)

(H 08 05)

fixing to wall



Features and Benefits

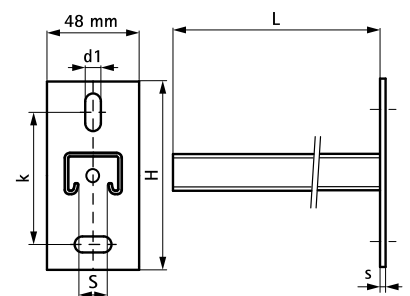
- wall plate welded on Strut Profile
- slots at 90° to each other to simplify fixing
- CO₂ welded
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0226
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety
- for more information about the max. allowed load ($F_{a,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'



Part No.	L	H	h	s	d1	S	k	From Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6603831	200 mm	110	70.0	5.0	25 x 11	22	70.0	Strut 41x21x2.5	10
6603832	300 mm	110	70.0	5.0	25 x 11	22	70.0	Strut 41x21x2.5	10
6603833	450 mm	110	70.0	5.0	25 x 11	22	70.0	Strut 41x21x2.5	20
6603834	600 mm	110	70.0	5.0	25 x 11	22	70.0	Strut 41x21x2.5	10
6603923	300 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.0	10
6603926	450 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.0	10
6603928	600 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.0	8
6603861	150 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	10
6603870	200 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	10
6603862	300 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	10
6603871	400 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	10
6603863	450 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	10
6603873	500 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	10
6603864	600 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	8
6603865	750 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	8
6603866	1,000 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	1
6603867	1,200 mm	130	87.5	7.0	30 x 13	22	87.5	Strut 41x41x2.5	1

Strut 41x41x2.5 and above tested for fire safety.

For more information about the max. allowed load ($F_{a,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.

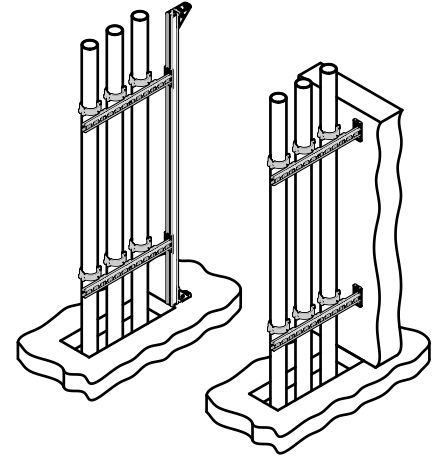


Complementary

- 450 BIS Washer (BUP1000)
- 264 BIS Rail Prop (BUP1000)

BIS RapidStrut® Cantilever Arm Vertical (BUP1000)

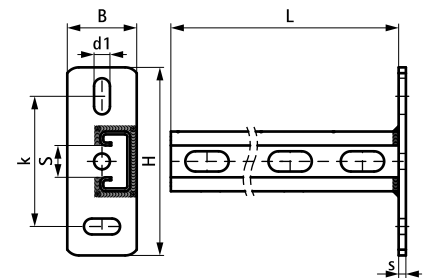
(H 08 07)



Features and Benefits

- vertical welded cantilever arm for vertical pipe installations
- perfect solution for shaft situations with or without wall
- optimal utilization of the available space in shafts
- CO₂ welded
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0226
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B (mm)	H (mm)	s (mm)	d1 (mm)	S (mm)	k (mm)	From Rail	Pack 1
6603828	300 mm	48	130	5.0	25 x 11	22	90	Strut 41x21	10
6603829	600 mm	48	130	5.0	25 x 11	22	90	Strut 41x21	10



Complementary

- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)

Complementary

- 280 BIS RapidStrut® Slide Nut
- 502 WT B1 Throughbolt Anchor
- 508 WCS1H Concrete Screw

BIS RapidStrut® Cantilever Arm 41x41D (BUP1000)

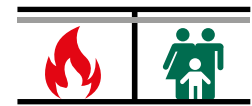
(H 08 10)

fixing to wall



Features and Benefits

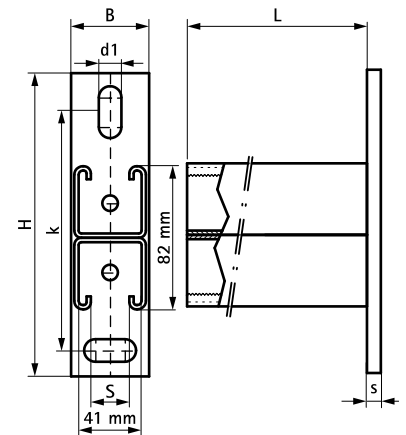
- wall plate welded on Strut Profile
- slots at 90° to each other to simplify fixing
- CO₂ welded
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	L	B	H	s1	d1	S	k	From Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6603883	450 mm	45	175	8.0	30 x 13	22	137.5	Strut 41x41Dx2.5	8
6603884	600 mm	45	175	8.0	30 x 13	22	137.5	Strut 41x41Dx2.5	4
6603885	750 mm	45	175	8.0	30 x 13	22	137.5	Strut 41x41Dx2.5	4
6603886	1,000 mm	45	175	8.0	30 x 13	22	137.5	Strut 41x41Dx2.5	1

Strut 82 (41x2) and above tested for fire safety.

For more information about the max. allowed load ($F_{0,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



BIS RapidStrut® Cantilever Arm with Rail Prop

(H 08 15)

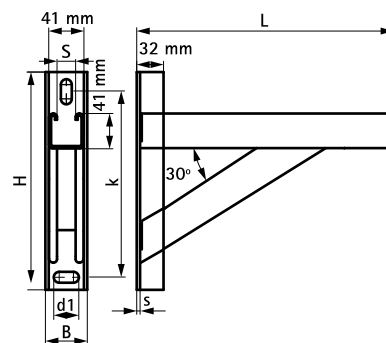
fixing to wall



Features and Benefits

- wall plate welded on Strut Profile
- CO₂ welded
- with prop
- inward formed flanges with serrated profile for extra grip
- material: steel 1.0332
- hot dip galvanized

Part No.	L	B	H	s	d1	S	k	From Rail	F _{a,z} (N)	Pack 1
6601894	600 mm	50 (mm)	350 (mm)	4.0 (mm)	23 x 13 (mm)	22 (mm)	311.5 (mm)	Strut 41x41	1,400	1



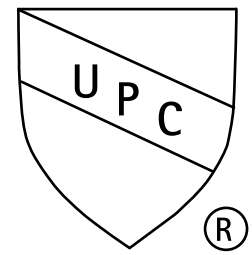
Cantilever Arm for WMO Strut

(H 08 200)



Features and Benefits

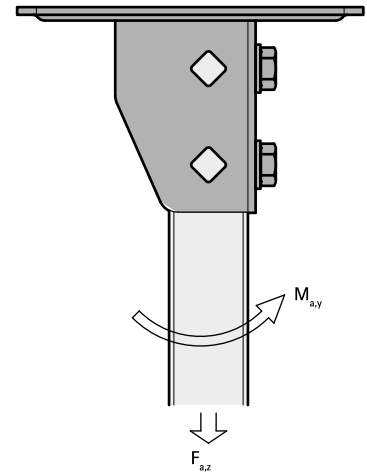
- mounts directly to the wall or ceiling without all thread, allowing for a tight mounting
- a large variety of clamps can be attached to the cantilever with only a single screw or other accessories
- pre-assembled for quick installation
- material: steel 1.0226
- hot dip galvanized



Part No.	Pack 1
66090110	25

BIS RapidStrut® Base Plate G2 (BUP1000)

(H 12 03)

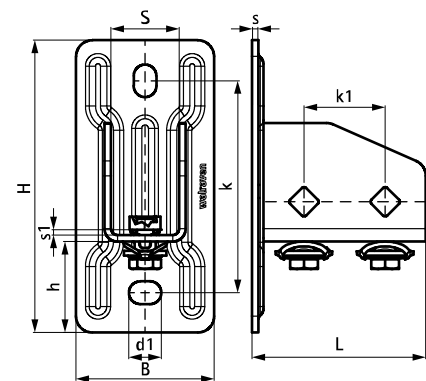


Features and Benefits

- flexible base plate for Strut rails
- suitable for all Strut rail up to 82mm height
- open side of rails 41x41 can be turned to all sides
- at high loads we advise to install with throughbolts
- timesaving with pre-assembled fasteners
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety

Part No.	L	B	H	h	s	d1	S	k	k1	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(Nm)	
665885400	107 mm	85	180	56	4.0	20 x 14	42	130	50	3,636	5,151	485.0	10

F_{a,z}: max. allowed load in combination with 2 slide nuts M10, tightened with 40 Nm.
F_{a,z 2}: max. allowed load in combination with 2 throughbolts M10, tightened with 40 Nm.
M_{a,y}: max. moment in combination with 2 throughbolts M10, tightened with 40 Nm.



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 280 BIS RapidStrut® Slide Nut

Complementary

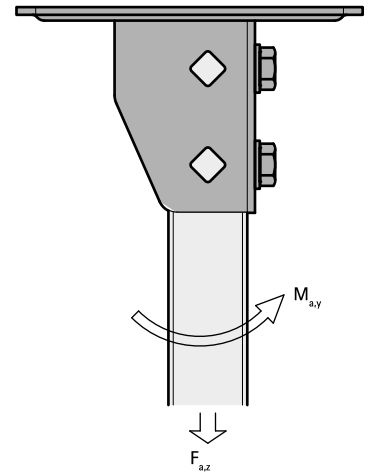
- 208 BIS Washer (Flat) (BUP1000)
- 448 BIS Hexagon Head Bolt (BUP1000)
- 508 WCS1H Concrete Screw

Alternative

- 259 BIS Strut Base Plate Heavy Duty (BUP1000)

BIS Strut Base Plate G2 (zp)

(H 12 11)

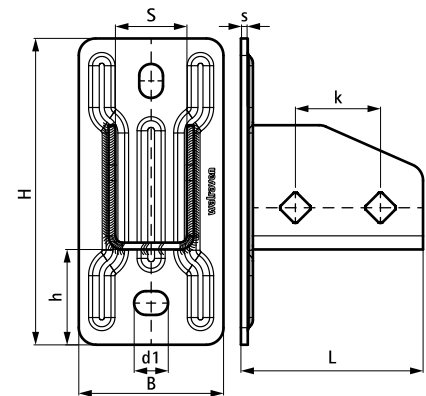


Features and Benefits

- flexible base plate for Strut rails
- suitable for all Strut rail up to 82mm height
- open side of rails 41x41 can be turned to all sides
- at high loads we advise to install with throughbolts
- material: steel
- zinc plated

Part No.	L	B	H	h	s	d1	S	k	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(Nm)	
66583804	107 mm	85	180	56	4.0	20 x 14	42	50	3,636	5,151	485.0	10

F_{a,z}: max. allowed load in combination with 2 slide nuts M10, tightened with 40 Nm.
F_{a,z 2}: max. allowed load in combination with 2 throughbolts M10, tightened with 40 Nm.
M_{a,y}: max. moment in combination with 2 throughbolts M10, tightened with 40 Nm.



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 281 BIS RapidStrut® Slide Nut with Plastic Tabs (zp)
- 209 BIS Washer (Flat)

Complementary

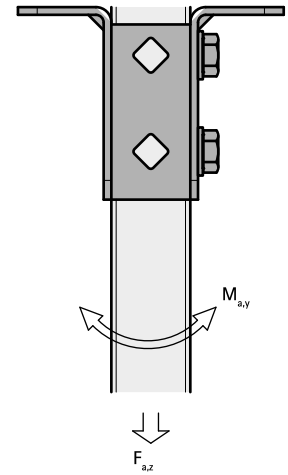
- 502 WTB1 Throughbolt Anchor
- 508 WCS1H Concrete Screw
- 449 BIS Hexagon Head Bolt

Alternative

- 256 BIS RapidStrut® Base Plate G2 (BUP1000)
- 259 BIS Strut Base Plate Heavy Duty (BUP1000)

BIS Strut T-shape Base Plate (BUP1000)

(H 12 12)

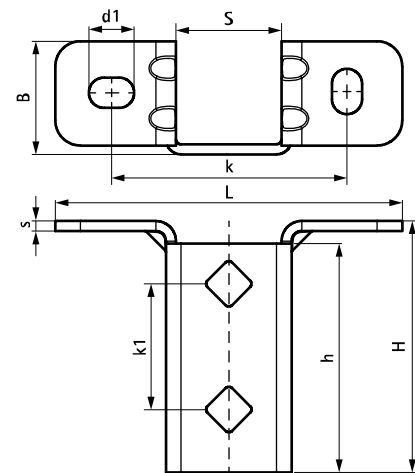


Features and Benefits

- highly flexible base plate for Strut rails
- open side of the rail can be turned to all sides
- extra safety by reinforced bending
- hole pattern is adapted to the hole pattern of Strut rails
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	h	s	d1	S	k	k1	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(Nm)	
66588361	138 mm	45	100	91	4.0	18 x 12	42	95	50	3,636	3,636	164.0	10

F_{a,z}: max. allowed load in combination with 2 slide nuts M10, tightened with 40 Nm.
F_{a,z 2}: max. allowed load in combination with 2 throughbolts M10, tightened with 40 Nm.
M_{a,y}: max. moment in combination with 2 throughbolts M10, tightened with 40 Nm.



Complementary

- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)

Complementary

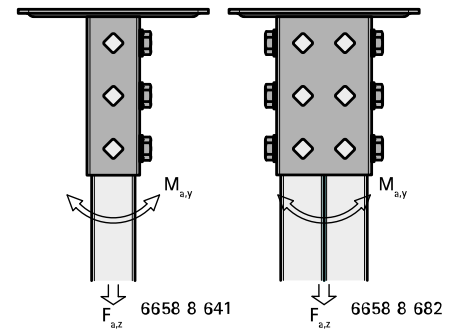
- 448 BIS Hexagon Head Bolt (BUP1000)
- 502 WTB1 Throughbolt Anchor
- 508 WCS1H Concrete Screw

Alternative

- 256 BIS RapidStrut® Base Plate G2 (BUP1000)
- 259 BIS Strut Base Plate Heavy Duty (BUP1000)

BIS Strut Base Plate Heavy Duty (BUP1000)

(H 12 13)



Features and Benefits

- heavy base plate for Strut rails
- can be used together with slide nut with plastic tabs or throughbolts
- hole pattern is adapted to the hole pattern of Strut rails
- closed profile for increased structural strength
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

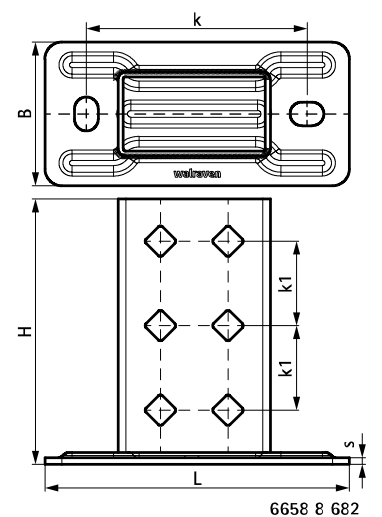
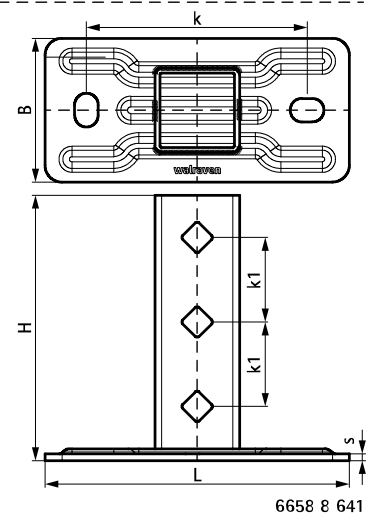
Part No.	L	B	H	s	k	k1	For Rail	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)		(N)	(N)	(Nm)	
66588641	180 mm	85	157	4.0	130	50	Strut 41x41 + 41x21D	4,242	5,303	258.0	10
66588682	180 mm	85	157	4.0	130	50	Strut 41x82 + Strut 41x41D	7,273	10,303	606.0	5

Part No. 66588641: F_{a,z}: max. allowed load in combination with 3 slide nuts M10, tightened with 40 Nm.

Part No. 66588682: F_{a,z}: max. allowed load in combination with 6 slide nuts M10, tightened with 40 Nm.

F_{a,z 2}: max. allowed load in combination with 2 throughbolts M10, tightened with 40 Nm.

M_{a,y}: max. moment in combination with 2 throughbolts M10, tightened with 40 Nm.



Complementary

- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)

Complementary

- 448 BIS Hexagon Head Bolt (BUP1000)
- 502 WT1 Throughbolt Anchor
- 508 WCS1H Concrete Screw

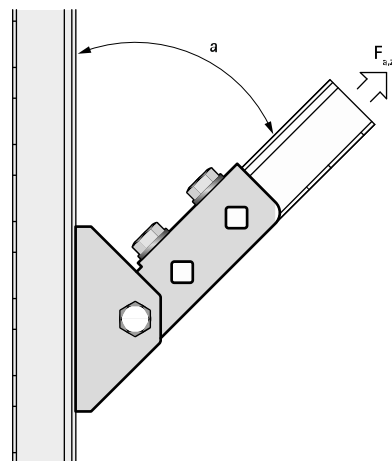
Alternative

- 256 BIS RapidStrut® Base Plate G2 (BUP1000)

BIS Strut Wall Plate (Hinged) (BUP1000)

(H 12 25)

fixing to wall

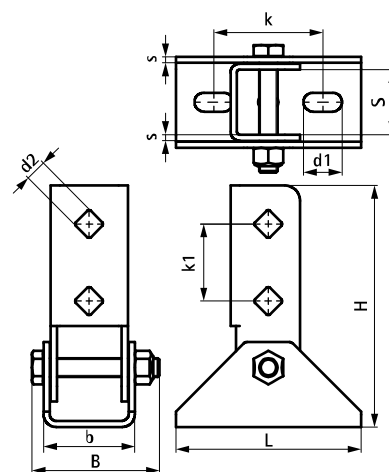


Features and Benefits

- wall plate with hinging U-profile
- for wall fixing of rail
- rail can be fixed with slot downwards or sideways
- also used to strengthen constructions with Strut 41x41
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	b	s	d1	d2	S	k	k1	For Rail	F _{a,z}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(N)	
66588814	120 mm	83	157	59	4.0	25x12.2	13.8	42	71	50	Strut	2,500	10 *

Max. allowed load (F_{a,z}) under an angle of 45°.
 * Tested with rail 41x41x2.5 with throughbolts. More details can be found on the Technical Datasheet.



BIS Adjustable Support Bracket

(H 12 42)

support bracket fastener for height adjustable rail installation

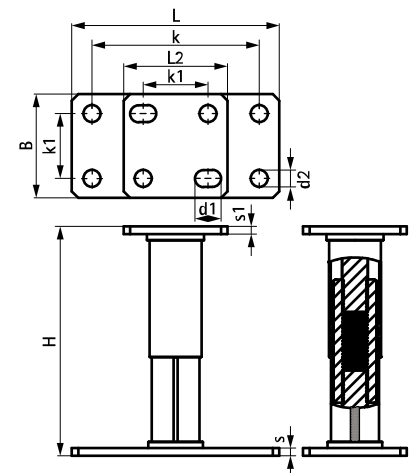


Features and Benefits

- height adjustment range 135mm to 210mm also in installed state (left/right thread)
- suitable for all Strut rails (advised to use open side down for flexibility to meet the holes)
- use up to class 1-2 according to Eurocode 5 (indoor and covered outdoor area without weather influences)
- material: metal parts made of steel S235JR; protection cover made of plastic, grey
- zinc plated (Zn-Fe zinc / iron coating)

Part No.	L	L2	B	H	s	s1	d1	d2	k	k1	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
66583810	160 mm	80	80	135-200	6.0	6.0	20 x 13	Ø 13.0	129	50	-

*For a detailed calculation and for support how to spread the load please contact Walraven Technical Support.
In cases where a foot is used in roof applications, the installer is obliged to verify maximum load capacity of roof before installation.*



Complementary

- 281 BIS RapidStrut® Slide Nut with Plastic Tabs (zp)
- 502 WT1 Throughbolt Anchor
- 508 WCS1H Concrete Screw

Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)

BIS Strut T-Bracket

(H 12 50)

fixing to wall



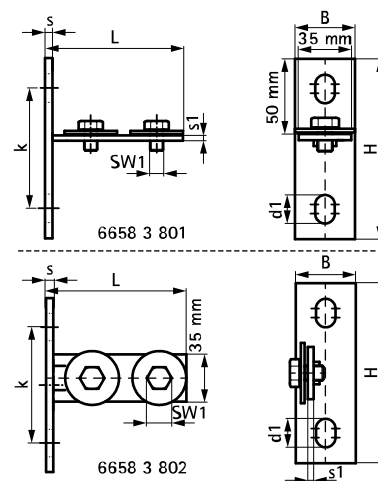
6658 3 801



6658 3 802

Features and Benefits

- for small spans in constructions with Strut Rail
- quick installation
- with pre-assembled screws and washers
- material: steel 1.0332

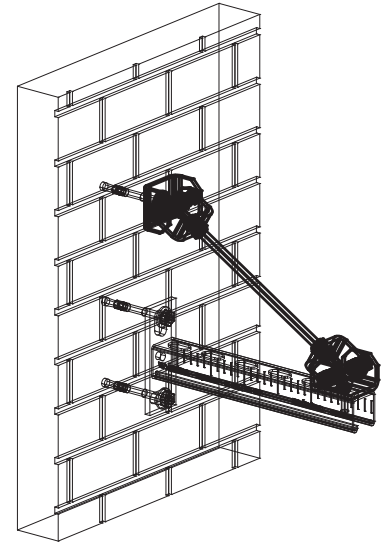


Part No.	Model	L	B	H	s	s1	d1	k	SW1	T _(max.)	For Rail	ST	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)			
66583801	Horizontal	104 mm	40	120	5.0	4.0	19 x 13	80	17	15.0	Strut 41x21 + 41x41 + 41x21D	zinc plated	25
66583802	Vertical	104 mm	40	120	5.0	4.0	19 x 13	80	17	15.0	Strut 41x21 + 41x41 + 41x21D	zinc plated	25

BIS Adjustable Support (BUP1000)

(H 12 53)

fixing to wall

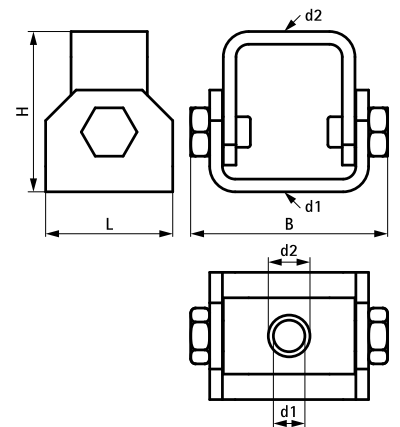


Features and Benefits

- especially for angled installations with bracings
- suitable for fixing to walls or fixing rails
- adjustable angle up to 90°
- with two holes Ø13 mm
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	d1	d2	For Rail	F _{az}	ST	Pack 1
		(mm)	(mm)	(mm)	(mm)		(N)		
66588818	50 mm	78	63	Ø 13.0	Ø 13.0	Strut	5,000	BIS UltraProtect® 1000	10

Max. allowed load: when used at an angle of 45° on wall/ceiling.



BIS Rail Prop (BUP1000)

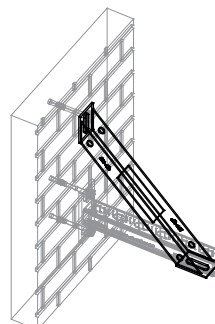
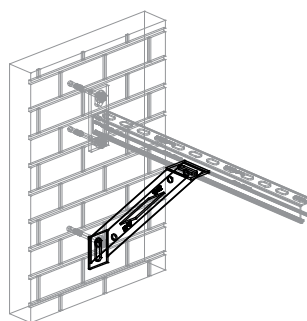
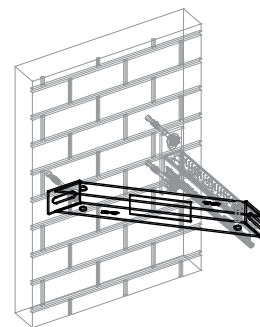
(H 16 05)

reinforcement of cantilever arm

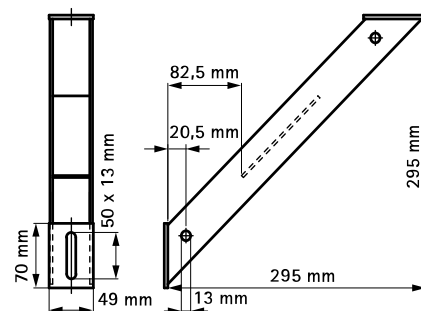


Features and Benefits

- 45° support bracket
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- CO₂ welded
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	For Rail	Pack 1
66288530	Strut + WM35	10



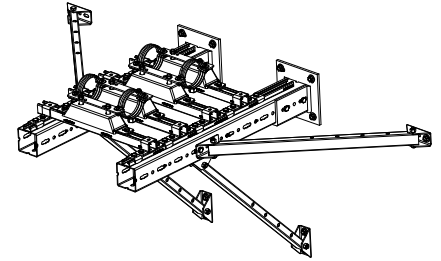
Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

BIS Flexible Rail Prop

reinforcement of rail fabrications

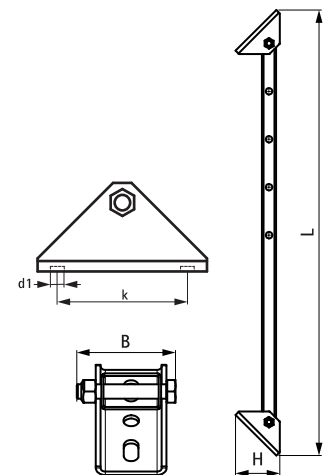
(H 16 07)



Features and Benefits

- flexible angle support bracket
- to strengthen rail constructions
- by additional holes the length can be reduced in steps of 100mm
- suitable for Strut rails and for Maxx rails
- material: u-plate steel 1.0242 (S250GD); tube profile: steel 1.0038 (S235JR)
- u-plate: Z275-MAC (pre-galvanized); tube profile: hot-dip galvanized 50-80 µm

Part No.	L	B (mm)	H (mm)	d1 (mm)	k (mm)	Fa,z (N)	Pack 1
6621083	929	83	92	25 x 12.2	70.6	7,500	1



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 249 BIS RapidStrut® Fixing Rail Double (pg)
- 502 WTB1 Throughbolt Anchor

Complementary

- 508 WCS1H Concrete Screw

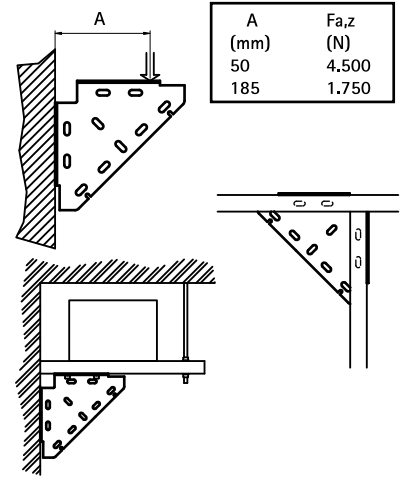
Alternative

- 264 BIS Rail Prop (BUP1000)

BIS RapidStrut Construction Bracket (BUP1000)

(H 16 20)

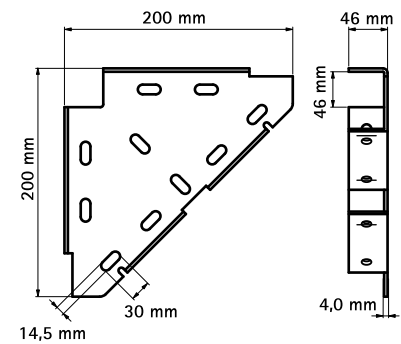
to make Strut rail fabrications



Features and Benefits

- one-part support
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	For Rail	Pack 1
65938020	Strut + WM35	10



Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

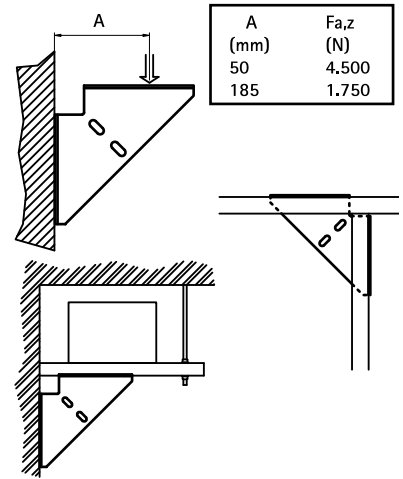
Alternative

267 BIS RapidStrut Corner Bracket (BUP1000)

BIS RapidStrut Corner Bracket (BUP1000)

(H 16 35)

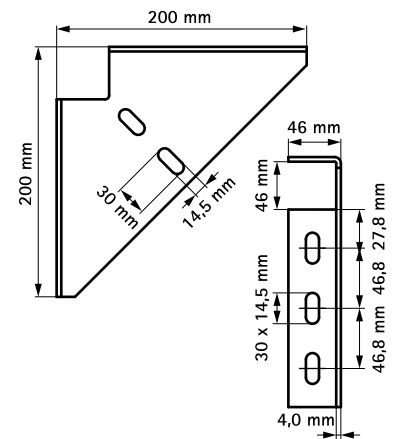
to make Strut rail fabrications



Features and Benefits

- one-part support
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	For Rail	Pack 1
66038020	Strut + WM35	10



Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Alternative

266 BIS RapidStrut Construction Bracket (BUP1000)

BIS Strut Floor Bracket

(H 16 50)

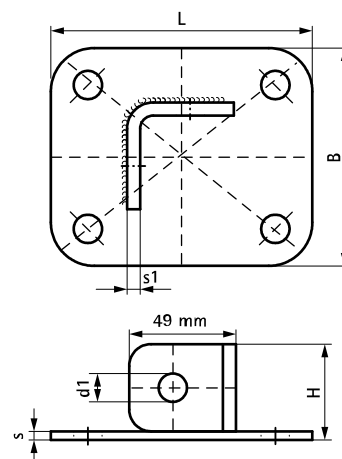
to make Strut rail fabrications



Features and Benefits

- to make fabrication with Strut Rail
- material: steel 1.0332
- easy fitting due to rounded edges

Part No.	L	B	H	s	s1	d1	For Rail	ST	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)			
66583602	120 mm	100	44	4.0	4.0	Ø 13	Strut 41x41	zinc plated	15



BIS Console Kit Clim ISO – Strut (Wall Rail)

(H 19 10)

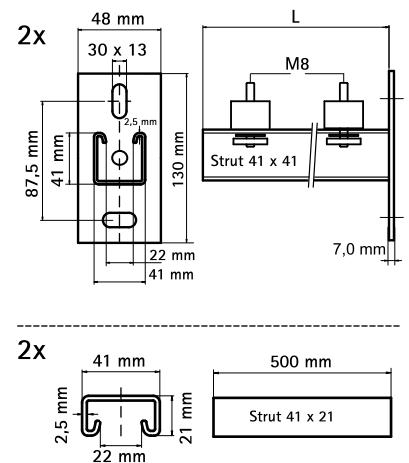
wall fixing of appliances



Features and Benefits

- universal fixing kit
- for wall fixing of airconditioners, heaters, compressors and other heavy duty material
- material: steel 1.0332
- hot dip galvanized
- noise insulation by use of vibration isolators (support made of vulcanized rubber)
- consists of:
 - 2 Cantilever arms of Strut 41x41
 - 2 lengths of Strut 41x21
 - 4 Vibration isolators
 - 2 Rail End Caps

Part No.	L	T _(max.) (Nm)	From Rail	F _{a,z} (N)	Pack 1
6901945	450 mm	15.0	Strut 41x41	2,000	1
6901960	600 mm	15.0	Strut 41x41	1,200	1



BIS Console Kit Clim ISO – Strut

(H 19 15)

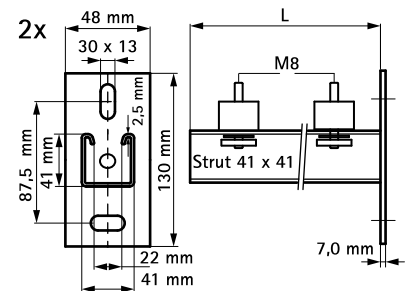
wall fixing of appliances



Features and Benefits

- universal fixing kit
- for wall fixing of airconditioners, heaters, compressors and other heavy duty material
- vibration isolators pre-assembled with slide nut, washer and hexagon head lock-nut
- vibration isolators pre-assembled on cantilever arm
- material: steel 1.0332
- hot dip galvanized
- noise insulation by use of vibration isolators (support made of vulcanized rubber)
- consists of:
 - 2 Cantilever arms of Strut 41x41
 - 4 Vibration isolators
 - 2 Rail End Caps

Part No.	L	T _(max.) (Nm)	From Rail	F _{a,z} (N)	Pack 1
6901860	600 mm	15.0	Strut 41x41	1,200	1



Alternative

269 BIS Console Kit Clim ISO – Strut (Wall Rail)

BIS RapidStrut® Slide Nut G2 (BUP1000)

(H 24 04)

fixing to Strut rail



Features and Benefits

- slide nut with washer and BIS RapidStrut® spring
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

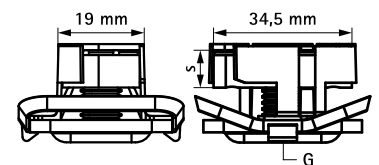
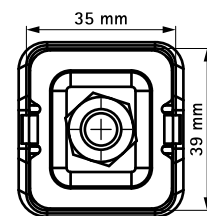


Part No.	G	s (mm)	T _{inst} (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
665185106	M6	5.0	7	Strut	2,660	950	20	200
665185108	M8	6.0	11	Strut	3,120	1,100	20	200
665185110	M10	8.0	15	Strut	5,000	1,250	20	200
665185112	M12	9.0	22	Strut	5,000	2,440	20	200

M10 and above tested for fire safety.

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.

More details can be found on the Technical Datasheet.

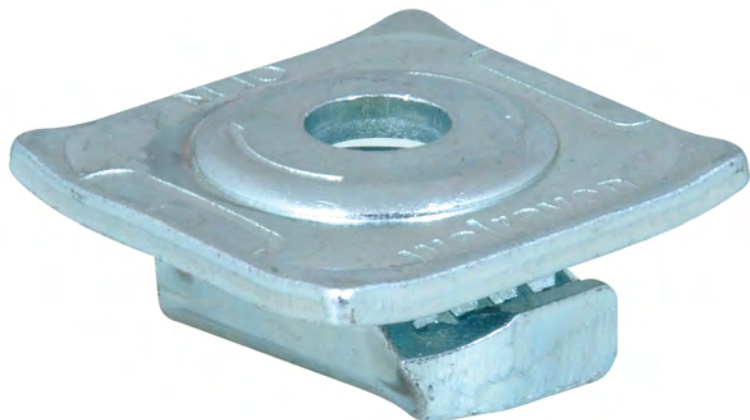


Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

BIS RapidStrut® Slide Nut MS (BUP1000)

(H 24 09)

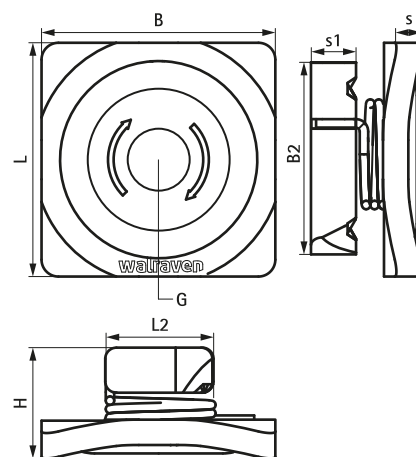


Features and Benefits

- slide nut with washer and metal spring
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- solid washer for strong connection
- robust since completely made from metal
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	L	L2	B	B2	H	s	s1	T _{inst}	For Rail	F _{a,z}	F _{a,x}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)		(N)	(N)	
66518308	M8	43 mm	19 mm	43	34	20	4.0	8.0	25.0	Strut	4,450	1,450	150
66518310	M10	43 mm	19 mm	43	34	20	4.0	8.0	30.0	Strut	5,000	1,810	150
66518312	M12	43 mm	19 mm	43	34	20	4.0	10.0	40.0	Strut	5,000	2,790	150

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
More details can be found on the Technical Datasheet.



Complementary

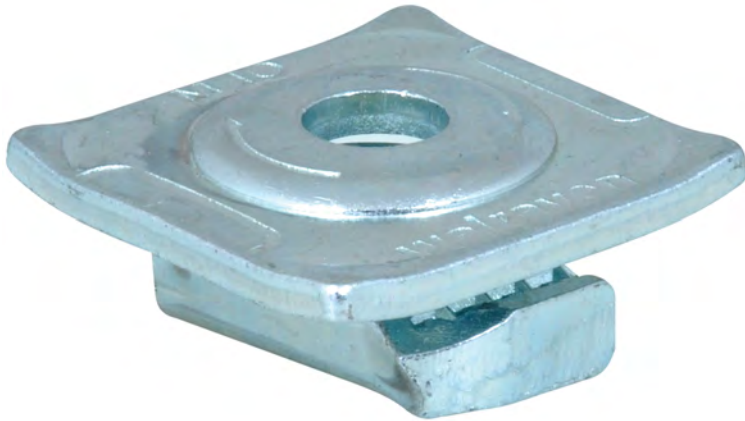
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 253 BIS RapidStrut® Cantilever Arm 41x41D (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 281 BIS RapidStrut® Slide Nut with Plastic Tabs (zp)

BIS RapidStrut® Slide Nut MS (ZP)

(H 24 11)

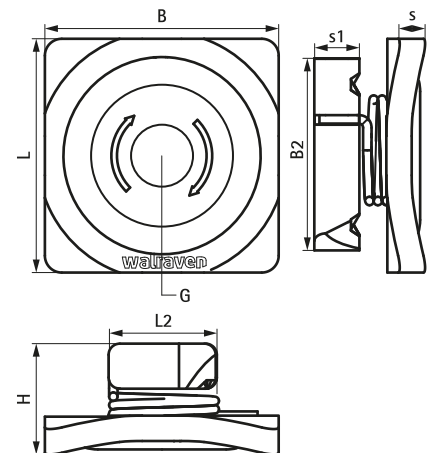


Features and Benefits

- slide nut with washer and metal spring
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- solid washer for strong connection
- robust since completely made from metal
- material: steel
- zinc plated

Part No.	G	L	L2	B	B2	H	s	s1	T _{inst}	For Rail	F _{a,z}	F _{a,x}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)		(N)	(N)	
66513108	M8	43 mm	19 mm	43	34	43	4.0	8.0	25.0	Strut	4,450	1,450	150
66513110	M10	43 mm	19 mm	43	34	20	4.0	8.0	30.0	Strut	5,000	1,810	150
66513112	M12	43 mm	19 mm	43	34	20	4.0	10.0	40.0	Strut	5,000	2,790	150

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
More details can be found on the Technical Datasheet.



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 253 BIS RapidStrut® Cantilever Arm 41x41D (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 281 BIS RapidStrut® Slide Nut with Plastic Tabs (zp)

BIS RapidStrut® Slide Nut with Adapter MS (ZP)

(H 24 12)



66513116



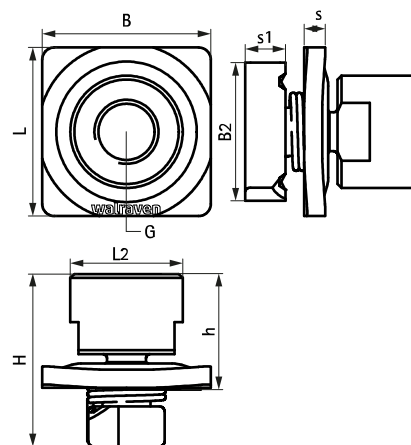
66513121

Features and Benefits

- slide nut with adapter, washer and metal spring
- to connect clamps with M16 or 1/2" nut to Strut rails
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- solid washer for strong connection
- robust since completely made from metal
- material: steel
- zinc plated

Part No.	G	L	L2	B	B2	H	h	s	s1	T _{inst}	For Rail	F _{az}	F _{ax}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)		(N)	(N)	
66513116	M16	43 mm	19 mm	43	34	47	30	4.0	8.0	40.0	Strut	5,000	2,790	25
66513121	1/2"	43 mm	19 mm	43	34	43	26	4.0	8.0	40.0	Strut	5,000	2,790	25

*Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
More details can be found on the Technical Datasheet.*



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 281 BIS RapidStrut® Slide Nut with Plastic Tabs (zp)

BIS Strut Slide Nut (BUP1000)

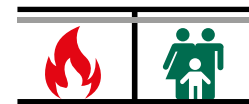
(H 24 15)

fixing to Strut rail



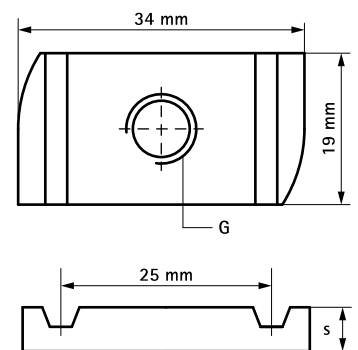
Features and Benefits

- for all types of Strut Rail
- for tight fixing of accessories (e.g. connectors) on rail
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
65188006	M6	5.0	7.0	Strut	2,660	950	100	-
65188008	M8	6.0	25.0	Strut	4,500	2,200	100	1,000
65188010	M10	8.0	40.0	Strut	5,000	2,550	100	500
65188012	M12	9.0	40.0	Strut	5,000	2,950	100	500

M10 tested for fire safety.
 M12 tested for fire safety.
 Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
 More details can be found on the Technical Datasheet.



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Alternative

- 280 BIS RapidStrut® Slide Nut

BIS Strut Slide Nut (zp)

(H 24 20)

fixing to Strut rail



Features and Benefits

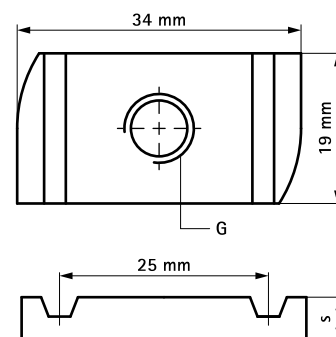
- material: steel 1.0332
- zinc plated
- tested for fire safety

Part No.	G	L	s	T _(max.)	For Rail	F _{a,z}	F _{a,x}	Pack 1	Pack 2
			(mm)	(Nm)		(N)	(N)		
6517006	M6	-	5.0	7.0	Strut	2,660	950	100	600
6517008	M8	-	6.0	25.0	Strut	4,500	2,200	100	500
6517010	M10	-	9.0	40.0	Strut	5,000	2,550	100	600
6517012	M12	-	9.0	50.0	Strut	5,000	2,950	100	500

M10 and above tested for fire safety.

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.

More details can be found on the Technical Datasheet.



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 281 BIS RapidStrut® Slide Nut with Plastic Tabs (zp)
- 275 BIS Strut Slide Nut (BUP1000)

BIS Strut Slide Nut (hdg)

(H 24 25)

fixing to Strut rail

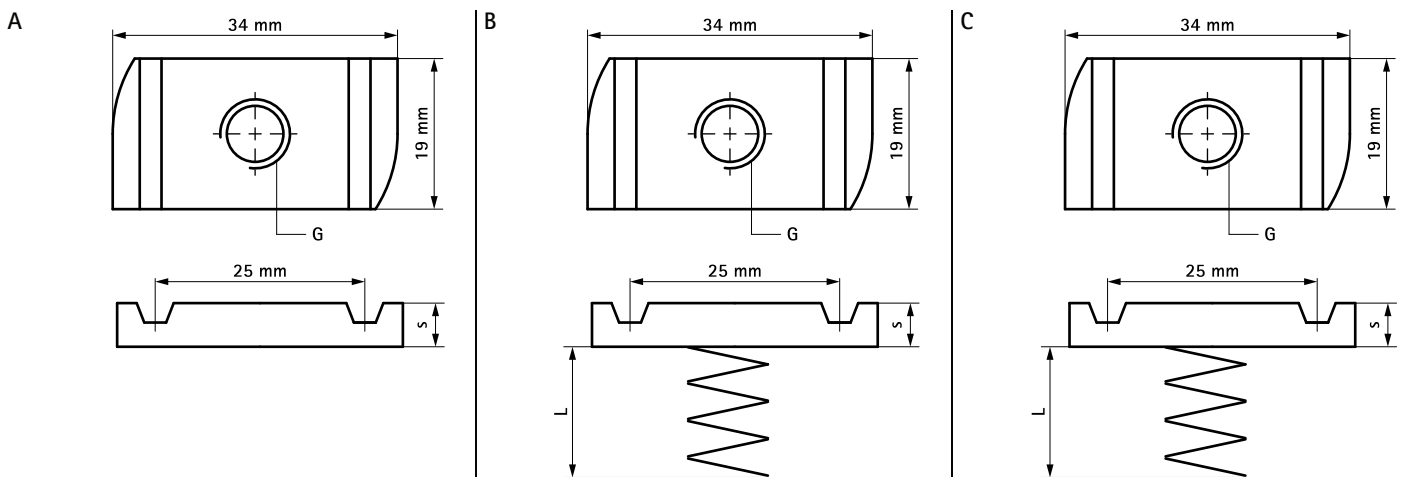


Features and Benefits

- material: slide nut made of steel 1.0332; ■ hot dip galvanized
- spring made of spring steel DIN17223 (class A)
- tested for fire safety

Part No.	G	L	s	T _(max.)	For Rail	F _{a,z}	F _{a,x}	Pack 1
			(mm)	(Nm)		(N)	(N)	
A 6518006	M6	-	5.0	7.0	Strut	2,660	950	100
A 6518008	M8	-	6.0	25.0	Strut	4,500	2,200	100
A 6518010	M10	-	8.0	40.0	Strut	5,000	2,550	100
A 6518012	M12	-	9.0	50.0	Strut	5,000	2,950	100
B 6518106	M6	13 mm	5.0	7.0	Strut 41x21	2,660	950	100
B 6518108	M8	13 mm	6.0	25.0	Strut 41x21	4,500	2,200	100
B 6518110	M10	13 mm	8.0	40.0	Strut 41x21	5,000	2,550	100
B 6518112	M12	13 mm	9.0	50.0	Strut 41x21	5,000	2,950	100
C 6518206	M6	33 mm	5.0	7.0	Strut 41x41	2,660	950	100
C 6518208	M8	33 mm	6.0	25.0	Strut 41x41	4,500	2,200	100
C 6518210	M10	33 mm	8.0	40.0	Strut 41x41	5,000	2,550	100
C 6518212	M12	33 mm	9.0	50.0	Strut 41x41	5,000	2,950	100

M10 and above tested for fire safety.
 Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
 More details can be found on the Technical Datasheet.



Alternative
 275 BIS Strut Slide Nut (BUP1000)

BIS Strut Square Slide Nut (BUP1000)

(H 24 32)

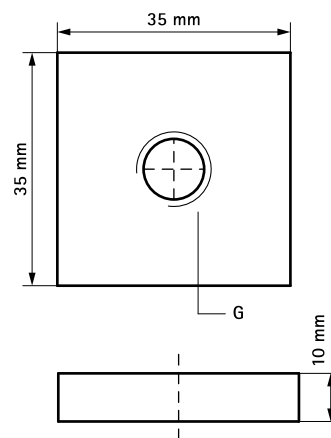
fixing to Strut rail



Features and Benefits

- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	For Rail	Pack 1
65178016	M16	Strut	250



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 26 BIS Heavy Duty Clamp HD1501 (BUP1000)

Complementary

- 46 BIS Heavy Duty Clamp HD500 (BUP1000)

Alternative

- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 280 BIS RapidStrut® Slide Nut
- 275 BIS Strut Slide Nut (BUP1000)

BIS Strut Square Slide Nut

(H 24 30)

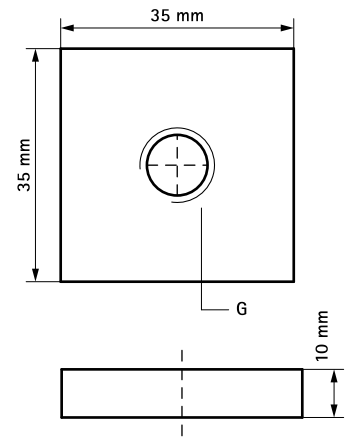
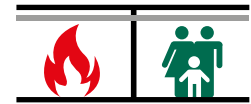
fixing to Strut rail



Features and Benefits

- material: steel 1.0332
- zinc plated
- tested for fire safety

Part No.	G	For Rail	Pack 1	Pack 2
6517016	M16	Strut	50	250



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 280 BIS RapidStrut® Slide Nut
- 275 BIS Strut Slide Nut (BUP1000)

BIS RapidStrut® Slide Nut with Plastic Tabs (BUP1000)

(H 24 35)

fixing to Strut rail



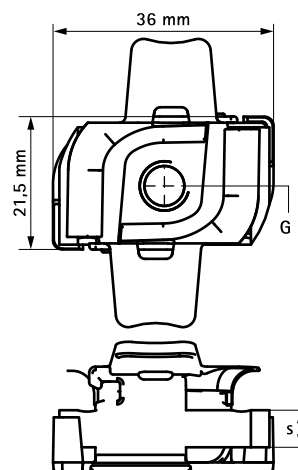
Features and Benefits

- slide nut with plastic 'tabs'
- for all types of Strut Rail
- for tight fixing of accessories (e.g. connectors) on rail
- with plastic tabs which simplifies inserting and positioning
- material: slide nut made of steel 1.0332; tabs made of PP (polypropylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1
651868006	M6	5.0	7.0	Strut	2,660	950	100
651868008	M8	6.0	25.0	Strut	4,500	2,200	100
651868010	M10	8.0	40.0	Strut	5,000	2,550	100
651868012	M12	9.0	50.0	Strut	5,000	2,950	100

M10 and above tested for fire safety.
 Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
 More details can be found on the Technical Datasheet.



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 275 BIS Strut Slide Nut (BUP1000)

BIS RapidStrut® Slide Nut with Plastic Tabs (zp)

(H 24 40)

fixing to Strut rail



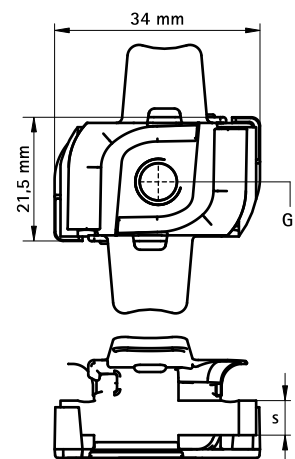
Features and Benefits

- slide nut with plastic 'tabs'
- for all types of Strut Rail
- for tight fixing of accessories (e.g. connectors) on rail
- with plastic tabs which simplifies inserting and positioning
- material: slide nut made of steel 1.0332; tabs made of PP (polypropylene), green
- zinc plated
- tested for fire safety



Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1
6518606	M6	5.0	7.0	Strut	2,660	950	100
6518608	M8	6.0	25.0	Strut	4,500	2,200	100
6518610	M10	9.0	40.0	Strut	5,000	2,550	100
6518612	M12	9.0	50.0	Strut	5,000	2,950	100

M10 and above tested for fire safety.
 Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
 More details can be found on the Technical Datasheet.



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

Alternative

- 275 BIS Strut Slide Nut (BUP1000)

BIS RapidStrut® Hammerfix G2 (BUP1000)

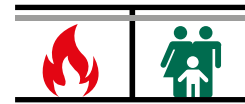
(H 24 49)

fixing to Strut rail



Features and Benefits

- slide nut with stud bolt, washer and BIS RapidStrut® spring
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

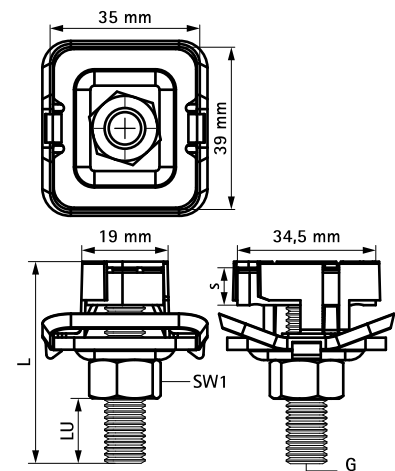


Part No.	G	L	LU (mm)	s (mm)	SW1 (mm)	T _(max.) (Nm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
652785804	M8	40 mm	16	6.0	13	11.0	3,120	1,100	15	150
652785805	M8	50 mm	26	6.0	13	11.0	3,120	1,100	15	150
652785806	M8	60 mm	36	6.0	13	11.0	3,120	1,100	5	100
652785808	M8	80 mm	56	6.0	13	11.0	3,120	1,100	5	100
652785810	M8	100 mm	76	6.0	13	11.0	3,120	1,100	5	100
652785004	M10	40 mm	12	8.0	17	15.0	5,000	1,250	15	150
652785006	M10	60 mm	32	8.0	17	15.0	5,000	1,250	5	100
652785008	M10	80 mm	52	8.0	17	15.0	5,000	1,250	5	100
652785204	M12	40 mm	10	9.0	19	22.0	5,000	2,440	5	100
652785206	M12	60 mm	30	9.0	19	22.0	5,000	2,440	5	100

M10 tested for fire safety.

M12 tested for fire safety.

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

BIS RapidStrut® Hammerfix 'U' G2 (BUP1000)

(H 24 59)

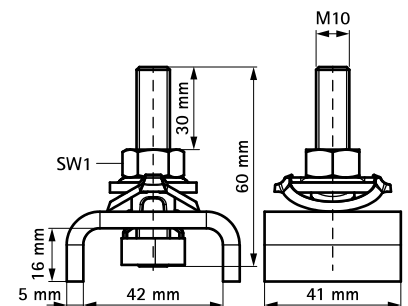
fixing to Strut rail



Features and Benefits

- slide nut with stud bolt, U-shaped washer and BIS RapidStrut® spring
- U-shaped for extra stability
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- visual guide to check the position of the slide nut
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	SW1 (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1
665285006	17	15.0	Strut	10,000	50



BIS Strut Tee-Bolt 'U' (BUP1000)

(H 24 62)

fixing to Strut rail

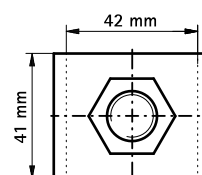
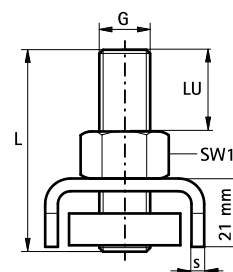


Features and Benefits

- slide nut with stud bolt and U-shaped washer
- U-shaped for extra stability
- ready-to-use pre-assembled
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	G	L	LU (mm)	s (mm)	SW1 (mm)	For Rail	Pack 1
65278606	M16	60 mm	24	4.0	24	Strut	15



BIS Strut Tee-Bolt Assembly

fixing to Strut rail

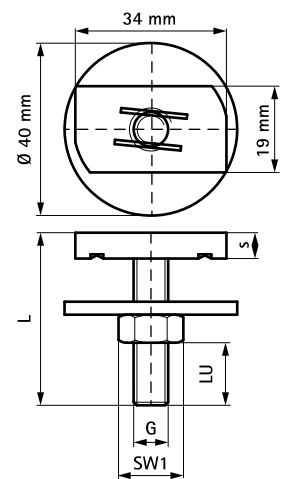
(H 24 70)



Features and Benefits

- slide nut with stud bolt and washer
- zinc plated
- material: steel

Part No.	G	L	LU	s	SW1	T _(max.)	For Rail	Pack 1	Pack 2
			(mm)	(mm)	(mm)	(Nm)			
6527934	M8	40 mm	18	6.0	13	15.0	Strut	25	125
6527935	M8	50 mm	28	6.0	13	15.0	Strut	25	250
6527944	M10	40 mm	14	8.0	17	15.0	Strut	25	250



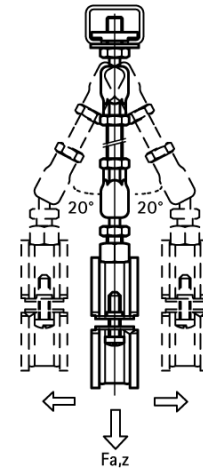
Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Ball Swivel Hanger

(H 24 75)

fixing to Strut rail

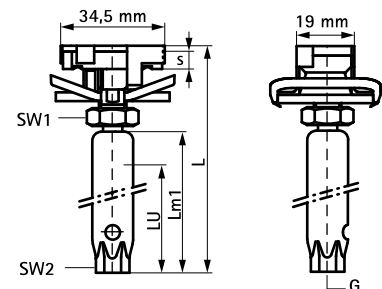
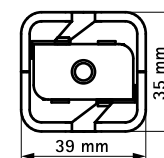


Features and Benefits

- slide nut with ball swivel hanger, washer and BIS RapidStrut® spring
- recommended for metal pipes up to DN 50, plastic pipes up to DN 100
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- with inspection hole to check screw-in depth (attention: when the threaded rod is screwed-in too deep, the ball swivel is blocked)
- screw-in depth is continuously variable (see LU)
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

Part No.	G	L	LU	s	Lm1	SW1	SW2	T _(max.)	For Rail	F _{a,z}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)		(N)	
66530805	M8	80 mm	43	6.0	50	13	10	15.0	Strut	3,100	25
66530005	M10	80 mm	43	8.0	50	13	12	15.0	Strut	3,100	25

Please note. Always use 2 ball swivel hangers and secure by additional hexagon nut (see application picture). The maximum length change that can be dealt with, depends on the fixing distance (ceiling - pipe). The height difference that occurs as a result, needs to be taken into consideration. To be used in combination with BIS Ball Swivel Hangers. Product can be found on page E 10 05.



Complementary

- 154 BIS Ball Swivel Hanger
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS Strut Washer – Flat (BUP1000)

(H 24 80)

to make Strut rail fabrications



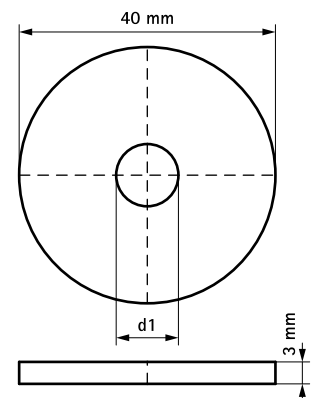
Features and Benefits

- flat washer
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	B (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
65381508	40	Ø 8.4	Strut	50	250
65381510	40	Ø 10.5	Strut	50	250
65381512	40	Ø 13.0	Strut	50	250

Ø 10.5 and above tested for fire safety.
Also available in stainless steel 1.4401 (AISI 316).



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS Strut Washer – Flat (zp)

(H 24 85)

fixing to Strut rail

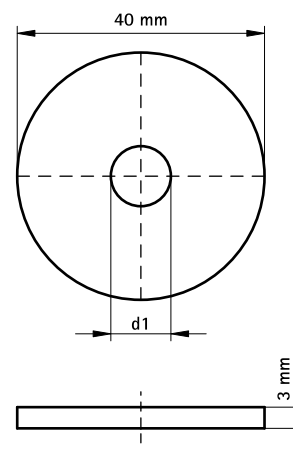


Features and Benefits

- flat washer
- material: steel 1.0332
- zinc plated
- tested for fire safety

Part No.	B (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
6533506	40	Ø 6.4	Strut	50	250
6533508	40	Ø 8.4	Strut	50	250
6533510	40	Ø 10.5	Strut	50	250
6533512	40	Ø 13.0	Strut	50	250

Ø 10.5 and above tested for fire safety.



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Alternative

- 287 BIS Strut Washer - Flat (BUP1000)
- 289 BIS Strut Washer - U-shaped (BUP1000)

BIS Strut Washer – U-shaped (BUP1000)

(H 24 92)

to make Strut rail fabrications



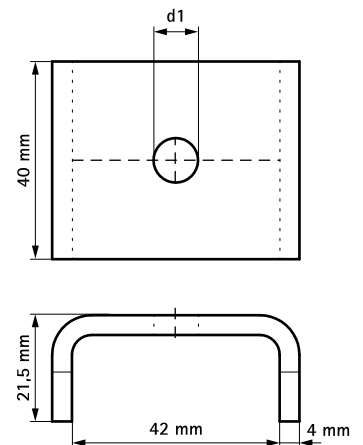
Features and Benefits

- U-shaped washer
- U-shaped for extra stability
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	d1 (mm)	For Rail	Pack 1
66588009	Ø 9.0	Strut	50
66588010	Ø 11.0	Strut	50
66588012	Ø 13.0	Strut	50
66588016	Ø 17.0	Strut	50

Ø 11.0 and above tested for fire safety.



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS RapidStrut® Rail Connector 90° G2 (BUP1000)

(H 28 04)

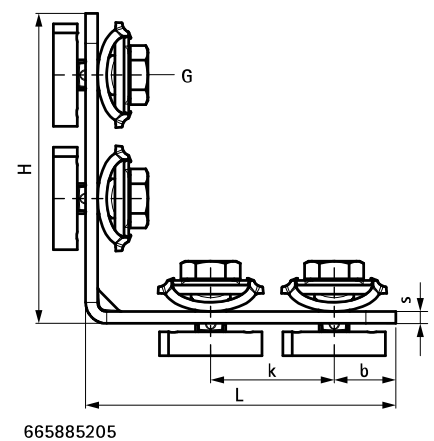
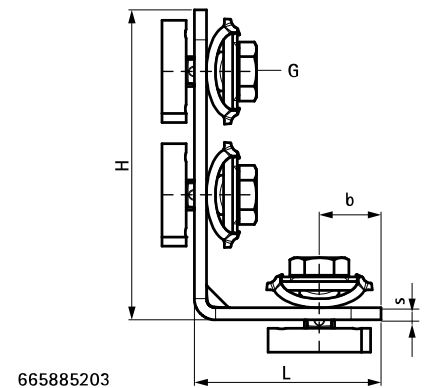
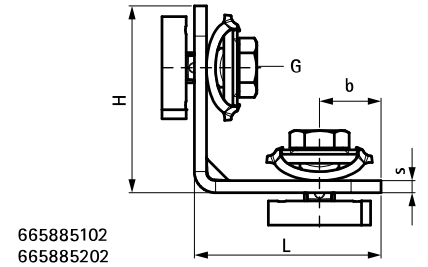
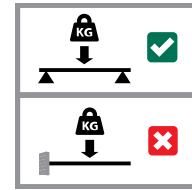
to make Strut rail fabrications



Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- to make fabrication with Strut Rail
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- 'Direct Twist' technology for easy and secure installation
- visual guide to check the position of the slide nut
- Part No. 66588520X: optimized for easy installation with electrical tools
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Model	Type	Thread (M)	L	H	b	s	k	a	T _(max.)	For Rail	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)	(°)	(Nm)		
665885102	Short / short	2 sides pre-assembled	M10	42 mm	62	20.5	4	-	90°	40.0	Strut	50
665885202	Short / short	2 sides pre-assembled	M10	62 mm	62	20.5	4	-	90°	40.0	Strut	50
665885203	Short / long	2 sides pre-assembled	M10	62 mm	103	20.5	4	-	90°	40.0	Strut	25



Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS Strut Connector 90° (BUP1000)

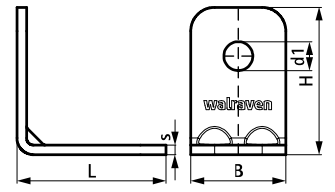
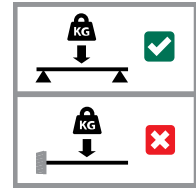
(H 28 13)



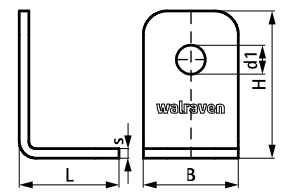
Features and Benefits

- angle connector for all Strut rails to make fabrications
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- user friendly by rounded edges
- with reinforced bend for extra strength
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

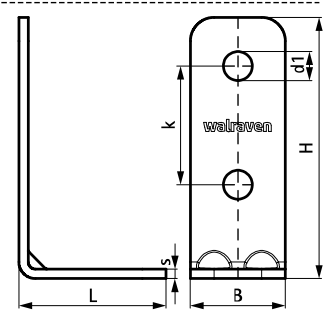
Part No.	Model	L	B	H	s	d1	k	a	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(°)	
66588207	Short / short	42 mm	40	62	4.0	Ø 12.2	-	90	50
66588221	Short / long	62 mm	40	110	4.0	Ø 12.2	50	90	25
66588228	Long / long	110 mm	40	110	4.0	Ø 12.2	50	90	25
66588201	Short / short	62 mm	40	62	4.0	Ø 12.2	-	90	50



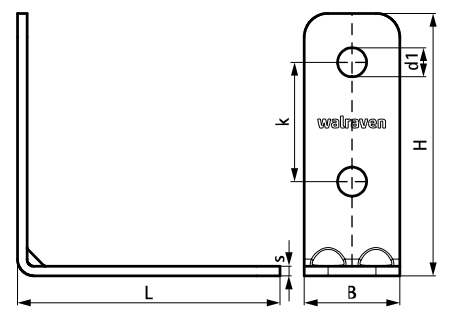
66588201



66588207



66588221



66588228

Complementary

- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)
- 348 BIS Yeti® 130 Support System

Alternative

- 290 BIS RapidStrut® Rail Connector 90° G2 (BUP1000)
- 292 BIS Strut Connector 90° / 2D (BUP1000)
- 293 BIS Strut Connector 90° Rigid (BUP1000)

BIS Strut Connector 90° / 2D (BUP1000)

(H 28 23)

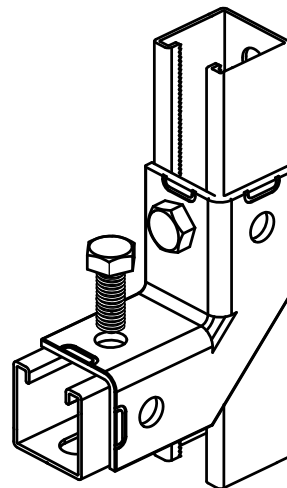
to make Strut rail fabrications



6659 8 914

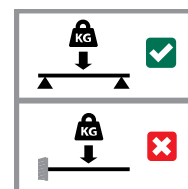


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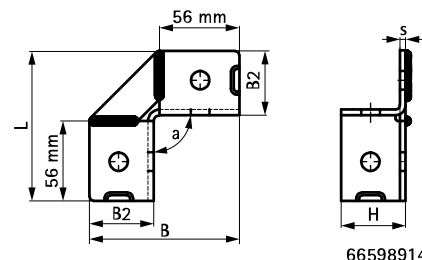


Features and Benefits

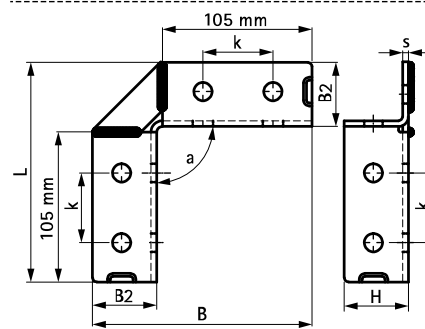
- flexible connector allows different rail positioning
- strong connection by surrounding the rail
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	d (mm)	Model	L	B	B2	H	s	k	a	For Rail	Pack 1
66598914	13 mm	2+2 / 90	105 mm	105	45	45	4.0	-	90	Strut	10
66598918	13 mm	4+4 / 90	154 mm	154	45	45	4.0	49	90	Strut	10



66598914



66598918

Complementary

- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 251 BIS RapidStrut® Cantilever Arm (BUP1000)

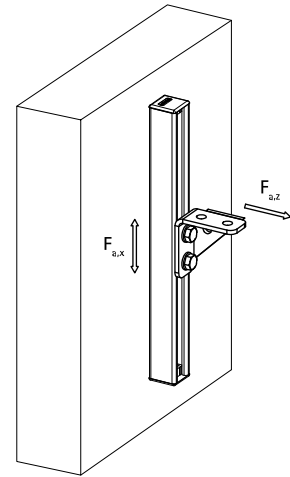
Alternative

- 290 BIS RapidStrut® Rail Connector 90° G2 (BUP1000)
- 293 BIS Strut Connector 90° Rigid (BUP1000)

BIS Strut Connector 90° Rigid (BUP1000)

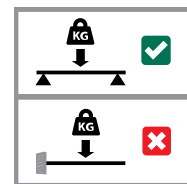
(H 28 25)

to make Strut rail fabrications



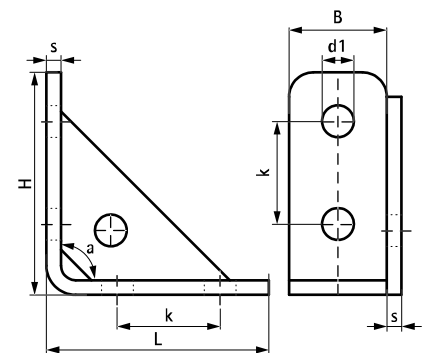
Features and Benefits

- reinforced connector to make rigid fabrications with Strut rails
- easy fitting due to rounded edges
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	L	B	H	s	d1	k	a	For Rail	F _{a,z}	F _{a,z 2}	F _{a,x}	F _{a,x 2}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(°)		(N)	(N)	(N)	(N)	
66588291	91 mm	40	91	6	∅ 13	42	90°	Strut	4,000	8,000	3,000	7,000	25

F_{a,z}: max. allowed load acc. RAL GZ-655D (with rail 41x41x1.5).
F_{a,z2}: max. allowed load (with rail 41x41x2.5).
F_{a,x}: max. allowed load acc. RAL GZ-655D (with rail 41x41x1.5 and bolted 2 x M12 - 30Nm).
F_{a,x2}: max. allowed load (with rail 41x41x2.5 and bolted 2 x M12 - 60Nm).



BIS Strut Connector, Hinged (BUP1000)

(H 28 40)

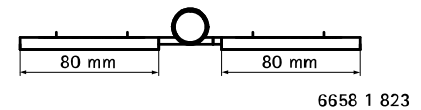
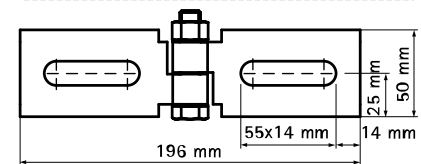
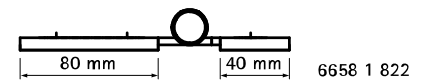
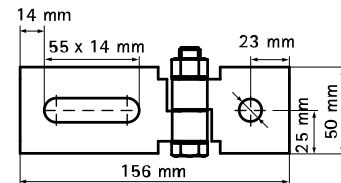
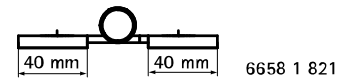
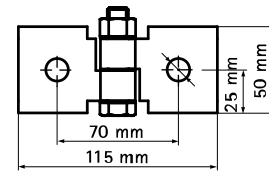
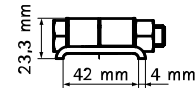
to make Strut rail fabrications



Features and Benefits

- to make fabrication with Strut Rail
- fully adjustable
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Model	For Rail	F _{a,z} (N)	Pack 1
66581821	Short / short	Strut	1,000	20
66581822	Short / long	Strut	1,000	20
66581823	Long / long	Strut	1,000	20



BIS RapidStrut® Rail Connector 135° G2 (BUP1000)

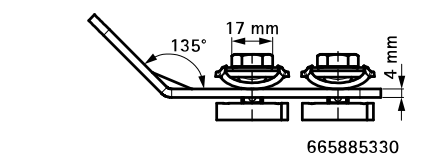
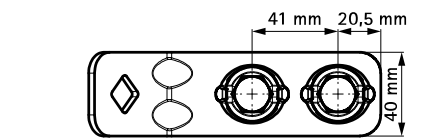
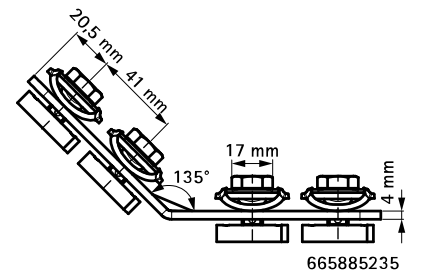
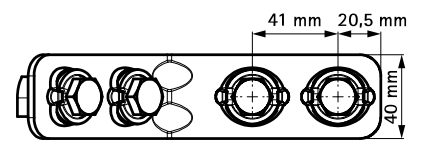
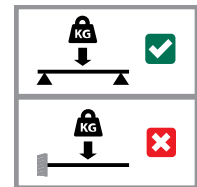
(H 28 54)

to make Strut rail fabrications



Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- to make fabrication with Strut Rail
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- 'Direct Twist' technology for easy and secure installation
- visual guide to check the position of the slide nut
- optimized for easy installation with electrical tools
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	Model	Type	a (°)	T _(max.) (Nm)	For Rail	Pack 1
665885235	Long / long	2 sides pre-assembled	135°	40.0	Strut	20
665885330	Short / long	1 side pre-assembled	135°	40.0	Strut	25

Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS Strut Angle Connector 135° (BUP1000)

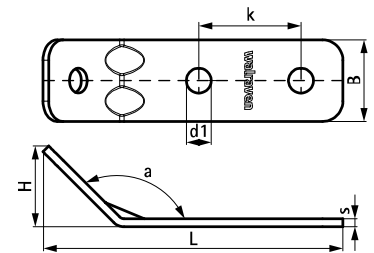
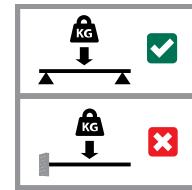
(H 28 63)



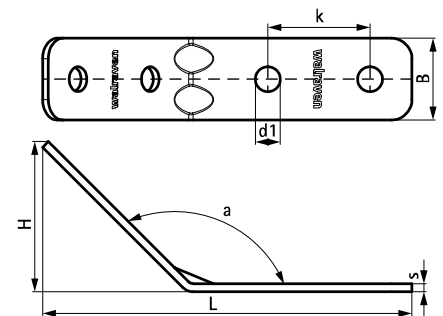
Features and Benefits

- angle connector for all Strut rails to make fabrications
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- user friendly by rounded edges
- with reinforced bend for extra strength
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Model	L	B	H	s	d1	k	a	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(°)	
66588242	Short / long	147 mm	40	39	4.0	∅ 12.2	50	135	25
66588256	Long / long	180 mm	40	80	4.0	∅ 12.2	50	135	25



66588242



66588256

Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 280 BIS RapidStrut® Slide Nut

Complementary

- 275 BIS Strut Slide Nut (BUP1000)
- 287 BIS Strut Washer - Flat (BUP1000)

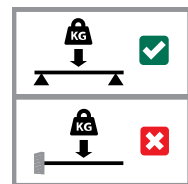
BIS Strut Angle Connector 45° (BUP1000)

(H 28 68)

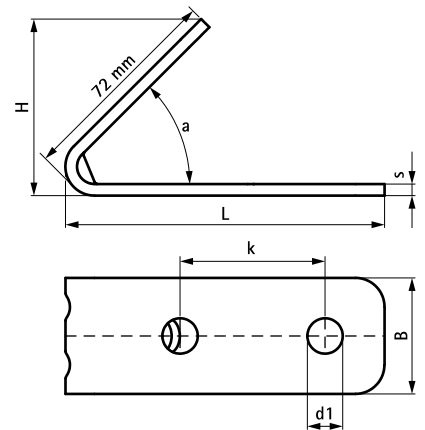


Features and Benefits

- angle connector for all Strut rails to make fabrications
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- user friendly by rounded edges
- with reinforced bend for extra strength
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	Model	L	B (mm)	H (mm)	s (mm)	d1 (mm)	k (mm)	a (°)	Pack 1
66588270	Short / long	110 mm	40	61	4.0	Ø 12.2	50	45	25



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 280 BIS RapidStrut® Slide Nut

Complementary

- 275 BIS Strut Slide Nut (BUP1000)
- 287 BIS Strut Washer - Flat (BUP1000)

BIS RapidStrut® Rail Connector G2 (BUP1000)

(H 28 74)

to make Strut rail fabrications

A

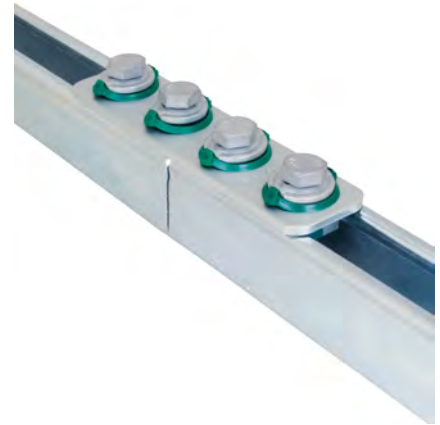


B



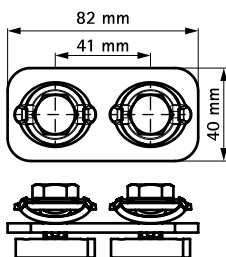
Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- to make fabrication with Strut Rail
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- 'Direct Twist' technology for easy and secure installation
- visual guide to check the position of the slide nut
- optimized for easy installation with electrical tools
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

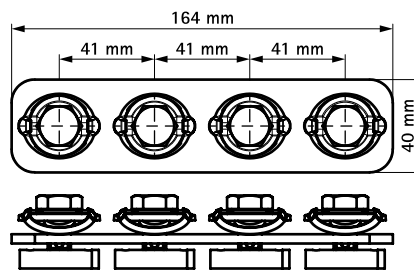


Part No.	Type	L	T _(max.) (Nm)	For Rail	Pack 1
A 665885184	2 x M10	82 mm	40.0	Strut	50
B 665885186	4 x M10	164 mm	40.0	Strut	25

A



B



Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Alternative

300 BIS RapidStrut® Rail Connector -

BIS Rectangular Connector

to make Strut rail fabrications

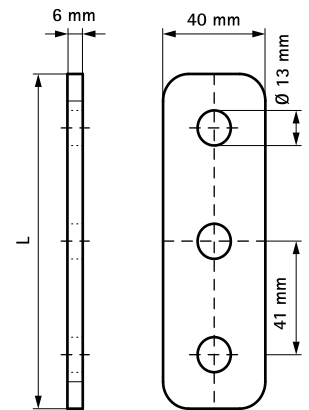
(H 28 85)



Features and Benefits

- flat connector
- to make fabrication with Strut Rail
- material: steel 1.0332
- hot dip galvanized

Part No.	Model	L	For Rail	Pack 1
66580312	3 holes	123 mm	Strut	50



BIS RapidStrut® Rail Connector – U-shaped G2 (BUP1000)

(H 28 89)

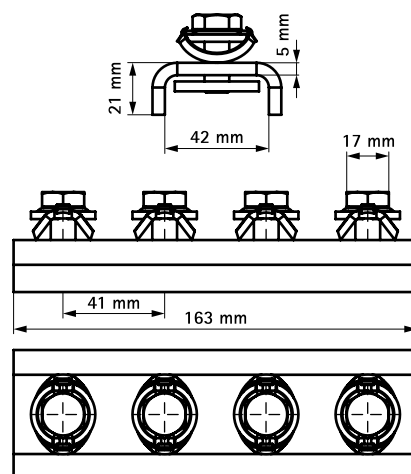
to make Strut rail fabrications



Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- to make fabrication with Strut Rail
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	T _(max.) (Nm)	For Rail	Pack 1
665885421	40.0	Strut	20



Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Alternative

298 BIS RapidStrut® Rail Connector G2 (BUP1000)

BIS Strut U-Connector linear (BUP1000)

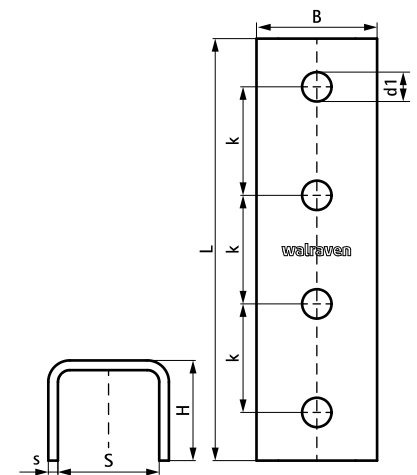
(H 28 103)



Features and Benefits

- U-shaped for extra stability
- longitudinal connector for all Strut rails
- for strong connections and in combination with Double Strut rails it is advised to use linear connectors on both sides of the rail
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	s	d1	S	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
66588121	175 mm	50	21.5	4.0	Ø 12.2	42	45	Strut 41x21 + 41x21D	20
66588141	175 mm	50	41.5	4.0	Ø 12.2	42	45	Strut 41x41 + 41x41D + 41x62 + 41x62D + 41x82	10



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 275 BIS Strut Slide Nut (BUP1000)

Complementary

- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)

Alternative

- 300 BIS RapidStrut® Rail Connector -

BIS RapidStrut® Rail T- and X-Connector G2 (BUP1000)

(H 28 109)

to make Strut rail fabrications

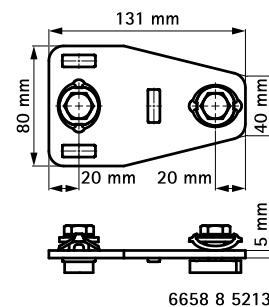


6658 8 5213

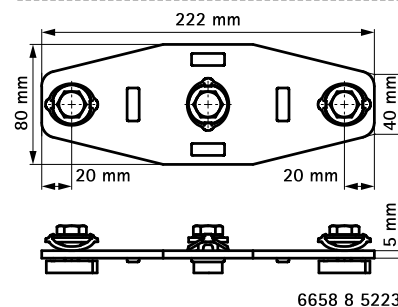
6658 8 5223

Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- to make fabrication with Strut Rail
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- 'Direct Twist' technology for easy and secure installation
- visual guide to check the position of the slide nut
- optimized for easy installation with electrical tools
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



6658 8 5213



6658 8 5223

Part No.	Type	T _(max.) (Nm)	For Rail	Pack 1
665885213	T	40.0	Strut	20
665885223	X	40.0	Strut	15

Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

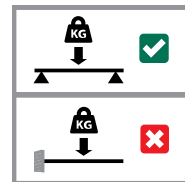
BIS Strut T-Connector (BUP1000)

(H 28 118)

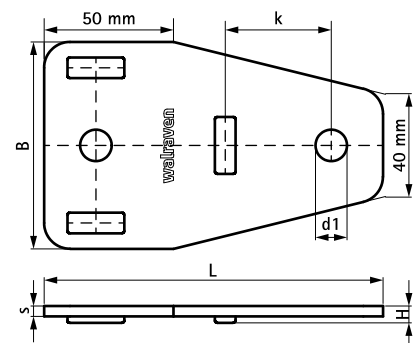


Features and Benefits

- T-connector for Strut rails
- extra safety by locking notches to prevent turning
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	L	B	H	s	d1	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)		
66588301	131 mm	80	6.5	4.0	Ø 12.2	41	Strut	25



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 275 BIS Strut Slide Nut (BUP1000)

Complementary

- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)

Alternative

- 302 BIS RapidStrut® Rail

BIS Strut Z-Bracket (BUP1000)

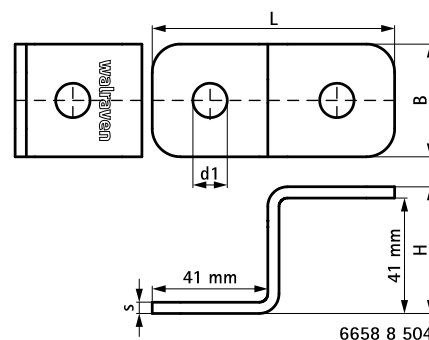
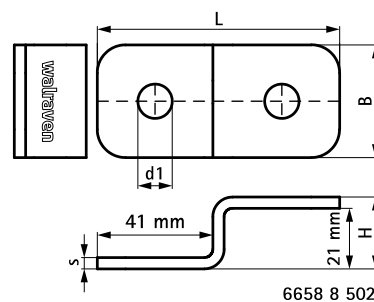
(H 28 128)



Features and Benefits

- to connect Strut rails to wall or ceiling
- connector to make Z-connections between Strut rails
- user friendly by rounded edges
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	L	B	H	s	d1	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)		
66588502	86 mm	40	25.5	4.0	Ø 12.2	Strut 41x21	50
66588504	86 mm	40	45	4.0	Ø 12.2	Strut 41x41 + 41x21D	50



Complementary

- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 275 BIS Strut Slide Nut (BUP1000)

Complementary

- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)

Alternative

- 305 BIS RapidStrut® Cross Connector G2 (BUP1000)

BIS RapidStrut® Cross Connector G2 (BUP1000)

(H 28 134)

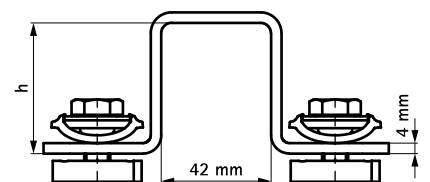
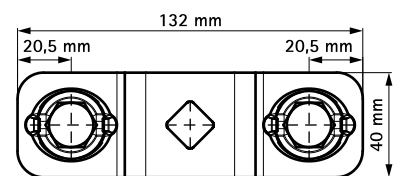
to make Strut rail fabrications



Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- to make fabrication with Strut Rail
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- 'Direct Twist' technology for easy and secure installation
- visual guide to check the position of the slide nut
- optimized for easy installation with electrical tools
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	h (mm)	T _(max.) (Nm)	For Rail	Pack 1
665885402	20	40.0	Strut 41x21	25
665885404	40	40.0	Strut 41x41	25
665885405	50	40.0	Strut 41x51 (BIS RapidStrut® DS 5)	25
665885406	60	40.0	Strut 41x62	15
665885408	80	40.0	Strut 41x82	10

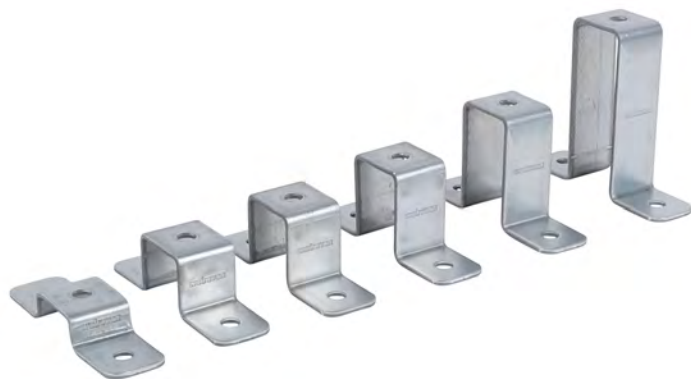


Complementary

245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

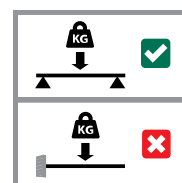
BIS Strut Cross Connector (BUP1000)

(H 28 143)

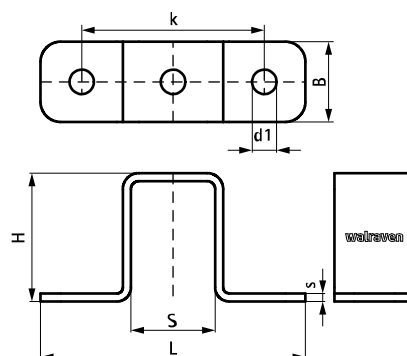


Features and Benefits

- connector to make cross connections between Strut rails
- to connect Strut rails to wall or ceiling
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- user friendly by rounded edges
- material: steel 1.0242 (S250GD) + ZM310 MAC
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	L	B	H	s	d1	S	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
66588292	141	40	24	4.0	12.2	42	100	Strut 41x21	25
66588294	141	40	44	4.0	12.2	42	100	Strut 41x41	25
66588295	141	40	54	4.0	12.2	42	100	Strut 41x51 (BIS RapidStrut® DS 5)	25
66588296	141	40	64	4.0	12.2	42	100	Strut 41x62	20
66588298	141	40	84	4.0	12.2	42	100	Strut 41x82	10
66588299	141	40	126	4.0	12.2	42	100	Strut 41x124	10



Complementary

- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 275 BIS Strut Slide Nut (BUP1000)

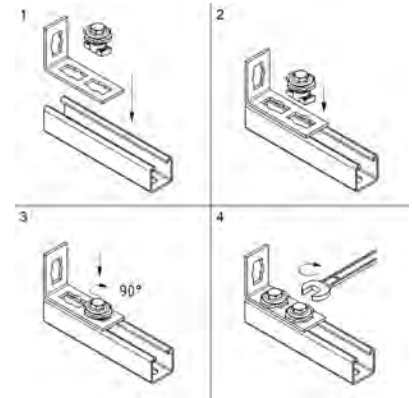
Complementary

- 280 BIS RapidStrut® Slide Nut
- 208 BIS Washer (Flat) (BUP1000)

BIS PushStrut Button

(H 29 05)

for easy installation of complex rail constructions

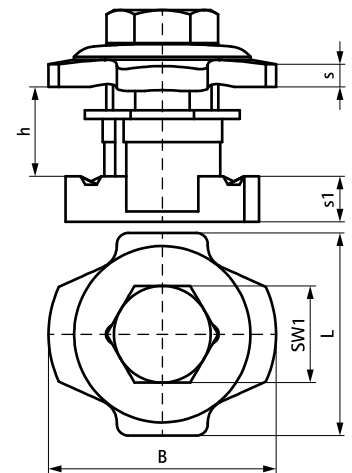


Features and Benefits

- universal button: easily combined with all common Strut profiles and all BIS PushStrut Connectors
 - teeth with force fit connections offer more stability
 - timesaving and flexible
 - easy to remove and reusable
 - 3D constructions due to 3D Connectors
- material: steel
 - zinc plated

Part No.	L	B	h	s	s1	SW1	$F_{a,z}$ (N)	$F_{a,x}$ (N)	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)			
66519910	36 mm	40	15	4.0	8.0	17	5,000	3,000	50

The max. allowed load ($F_{a,z}$) in the table refers to rails and cantilever arms with a material thickness of 2.5 mm. The $F_{a,z}$ at a thickness of 2.0 mm profile thickness = 4,500 N. The $F_{a,z}$ at a thickness of 1.5 mm profile thickness = 3,500 N.



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 309 BIS PushStrut Connector Flat
- 310 BIS PushStrut Construction Bracket Q (zp)

Complementary

- 311 BIS PushStrut Connector 90°
- 312 BIS PushStrut T-Connector
- 314 BIS PushStrut 3D Connector

BIS PushStrut Washer

(H 29 08)

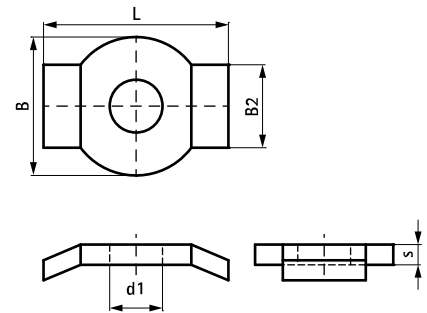
special washer for PushStrut accessories to install direct on building structure



Features and Benefits

- adapts the special hole into a standard hole
- material: steel
- zinc plated

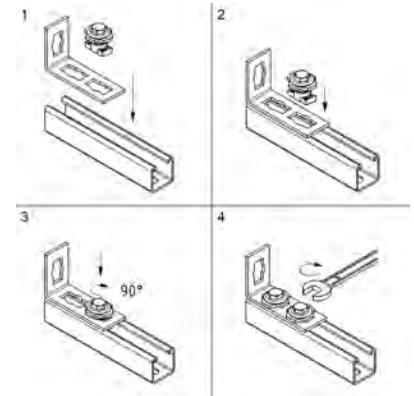
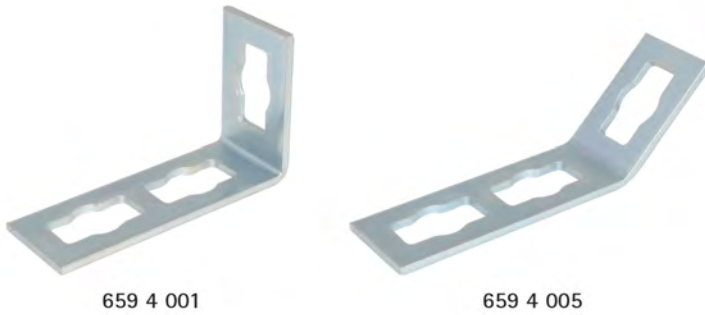
Part No.	L	B	B2	s	d1	Pack 1
6594000	37 mm	28 (mm)	17 (mm)	4.0 (mm)	10.5 (mm)	1



BIS PushStrut Connector Flat

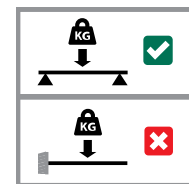
(H 29 10)

for easy installation of complex rail constructions

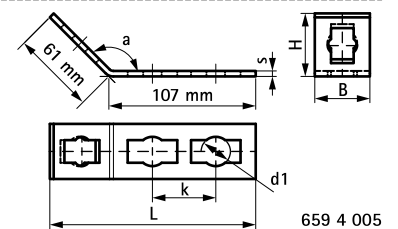
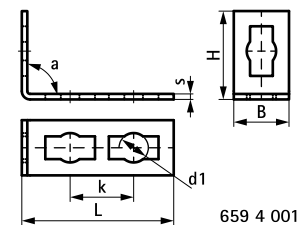


Features and Benefits

- easily combined with all common Strut profiles
- quick and easy to install
- closure button allows a force fit connection
- timesaving and flexible
- easy to remove and reusable
- 3D constructions due to 3D Connectors
- material: steel
- zinc plated



Part No.	L	B	H	s	d1	k	a	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(°)	
6594001	110 mm	40	64	4.0	21	46	90°	25
6594005	150 mm	40	46	4.0	21	46	135°	25



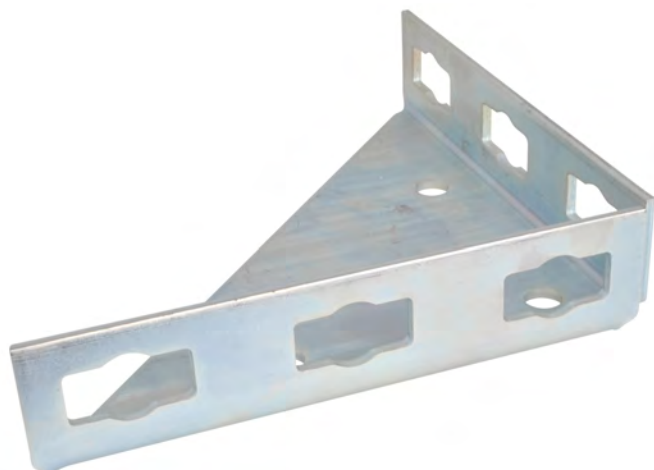
Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 307 BIS PushStrut Button

BIS PushStrut Construction Bracket Q (zp)

(H 29 15)

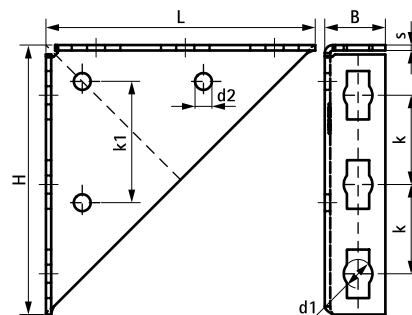
for easy installation of complex rail constructions



Features and Benefits

- easily combined with all common Strut profiles
- stable rail connection due to fixing to the building
- timesaving and flexible
- easy to remove and reusable
- 3D constructions due to 3D Connectors
- material: steel
- zinc plated

Part No.	L	B	H	s	d1	d2	k	k1	Pack 1
6594025	200 mm	45 (mm)	200 (mm)	4.0 (mm)	21 (mm)	13 (mm)	66 (mm)	90 (mm)	10



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 307 BIS PushStrut Button

BIS PushStrut Connector 90°

(H 29 20)

for easy installation of complex rail constructions



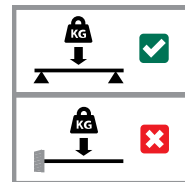
659 4 010



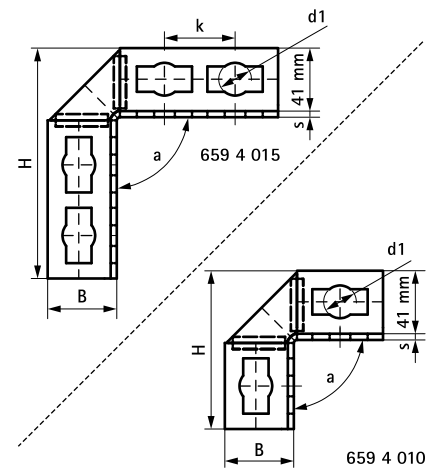
659 4 015

Features and Benefits

- easily combined with all common Strut profiles
 - lateral edges offers great stability
 - flexible use of hole pattern (flexible twist of hole pattern possible)
 - timesaving and flexible
 - easy to remove and reusable
 - 3D constructions due to 3D Connectors
- material: steel
 - zinc plated



Part No.	Model	B (mm)	H (mm)	s (mm)	d1 (mm)	k (mm)	a (°)	Pack 1
6594010	2-2	45	103	4.0	21	-	90	10
6594015	4-4	45	150	4.0	21	46	90	10



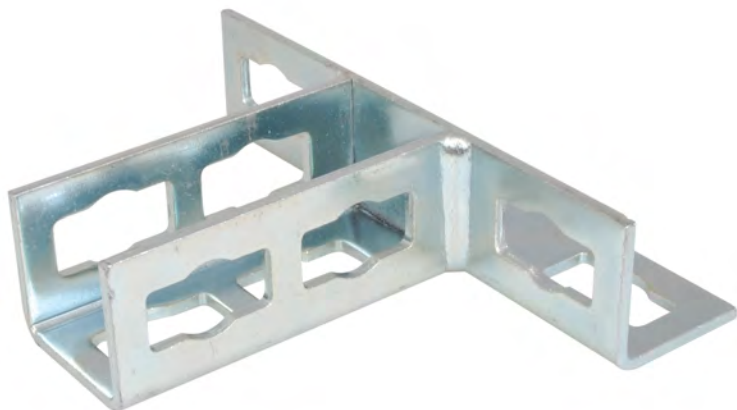
Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 307 BIS PushStrut Button

BIS PushStrut T-Connector

(H 29 25)

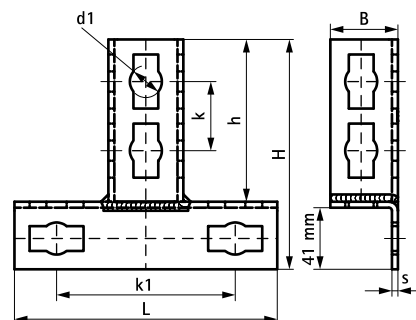
for easy installation of complex rail constructions



Features and Benefits

- easily combined with all common Strut profiles
- stable T-connection due to lateral edges
- flexible use of hole pattern (flexible twist of hole pattern possible)
- timesaving and flexible
- easy to remove and reusable
- 3D constructions due to 3D Connectors
- material: steel
- zinc plated

Part No.	L	B	H	h	s	d1	k	k1	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
6594020	175 mm	45	153	108	4.0	21	46	119	25



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 307 BIS PushStrut Button

BIS PushStrut Wallplate

for easy installation of complex rail constructions

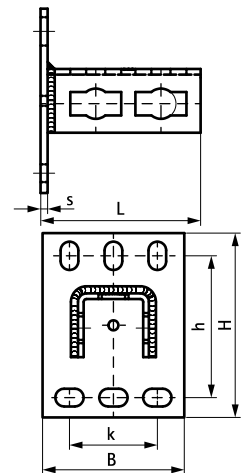
(H 29 28)



Features and Benefits

- easily combined with all common Strut profiles
- stable connection of rails to the floor, ceiling or wall
- timesaving and flexible
- easy to remove and reusable
- material: steel
- zinc plated

Part No.	L	B	H	h	s	k	$F_{a,z}$	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(N)	
6594035	113 mm	100	130	100	5.0	62	3,000	10



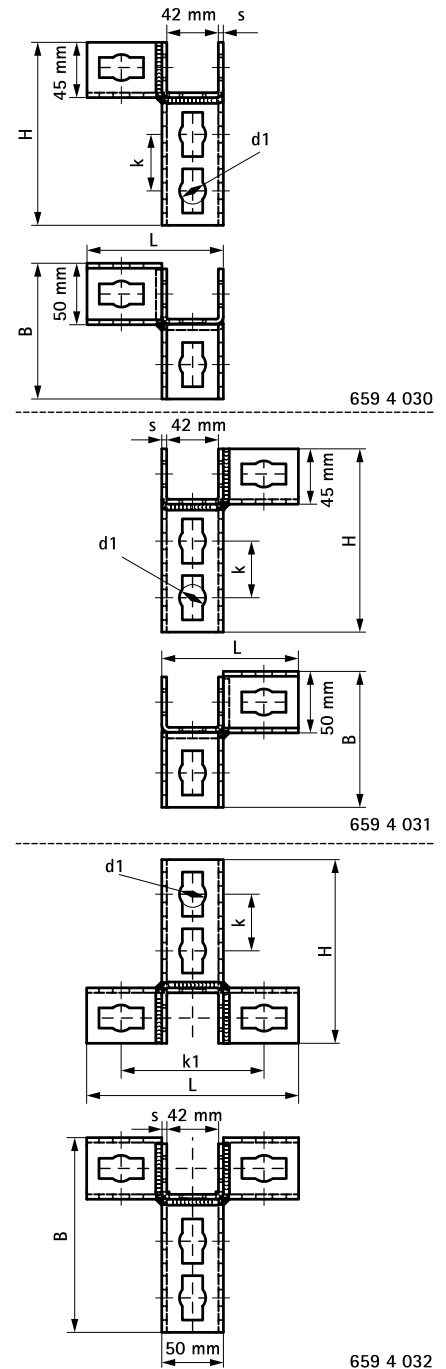
Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 307 BIS PushStrut Button

BIS PushStrut 3D Connector

(H 29 30)

for easy installation of complex rail constructions



Features and Benefits

- easily combined with all common Strut profiles
- 3D-Connector for complex frame and rail constructions
- universal and simple use
- timesaving and flexible
- easy to remove and reusable
- 3D constructions due to 3D Connectors
- material: steel
- zinc plated

Part No.	Model	L	B	H	s	d1	k	k1	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	
6594030	6-3-3-L (branch left)	111 mm	111	149	4.0	21	46	-	10
6594031	6-3-3-R (branch right)	111 mm	111	149	4.0	21	46	-	10
6594032	6-6-3-3 (branch left and right)	172 mm	158	149	4.0	21	46	116	10

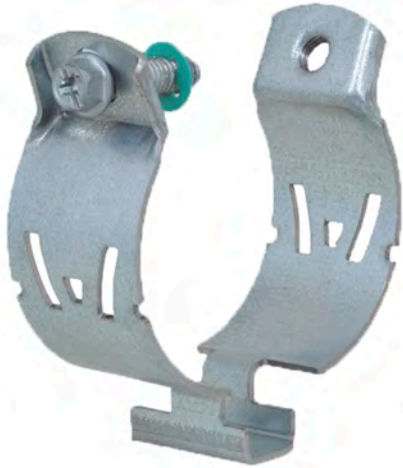
Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 307 BIS PushStrut Button

W1000 Strut Clamp

(H 32 215)

to be used with steel pipes and EMT conduit 18 - 60 mm



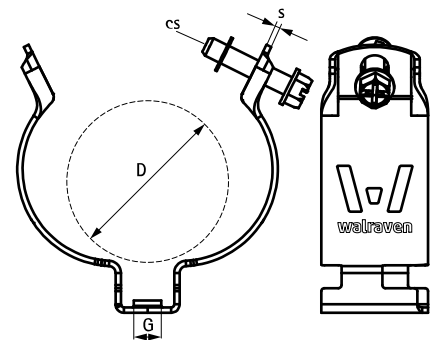
Features and Benefits

- the new alternative to the standard Strut Clamp
- 3-way use, on strut, on threaded rod, directly on wall or ceiling
- one-piece design - no loose parts
- easier, faster, safer - installs with one hand
- 3-way screw head - Phillips, flat and hex
- unique design allows one clamp to fit multiple pipe sizes - less items to stock
- W Series Clamps are boxed for easy handling - no more bags
- material: steel 1.0242
- surface treatment: high grade Zn-Mg based coating (600 hours salt spray)
- Test Reports:
 - Strength and corrosion:UL 1565 Listed



Part No.	D (mm)	D / IPS (")	D / EMT (")	G	s (mm)	cs	F _{a,z} (N)	F _{a,z} (lbs)	Pack 1
2015021	18 - 21	1/2	1/2	1/4"	1.25	1/4"	890	200	50
2015027	23 - 27	3/4	3/4	3/8"	1.25	1/4"	890	200	50
2015033	29 - 33	1	1	3/8"	1.25	1/4"	980	220	25
2015042	38 - 42	1-1/4	1-1/4	3/8"	1.25	1/4"	980	220	25
2015048	44 - 48	1-1/2	1-1/2	3/8"	1.50	1/4"	1,780	400	25
2015060	56 - 60	2	2	3/8"	1.50	1/4"	1,780	400	25

For additional testing information, please contact our Sales Office!



W2000 Cushion Clamp

(H 32 205)

to be used for metal pipe applications 9 - 63 mm



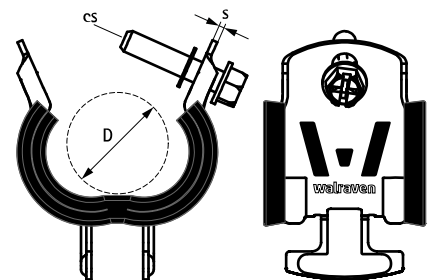
Features and Benefits

- the new alternative to the Cushion Clamp
- one-piece design - no loose parts
- easier, faster, safer - installs with one hand
- 3-way screw head - Phillips, flat and hex
- unique design allows one clamp to fit multiple pipe sizes - less items to stock
- W Series Clamps are boxed for easy handling - no more bags
- material: steel 1.0242
- surface treatment: high grade Zn-Mg based coating (600 hours salt spray)
- black EPDM rubber lining protects against galvanic corrosion
- noise/vibration insulating lining
- age resistant lining
- Test Reports:
 - Strength and corrosion:UL 1565 Listed
 - Noise emission:2016-SG-Bauakustik-1647-001-16



Part No.	D (mm)	D (")	D / CTS (")	D / ACR (")	D / IPS (")	s (mm)	cs	F _{a,z} (N)	F _{a,z} (lbs)	ULS	ULC	Pack 1
2025004	9 - 10	0.354 - 0.394	1/4	3/8	-	1.25	1/4"	890	200	ULS	ULC	50
2025006	11 - 13	0.433 - 0.512	3/8	1/2	-	1.25	1/4"	890	200	ULS	ULC	50
2025008	14 - 16	0.551 - 0.630	1/2	5/8	1/4	1.25	1/4"	890	200	ULS	ULC	50
2025010	17 - 19	0.670 - 0.748	5/8	3/4	3/8	1.25	1/4"	980	220	ULS	ULC	50
2025012	20 - 22	0.787 - 0.866	3/4	7/8	1/2	1.25	1/4"	980	220	ULS	ULC	50
2025014	25 - 29	0.984 - 1.142	1	1-1/8	3/4	1.50	1/4"	1,780	400	ULS	ULC	50
2025016	32 - 35	1.260 - 1.378	1-1/4	1-3/8	1	1.50	1/4"	1,780	400	ULS	ULC	50
2025018	37 - 40					1.50	1/4"	1,780		ULS	ULC	50
2025020	40 - 43	1.575 - 1.693	1-1/2	1-5/8	1-1/4	1.75	5/16"	1,780	400	ULS	ULC	25
2025022	48 - 50	1.890 - 1.969	-	-	1-1/2	1.75	5/16"	1,780	400	ULS	ULC	25
2025024	54 - 56	2.126 - 2.205	2	2-1/8	-	1.75	5/16"	1,780	400	ULS	ULC	25
2025026	60 - 63	2.362 - 2.480	-	-	2	1.75	5/16"	1,780	400	ULS	ULC	25

For additional testing information, please contact our Sales Office!



Complementary

247 BIS RapidStrut® Fixing Rail (BUP1000)

Alternative

317 W5000 Cushion Clamp

W5000 Cushion Clamp

(H 32 210)

to be used for plastic pipe applications 12 - 63 mm



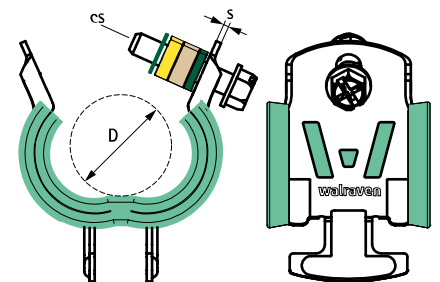
Features and Benefits

- the new alternative to the Cushion Clamp
- with removable spacer washers, making the clamp suitable for either sliding or anchoring
- one-piece design - no loose parts
- easier, faster, safer - installs with one hand
- 3-way screw head - Phillips, flat and hex
- W Series Clamps are boxed for easy handling - no more bags
- material: steel 1.0242
- surface treatment: high grade Zn-Mg based coating (600 hours salt spray)
- green EPDM rubber lining will prevent plasticiser migration
- noise/vibration insulating lining according DIN EN ISO 3822-1
- age resistant lining
- Test Reports:
 - Strength and corrosion:UL 1565 Listed
 - Plasticizer migration behaviour:2016-TR151002-V5
 - Noise emission:2016-SG-Bauakustik-1647-001-16



Part No.	D (mm)	D (")	D / CTS (")	D / IPS (")	s (mm)	cs	F _{a,z} (N)	F _{a,z} (lbs)	ULS	ULC	Pack 1
2055007	12 - 13	0.472 - 0.512	3/8	-	1.25	1/4"	890	200	ULS	ULC	50
2055008	14 - 15	0.512 - 0.591	-	1/4	1.25	1/4"	890	200	ULS	ULC	50
2055009	15 - 16	0.512 - 0.591	1/2	-	1.25	1/4"	890	200	ULS	ULC	50
2055010	17 - 18	0.630 - 0.748	-	3/8	1.25	1/4"	980	220	ULS	ULC	50
2055012	19 - 22	0.787 - 0.906	5/8 - 3/4	1/2	1.25	1/4"	980	220	ULS	ULC	50
2055013	24 - 25	0.984 - 1.142	-	-	1.50	1/4"	1,780	400	ULS	ULC	50
2055014	26 - 29	0.984 - 1.142	1	3/4	1.50	1/4"	1,780	400	ULS	ULC	50
2055016	32 - 35	1.260 - 1.378	1-1/4	1	1.50	1/4"	1,780	400	ULS	ULC	50
2055020	40 - 43	1.575 - 1.693	1-1/2	1-1/4	1.75	5/16"	1,780	400	ULS	ULC	25
2055022	47 - 49	1.850 - 1.929	-	1-1/2	1.75	5/16"	1,780	400	ULS	ULC	25
2055023	50 - 52	1.969 - 2.047	-	-	1.75	5/16"	1,780	400	ULS	ULC	25
2055024	53 - 54	2.087 - 2.126	2	-	1.75	5/16"	1,780	400	ULS	ULC	25
2055025	56 - 58	2.205 - 2.283	-	-	1.75	5/16"	1,780	400	ULS	ULC	25
2055026	60 - 63	2.362 - 2.480	-	2	1.75	5/16"	1,780	400	ULS	ULC	25

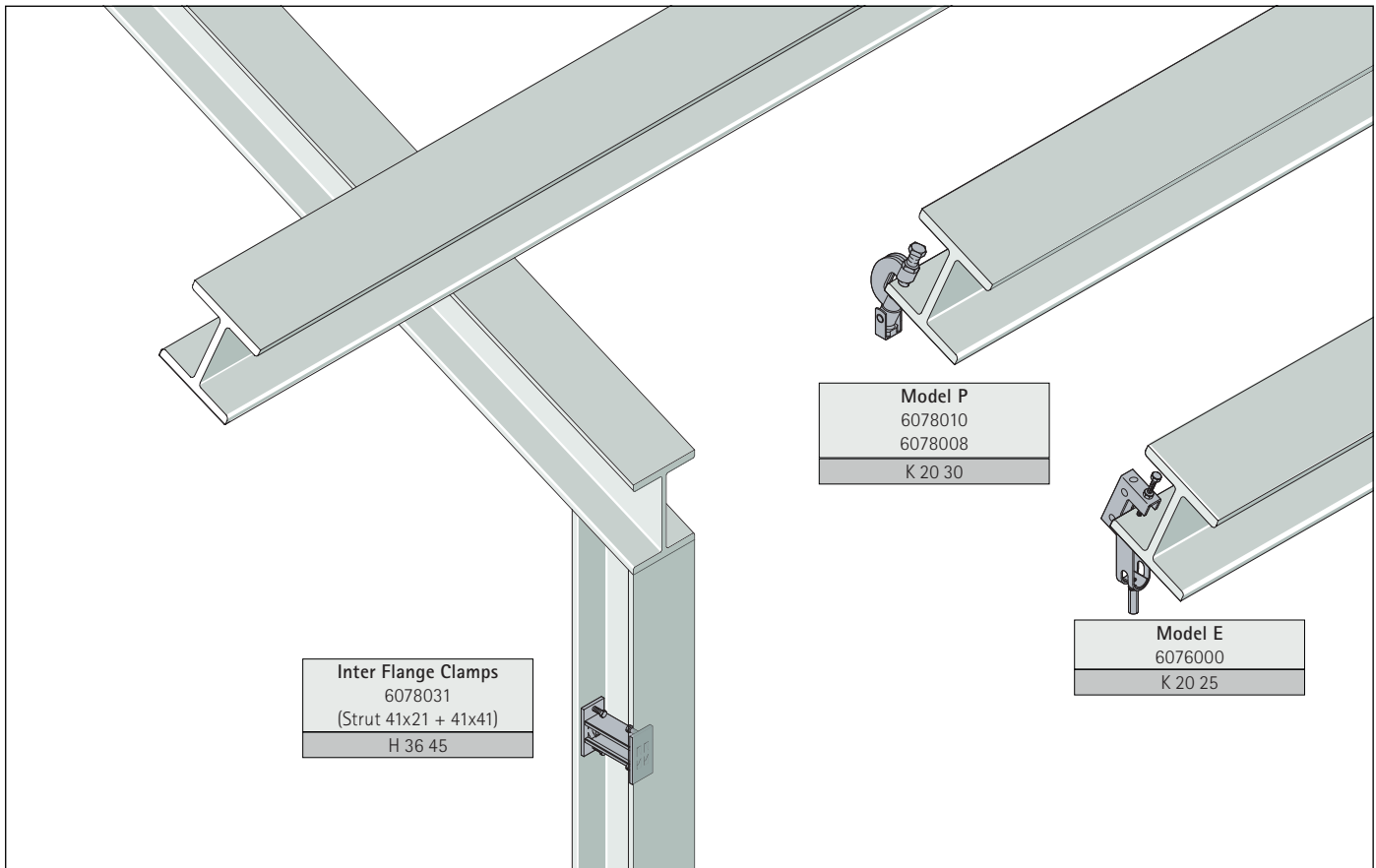
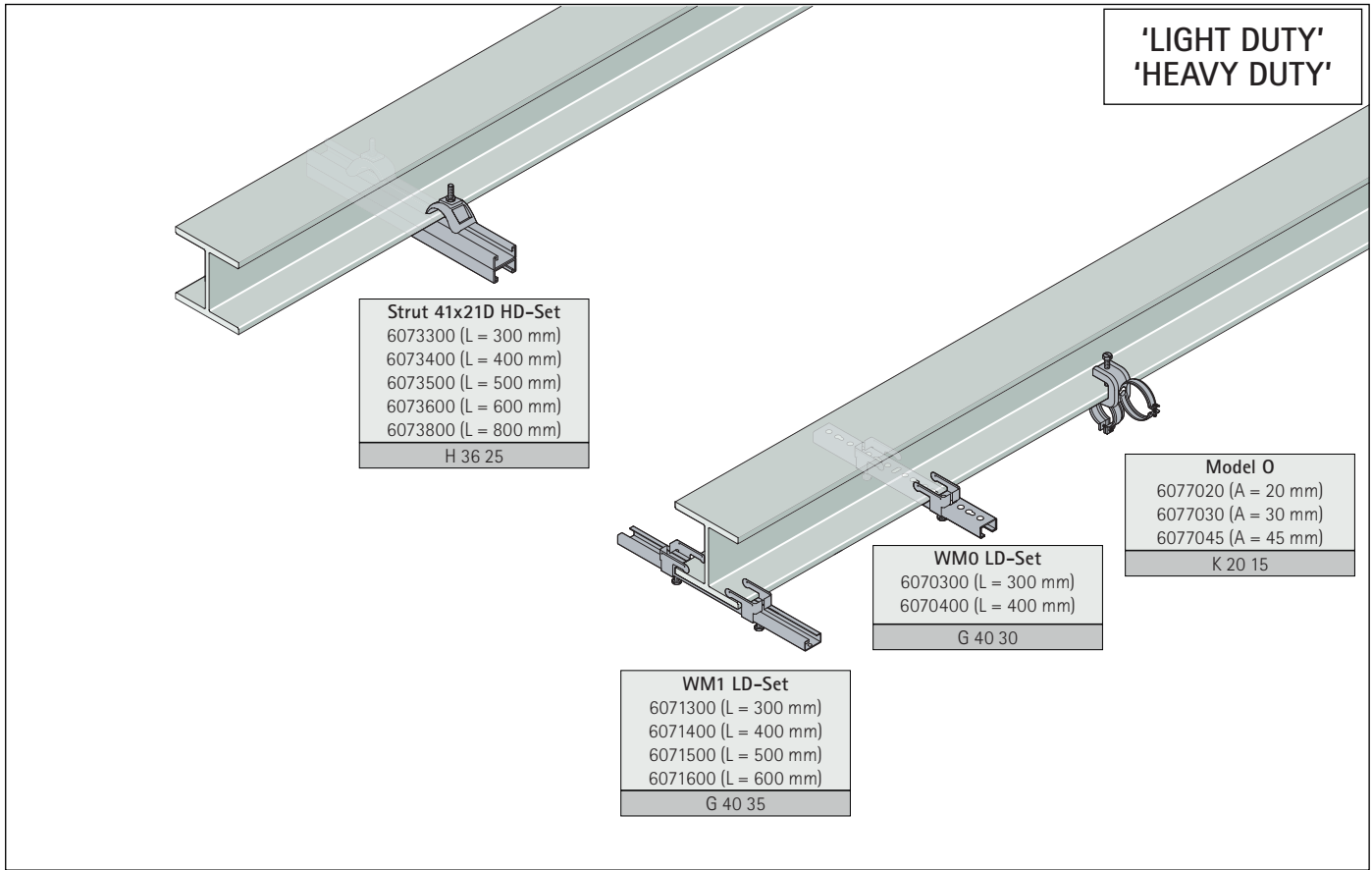
For additional testing information, please contact our Sales Office!



Complementary

247 BIS RapidStrut® Fixing Rail (BUP1000)

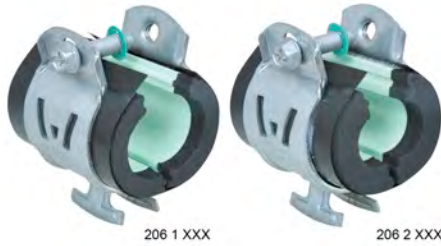
BIS Strut Fixing Sets (Electrical)



W6000 Insulated Clamp

(H 32 220)

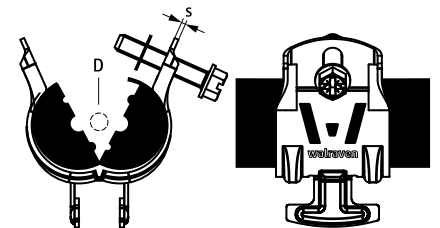
to be used with pipes that need to be insulated 6 - 43 mm



Features and Benefits

- for installation of thermal isolated steel, copper, stainless steel or plastic pipe
- one-piece design - no loose parts
- easier, faster, safer - installs with one hand
- 3-way screw head - Phillips, flat and hex
- available with 3/8" or 1/2" integrated thermal insulation block
- to be used in combination with soft insulation material
- vapour-proof gluing to pipe insulation
- excellent thermal and mechanical properties
- W Series Clamps are boxed for easy handling - no more bags
- material: Clamp: made of steel 1.0242; Insulation shell: PIR thermally hardening foam (core), synthetic rubber (sides) and vapor-proof layer of black PVC
- surface treatment: high grade Zn-Mg based coating (600 hours salt spray)

Part No.	D (mm)	D / CTS (")	D / ACR (")	Model	F _{a,z} (N)	F _{a,z} (lbs)	Pack 1
2061006	6 - 7	-	1/4	3/8" thermal insulation block	160	36	25
2061010	9 - 10	1/4	3/8	3/8" thermal insulation block	160	36	25
2061013	11 - 13	3/8	1/2	3/8" thermal insulation block	300	68	25
2061016	14 - 16	1/2	5/8	3/8" thermal insulation block	300	68	25
2061019	17 - 19	5/8	3/4	3/8" thermal insulation block	400	91	25
2061022	20 - 22	3/4	7/8	3/8" thermal insulation block	400	91	25
2061029	25 - 29	1	1-1/8	3/8" thermal insulation block	700	159	25
2061035	32 - 35	1-1/4	1-3/8	3/8" thermal insulation block	700	159	25
2061041	40 - 43	1-1/2	1-5/8	3/8" thermal insulation block	1,000	227	25
2062006	6 - 7	-	1/4	1/2" thermal insulation block	160	36	25
2062010	9 - 10	1/4	3/8	1/2" thermal insulation block	160	36	25
2062013	11 - 13	3/8	1/2	1/2" thermal insulation block	300	68	25
2062016	14 - 16	1/2	5/8	1/2" thermal insulation block	300	68	25
2062019	17 - 19	5/8	3/4	1/2" thermal insulation block	400	91	25
2062022	20 - 22	3/4	7/8	1/2" thermal insulation block	400	91	25
2062029	25 - 29	1	1-1/8	1/2" thermal insulation block	700	159	25
2062035	32 - 35	1-1/4	1-3/8	1/2" thermal insulation block	700	159	25
2062041	40 - 43	1-1/2	1-5/8	1/2" thermal insulation block	1,000	227	25
2063010	9 - 10	1/4	3/8	3/4" thermal insulation block	160	36	25
2063013	11 - 13	3/8	1/2	3/4" thermal insulation block	300	68	25
2063016	14 - 16	1/2	5/8	3/4" thermal insulation block	300	68	25
2063019	17 - 19	5/8	3/4	3/4" thermal insulation block	400	91	25
2063022	20 - 22	3/4	7/8	3/4" thermal insulation block	400	91	25
2063029	25 - 29	1	1-1/8	3/4" thermal insulation block	700	159	25
2063035	32 - 35	1-1/4	1-3/8	3/4" thermal insulation block	700	159	25



BIS Strut Clamp with Lining

(H 32 05)

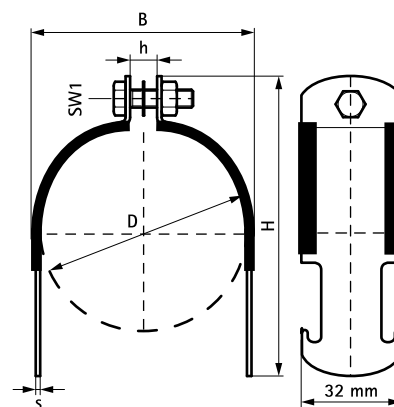
for metal pipes \varnothing 85 - 315 mm



Features and Benefits

- two-part clamp
- for direct fixing of pipes to Strut Rail
- both ends suitable for locating into Strut Rail
- material: steel 1.0226
- pre-galvanized
- sound insulating lining according DIN 4109
- noise insulating lining, EPDM rubber, black

Part No.	D (mm)	D (°)	DN	B (mm)	H (mm)	h (mm)	s (mm)	SW1 (mm)	Pack 1
2105090	85 - 90	3	80	98	134	12	2.0	13	50
2105110	105 - 110	-	-	117	159	17	2.5	17	50
2105140	130 - 140	5	125	147	189	17	2.5	17	25
2105160	150 - 160	-	-	165	210	17	3.0	17	25
2105200	190 - 200	-	-	208	244	17	3.0	17	25
2105225	215 - 225	8	200	233	276	17	3.0	17	25
2105250	240 - 250	-	-	258	301	17	3.0	17	25
2105315	315	-	-	323	366	17	3.0	17	25



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 246 BIS RapidStrut® Fixing Rail (pg)

Alternative

- 321 BIS Strut Clamp

BIS Strut Clamp

for steel pipes \varnothing 9 - 250 mm

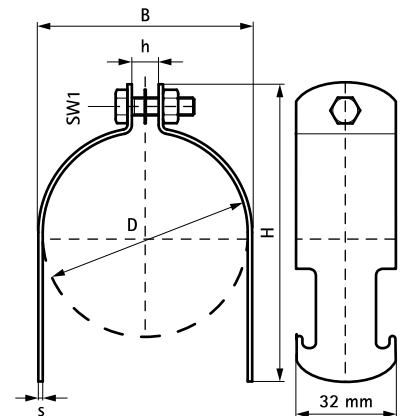
(H 32 10)



Features and Benefits

- two-part clamp
- for direct fixing of pipes to Strut Rail
- both ends suitable for locating into Strut Rail
- pre-galvanized
- material: steel 1.0226

Part No.	D (mm)	D (°)	DN	B (mm)	H (mm)	h (mm)	s (mm)	SW1 (mm)	Pack 1
2005012	10 - 12	1/8	6	15	49	5.0	1.5	10	100
2005014	12 - 14	1/4	8	17	51	5.0	1.5	10	100
2005016	14 - 16	-	-	19	53	5.0	1.5	10	100
2005018	16 - 18	3/8	10	21	55	7.5	1.5	10	100
2005022	20 - 22	1/2	15	25	58	10.0	1.5	10	100
2005026	22 - 26	-	-	29	62	10.0	1.5	10	100
2005030	26 - 30	3/4	20	33	67	10.0	1.5	10	100
2005040	35 - 40	-	-	43	77	10.0	1.5	10	100
2005050	45 - 50	1 1/2	40	54	88	10.0	2.0	13	100
2005055	50 - 55	-	-	59	93	10.0	2.0	13	100
2005060	55 - 60	-	-	64	98	10.0	2.0	13	100
2005070	65 - 70	-	-	74	108	10.0	2.0	13	100
2005075	70 - 75	-	-	79	113	10.0	2.0	13	50
2005085	80 - 85	-	-	89	123	10.0	2.0	13	50
2005090	85 - 90	3	80	94	128	10.0	2.0	13	50
2005095	90 - 95	-	-	99	133	10.0	2.0	13	50
2005100	95 - 100	-	-	104	138	10.0	2.0	13	50
2005105	100 - 105	-	-	110	148	15.0	2.5	17	50
2005110	105 - 110	-	-	115	153	15.0	2.5	17	50
2005120	110 - 120	4	100	125	163	15.0	2.5	17	50
2005130	120 - 130	-	-	135	173	15.0	2.5	17	25
2005140	130 - 140	5	125	145	183	15.0	2.5	17	25
2005150	140 - 150	-	-	155	193	15.0	2.5	17	25
2005170	160 - 170	6	150	176	214	15.0	3.0	17	25
2005200	190 - 200	-	-	206	244	15.0	3.0	17	25
2005225	215 - 225	8	200	231	269	15.0	3.0	17	25
2005250	240 - 250	-	-	256	294	15.0	3.0	17	25



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 246 BIS RapidStrut® Fixing Rail (pg)

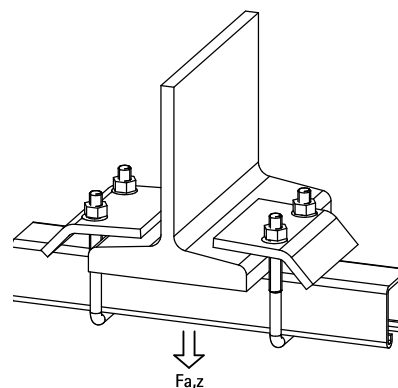
Alternative

- 320 BIS Strut Clamp with Lining

BIS Strut Rail Beam Clamp

(H 36 05)

to make Strut rail fabrications

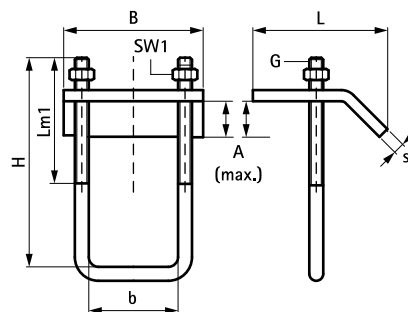


Features and Benefits

- for a solid fixing to steel construction
- hot dip galvanized
- without the need for welding or drilling
- always use 2 beam clamps per fixing
- material: steel 1.0332

Part No.	A (mm)	G	L	B (mm)	H (mm)	b (mm)	s (mm)	Lm1 (mm)	SW1 (mm)	T _{inst} (Nm)	For Rail	F _{a,z} (N)	Pack 1
66581711	17.5	M10	69 mm	80	90		5.5	60	17	15	Strut 41x21 + 41x41 + 41x21D	5,700	25
66581721	20.0	M10	69 mm	80	130	44	6.0	75	17	15	Strut 41x62 + 41x82 + 41x41D + DS 5 (41 x 51)	5,700	25

Also available in stainless steel 1.4401 (AISI 316).



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Complementary

- 249 BIS RapidStrut® Fixing Rail Double (pg)

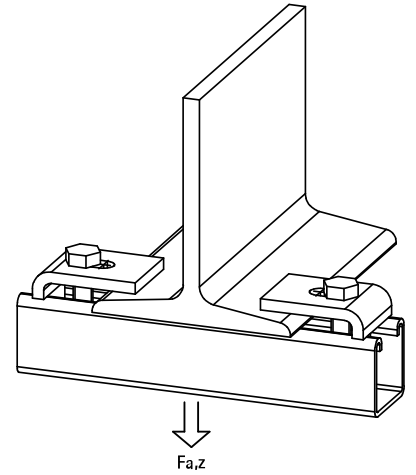
Alternative

- 327 BIS Strut 'Heavy Duty' Beam Clamp
- 326 BIS Strut 41x21D 'Heavy Duty' Set

BIS Strut Rail Beam Clamp

(H 36 10)

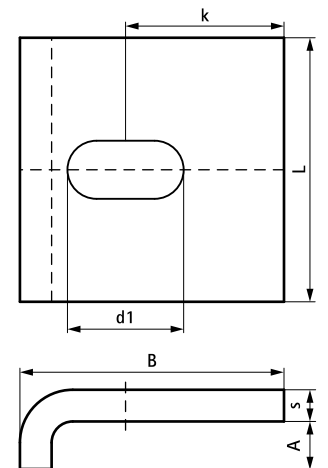
to make Strut rail fabrications



Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- always use 2 beam clamps per fixing
- material: steel 1.0332
- zinc plated

Part No.	A (mm)	L	B (mm)	s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1
66583741	15	50 mm	50	6.0	22 x 11	30	8,000	50



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 249 BIS RapidStrut® Fixing Rail Double (pg)

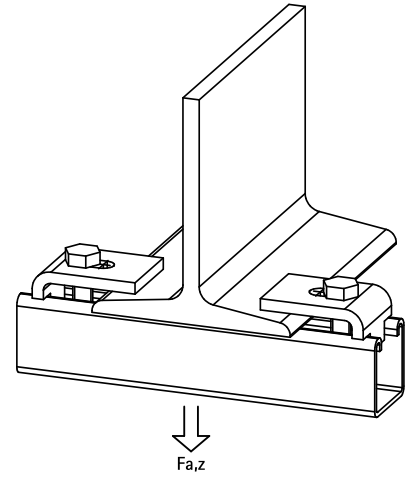
Alternative

- 322 BIS Strut Rail Beam Clamp
- 327 BIS Strut 'Heavy Duty' Beam Clamp
- 326 BIS Strut 41x21D 'Heavy Duty' Set

BIS Strut Rail Beam Clamp

(H 36 15)

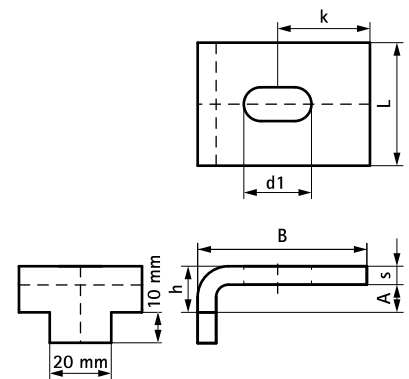
to make Strut rail fabrications



Features and Benefits

- for a solid fixing to steel construction
- zinc plated
- without the need for welding or drilling
- always use 2 beam clamps per fixing
- material: steel 1.0332

Part No.	A (mm)	L (mm)	B (mm)	h (mm)	s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1
66583761	15	40 mm	55	20	6.0	22 x 11	30	8,300	50



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 249 BIS RapidStrut® Fixing Rail Double (pg)

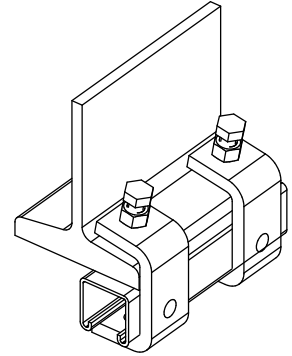
Alternative

- 326 BIS Strut 41x21D 'Heavy Duty' Set
- 327 BIS Strut 'Heavy Duty' Beam Clamp
- 322 BIS Strut Rail Beam Clamp

BIS Strut Beam Clamp

to make Strut rail fabrications

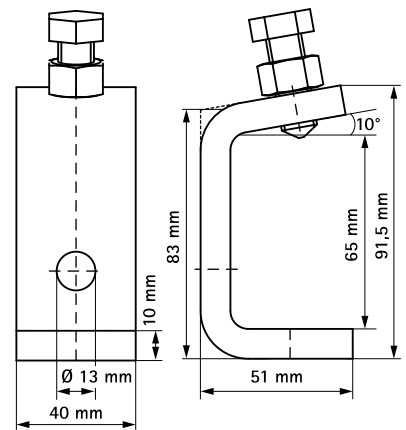
(H 36 20)



Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- always use 2 beam clamps per fixing
- material: steel 1.0332

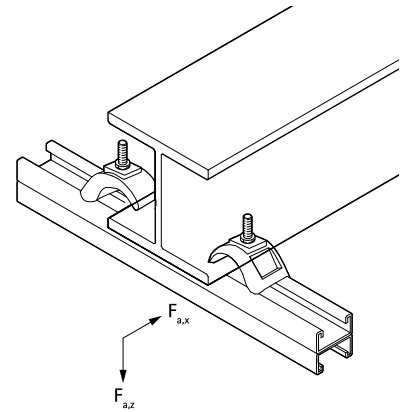
Part No.	For Rail	F _{a,z} (N)	ST	Pack 1
66583736	Strut 41x41 + 41x21D	4,500	zinc plated	25



BIS Strut 41x21D 'Heavy Duty' Set

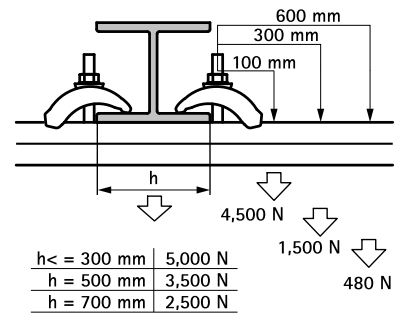
(H 36 25)

fixing to steel beam up to flange 35 mm



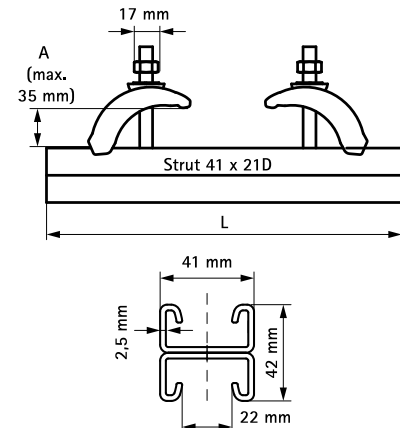
Features and Benefits

- solid cast iron beam clamp for suspension of heavy loads onto beams without welding or drilling
- up to flange thickness 35 mm
- material: beam clamp made of steel; rail made of steel 1.0332
- hot dip galvanized
- consists of:
 - 1 length of Strut Rail 41x21D
 - 2 Beam clamps (Part No. 607 2 002)
 - 4 Rail End Caps
 - beam clamp also available loose



Part No.	A (mm)	L	T _(max.) (Nm)	From Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1
6073400	< 35	400 mm	30.0	Strut 41x21D	5.000*	1,500	4
6073600	< 35	600 mm	30.0	Strut 41x21D	5.000*	1,500	4
6073800	< 35	800 mm	30.0	Strut 41x21D	5.000*	1,500	1

* $h \leq 300 \text{ mm}$, see drawing on the right side.



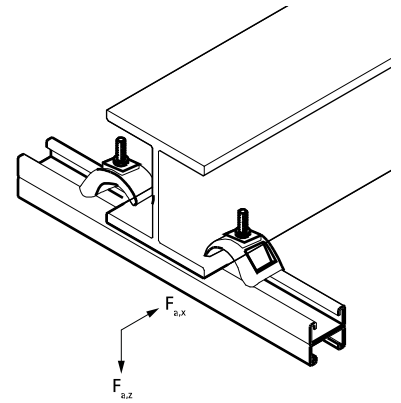
Complementary

- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)
- 283 BIS RapidStrut® Hammerfix 'U' G2 (BUP1000)

BIS Strut 'Heavy Duty' Beam Clamp

(H 36 40)

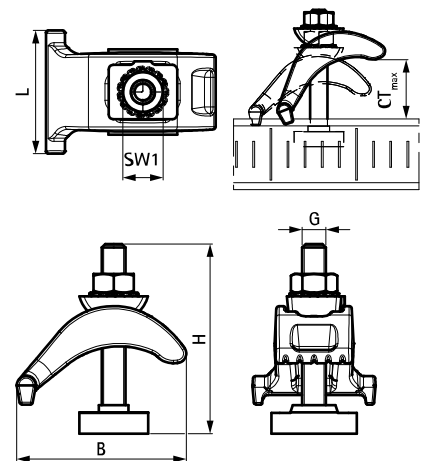
fixing to steel beam up to flange 35 mm



Features and Benefits

- solid cast iron beam clamp for suspension ■ hot dip galvanized
- of heavy loads onto beams without welding or drilling
- up to flange thickness 35 mm
- for fixing of all Strut to a steel beam
- material: steel

Part No.	G	L	B	H	CT _{max}	SW1	T _(max.)	For Rail	F _{a,z}	F _{a,x}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(Nm)		(N)	(N)	
6072002	M10	52 mm	72	80	35	17	30.0	Strut	8,000	1,500	25
<i>F_{a,z}: max. allowed load acc. RAL GZ-655 / D-3.3.</i>											



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)

Complementary

- 249 BIS RapidStrut® Fixing Rail Double (pg)
- 250 BIS RapidStrut® Fixing Rail Double (hdg)

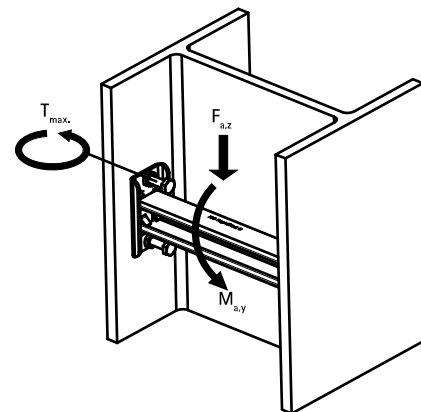
Alternative

- 326 BIS Strut 41x21D 'Heavy Duty' Set

BIS Strut Inter Flange Clamp

(H 36 50)

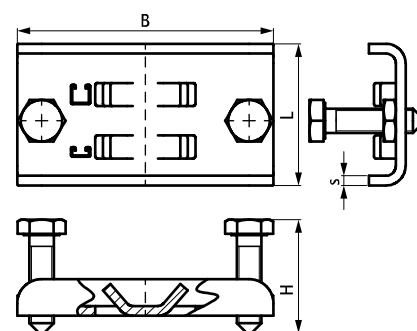
fixing to steel beam



Features and Benefits

- set of two clamping plates, to be installed in combination with Strut Rail
- for connecting installation between the flanges of I- or U-profile steelwork without drilling or welding
- material: clamp made of steel 1.0242 (S250GD); hexagon head bolts M10x40 with tip: steel class 8.8 (EN-ISO 898-1); hexagon thin nuts M10 DIN 439-B: steel class 04 (EM-ISO 898-2)
- clamp: ZM310-MAC (pre-galvanized); fasteners: zinc plated ISO 2081-Fe/Zn5/A (EN ISO 2081:2008)

Part No.	L	B	H	s	T _(max.)	For Rail	F _{a,z}	M _{a,y}	Pack 1
		(mm)	(mm)	(mm)	(Nm)		(N)	(Nm)	
6078031	58	105	46	4	25.0	Strut 41x21 + 41x41	2,100	75.0	10



Complementary

- 246 BIS RapidStrut® Fixing Rail (pg)
- 271 BIS RapidStrut® Slide Nut G2 (BUP1000)
- 282 BIS RapidStrut® Hammerfix G2 (BUP1000)

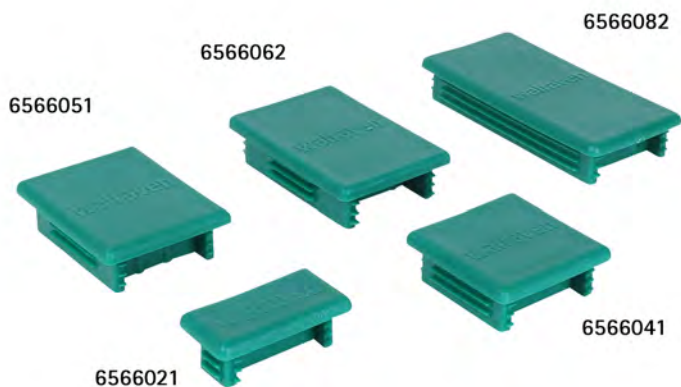
Complementary

- 273 BIS RapidStrut® Slide Nut MS (ZP)

BIS Strut Rail End Cap

(H 39 05)

finishing of Strut Rail



Features and Benefits

- for clean finishing of rail end, covers all burrs
- material: PE (polyethylene), green
- easy to fix securely

Part No.	For Rail	Pack 1	Pack 2
6566021	Strut 41x21	50	2,500
6566041	Strut 41x41	50	1,500
6566051	Strut 41x51 (BIS RapidStrut® DS 5)	40	200
6566062	Strut 41x62	50	500
6566082	Strut 41x82	50	500

Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 246 BIS RapidStrut® Fixing Rail (pg)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS Strut PVC Profile (BUP1000)

(H 39 15)

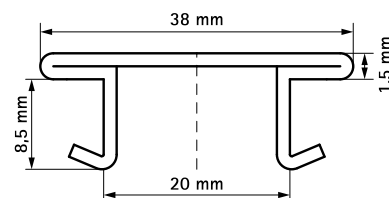
finishing of Strut Rail



Features and Benefits

- closing strip for rail
- reduces the risk of dirt / moisture ingress
- aesthetic finish
- simplifies cleaning / maintenance
- material: PVC (polyvinylchloride), white

Part No.	L	For Rail	Pack 1
6566999	3 m	Strut	25



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 246 BIS RapidStrut® Fixing Rail (pg)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

BIS Strut Rubber Strip

noise insulation lining for Strut rail

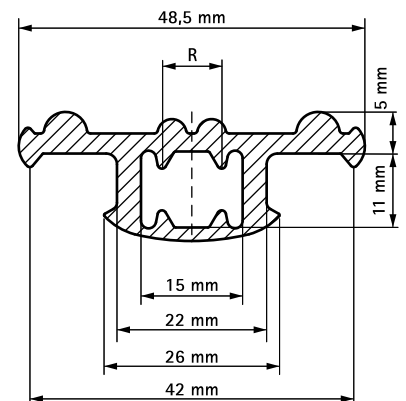
(H 39 20)



Features and Benefits

- push in strip
 - noise insulating lining for rail
 - also usable for threaded rod M6, M8 or M10
 - building material class B2 according to DIN 4102-1 and class E according to EN 13501-1
 - sound insulating lining according DIN 4109
- material: EPDM rubber, black

Part No.	R	L	For Rail	Pack 1
6568041	1/4 - 1/2"	30 m	Strut	30
6568042	1/4 - 1/2"	50 mm	Strut	50



Complementary

- 251 BIS RapidStrut® Cantilever Arm (BUP1000)
- 246 BIS RapidStrut® Fixing Rail (pg)
- 245 BIS RapidStrut® Fixing Rail DS 5 (BUP1000)

Calculation method

The published safe working loads are calculated with perforated (slotted) rail.

Loads are calculated taking into consideration a maximum deflection (f) of L/200 (according to RAL-GZ 655/B) and a maximum bending stress of 160 N/mm² (see picture 1).

1 N (Newton) = 0,102 kg
1 kg = 9,8 N (Newton)

Fixing of rails to walls or ceilings

The strength of the anchoring of the rail has not been taken into consideration. The installer must verify that the bolts and wall plugs used are suitable for the maximum permitted loading of the rail.

Reading the rail loading tables

The stated values are only valid for the fixing rail. The maximum safe load of all other construction parts have to be verified. The stated maximum safe load is calculated for a static load at free bending support (see picture 2).

Where the segment is marked with a hyphen, the stated length cannot be safely loaded.

Special conditions

In case of doubt or for special conditions not stated in the loading tables, please do not hesitate to contact our technical department for their advice.

Hanging of rails from the ceiling

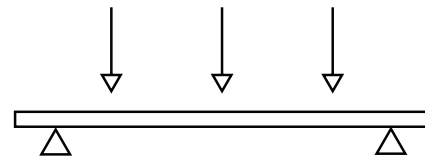
When hanging rails from the ceiling we recommend the use of U-formed washers on the open side of the rail (see picture 3).

Methods of loading

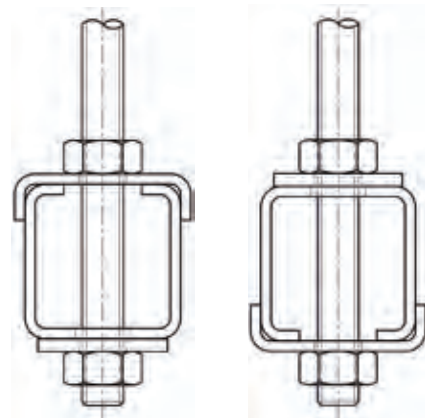
Where loads are suspended beneath rails (e.g. hanging pipes), the load must not exceed the relevant safe load of the slide nut. To increase rigidity of the installation we recommend the use of a U-formed washer (see picture 4).



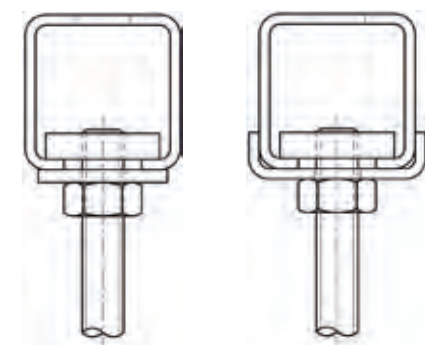
Picture 1



Picture 2

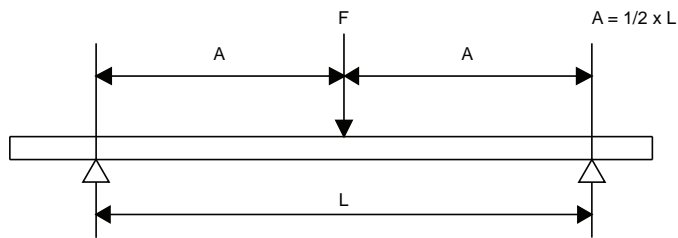


Picture 3



Picture 4

BIS RapidStrut® Fixing rail: suspension on 1 point



L (mm)	Single									Double			
	41x21 x1.5	41x21 x2.0	41x21 x2.5	41x41 x1.5	41x41 x2.0	41x41 x2.5	41x51 x2.0	41x62 x2.5	41x82 x2.5	41x21D	41x41D	41x62D	41x82D
250	1,848	2,153	2,381	5,427	6,556	7,611	8,812	14,730	23,035	7,081	22,797	46,461	75,937
300	1,540	1,794	1,984	4,523	5,463	6,342	7,343	12,275	19,196	5,901	18,997	38,718	63,281
350	1,320	1,538	1,701	3,877	4,683	5,436	6,294	10,522	16,453	5,058	16,283	33,187	54,241
400	1,155	1,346	1,488	3,392	4,098	4,757	5,507	9,206	14,397	4,426	14,248	29,038	47,461
450	1,027	1,196	1,323	3,015	3,642	4,228	4,895	8,183	12,797	3,934	12,665	25,812	42,187
500	924	1,076	1,190	2,714	3,278	3,805	4,406	7,365	11,517	3,540	11,398	23,231	37,969
600	770	897	992	2,261	2,732	3,171	3,671	6,138	9,598	2,950	9,499	19,359	31,641
700	660	769	850	1,938	2,341	2,718	3,147	5,261	8,227	2,529	8,142	16,593	27,120
800	557	642	719	1,696	2,049	2,378	2,754	4,603	7,198	2,213	7,124	14,519	23,730
900	440	508	568	1,508	1,821	2,114	2,448	4,092	6,399	1,967	6,332	12,906	21,094
1,000	356	411	460	1,357	1,639	1,903	2,203	3,683	5,759	1,770	5,699	11,615	18,984
1,200	247	286	320	1,131	1,366	1,586	1,836	3,069	4,799	1,475	4,749	9,679	15,820
1,400	182	210	235	969	1,171	1,359	1,573	2,630	4,113	1,264	4,071	8,297	13,560
1,600	139	161	180	794	952	1,114	1,377	2,302	3,599	1,015	3,562	7,260	11,865
1,800	110	127	142	628	752	881	1,224	2,046	3,199	802	3,166	6,453	10,547
2,000	89	103	115	508	609	713	1,004	1,841	2,879	650	2,850	5,808	9,492
2,250	70	81	91	402	481	564	794	1,624	2,559	513	2,533	5,162	8,437
2,500	57	66	74	325	390	456	643	1,315	2,303	416	2,280	4,646	7,594
2,750	47	54	61	269	322	377	531	1,087	2,094	344	2,072	4,224	6,903
3,000	40	46	51	226	271	317	446	913	1,890	289	1,863	3,872	6,328
3,250	34	39	44	193	231	270	380	778	1,611	246	1,588	3,574	5,841
3,500	29	34	38	166	199	233	328	671	1,389	212	1,369	3,319	5,424
3,750	25	29	33	145	173	203	286	584	1,210	185	1,193	3,097	5,062
4,000	22	26	29	127	152	178	251	514	1,063	162	1,048	2,904	4,746
4,250	20	23	25	113	135	158	222	455	942	144	928	2,733	4,467
4,500	18	20	23	100	120	141	198	406	840	128	828	2,504	4,219
4,750	16	18	20	90	108	126	178	364	754	115	743	2,248	3,997
5,000	14	16	18	81	97	114	161	329	680	104	671	2,029	3,797
5,250	13	15	17	74	88	104	146	298	617	94	608	1,840	3,616
5,500	12	14	15	67	81	94	133	272	562	86	554	1,676	3,452
5,750	11	12	14	62	74	86	122	249	515	79	507	1,534	3,302
6,000	-	11	13	56	68	79	112	228	473	72	466	1,409	3,052

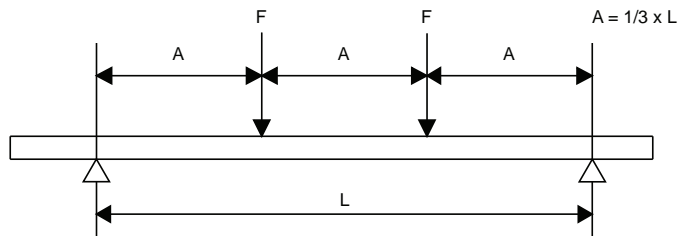
Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

BIS RapidStrut® Fixing rail: 2 equal loads



L (mm)	Single									Double			
	41x21 x1.5	41x21 x2.0	41x21 x2.5	41x41 x1.5	41x41 x2.0	41x41 x2.5	41x51 x2.0	41x62 x2.5	41x82 x2.5	41x21D	41x41D	41x62D	41x82D
250	1,386	1,615	1,786	4,070	4,917	5,708	6,609	11,048	17,276	5,311	17,098	34,846	56,953
300	1,155	1,346	1,488	3,392	4,098	4,757	5,507	9,206	14,397	4,426	14,248	29,038	47,461
350	990	1,153	1,275	2,907	3,512	4,077	4,720	7,891	12,340	3,793	12,213	24,890	40,681
400	866	1,009	1,116	2,544	3,073	3,568	4,130	6,905	10,798	3,319	10,686	21,779	35,596
450	770	897	992	2,261	2,732	3,171	3,671	6,138	9,598	2,950	9,499	19,359	31,641
500	693	807	893	2,035	2,459	2,854	3,304	5,524	8,638	2,655	8,549	17,423	28,476
600	578	670	744	1,696	2,049	2,378	2,754	4,603	7,198	2,213	7,124	14,519	23,730
700	427	492	552	1,454	1,756	2,039	2,360	3,946	6,170	1,897	6,106	12,445	20,340
800	327	377	422	1,272	1,537	1,784	2,065	3,452	5,399	1,660	5,343	10,889	17,798
900	258	298	334	1,131	1,366	1,586	1,836	3,069	4,799	1,475	4,749	9,679	15,820
1,000	209	241	270	1,018	1,229	1,427	1,652	2,762	4,319	1,328	4,274	8,712	14,238
1,200	145	168	188	829	993	1,163	1,377	2,302	3,599	1,059	3,562	7,260	11,865
1,400	107	123	138	609	730	854	1,180	1,973	3,085	778	3,053	6,223	10,170
1,600	82	94	106	466	559	654	921	1,726	2,699	596	2,672	5,445	8,899
1,800	65	74	83	368	442	517	728	1,489	2,399	471	2,375	4,840	7,910
2,000	52	60	68	298	358	419	590	1,206	2,160	381	2,137	4,356	7,119
2,250	41	48	53	236	283	331	466	953	1,920	301	1,900	3,872	6,328
2,500	33	39	43	191	229	268	377	772	1,598	244	1,575	3,485	5,695
2,750	28	32	36	158	189	221	312	638	1,320	202	1,302	3,168	5,178
3,000	23	27	30	133	159	186	262	536	1,109	169	1,094	2,904	4,746
3,250	20	23	26	113	135	159	223	457	945	144	932	2,680	4,381
3,500	17	20	22	97	117	137	192	394	815	124	804	2,430	4,068
3,750	15	17	19	85	102	119	168	343	710	108	700	2,117	3,797
4,000	13	15	17	75	89	105	147	302	624	95	615	1,860	3,560
4,250	12	13	15	66	79	93	131	267	553	84	545	1,648	3,350
4,500	10	12	13	59	71	83	116	238	493	75	486	1,470	3,164
4,750	-	11	12	53	63	74	105	214	443	68	436	1,319	2,858
5,000	-	-	11	48	57	67	94	193	399	61	394	1,191	2,579
5,250	-	-	-	43	52	61	86	175	362	55	357	1,080	2,340
5,500	-	-	-	39	47	55	78	159	330	50	325	984	2,132
5,750	-	-	-	36	43	51	71	146	302	46	298	900	1,950
6,000	-	-	-	33	40	47	66	134	277	42	273	827	1,791

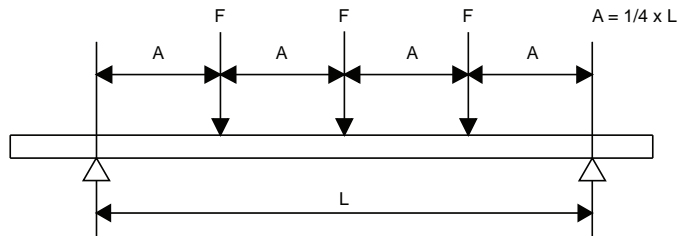
Max. allowed load in N. per suspension point (F).

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

BIS RapidStrut® Fixing rail: 3 equal loads



L (mm)	Single									Double			
	41x21 x1.5	41x21 x2.0	41x21 x2.5	41x41 x1.5	41x41 x2.0	41x41 x2.5	41x51 x2.0	41x62 x2.5	41x82 x2.5	41x21D	41x41D	41x62D	41x82D
250	924	1,076	1,190	2,714	3,278	3,805	4,406	7,365	11,517	3,540	11,398	23,231	37,969
300	770	897	992	2,261	2,732	3,171	3,671	6,138	9,598	2,950	9,499	19,359	31,641
350	660	769	850	1,938	2,341	2,718	3,147	5,261	8,227	2,529	8,142	16,593	27,120
400	578	673	744	1,696	2,049	2,378	2,754	4,603	7,198	2,213	7,124	14,519	23,730
450	513	598	661	1,508	1,821	2,114	2,448	4,092	6,399	1,967	6,332	12,906	21,094
500	462	538	595	1,357	1,639	1,903	2,203	3,683	5,759	1,770	5,699	11,615	18,984
600	385	449	496	1,131	1,366	1,586	1,836	3,069	4,799	1,475	4,749	9,679	15,820
700	306	353	396	969	1,171	1,359	1,573	2,630	4,113	1,264	4,071	8,297	13,560
800	234	270	303	848	1,024	1,189	1,377	2,302	3,599	1,106	3,562	7,260	11,865
900	185	214	239	754	911	1,057	1,224	2,046	3,199	983	3,166	6,453	10,547
1,000	150	173	194	678	820	951	1,101	1,841	2,879	885	2,850	5,808	9,492
1,200	104	120	135	565	683	793	918	1,534	2,399	738	2,375	4,840	7,910
1,400	77	88	99	437	524	613	787	1,315	2,057	558	2,035	4,148	6,780
1,600	59	68	76	335	401	469	661	1,151	1,800	427	1,781	3,630	5,933
1,800	46	53	60	264	317	371	522	1,023	1,600	338	1,583	3,226	5,273
2,000	38	43	48	214	257	300	423	865	1,440	274	1,425	2,904	4,746
2,250	30	34	38	169	203	237	334	684	1,280	216	1,266	2,581	4,219
2,500	24	28	31	137	164	192	271	554	1,146	175	1,130	2,323	3,797
2,750	20	23	26	113	136	159	224	458	947	145	934	2,112	3,452
3,000	17	19	22	95	114	133	188	385	796	122	785	1,936	3,164
3,250	14	16	18	81	97	114	160	328	678	104	669	1,787	2,921
3,500	12	14	16	70	84	98	138	283	585	89	576	1,659	2,712
3,750	11	12	14	61	73	85	120	246	509	78	502	1,518	2,531
4,000	-	11	12	54	64	75	106	216	448	68	441	1,335	2,373
4,250	-	-	11	47	57	67	94	192	397	61	391	1,182	2,233
4,500	-	-	-	42	51	59	84	171	354	54	349	1,054	2,109
4,750	-	-	-	38	45	53	75	153	317	48	313	946	1,998
5,000	-	-	-	34	41	48	68	138	287	44	282	854	1,850
5,250	-	-	-	31	37	44	61	126	260	40	256	775	1,678
5,500	-	-	-	28	34	40	56	114	237	36	233	706	1,529
5,750	-	-	-	26	31	36	51	105	217	33	214	646	1,399
6,000	-	-	-	24	29	33	47	96	199	30	196	593	1,285

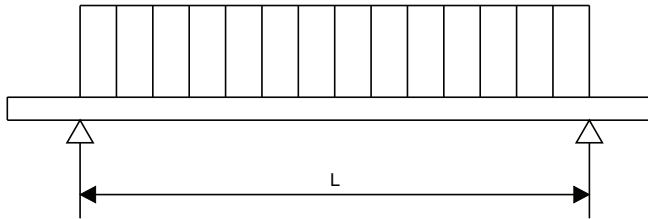
Max. allowed load in N. per suspension point (F).

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

BIS RapidStrut® Fixing rail: uniformly distributed load



L (mm)	Single									Double			
	41x21 x1.5	41x21 x2.0	41x21 x2.5	41x41 x1.5	41x41 x2.0	41x41 x2.5	41x51 x2.0	41x62 x2.5	41x82 x2.5	41x21D	41x41D	41x62D	41x82D
250	3,697	4,306	4,762	10,854	13,112	15,222	17,623	29,460	46,070	14,162	45,594	92,923	151,875
300	3,081	3,588	3,968	9,045	10,927	12,685	14,686	24,550	38,391	11,802	37,995	77,436	126,562
350	2,640	3,076	3,401	7,753	9,366	10,873	12,588	21,043	32,907	10,116	32,567	66,373	108,482
400	2,310	2,691	2,976	6,784	8,195	9,514	11,014	18,413	28,794	8,851	28,496	58,077	94,922
450	2,054	2,392	2,645	6,030	7,285	8,457	9,791	16,367	25,594	7,868	25,330	51,624	84,375
500	1,848	2,153	2,381	5,427	6,556	7,611	8,812	14,730	23,035	7,081	22,797	46,461	75,937
600	1,540	1,794	1,984	4,523	5,463	6,342	7,343	12,275	19,196	5,901	18,997	38,718	63,281
700	1,163	1,342	1,503	3,877	4,683	5,436	6,294	10,522	16,453	5,058	16,283	33,187	54,241
800	891	1,028	1,151	3,392	4,098	4,757	5,507	9,206	14,397	4,426	14,248	29,038	47,461
900	704	812	909	3,015	3,642	4,228	4,895	8,183	12,797	3,934	12,665	25,812	42,187
1,000	570	658	737	2,714	3,278	3,805	4,406	7,365	11,517	3,540	11,398	23,231	37,969
1,200	396	457	512	2,260	2,708	3,170	3,671	6,138	9,598	2,887	9,499	19,359	31,641
1,400	291	336	376	1,660	1,989	2,329	3,147	5,261	8,227	2,121	8,142	16,593	27,120
1,600	223	257	288	1,271	1,523	1,783	2,511	4,603	7,198	1,624	7,124	14,519	23,730
1,800	176	203	227	1,004	1,204	1,409	1,984	4,059	6,399	1,283	6,332	12,906	21,094
2,000	143	164	184	814	975	1,141	1,607	3,288	5,759	1,039	5,699	11,615	18,984
2,250	113	130	146	643	770	902	1,270	2,598	5,119	821	5,066	10,325	16,875
2,500	91	105	118	521	624	730	1,028	2,104	4,355	665	4,293	9,292	15,187
2,750	75	87	97	430	516	604	850	1,739	3,599	550	3,548	8,448	13,807
3,000	63	73	82	362	433	507	714	1,461	3,024	462	2,981	7,744	12,656
3,250	54	62	70	308	369	432	609	1,245	2,577	394	2,540	7,148	11,683
3,500	47	54	60	266	318	373	525	1,074	2,222	339	2,190	6,624	10,848
3,750	41	47	52	231	277	325	457	935	1,936	296	1,908	5,770	10,125
4,000	36	41	46	203	244	285	402	822	1,701	260	1,677	5,071	9,492
4,250	32	36	41	180	216	253	356	728	1,507	230	1,486	4,492	8,934
4,500	28	32	36	161	193	225	317	649	1,344	205	1,325	4,007	8,437
4,750	25	29	33	144	173	202	285	583	1,206	184	1,189	3,596	7,791
5,000	23	26	29	130	156	183	257	526	1,089	166	1,073	3,246	7,031
5,250	21	24	27	118	141	166	233	477	988	151	974	2,944	6,378
5,500	19	22	24	108	129	151	212	435	900	137	887	2,682	5,811
5,750	17	20	22	98	118	138	194	398	823	126	812	2,454	5,317
6,000	16	18	20	90	108	127	179	365	756	115	745	2,254	4,883

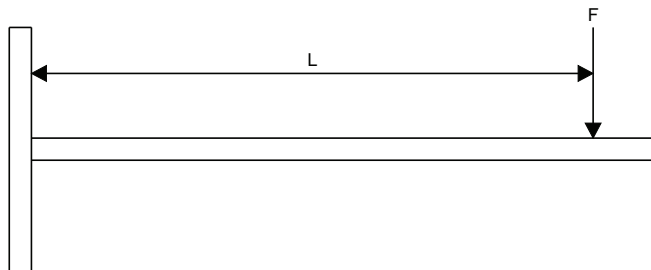
Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

BIS RapidStrut® Cantilever arms: suspension on 1 point



L (mm)	Single									Double			
	41x21 x1.5	41x21 x2.0	41x21 x2.5	41x41 x1.5	41x41 x2.0	41x41 x2.5	41x51 x2.0	41x62 x2.5	41x82 x2.5	41x21D	41x41D	41x62D	41x82D
100	1,155	1,346	1,488	3,392	4,098	4,757	5,507	9,206	14,397	4,426	14,248	29,038	47,461
150	770	897	992	2,261	2,732	3,171	3,671	6,138	9,598	2,950	9,499	19,359	31,641
200	557	642	719	1,696	2,049	2,378	2,754	4,603	7,198	2,213	7,124	14,519	23,730
250	356	411	460	1,357	1,639	1,903	2,203	3,683	5,759	1,770	5,699	11,615	18,984
300	247	286	320	1,131	1,366	1,586	1,836	3,069	4,799	1,475	4,749	9,679	15,820
350	182	210	235	969	1,171	1,359	1,573	2,630	4,113	1,264	4,071	8,297	13,560
400	139	161	180	794	952	1,114	1,377	2,302	3,599	1,015	3,562	7,260	11,865
450	110	127	142	628	752	881	1,224	2,046	3,199	802	3,166	6,453	10,547
500	89	103	115	508	609	713	1,004	1,841	2,879	650	2,850	5,808	9,492
550	74	85	95	420	504	589	830	1,674	2,618	537	2,591	5,280	8,629
600	62	71	80	353	423	495	697	1,427	2,399	451	2,375	4,840	7,910
700	45	52	59	259	311	364	512	1,048	2,057	331	2,035	4,148	6,780
800	35	40	45	199	238	279	392	803	1,661	254	1,638	3,630	5,933
900	27	32	36	157	188	220	310	634	1,313	200	1,294	3,226	5,273
1,000	22	26	29	127	152	178	251	514	1,063	162	1,048	2,904	4,746
1,100	18	21	24	105	126	147	208	425	879	134	866	2,619	4,315
1,200	15	18	20	88	106	124	174	357	738	113	728	2,201	3,955
1,300	13	15	17	75	90	106	149	304	629	96	620	1,875	3,651
1,400	11	13	15	65	78	91	128	262	542	83	535	1,617	3,390
1,500	-	11	13	56	68	79	112	228	473	72	466	1,409	3,052

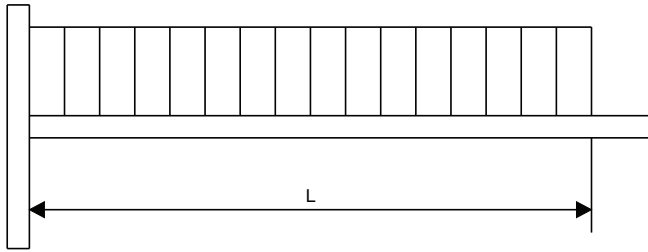
Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

BIS RapidStrut® Cantilever arms: uniformly distributed load



L (mm)	Single									Double			
	41x21 x1.5	41x21 x2.0	41x21 x2.5	41x41 x1.5	41x41 x2.0	41x41 x2.5	41x51 x2.0	41x62 x2.5	41x82 x2.5	41x21D	41x41D	41x62D	41x82D
100	2,310	2,691	2,976	6,784	8,195	9,514	11,014	18,413	28,794	8,851	28,496	58,077	94,922
150	1,540	1,794	1,984	4,523	5,463	6,342	7,343	12,275	19,196	5,901	18,997	38,718	63,281
200	1,155	1,346	1,488	3,392	4,098	4,757	5,507	9,206	14,397	4,426	14,248	29,038	47,461
250	924	1,076	1,190	2,714	3,278	3,805	4,406	7,365	11,517	3,540	11,398	23,231	37,969
300	660	761	853	2,261	2,732	3,171	3,671	6,138	9,598	2,950	9,499	19,359	31,641
350	485	559	626	1,938	2,341	2,718	3,147	5,261	8,227	2,529	8,142	16,593	27,120
400	371	428	480	1,696	2,049	2,378	2,754	4,603	7,198	2,213	7,124	14,519	23,730
450	293	338	379	1,508	1,821	2,114	2,448	4,092	6,399	1,967	6,332	12,906	21,094
500	238	274	307	1,356	1,625	1,902	2,203	3,683	5,759	1,732	5,699	11,615	18,984
550	196	227	254	1,121	1,343	1,572	2,003	3,348	5,235	1,432	5,181	10,559	17,258
600	165	190	213	942	1,128	1,321	1,836	3,069	4,799	1,203	4,749	9,679	15,820
700	121	140	157	692	829	970	1,367	2,630	4,113	884	4,071	8,297	13,560
800	93	107	120	530	635	743	1,046	2,140	3,599	677	3,562	7,260	11,865
900	73	85	95	418	501	587	827	1,691	3,199	535	3,166	6,453	10,547
1,000	59	69	77	339	406	476	670	1,370	2,835	433	2,795	5,808	9,492
1,100	49	57	63	280	336	393	553	1,132	2,343	358	2,310	5,280	8,629
1,200	41	48	53	235	282	330	465	951	1,969	301	1,941	4,840	7,910
1,300	35	41	45	201	240	281	396	811	1,678	256	1,654	4,467	7,302
1,400	30	35	39	173	207	243	342	699	1,447	221	1,426	4,148	6,780
1,500	26	30	34	151	181	211	298	609	1,260	192	1,242	3,757	6,328

Max. allowed load in N.

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

For large spans and high rail flanks (> = 62mm), depending on the load, appropriate measures against occurring torsional forces may have to be taken.

Maxx Bolt Set (ZFC)

(H2 05 28)

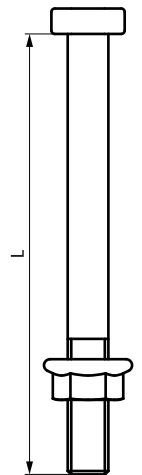
for fixing to Maxx Heavy Rail Profiles



Features and Benefits

- for fixing in profile perforation
- the bolt size is ideally suited to fit the perforation of Maxx Heavy Rail Profile
- max. torque is 80Nm
- hexagon nut with collar and serration
- material: steel, strength class 8.8
- surface treatment: zinc flake coated
- consists of:
 - 1 bolt
 - 1 nut
 - 1 washer

Part No.	Model	G	L	Pack 1
614581213	Maxx 100 Bolt Set	M12	140 mm	25
614581216	Maxx 120 Bolt Set	M12	160 mm	25
614581614	Maxx 100 Bolt Set	M16	140 mm	25
614581616	Maxx 120 Bolt Set	M16	160 mm	25



Maxx End Cap

(H2 05 40)

finishing of rail



Features and Benefits

- for clean finishing of rail end, covers all burrs
- easy to fix securely
- suitable for Maxx Profile MX100 and MX120
- material: PE (polyethylene), green

Part No.	Type	Pack 1
6566810	EC100	1
6566812	EC120	1

| BIS Rooftop + Solar Fixings



BIS Support System for Rooftop Installations

BIS Yeti® 480 Support System (BUP1000)	342
BIS Yeti® Ballast Block	343
BIS Yeti® 335 Support System (BUP1000)	344
BIS Yeti® 335 H-Set with Rail (BUP1000)	345
BIS Yeti® 335 Hinge (BUP1000)	346
BIS Yeti® 335 Frame Set	347
BIS Yeti® 130 Support System	348
BIS Yeti® 130 Frame Set (BUP1000)	349
BIS Yeti® 130 Cable Tray Set (BUP1000)	350
BIS Yeti® Triplex Separation Layer	351
BIS Yeti® Service Deck Grid	352
BIS Yeti® Service Deck Step	353
Fastening Set for Grids	354
Rooftop Anchor	355
BIS Ursus Foot Support System (BUP1000)	356



BIS Solar Panel Fixings

BIS Fixing Brackets - 755 / 756	357
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BIS Yeti[®] 480 Support System (BUP1000)

for Rooftop Installations

(10405)



Features and Benefits

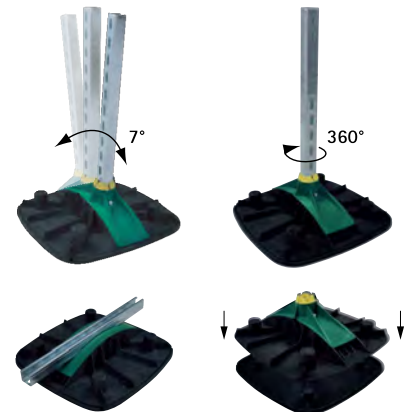
- modular supporting system for climate installations, solar panels, walkways, pipe work, cable ways, etc.
- for flat and low pitched roofs
- adjustable up to 7° to compensate roof pitch
- 360° rotatable insert for BIS RapidStrut[®] 41x41 or BIS RapidStrut[®] DS 5 (41x52 mm)
- with non-slip anti-vibration mat
- with optional stackable ballast block for increased weight / stability
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- resistant to UV and chemical influences
- noise reduction according to DIN EN ISO 10140-1 and DIN EN ISO 10140-3 up to 31 dB(A)
- UV-resistance according to EN ISO 16474-3:2014-02
- BIS Yeti 480 H-set consisting of:
 - 2 x BIS Yeti[®] 480 vertical, including non-slip anti-vibration mat (made of rubber)
 - 4 x BIS Strut Connector 90°
 - 8 x hexagon head bolts and slide nuts



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SG Bauakustik
Nr. 1762-001-19



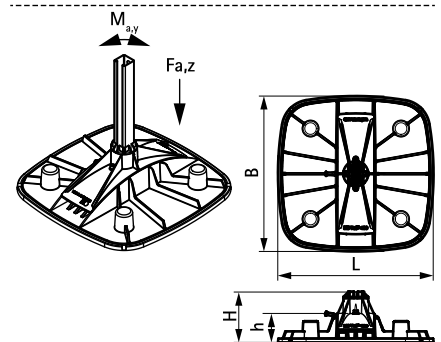
Part No.	Model	L	B	H	h	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1	Pack 2
			(mm)	(mm)	(mm)	(N)	(N)	(Nm)		
67685001	Vertical	480 mm	480	160	80	20,000*	30,000**	200.0	1	25
67685101	Horizontal	480 mm	480	-	-	20,000*	30,000**	200.0	1	30
67685301	H-set (without Strut Rail)	480 mm	480	-	-	20,000*	30,000**	200.0	1	-

* = Maximum allowed load for Strut 41x41x2.5.

** = Maximum allowed load for Strut 41x51x2.0 - DS5.

For a detailed calculation and for support how to spread the load please contact Walraven Technical Support.

In cases where a foot is used in roof applications, the installer is obliged to verify maximum load capacity of roof before installation.



Complementary

- 343 BIS Yeti[®] Ballast Block
- 351 BIS Yeti[®] Triplex Separation Layer

BIS Yeti[®] Ballast Block

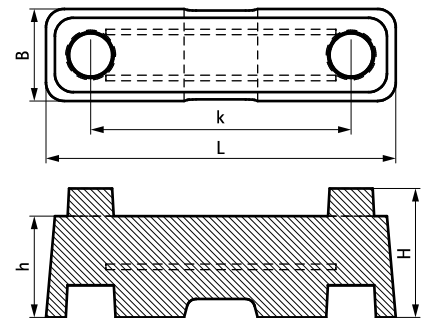
(10407)



Features and Benefits

- Ballast Block for BIS Yeti[®] 480 Support System
- re-inforced concrete ballast block for outside use
- easy to install, without tools
- stackable due to special design
- increases stability against wind loads
- material: reinforced concrete

Part No.	L	B	H	h	k	Weight	Pack 1	Pack 2
		(mm)	(mm)	(mm)	(mm)	(kg)		
67685401	380 mm	100	140	110	283	8	1	100



Complementary

342 BIS Yeti[®] 480 Support System (BUP1000)

BIS Yeti® 335 Support System (BUP1000)

(104 10)

for Rooftop Installations



Features and Benefits

- modular supporting system for climate installations, solar panels, walkways, pipe work, cable ways, etc.
- for flat roofs
- for horizontal and vertical applications
- 360° rotatable insert for BIS RapidStrut® 41x41 or BIS RapidStrut® DS 5 (41x52 mm)
- with non-slip anti-vibration mat
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- resistant to UV and chemical influences
- noise reduction according to DIN EN ISO 10140-1 and DIN EN ISO 10140-3 up to 31 dB(A)
- UV-resistance according to EN ISO 16474-3:2014-02
- BIS Yeti 335 H-set consisting of:
 - 2 x BIS Yeti® 335 including non-slip anti-vibration mat (made of rubber)
 - 4 x BIS Strut Connector 90°
 - 8 x hexagon head bolts and slide nuts



SG Bauakustik
Nr. 1762-001-19

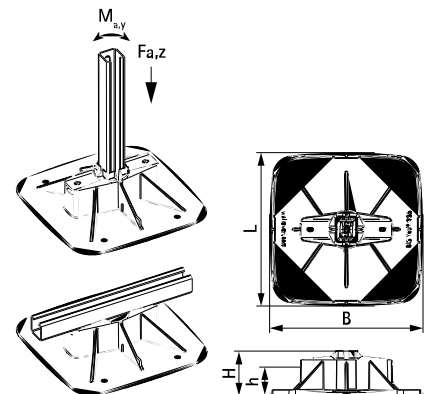
Part No.	Model	L	B	H	h	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1	Pack 2
			(mm)	(mm)	(mm)	(N)	(N)	(Nm)		
67685201	Vertical	335 mm	335	100	20	20,000*	30,000**	200.0	1	75
67685302	H-set (without Strut Rail)	335 mm	335	-	-	20,000*	30,000**	200.0	1	27

* = Maximum allowed load for Strut 41x41x2.5.

** = Maximum allowed load for Strut 41x51x2.0 - DS5.

For a detailed calculation and for support how to spread the load please contact Walraven Technical Support.

In cases where a foot is used in roof applications, the installer is obliged to verify maximum load capacity of roof before installation.



Complementary

- 351 BIS Yeti® Triplex Separation Layer
- 346 BIS Yeti® 335 Hinge (BUP1000)

Alternative

- 348 BIS Yeti® 130 Support System

BIS Yeti® 335 H-Set with Rail (BUP1000)

(10411)

for Rooftop Installations

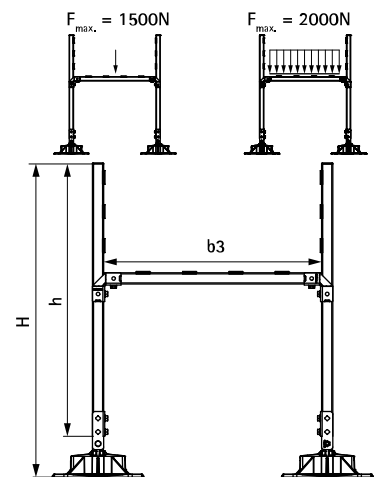


Features and Benefits

- complete set for supporting installation appliances on flat and low pitched roofs
- for quick installation of air duct channels on the roof
- adjustable to compensate roof pitch and 360° rotatable insert for flexibility in positioning
- with non-slip anti-vibration mat
- predefined load capacity (see assembly instruction), calculation not necessary
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- resistant to UV and chemical influences
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- noise reduction according to DIN EN ISO 10140-1 and DIN EN ISO 10140-3 up to 31 dB(A)
- UV-resistance according to EN ISO 16474-3:2014-02
- Part No. 67685310 consisting of:
 - 2 x BIS Yeti® 335 including non-slip anti-vibration mat (made of rubber)
 - 3 x 1.0 m BIS RapidStrut® Fixing Rail 41x41/2.0 (BUP1000), cut to length and deburred
 - 2 x BIS Yeti 335 Hinge (BUP1000)
 - 2 x BIS Strut Connector 90° / 2D (BUP1000)
 - 10 x BIS Strut Rubber Strip 50mm for noise insulating according DIN 4109
 - all connecting elements, rail end caps and bolts are included and most are pre-assembled



SG Bauakustik
Nr. 1762-001-19



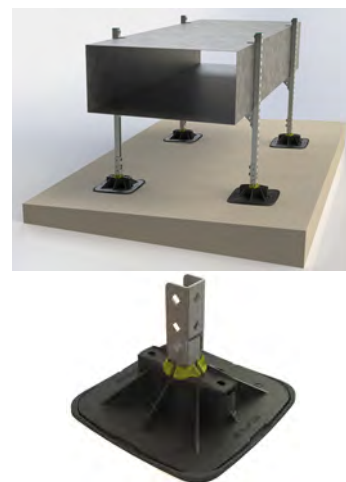
Part No.	b3 (mm)	H (mm)	h (mm)	Pack 1
67685310	1,000	1,150	1,000	1

Maximum load ($F_{0,z}$) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer.
If changes to the mounting parameters is necessary then please contact Walraven Technical Department.

BIS Yeti® 335 Hinge (BUP1000)

(104 12)

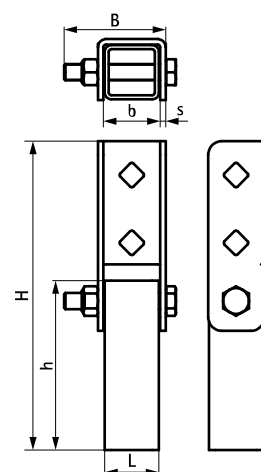
for Rooftop Installations



Features and Benefits

- adjustable connector for rails
- fully flexible in angle and direction due to rotatable insert in Yeti 335
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- UV-resistance according to EN ISO 16474-3:2014-02

Part No.	L	B (mm)	H (mm)	h (mm)	b (mm)	s (mm)
67685414	40	70	228	125	42	4



Complementary

- 347 BIS Yeti® 335 Frame Set
- 344 BIS Yeti® 335 Support System (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)

BIS Yeti® 335 Frame Set

(10415)

for Rooftop Installations



6768 5 501

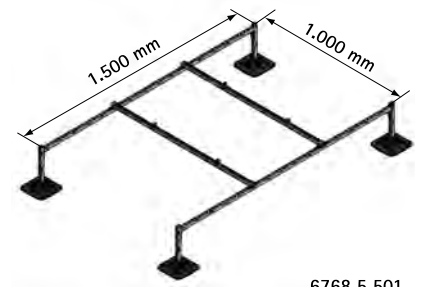


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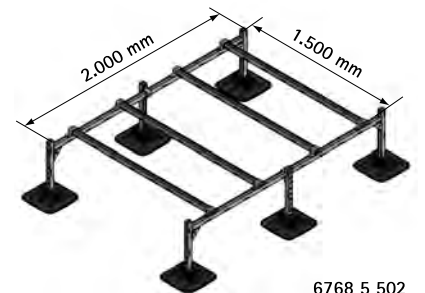


Features and Benefits

- complete set for supporting installation appliances on flat roofs
- suitable for wide range of commonly used airco's, ventilation units, etc.
- with non-slip anti-vibration mat
- predefined load capacity: calculation not necessary
- device can't be heavier than 150 kg
- top of device can't be higher than 1.2 m over the roof level
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- sets meet the requirements of DIN 18531-1
- UV-resistance according to EN ISO 16474-3:2014-02
- Part No. 67685501: consisting of:
 - 4 x BIS Yeti® 335 including non-slip anti-vibration mat (made of rubber)
 - 2 x 1.5 m BIS RapidStrut® Fixing Rail DS 5 (BUP1000), pre-assembled with vertical legs of 0.5 m on both sides, ready to just plug in the BIS Yeti® 335
 - 2 x 1 m BIS RapidStrut® Fixing Rail DS 5 (BUP1000), as a cross-connection to the frame. Connecting elements are already pre-installed on the frame
 - all connecting elements, rail end caps and bolts are included and most are pre-assembled
- Part No. 67685502: consisting of:
 - 6 x BIS Yeti® 335 including non-slip anti-vibration mat (made of rubber)
 - 2 x 2 m and 4 x 1.5 m pre-cutted BIS RapidStrut® Fixing Rail DS 5 (BUP1000), for use as longitudinal and transverse rails
 - 6 x 0.5 m BIS RapidStrut® Fixing Rail DS 5 (BUP1000), for use as vertical legs with pre-assembled connecting elements
 - all connecting elements, rail end caps and bolts are included and most are pre-assembled



6768 5 501



6768 5 502

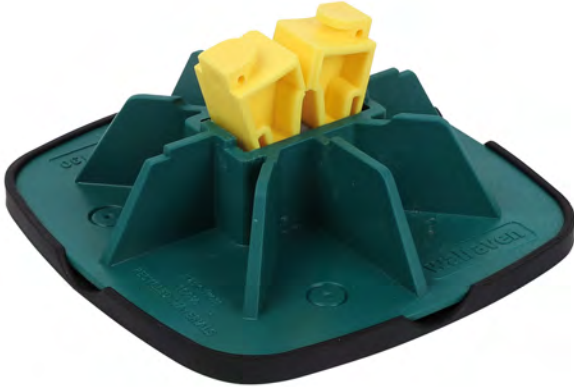
Part No.	Model	Pack 1
67685501	BIS Yeti® 335 for 1 installation appliance	1
67685502	BIS Yeti® 335 for 2 installation appliances	1

*Before mounting, the roof load capacity has to be confirmed by a structural engineer.
If changes to the mounting parameters is necessary then please contact Walraven Technical Department.*

BIS Yeti® 130 Support System

for Light Rooftop Installations

(1 04 50)



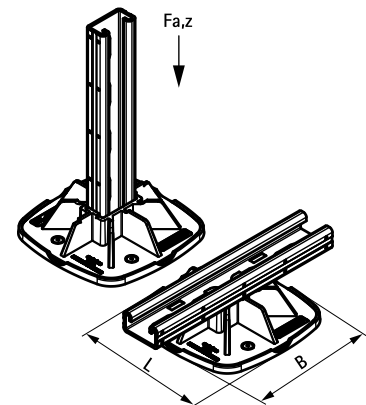
Features and Benefits

- modular supporting system for light rooftop installations
- for horizontal and vertical applications
- flexible and cost-effective solution for pipes, cable-trays, air duct channels etc.
- with non-slip anti-vibration mat
- with unique click-mechanism for quick and safe installation
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- plastic components made from 100% recycled material
- resistant to UV and chemical influences
- UV-resistance according to EN ISO 16474-3:2014-02



Part No.	Model	L	B	For Rail	F _{a,z}	Pack 1
67685130	Including non-slip anti-vibration mat	130 mm	130 (mm)	Strut 41x21	2,500 (N)	10

For a detailed calculation and for support how to spread the load please contact Walraven Technical Support.
In cases where a foot is used in roof applications, the installer is obliged to verify maximum load capacity of roof before installation.



BIS Yeti[®] 130 Frame Set (BUP1000)

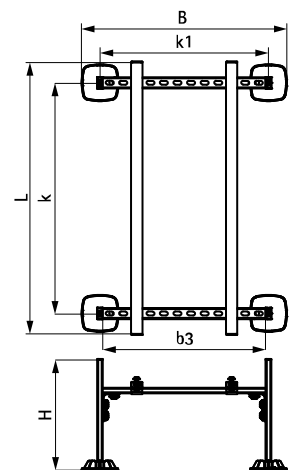
(10452)

for Light Rooftop Installations



Features and Benefits

- complete set for supporting installation appliances on flat roofs
- suitable for wide range of commonly used airco's, ventilation units, etc.
- with non-slip anti-vibration mat
- predefined load capacity (max. 1,500 N), calculation not necessary
- top of device can't be higher than 1.2 m over the roof level
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- plastic components made from 100% recycled material
- resistant to UV and chemical influences
- surface protection:
 - product is part of the BIS UltraProtect[®] 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- sound reduction
- UV-resistance according to EN ISO 16474-3:2014-02
- Part No. 67685532 consisting of:
 - 4 x BIS Yeti[®] 130 including non-slip anti-vibration mat (made of rubber)
 - 2 x 1.0 m BIS RapidStrut[®] Fixing Rail 41x21 (BUP1000), cut to length and deburred
 - 2 x 0.6 m BIS RapidStrut[®] Fixing Rail 41x21 (BUP1000), cut to length and deburred
 - 4 x 0.4 m BIS RapidStrut[®] Fixing Rail 41x21 (BUP1000), cut to length and deburred, as vertical legs, ready to just plug in the BIS Yeti[®] 130
 - all connecting elements, rail end caps and bolts are included and most are pre-assembled



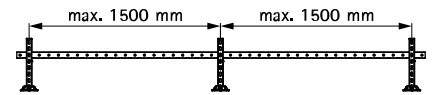
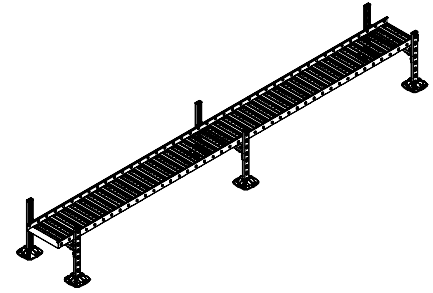
Part No.	Model	L	B	b3	H	k	k1	F _{a,z}	Pack 1
67685532	BIS Yeti [®] 130 Frame Set for 1 installation appliance	1,000 mm	751 (mm)	600 (mm)	400 (mm)	850 (mm)	621 (mm)	1,500 (N)	1

Maximum load (F_{a,z}) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer. If changes to the mounting parameters is necessary then please contact Walraven Technical Department.

BIS Yeti® 130 Cable Tray Set (BUP1000)

(10454)

for installation of cable trays on roofs

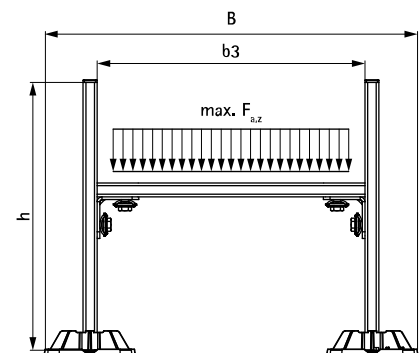


Features and Benefits

- complete set for cable tray installations on the roof
- flexible and cost-effective solution
- also possible to use for pipes or small air duct channels
- with non-slip anti-vibration mat
- predefined load capacity: calculation not necessary
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- plastic components made from 100% recycled material
- resistant to UV and chemical influences
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- sound reduction
- UV-resistance according to EN ISO 16474-3:2014-02
- Part No. 67685534 consisting of:
 - 6 x BIS Yeti® 130 including non-slip anti-vibration mat (made of rubber)
 - 9 x 0.4 m BIS RapidStrut® Fixing Rail 41x21 (BUP1000), cut to length and deburred
 - 6 x BIS RapidStrut® 90° Connector, pre-assembled ready to use
 - 6 x BIS RapidStrut® Endcaps



Part No.	Model	B (mm)	b3 (mm)	h (mm)	F _{a,z} (N)	Pack 1
67685534	BIS Yeti® 130 Cable Tray Set 400	551	400	400	1,500	1
Maximum load (F _{a,z}) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer. If changes to the mounting parameters is necessary then please contact Walraven Technical Department.						



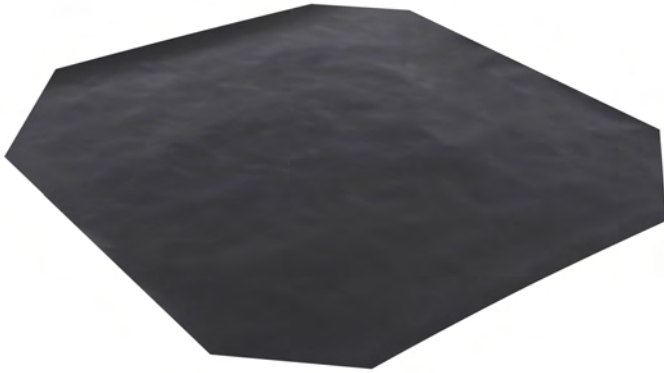
Complementary

- 258 BIS Strut T-shape Base Plate (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 291 BIS Strut Connector 90° (BUP1000)

BIS Yeti® Triplex Separation Layer

for Rooftop Installations

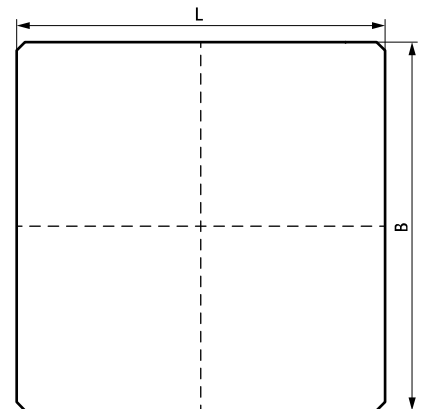
(10455)



Features and Benefits

- 3-layer release and protection layer for use between BIS Yeti® mounting foot and PVC roof
- size 350x350 by 1/4 pitch also suitable for BIS Yeti® 130
- high coefficient of static friction (between 0.400 and 0.500 depending on roof pitch and dry / wet condition)
- use on both sides possible
- material: HDPE film (black), aluminum foil, PET film (transparent)

Part No.	L	B (mm)	Pack 1
67685403	350 mm	350	10
67685405	500 mm	500	10

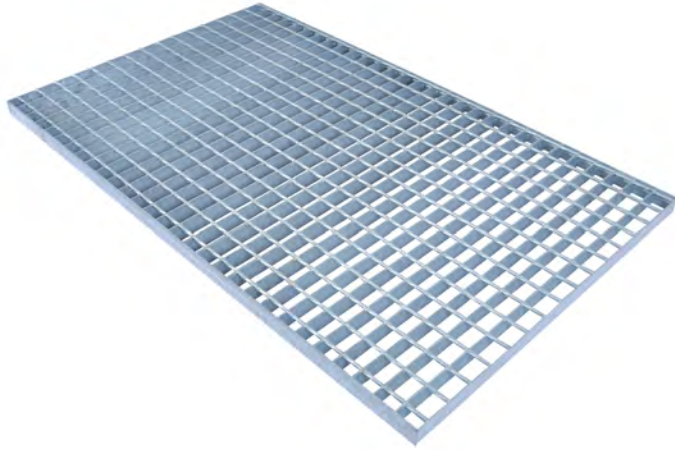


Complementary

- 342 BIS Yeti® 480 Support System (BUP1000)
- 344 BIS Yeti® 335 Support System (BUP1000)
- 347 BIS Yeti® 335 Frame Set

BIS Yeti[®] Service Deck Grid

(104 16)



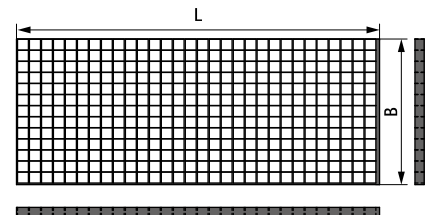
Features and Benefits

- complete range of gratings and stair treads to build service walkways
- in combination with BIS Yeti[®] and BIS RapidStrut[®] a complete system for outside use
- on request we offer engineered customized solutions as set
- material: steel
- hot dip galvanized

Part No.	Model	L	B (mm)	Pack 1	
67695100	Grid SP (30x2)	500 mm	1,000	1	*
67696100	Grid SP (30x2)	600 mm	1,000	1	*
67698100	Grid SP (30x2)	800 mm	1,000	1	*
67691050	Grid SP (30x2)	1,000 mm	500	1	*
67691080	Grid SP (30x2)	1,000 mm	800	1	*
67691100	Grid SP (30x2)	1,000 mm	1,000	1	*
67691120	Grid RR (33x33)	1,000 mm	1,200	1	**
67692100	Grid SP (30x2)	1,200 mm	1,000	1	*
67695010	Grid SP (30x2)	1,500 mm	1,000	1	*
67695015	Grid RR (33x33)	1,500 mm	1,500	1	**

* L = flat steel direction; B = rod direction (Type SP)

** L = flat steel direction; B = flat steel direction (Type RR)



Complementary

- 353 BIS Yeti[®] Service Deck Step
- 354 Fastening Set for Grids
- 342 BIS Yeti[®] 480 Support System (BUP1000)

Complementary

- 245 BIS RapidStrut[®] Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut[®] Fixing Rail (BUP1000)

BIS Yeti[®] Service Deck Step

(10417)

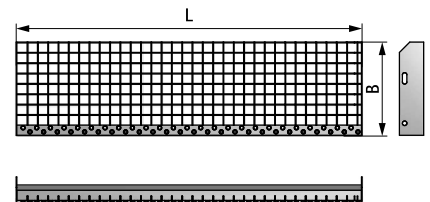


Features and Benefits

- complete range of gratings and stair treads to build service walkways
- in combination with BIS Yeti[®] and BIS RapidStrut[®] a complete system for outside use
- on request we offer engineered customized solutions as set
- material: steel
- hot dip galvanized

Part No.	Model	L	B (mm)	Pack 1
67690060	Step TSP 3-30	600 mm	240	1
67690080	Step TSP 3-30	800 mm	240	1
67690100	Step TSP 3-30	1,000 mm	240	1
67690130	Step TSP 3-30	1,000 mm	305	1

L = flat steel direction; B = rod direction (Type TSP)



Complementary

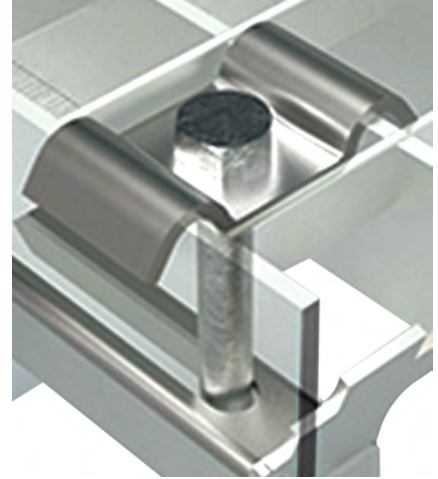
- 352 BIS Yeti[®] Service Deck Grid
- 354 Fastening Set for Grids
- 342 BIS Yeti[®] 480 Support System (BUP1000)

Complementary

- 245 BIS RapidStrut[®] Fixing Rail DS 5 (BUP1000)
- 247 BIS RapidStrut[®] Fixing Rail (BUP1000)

Fastening Set for Grids

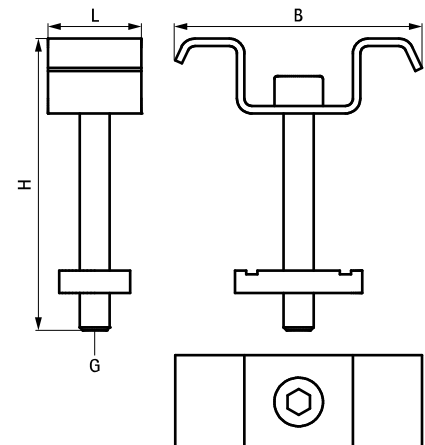
(104 18)



Features and Benefits

- set contains 4 top plates, 4 screws and 4 hot dip galvanized slidenuts
- W-shaped top plate for optimal fit to grids and flat top surface
- material: steel

Part No.	G	L	B (mm)	H (mm)	Set	Pack 1
67699000	M8	21 mm	60	68	4 pcs.	1



Complementary

- 352 BIS Yeti® Service Deck Grid
- 353 BIS Yeti® Service Deck Step

Rooftop Anchor

for Rooftop Installations

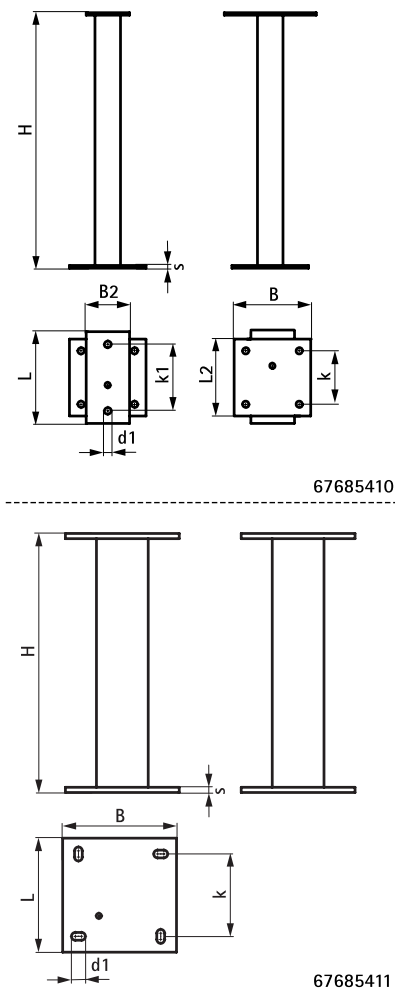
(104 19)



Features and Benefits

- to connect rooftop installations with the building structure
- as fixpoint construction when required
- the inside of the mounting base must be filled with weatherproof expanding foam on site to avoid thermal bridges
- 67685410 to be used in combination with BIS RapidStrut® Base Plates (665885400 / 66583804)
- 67685411 to be used in combination with Maxx Base Plates (6581820 / 6581821)
- material: steel S235JR

Part No.	L	L2 (mm)	B (mm)	B2 (mm)	H (mm)	s (mm)	d1 (mm)	k (mm)	k1 (mm)	From Rail
67685410	180 mm	150 mm	150	85	500	5	13	105	130	50x50x4
67685411	220 mm	-	220	-	500	10	27x15	159	-	100x100x4



Complementary

- 256 BIS RapidStrut® Base Plate G2 (BUP1000)
- 247 BIS RapidStrut® Fixing Rail (BUP1000)
- 342 BIS Yeti® 480 Support System (BUP1000)

Complementary

- 344 BIS Yeti® 335 Support System (BUP1000)

BIS Ursus Foot Support System (BUP1000)

(1 04 20)

for Rooftop Installations



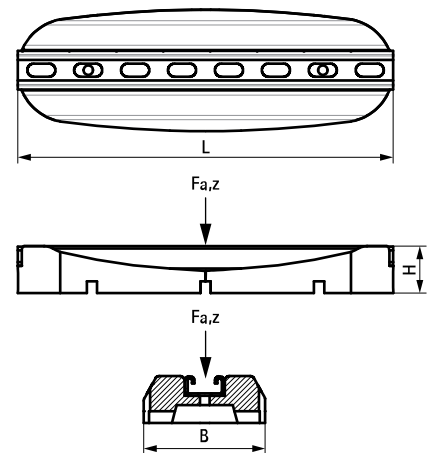
Features and Benefits

- for supporting small pipework systems, ductwork runs and cable trays
- to support climate installations, walkways on flat roofs, etc.
- does not penetrate the waterproof membrane
- material: vulcanized rubber, black; Strut Rail made of steel 1.0242
- UV resistant
- Strut Rail: surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Model	L	B (mm)	H (mm)	F _{a,z} (N)	Pack 1
67687250	Horizontal, including rail	250 mm	130	50	1,000	1
67687400	Horizontal, including rail	400 mm	130	50	2,000	1
67687601	Horizontal, including rail	600 mm	200	50	3,000	1

For a detailed calculation and for support how to spread the load please contact Walraven Technical Support.

In cases where a foot is used in roof applications, the installer is obliged to verify maximum load capacity of roof before installation.



BIS Fixing Brackets - 755 / 756

(10830)



790 4 150

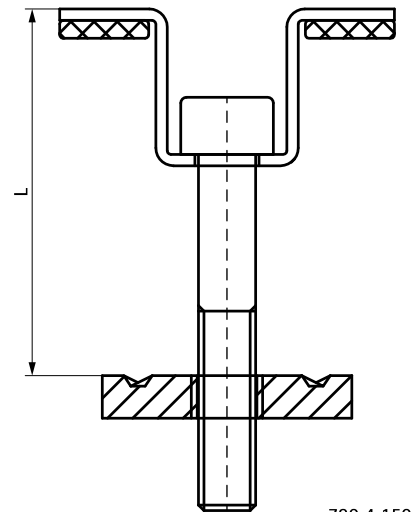


790 4 0XX

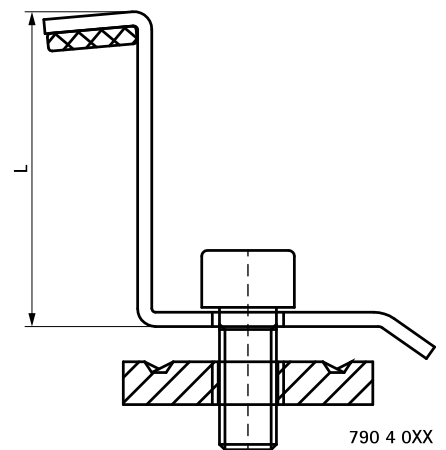
Features and Benefits

- for fixing solar panels to Strut rail
- surface treatment: Dacromet
- material: steel

Part No.	Model	L	Pack 1
7904150	Middle Clamp	35 - 50 mm	20
7904035	End Clamp	35 mm	20
7904040	End Clamp	40 mm	20
7904045	End Clamp	45 mm	20
7904050	End Clamp	50 mm	20



790 4 150



790 4 0XX

J BIS Electrical Fixings



Britclips® – Beam Clips

Britclips® Tiger	364
Britclips® FC	365
Britclips® FC TB	366
Britclips® FC ICC	367
Britclips® FC M6 x 9	368
Britclips® FCR M6	369
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Britclips® – Universal Beam Clips

Britclips® FU	372
Britclips® FU M6 x 9	373
Britclips® FU ICC	374



Britclips® – Screw-on Beam Clamps

Britclips® SB	375
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Britclips® – Push-on Clips

Britclips® PC Flange	376
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Britclips® TRC	380
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Britclips® – Acoustic Ceiling Clips

Britclips® ACHW / ACHZ	383
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BIS Cablefix

BIS Twistfix	387
BIS Fixing Rail for BIS Twistfix	388
BIS Fixing Rail for BIS Cablefix	389



BIS STARLOCK, Cable Ties

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J BIS Electrical Fixings



BIS Nail Clips

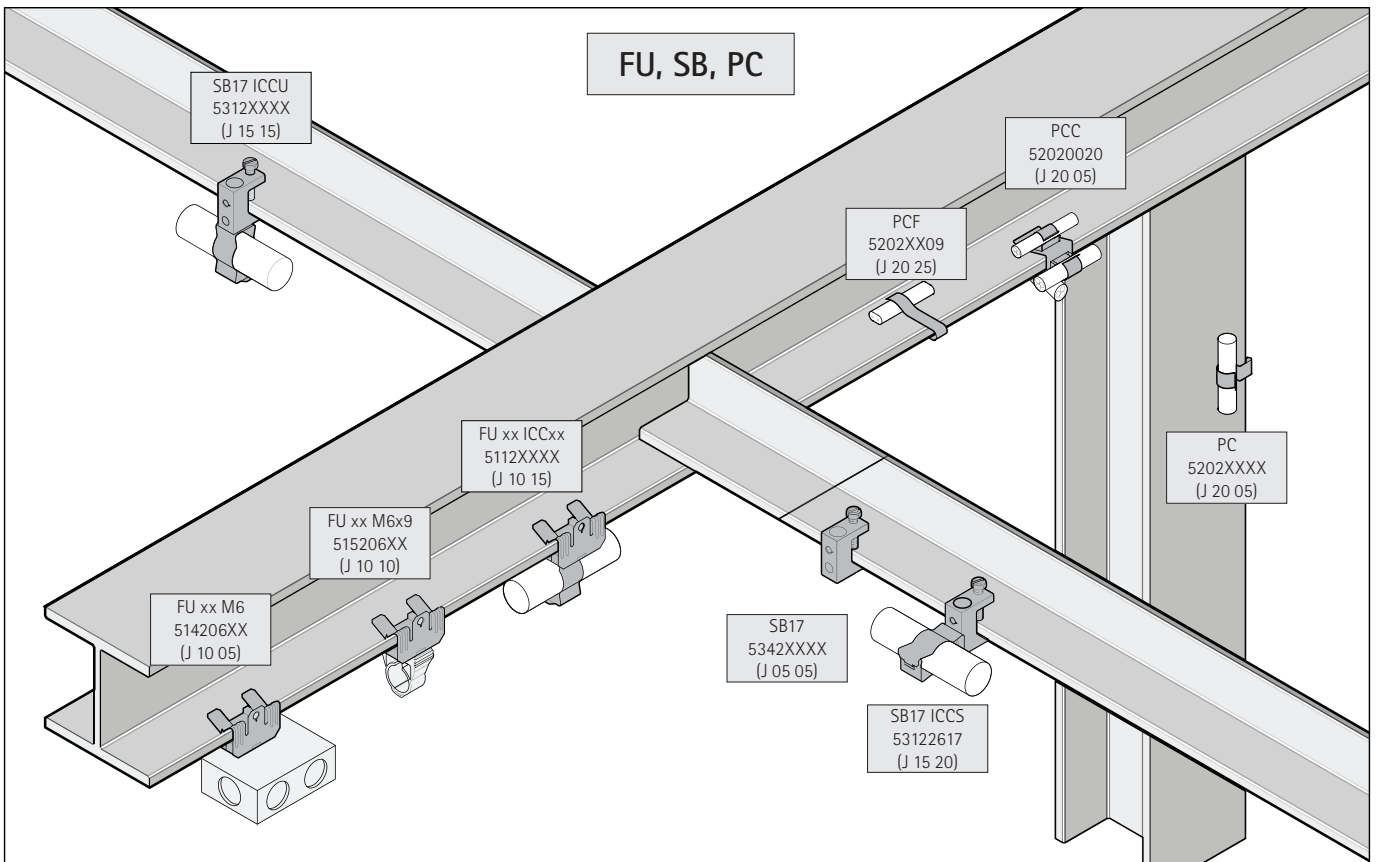
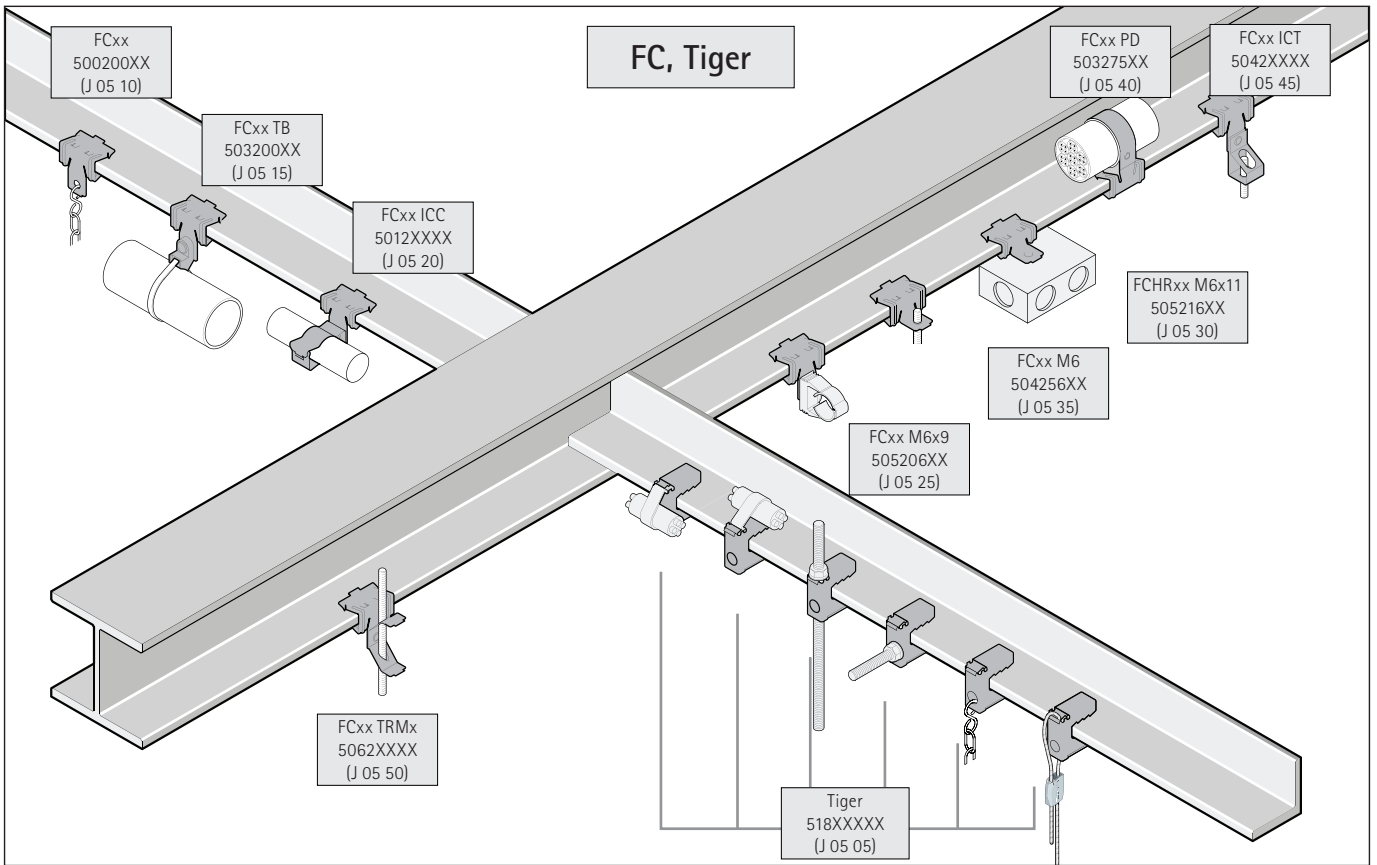
BIS Nail Clip (White)

397

BIS Nail Clip (Black)

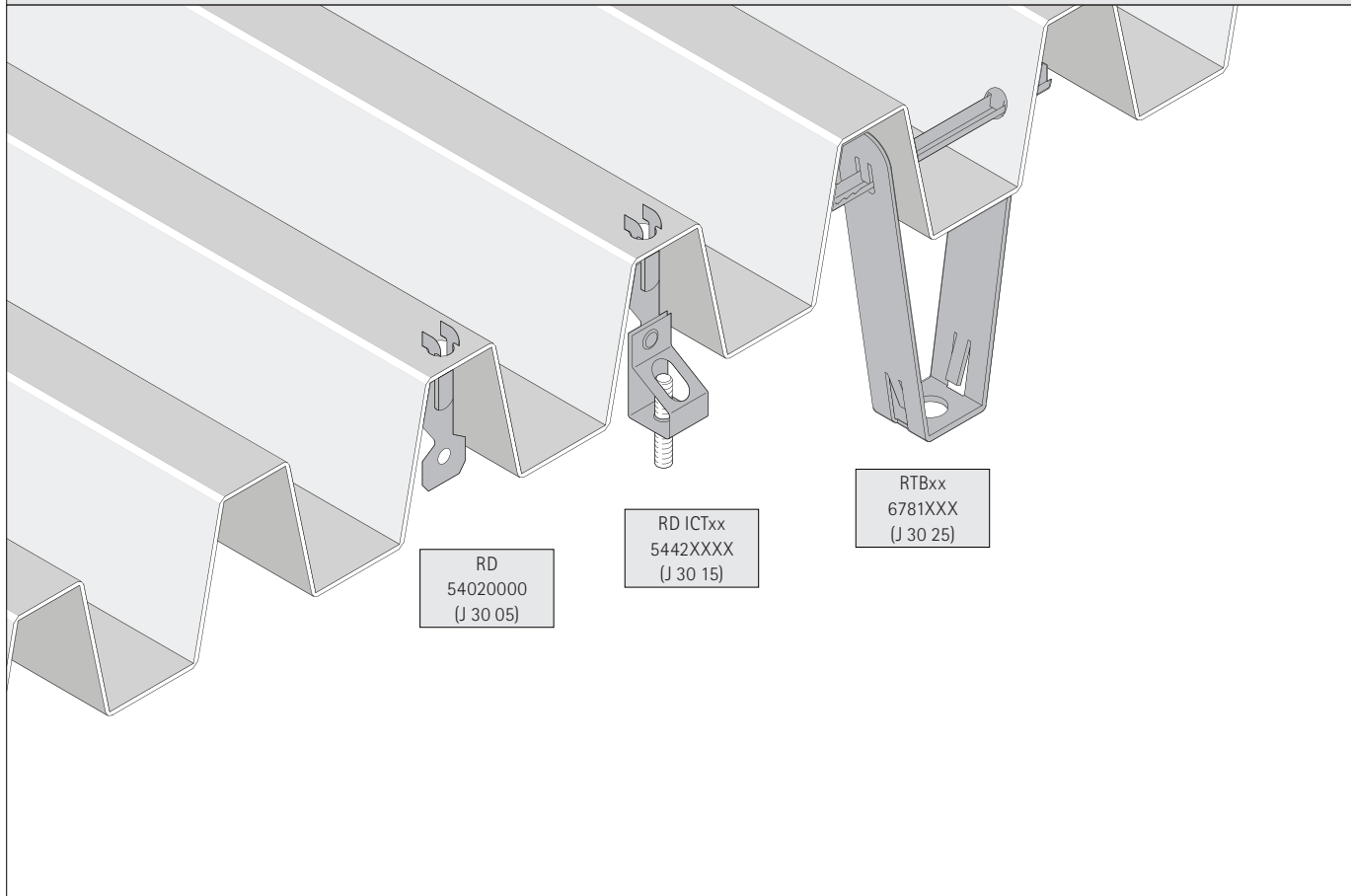
398

Application Britclips® Tiger, FC, FU, SB, PC

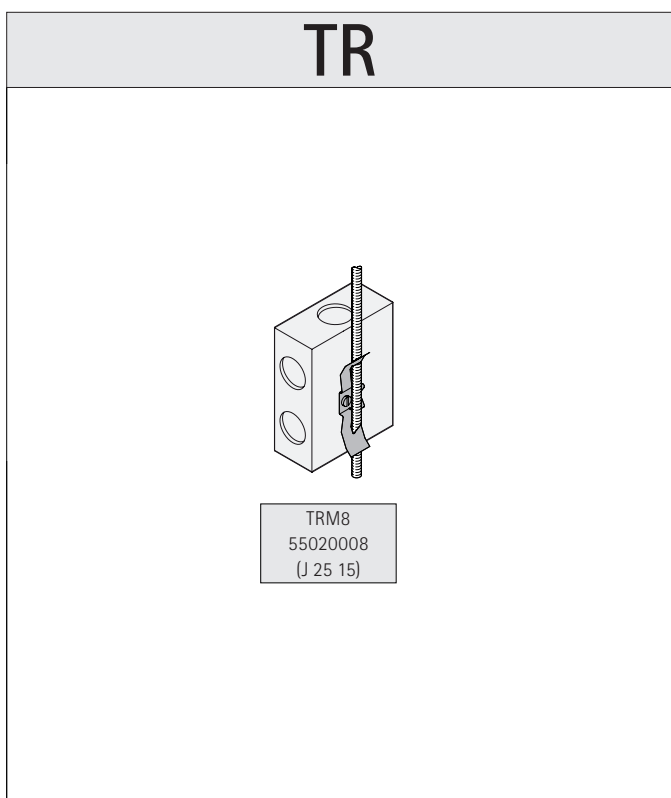


Application Britclips® RD, RTB, TR, CD

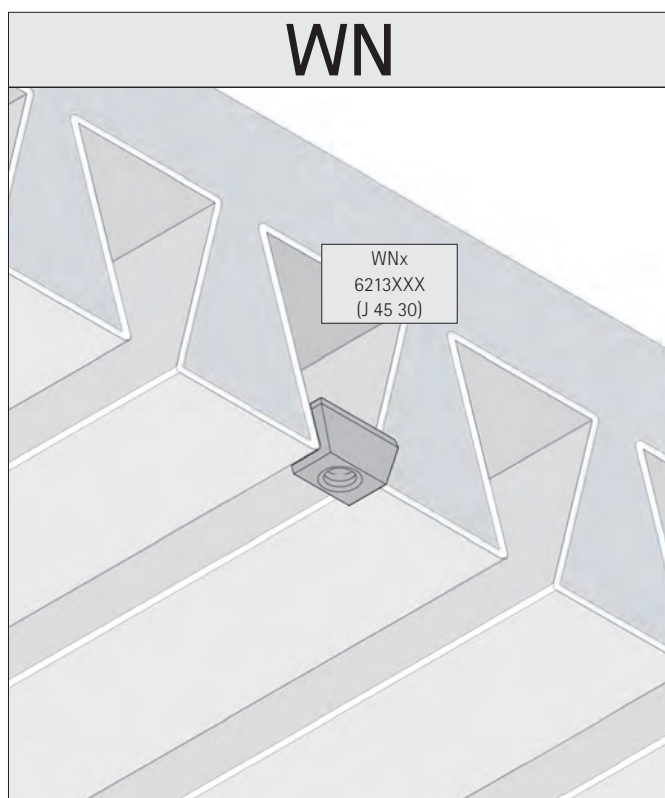
RD, RTB



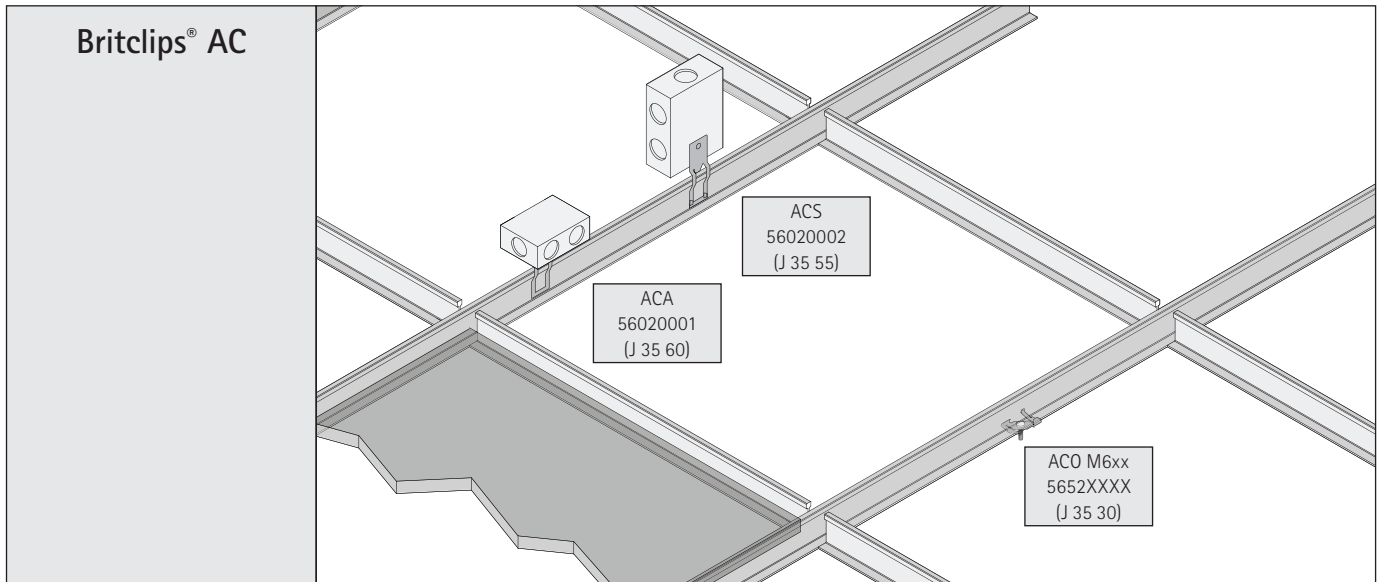
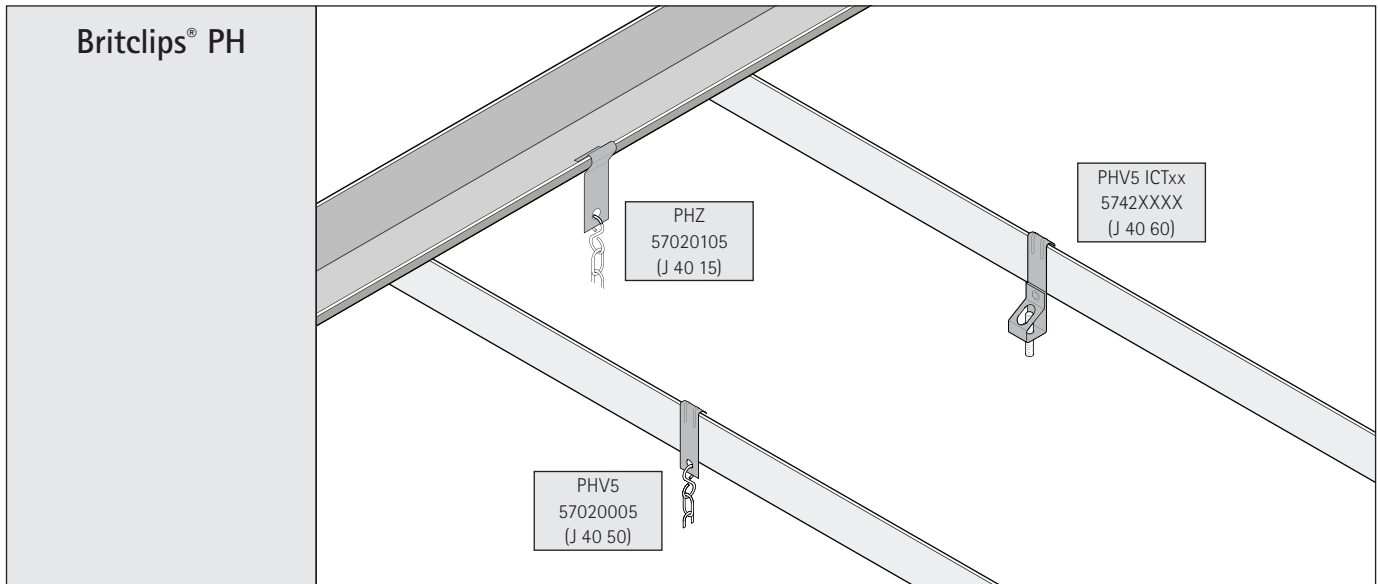
TR



WN



Application Britclips® PH, AC, PHV



Britclips® Tiger

for flange 2 - 24 mm

(J 05 05)



Features and Benefits

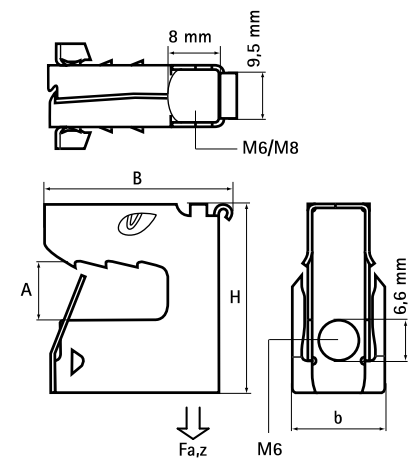
- multi-purpose clip
- for static loads, single use and non relocatable
- to hammer on or by hand; always the eye opposite to the load
- also suitable for outside use
- with hole to receive steel cable, S-Hook, cable tie, threaded rod (M6 or M8), etc.
- material: spring steel (type C67S according to EN10132)
- surface treatment: Magni coated, 2 layers (600 hours resistant to salt spray)
- incl. Britclips® ICP Thread plate, for wood screws from 4.0 to 4.5 mm (see J 50 07)

CSTB
le futur en construction

Report ED 05 / 022

Part No.	Code	A (mm)	B (mm)	H (mm)	d1 (mm)	d2 (mm)	F _{a,z} (N)	CSTB	Pack 1	Pack 2
51803216	Tiger 16R	8 - 16	32	38	8.0	6.6	1,200	CSTB	25	250

*For use with static loads only.
Max. allowed load (F_{a,z}) with M6 or M8 threaded rod vertical (safety margin 1:4).
Externally tested by CSTB.*



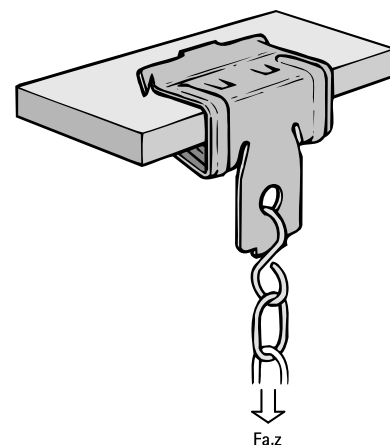
Complementary
470 BIS Stud Bolt
394 BIS Cable Tie
465 BIS S-Hook

Complementary
472 BIS Threaded Rod
463 BIS Chain (DIN 5685)

Britclips® FC

for flange 2 - 30 mm

(J 05 10)

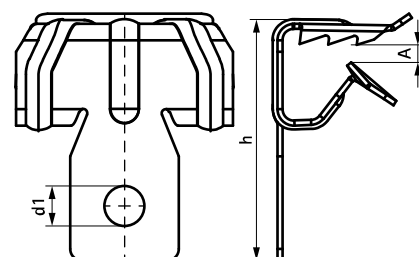


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with fixing hole (Ø 7 mm) to fix S-hook, bolt/nut, etc.
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	h (mm)	d1 (mm)	F _{a,z} (N)	Pack 1
50020004	FC4	2 - 4	27	7	450	100
50020009	FC8	4 - 8	39	7	950	100
50020016	FC14	8 - 14	41	7	950	100
50020020	FC20	14 - 20	47	7	950	100
50020030	FC28	20 - 28	56	7	950	100

For use with static loads only.



Complementary

- 465 BIS S-Hook
- 463 BIS Chain (DIN 5685)

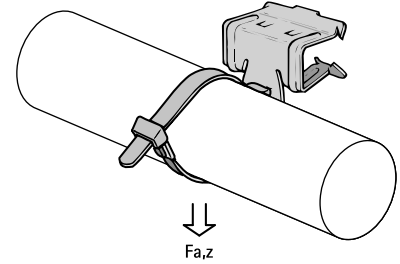
Alternative

- 364 Britclips® Tiger

Britclips® FC TB

for flange 2 - 30 mm

(J05 15)

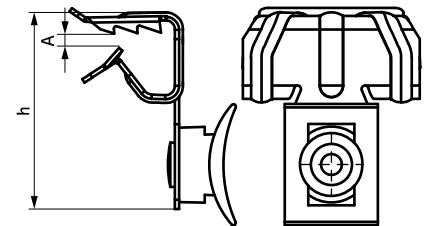


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with saddle for cable tie attachment (up to width 7.6 mm)
- material: bracket made of spring steel (type C67S according to EN10132); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	h (mm)	F _{a,z} (N)	Pack 1	Pack 2
50320009	FC8 TB	4 - 8	39	220	100	400
50320016	FC14 TB	8 - 14	41	220	100	400
50320020	FC20 TB	14 - 20	47	220	100	400
50320030	FC28 TB	20 - 28	50	220	100	400

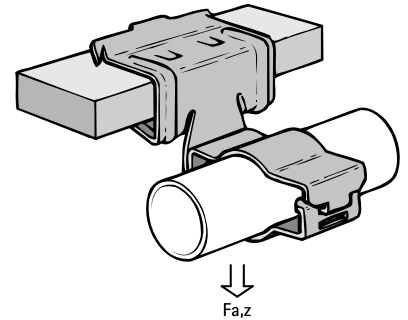
For use with static loads only.



Britclips® FC ICC

for flange 2 - 30 mm

(J 05 20)

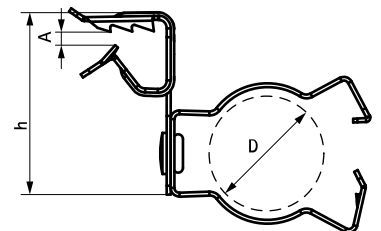
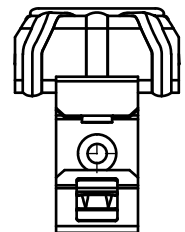


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- suitable for pipe or cable fixing horizontal, vertical or crossed with respect to the flange
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	D (mm)	A (mm)	h (mm)	F _{a,z} (N)	Pack 1	Pack 2
50122409	FC8 ICC24	18 - 24	4 - 8	39	450	50	200
50122416	FC14 ICC24	18 - 24	8 - 14	41	450	50	200
50122420	FC20 ICC24	18 - 24	14 - 20	47	450	50	200
50122430	FC28 ICC24	18 - 24	20 - 28	56	450	50	200
50122609	FC8 ICC26	22 - 26	4 - 8	39	450	50	200
50122616	FC14 ICC26	22 - 26	8 - 14	41	450	50	200
50122620	FC20 ICC26	22 - 26	14 - 20	47	450	50	200
50122630	FC28 ICC26	22 - 26	20 - 28	56	450	50	200
50123216	FC14 ICC32	30 - 32	8 - 14	41	450	50	200
50123220	FC20 ICC32	30 - 32	14 - 20	47	450	50	200

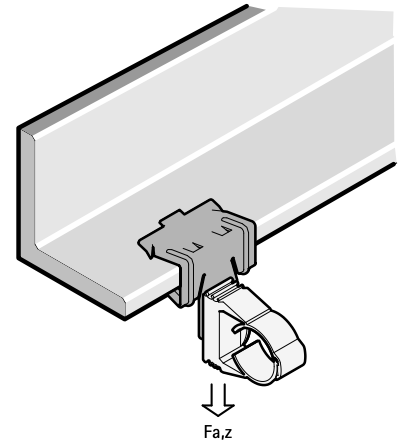
For use with static loads only.



Britclips® FC M6 x 9

for flange 2 - 30 mm

(J 05 25)

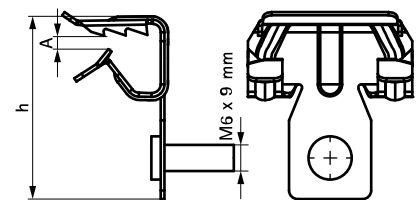


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with stud bolt M6 x 9 mm for fixing of clamp, conduit junction box, etc.
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	h (mm)	F _{a,z} (N)	Pack 1	Pack 2
50520604	FC4 M6x9	2 - 4	27	450	100	500
50520609	FC8 M6x9	4 - 8	39	450	100	500
50520616	FC14 M6x9	8 - 14	41	450	100	400
50520620	FC20 M6x9	14 - 20	47	450	100	400
50520630	FC28 M6x9	20 - 28	50	450	100	400

For use with static loads only.



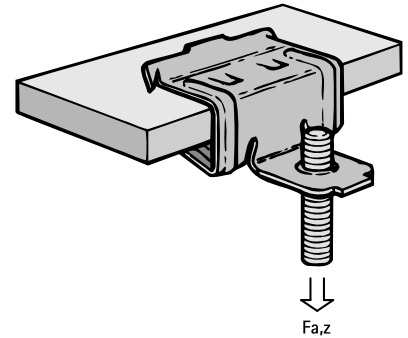
Complementary

84 starQuick® Clamp - M6 (Grey)

Britclips® FCR M6

for flange 5 - 16 mm

(J 05 35)

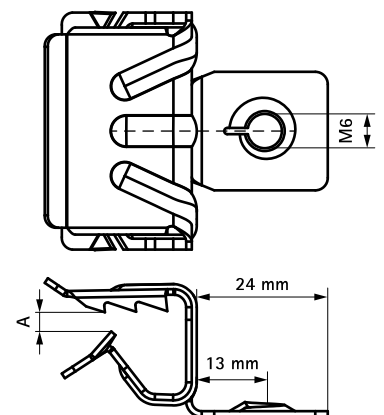


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with female thread M6
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	F _{a,z} (N)	Pack 1	Pack 2
50425609	FCR8 M6	4 - 8	M6	200	100	400
50425616	FCR14 M6	8 - 14	M6	200	100	400

For use with static loads only.



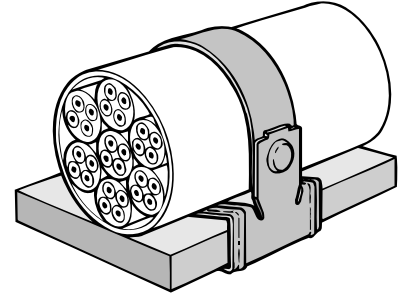
Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

Britclips® FC PD

for flange 2 - 30 mm

(J 05 40)

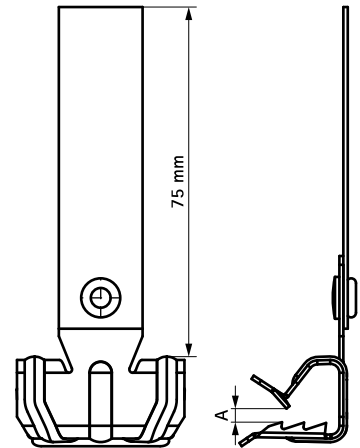


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with flexible strip to support cables
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	Pack 1	Pack 2
50327504	FC4 PD	2 - 4	100	400

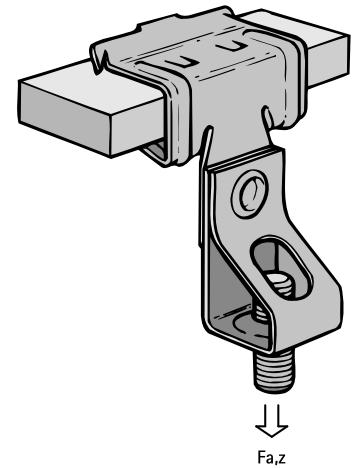
For use with static loads only.



Britclips® FC ICT

for flange 2 - 30 mm

(J 05 45)

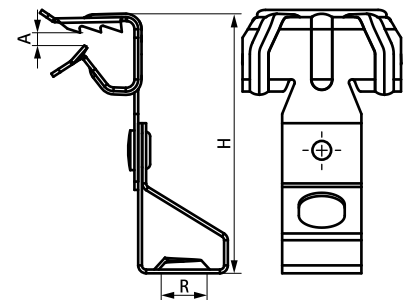


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	H (mm)	F _{a,z} (N)	Pack 1	Pack 2
50420609	FC8 ICTM6	4 - 8	M6	51	650	100	400
50420809	FC8 ICTM8	4 - 8	M8	51	700	100	400
50420616	FC14 ICTM6	8 - 14	M6	56	650	100	400
50420816	FC14 ICTM8	8 - 14	M8	56	700	100	400

For use with static loads only.



Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

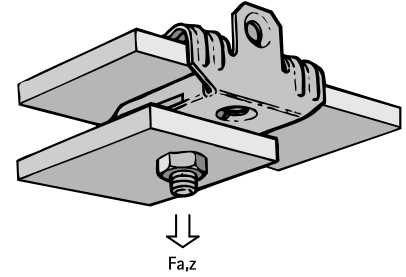
Alternative

- 364 Britclips® Tiger

Britclips® FU

for flange 3 - 20 mm

(J 10 05)

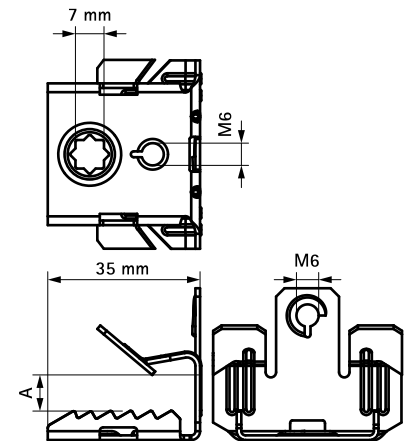


Features and Benefits

- for a solid fixing under flanges without welding or drilling
- suitable for horizontal and vertical flanges
- with female thread M6
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	F _{a,z} (N)	Pack 1	Pack 2
51420607	FU7 M6	3.0 - 7.0	M6	450	100	400
51420613	FU12,5 M6	8.0 - 12.5	M6	450	100	400
51420620	FU20 M6	14.0 - 20.0	M6	450	100	400

For use with static loads only.



Complementary

- 470 BIS Stud Bolt
- 394 BIS Cable Tie
- 472 BIS Threaded Rod

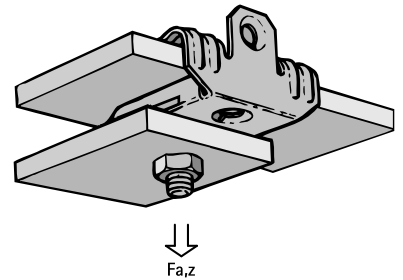
Alternative

- 364 Britclips® Tiger

Britclips® FU M6 x 9

for flange 3 - 20 mm

(J 10 10)

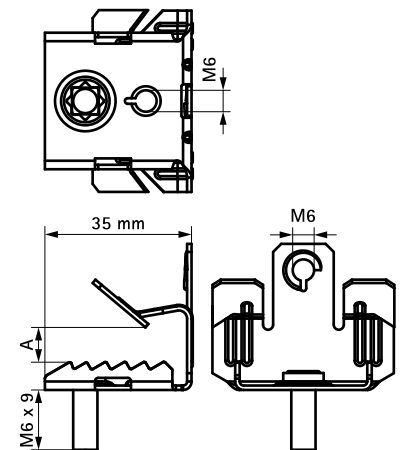


Features and Benefits

- for a solid fixing under flanges without welding or drilling
- suitable for horizontal and vertical flanges
- with stud bolt M6 x 9 mm for fixing of clamp, conduit junction box, etc.
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	F _{a,z} (N)	Pack 1	Pack 2
51520607	FU7 M6x9	3.0 - 7.0	M6	450	100	400
51520613	FU12,5 M6x9	8.0 - 12.5	M6	450	100	400
51520620	FU20 M6x9	14.0 - 20.0	M6	450	100	400

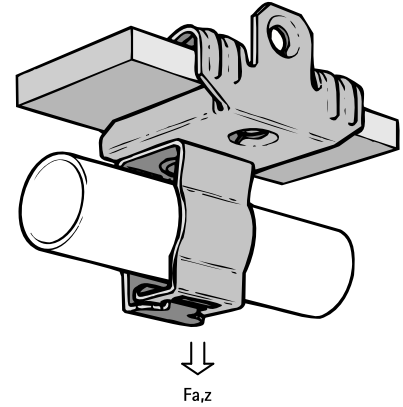
For use with static loads only.



Britclips® FU ICC

for flange 3 - 20 mm

(J 10 15)

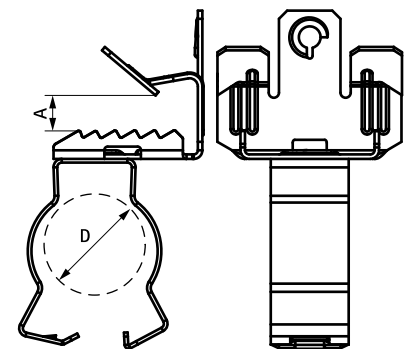


Features and Benefits

- for a solid fixing under flanges without welding or drilling
- suitable for pipe or cable fixing horizontal, vertical or crossed with respect to the flange
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	D (mm)	A (mm)	F _{a,z} (N)	Pack 1	Pack 2
51122413	FU12,5 ICC24	19 - 22	8.0 - 12.5	450	50	200
51122420	FU20 ICC24	19 - 22	14.0 - 20.0	450	50	200
51122613	FU12,5 ICC26	23 - 25	8.0 - 12.5	450	50	200
51122620	FU20 ICC26	23 - 25	14.0 - 20.0	450	50	200
51123207	FU7 ICC32	26 - 32	3.0 - 7.0	450	50	200

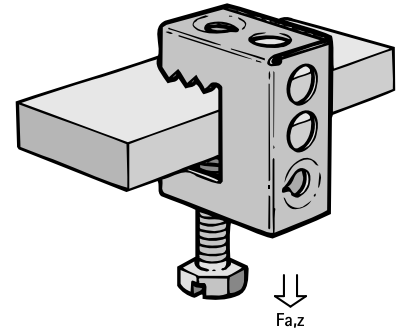
For use with static loads only.



Britclips® SB

for flange 2 - 17 mm

(J 15 05)

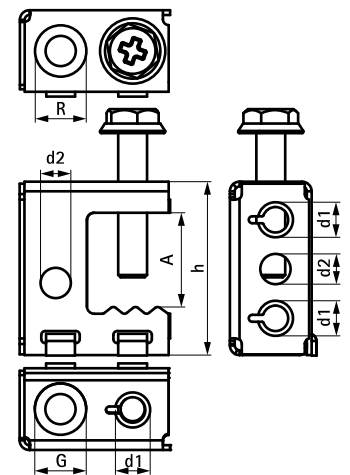


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- various fixing possibilities to clamp (horizontal and vertical)
- with thread connector M6
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	G	h (mm)	d1 (mm)	d2 (mm)	F _{a,z} (N)	Pack 1	Pack 2
53420717	SB17 6,5	2 - 17	11 mm	Ø 6.0 mm	36	M6	6.0	550	100	300

For use with static loads only.



Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

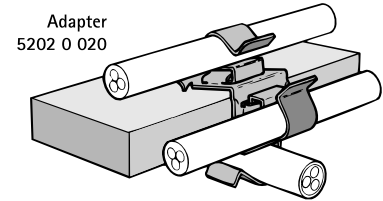
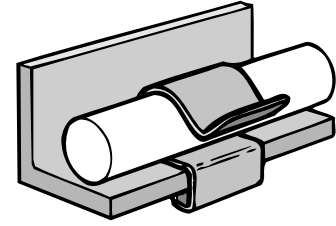
Alternative

- 364 Britclips® Tiger

Britclips® PC Flange

for flange 2 - 7 mm

(J 20 05)

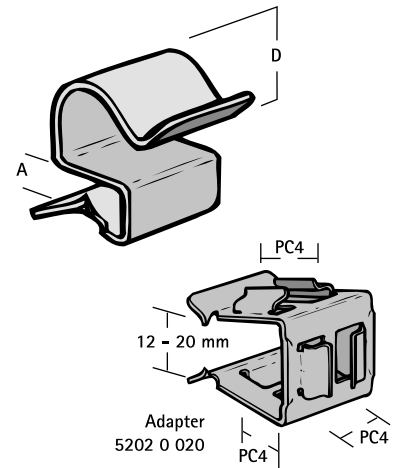


Features and Benefits

- for quick fixing of cables
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	D (mm)	A (mm)	Pack 1	Pack 2
52020604	PC4 5,5	4.5 - 5.5	2 - 4	100	500
52020704	PC4 7	6.0 - 7.0	2 - 4	100	500
52020904	PC4 9	7.0 - 9.0	2 - 4	100	500
52021104	PC4 11	10.0 - 11.0	2 - 4	100	500
52021404	PC4 14	12.0 - 14.0	2 - 4	100	500
52021804	PC4 18	15.0 - 18.0	2 - 4	100	500
52022404	PC4 24	19.0 - 24.0	2 - 4	100	500
52023004	PC4 30	25.0 - 30.0	2 - 4	100	500
52020607	PC7 5,5	4.5 - 5.5	4 - 7	100	500
52020707	PC7 7	6.0 - 7.0	4 - 7	100	500
52020907	PC7 9	7.0 - 9.0	4 - 7	100	500
52021107	PC7 11	10.0 - 11.0	4 - 7	100	500
52021407	PC7 14	12.0 - 14.0	4 - 7	100	500
52021807	PC7 18	15.0 - 18.0	4 - 7	100	500
52022407	PC7 24	19.0 - 24.0	4 - 7	100	500
52023007	PC7 30	25.0 - 30.0	4 - 7	100	500

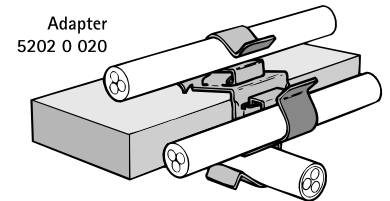
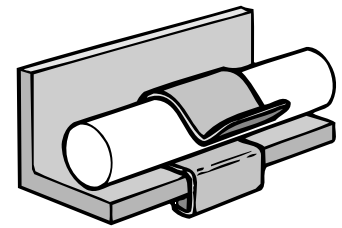
For use with static loads only.



Britclips® PC Flange

for flange 8 - 12 mm

(J 20 06)

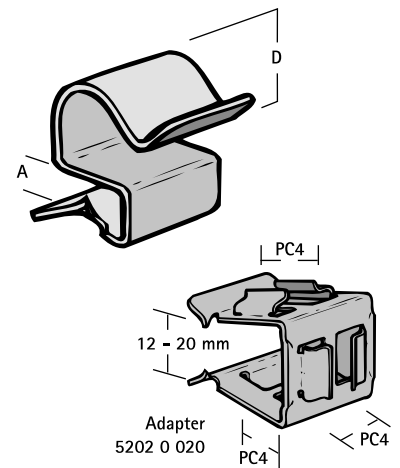


Features and Benefits

- for quick fixing of cables
- Part No. 52020020: adaptor for fastening of maximum 3 cable run clips (type PC4)
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	D (mm)	A (mm)	Pack 1	Pack 2
52020712	PC12 7	6.0 - 7.0	8 - 12	100	500
52020912	PC12 9	7.0 - 9.0	8 - 12	100	500
52021112	PC12 11	10.0 - 11.0	8 - 12	100	500
52021412	PC12 14	12.0 - 14.0	8 - 12	100	500
52021812	PC12 18	15.0 - 18.0	8 - 12	100	500
52022412	PC12 24	19.0 - 24.0	8 - 12	100	500
52023012	PC12 30	25.0 - 30.0	8 - 12	100	500
52020020	PCC	0	12 - 20	50	200

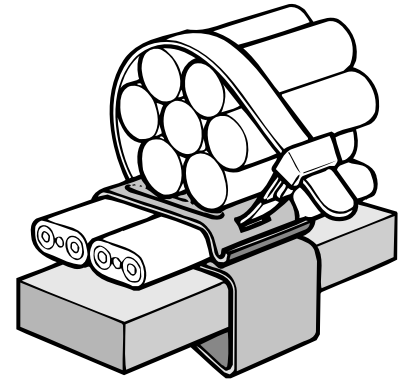
For use with static loads only.



Britclips® PCD

for flange 3 - 25 mm

(J 20 15)

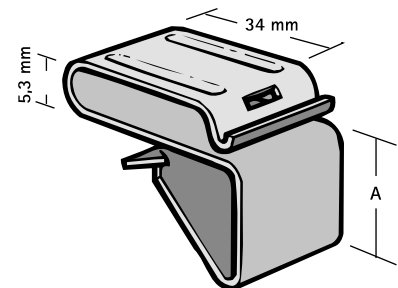


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- suitable for horizontal and vertical flanges
- for quick fixing of round or flat cables parallel to flange
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	Pack 1	Pack 2
52323412	PCD12	3 - 12	100	400
52323425	PCD25	12 - 25	100	300

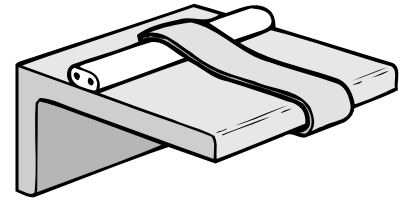
For use with static loads only.



Britclips® PCF

for flange 3 - 11 mm

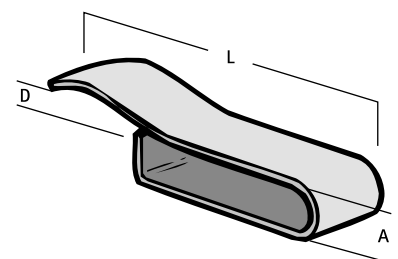
(J 20 25)



Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- surface treatment: Delta-Tone 9000 (480 hours)
- for quick fixing of cables
- material: spring steel (type C67S according to EN10132)

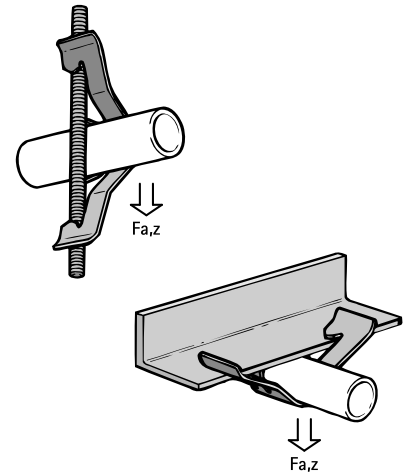
Part No.	Code	D (mm)	A (mm)	L	Pack 1
52022009	PCF9	7 - 20	8 - 9 / 10 - 11	41 mm	100
<i>For use with static loads only.</i>					



Britclips® TRC

for threaded rods or flanges 16 - 20 mm

(J 25 05)

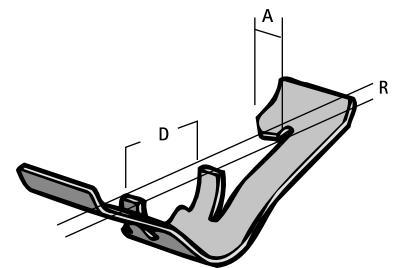


Features and Benefits

- for quick fixing to threaded rods or flanges without welding or drilling
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	D (mm)	A (mm)	R	F _{a,z} (N)	Pack 1	Pack 2
55922510	TRCM10	16 - 20	6 - 9	M6 - M8 / M10	450	100	400

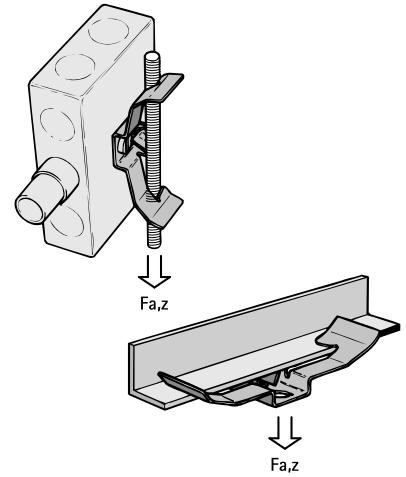
*For use with static loads only.
Load shown is for beam application, for rod application F_{a,z} = 220 N.*



Britclips® TR

for threaded rods or flanges

(J 25 15)

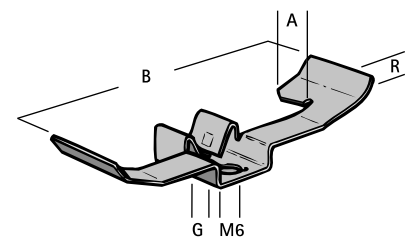


Features and Benefits

- for quick fixing to threaded rods or flanges without welding or drilling
- with female thread or hole for universal use
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	G	B (mm)	F _{a,z} (N)	Pack 1	Pack 2
55020008	TRM8	3 - 7	M4 - M8	M4	80	220	100	400

For use with static loads only.



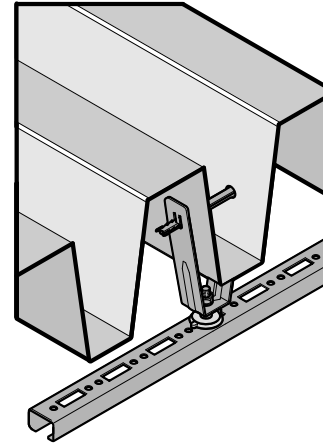
Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

Britclips® Rapid RTB

for ceilings

(J 30 25)

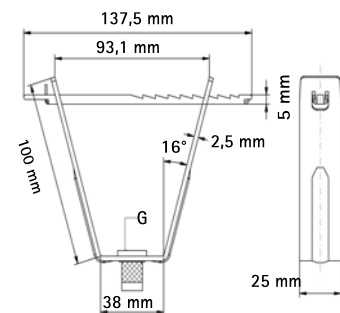


Features and Benefits

- for fixing to trapezium shaped roofing sheets
- minimum thickness roof sheet 0.63 mm
- quick fixing: one piece and elements cannot be lost
- for making a hole in the roof deck we recommend the use of the BIS Hole Punching Pliers (Part No. 692 0 012)
- material: steel
- pre-galvanized

Part No.	Code	G	Pack 1
6781106	RTB 6	M6	50
6781108	RTB 8	M8	50
6781110	RTB 10	M10	50
6781013	RTB 13	Ø 13.0 mm	50

Maximum load ($F_{0,2}$) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer.



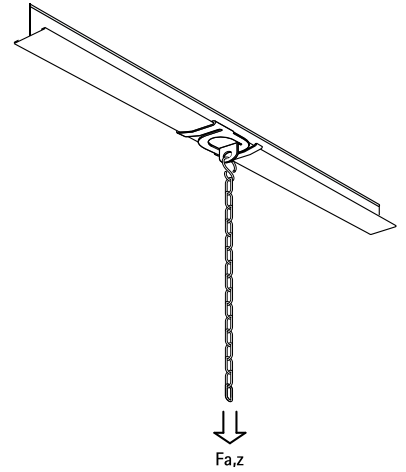
Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod
- 429 BIS Hole Punching Plier

Britclips® ACHW / ACHZ

for ceiling grid 25 mm

(J 35 40)

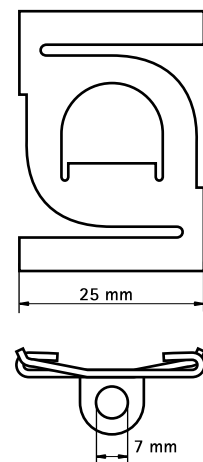


Features and Benefits

- twist on fixing
- for fixing to the ceiling grid
- with fixing hole (Ø 7,0 mm) to fix S-hook/nut, etc.
- material: spring steel (type C67S according to EN10132)

Part No.	Code	d1 (mm)	F _{a,z} (N)	ST	Pack 1	Pack 2
56090025	ACHW	7.0	220	epoxy-coated (white)	100	500

For use with static loads only.



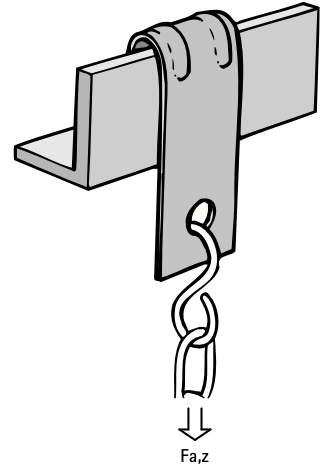
Complementary

- 465 BIS S-Hook
- 463 BIS Chain (DIN 5685)

Britclips® PHV

for vertical flanges 1 - 7 mm

(J 40 50)

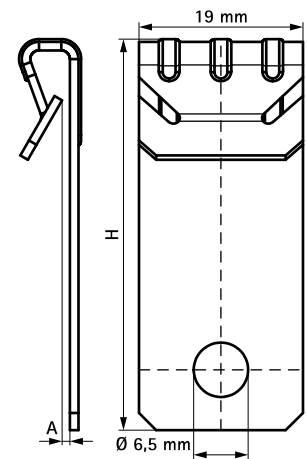


Features and Benefits

- for fixing to vertical flanges
- with fixing hole (Ø 6.5 mm) vertical to fix S-hook, bolt/nut, etc.
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	H (mm)	d1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
57020005	PHV5	1 - 5	39	6.5	720	100	500

For use with static loads only.



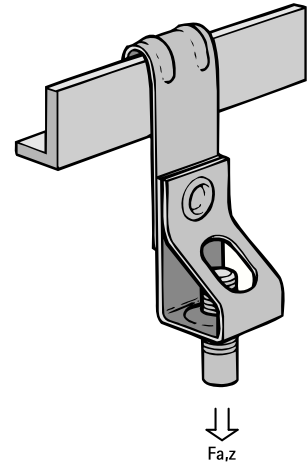
Complementary

- 465 BIS S-Hook
- 463 BIS Chain (DIN 5685)

Britclips® PHV ICT

for vertical flanges 1 - 7 mm

(J 40 60)

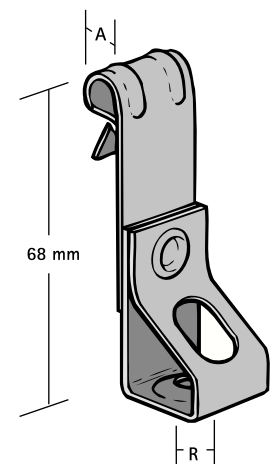


Features and Benefits

- for fixing to vertical flanges
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type C67S according to EN10132)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No.	Code	A (mm)	R	F _{a,z} (N)	Pack 1	Pack 2
57420605	PHV5 ICTM6	1 - 5	M6	650	100	400
57420805	PHV5 ICTM8	1 - 5	M8	700	100	400
57421005	PHV5 ICTM10	1 - 5	M10	720	100	400

For use with static loads only.



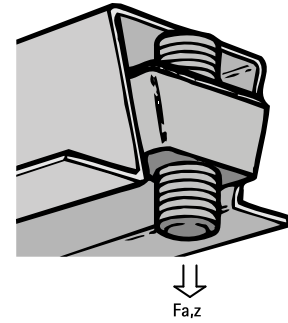
Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

Britclips® WN

for composite flooring systems

(J 45 30)

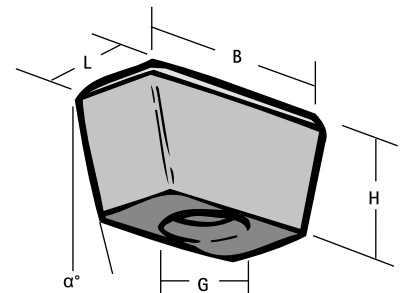


Features and Benefits

- for fixing to composite flooring systems
- material: steel
- with thread connector
- zinc plated

Part No.	Type	R	L	B	H	a	F _{a,z}	Pack 1
				(mm)	(mm)	(°)	(N)	
6213006	HW6	M6	12.5 mm	25	13.0	15.0°	1,200	100
6213008	HW8	M8	12.5 mm	25	13.0	15.0°	1,690	100
6213010	HW10	M10	12.5 mm	25	13.0	15.0°	2,050	100
6213106	HW6SR	M6	13.0 mm	21	10.0	11.5°	1,200	100
6213108	HW8SR	M8	13.0 mm	21	10.0	11.5°	1,690	100
6213110	HW10SR	M10	13.0 mm	21	10.0	11.5°	2,250	100
6213208	HMWA8	M8	10.0 mm	19	10.0	23.5°	1,690	100
6213408	HMW8	M8	9.5 mm	19	9.5	14.0°	1,690	100

For use with static loads only.



Complementary

- 470 BIS Stud Bolt
- 472 BIS Threaded Rod

BIS Twistfix

14 - 72 mm

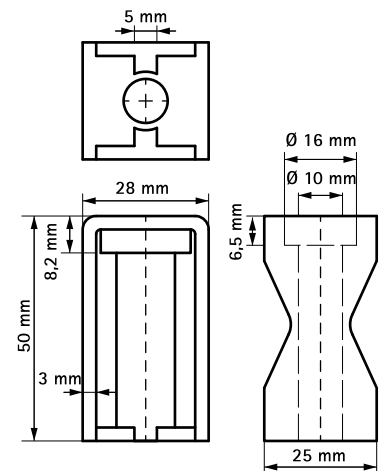
(J 58 10)



Features and Benefits

- space saving
- allows fixing of different diameters with the same clip
- for electrical and optical fiber systems
- material: PA (polyamide), black
- halogen free
- UV resistant
- Part No. 658420X: Flamability rating: class UL 94 HB
- temperature resistance from -18 °C to +66 °C

Part No.	D (mm)	For Rail	Pack 1
6584202	14 - 48	WM0 (27x18) + 28x30	100
6584203	14 - 48	35x18	100
6584204	24 - 72	WM0 (27x18) + 28x30	50
6584205	24 - 72	35x18	50



Complementary

- 388 BIS Fixing Rail for BIS Twistfix
- 173 RapidRail® Fixing Rail

BIS Fixing Rail for BIS Twistfix

(J 58 15)



Features and Benefits

- for a quick and easy fixing
- rail is open at both ends for easy fixing with electrical screwdriver

Part No.	L	s (mm)	S (mm)	From Rail	ST	BndS
6504125	1 m	1.50	16	35x18T	pre-galvanized	12
6504018	500 mm	1.50	16	35x18T	pre-galvanized	12
<i>Part No. 6504XXX: pre-galvanized.</i>						

BIS Fixing Rail for BIS Cablefix

(J 58 25)



Features and Benefits

- for a quick and easy fixing
 - with continuous perforation
 - distance between rail end and first hole is always equal
- material: steel

Part No.	L	s (mm)	S (mm)	From Rail	ST	BndS
6504026	2 m	2.00	22.0	38x30	pre-galvanized	16
<i>Part No. 6504XXX: pre-galvanized.</i>						

BIS STARLOCK I Cable Bind System

(J 60 05)

cable bind system



Features and Benefits

- for batch fixing large quantities of cable ties
- easy and quick to use
 - tightens strip and cuts redundant part
- BIS STARLOCK I standard model, supplied as startset in blisterpack
- material:
 - cable strap made of PA6 (polyamide)
 - locking clips made of POM (polyoxymethylene)
- cable strap:
 - tensile strength 15 kg (safety factor 1:2)
 - UV-resistant (black)
 - temperature resistance up to approx. 70 °C
 - width 4.5 mm

Part No.	Model	Pack 1	Pack 2
0909010	Startset consisting of: 1 x BIS STARLOCK I, 1 x 15 m cable strap and 200 locking clips, white	1	6
0909011	Startset consisting of: 1 x BIS STARLOCK I, 1 x 15 m cable strap and 200 locking clips, black	1	6

Complementary

- 393 BIS STARLOCK Parts
- 392 BIS STARLOCK Consumables

BIS STARLOCK II Cable Bind System

(J 60 10)

cable bind system



0909060



0909061



Features and Benefits

- for batch fixing large quantities of cable ties
- easy and quick to use
 - tightens strip and cuts redundant part
- BIS STARLOCK II with tightening lever, supplied as startset in case
- material:
 - cable strap made of PA6 (polyamide)
 - locking clips made of POM (polyoxymethylene)
- cable strap:
 - tensile strength 15 kg (safety factor 1:2)
 - UV-resistant (black)
 - temperature resistance up to approx. 70 °C
 - width 4.5 mm

Part No.	Model	Pack 1	Pack 2
0909060	Startset consisting of: 1 x BIS STARLOCK II, 1 x 15 m cable strap and 100 locking clips, white	1	9
0909061	Startset consisting of: 1 x BIS STARLOCK II, 1 x 15 m cable strap and 100 locking clips, black	1	9

BIS STARLOCK Consumables

(J 60 15)

cable bind system



Features and Benefits

- material:
 - cable strap made of PA6 (polyamide)
 - locking clips made of POM (polyoxymethylene)
- cable strap:
 - tensile strength 15 kg (safety factor 1:2)
 - UV-resistant (black)
 - temperature resistance up to approx. 70 °C
 - width 4.5 mm

Part No.	Model	Pack 1	Pack 2
0909120	Cable strap L = 15 m, white	2	20
0909100	Cable strap L = 15 m, white	300	-
0909121	Cable strap L = 15 m, black	2	20
0909101	Cable strap L = 15 m, black	300	-
0909150	Cable strap L = 100 m, white	1	16
0909151	Cable strap L = 100 m, black	1	16
0909200	Stick with 20 locking clips, white	10	100
0909250	Stick with 20 locking clips, white	10	100
0909201	Stick with 20 locking clips, black	10	100
0909251	Stick with 20 locking clips, black	10	100
0909211	Stick with 20 locking clips, black	50	-

BIS STARLOCK Parts

cable bind system

(J 60 20)



Features and Benefits

- for BIS STARLOCK I and BIS STARLOCK II
Cable bundler

Part No.	Model	For	Pack 1	Pack 2
0909920	Knives (replacement)	BIS STARLOCK I + II	5	100

BIS Cable Tie

(J 60 35)



Features and Benefits

- material: PA (polyamide)
- temperature resistance from -35 °C to +85 °C
- resistant to oil, grease, salt and thin acids

Part No.	L	Colour	Pack 1
0903200	200 x 3.6 mm	Black	100
0903290	290 x 3.6 mm	Black	100
0903370	370 x 3.6 mm	Black	100
0905178	178 x 4.8 mm	Black	100
0905200	200 x 4.8 mm	Black	100
0905250	250 x 4.8 mm	Black	100
0905290	290 x 4.8 mm	Black	100
0905360	360 x 4.8 mm	Black	100
0905430	430 x 4.8 mm	Black	100
0901290	290 x 7.6 mm	Black	100
0907240	240 x 7.8 mm	Black	100
0901300	300 x 7.8 mm	Black	100
0901370	365 x 7.8 mm	Black	100
0907450	450 x 7.8 mm	Black	100
0907540	540 x 7.8 mm	Black	100
0907750	720 x 7.8 mm	Black	100
0908780	780 x 9.0 mm	Black	100

BIS Basefix

(J 60 40)



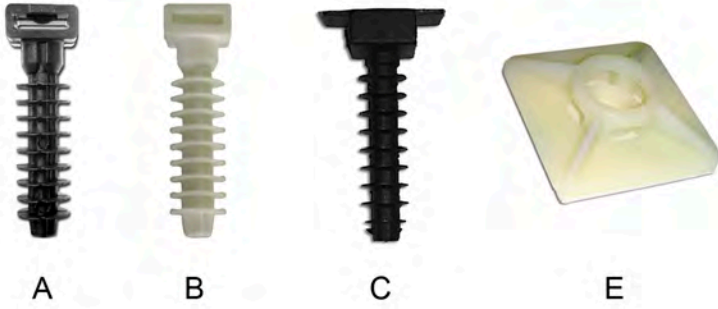
Features and Benefits

- quick installation in 15 seconds
- better fit of tube due to form
- to fix tubes with cable ties on different surfaces

Part No.	Model	Pack 1	Pack 2
0900406	Nylon cable tie fixing	100	1,000

BIS Fixing Accessory for Cable Tie

(J 60 45)



Features and Benefits

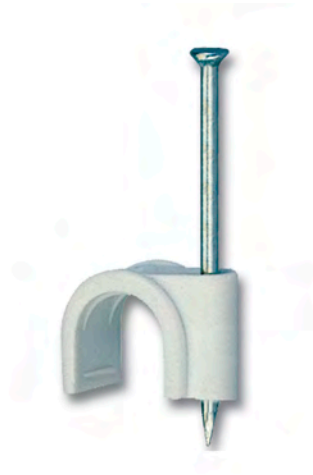
- accessories for fixing nylon tie-wraps to different surfaces

Part No.	Model	Type	Pack 1	Pack 2
0900401	Stud Ø 8 (black)	A	100	5,000
0900402	Stud Ø 8 (white)	B	100	5,000
0900403	Stud Ø 6	C	100	5,000

BIS Nail Clip (White)

for fixing round electrical conductors

(J 65 05)



Features and Benefits

Part No.	For	Pc.	Pack 1
08590602	Cable 2 x 1	6	100
08590702	Cable 2 x 1 / 2 x 1.5	7	100
08590802	Cable 2 x 2.5	8	100
08590902	Cable 2 x 4 / 3 x 2.5	9	100
08591002	Cable 2 x 4	10	100

BIS Nail Clip (Black)

for fixing round electrical conductors

(J 65 10)



Features and Benefits

Part No.	For	Pc.	Pack 1
08580602	Cable 2 x 1	6	100
08580702	Cable 2 x 1 / 2 x 1.5	7	100
08580802	Cable 2 x 2.5	8	100
08580902	Cable 2 x 4 / 3 x 2.5	9	100
08581002	Cable 2 x 4	10	100

K BIS Fixing Accessories



BIS Suspension Band

BIS Suspension Band - Plated	401
BIS Suspension Band - Plasticized	402
BIS Suspension Band - Loose	403
BIS Suspension Band (Curved) - Steel	404
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BIS Autoblock Suspension Band

BIS Uniblock	407
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BIS Wall Plates

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BIS Fixings to Corrugated Sheets

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BISMAT® Rail

BISMAT® Rail	434
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BIS Pipe Reinforcement	440
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BIS Hanger Bolts and Wood Screws

BIS Hanger Bolt (BUP1000)	441
BIS Hanger Bolt	442
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K BIS Fixing Accessories



BIS Screws, Bolts, Washers, Nuts

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BIS Chains

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BIS Stud Bolts, Stud Connectors

BIS Stud Bolt (BUP1000)	469
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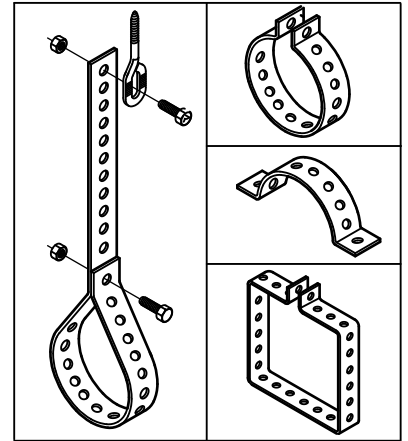
BIS DobyGrip

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BIS Suspension Band – Plated

(K 05 05)

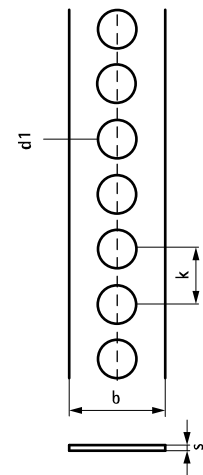
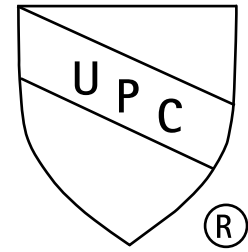
fixing of pipes and air ducts



Features and Benefits

- with continuous perforation
- material: steel
- pre-galvanized

Part No.	Type	L	b x s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1	App.
0830012	5055	10 m	12 x 1.0	5.0	8.0	1,050	10	roll
0830017	5055	10 m	17 x 1.0	7.0	12.0	1,500	10	roll
0830117	5055	10 m	17 x 1.0	6.5	15.0	1,290	10	roll
0831012	5055L	10 m	12 x 0.8	5.0	8.0	840	10	roll
0831017	5055L	10 m	17 x 0.8	7.0	12.0	1,070	10	roll
0831026	5055L	10 m	26 x 1.0	8.5	14.0	2,620	10	roll



Complementary

- 445 BIS Suspension Eye (Female Threaded)
- 616 BIS Shouldered Masonry Nail
- 457 BIS Suspension Eye - Wood Thread

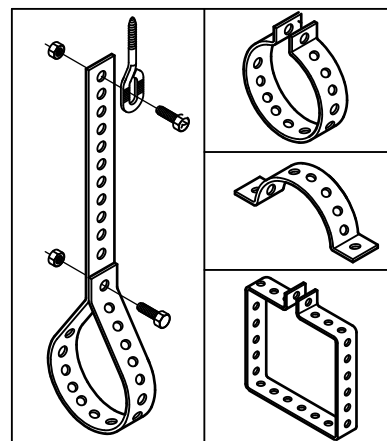
Complementary

- 458 BIS Suspension Eye - Metric
- 525 BIS HK

BIS Suspension Band – Plasticized

(K 05 10)

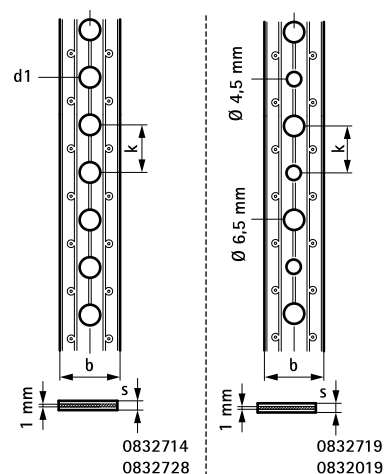
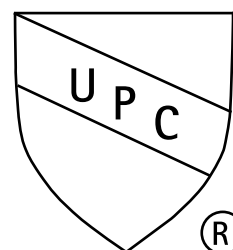
fixing of pipes and air ducts



Features and Benefits

- with continuous perforation
- material: steel, PVC coated
- pre-galvanized, welded plastic case

Part No.	Model	L	b x s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1	App.
0832714	Without packaging	10 m	14 x 3.0	4.5	15.0	880	10	roll
0832728	Without packaging	10 m	26 x 3.2	8.5	16.0	1,260	10	roll
0832719	Without packaging	10 m	19 x 3.0	-	15.0	1,230	10	roll
0832019	Cardboard box	10 m	19 x 3.0	-	15.0	1,230	18	roll



Complementary

- 445 BIS Suspension Eye (Female Threaded)
- 616 BIS Shouldered Masonry Nail
- 457 BIS Suspension Eye - Wood Thread

Complementary

- 458 BIS Suspension Eye - Metric
- 525 BIS HK

BIS Suspension Band – Loose

(K 05 15)

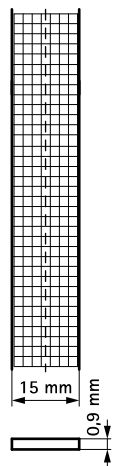
fixing of pipes and air ducts



Features and Benefits

- material: PP (polypropylene)
- Part No. 0833015: in carton box
- Part No. 0833915: bundled
- tear load: ca. 2,500 N
- colour: traffic black
- UV-stabilized

Part No.	L	b x s (mm)	Pack 1	App.
0833915	15 m	15 x 0.9	10	roll
0833015	15 m	15 x 0.9	10	roll



BIS Suspension Band (Curved) – Steel

(K 05 20)

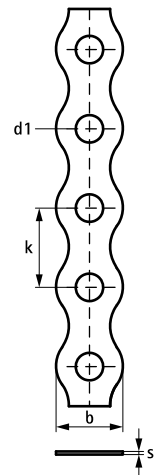
fixing of pipes and air ducts



Features and Benefits

- flexible system with multiple applications
- material: steel
- dispenser cassette allows easy handling and storage
- pre-galvanized

Part No.	L	b x s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1	App.
0835012	10 m	12 x 0.8	5.0	14.5	840	10	roll
0835017	10 m	17 x 0.8	7.0	20.2	1,010	10	roll
0835026	10 m	26 x 1.0	8.0	25.0	1,650	10	roll



BIS Suspension Band (Curved) – Aluminium

(K 05 25)

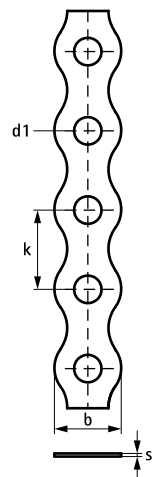
fixing of pipes and air ducts



Features and Benefits

- flexible system with multiple applications
- dispenser cassette allows easy handling and storage
- material: aluminium

Part No.	L	b x s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1	App.
0834117	10 m	17 x 1.0	7.0	20.2	310	10	roll



BIS Suspension Band – Plastic-coated

(K 05 35)

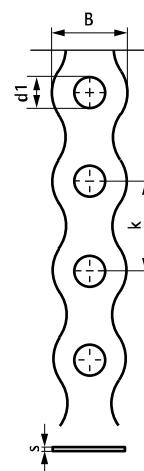
fixing of pipes and air ducts



Features and Benefits

- flexible system with multiple applications
- material: plastic-coated galvanized steel
- ideal for applications requiring corrosion resistance and electrical insulation

Part No.	Model	L	b x s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1	App.
0839018	Without packaging	10 m.	18 x 1.2	6.5	20.0	1,010	10	roll



Complementary

- 445 BIS Suspension Eye (Female Threaded)
- 457 BIS Suspension Eye - Wood Thread
- 458 BIS Suspension Eye - Metric

Complementary

- 616 BIS Shouldered Masonry Nail
- 525 BIS HK

BIS Uniblock

(K 12 10)



083 8 000



083 8 002



083 8 001

Features and Benefits

- maximum functionality and rapidity on installation
- metal locking devices for steel strip banding system
- for installation of flexible tubes in the heating, ventilation and air conditioning industry
- the unique one piece locking device provides very fast clamping in a few seconds
- material: suspension band of stainless steel; traction screws of steel, zinc plated

Part No.	Model	Pack 1	Pack 2
0838000	30m steel strip	1	-
0838001	Set 'Autoblock' 3m + 8 screws	1	-

BIS Wall Plate 670

(K 15 05)

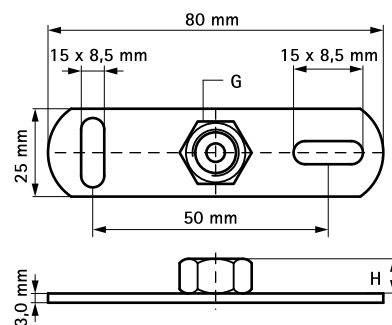
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded connection nut
- material: steel
- zinc plated

Part No.	G	H (mm)	F _{a,z} (N)	Pack 1	Pack 2
6703006	M6	6	2,500	50	250
6703008	M8	8	2,500	50	250
6703009	M8/10	18	2,500	50	200
6703010	M10	10	2,500	50	200
6703016	M16	13	2,500	50	250
6703021	G1/2"	15	2,500	50	200



BIS Wall Plate

fixing to wall or ceiling

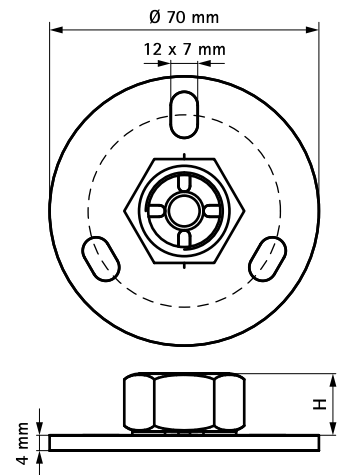
(K 15 07)



Features and Benefits

- with resistance welded connection nut
- zinc plated
- material: steel

Part No.	G	H (mm)	F _{a,z} (N)	Pack 1
6709021	G1/2"	16	2,500	50



BIS Wall Plate CO₂ Welded (BUP1000)

(K 15 09)

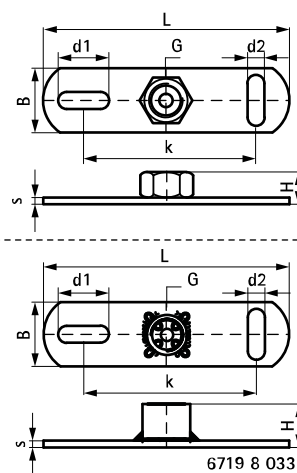
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- with CO₂ welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	L	B	H	s	d1	d2	k	F _{a,z}	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	
67198016	M16	145 mm	38	19.5	4	30 x 11	25 x 11	100	6,000	50
67198021	G1/2"	145 mm	38	21.5	4	30 x 11	25 x 11	100	4,000	50
67198033	G1"	145 mm	38	26.5	4	30 x 11	25 x 11	100	5,500	50



BIS Wall Plate Resistance Welded

(K 15 10)

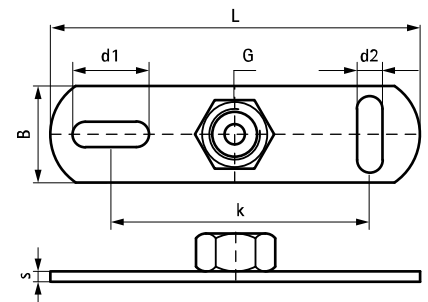
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded connection nut
- material: steel
- zinc plated

Part No.	G	L	B (mm)	H (mm)	s (mm)	d1 (mm)	d2 (mm)	k (mm)	F _{a,z} (N)	Pack 1
6713008	M8	145 mm	38	8	4	30 x 11	25 x 11	100	3,200	40
6713010	M10	145 mm	38	10	4	30 x 11	25 x 11	100	3,500	40
6713012	M12	145 mm	38	10	4	30 x 11	25 x 11	100	3,500	40
6713016	M16	145 mm	38	13	4	30 x 11	25 x 11	100	3,800	50
6713021	G½"	145 mm	38	15	4	30 x 11	25 x 11	100	3,800	50



BIS Wall Plate Resistance Welded (BUP1000)

(K 15 11)

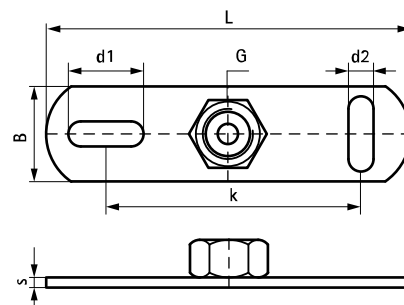
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded connection nut
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	L	B (mm)	s (mm)	d1 (mm)	d2 (mm)	k (mm)	F _{a,z} (N)	Pack 1
6708008	M8	80 mm	25	3	15 x 8.5	15 x 8.5	50	2,500	50
6708010	M10	80 mm	25	3	15 x 8.5	15 x 8.5	50	2,500	50



BIS Wall Plate CO₂ Welded

(K 15 12)

fixing to wall or ceiling



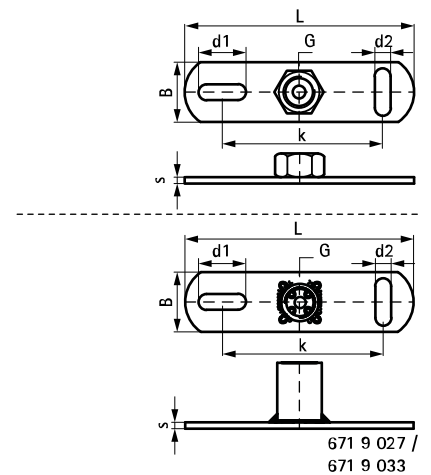
6719016

6719027

Features and Benefits

- slots at 90° to each other to simplify fixing
- with CO₂ welded connection nut
- material: steel
- zinc plated

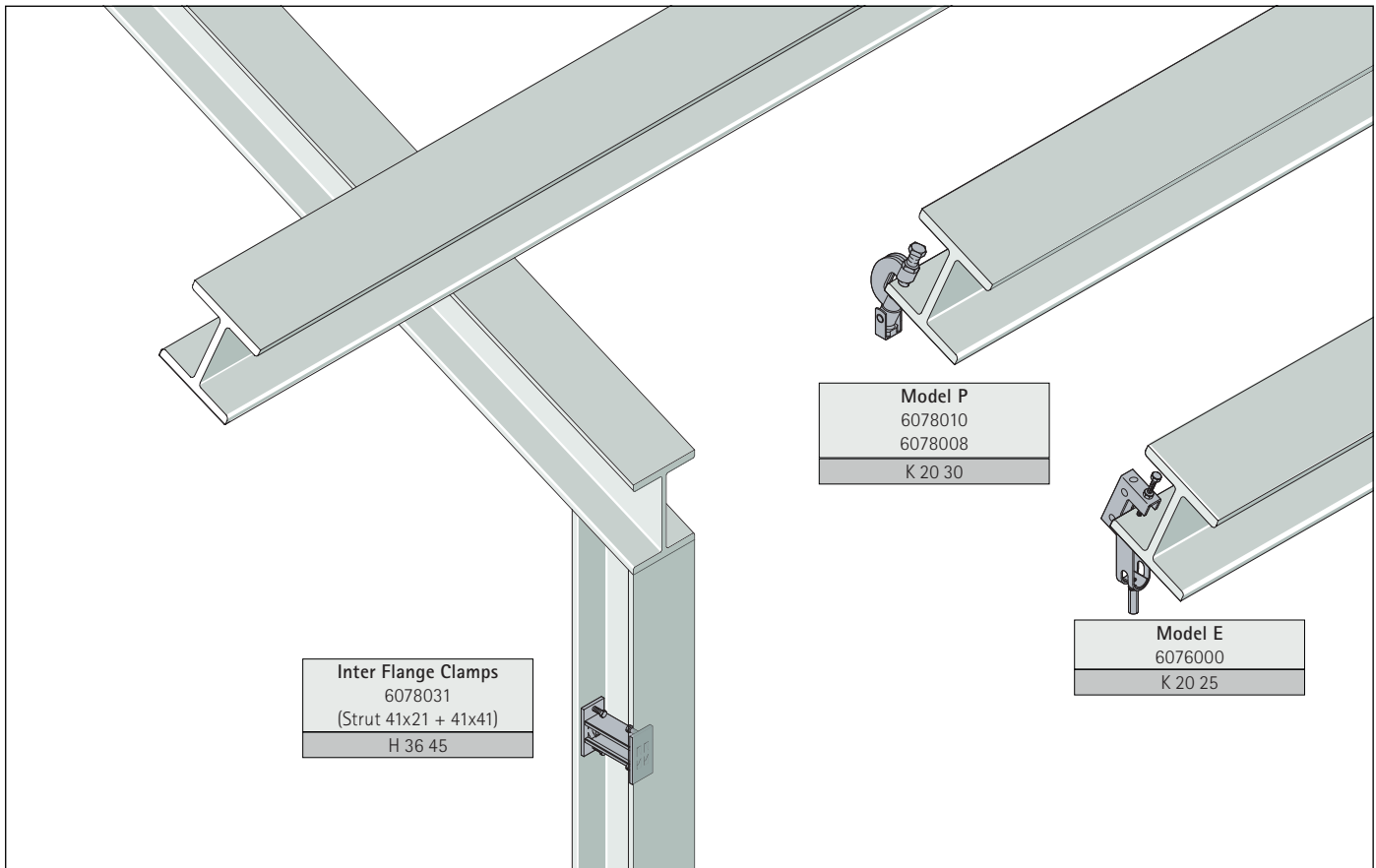
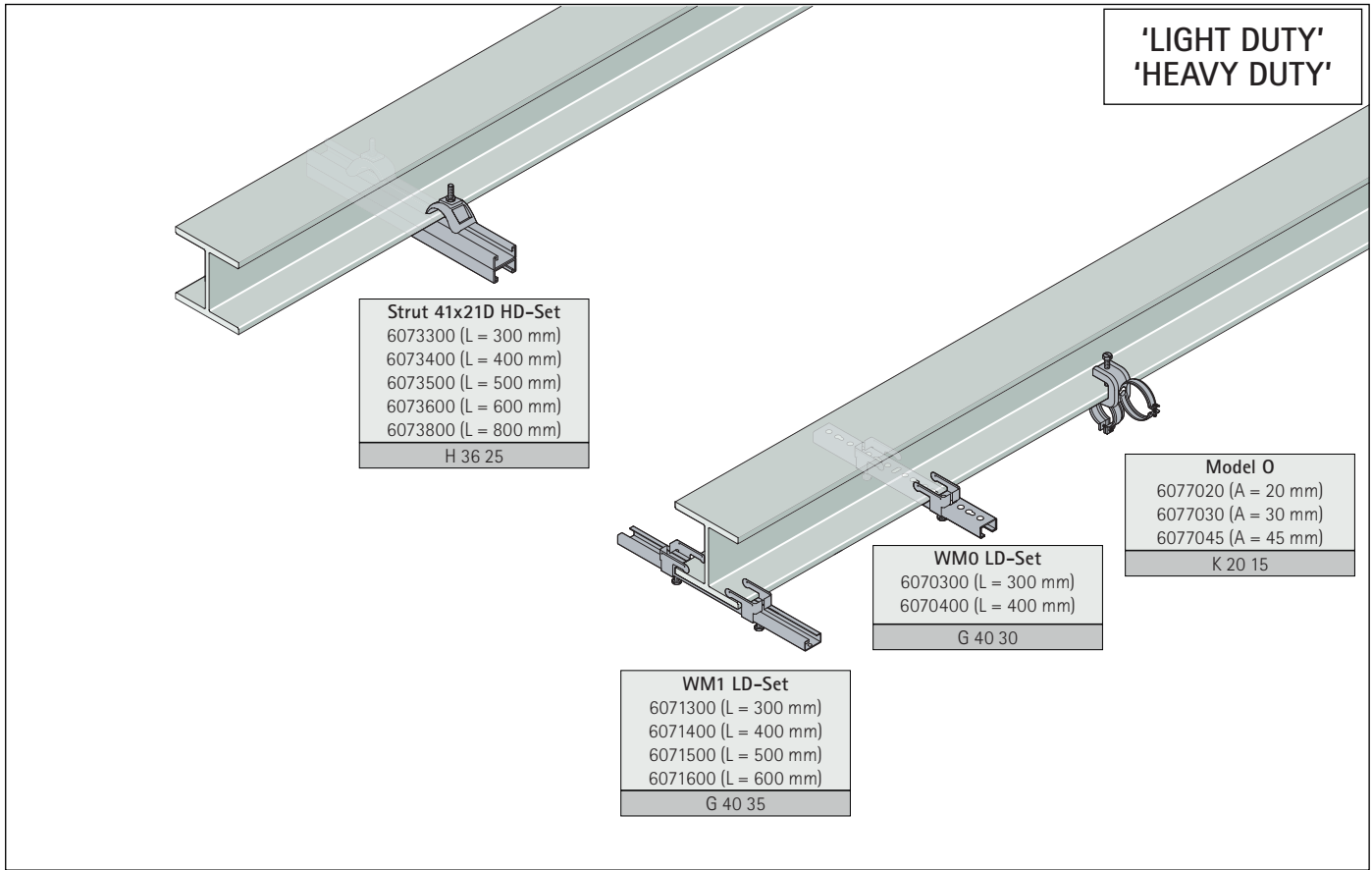
Part No.	G	L	B (mm)	H (mm)	s (mm)	d1 (mm)	d2 (mm)	k (mm)	F _{a,z} (N)	Pack 1
6719012	M12	145 mm	38	14	4	30 x 11	25 x 11	100	6,000	50
6719016	M16	145 mm	38	17	4	30 x 11	25 x 11	100	6,000	50
6719021	G1/2"	145 mm	38	19	4	30 x 11	25 x 11	100	4,000	50
6719027	G3/4"	145 mm	38	22	4	30 x 11	25 x 11	100	5,000	50
6719033	G1"	145 mm	38	24	4	30 x 11	25 x 11	100	5,500	50



Complementary

- 470 BIS Stud Bolt
- 474 BIS Threaded Tube

BIS Beam Clamps Electrical



BIS Wall Plate 672 (Male Thread)

(K 15 15)

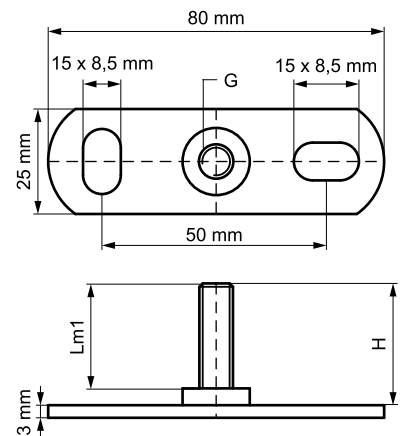
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded male stud bolt
- material: steel
- zinc plated

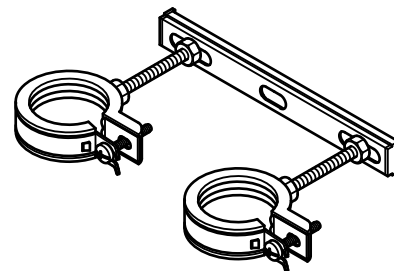
Part No.	G	H (mm)	Lm1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6723006	M6	28	25	2,500	50	250
6723108	M8	13	10	2,500	50	250
6723008	M8	28	25	2,500	50	250
6723110	M10	15	12	2,500	50	250
6723010	M10	38	35	2,500	50	150



BIS Duplo Fixing Plate

(K 15 20)

double fixing of 2 clamps to wall or ceiling

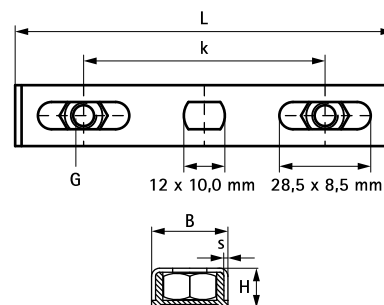


Features and Benefits

- 2 hexagon nuts M8 are infinitely adjustable in center distance
- attach 2 pipes on a wall or ceiling with only one drill hole
- material: metal parts made of steel; plastic housing made of PP (polypropylene), white
- zinc plated

Part No.	G	L	H (mm)	b x s (mm)	k (mm)	F _{a,z} (N)	Pack 1
6743001	M8	116.5 mm	10.5	20 x 1.0	60 - 100	290	50
6743002	M8	146.4 mm	11.0	20 x 2.0	90 - 130	590	50

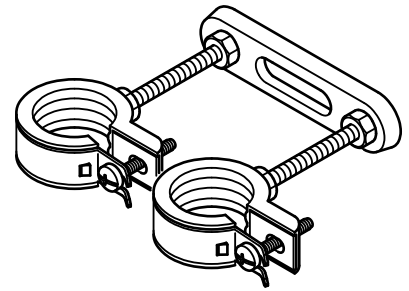
Max. allowed load: based on using largest value for k for suspension.



BIS Double Wall Plate

double fixing of 2 clamps to wall or ceiling

(K 15 25)

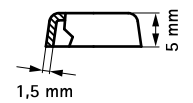
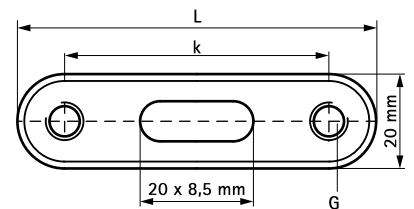


Features and Benefits

- with fixed centre distance
- zinc plated
- material: steel

Part No.	G	L	k (mm)	F _{a,z} (N)	Pack 1	Pack 2
6748055	M8	75 mm	55	1,250	50	500
6748065	M8	85 mm	65	1,010	50	500
6748085	M8	105 mm	85	730	50	500
6748105	M8	125 mm	105	420	50	500
6748150	M8	170 mm	150	270	50	500

Max. allowed load: both fixing points are equally loaded.



BIS Universal Cube

assembly cube for fastenings

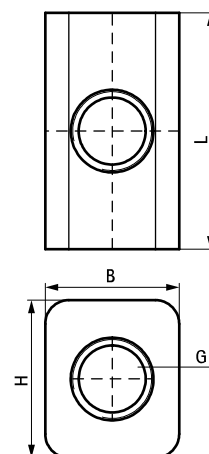
(K 18 05)



Features and Benefits

- universal cube with four threaded holes
- zinc plated for fastening applications

Part No.	G	L	B (mm)	H (mm)	Pack 1	Pack 2
6443908	M8	17 mm	30	19	50	200



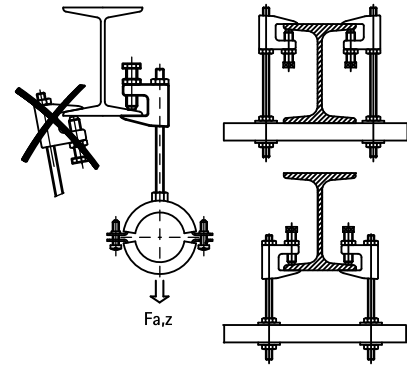
Complementary

- 454 BIS Hexagon Nut
- 442 BIS Hanger Bolt
- 470 BIS Stud Bolt

BIS Beam Clamp Model C (BUP1000)

(K 20 03)

for flange



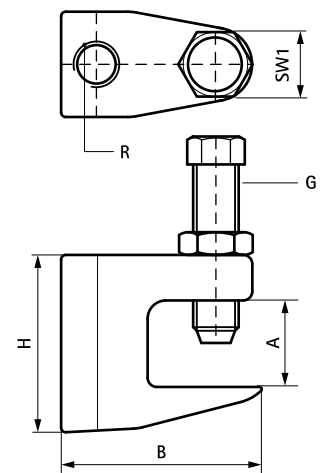
Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- according to VdS-regulations an additional safety strap should be used when supporting pipes above DN65
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	Code	A (mm)	Model	R	G	B (mm)	H (mm)	SW1 (mm)	F _{a,z} (N)	F _{a,z} (kg)	FM	VdS	Pack 1
6008008	TK10-M8	≤23	BIS Beam Clamp model C	M8	M10	50	45	17	2,500	250	-	VdS	50
6008010	TKN10-M10	≤20	BIS Beam Clamp model C	M10	M10	44	42	17	2,500	250	FM	VdS	50
6008910	TKN10-D11	≤20	BIS Beam Clamp model C	Ø 11 mm	M10	44	42	17	2,500	250	FM	VdS	50

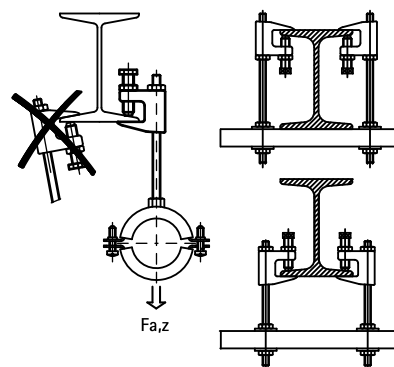
Tighten the set screw with hand and apply a further 1/2 turn with a spanner. Tighten counter nut with hand and apply a further 1/8 turn with a spanner. Certificates available on request.



BIS Beam Clamp Model C

(K 20 05)

for flange up to 28 mm



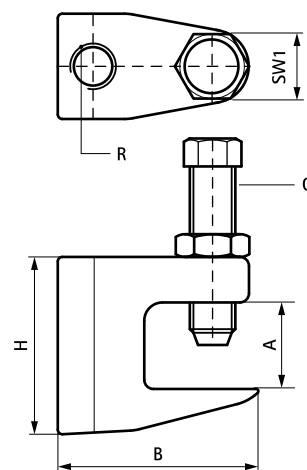
Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- according to VdS-regulations an additional safety strap should be used when supporting pipes above DN65
- bolt with hexagon head according to DIN 933 strength class 8.8, screw point with cup ring according to EN ISO 4753 and lock nut
- material: beam clamp made of cast iron; bolt of hardened steel, nut of steel, zinc plated
- see also: BIS Safety Strap (page K 20 06)



Part No.	Code	A (mm)	R	G	B (mm)	H (mm)	SW1 (mm)	F _{a,z} (N)	FM	UL	VdS	Pack 1
6003206	TKN8-M6	≤18	M6	M8	38	35	13	1,200	-	-	-	50
6003006	TK10-M6	≤23	M6	M10	50	45	17	2,500	-	-	-	50
6003208	TKN8-M8	≤18	M8	M8	38	35	13	1,200	-	-	VdS	50
6003008	TK10-M8	≤23	M8	M10	50	45	17	2,500	-	-	VdS	50
6003010	TKN10-M10	≤20	M10	M10	44	42	17	2,500	FM	UL	VdS	50
6003310	TK16-M10	≤28	M10	M12	58	58	19	2,500	FM	UL	VdS	25
6003012	TK12-M12	≤26	M12	M10	58	54	17	3,500	FM	UL	VdS	25
6003016	TK16-M16	≤28	M16	M12	58	58	19	5,500	FM	UL	VdS	25
6003905	TKN8-D9	≤18	∅ 9 mm	M8	38	35	13	1,200	-	-	VdS	50
6003906	-	≤18	∅ 7 mm	M8	38	35	13	1,200	-	-	-	50
6003908	TK10-D9	≤23	∅ 9 mm	M10	50	45	17	2,500	-	-	VdS	50
6003910	TKN10-D11	≤20	∅ 11 mm	M10	44	42	17	2,500	FM	UL	VdS	50
6003912	TK12-D13	≤26	∅ 13 mm	M10	58	54	17	3,500	FM	UL	VdS	25

Tighten the set screw with hand and apply a further 1/2 turn with a spanner. Tighten counter nut with hand and apply a further 1/8 turn with a spanner. Certificates available on request.

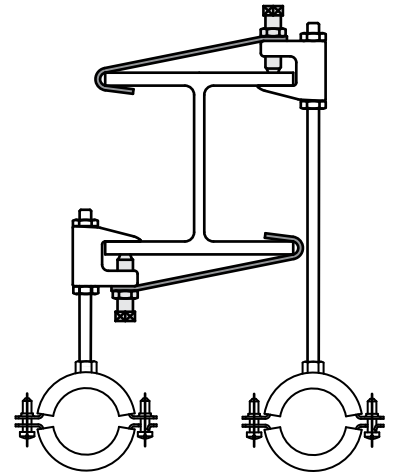
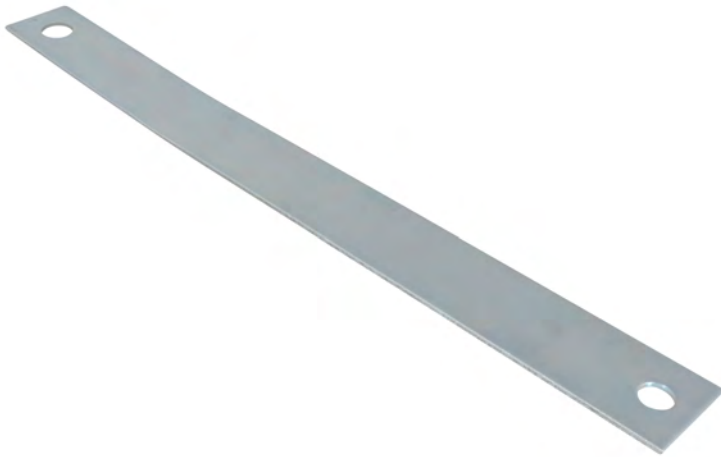


Complementary

421 BIS Safety Strap for Beam Clamp Model C

BIS Safety Strap for Beam Clamp Model C

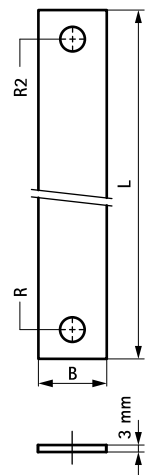
(K 20 06)



Features and Benefits

- Safety Strap needs to be bent by hand
- material: steel
- pre-galvanized
- see also: BIS Beam Clamps Model C (page K 20 05)

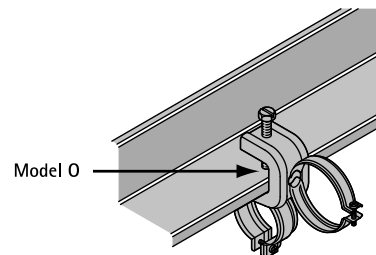
Part No.	R	R2	L	B (mm)	Pack 1
6015110	Ø 10.5 mm	Ø 12.5 mm	350 mm	25	25
6015112	Ø 12.5 mm	Ø 16.5 mm	400 mm	40	25



BIS Beam Clamp Model O

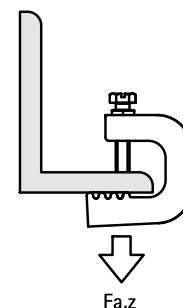
(K 20 15)

for flange up to 45 mm

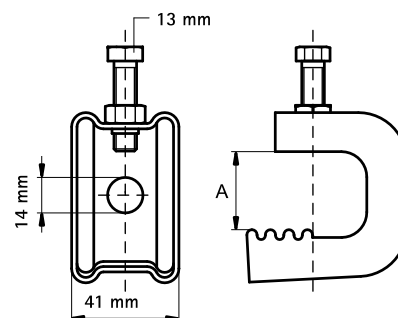


Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- up to flange thickness 45 mm
- with hole \varnothing 14 mm for fixing of BIS IC-clamp, stud bolt or S-Hook
- with serration for increased security
- material: steel
- surface treatment: Dacromet
- see also: IC-clamp (for conduit or cable); square nut (for threaded rod) or protective cap (to avoid damaging of protected surfaces)



Part No.	A (mm)	$F_{a,z}$ (N)	Pack 1
6077020	≤ 20	1,100	25
6077030	≤ 30	1,200	25
6077045	≤ 45	1,300	25



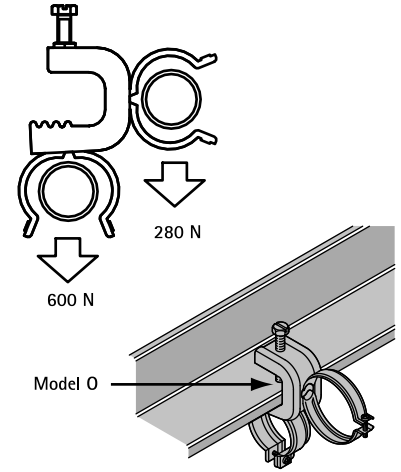
Complementary

- 470 BIS Stud Bolt
- 423 BIS Beam Clamp Model O - Accessories

BIS Beam Clamp Model O – Accessories

(K 20 20)

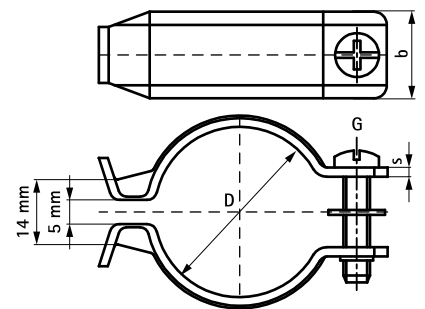
accessories for BIS Beam Clamp Model O



Features and Benefits

- Part No. 60772XX: for fixing of clamps or cables to BIS Beam clamp model 'O' (Part No. 60770XX)
- material: clamp and square nut made of steel
- Part No. 607 7 2XX: surface treatment: Dacromet

Part No.	D (mm)	Model	G	b x s (mm)	F _{a,z} (N)	F _{a,z 2} (N)	Pack 1	Pack 2
6077220	16.0 - 20.0	BIS IC-Clamp	M5	16 x 1.5	600	280	50	200
6077225	20.4 - 25.0	BIS IC-Clamp	M5	16 x 1.5	600	280	50	200
6077231	26.9 - 31.8	BIS IC-Clamp	M5	16 x 1.5	600	280	50	200
6077238	33.7 - 38.0	BIS IC-Clamp	M6	20 x 1.5	600	280	50	200
6077244	40.0 - 44.5	BIS IC-Clamp	M6	20 x 1.5	600	280	50	200



BIS Swivel Beam Clamp Model P

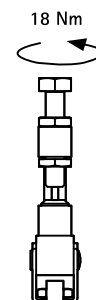
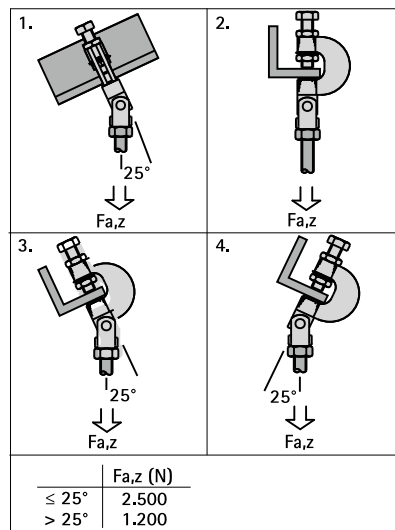
(K 20 30)

for flange up to 17 mm



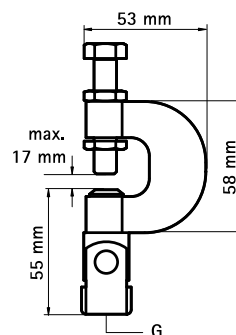
Features and Benefits

- multidirectional clamp
- for suspension on pitched flanges without welding or drilling
- up to flange thickness 17 mm
- according to VdS-regulations an additional safety strap should be used when supporting pipes above DN65
- articulation to 45° sideways, 90° forwards
- safety strap is obliged with VdS applications 1 and 4
- material: steel
- zinc plated
- with VdS-approval - certificate number G 4020003



Part No.	Code	A (mm)	G	FM	VdS	Pack 1
6078008	HFLS-M8	≤17	M8	-	VdS	10
6078010	HFLS	≤17	M10	FM	VdS	25

FM and VdS Approval to 25° articulation.

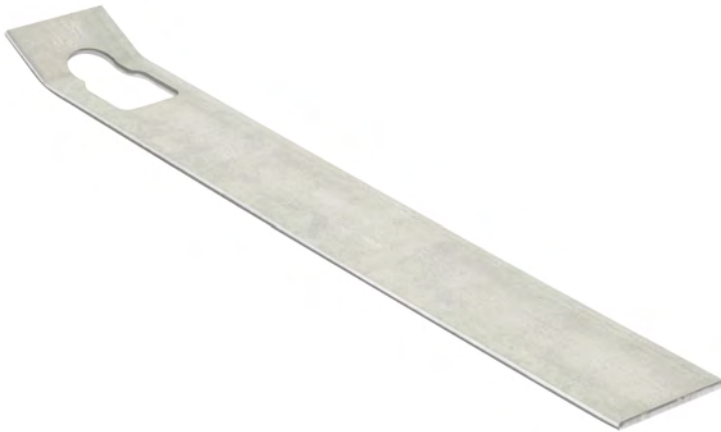


Complementary

- 470 BIS Stud Bolt
- 425 BIS Safety Strap for Beam Clamp Model P

BIS Safety Strap for Beam Clamp Model P

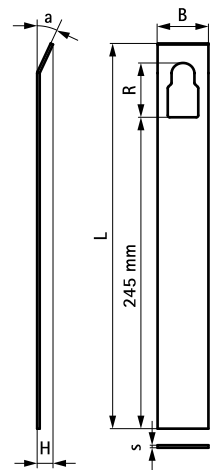
(K 20 31)



Features and Benefits

- Safety Strap needs to be bent by hand
- material: steel
- pre-galvanized
- see also: BIS Beam Clamps Model P (page K 20 30)

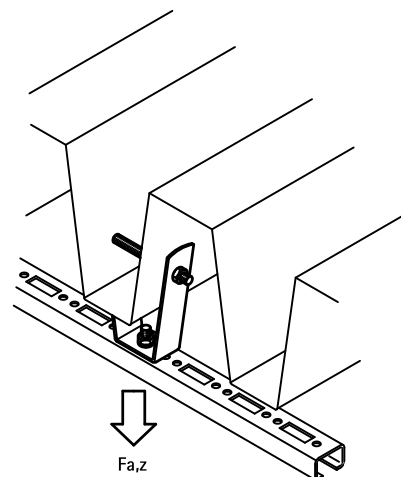
Part No.	R	L	B	H	s	a	Pack 1
			(mm)	(mm)	(mm)	(°)	
6015210	44 mm x 24 mm	303 mm	40	12.5	3.0	25	10



BIS Roofing Sheet Hanger (BUP1000)

(K 25 03)

fixing to profiled roofing sheet

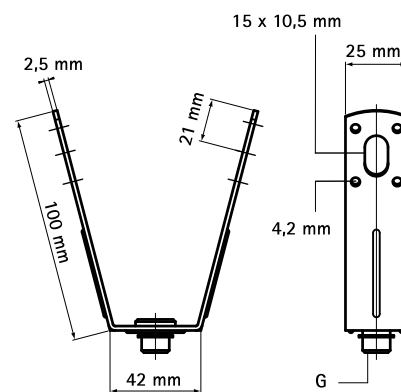


Features and Benefits

- for mounting to profiled roofing sheet by means of pop rivets or threaded rod
- for applications in environments requiring increased corrosion resistance
- variable distance to roof hanger by using a threaded rod
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	F _{a,z} (N)	Pack 1
6785801	Ø 13.0 mm	2,300	50

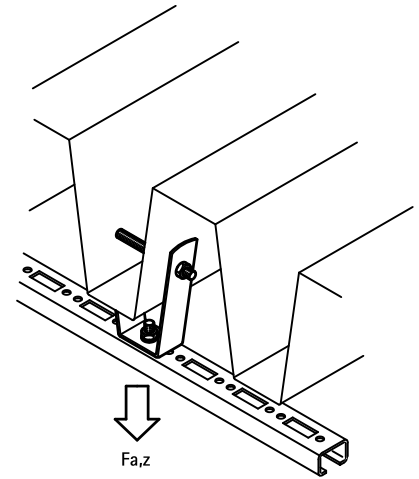
Maximum load (F_{a,z}) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer.



BIS Roofing Sheet Hanger VdS

(K 25 05)

fixing to profiled roofing sheet



Features and Benefits

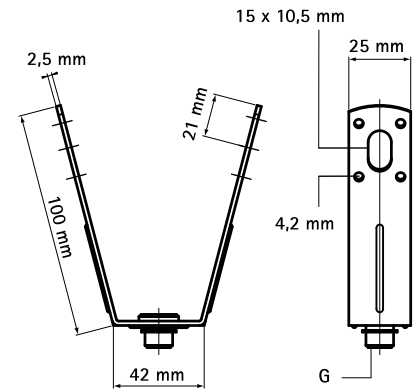
- for mounting to profiled roofing sheet by means of pop rivets or threaded rod
- for fixing pipes up to DN 50 in stationary water extinguishing systems to profiled roofing sheets according to VdS guidelines
- variable distance to roof hanger by using a threaded rod
- material: steel
- pre-galvanized
- with VdS-approval - certificate number G 4070033

Part No.	G	F _{a,z} (N)	VdS	Pack 1
6785001	Ø 13.0 mm	2,300	VdS	50
6785008	M8	2,300	VdS	50
6785010	M10	2,300	VdS	50

Maximum load (F_{a,z}) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer.



Cert.Nr.
G 4070033



Complementary

- 429 BIS Hole Punching Plier
- 454 BIS Hexagon Nut
- 449 BIS Hexagon Head Bolt

BIS Roofing Sheet Hanger

(K 25 07)

fixing to profiled roofing sheet

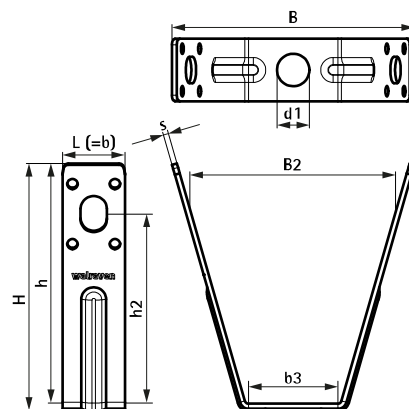


Features and Benefits

- for mounting to profiled roofing sheet by means of pop rivets or threaded rod
- material: steel
- pre-galvanized
- variable distance to roof hanger by using a threaded rod

Part No.	L	B	B2	b3	H	h	h2	b	s	d1	F _{a,z}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	
6785101	25 mm	97	82	38	99	96	76	25	2	Ø 13.0	1,700	50

Maximum load (F_{a,z}) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer.



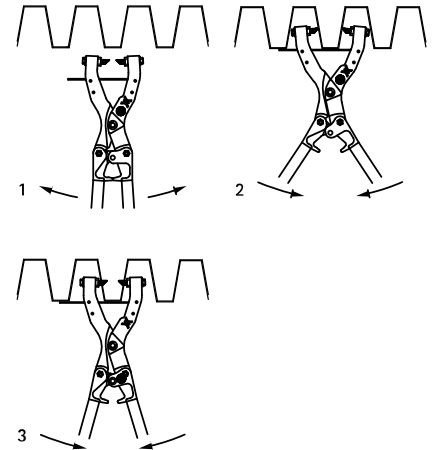
Complementary

472 BIS Threaded Rod

BIS Hole Punching Plier

accessories for BIS Roofing sheet hangers

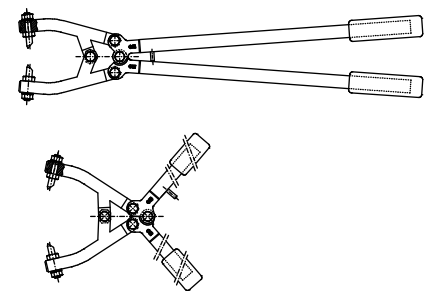
(K 25 10)



Features and Benefits

- for trapezium shaped roofing sheets up to max. 1.5 mm thickness
- robust and durable design
- replaceable punching pins, Part No. 6920013
- supplied with Ø 10.5 mm punching pins

Part No.	Model	Minimum Jaw Opening (mm)	Maximum Jaw Opening (mm)	Pack 1
6920012	BIS Hole Punching Pliers	25	90	1
6920017	BIS Hole Punching Pliers L	80	170	1



Complementary

- 430 BIS Replacement Punching Pins
- 428 BIS Roofing Sheet Hanger

BIS Replacement Punching Pins

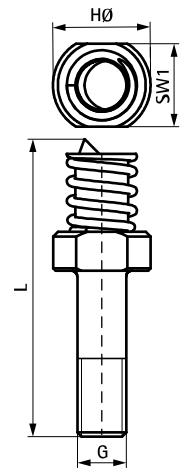
(K 25 12)



Features and Benefits

- replacement punching pins for BIS Hole Punching Pliers

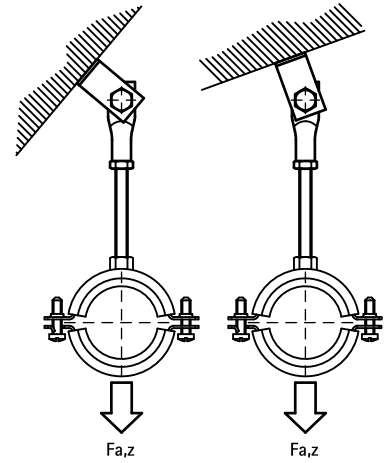
Part No.	Model	G	L	HØ (mm)	SW1 (mm)	For	Pack 1
6920013	Set of two pins	M10	61 mm	20	17	6920012 & 6920017	1



BIS Roof Suspension Assembly

fixing to pitched roof

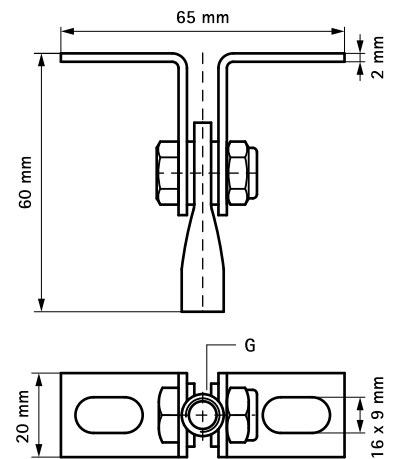
(K 25 15)



Features and Benefits

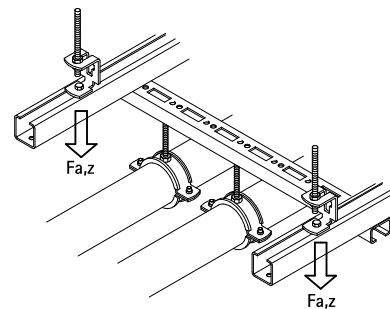
- for fixing to pitched roof
- material: steel
- adjustable to suit the slope of any pitched roof
- zinc plated

Part No.	G	F _{a,z} (N)	Pack 1
6788008	M8	2,580	50



BIS Height Adjuster

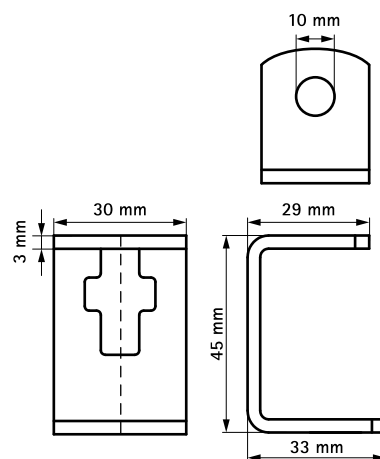
(K 25 25)



Features and Benefits

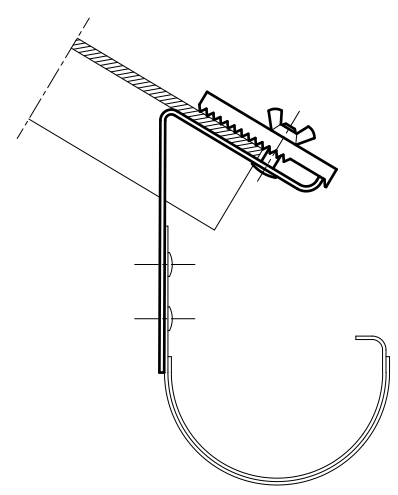
- 30 mm continuously variable height adjustable
- zinc plated
- for stud bolt M8 or M10
- can also be used as rail suspension element
- material: steel 1.0332

Part No.	R	F _{a,z} (N)	Pack 1
6793810	M8 - M10	1,690	50



BIS Clamp for Corrugated Sheet

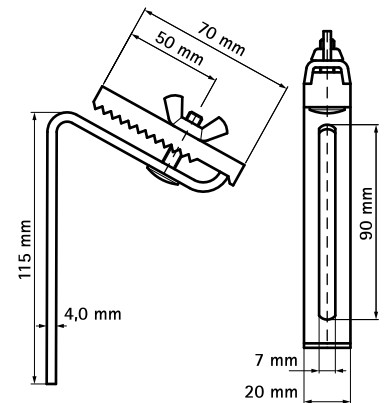
(K 27 05)



Features and Benefits

- for a tightened fixing of gutter to corrugated sheets
- no damage to corrugated sheet (suitable for every thickness)
- material: steel
- hot dip galvanized

Part No.	Pack 1
5191000	50



BISMAT[®] Rail

fixing to wall or ceiling

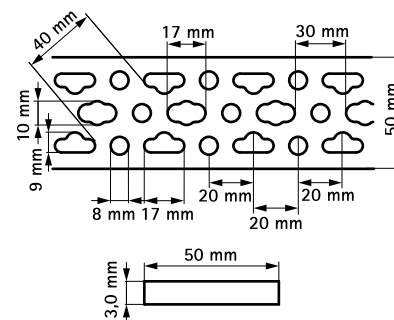
(K 30 05)



Features and Benefits

- universal system for pipe-fixing in wall opening, wall corners, etc.
- with continuous hole pattern, designed for centre distance of sanitary armature
- material: steel
- pre-galvanized

Part No.	L	BndL
0835503	2 m	50



Complementary

- 435 BISMAT[®] Rail - Plier
- 436 BISMAT[®] Rail - Backing Plate
- 437 BISMAT[®] Rail - Sound Shield

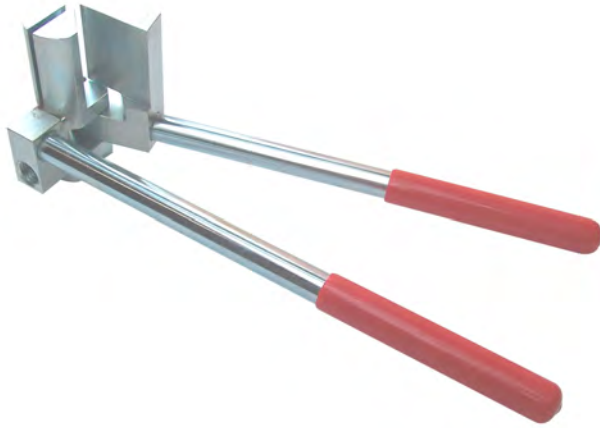
Complementary

- 438 BISMAT[®] Rail - Sound Cap
- 439 BISMAT[®] Rail - Mounting Clamp

BISMAT[®] Rail – Plier

accessories of BISMAT[®] Rail

(K 30 10)



Features and Benefits

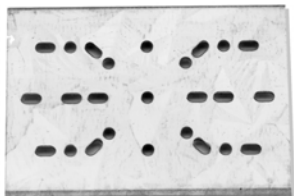
- for bending BISMAT[®] Rail to any required angle
- robust construction

Part No.	For Rail	Pack 1
6920050	BISMAT [®] Rail	1

BISMAT[®] Rail – Backing Plate

(K 30 20)

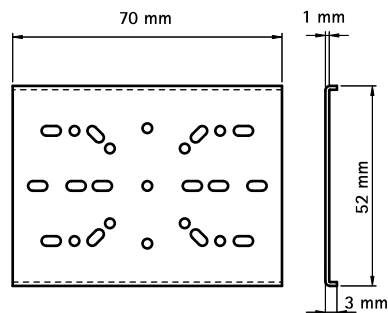
accessories of BISMAT[®] Rail



Features and Benefits

- for a secure fixing of sanitary wall plates
- pre-galvanized to BISMAT[®] Rail
- material: steel

Part No.	For Rail	Pack 1
0835000	BISMAT [®] Rail	50



BISMAT[®] Rail – Sound Shield

(K 30 25)

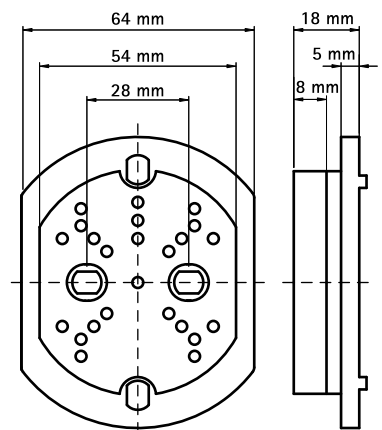
accessories of BISMAT[®] Rail



Features and Benefits

- to avoid noise transmission of sanitary wall plates
- material: ABS and EPDM
- sound insulating lining according DIN 4109

Part No.	For Rail	Pack 1
0835001	BISMAT [®] Rail	20



BISMAT[®] Rail – Sound Cap

accessories of BISMAT[®] Rail

(K 30 40)



Features and Benefits

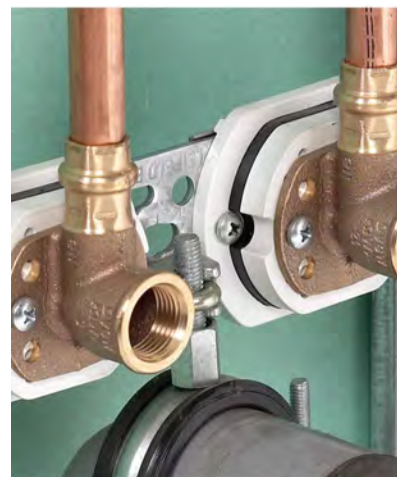
- sound cap for sanitary wall plates
- material: EPP

Part No.	For Rail	Pack 1
0835006	BISMAT [®] Rail	20

BISMAT[®] Rail – Mounting Clamp

(K 30 45)

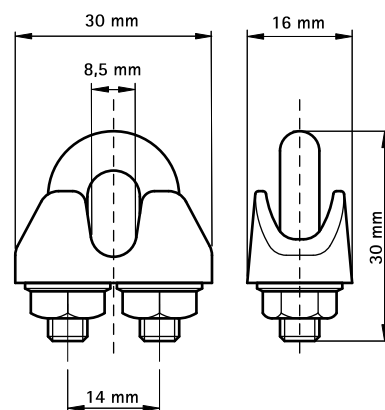
accessories of BISMAT[®] Rail



Features and Benefits

- to fix stud bolt M6 or M8 to BISMAT[®] Rail
- material: steel
- (e.g. to fix a clamp or siphon)

Part No.	For Rail	Pack 1
0835002	BISMAT [®] Rail	50



BIS Pipe Reinforcement

support for plastic pipe Ø 16 - 160 mm

(K 35 05)

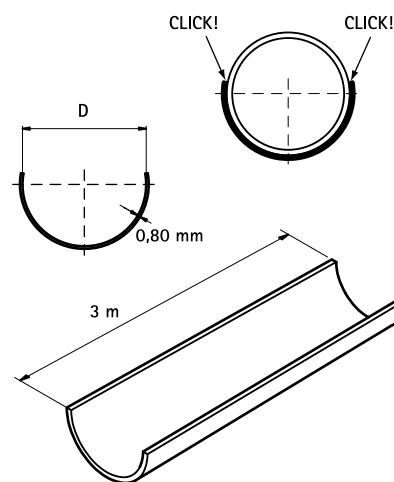


BISMAT® 5000

Features and Benefits

- self-gripping and continuous support for plastic pipes to prevent unsatisfactory deflections
- allows for longer distance between supports (fixing distance with reinforcement is 1.5 times longer than the distance without reinforcement)
- controls direction of pipe expansion. Maintains alignment of pipe, and prohibits "snaking"
- reinforcement fits inside insulation
- lightweight and economical, also 3 meter lengths are easy to handle
- eases handling and speeds installation of PEX tubing
- can be cut with hand tools
- material: steel
- pre-galvanized
- to be used with e.g. BISMAT® 5000, BIS Bifix® 5000 and BIS Polymat®

Part No.	D (mm)	Model	L	BndS
0635316	16	With click-effect	3 m	75
0635320	20	With click-effect	3 m	75
0635325	25	With click-effect	3 m	75
0635332	32	With click-effect	3 m	75
0635340	40	With click-effect	3 m	15
0635350	50	With click-effect	3 m	15
0635356	56	-	3 m	15
0635363	63	With click-effect	3 m	15
0635375	75	With click-effect	3 m	15
0635390	90	With click-effect	3 m	15
0635391	110	With click-effect	3 m	15
0635392	125	-	3 m	15
0635393	160	-	3 m	30



Complementary

- 32 BISMAT® 5000
- 33 Bifix® 5000 G2 (BUP1000)

BIS Hanger Bolt (BUP1000)

(K 40 04)

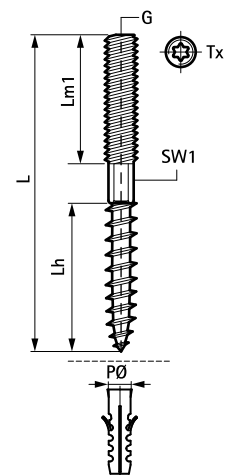
fixing to wall or ceiling



Features and Benefits

- with hexagon for fine setting
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	L	Lh (mm)	Lm1 (mm)	PØ (mm)	SW1 (mm)	Tx	Pack 1	Pack 2
62680820	M8	200 mm	50	50	10	6	25	50	250
62681010	M10	100 mm	50	40	12	8	25	50	500
62681020	M10	200 mm	55	40	12	8	25	50	250



BIS Hanger Bolt

fixing to wall or ceiling

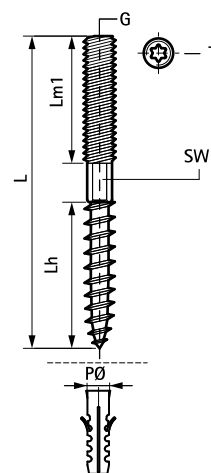
(K 40 05)



Features and Benefits

- with hexagon for fine setting
- zinc plated
- material: steel

Part No.	G	L	Lh (mm)	Lm1 (mm)	PØ (mm)	SW1 (mm)	Tx	Pack 1	Pack 2
6263606	M6	60 mm	35	25	8	-	-	100	1,000
6263609	M6	90 mm	30	30	8	5	-	100	1,000
6263612	M6	120 mm	30	30	8	5	-	100	1,000
6263615	M6	150 mm	30	45	8	5	-	100	1,000
6263805	M8	50 mm	35	15	10	6	25	100	1,000
6263806	M8	60 mm	30	20	10	6	25	100	1,000
6263807	M8	70 mm						100	1,400
6263808	M8	80 mm	35	35	10	6	25	100	1,000
6263809	M8	90 mm						100	1,000
6263810	M8	100 mm	50	40	10	6	25	100	1,000
6263812	M8	120 mm	50	40	10	6	25	100	500
6263815	M8	150 mm	50	50	10	6	25	50	500
6263816	M8	160 mm	60	40	10	6	25	50	250
6263818	M8	180 mm	60	40	10	6	25	50	250
6263820	M8	200 mm	50	50	10	6	25	50	250
6283006	M10	60 mm	35	15	12	8	25	50	500
6283008	M10	80 mm	35	35	12	8	25	50	500
6283010	M10	100 mm	50	40	12	8	25	50	500
6283011	M10	110 mm	50	40	12	8	25	50	500
6283012	M10	120 mm	50	40	12	8	25	50	500
6283014	M10	140 mm	50	40	12	8	25	50	250
6283018	M10	180 mm	55	60	12	8	25	50	250
6283020	M10	200 mm	55	40	12	8	25	50	250
6283210	M12	100 mm	50	30	12	10	30	50	-
6283212	M12	120 mm	60	45	12	10	30	50	250
6283214	M12	140 mm	60	60	12	10	30	50	-



BIS Threaded Shoulder Wood Screw Model A

(K 40 10)

fixing to wall or ceiling

985

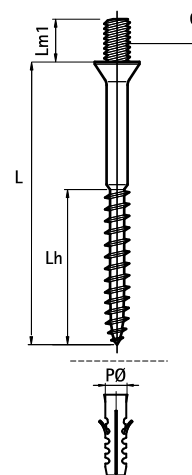


Features and Benefits

- material: steel
- zinc plated

Part No.	G	L	Lh (mm)	Lm1 (mm)	PØ (mm)	Pack 1	Pack 2
6353625	M6	25 mm	20	8	8	100	3,000
6353635	M6	35 mm	25	8	8	100	2,000
6353650	M6	50 mm	30	6	8	100	1,800
6353660	M6	60 mm	40	6	8	100	1,000
6353680	M6	80 mm	50	6	8	100	500
6353740	M7B	40 mm	23	5	8	100	1,200
6353750	M7B	50 mm	40	5	8	100	1,000
6353760	M7B	60 mm	40	5	8	100	1,000
6353770	M7B	70 mm	63	6	8	100	1,000
6353780	M7B	80 mm	40	5	8	100	1,000
6353835	M8	35 mm	30	10	10	100	1,200
6353850	M8	50 mm	30	8	10	100	-
6353860	M8	60 mm	30	8	10	100	1,000
6353880	M8	80 mm	30	8	10	100	-
6353890	M8	90 mm	50	12	10	100	500

M7B: pitch = M7 x 1 mm.



BIS Wood Screw Special

(K 40 20)

fixing to wall or ceiling

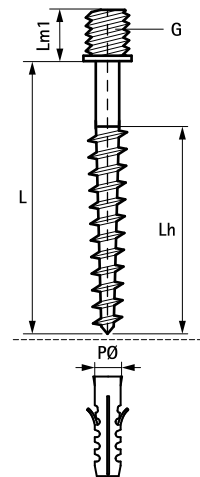
627



Features and Benefits

- with combi slot
- zinc plated
- material: steel

Part No.	G	L	Lh	Lm1	PØ	Pack 1	Pack 2
			(mm)	(mm)	(mm)		
6356630	M6	30 mm	30	7	6	100	4,000
6356640	M6	40 mm	40	7	6	100	4,000
6356650	M6	50 mm	50	7	6	100	4,000
6356840	M8	40 mm	40	8	8	100	2,000
6356860	M8	60 mm	40	8	8	100	2,000
6356150	M10	50 mm	40	10	10	100	1,000
6356170	M10	70 mm	40	10	10	100	1,000

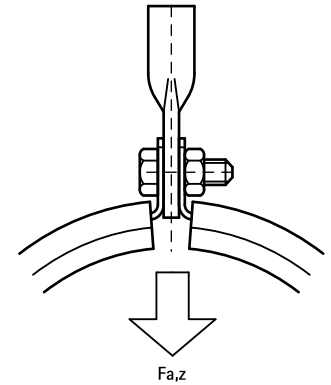


BIS Suspension Eye (Female Threaded)

(K 45 05)

to make a suspension point

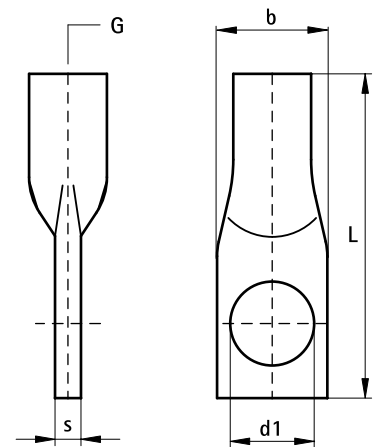
680



Features and Benefits

- closed design to maximize loading
- zinc plated
- material: steel

Part No.	G	L	b x s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6803008	M8	45 mm	13.5 x 3.5	∅ 8.5	2,580	100	500
6803010	M10	50 mm	17.0 x 4.0	∅ 10.5	3,540	100	500
6803012	M12	55 mm	20.5 x 5.5	∅ 10.5	7,750	100	500

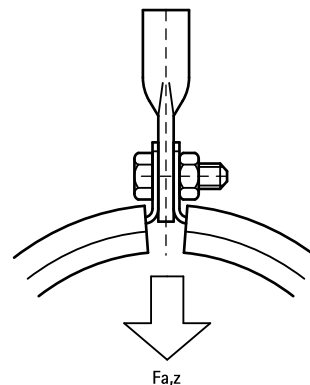


BIS Suspension Eye

to make a suspension point

887

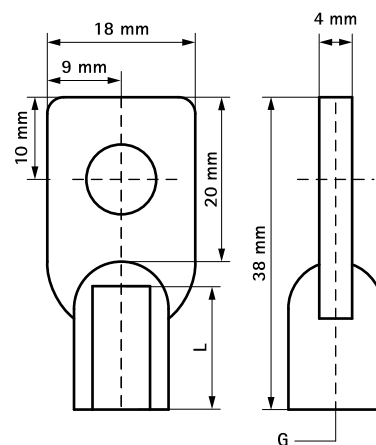
(K 45 10)



Features and Benefits

- material: Zamak (zinc/aluminium alloy)

Part No.	G	L	F _{a,z} (N)	Pack 1
6803706	M6	15 mm	2,170	50
6803708	M8	15 mm	2,270	50



BIS Eye Bolt

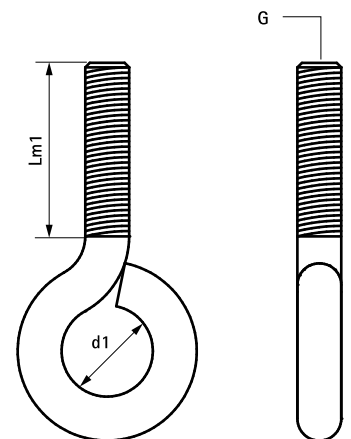
(K 45 15)



Features and Benefits

- material: steel
- zinc plated

Part No.	G	d1 (mm)	Lm1 (mm)	Pack 1	Pack 2
6804825	M8	Ø 10.0	22	50	200
6804030	M10	Ø 15.0	30	25	100



Complementary

- 494 WD11 Drop-in Anchor
- 495 WD11L Drop-in Anchor Lipped
- 497 WD11 Setting Tool

Complementary

- 500 WBA Brass Anchor

BIS Hexagon Head Bolt (BUP1000)

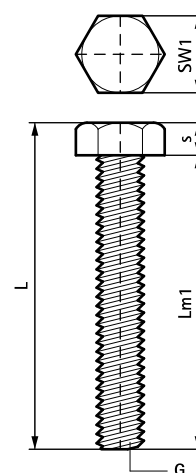
(K 45 19)



Features and Benefits

- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	Type	G	L	s (mm)	Lm1 (mm)	SW1 (mm)	Pack 1
61480825	DIN 933	M8	30.3 mm	5.3	25	13	200
61480830	DIN 933	M8	35.3 mm	5.3	30	13	200
61480860	DIN 933	M8	65.3 mm	5.3	60	13	50
61480880	DIN 933	M8	85.3 mm	5.3	80	13	50
61481016	DIN 933	M10	22.4	6.4	16	17	200
61481025	DIN 933	M10	31.4 mm	6.4	25	17	200
61481030	DIN 933	M10	36.4 mm	6.4	30	17	200
61481060	DIN 933	M10	66.4 mm	6.4	60	17	100
61481080	DIN 933	M10	86.4 mm	6.4	80	17	100
61481225	DIN 933	M12	32.5 mm	7.5	25	19	100
61481230	DIN 933	M12	37.5 mm	7.5	30	19	100
61481260	DIN 933	M12	67.5 mm	7.5	60	19	100
61481280	DIN 933	M12	87.5 mm	7.5	80	19	100



Complementary

- 494 WDI1 Drop-in Anchor
- 495 WDI1L Drop-in Anchor Lipped
- 497 WDI1 Setting Tool

Complementary

- 500 WBA Brass Anchor
- 453 BIS Hexagon Nut (BUP1000)
- 450 BIS Washer (BUP1000)

BIS Hexagon Head Bolt

(K 45 20)

614



614 3 6XX

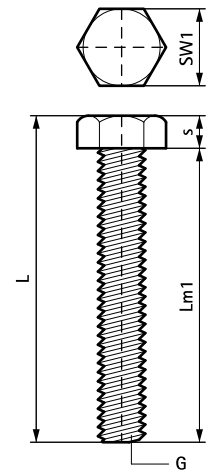


614 3 XXX

Features and Benefits

- Part No. 61436XX: slotted head
- material: steel
- zinc plated
- Part No. 614230: hot dip galvanized

Part No.	Type	G	L	s	Lm1	SW1	Pack 1
				(mm)	(mm)	(mm)	
6143620	DIN 933	M6	24.0 mm	4.0	20	10	50
6143630	DIN 933	M6	34.0 mm	4.0	30	10	100
6143816	DIN 933	M8	21.3 mm	5.3	16	13	200
6143820	DIN 933	M8	25.3 mm	5.3	20	13	50
6143825	DIN 933	M8	30.3 mm	5.3	25	13	50
6143830	DIN 933	M8	35.0 mm	5.0	30	13	200
6143835	DIN 933	M8	40.3 mm	5.3	35	13	50
6143840	DIN 933	M8	45.0 mm	5.0	40	13	200
6143860	DIN 933	M8	65.3 mm	5.3	60	13	200
6143880	DIN 933	M8	85.3 mm	5.3	80	13	200
6143891	DIN 933	M8	105.3 mm	5.3	100	13	100
6143892	DIN 933	M8	125.3 mm	5.3	120	13	100
6143894	DIN 933	M8	145.3 mm	5.3	140	13	50
6143920	DIN 933	M10	26.4 mm	6.4	20	17	100
6143925	DIN 933	M10	31.4 mm	6.4	25	17	100
6143930	DIN 933	M10	36.4 mm	6.4	30	17	100
6143935	DIN 933	M10	41.1 mm	6.4	35	17	100
6143940	DIN 933	M10	46.4 mm	6.4	40	17	100
6143950	DIN 933	M10	56.4 mm	6.4	50	17	100
6143960	DIN 933	M10	66.0 mm	6.0	60	17	100
6143980	DIN 933	M10	86.0 mm	6.0	80	17	100
6143990	DIN 933	M10	96.4 mm	6.4	90	17	100
6144030	DIN 933	M12	37.4 mm	7.4	30	19	100
6144040	DIN 933	M12	47.4 mm	7.4	40	19	100
6144050	DIN 933	M12	57.4 mm	7.4	50	19	100
6144640	DIN 933	M16	50 mm	10.0	40	24	50
6141230	DIN 933	M12	37 mm	8.0	30	19	100



Complementary

- 451 BIS Washer
- 454 BIS Hexagon Nut
- 494 WD11 Drop-in Anchor

Complementary

- 495 WD11L Drop-in Anchor Lipped
- 497 WD11 Setting Tool
- 500 WBA Brass Anchor

BIS Washer (BUP1000)

(K 45 29)



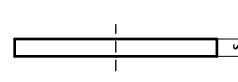
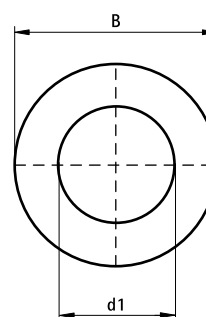
Features and Benefits

- according to EN-ISO 7089 (was DIN 125A)
- material: steel 1.0332
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	Type	B (mm)	s (mm)	d1 (mm)	Pack 1
65381308	EN-ISO 7089	16	1.6	Ø 8.4	100
65381310	EN-ISO 7089	20	2.0	Ø 10.5	100
65381312	EN-ISO 7089	24	2.5	Ø 13.0	100
65381316	EN-ISO 7089	30	3.0	Ø 17.0	50

Ø 10.5 and above tested for fire safety.



BIS Washer

(K 45 30)

653

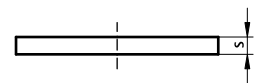
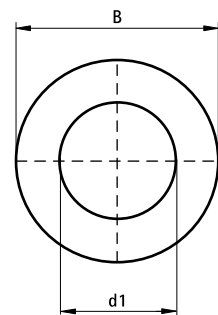


Features and Benefits

- according to EN-ISO 7089 (was DIN 125A)
- zinc plated
- material: steel
- Part No. 6531012: hot dip galvanized
- tested for fire safety

Part No.	Type	B (mm)	s (mm)	d1 (mm)	Pack 1	Pack 2
6533006	EN-ISO 7089	12	1.6	Ø 6.4	100	2,500
6533008	EN-ISO 7089	16	1.6	Ø 8.4	100	2,500
6533010	EN-ISO 7089	20	2.0	Ø 10.5	100	2,500
6533012	EN-ISO 7089	24	2.5	Ø 13.0	100	2,500
6531012	DIN 125A	24	2.5	Ø 13.0	100	-
6533016	EN-ISO 7089	30	3.0	Ø 17.0	50	2,500
6533020	EN-ISO 7089	37	3.0	Ø 21.0	100	-
6533606	DIN 9021	18	1.6	Ø 6.4	200	8,000
6533608	DIN 9021	25	2.0	Ø 8.4	200	4,000
6533610	DIN 9021	30	2.5	Ø 10.5	200	2,000
6533612	DIN 9021	40	3.0	Ø 13.0	100	-

Ø 10.5 and above tested for fire safety.



BIS Serated Washer

(K 45 33)



Features and Benefits

- serrated lock washer with external teeth
- zinc plated
- according to NEN-2453 (former DIN 6798)
- material: steel

Part No.	B (mm)	s (mm)	d1 (mm)	Pack 1
6533996	11.0	0.7	Ø 6.4	500
6533998	15.0	0.8	Ø 8.4	200
6533990	18.0	0.9	Ø 10.5	500
6533992	20.5	1.0	Ø 12.5	500

BIS Hexagon Nut (BUP1000)

(K 45 34)



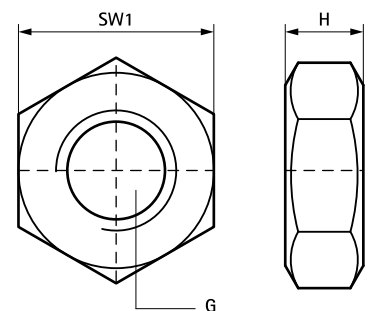
Features and Benefits

- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	Type	G	H (mm)	SW1 (mm)	Pack 1	Pack 2
61281008	DIN 934	M8	6.5	13	100	1,500
61281010	DIN 934	M10	8.0	17	100	2,000
61281012	DIN 934	M12	10.0	19	100	1,200
61281016	DIN 934	M16	13.0	24	100	-

M10 and above tested for fire safety.



BIS Hexagon Nut

(K 45 35)



Features and Benefits

- material: steel
- zinc plated
- tested for fire safety

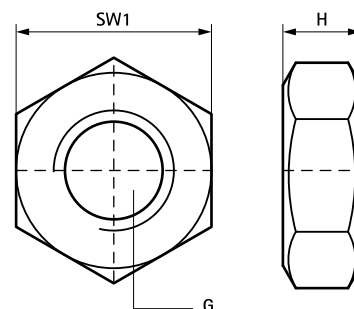


Part No.	Type	G	H (mm)	SW1 (mm)	Pack 1	Pack 2
6123006	DIN 934	M6	5.0	10	100	7,000
6123007	DIN 934	M7B	5.5	11	100	-
6123009	DIN 934	M7F	5.5	11	100	1,500
6123008	DIN 934	M8	6.5	13	100	1,500
6123010	DIN 934	M10	8.0	17	100	2,000
6123012	DIN 934	M12	10.0	19	100	1,200
6123014	DIN 934	M14	11.0	22	100	-
6123016	DIN 934	M16	13.0	24	100	-
6123020	DIN 934	M20	16.0	30	100	-
6123021	BSPP	G½"	15.0	27	100	-

M10 and above tested for fire safety.

M7B: pitch = M7 x 1 mm.

M7F: pitch = M7 x 1.5mm.

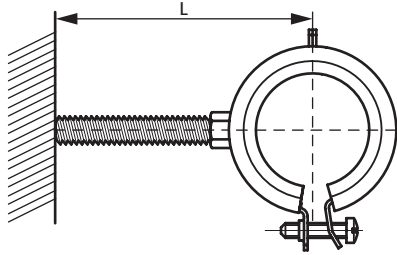


Complementary

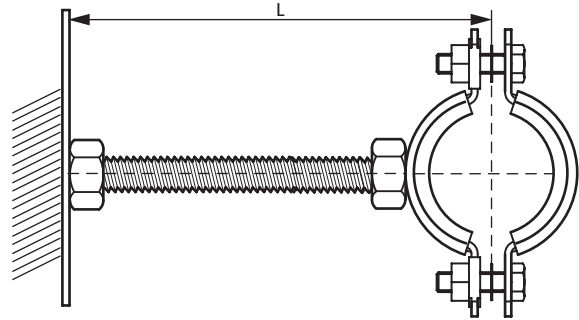
428 BIS Roofing Sheet Hanger

BIS Stud Bolts / BIS Threaded Rods

Maximum allowed load



BIS Stud Bolts / BIS Threaded Rods



BIS Threaded Tubes

Ø	BIS Stud Bolts / BIS Threaded Rods							BIS Threaded Tubes		
	M8	M10	M12	M16	M20	M22	M24	1/2"	3/4"	1"
L (mm)										
20	210	422	744	1.936	3.785	5.295	6.542	3.057	5.377	10.693
30	140	281	496	1.291	2.523	3.530	4.361	2.038	3.584	7.128
40	105	211	372	968	1.892	2.647	3.271	1.528	2.688	5.346
50	84	169	297	774	1.514	2.118	2.617	1.223	2.151	4.277
60	70	141	248	645	1.262	1.765	2.181	1.019	1.792	3.564
70	60	120	212	553	1.081	1.513	1.869	873	1.536	3.055
80	50	105	186	484	946	1.324	1.636	764	1.344	2.673
90	40	94	165	430	841	1.177	1.454	679	1.195	2.376
100	32	81	149	387	757	1.059	1.308	611	1.075	2.138
125	21	52	111	310	606	847	1.047	489	860	1.711
150	14	36	77	258	505	706	872	408	717	1.426
175	10	27	57	203	433	605	748	349	614	1.222
200	-	20	43	155	378	529	654	305	538	1.069
225	-	16	34	123	300	469	582	272	478	950
250	-	13	28	99	243	380	504	239	430	855
275	-	11	23	82	201	314	416	198	391	778
300	-	-	19	69	169	264	350	166	358	713
325	-	-	16	59	144	225	298	141	322	658
350	-	-	14	51	124	194	257	122	278	611
375	-	-	12	44	108	169	224	106	242	570
400	-	-	11	39	95	148	197	93	213	531
450	-	-	-	31	75	117	156	74	168	420
500	-	-	-	25	61	95	126	60	136	340

Max. allowed load in N.
 Allowable bending: $f = (1/150) \times L$
 Allowable bending stress: $\sigma = 160 \text{ N/mm}^2$

Please contact our technical department in case of special applications.

BIS Sheet Metal Cylinder Screw

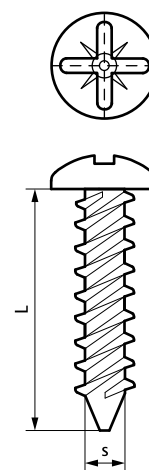
(K 45 40)



Features and Benefits

- according to ISO 7049 (was DIN 7981)
- zinc plated
- material: steel

Part No.	L	s (mm)	Pack 1	Pack 2
6174413	13 mm	4.2	100	-
6174516	16 mm	4.8	100	-
6174519	19 mm	4.8	100	-
6174431	30 mm	4.2	100	4,000
6174525	25 mm	5.0	100	4,000
6174530	30 mm	5.0	100	4,000
6174535	35 mm	5.0	100	4,000
6174536	35 mm	5.5	100	4,000



BIS Suspension Eye – Wood Thread

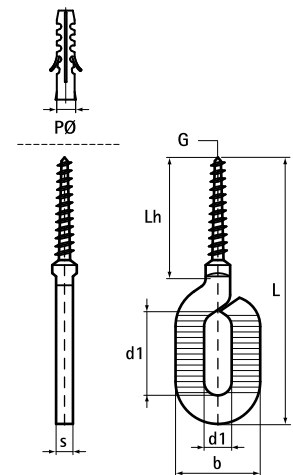
(K 45 45)



Features and Benefits

- material: steel
- zinc plated

Part No.	G	L	b x s (mm)	d1 (mm)	Lh (mm)	PØ (mm)	F _{a,z} (N)	Pack 1
6813650	H6	85 mm	21 x 4.0	22 x 8.0	45	8	1,140	100
6813850	H8	100 mm	27 x 5.5	26 x 9.0	55	10	1,800	100



BIS Suspension Eye – Metric

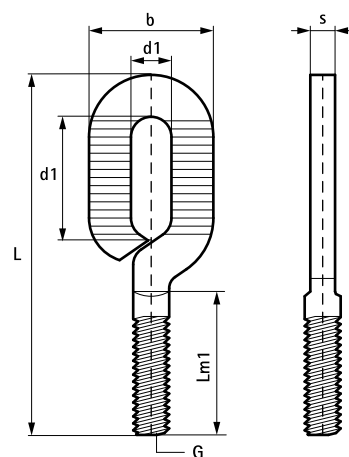
(K 45 50)



Features and Benefits

- material: steel
- zinc plated

Part No.	G	L	b x s (mm)	d1 (mm)	Lm1 (mm)	F _{a,z} (N)	Pack 1
6813830	M8	80 mm	27 x 5.5	26 x 9.0	30	1,800	100



Complementary

- 494 WDI1 Drop-in Anchor
- 495 WDI1L Drop-in Anchor Lipped
- 608 WDI1 Drop-in Anchor SSt

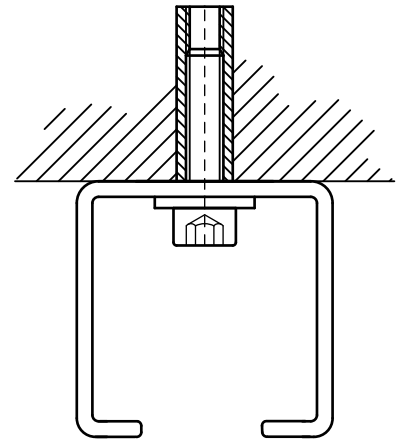
Complementary

- 500 WBA Brass Anchor
- 497 WDI1 Setting Tool

BIS Socket Head Bolt (BUP1000)

(K 45 54)

fixing of rail

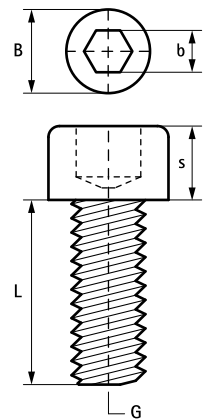


Features and Benefits

- for fixing of fixing rail
- material: steel, strength class 8.8
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- according to ISO 4762

Part No.	G	L	B (mm)	b (mm)	s (mm)	Pack 1
61380825	M8	25 mm	13	6	8.0	200
61380860	M8	60 mm	13	6	8.0	200
61380880	M8	80 mm	13	6	8.0	100
61381025	M10	25 mm	16	10	8.0	200
61381030	M10	30 mm	16	10	8.0	200
61381230	M12	30 mm	18	12	10.0	100
61381260	M12	60 mm	18	12	10.0	100

Required bolt or screw depends on rail hole pattern.



Complementary

- 494 WD11 Drop-in Anchor
- 495 WD11L Drop-in Anchor Lipped
- 608 WD11 Drop-in Anchor SSt

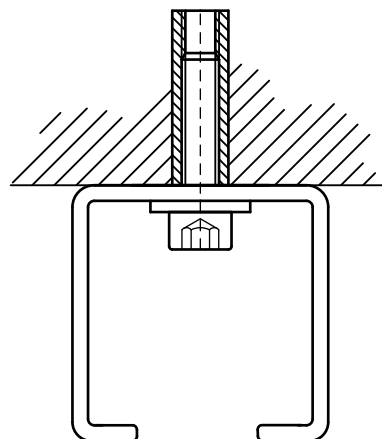
Complementary

- 497 WD11 Setting Tool
- 500 WBA Brass Anchor

BIS Socket Head Bolt and Screw

fixing of rail

(K 45 55)

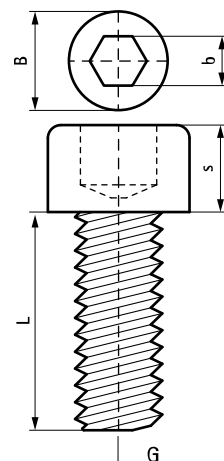


Features and Benefits

- for fixing of fixing rail
- material: steel, strength class 8.8
- zinc plated
- according to ISO 4762

Part No.	G	L	B (mm)	b (mm)	s (mm)	Pack 1
6133010	M8	16 mm	13	6.0	8.0	200
6133011	M8	20 mm	13	6.0	8.0	200
6133012	M8	25 mm	13	6.0	8.0	200
6133015	M10	15 mm	16	8.0	10.0	200

Required bolt or screw depends on rail hole pattern.



Complementary

- 494 WDI1 Drop-in Anchor
- 495 WDI1L Drop-in Anchor Lipped
- 497 WDI1 Setting Tool

Complementary

- 500 WBA Brass Anchor

BIS Hexagon Wood Bolt

(K 45 60)

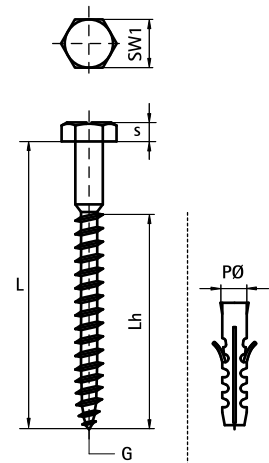
986



Features and Benefits

- material: steel
- zinc plated

Part No.	Model	Type	G	L	s (mm)	Lh (mm)	PØ (mm)	SW1 (mm)	Pack 1
6183805	Torx 30	986	H8	50 mm	6.5	30	10	13	100
6183806	Torx 30	986	H8	60 mm	6.5	35	10	13	100
6183807	Torx 30	986	H8	70 mm	6.5	40	10	13	100
6183808	Torx 30	986	H8	80 mm	6.5	50	10	13	100
6183809	DIN 571	986	H8	90 mm	6.5	55	10	13	100
6183810	DIN 571	986	H8	100 mm	6.5	60	10	13	100
6183812	DIN 571	986	H8	120 mm	6.5	75	10	13	100
6193006	DIN 571	986	H10	60 mm	7.0	35	12	17	100
6193008	DIN 571	986	H10	80 mm	7.0	50	12	17	50
6193010	DIN 571	986	H10	100 mm	7.0	60	12	17	50



BIS Chipboard Screw

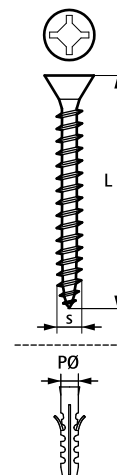
(K 45 65)



Features and Benefits

- countersunk head with cross slot
- zinc plated, yellow passivated
- material: steel

Part No.	L	s (mm)	PØ (mm)	Pack 1
6185405054	50 mm	4.0	7.0	500
6185505054	50 mm	5.0	8.0	500
6185506044	60 mm	5.0	8.0	400
6185606044	60 mm	6.0	8.0	250



BIS Chain (DIN 5685)

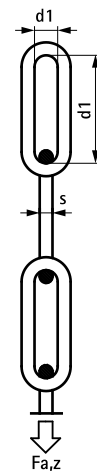
(K 50 05)



Features and Benefits

- Part No. 0910013: short linked (according to DIN 5685-2)
 - material: steel
 - zinc plated
- Part No. 0910015 and 0910017: long linked (according to DIN 5685-1)

Part No.	L	s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1	App.
0910013	30 m	3.0	16 x 5.4	850	1	m.
0910015	30 m	3.0	26 x 5.4	600	1	m.
0910017	30 m	4.0	32 x 7.2	1,800	1	m.



Complementary

- 465 BIS S-Hook
- 467 BIS Splitted S-Hook
- 468 BIS Pig Tail Chain Hook

BIS Victor Chain (DIN 5686)

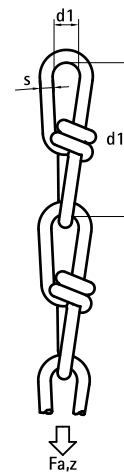
(K 50 10)



Features and Benefits

- according to DIN 5686
- zinc plated
- material: steel

Part No.	L	s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1	App.
0912022	30 m	2.0	28 x 5.0	400	1	m.
0912025	30 m	2.2	31 x 5.0	500	1	m.
0912027	30 m	2.5	35 x 6.0	600	1	m.
0912030	30 m	2.8	39 x 6.0	800	1	m.
0913032	30 m	3.1	41 x 8.0	1,000	1	m.



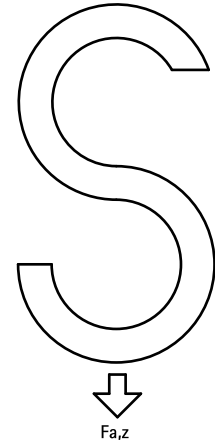
Complementary

- 465 BIS S-Hook
- 467 BIS Splitted S-Hook
- 468 BIS Pig Tail Chain Hook

BIS S-Hook

7.0 - 14.0 mm

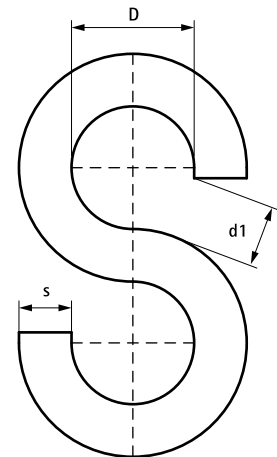
(K 50 15)



Features and Benefits

- material: steel
- zinc plated

Part No.	D (mm)	s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6941030	7.0	3.0	3.5 mm	120	100	500
6941040	11.0	4.0	5.0 mm	250	100	500
6941050	14.0	5.0	5.5 mm	400	100	500



BIS DobyGrip Info Page



Strong, simple and fast

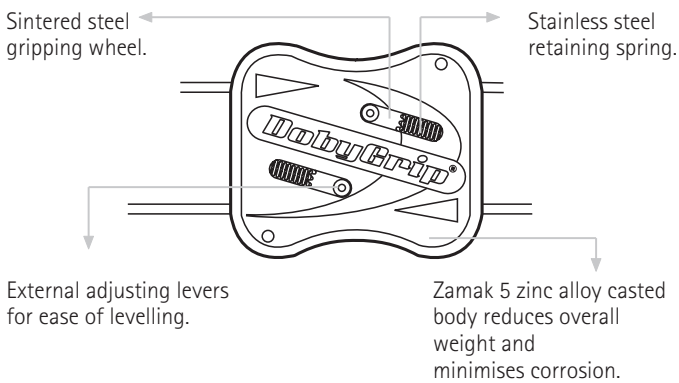
The BIS DobyGrip catenary wire system is the quick and efficient alternative to threaded rods and chains. You can install it up to 6x faster.

The system is ideal for static objects which need to be hung in high areas. For example cable channels, suspended ceilings, air ducts and light fittings.

Suitable for use in multiple applications and markets including HVAC, electrical, displays, lighting, signage and vineyards.

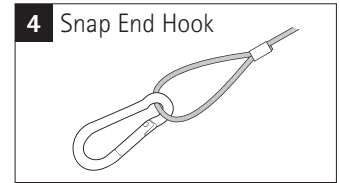
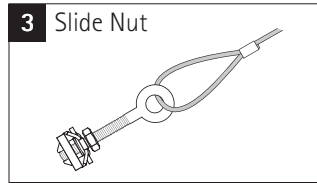
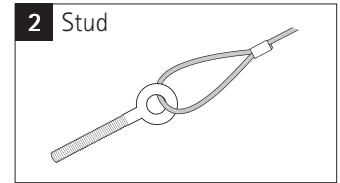
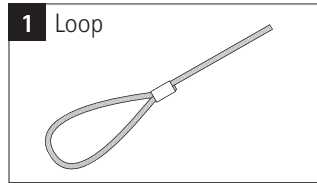
Easy to use

1. Pass cable tail through BIS DobyGrip in the direction of the arrow on casing.
2. Pass cable tail through suspension point of supported item, pull cable back through BIS DobyGrip. Height can be easily adjusted by using external cable release, infinitely adjustable.



Lightweight

Assembly and handling on site are much simpler. Reduces the need for working at height with unwieldy fixing materials.



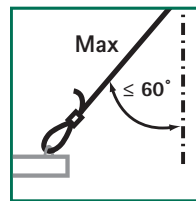
4 versions for 1001 purposes

The various versions make the system very flexible and widely applicable. Every type of BIS DobyGrip cable is available in various lengths. Reels of wire can also be supplied.

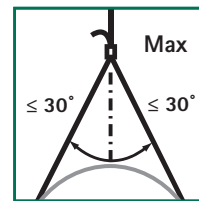
High safe working loads

The BIS DobyGrip cable is available in 2 different thicknesses and is suitable for both vertical and diagonal loads. Suspension with the BIS DobyGrip system is not only strong, but also reduces vibration.

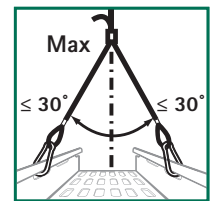
s	Max. Fa,z (N)				
	0°	15°	30°	45°	60°
s = 1 mm	100	90	80	70	50
s = 2 mm	500	450	400	350	250



Fa.z 50%



Fa.z 80%

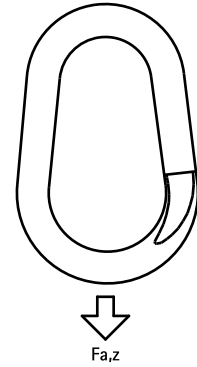


Fa.z 80%



BIS Splitted S-Hook

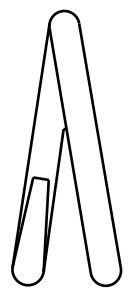
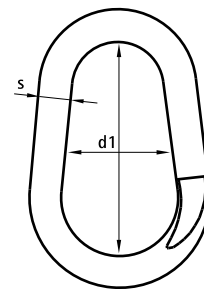
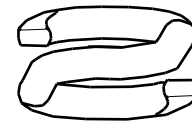
(K 50 20)



Features and Benefits

- material: steel
- zinc plated

Part No.	s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6942030	3.0	16.5 x 6.5	350	100	500
6942040	4.0	20.0 x 8.0	550	100	300



BIS Pig Tail Chain Hook

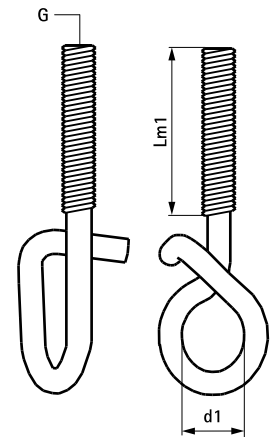
(K 50 25)



Features and Benefits

- material: steel
- zinc plated

Part No.	G	d1 (mm)	Lm1 (mm)	F _{a,z} (N)	Pack 1
6940006	M6	15.0	40	400	100
6940008	M8	16.5	30	600	100



BIS Stud Bolt (BUP1000)

(K 55 04)

fixing to rail, wall plates, etc.



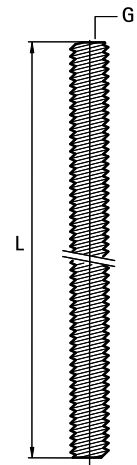
Features and Benefits

- according to DIN 976-1
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227
- tested for fire safety



Part No.	Type	G	L	$A_{s,nom}$ (mm ²)	$F_{a,z}$ (N)	Pack 1
63181010	DIN 976-1	M8	100 mm	36.6	19,500	100
63181020	DIN 976-1	M8	200 mm	36.6	19,500	50
63281010	DIN 976-1	M10	100 mm	58.0	30,900	100
63281020	DIN 976-1	M10	200 mm	58.0	30,900	50

M10 and above tested for fire safety.



Complementary

- 477 BIS Stud Connector (BUP1000)
- 478 BIS Stud Connector
- 481 BIS Threaded Rod Connector

BIS Stud Bolt

(K 55 05)

fixing to rail, wall plates, etc.



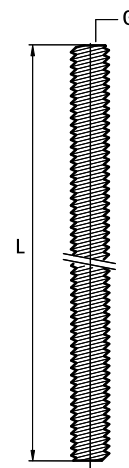
Features and Benefits

- according to DIN 976-1
- material: steel
- zinc plated
- tested for fire safety



Part No.	Type	G	L	A _{s,nom} (mm ²)	F _{a,z} (N)	Pack 1	Pack 2
6313602	-	M6	20 mm	-	-	200	4,000
6313802	DIN 976-1	M8	25 mm	36.6	9,700	100	1,000
6313803	DIN 976-1	M8	30 mm	36.6	9,700	100	1,000
6313804	DIN 976-1	M8	40 mm	36.6	9,700	100	1,000
6313805	DIN 976-1	M8	50 mm	36.6	9,700	100	1,000
6313806	DIN 976-1	M8	60 mm	36.6	9,700	100	1,000
6313807	DIN 976-1	M8	70 mm	36.6	9,700	100	1,000
6313808	DIN 976-1	M8	80 mm	36.6	9,700	100	1,000
6313809	DIN 976-1	M8	90 mm	36.6	9,700	100	1,000
6313810	DIN 976-1	M8	100 mm	36.6	9,700	100	1,000
6313812	DIN 976-1	M8	120 mm	36.6	9,700	50	250
6313815	DIN 976-1	M8	150 mm	36.6	9,700	50	250
6313818	DIN 976-1	M8	180 mm	36.6	9,700	50	250
6313820	DIN 976-1	M8	200 mm	36.6	9,700	50	250
6323002	DIN 976-1	M10	25 mm	58.0	15,400	50	500
6323003	DIN 976-1	M10	30 mm	-	-	50	500
6323004	DIN 976-1	M10	40 mm	58.0	15,400	50	500
6323005	DIN 976-1	M10	50 mm	58.0	15,400	50	500
6323006	DIN 976-1	M10	60 mm	58.0	15,400	50	500
6323007	DIN 976-1	M10	70 mm	58.0	15,400	50	500
6323008	DIN 976-1	M10	80 mm	58.0	15,400	50	500
6323009	DIN 976-1	M10	90 mm	58.0	15,400	50	500
6323010	DIN 976-1	M10	100 mm	58.0	15,400	50	250
6323012	DIN 976-1	M10	120 mm	58.0	15,400	50	250
6323015	DIN 976-1	M10	150 mm	-	-	50	250
6323016	DIN 976-1	M10	160 mm	58.0	15,400	50	250
6323018	DIN 976-1	M10	180 mm	58.0	15,400	50	250
6323020	DIN 976-1	M10	200 mm	58.0	15,400	50	250
6323024	DIN 976-1	M10	240 mm	-	-	50	100

M10 and above tested for fire safety.



Complementary

- 478 BIS Stud Connector
- 481 BIS Threaded Rod Connector

BIS Threaded Rod (BUP1000)

(K 55 08)

fixing to rail, wall plates, etc.



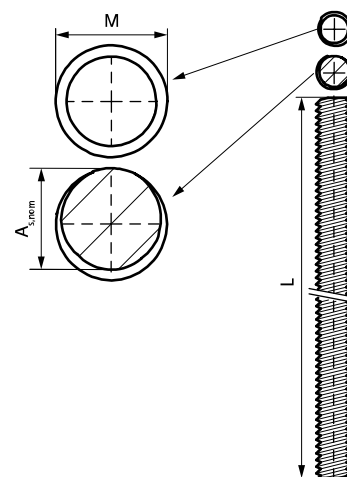
Features and Benefits

- according to DIN 976-1
- material: steel, strength class 4.8
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227



Part No.	Type	Thread (M)	L	$A_{s,nom}$ (mm ²)	$F_{a,z}$ (N)	BndS
63081008	DIN 976-1	M8	1 m	36.6	9,700	50
63082008	DIN 976-1	M8	2 m	36.6	9,700	25
63081010	DIN 976-1	M10	1 m	58.0	15,400	25
63082010	DIN 976-1	M10	2 m	58.0	15,400	20
63081012	DIN 976-1	M12	1 m	84.3	22,400	20
63082012	DIN 976-1	M12	2 m	84.3	22,400	15
63081016	DIN 976-1	M16	1 m	157.0	41,800	20
63082016	DIN 976-1	M16	2 m	157.0	41,800	10

M10 tested for fire safety.
M12 tested for fire safety.



Complementary

- 477 BIS Stud Connector (BUP1000)
- 478 BIS Stud Connector
- 481 BIS Threaded Rod Connector

BIS Threaded Rod

fixing to rail, wall plates, etc.

(K 55 10)

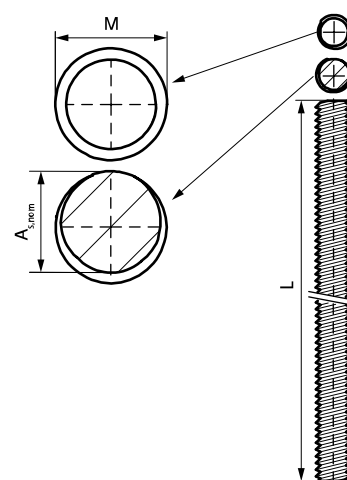


Features and Benefits

- according to DIN 976-1
- material: steel, strength class 4.8
- zinc plated

Part No.	Type	Thread (M)	L	A _{s,nom} (mm ²)	F _{a,z} (N)	BndS
6303006	DIN 976-1	M6	1 m	20.1	5,300	100
6303206	DIN 976-1	M6	2 m	20.1	5,300	50
6303306	DIN 976-1	M6	3 m	20.1	5,300	50
6303007	DIN 976-1	M7B	1 m	-	-	50
6303007F	DIN 976-1	M7F	1 m	-	-	50
6303008	DIN 976-1	M8	1 m	36.6	9,700	50
6303208	DIN 976-1	M8	2 m	36.6	9,700	25
6303308	DIN 976-1	M8	3 m	36.6	9,700	25
6303010	DIN 976-1	M10	1 m	58.0	15,400	25
6303210	DIN 976-1	M10	2 m	58.0	15,400	20
6303310	DIN 976-1	M10	3 m	58.0	15,400	20
6303012	DIN 976-1	M12	1 m	84.3	22,400	20
6303212	DIN 976-1	M12	2 m	84.3	22,400	15
6303312	DIN 976-1	M12	3 m	84.3	22,400	15
6303014	DIN 976-1	M14	1 m	114.0	30,400	10
6303016	DIN 976-1	M16	1 m	157.0	41,800	10
6303216	DIN 976-1	M16	2 m	157.0	41,800	10
6303316	DIN 976-1	M16	3 m	157.0	41,800	1
6303020	DIN 976-1	M20	1 m	245.0	65,300	5
6303024	DIN 976-1	M24	1 m	353.0	94,100	5

M7B: pitch = M7 x 1 mm.
M7F: pitch = M7 x 1.5mm.
M10 tested for fire safety.
M12 tested for fire safety.



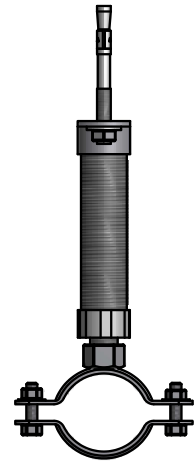
Complementary

- 478 BIS Stud Connector
- 146 BIS dB-FiX® 80 Stand-off Fixing Kit

BIS Threaded Tube (BUP1000)

(K 55 13)

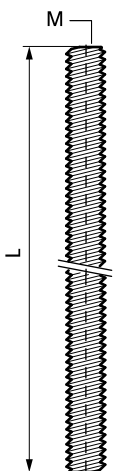
fixing to rail, wall plates, etc.



Features and Benefits

- according to EN 10255 (was DIN 2440)
- Installation according to instructions for use
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

Part No.	G	L	BndS
6298221	G1½"	2 m	10
6298233	G1"	2 m	5



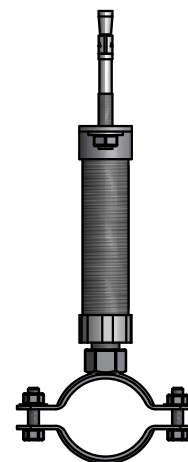
Complementary

- 27 BIS Heavy Duty Clamp HD1501 (BUP1000)
- 47 BIS Heavy Duty Clamp HD500 (BUP1000)

BIS Threaded Tube

fixing to rail, wall plates, etc.

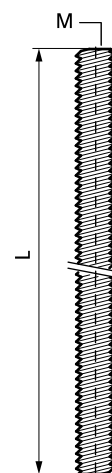
(K 55 15)



Features and Benefits

- according to EN 10255 (was DIN 2440) ■ zinc plated
- metrical thread according to DIN ISO 228-1
- material: steel

Part No.	Thread (M)	L	BndS
6293021	G1/2"	0.5 m	-
6293133	G1"	1 m	-
6293221	G1/2"	2 m	10
6293227	G3/4"	2 m	-
6293233	G1"	2 m	5



Complementary

- 27 BIS Heavy Duty Clamp HD1501 (BUP1000)
- 47 BIS Heavy Duty Clamp HD500 (BUP1000)
- 411 BIS Wall Plate Resistance Welded

BIS Threaded Distance Bar

(K 55 20)

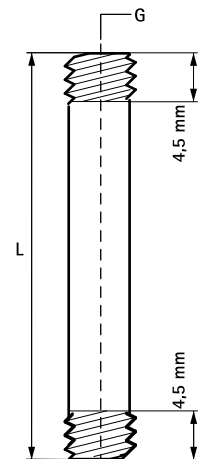
fixing to rail, wall plates, etc.



Features and Benefits

- for fixing of clamps to wall plates or plugs
- zinc plated
- with female thread
- tested for fire safety
- material: steel

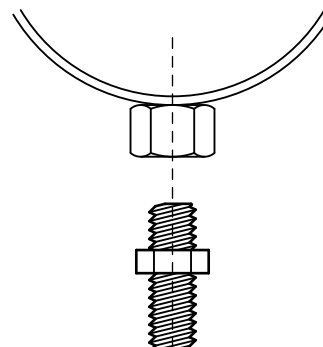
Part No.	G	L	Pack 1	Pack 2
6413158	M8	15 mm	100	1,000
6413258	M8	25 mm	100	1,000
6413358	M8	35 mm	100	1,000
6413458	M8	45 mm	100	1,000
6413558	M8	55 mm	100	1,000
6413658	M8	65 mm	100	1,000



BIS Threaded Nipple

adjustment of thread connection

(K 55 25)

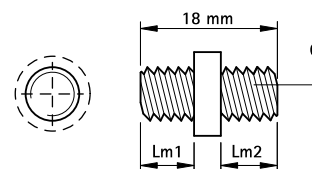


Features and Benefits

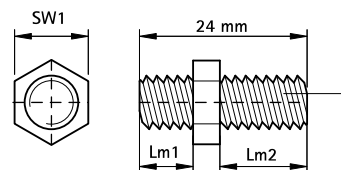
- for creating male thread to for example clamp or wall plate
- material: steel
- zinc plated
- tested for fire safety

Part No.	Model	G	Lm1 (mm)	Lm2 (mm)	SW1 (mm)	Pack 1	Pack 2
6413006	Round Collar	M6	8.0	8.0	-	100	3,000
6413008	Hexagon Collar	M8	8.0	12.0	10	100	2,000

M8 and above tested for fire safety.



641 3 006

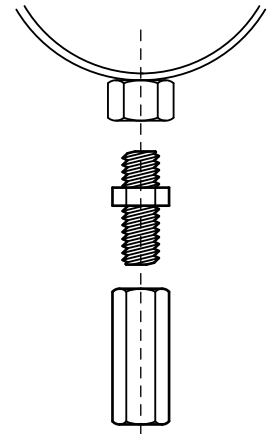


641 3 008

BIS Stud Connector (BUP1000)

(K 55 28)

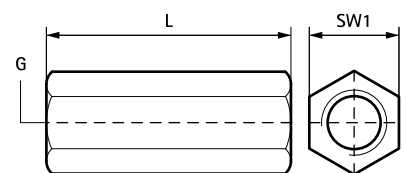
connecting of stud bolts



Features and Benefits

- to connect 2 male threaded components
- material: steel
- surface protection:
 - product is part of the BIS UltraProtect® 1000 system
 - suitable for in- and outdoor applications
 - stands min. 1,000 hours salt spray test (max. 5% red rust) according to ISO 9227

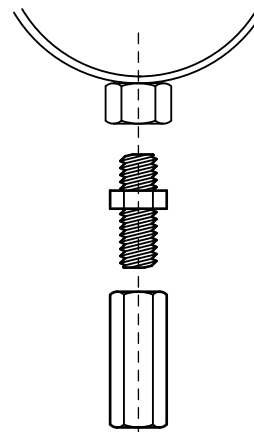
Part No.	G	L	SW1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6458830	M8	30 mm	11	18,100	100	1,000
6458940	M10	40 mm	13	20,400	50	500
6458240	M12	40 mm	17	23,000	25	250



BIS Stud Connector

connecting of stud bolts

(K 55 30)

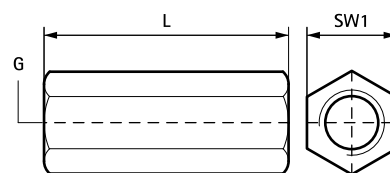


Features and Benefits

- to connect 2 male threaded components
- zinc plated
- material: steel

Part No.	G	L	SW1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6453625	M6	25 mm	10	11,900	100	1,000
6453725	M7B	25 mm	11	15,900	100	1,000
6453830	M8	30 mm	11	18,100	100	1,000
6453930	M10	30 mm	13	20,900	50	500
6453940	M10	40 mm	13	20,400	50	1,000
6453240	M12	40 mm	17	23,000	50	500
6453016	M16	48 mm	24	30,300	200	-
6463650	M16	50 mm	24	30,300	25	-

M7B: pitch = M7 x 1 mm.



Alternative

477 BIS Stud Connector (BUP1000)

BIS Thread Adaptor (M/F)

adjustment of thread connection

(K 55 35)



6473XXX



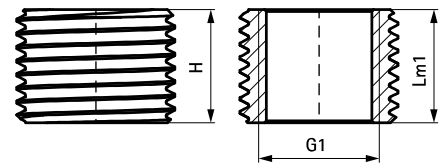
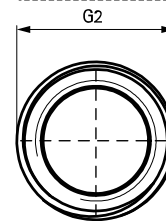
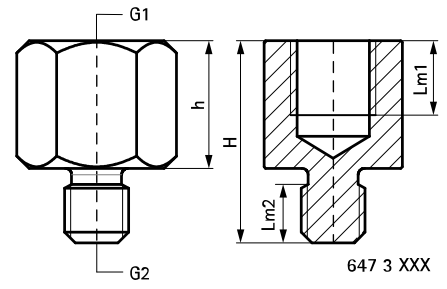
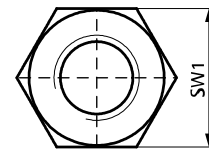
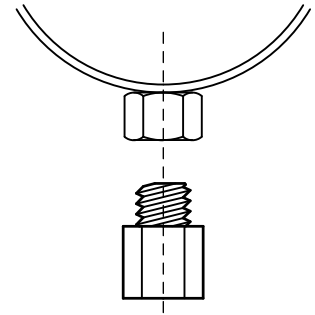
6473521
6484321

Features and Benefits

- to enlarge or reduce the thread size in the connection of clamps, etc.
- material: steel
- zinc plated
- tested for fire safety

Part No.	H (mm)	h (mm)	G1	G2	Lm1 (mm)	Lm2 (mm)	SW1 (mm)	Pack 1	Pack 2
6473008	19	12	M8	M6	7.0	5.5	13	100	1,000
6473207	22	12	M8	M7F	7.0	8.0	13	50	500
6473108	21	14	M7F	M8	7.0	5.5	13	50	500
6473206	20	12	M6	M8	7.0	6.0	13	100	2,000
6473210	23	15	M10	M8	9.0	6.0	13	100	2,000
6473212	23	15	M12	M8	8.0	6.0	17	50	-
6473221	30	22	G1/2	M8	13.0	8.0	27	50	250
6473306	21	13	M6	M10	7.0	6.0	13	100	-
6473308	21	13	M8	M10	7.0	6.0	13	100	2,000
6473312	25	15	M12	M10	8.0	8.0	17	50	500
6473316	32	22	M16	M10	13.0	8.0	24	25	-
6473321	31	21	G1/2	M10	12.0	8.0	27	25	250
6473408	23	13	M8	M12	7.0	7.5	13	50	1,000
6473410	23	13	M10	M12	8.0	7.5	13	50	1,000
6473416	32	22	M16	M12	11.0	8.0	24	50	-
6473510	32	18	M10	M16	9.0	11.0	19	50	-
6473512	32	18	M12	M16	10.0	11.0	19	50	-
6473421	26	11	M10	G1/2	9.0	13.0	27	25	250
6484321	8	-	M10	G1/2	8.0	-	-	50	500
6473521	15	-	M16	G1/2	15.0	-	-	50	250
6473621	25	15	G3/4	G1/2	12.0	7.0	-	50	700
6473721	32	20	G1	G1/2	17.0	9.0	-	10	100

M10 and above tested for fire safety.
M7F: pitch = M7 x 1.5mm.



647 3 521 /
648 4 321

BIS Stud Connector (Round)

(K 55 39)

adjustment of thread connection



Features and Benefits

- sistema para unir 2 elementos roscados
- útil para separar abrazaderas de la pared
- material: steel
- zinc plated

Part No.	G	L	Pack 1	Pack 2
6459620	M6	20 mm	100	2,700
6459630	M6	30 mm	100	2,000
6459820	M8	20 mm	100	2,700
6459830	M8	30 mm	100	1,000
6459030	M10	30 mm	100	1,000

BIS Threaded Rod Connector

adjustment of thread connection

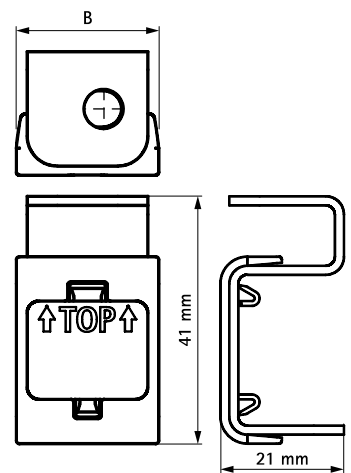
(K 55 41)



Features and Benefits

- to connect 2 male threaded components
- vertically adjustable
- material: steel
- pre-galvanized

Part No.	G	B (mm)	$F_{a,z}$ (N)	Pack 1	Pack 2
6455006	M6	24	2,680	25	250
6455008	M8	24	2,250	25	250
6455010	M10	30	3,590	25	250



BIS DobyGrip Loop

(K 65 05)

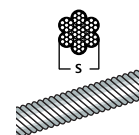


Features and Benefits

- for a quick and easy fixing to roof and bearing beams, ridge beams, etc.
- reduces installation time compared to conventional methods
- wire suspension system for high loads
- all wires are supplied including BIS DobyGrip Lock
- material: 7x7 stranded galvanized steel wire rope
- strict quality inspection procedures and independent tests ensure reliability
- see also: BIS DobyGrip Info Page

Part No.	L	s (mm)	F _{a,z} (N)	Pack 1	Pack 2
09481101	1 m	1.0	100	10	500
09481102	2 m	1.0	100	10	250
09481103	3 m	1.0	100	10	250
09481105	5 m	1.0	100	10	100
09481201	1 m	2.0	500	10	250
09481202	2 m	2.0	500	10	100
09481203	3 m	2.0	500	10	100
09481205	5 m	2.0	500	10	100

Loads tested to a 5:1 safety factor. All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.



Complementary

- 364 Britclips® Tiger
- 365 Britclips® FC
- 525 BIS HK

BIS DobyGrip Stud

(K 65 10)

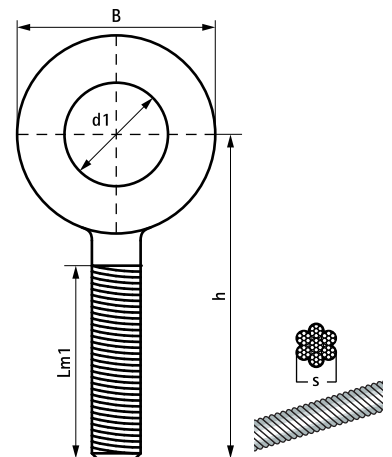


Features and Benefits

- for a quick and easy fixing to ceilings by means of a wall plug/drop-in-anchor
- reduces installation time compared to conventional methods
- wire suspension system for high loads
- all wires are supplied including BIS DobyGrip Lock
- material: 7x7 stranded galvanized steel wire rope
- strict quality inspection procedures and independent tests ensure reliability
- see also: BIS DobyGrip Info Page

Part No.	G	L	B (mm)	h (mm)	s (mm)	d1 (mm)	Lm1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
09482261	M6	1 m	20	62	2.0	∅ 11	48	500	10	250
09482262	M6	2 m	20	62	2.0	∅ 11	48	500	10	100
09482265	M6	5 m	20	62	2.0	∅ 11	48	500	10	100
09482281	M8	1 m	25	74	2.0	∅ 13	56	500	10	250
09482282	M8	2 m	25	74	2.0	∅ 13	56	500	10	100
09482283	M8	3 m	25	74	2.0	∅ 13	56	500	10	100
09482285	M8	5 m	25	74	2.0	∅ 13	56	500	10	100

Lloads tested to a 5:1 safety factor. All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.



BIS DobyGrip Snap End Hook

(K 65 20)

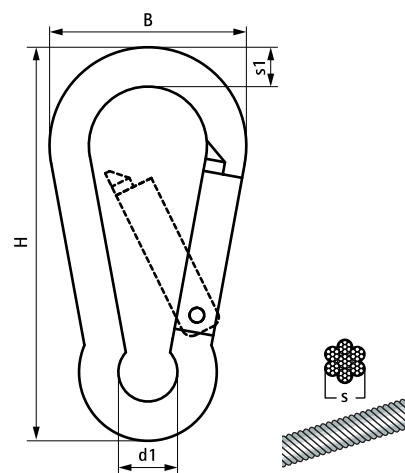


Features and Benefits

- for a quick and easy fixing to hooks and suspension eyes
- reduces installation time compared to conventional methods
- wire suspension system for high loads
- all wires are supplied including BIS DobyGrip Lock
- material: 7x7 stranded galvanized steel wire rope
- strict quality inspection procedures and independent tests ensure reliability
- see also: BIS DobyGrip Info Page

Part No.	L	B	H	s	s1	d1	F _{a,z} (N)	Pack 1	Pack 2
		(mm)	(mm)	(mm)	(mm)	(mm)			
09486201	1 m	30	60	2.0	6.0	9.0	500	10	250
09486202	2 m	30	60	2.0	6.0	9.0	500	10	100
09486203	3 m	30	60	2.0	6.0	9.0	500	10	100

Loads tested to a 5:1 safety factor. All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.



Complementary

- 364 Britclips® Tiger
- 365 Britclips® FC
- 525 BIS HK

BIS DobyGrip Wire Reel

(K 65 25)



Features and Benefits

- for a quick and easy fixing to various suspension points
- wire lengths can be self-determined
- wire suspension system for high loads
- material: 7x7 stranded galvanized steel wire rope
- strict quality inspection procedures and independent tests ensure reliability
- see also: BIS DobyGrip Info Page

Part No.	L	s (mm)	F _{a,z} (N)	Pack 1	Pack 2
09489115	150 m	1.0	100	1	8
09489215	150 m	2.0	500	1	2

Loads tested to a 5:1 safety factor. All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.

Complementary

- 364 Britclips® Tiger
- 365 Britclips® FC
- 525 BIS HK

BIS DobyGrip Lock

(K 65 30)



Features and Benefits

- reduces installation time compared to conventional methods
- wire suspension system for high loads
- Part No. 09489001: for use in combination with 1 mm diameter BIS DobyGrip wires
- Part No. 09489000: for universal use in combination with 1 mm as well as 2 mm diameter BIS DobyGrip wires
- Part No. 09489001: suitable for a maximum load of 10kg (1 mm wire diameter) with a 5:1 safety factor
- Part No. 09489000: suitable for a maximum load of 10kg (1 mm wire diameter) or 50kg (2 mm wire diameter) with a 5:1 safety factor
- simple height adjustment using external cable release, infinitely adjustable
- material: body of Zamak 5 zinc alloy; retaining spring of stainless steel (AISI 304); gripping wheel of sintered steel
- strict quality inspection procedures and independent tests ensure reliability
- see also: BIS DobyGrip Info Page

Part No.	L	B (mm)	F _{a,z} (N)	Pack 1	Pack 2	For (DobyGrip)
09489001	20 mm	16.5	100	50	1,000	1 mm
09489000	30 mm	25.0	500	20	500	2 mm

Loads tested to a 5:1 safety factor. All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.

BIS DobyGrip Lighting Kit

(K 65 32)



Features and Benefits

- lightweight and ideal easy to use solution for lighting to be hung in high areas
- for a quick and easy fixing to roof and bearing beams, ridge beams, etc.
- reduces installation time compared to conventional methods
- material: 7x7 stranded galvanized steel wire rope
- strict quality inspection procedures and independent tests ensure reliability
- lighting kit consists of:
 - 2 x 3 meter lengths of BIS DobyGrip 1 mm wire
 - 2 x BIS DobyGrip lock 1 mm
 - 2 x Suspension Clips
 - see also: BIS DobyGrip Info Page

Part No.	Model	$F_{a,z}$ (N)	Pack 1	App.
09489300	Lighting Kit	80	2	pc.
<i>Loads tested to a 5:1 safety factor. All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.</i>				

BIS Catenary Wire Cutter

(K 65 60)



Features and Benefits

- for cutting BIS DobyGrip wire ropes without unraveling
- spring loaded action and non slide grip

Part No.	Model	Pack 1	Pack 2
09409005	For wire diameters 1 - 3 mm	1	10

BIS Wire Rope

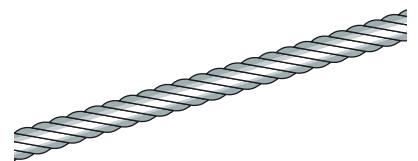
(K 65 35)



Features and Benefits

- material: mild steel
- pre-galvanized
- packed per reel

Part No.	Code	L	s (mm)	F _{a,z} (N)	Pack 1
6390303	CAT3-30	30 m	3.0	1,900	1
6390305	CAT3-50	50 m	3.0	1,900	1
6390310	CAT3-100	100 m	3.0	1,900	1



BIS Rope Grip and Eyelet

(K 65 40)



639 1 X12

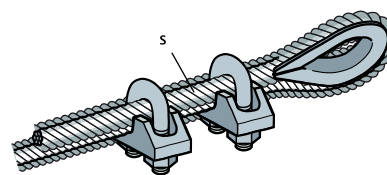


639 2 XXX

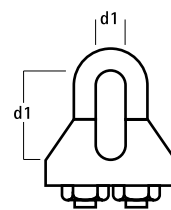
Features and Benefits

- material: mild steel
- pre-galvanized

Part No.	Code	s (mm)	d1 (mm)	Pack 1
6392308	CAT3-RG	3.0	8.0 x 5.5	20



639 1 X12



639 2 XXX

BIS Hook and Eye Rope Tensioner

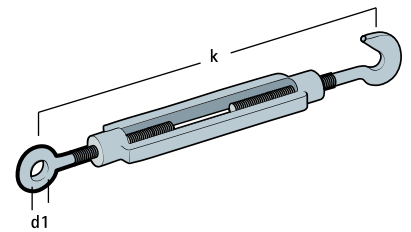
(K 65 45)



Features and Benefits

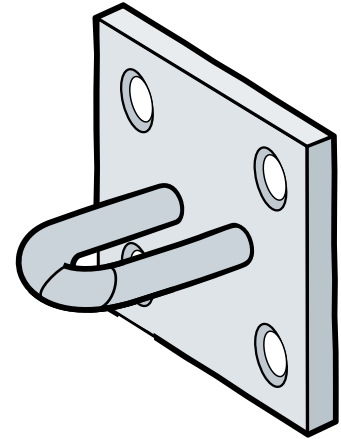
- material: mild steel
- pre-galvanized

Part No.	Code	d1 (mm)	k (mm)	Pack 1
6393210	CAT6-ST	10	175 - 255	20



BIS Anchor Ring

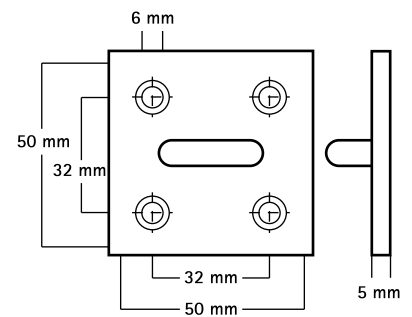
(K 65 50)



Features and Benefits

- material: mild steel
- pre-galvanized

Part No.	Code	B (mm)	H (mm)	s (mm)	Pack 1
6393000	CAT50-RP	50	50	5.0	10



L BIS Fastenings



Heavy Duty Anchors

WDI1 Drop-in Anchor	494
WDI1L Drop-in Anchor Lipped	495
WDI1R Drop-in Anchor Short	496
WDI1 Setting Tool	497
WDI1R Setting Tool Set	498
WDI1R SD Stop Drill Bit	499
WBA Brass Anchor	500
WSA1 Shield Anchor	501
WTB1 Throughbolt Anchor	502
WTB7 Throughbolt Anchor	503
WHA1H Highload Anchor	504
WCS1N Concrete Screw	505
WCS1M Concrete Screw	506
WCS1P Concrete Screw	507
WCS1H Concrete Screw	508
WCA1 Ceiling Anchor	509
WHC Hollow Core Anchor	510
WGB-M Aerated Concrete Anchor	511
WGB-M Setting Tool	512
WIS Chemical Anchor WPSF100	513
WIS Chemical Anchor WVSF200	514
WIS Extension Pipe	515
WIS Brush	516
WIS Blow Pump	517
WIS Dispenser Gun	518
WIS Plastic Mesh Sleeve	519
WIS Threaded Rod	520
WIS Stud Bolt	521
WDI1 SD Stop Drill Bit	522
WSDS+ 3CE Concrete Drill Bit	523



BIS Anchors

WCA1 Ceiling Anchor	524
BIS HK	525



Light Duty Fixings

WUP Uni Plug	526
WEP Expansion Plug	527
WNP Nail Plug	528
WPF Plasterboard Fixings	529
WCP Cavity Plug	530
WRX Metal Plug	531
WRX Plastic Plug	532



BIS Plugs

BIS XL	533
BIS TWIST	534
BIS CP	535
BIS ARAYPLAST	536
BIS Star Plug	537



BIS Hammer-in Studs

BIS Hammer-in Shoulder Stud	538
BIS Hammer-in Stud	539
BIS Nail Shoulder Stud	540

WDI1 Drop-in Anchor

(L 03 05)

standard drop-in anchor



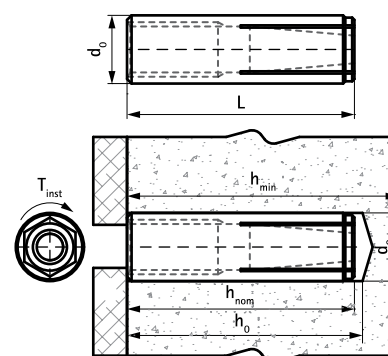
Features and Benefits

- simple and quick installation procedure
- medium load capacity
- no collar for anchor setting at greater hole depth
- material: steel
- zinc plated
- ETA ETAG001 Part 6 approval for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire (M8-M16)
- substrate type:
 - cracked concrete
 - non-cracked concrete



Part No.	Code	Size	L	d_0	h_0	h_{min}	h_{nom}	Rec. Tension Load C20/25 Concrete e (kN)	ETA	Pack 1	Pack 2
				(mm)	(mm)	(mm)	(mm)				
6103006	WDI1 6x25	M6	25 mm	8	≥ 30	80	≥ 25	0.52*	ETA	100	2,400
6103008	WDI1 8x30	M8	30 mm	10	≥ 32	80	≥ 30	1.02*	ETA	100	600
6103010	WDI1 10x40	M10	40 mm	12	≥ 42	80	≥ 40	1.55*	ETA	50	500
6103012	WDI1 12x50	M12	50 mm	15	≥ 53	100	≥ 50	2.19*	ETA	50	300
6103016	WDI1 16x65	M16	65 mm	20	≥ 70	130	≥ 65	4.53*	ETA	25	200

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.



Complementary

- 497 WDI1 Setting Tool
- 516 WIS Brush
- 517 WIS Blow Pump

Complementary

- 522 WDI1 SD Stop Drill Bit
- 523 WSDS+ 3CE Concrete Drill Bit

WDI1L Drop-in Anchor Lipped

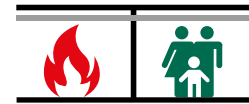
(L 03 10)

standard drop-in anchor with a lip collar



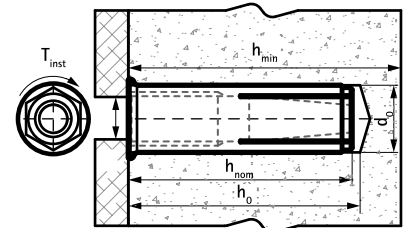
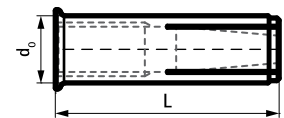
Features and Benefits

- simple and quick installation procedure
- collar with a lip for flush anchor setting at any hole depth
- medium load capacity
- material: steel
- zinc plated
- ETA ETAG001 Part 6 approval for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire (M8-M16)
- substrate type:
 - cracked concrete
 - non-cracked concrete



Part No.	Code	Size	L	d ₀	h ₀	h _{min}	h _{nom}	Rec. Tension Load C20/25 Concrete (kN)	Pack 1	Pack 2
				(mm)	(mm)	(mm)	(mm)			
6103106	WDI1L 6x25	M6	25 mm	8	≥ 30	80	≥ 25	0.52*	100	600
6103108	WDI1L 8x30	M8	30 mm	10	≥ 32	80	≥ 30	1.02*	100	600
6103110	WDI1L 10x40	M10	40 mm	12	≥ 42	80	≥ 40	1.55*	50	500
6103112	WDI1L 12x50	M12	50 mm	15	≥ 53	100	≥ 50	2.19*	50	300
6103116	WDI1L 16x65	M16	65 mm	20	≥ 70	130	≥ 65	4.53*	25	150

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.



Complementary

- 497 WDI1 Setting Tool
- 516 WIS Brush
- 517 WIS Blow Pump

Complementary

- 522 WDI1 SD Stop Drill Bit
- 523 WSDS+ 3CE Concrete Drill Bit

WDI1R Drop-in Anchor Short

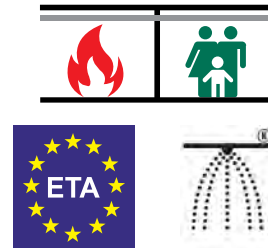
(L 03 20)

reduced length drop-in anchor with a lip collar



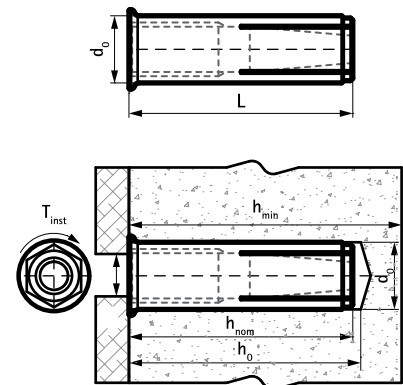
Features and Benefits

- simple and quick installation procedure
- collar with a lip for flush anchor setting at any hole depth
- medium load capacity
- reduced 25 mm anchor length allows approved applications in precast prestressed hollow core slabs
- material: steel
- zinc plated
- ETA ETAG001 Part 6 approval for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- complies with VdS CE 4001:2014-04 (05) and VdS CE 4001:2018-01 (06) for applications with sprinkler systems in concrete elements
- substrate type:
 - cracked concrete
 - non-cracked concrete



Part No.	Code	Size	L	d ₀	h ₀	h _{min}	h _{nom}	Rec. Tension Load C20/25 Concrete (kN)	ETA	Pack 1
				(mm)	(mm)	(mm)	(mm)			
6103206	WDI1R 6x25	M6	25 mm	8	≥ 25	80	≥ 25	1.67*	ETA	100
6103208	WDI1R 8x25	M8	25 mm	10	≥ 25	80	≥ 25	1.90*	ETA	100
6103210	WDI1R 10x25	M10	25 mm	12	≥ 25	80	≥ 25	2.14*	ETA	50
6103212	WDI1R 12x25	M12	25 mm	15	≥ 25	80	≥ 25	2.14*	ETA	50

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.



Complementary

- 498 WDI1R Setting Tool Set
- 516 WIS Brush
- 517 WIS Blow Pump

Complementary

- 522 WDI1 SD Stop Drill Bit
- 523 WSDS+ 3CE Concrete Drill Bit
- 499 WDI1R SD Stop Drill Bit

WDI1 Setting Tool

(L 03 25)



Features and Benefits

- for setting Walraven WDI1 Drop-in Anchors

Part No.	Code	For	Pack 1
6902106	WDI1ST 6	WDI1 6x25	10
6902108	WDI1ST 8	WDI1 8x30	10
6902110	WDI1ST 10	WDI1 10x40	10
6902112	WDI1ST 12	WDI1 12x50	10
6902116	WDI1ST 16	WDI1 16x65	10

WDI1R Setting Tool Set

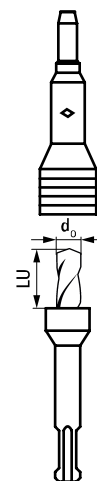
(L 03 27)



Features and Benefits

- combined tool for drilling and setting WDI1R anchors
- 50% faster installation than with traditional methods
- no uncomfortable hammering in overhead installations

Part No.	Code	LU (mm)	d ₀ (mm)	For	Pack 1	Pack 2
6902206	WDI1R STS 6	25	8	WDI1R M6	1	20
6902208	WDI1R STS 8	25	10	WDI1R M8	1	20
6902210	WDI1R STS 10	25	12	WDI1R M10	1	20



Complementary

- 496 WDI1R Drop-in Anchor Short
- 499 WDI1R SD Stop Drill Bit

WDI1R SD Stop Drill Bit

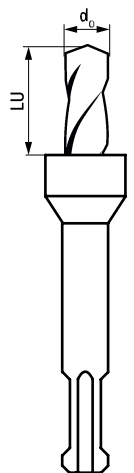
(L 03 28)



Features and Benefits

- designed for drilling all concrete at controlled depth
- particularly suitable for high volume installations of WDI1R Drop-in Anchors
- can be used as a replacement drill bit for WDI1R STS Setting Tool Set

Part No.	Code	LU (mm)	d ₀ (mm)	For	Pack 1	Pack 2
6902306	WDI1R SD 6	25	8	WDI1R M6	1	20
6902308	WDI1R SD 8	25	10	WDI1R M8	1	20
6902310	WDI1R SD 10	25	12	WDI1R M10	1	20



Complementary

- 496 WDI1R Drop-in Anchor Short
- 498 WDI1R Setting Tool Set

WBA Brass Anchor

(L 03 30)

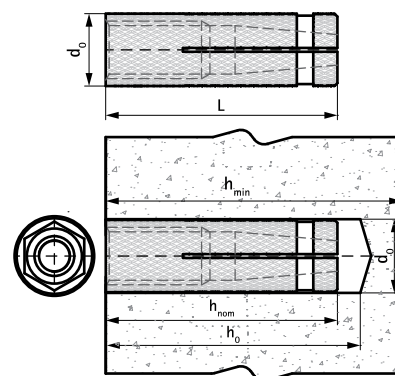
standard brass expansion anchor



Features and Benefits

- reduced anchor length requires less drilling
- for use with standard metric bolts and threaded rods
- does not require a setting tool
- knurled external surface provides improved grip and resists rotation in the hole
- material: brass
- corrosion resistant

Part No.	Code	Size	L	d ₀ (mm)	h ₀ (mm)	h _{min} (mm)	h _{nom} (mm)	Pack 1	Pack 2
6107006	WBA 6x22	M6	22 mm	8	≥ 27	100	≥ 22	100	1,600
6107008	WBA 8x28	M8	28 mm	10	≥ 32	100	≥ 28	100	1,600
6107010	WBA 10x32	M10	32 mm	12	≥ 35	100	≥ 32	100	800
6107012	WBA 12x38	M12	38 mm	15	≥ 40	100	≥ 38	50	400



Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 522 WDI1 SD Stop Drill Bit

Complementary

- 523 WSDS+ 3CE Concrete Drill Bit

WSA1 Shield Anchor

heavy duty expansion anchor

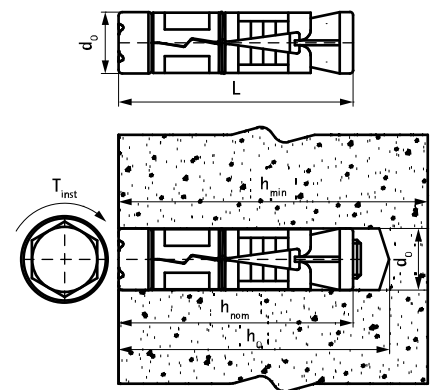
(L 03 35)



Features and Benefits

- three-part expanding sleeve provides optimal load and safety of use in many substrates
- for use with metric threaded rods or bolts
- suitable for use in multiple base materials
- material: steel
- zinc plated
- substrate type:
 - concrete
 - hollow masonry
 - natural stone

Part No.	Code	Size	L	d ₀ (mm)	h ₀ (mm)	h _{min} (mm)	h _{nom} (mm)	Pack 1
6103608	WSA1 8x50	M8	50 mm	14	≥ 55	100.0	50	100
6103610	WSA1 10x60	M10	60 mm	16	≥ 65	100.0	60	100
6103612	WSA1 12x75	M12	75 mm	20	≥ 85	100.0	80	50
6103616	WSA1 16x115	M16	115 mm	25	≥ 125	142.5	120	25



Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 523 WSDS+ 3CE Concrete Drill Bit

WTB1 Throughbolt Anchor

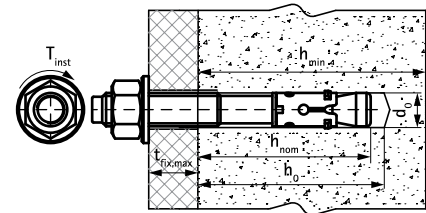
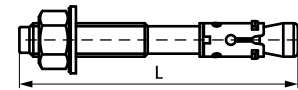
(L 03 40)

high performance corrosion resistant expansion anchor for cracked concrete



Features and Benefits

- high load capacity
- pre- and through-fixing
- two embedment depths provide installation flexibility
- zinc-flake coated for improved corrosion resistance
- material: steel
- zinc plated with zinc flake
- ETA Option 1 approval for cracked and non-cracked concrete
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- substrate type:
 - cracked concrete
 - non-cracked concrete
 - stone



Part No.	Code	Size	L	d ₀	h ₀	h _{min}	h _{nom}	t _{fix,max}	Rec. Tension Load C20/25 Uncracked Concrete (kN)	Rec. Tension Load C20/25 Cracked Concrete (kN)	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)			
609831080	WTB1 8x80	M8	80 mm	8	55	100	55	10	3.57*	1.98*	100
609831081	WTB1 8x100	M8	100 mm	8	55	100	55	35	3.57*	1.98*	100
609831082	WTB1 8x115	M8	115 mm	8	55	100	55	50	3.57*	1.98*	100
609831100	WTB1 10x95	M10	95 mm	10	69	120	69	15	5.71*	4.29*	50
609831101	WTB1 10x115	M10	115 mm	10	69	120	69	35	5.71*	4.29*	50
609831102	WTB1 10x130	M10	130 mm	10	69	120	69	50	5.71*	4.29*	50
609831120	WTB1 12x120	M12	120 mm	12	80	140	80	25	9.52*	5.71*	50
609831121	WTB1 12x135	M12	135 mm	12	80	140	80	40	9.52*	5.71*	50
609831160	WTB1 16x140	M16	140 mm	16	100	170	100	20	16.67*	9.52*	25

* Recommended loads: are stated for single anchors; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.
 The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.
 For more information, please refer to the ETA report.

Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 523 WSDS+ 3CE Concrete Drill Bit

WTB7 Throughbolt Anchor

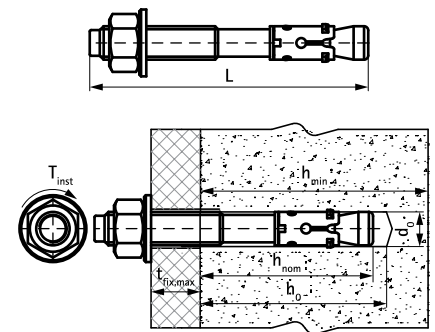
(L 03 45)

high performance expansion anchor for non-cracked concrete



Features and Benefits

- high load capacity
- pre- and through-fixing
- two embedment depths provide installation flexibility
- material: steel
- zinc plated
- ETA Option 7 approval for non-cracked concrete
- substrate type:
 - non-cracked concrete
 - stone



Part No.	Code	Size	L	d ₀ (mm)	h ₀ (mm)	h _{min} (mm)	h _{nom} (mm)	t _{fix,max} (mm)	Rec. Tension Load C20/25 Uncracked Concrete (kN)	Pack 1
609837080	WTB7 8x75	M8	75 mm	8	55	100	55	10	4.76*	100
609837081	WTB7 8x95	M8	95 mm	8	55	100	55	30	4.76*	100
609837082	WTB7 8x115	M8	115 mm	8	55	100	55	50	4.76*	100
609837100	WTB7 10x95	M10	95 mm	10	59	100	59	25	4.76*	50
609837101	WTB7 10x115	M10	115 mm	10	59	100	59	45	4.76*	50
609837102	WTB7 10x130	M10	130 mm	10	59	100	59	60	4.76*	50
609837120	WTB7 12x100	M12	100 mm	12	80	136	80	5	9.92*	50
609837121	WTB7 12x120	M12	120 mm	12	80	136	80	25	9.92*	50
609837122	WTB7 12x150	M12	150 mm	12	80	136	80	55	9.92*	50
609837123	WTB7 12x180	M12	180 mm	12	80	136	80	85	9.92*	50
609837160	WTB7 16x150	M16	150 mm	16	100	170	100	30	15.71*	25

* Recommended loads: are stated for single anchors; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.
 The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.
 For more information, please refer to the ETA report.

Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 522 WD11 SD Stop Drill Bit

Complementary

- 523 WSDS+ 3CE Concrete Drill Bit

WHA1H Highload Anchor

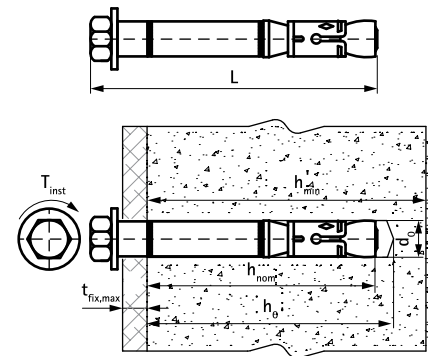
(L 03 54)

ultimate performance anchor for cracked concrete and seismic conditions



Features and Benefits

- very high load capacity
- material: steel
- zinc plated
- ETA Option 1 approval for cracked and non-cracked concrete
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- seismic performance categories C1 and C2 for design of anchorages under seismic action
- substrate type:
 - cracked concrete
 - non-cracked concrete



Part No.	Code	Size	L	d ₀	h ₀	h _{min}	h _{nom}	t _{fix,max}	Rec. Tension Load C20/25 Uncracked Concrete (kN)	Rec. Tension Load C20/25 Cracked Concrete (kN)	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)			
609832120	WHA1H 12x85	M8	85 mm	12	80	120	70	10	9.52*	5.71*	50
609832121	WHA1H 12x125	M8	125 mm	12	80	120	70	50	9.52*	5.71*	25
609832150	WHA1H 15x110	M10	110 mm	15	95	140	85	15	14.29*	7.62*	25
609832151	WHA1H 15x136	M10	136 mm	15	95	140	85	45	14.29	7.62*	25
609832180	WHA1H 18x117	M12	117 mm	18	105	160	95	10	17.20*	12.26*	20

* Recommended loads: are stated for single anchors; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.
 The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.
 For more information, please refer to the ETA report.

Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 522 WDI1 SD Stop Drill Bit

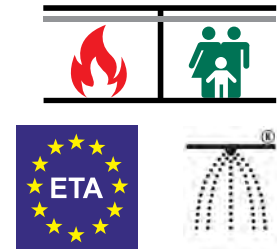
Complementary

- 523 WSDS+ 3CE Concrete Drill Bit

WCS1N Concrete Screw

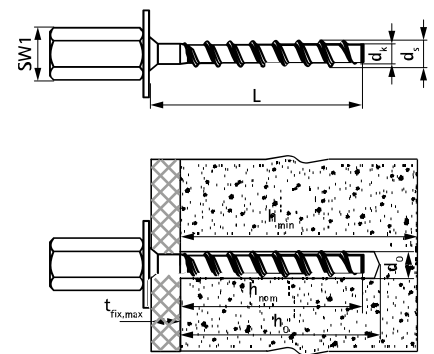
(L 03 60)

high performance concrete screw with a female internal M8/M10 thread



Features and Benefits

- high load capacity
- simple and quick installation procedure
- approved for use in precast prestressed hollow core slabs
- up to 3 anchoring depths provide maximum installation flexibility
- reduced edge and anchor spacing distances
- pre- and through-fixing
- material: steel
- zinc plated
- ETA Option 1 approval for cracked and non-cracked concrete
- ETA according to EAD 330747-00-0601 for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- seismic performance category C1 for design of anchorages under seismic action
- complies with VdS CE 4001:2014-04 (05) and VdS CE 4001:2018-01 (06) for applications with sprinkler systems in concrete elements
- substrate type:
 - cracked concrete
 - non-cracked concrete
 - precast pre-stressed hollow core slabs



Part No.	Code	Size	L	dk	ds	d0	h0	hmin	hnom	tfix,max	SW1	Rec. Tension Load C20/25 Concrete (kN)	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6253606	WCS1N 6x35 M8/10	6	35 mm	5.1	7.5	6	40	80	35	0	13	1.43*	50
6253696	WCS1N 6x55 M8/10	6	55 mm	5.1	7.5	6	60	100	55	0	13	3.57*	50

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.

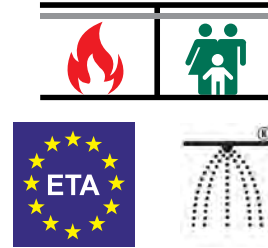
Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 523 WSDS+ 3CE Concrete Drill Bit

WCS1M Concrete Screw

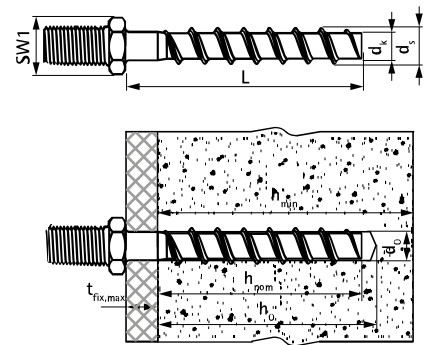
(L 03 65)

high performance concrete screw with male thread connection



Features and Benefits

- high load capacity
- simple and quick installation procedure
- approved for use in precast prestressed hollow core slabs
- up to 3 anchoring depths provide maximum installation flexibility
- reduced edge and anchor spacing distances
- pre- and through-fixing
- material: steel
- zinc plated
- ETA Option 1 approval for cracked and non-cracked concrete
- ETA according to EAD 330747-00-0601 for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- seismic performance category C1 for design of anchorages under seismic action
- complies with VdS CE 4001:2014-04 (05) and VdS CE 4001:2018-01 (06) for applications with sprinkler systems in concrete elements
- substrate type:
 - cracked concrete
 - non-cracked concrete
 - precast pre-stressed hollow core slabs



Part No.	Code	Size	L	dk (mm)	ds (mm)	do (mm)	h0 (mm)	hmin (mm)	hnom (mm)	tfix,max (mm)	SW1 (mm)	Rec. Tension Load C20/25 Concrete (kN)	Pack 1
6253104	WCS1M 6x35 M8	6	35 mm	5.1	7.5	6	40	80	35	0	10	1.43*	100
6253106	WCS1M 6x55 M8	6	55 mm	5.1	7.5	6	60	100	55	0	10	3.57*	100

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.

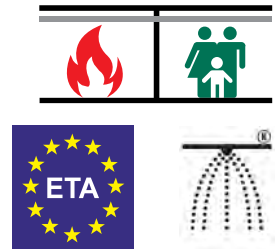
Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 523 WSDS+ 3CE Concrete Drill Bit

WCS1P Concrete Screw

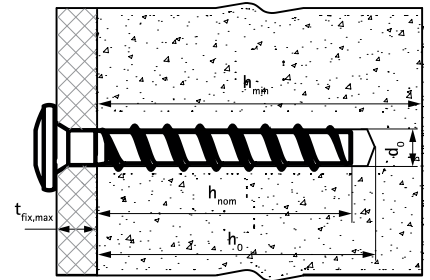
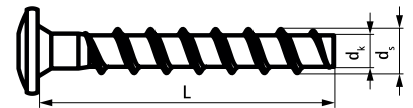
(L 03 70)

high performance concrete screw with a pan head with torx



Features and Benefits

- high load capacity
- through-fixing
- simple and quick installation procedure
- approved for use in precast prestressed hollow core slabs
- reduced edge and anchor spacing distances
- material: steel
- zinc plated
- ETA according to EAD 330747-00-0601 for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- complies with VdS CE 4001:2014-04 (05) and VdS CE 4001:2018-01 (06) for applications with sprinkler systems in concrete elements
- substrate type:
 - cracked concrete
 - non-cracked concrete
 - precast pre-stressed hollow core slabs



Part No.	Code	Size	L	d _k (mm)	d _s (mm)	d ₀ (mm)	h ₀ (mm)	h _{min} (mm)	h _{nom} (mm)	t _{fix,max} (mm)	Drive	Rec. Tension Load C20/25 Concrete (kN)	Pack 1
6253006	WCS1P 6x40	6	40 mm	5.1	7.5	6	40	80	35	5	T30	1.43*	100

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.
 The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.
 For more information, please refer to the ETA report.

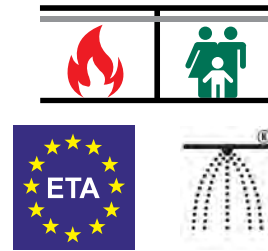
Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 523 WSDS+ 3CE Concrete Drill Bit

WCS1H Concrete Screw

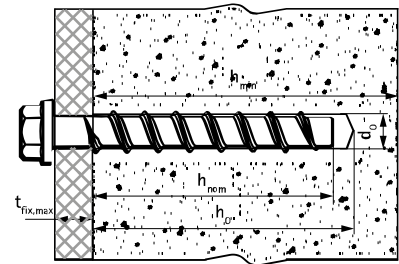
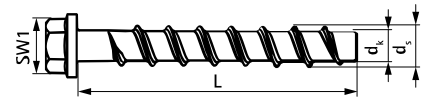
(L 03 75)

high performance corrosion resistant concrete screw with hexagon head



Features and Benefits

- high load capacity
- through-fixing
- approved for use in precast prestressed hollow core slabs
- up to 3 anchoring depths provide maximum installation flexibility
- reduced edge and anchor spacing distances
- material: steel
- surface treatment: zinc flake coated
- ETA Option 1 approval for cracked and non-cracked concrete
- ETA according to EAD 330747-00-0601 for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- seismic performance categories C1 and C2 for design of anchorages under seismic action
- complies with VdS CE 4001:2014-04 (05) and VdS CE 4001:2018-01 (06) for applications with sprinkler systems in concrete elements
- substrate type:
 - cracked concrete
 - non-cracked concrete
 - precast pre-stressed hollow core slabs



Part No.	Code	Size	L	d _k	d _s	d ₀	h ₀	h _{min}	h _{nom}	t _{fix,max}	SW1	Rec. Tension Load C20/25 Uncracked Concrete (kN)	Rec. Tension Load C20/25 Cracked Concrete (kN)	Pack 1
6253304	WCS1H 6x40	6	40 mm	5.1	7.5	6	40	80	35	5	13	1.43**	1.43**	100
6253306	WCS1H 6x60	6	60 mm	5.1	7.5	6	60	100	55	5	13	4.29*	1.90*	100
6253408	WCS1H 8x70	8	70 mm	7.1	10.6	8	75	100	65	5	13	7.62*	5.71*	50
6253418	WCS1H 8x80	8	80 mm	7.1	10.6	8	75	100	65	15	13	7.62*	5.71*	50
6253428	WCS1H 8x100	8	100 mm	7.1	10.6	8	75	100	65	35	13	7.62*	5.71*	50
6253438	WCS1H 8x120	8	120 mm	7.1	10.6	8	75	120	65	55	13	7.62*	5.71*	50
6253506	WCS1H10x60	10	60 mm	9.1	12.6	10	65	100	55	5	15	5.71*	4.29*	50
6253509	WCS1H 10x90	10	90 mm	9.1	12.6	10	95	100	85	25	15	11.90*	9.60*	50
6253510	WCS1H 10x100	10	100 mm	9.1	12.6	10	95	130	85	35	15	11.90*	9.60*	50
6253512	WCS1H 10x120	10	120 mm	9.1	12.6	10	95	130	85	55	15	11.90*	9.60*	50

* = Recommended loads: are stated for single anchors; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.

** = Recommended load is stated for multiple use for non-structural applications according to ETAG001, Part 6.

The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.

For more information, please refer to the ETA report.

Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 523 WSDS+ 3CE Concrete Drill Bit

WCA1 Ceiling Anchor

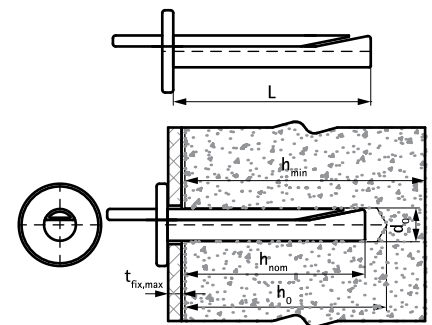
economical ceiling hammer-set anchor

(L 03 80)



Features and Benefits

- through-fixing
- simple and quick installation procedure
- correct anchor installation can be verified by simple visual check
- medium load capacity
- material: steel
- zinc plated
- ETA ETAG001 Part 6 approval for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- substrate type:
 - cracked concrete
 - non-cracked concrete



Part No.	Code	Size	L	d ₀ (mm)	h ₀ (mm)	h _{min} (mm)	h _{nom} (mm)	t _{fix,max} (mm)	Rec. Tension Load C20/25 Concrete (kN)	Pack 1	Pack 2
60963604	WCA1 6x40	6	36 mm	6	≥ 40	100	≥ 32	4.5	1.43*	100	1,600
60963665	WCA1 6x65	6	65 mm	6	≥ 40	100	≥ 32	35.0	1.43*	50	800

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.

Complementary

523 WSDS+ 3CE Concrete Drill Bit

WHC Hollow Core Anchor

(L 03 81)

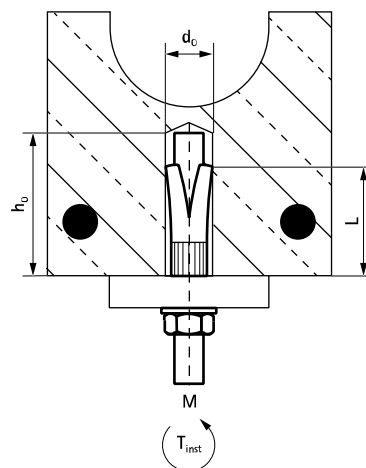
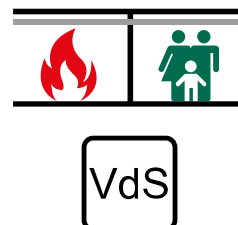
for hollow core concrete slabs



Features and Benefits

- designed specifically for use in precast pre-stressed hollow core concrete slabs
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- very high load capacity

Part No.	Code	Thread (M)	L	d ₀ (mm)	h ₀ (mm)	T _{inst} (Nm)	Pack 1
6096408	WHC	M8	44 mm	12	55	20	50
6096410	WHC	M10	53 mm	16	60	30	50
6096412	WHC	M12	58 mm	18	70	40	25



Complementary

- 472 BIS Threaded Rod
- 454 BIS Hexagon Nut
- 520 WIS Threaded Rod

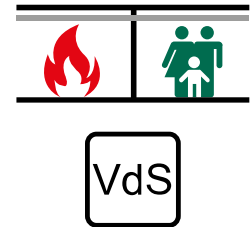
WGB-M Aerated Concrete Anchor

(L 03 82)

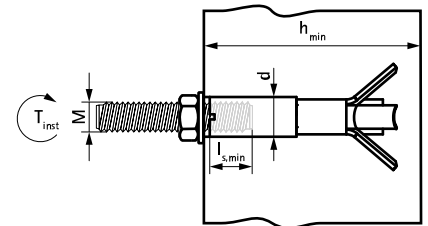


Features and Benefits

- internal thread connection allows flexible distance from the anchor to the fixture
- load can be applied immediately after installation
- installation does not require drilling
- four-way expansion provides high permissible loads, even in tensile areas of roofs and ceilings
- high load safety due to undercutting expansion
- material: steel
- zinc plated
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- VdS approval for applications with stationary fire extinguishing systems



Part No.	Code	d (mm)	Thread (M)	$l_{s,min}$ (mm)	h_{min} (mm)	T_{inst} (Nm)	Pack 1
6103510	WGB-M	16	M10	10-18	175	8	25
6103512	WGB-M	16	M12	12-18	175	8	25



Complementary

- 512 WGB-M Setting Tool
- 520 WIS Threaded Rod
- 454 BIS Hexagon Nut

WGB-M Setting Tool

(L 03 83)



Features and Benefits

- for use with WGB-M M10 or M12 aerated concrete anchors
- solid metal construction ensures high durability and many years of service

Part No.	Code	Size	Pack 1
6902511	WGB-M ST	M10/12	20

WIS Chemical Anchor WPSF100

(L 03 85)

universal chemical anchoring system for non-cracked concrete and masonry.



Features and Benefits

- reduced edge and anchor spacing distances
- always correct mixing ratio thanks to the static mixer nozzle
- for use with industry-standard silicone dispensing guns
- installations in wet and flooded holes without loss of load capacity
- cartridge may be used up over several times (each installation after a break requires new mixing nozzle)
- ETA Option 7 approval for non-cracked concrete
- A+ VOC emissions class
- ETA ETAG029 approval for hollow and solid masonry
- tested according to LEED 2009 EQ c4.1, SCAQMD rule 1168 (2005)
- substrate type:
 - non-cracked concrete
 - solid masonry
 - hollow masonry



Part No.	Code	ETA	LEED	VOC+	Cont.	Pack 1
6099113	WPSF100	ETA	LEED	VOC+	300 ml	12

For more information, please refer to the ETA report.

Complementary

- 515 WIS Extension Pipe
- 516 WIS Brush
- 517 WIS Blow Pump

Complementary

- 518 WIS Dispenser Gun
- 519 WIS Plastic Mesh Sleeve
- 520 WIS Threaded Rod

WIS Chemical Anchor WVSF200

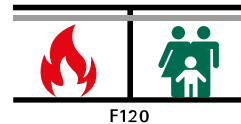
(L 03 90)

high performance chemical anchoring system for cracked concrete and rebar connections



Features and Benefits

- reduced edge and anchor spacing distances
- always correct mixing ratio thanks to the static mixer nozzle
- approved for use with rebars as anchors in non-cracked concrete
- cartridge may be used up over several times (each installation after a break requires new mixing nozzle)
- ETA Option 1 approval for cracked and non-cracked concrete
- A+ VOC emissions class
- ETA TR023 for post-installed rebar connections
- seismic performance category C1 for design of anchorages under seismic action
- tested according to LEED 2009 EQ c4.1, SCAQMD rule 1168 (2005)
- WRAS Material Approval for contact with potable water
- substrate type:
 - cracked concrete
 - non-cracked concrete



F120



Part No.	Code	ETA	LEED	WRAS	VOC+	Seismic	Cont.	Pack 1
6099123	WVSF200	ETA	LEED	WRAS	VOC+	C1	300 ml	12

For more information, please refer to the ETA report.

Complementary

- 515 WIS Extension Pipe
- 516 WIS Brush
- 517 WIS Blow Pump

Complementary

- 518 WIS Dispenser Gun
- 519 WIS Plastic Mesh Sleeve
- 520 WIS Threaded Rod

WIS Extension Pipe

(L 03 105)



Features and Benefits

- fits standard and epoxy nozzles

Part No.	Code	L	Pack 1
6099992	WIS EP	185 mm	12

WIS Brush

(L 03 110)



Features and Benefits

- each brush suitable for cleaning two hole diameters
- hybrid brush (steel and natural bristle)
- Part No. 6099981: single brush for M12 and M16 hole
- Part No. 6099982: single brush for M20 and M24 hole
- Part No. 6099980: single brush for M8 and M10 hole

Part No.	Code	L	For Drill Hole Ø			For	Pack 1
			(mm)	(mm)	(mm)		
6099980	WIS BR M8/10	300 mm	10/12	14	120	M8/M10	1
6099981	WIS BR M12/16	300 mm	14/18	20	120	M12/M16	1
6099982	WIS BR M20/24	300 mm	22/26	29	120	M20/M24	1

WIS Blow Pump

(L03 115)



Features and Benefits

- high blowing capacity

Part No.	Code	Pack 1
6099985	WIS BP	1

WIS Dispenser Gun

(L 03 120)



Features and Benefits

- the 26:1 thrust ratio makes dispensing tools easy to use
- no free-play allows dispensing with precision
- metal backplate improves tool durability
- metal piston pushers extrude cartridges at correct angle
- metal trigger (not aluminum) improves tool durability
- thick 5 mm chamfered push plate with rubber pads improves tool durability

Part No.	Code	For	Pack 1
6099986	WIS DG 300ml	Cartridge 300ml	1
6099988	WIS DG 410ml	Cartridge 410ml	1
6099989	WIS DG 585ml	Cartridge 385/585ml	1

WIS Plastic Mesh Sleeve

16 - 20 mm

(L 03 125)



Features and Benefits

- end cap prevents resin leaking out of the sleeve in overhead installations
- for use with WPSF100 & WVSF200 chemical anchoring systems in hollow substrates
- sleeves for M8, M10 and M12 threaded rods

Part No.	Code	D (mm)	L	For	Pack 1
6097017	WIS PS 16x85	16	85 mm	M8, M10 threaded bar	10
6097018	WIS PS 16x130	16	130 mm	M8, M10 threaded bar	10
6097020	WIS PS 20x85	20	85 mm	M12 threaded bar	10

WIS Threaded Rod

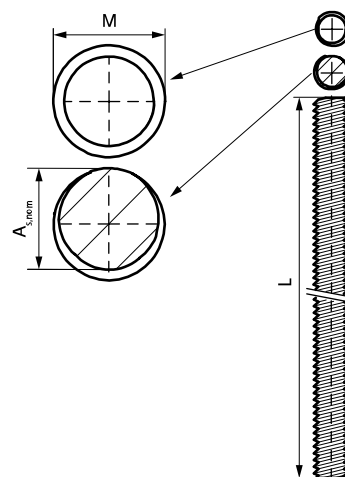
(L 03 130)



Features and Benefits

- according to DIN 976-1
- thread with 60° angle provides best performance
- material: steel, strength class 8.8
- zinc plated

Part No.	Code	Thread (M)	L	A _{s,nom} (mm ²)	F _{a,z} (N)	BndS
63039108	WIS TR M8x1000	M8	1 m	36.6	19,500	50
63039110	WIS TR M10x1000	M10	1 m	58.0	30,900	25
63039112	WIS TR M12x1000	M12	1 m	84.3	45,000	20
63039116	WIS TR M16x1000	M16	1 m	157.0	83,700	20



Complementary

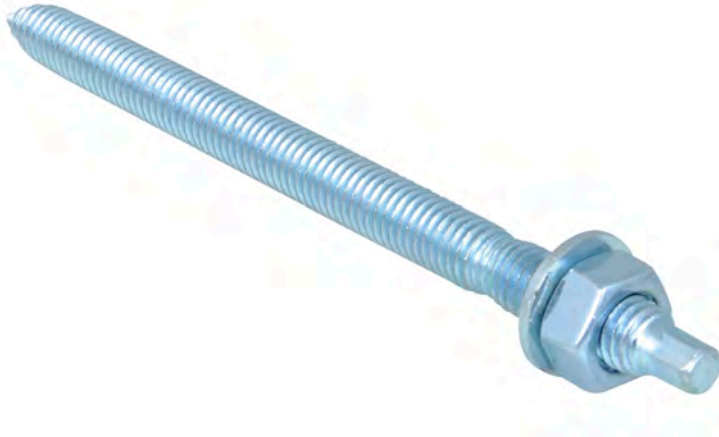
523 WSDS+ 3CE Concrete Drill Bit

Alternative

610 WIS Threaded Rod SSSt

WIS Stud Bolt

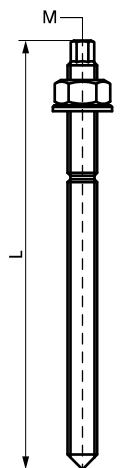
(L 03 140)



Features and Benefits

- pre-assembled nut and washer allow faster installation
- material: steel, strength class 5.8
- zinc plated

Part No.	Code	Thread (M)	L	$A_{s,nom}$ (mm ²)	$F_{a,z}$ (N)	Pack 1	Pack 2
60990811	WIS SB M8x110	M8	110 mm	36.6	12,200	10	160
60991013	WIS SB M10x130	M10	130 mm	58.0	19,300	10	160
60991016	WIS SB M10x160	M10	160 mm	58.0	19,300	10	80
60991219	WIS SB M12x190	M12	190 mm	84.3	28,100	10	80
60991622	WIS SB M16x220	M16	220 mm	157.0	52,300	10	80



Complementary

523 WSDS+ 3CE Concrete Drill Bit

WDI1 SD Stop Drill Bit

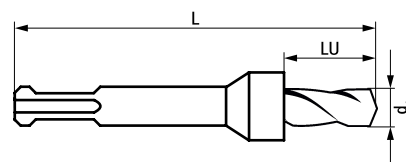
(L 03 145)



Features and Benefits

- three cutting edges increase drilling speed
- designed for drilling all concrete at controlled depth
- particularly suitable for high volume installations of anchors such as WDI1
- carbide tip with precision centering point resists overheating and provides trajectory control

Part No.	Code	L	LU (mm)	d ₀ (mm)	For	Pack 1	Pack 2
6951010	WDI1 SD 10x110/S	110 mm	32	10	WDI1 M8	10	150
6951012	WDI1 SD 12x130/S	130 mm	42	12	WDI1 M10	10	150



WSDS+ 3CE Concrete Drill Bit

(L 03 150)



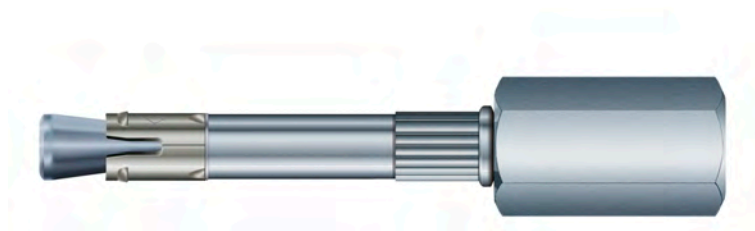
Features and Benefits

- three cutting edges increase drilling speed
- designed for drilling all concrete
- drills through rebar without getting stuck
- carbide tip with precision centering point resists overheating and provides trajectory control
- three flute zone for fast dust evacuation, acceleration, and extraction

Part No.	Code	L	LU (mm)	d ₀ (mm)	Pack 1	Pack 2
69520611	WSDS+6x110/3CE	110 mm	50	6	1	250
69520616	WSDS+6x160/3CE	160 mm	100	6	1	200
69520621	WSDS+6x210/3CE	210 mm	150	6	1	150
69520816	WSDS+8x160/3CE	160 mm	100	8	1	200
69520821	WSDS+8x210/3CE	210 mm	150	8	1	150
69521021	WSDS+10x210/3CE	210 mm	150	10	1	100
69521026	WSDS+10x260/3CE	260 mm	200	10	1	100
69521216	WSDS+12x160/3CE	160 mm	100	12	1	150
69521221	WSDS+12x210/3CE	210 mm	150	12	1	100
69521226	WSDS+12x260/3CE	260 mm	200	12	1	100
69521621	WSDS+16x210/3CE	210 mm	150	16	1	100
69521626	WSDS+16x260/3CE	260 mm	200	16	1	100

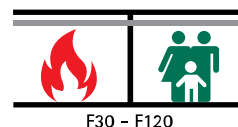
WCA1 Ceiling Anchor

(L 05 18)



Features and Benefits

- for suspending ceilings and fixing pipes and cable trays on walls and ceilings
- fast and simple mounting
- up to 40 seconds faster mounting compared to conventional anchors
- one product for two ports: M8 / M10 threaded stages
- nail anchor with double thread
- combined with double thread M8/10 with M8 and M10 threaded rods
- nail anchor expands automatically under load, and anchored in the borehole
- reduced anchorage depth of only 25 mm and drill hole depth of 35 mm
- no concrete reinforcement hits
- very small edge and axial spacings
- European Technical Approval for multiple fixings in cracked concrete



Part No.	L	LU (mm)	HØ (mm)	h ₀ (mm)	For	F _{a,z} (N)	F _{a,z} (F30 - (N))	F _{a,x} (N)	CE	ETA	Pack 1	Pack 2
6096300800	58 mm	25	6	35	M8 + M10 Threaded parts	2,140	600	7,300	CE	ETA	100	900

Max. allowed load (F_{a,z}) refers to a concrete grade of C20 / 25th. In case of fire (F60 - F120) values will significantly decrease. For detailed information please see ETA-11/0240th.

BIS HK

fixing to concrete, brick

(L 05 60)



Features and Benefits

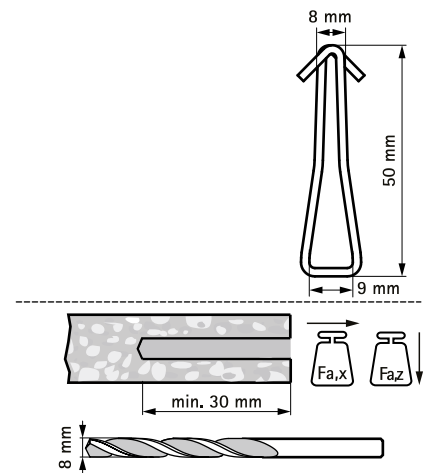
- for fixing of steel wire, suspension band or chain in concrete and solid stone
- for suspension of static loads such as air ducts, lowered ceilings, etc. to concrete
- also suitable for outside use
- drill 8 mm hole and hammer in HK wire anchor
- HK: for cables / BIS DobyGrip
- material: stainless steel 1.4401 (AISI 316)
- better fire resistance than plastic plugs
- tested by CSTB
- test report EPOD/06-05 (HK)



HK: Report EPOD/-6-05

Part No.	Model	F _{a,z} (N)	F _{a,x} (N)	CSTB	Pack 1	Pack 2
61073134	HK, without cap	800	800	CSTB	200	1,200
61073224	HK, with cap	800	800	CSTB	100	600

*Max. allowed load (Fa) in concrete (350 kg/m³), drill hole Ø 8 mm.
Safety margin 1:4.*



Complementary

- 401 BIS Suspension Band - Plated
- 463 BIS Chain (DIN 5685)
- 482 BIS DobyGrip Loop

Complementary

- 484 BIS DobyGrip Snap End Hook
- 485 BIS DobyGrip Wire Reel

WUP Uni Plug

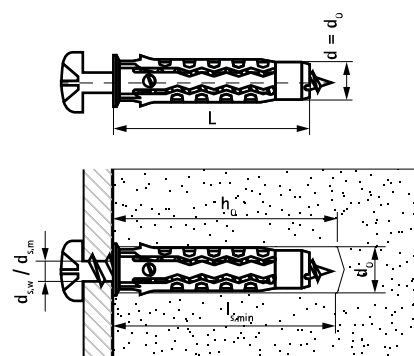
(L 07 05)

standard universal anchor for all types of substrates



Features and Benefits

- high load capacity
- can be used with wood screws, chipboard screws and metric bolts
- suitable for variety of substrates
- easily slides into holes
- does not slip past collar in deep holes
- does not expand prematurely
- resists rotation in holes
- Application:
 - shelves
 - wall-mounted cabinets
 - sanitary fixings
 - HVAC and plumbing fixings
- material: high quality PA6 polyamide
- substrate type:
 - lightweight concrete
 - concrete
 - masonry
 - hollow masonry
 - rock
 - sand-lime bricks
 - natural stone
 - gypsum



Part No.	Code	L	d ₀	h ₀	d _{s,w}	d _{s,m}	l _{s,min}	Rec. Tension Load Solid Brick	Rec. Tension Load Perforate d Brick	Rec. Tension Load C20/25 Concrete	Rec. Tension Load Lightweight Concrete	Rec. Tension Load Sandstone	Pack 1	Pack 2
								(kN)	(kN)	(kN)	(kN)	(kN)		
6100706	WUP 6x30	30 mm	6	40	3.5 - 5.0	M4	34	0.90	0.20	0.45	0.12	0.70	100	3,600
6100708	WUP 8x40	40 mm	8	50	4.5 - 6.0	-	44	1.00	0.40	1.15	0.19	1.00	100	3,600
6100710	WUP 10x50	50 mm	10	70	6.0 - 8.0	-	54	1.10	0.45	1.90	0.30	1.80	50	1,800
6100712	WUP 12x60	60 mm	12	70	8.0 - 10.0	-	64	1.50	0.50	2.70	0.40	2.10	25	900

Given recommended tension loads have been reached using a maximum diameter wood screw and include a safety factor of 5.

WEP Expansion Plug

(L 07 20)

economical expansion anchor for all types of substrates

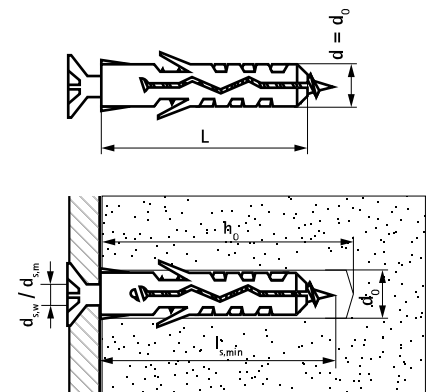


Features and Benefits

- can be used with wood screws, chipboard screws and metric bolts
- suitable for solid substrates
- does not expand prematurely
- resists rotation in holes
- Application:
 - shelves
 - wall-mounted cabinets
 - sanitary fixings
 - HVAC and plumbing fixings
- material: high quality PA6 polyamide
- substrate type:
 - lightweight concrete
 - concrete
 - masonry
 - hollow masonry
 - rock
 - sand-lime bricks
 - natural stone
 - gypsum

Part No.	Code	L	d ₀	h ₀	d _{s,w}	d _{s,m}	l _{s,min}	Rec. Tension Load Solid Brick	Rec. Tension Load C20/25 Concrete	Rec. Tension Load Lightweight Concrete	Pack 1	Pack 2
								(kN)	(kN)	(kN)		
61001005	WEP 5x25	25 mm	5	35	2.6 - 4.0	M3	29	0.20	0.35	0.04	100	3,600
61001006	WEP 6x30	30 mm	6	40	3.5 - 5.0	M4	34	0.40	0.60	0.06	100	3,600
61001008	WEP 8x40	40 mm	8	55	4.5 - 6.0	M5	44	0.60	0.85	0.09	100	3,600
61001010	WEP 10x50	50 mm	10	65	6.0 - 8.0	M6	54	0.80	1.40	0.20	50	1,800
61001012	WEP 12x60	60 mm	12	80	8.0 - 10.0	M8	64	1.00	1.80	0.40	25	900
61001014	WEP 14x70	70 mm	14	90	10.0 - 12.0	M10	74	1.30	2.60	0.50	20	720

Given recommended tension loads have been reached using a maximum diameter wood screw and include a safety factor of 5.



WNP Nail Plug

easy to install hammer-set anchor

(L 07 15)

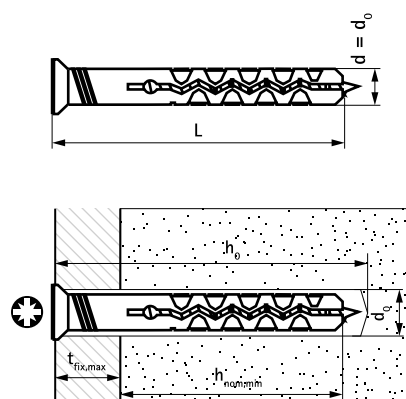


Features and Benefits

- quick and easy to install
- pre-assembled
- through-fixing
- long expansion zone provides stability
- can be adjusted or dismantled
- Application:
 - skirtings
 - cable clamps
 - profiles
 - cabinets
- material: steel
- material: high quality PA6 polyamide
- zinc plated
- substrate type:
 - concrete
 - masonry
 - hollow masonry
 - rock
 - sand-lime bricks
 - natural stone

Part No.	Code	L	d ₀	h ₀	h _{nom,m} in	t _{fix,max}	Drive	Rec. Tensi on Load Solid Brick	Rec. Tensi on Load C20/ 25 Concr ete	Rec. Tensi on Load Sands tone	Pack 1	Pack 2
			(mm)	(mm)	(mm)	(mm)		(kN)	(kN)	(kN)		
62230604	WNP 6x40	40 mm	6	50	30	10	PZ2	0.25	0.30	0.20	100	1,800
62230606	WNP 6x60	60 mm	6	70	30	30	PZ2	0.25	0.30	0.20	100	1,200
62230806	WNP 8x60	60 mm	8	70	40	20	PZ2	0.30	0.40	0.25	100	900
62230808	WNP 8x80	80 mm	8	90	40	40	PZ2	0.30	0.40	0.25	100	600
62230810	WNP 8x100	100 mm	8	110	40	60	PZ2	0.30	0.40	0.25	100	600

Given recommended loads include a safety factor of 5.



WPF Plasterboard Fixings

(L 07 22)

A classic hammer-in fixing for plasterboard

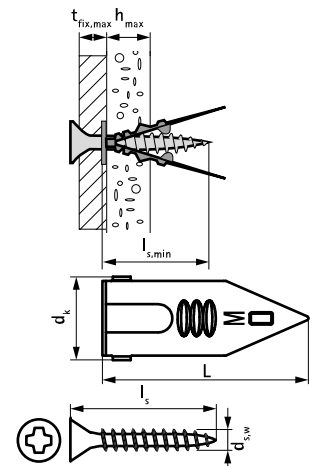


Features and Benefits

- quick and easy to install
- central thread guide provides optimum screw positioning
- does not require drilling
- sharp tip allows precise installation
- for use with \varnothing 3.5-5.0 mm wood or chipboard screws
- Application:
 - interior decorations
 - pictures
 - lamps
 - electrical fittings
- material: steel
- zinc plated
- substrate type:
 - plasterboard

Part No.	Code	Model	L	d _{s,w}	l _s	l _{s,min}	h _{max}	t _{fix,max}	Drive	Rec. Tension Load Plasterboard (h=1 2.5m) (kN)	Pack 1	Pack 2
				(mm)	(mm)	(mm)	(mm)	(mm)				
6110063	WPF 12x30	Screw excluded	30 mm	3.5 - 5.0	-	27	12.5	-	-	0.102*	200	4,800
6110092	WPF 12x30	Screw excluded	30 mm	3.5 - 5.0	-	27	12.5	-	-	0.102*	3,000	-
6110234	WPF 12x30 /4x30	Screw included	30 mm	4.0	30	27	12.5	3	PZ2	0.102*	25	3,750
6110263	WPF 12x30 /4x30	Screw included	30 mm	4.0	30	27	12.5	3	PZ2	0.102*	200	4,800
6110334	WPF 12x30 /4x50	Screw included	30 mm	4.0	50	27	12.5	23	PZ2	0.102*	25	3,750

* Recommended loads are for tension, have been reached using a 4.0 mm diameter wood screw and include a safety factor of 2.



WCP Cavity Plug

metal anchor with screw for cavity walls

(L 07 25)

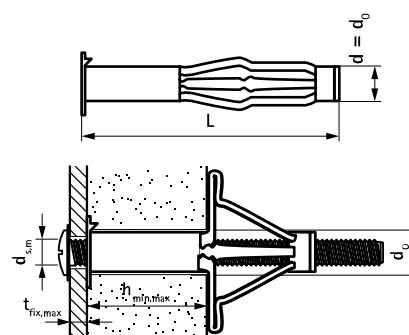


Features and Benefits

- high load capacity and security
- usable with various screwdriver bit types
- Application:
 - shelves
 - wall-mounted cabinets
 - sanitary fixings
 - HVAC and plumbing fixings
- material: steel
- zinc plated
- substrate type:
 - hollow masonry
 - chipboard
 - plasterboard

Part No.	Code	L	d ₀	d _{s,m}	h _{min,max}	t _{fix,max}	Drive	Rec. Tension Load Vertically Perforated Brick (Hz 12)	Rec. Tension Load Cement Fiber board (h=1 2mm)	Rec. Tension Load Chip board (h=1 3mm)	Rec. Tension Load Plasterboard (h=1 2.5m)	Pack 1	Pack 2
		(mm)	(mm)	(mm)	(mm)	(mm)		(kN)	(kN)	(kN)	(kN)		
6105400	WCP 4x35	35 mm	8	M4	4 - 9	16	Phillips	-	0.35	0.20	0.15	100	1,200
6105501	WCP 5x37	37 mm	10	M5	5 - 13	20	Phillips	-	0.40	0.25	0.18	100	1,200
6105502	WCP 5x50	50 mm	10	M5	5 - 18	26	Phillips	-	0.40	0.25	0.18	100	900
6105601	WCP 6x37	37 mm	12	M6	4 - 13	16	Phillips	0.70	0.42	0.28	0.20	100	900
6105603	WCP 6x63	63 mm	12	M6	16 - 32	28	Phillips	0.70	0.42	0.28	0.20	100	300

Given recommended loads include a safety factor of 3.



WRX Metal Plug

metal self-drilling anchor

(L 07 30)

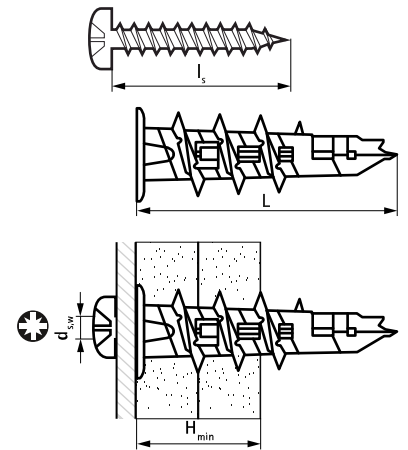


Features and Benefits

- self-drilling
- back twist lock allows screw removal without movement of the plug
- sharp tip allows accurate positioning and installation
- Application:
 - interior decorations
 - electrical fittings
- material: die-cast zinc
- substrate type:
 - lightweight concrete
 - gypsum
 - chipboard
 - plasterboard

Part No.	Code	L	d _{s,w}	l _s	h _{min}	Drive	Rec. Tension Load Chipboard (6mm pre drilling)	Rec. Tension Load Lightweight Concrete	Rec. Tension Load Gypsum Fiberboard	Rec. Tension Load Plasterboard (h=12.5mm)	Pack 1	Pack 2
6229903	WRX MP 14x32	32 mm	4.5 (mm)	30 (mm)	12.5 (mm)	PZ2	0.45 (kN)	0.10 (kN)	0.15 (kN)	0.10 (kN)	100	2,400

Given recommended loads include a safety factor of 3.



WRX Plastic Plug

plastic self-drilling anchor

(L 07 35)

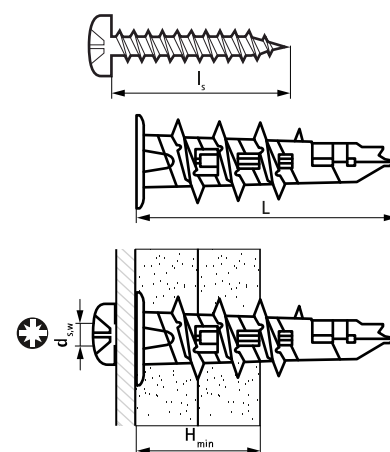


Features and Benefits

- self-drilling
- back twist lock allows screw removal without movement of the plug
- sharp tip allows accurate positioning and installation
- Application:
 - interior decorations
 - electrical fittings
- material: PA (polyamide) with fiber-glass reinforcement
- substrate type:
 - plasterboard

Part No.	Code	L	d _{s,w}	l _s	h _{min}	Drive	Rec. Tension Load Plasterboard (h=12.5mm) (kN)	Pack 1	Pack 2
6229904	WRX PP 14x32	32 mm	4.5 <small>(mm)</small>	30 <small>(mm)</small>	12.5 <small>(mm)</small>	PZ2	0.09	100	2,400

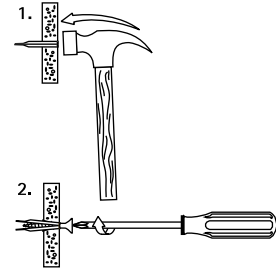
Given recommended loads include a safety factor of 3.



BIS XL

fixing to double plaster board > 13 mm

(L 10 12)

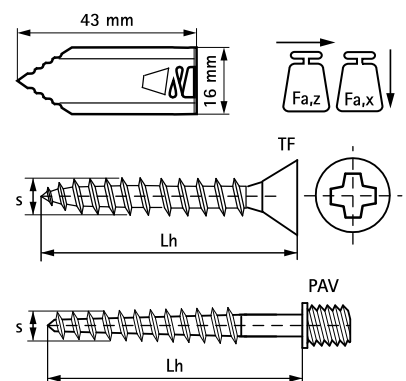


Features and Benefits

- hammer-in plug
- for heavy applications
 - applications: pipe fixings, radiators, heaters, airco-units, etc.
- for chipboard screw (Ø 4.0 - 5.0 mm, min. length 45 mm)
- easy and quick to use
 - no drill
 - plug anchors itself when tightening the screw
 - does not rotate on screwing
- material: steel
- better fire resistance than plastic plugs
- zinc plated

Part No.	Model	s (mm)	Lh (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
6114121	Incl. screws (TF)	4.0	50	250	700	12	120
6114143	Incl. screws (TF)	4.0	50	250	700	100	600
6114031	Without Screws	-	-	250	700	50	250
6114053	Without Screws	-	-	250	700	150	900
6114092	Without Screws	-	-	250	700	-	bulk

Max. allowed load in plasterboard (safety margin 1:2).



BIS TWIST

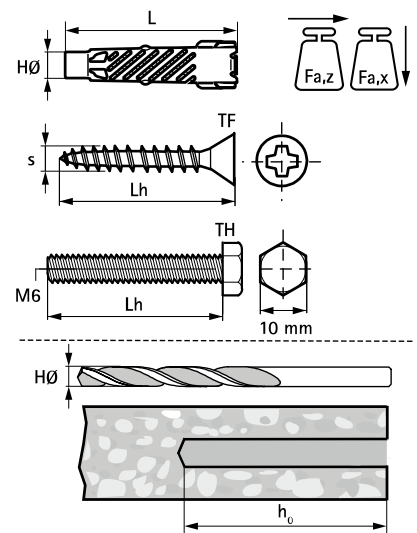
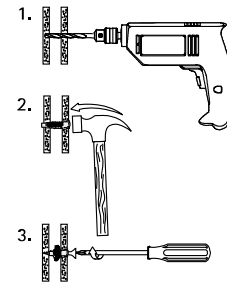
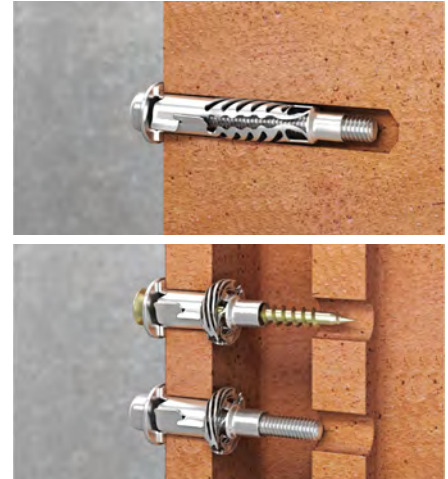
fixing to concrete, brick

(L 10 20)



Features and Benefits

- easy and quick to use
 - plug anchors itself when tightening the screw
 - does not rotate on screwing
- for (middle)heavy fixings in solid or hollow materials
- pre-drill hole \varnothing 8 mm or 10 mm and insert plug
- stays in position, when screw is removed
- with flat head
- with collar to prevent plug from falling into hollow space
- suitable for metric thread and chipboard screws
- expands in solid materials, strip up in hollow materials
- $H\varnothing$ 10mm: torque is max. 7.5 Nm
- material: steel
- better fire resistance than plastic plugs
- surface treatment: zinc plated, white passivated



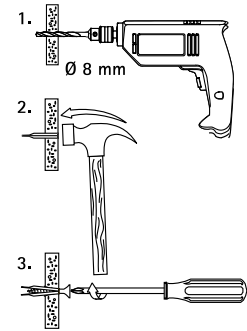
Part No.	Model	L	s	Lh	HØ	hØ	T _(max.)	F _{a,z}	F _{a,x}	Pack 1	Pack 2
		(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)	(N)	(N)		
6119141	Incl. screws (TF) and washers	45 mm	5.0	60	8	55	7.5	570	1,130	12	120
6119641	Incl. screws (TF) and washers	50 mm	6.0	70	10	65	7.5	570	1,130	10	100
6119653	Incl. screws (TF) and washers	50 mm	6.0	70	10	65	7.5	570	1,130	50	300
6119731	Incl. bolts (TH) and washers	50 mm	6.0	60	10	60	7.5	600	1,520	10	100
6119753	Incl. bolts (TH) and washers	50 mm	6.0	60	10	60	7.5	600	1,520	50	300

Max. allowed load (Fa) in brick (safety margin 1:2).
Other materials on demand.

BIS CP

fixing to aerated concrete, plaster block

(L 10 24)

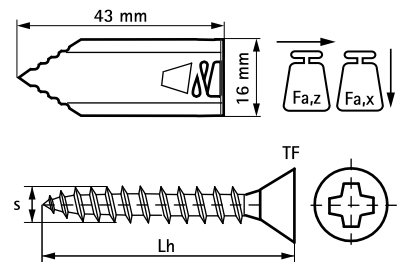


Features and Benefits

- hammer-in plug
- for medium applications into plaster block or aerated concrete block
- for chipboard screw (Ø 4.0 - 5.0 mm, min. length 45 mm)
- easy and quick to use
 - plug anchors itself when tightening the screw
 - does not rotate on screwing
- pre-drill hole Ø 8 mm to avoid breaking of material during screwing
- material: steel
- better fire resistance than plastic plugs
- surface treatment: zinc plated, colored

Part No.	Model	s (mm)	Lh (mm)	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
6117153	Incl. screws (TF)	4.0	50	400	750	100	600
6117063	Without Screws	-	-	400	750	150	900

Max. allowed load in plaster block (safety margin 1:2).



BIS ARAYPLAST

fixing to concrete, brick

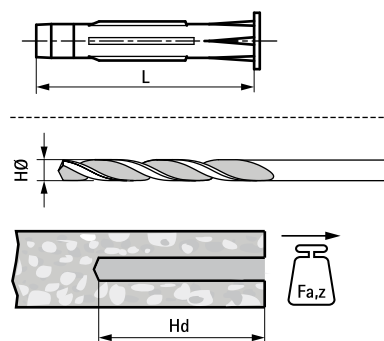
(L 10 68)



Features and Benefits

- for light duty fixings to e.g. brick (hollow or solid), block wall (hollow), etc.
- material: PE (polyethylene)
- with collar to prevent plug from falling into hollow space

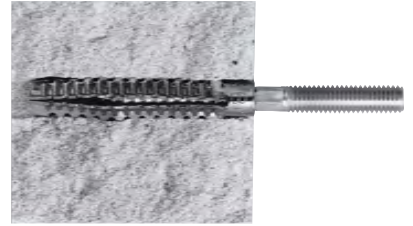
Part No.	L	HØ (mm)	Pack 1	Pack 2
6118331	50 mm	8	40	800
6118371	50 mm	8	600	6,000
6118411	60 mm	10	15	150
6118461	60 mm	10	400	3,200



BIS Star Plug

fixing to aerated concrete, plaster block

(L 10 80)



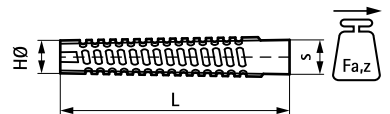
Features and Benefits

- for a fire safe fixing of pipes
- metal plug for wood and chipboard screws
- good grip because of external design (high pull-out resistance)
- insertion of hanger bolts is facilitated by the design of the internal shape (easy screw in)
- does not melt or burn with high temperature (important with gas pipes)
- dimension 6x32 mm and 8x38 mm can be hammered into low resistance aerated concrete without pre-drilling
- material: steel
- zinc plated, yellow passivated
- Part No. 6103860: zinc plated, blue passivated
- tested for fire safety
- tested according to DIN EN 1363-1: 1999-10



Part No.	L	s (mm)	HØ (mm)	Fa,z (N)	Pack 1	Pack 2
6103632	32 mm	6.0	7-8	60	100	500
6103838	38 mm	8.0	9-11	290	100	500
6103860	60 mm	8.0	9-11	490	100	500
6103960	60 mm	10.0	10-12	530	100	500

Max. allowed load ($F_{a,z}$) in aerated concrete (safety margin 1:3).
Exact drill hole diameter depends on the strength and the hardness of the building material.



BIS Hammer-in Shoulder Stud

(L 15 05)

fixing to wall or ceiling

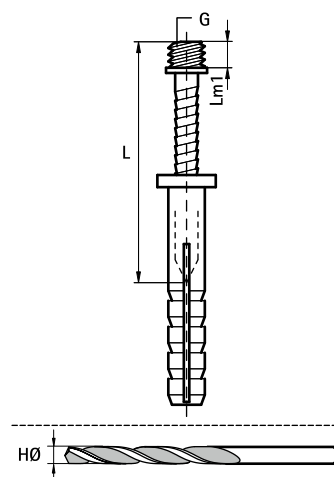


Features and Benefits

- hammer-in instead of screw-in
- impact head to prevent head damage
- plug with shoulder
- material: hammer-in stud made of steel; plug made of PA (polyamide), grey
- zinc plated, passivated

Part No.	G	L	Lm1 (mm)	HØ (mm)	Pack 1	Pack 2
6373640	M6	40 mm	6.0	6	100	1,200
6373740	M7B	40 mm	6.0	6	100	1,200
6373750	M7B	50 mm	6.3	8	100	1,200
6373850	M8	50 mm	6.0	8	100	1,200

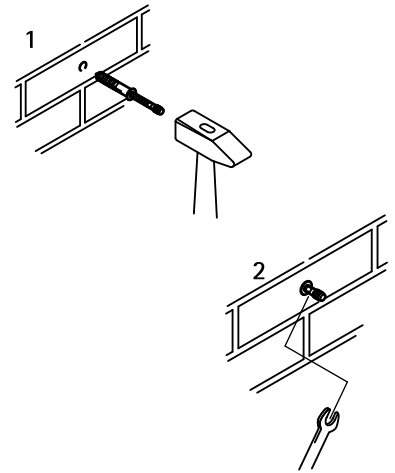
M7B: pitch = M7 x 1 mm.



BIS Hammer-in Stud

fixing to wall or ceiling

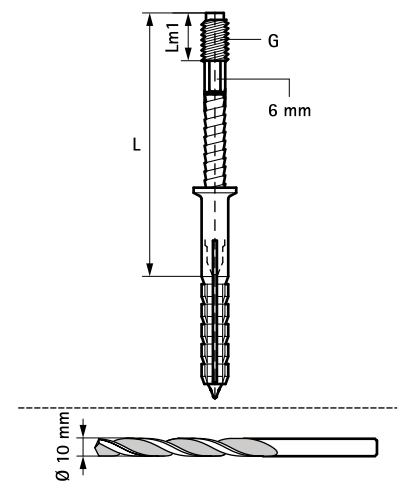
(L 15 10)



Features and Benefits

- impact head to prevent head damage
- with hexagon for fine setting
- plug with shoulder
- material: hammer-in stud made of steel;
- plug made of PA (polyamide), grey
- zinc plated

Part No.	G	L	Lm1 (mm)	Pack 1	Pack 2
6223808	M8	80 mm	14	100	500
6223810	M8	100 mm	34	100	500
6223812	M8	120 mm	34	100	500
6223815	M8	150 mm	50	100	500



BIS Nail Shoulder Stud

(L 15 20)

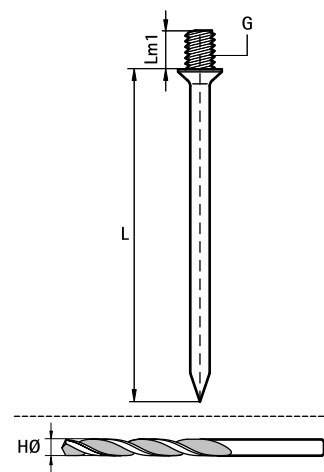
fixing to wall or ceiling



Features and Benefits

- material: tempered steel
- zinc plated

Part No.	G	L	Lm1 (mm)	HØ (mm)	Pack 1	Pack 2
6333618	M6	18 mm	8	4	100	3,000
6333625	M6	25 mm	8	4	100	3,000
6333630	M6	30 mm	8	4	100	2,000
6333640	M6	40 mm	8	4	100	2,000
6333655	M6	55 mm	8	4	100	1,800



M BIS Stainless Steel Pipe Support Fixings



BIS Clamps with Lining
 BIS Bifix® 1301 Stainless Steel (M8, M10) 544



BIS Clamps
 BIS Bifix® 300 Stainless Steel (M8, M10) 545



BIS Industrial Clamps with Lining
 Stainless Steel Heavy Duty Clamp with Lining (M12, M16) 546



BIS Industrial Clamps
 Stainless Steel Heavy Duty Clamp (M12, M16) 547
 BIS Stainless Steel U-Clamp 548



BIS Suspension Band
 BIS Stainless Steel Suspension Band 549



BIS Accessories for PVC Pipe Clamps
 BIS Stainless Steel Expansion Joint Bracket 550



BIS Clamps for Plastic Pipe
 BIS Bifix® 415 Stainless Steel 551
 BIS 434 Stainless Steel Clamp for PE-Pipe 552



BIS Clamps with Lining for Spiral Ducts
 BIS Clamp with Lining for Spiral Ducts (M8) 553



BIS Fixing Points and Sliding Devices
 BIS Stainless Steel Fixpoint Console FPC 'Medium' 554
 BIS Stainless Steel Expansion Device (M10) 555
 BIS Stainless Steel Expansion Guide Assembly 556



BIS RapidRail® – Fixing Rail
 BIS RapidRail® Stainless Steel Fixing Rail 557



BIS RapidRail® – Cantilever Arms
 BIS RapidRail® Stainless Steel Cantilever Arm 558



BIS RapidRail® – Wall Plates
 BIS RapidRail® Stainless Steel Wall Plate 559



BIS Rail Accessories for Pipe Fixing
 BIS RapidRail® Stainless Steel Slide Nut 560
 BIS Stainless Steel Slide Nut 561
 BIS RapidRail® Stainless Steel Hammerfix 562
 BIS Stainless Steel Washer (Flat) 563
 BIS Stainless Steel Washer (Flat) 564
 BIS Stainless Steel Washer (U-shaped) 565

M BIS Stainless Steel Pipe Support Fixings



BIS Rail Props
BIS Stainless Steel Rail Prop

566



BIS Strut Wall Plates
BIS Strut Stainless Steel T-shape Base Plate **576**
BIS Strut Stainless Steel Wall Plate (Hinged) **577**
BIS Strut Stainless Steel Adjustable Support **578**



BIS Rail Connectors
BIS Stainless Steel Rail Connector **567**
BIS RapidRail® Stainless Steel Linear Connector **568**

567

568



BIS Strut Rail Accessories for Pipe Fixing
BIS Strut Stainless Steel Slide Nut **579**
BIS Strut Stainless Steel Square Slide Nut **580**
BIS Strut Stainless Steel Tee-Bolt **581**
BIS Strut Stainless Steel Washer (Flat) **582**
BIS Strut Stainless Steel Washer (U-shaped) **583**



BIS Rail Beam Clamps
BIS RapidRail® Stainless Steel Beam Clamp

569



BIS RapidStrut® - Rail
BIS RapidStrut® Stainless Steel Fixing Rail **570**
BIS RapidStrut® Stainless Steel Fixing Rail Double **571**

570

571



BIS Strut Connectors
BIS Strut Stainless Steel Connector 90° Rigid **584**
BIS Strut Stainless Steel Angle Connector 90° **585**
BIS Strut Stainless Steel Angle Connector 135° **586**
BIS Strut Stainless Steel Connector 90° / 2D **587**
BIS Strut Stainless Steel Cross Connector **588**
BIS Strut Stainless Steel T-Connector **589**
BIS Strut Stainless Steel U-Connector **590**
BIS Strut Stainless Steel Z-Connector **591**



BIS RapidStrut® - Cantilever Arms
BIS RapidStrut® Stainless Steel Cantilever Arm

572



BIS RapidStrut® - Base Plates
BIS RapidStrut® Stainless Steel Base Plate G2

573



BIS Strut Beam Clamps
BIS Strut Stainless Steel Beam Clamp **592**
BIS Strut Stainless Steel Beam Clamp **593**
BIS Stainless Steel Beam Clamp Model O V2A **594**



BIS RapidStrut® - Rail Accessories for Pipe Fixing
BIS RapidStrut® Stainless Steel Slide Nut G2 **574**
BIS RapidStrut® Stainless Steel Slide Nut with Tabs **575**

574

575



BIS Wall Plates
BIS Stainless Steel Wall Plate Resistance Welded **595**
BIS Stainless Steel Wall Plate CO₂ Welded **596**
BIS Stainless Steel Wall Plate with Welded Stud Bolt 672 **597**

M BIS Stainless Steel Pipe Support Fixings



BIS Roofing Sheet Hangers

BIS Stainless Steel Roofing Sheet Hanger 598



BIS Hanger Bolts

BIS Stainless Steel Hanger Bolt 599



BIS Screws, Bolts, Nuts

BIS Stainless Steel Hexagon Head Screw 600

BIS Stainless Steel Hexagon Nut 601



BIS Chains, S-Hooks

BIS Stainless Steel Chain (DIN 5685-1) 602



BIS Threaded Rods, Thread Connectors

BIS Stainless Steel Stud Bolt 603

BIS Stainless Steel Threaded Rod 604

BIS Stainless Steel Stud Connector 605

BIS Stainless Steel Stud Connector 606

BIS Stainless Steel Thread Adaptor 607



BIS Fastenings

WDI1 Drop-in Anchor SSt 608

WTB1 Throughbolt Anchor SSt 609

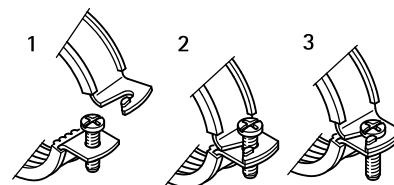
WIS Threaded Rod SSt 610

BIS Bifix[®] 1301 Stainless Steel

(M 05 05)

for stainless steel pipes Ø 11 - 250 mm

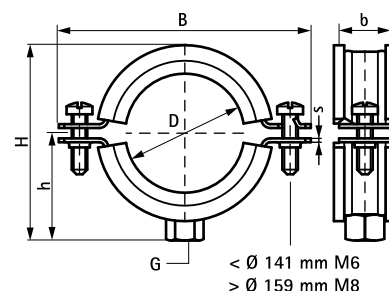
M8 - M10



Features and Benefits

- two-screw clamp
- with quick locking system
- material: stainless steel 1.4404 (AISI 316L)
- sound insulating lining according DIN 4109
- noise insulating lining, EPDM rubber, black
- age resistant lining

Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
3117015	11 - 14	1/4	8	M8	58	33	20	20 x 1.25	900	50
3117018	15 - 19	3/8	10	M8	64	39	23	20 x 1.25	900	50
3117023	20 - 23	1/2	15	M8	67	42	24	20 x 1.25	900	50
3117029	25 - 28	3/4	20	M8	72	47	27	20 x 1.25	900	50
3117035	31 - 35	1	25	M8	80	55	31	20 x 1.25	900	50
3117043	40 - 43	1 1/4	32	M8	87	62	35	20 x 1.25	900	50
3117049	47 - 51	1 1/2	40	M8	96	71	39	20 x 1.25	900	50
3117056	52 - 56	-	-	M8	100	75	41	20 x 1.25	900	50
3117063	57 - 64	2	50	M8	108	83	45	20 x 1.25	900	50
3117067	64 - 67	-	-	M8	109	87	46	20 x 2.00	1,350	25
3117076	70 - 76	2 1/2	65	M8	118	96	51	20 x 2.00	1,350	25
3117091	86 - 91	3	80	M8	130	108	57	20 x 2.00	1,350	25
3117106	100 - 106	-	-	M8	154	132	69	20 x 2.00	1,350	25
3117116	108 - 116	4	100	M8	158	136	71	20 x 2.50	1,710	25
3127018	15 - 19	3/8	10	M10	62	38	23	20 x 1.25	900	50
3127023	20 - 23	1/2	15	M10	64	43	25	20 x 1.25	900	50
3127029	25 - 28	3/4	20	M10	70	47	27	20 x 1.25	900	50
3127035	31 - 35	1	25	M10	78	55	31	20 x 1.25	900	50
3127043	40 - 43	1 1/4	32	M10	85	63	35	20 x 1.25	900	50
3127049	47 - 51	1 1/2	40	M10	97	72	39	20 x 1.25	900	50
3127056	52 - 56	-	-	M10	97	75	41	20 x 1.25	900	50
3127063	57 - 64	2	50	M10	102	82	44	20 x 1.25	900	50
3127067	64 - 67	-	-	M10	109	89	48	20 x 2.00	1,350	25
3127076	70 - 76	2 1/2	65	M10	118	98	52	20 x 2.00	1,350	25
3127085	79 - 85	-	-	M10	124	104	55	20 x 2.00	1,350	25
3127091	86 - 91	3	80	M10	130	109	58	20 x 2.00	1,350	25
3127106	100 - 106	-	-	M10	154	135	72	20 x 2.00	1,350	25
3127116	108 - 116	4	100	M10	158	137	72	20 x 2.50	1,710	25
3127132	124 - 132	-	-	M10	170	149	78	20 x 2.50	1,710	25
3127141	133 - 141	5	125	M10	179	159	83	20 x 2.50	1,710	25
3127168	159 - 168	6	150	M10	233	195	101	25 x 2.50	1,710	15
3127210	200 - 210	-	-	M10	273	235	120	25 x 2.50	1,710	15
3127219	210 - 219	8	200	M10	285	247	126	25 x 2.50	1,710	10
3127225	219 - 225	-	-	M10	284	247	126	25 x 2.50	1,710	10
3127250	244 - 250	-	-	M10	317	279	142	25 x 2.50	1,710	10



Complementary

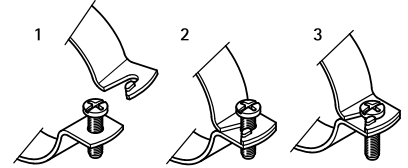
- 557 BIS RapidRail[®] Stainless Steel Fixing Rail
- 570 BIS RapidStrut[®] Stainless Steel Fixing Rail
- 599 BIS Stainless Steel Hanger Bolt

BIS Bifix® 300 Stainless Steel

(M 10 05)

for stainless steel pipes Ø 15 - 219 mm

M8 - M10



Features and Benefits

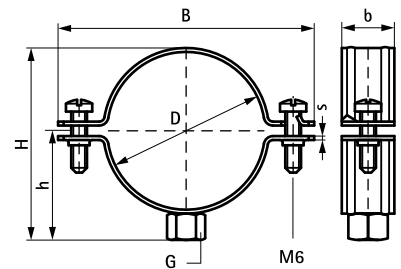
- two-screw clamp
- material: stainless steel 1.4404 (AISI 316L)
- with quick locking system



Part No.	D (mm)	D (")	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	RAL	Pack 1
3017017	15 - 19	3/8	10	M8	56	31	19	20 x 1.25	1,000	-	50
3017022	20 - 22	1/2	15	M8	58	33	20	20 x 1.25	1,000	-	50
3017030	25 - 28	3/4	20	M8	64	39	23	20 x 1.25	1,000	-	50
3017034	31 - 35	1	25	M8	72	47	27	20 x 1.25	1,000	-	50
3017042	40 - 43	1 1/4	32	M8	80	54	31	20 x 1.25	1,000	-	50
3017051	47 - 51	1 1/2	40	M8	87	62	35	20 x 1.25	1,000	-	50
3017060	54 - 60	-	-	M8	96	71	39	20 x 1.25	1,000	-	50
3017076	72 - 76	-	-	M8	109	86	46	20 x 2.00	1,500	RAL ¹	25
3017089	85 - 89	3	80	M8	124	101	54	20 x 2.00	1,500	RAL ¹	25
3017118	110 - 118	4	100	M8	154	131	69	20 x 2.50	1,900	RAL ¹	25
3027068	62 - 68	-	-	M10	102	80	44	20 x 2.00	1,500	RAL ¹	50
3027076	72 - 76	-	-	M10	109	87	48	20 x 2.00	1,500	RAL ¹	25
3027085	79 - 85	-	-	M10	118	96	52	20 x 2.00	1,500	RAL ¹	25
3027089	85 - 89	3	80	M10	124	102	55	20 x 2.00	1,500	RAL ¹	25
3027105	100 - 105	-	-	M10	139	117	62	20 x 2.00	1,500	RAL ¹	25
3027111	106 - 111	-	-	M10	146	124	66	20 x 2.50	1,900	RAL ¹	25
3027118	110 - 118	4	100	M10	154	132	70	20 x 2.50	1,900	RAL ¹	25
3027127	122 - 127	-	-	M10	163	140	74	20 x 2.50	1,900	RAL ¹	25
3027134	129 - 134	-	-	M10	170	148	78	20 x 2.50	1,900	RAL ¹	25
3027144	139 - 144	5	125	M10	179	157	83	20 x 2.50	1,900	RAL ¹	25
3027155	150 - 155	-	-	M10	192	172	91	20 x 2.50	1,900	RAL ¹	25
3027162	157 - 162	-	-	M10	196	174	91	20 x 2.50	1,900	RAL ¹	25
3027169	164 - 169	6	150	M10	203	181	95	20 x 2.50	1,900	RAL ¹	25
3027200	193 - 200	-	-	M10	256	216	112	25 x 2.50	1,900	RAL ¹	15
3027219	212 - 219	8	200	M10	273	233	121	25 x 2.50	1,900	RAL ¹	15

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/B.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.



Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 599 BIS Stainless Steel Hanger Bolt

Alternative

- 544 BIS Bifix® 1301 Stainless Steel

Stainless Steel Heavy Duty Clamp with Lining

(M 11 05)

72 - 325 mm

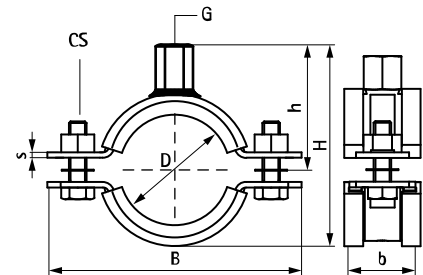
M12 - M16



Features and Benefits

- two-part clamp with two locking bolts
- heavy design
- with CO₂ welded connection nut
- material: stainless steel 1.4401 (A4) - EN 10088, AISI 316
- noise insulating lining, EPDM rubber, black
- also available on request: sound insulating lining of silicone rubber (reddish brown), heat resistant up to +200 °C (A 35 15)
- with sound insulating lining (acc. DIN 4109), age resistant, for temperatures -30 °C up to +110 °C

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
33177078	72 - 78	2½	65	M12	141	111	66	25 x 3.0	M10 x 30 mm	1,900	5
33177085	79 - 85	-	-	M12	148	118	69	25 x 3.0	M10 x 30 mm	1,900	5
33177092	86 - 92	3	80	M12	155	125	77	25 x 3.0	M10 x 30 mm	1,900	5
33177109	101 - 109	-	-	M12	184	144	82	30 x 4.0	M10 x 40 mm	2,400	5
33177116	108 - 116	4	100	M12	191	151	85	30 x 4.0	M10 x 40 mm	2,400	5
33177133	125 - 133	-	-	M12	208	168	94	30 x 4.0	M10 x 40 mm	2,400	5
33177140	132 - 140	5	125	M12	217	177	99	30 x 4.0	M10 x 40 mm	2,400	5
33177169	159 - 169	6	150	M12	271	211	116	40 x 4.0	M12 x 50 mm	3,800	5
33177188	178 - 188	-	-	M12	290	230	125	40 x 4.0	M12 x 50 mm	3,800	5
33177204	194 - 204	-	-	M12	307	247	134	40 x 4.0	M12 x 50 mm	3,800	5
33177213	203 - 213	-	-	M12	315	255	138	40 x 4.0	M12 x 50 mm	3,800	5
33177227	217 - 227	8	200	M12	329	269	145	40 x 4.0	M12 x 50 mm	3,800	5
33177250	240 - 250	-	-	M16	352	298	161	40 x 4.0	M12 x 50 mm	3,800	5
33177275	265 - 275	10	250	M16	377	323	174	40 x 4.0	M12 x 50 mm	3,800	5
33177325	315 - 325	12	300	M16	429	375	200	40 x 4.0	M12 x 50 mm	3,800	5



Complementary

- 554 BIS Stainless Steel Fixpoint Console FPC 'Medium'
- 556 BIS Stainless Steel Expansion Guide Assembly
- 604 BIS Stainless Steel Threaded Rod

Complementary

- 596 BIS Stainless Steel Wall Plate Resistance Welded
- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double

Stainless Steel Heavy Duty Clamp

(M 12 02)

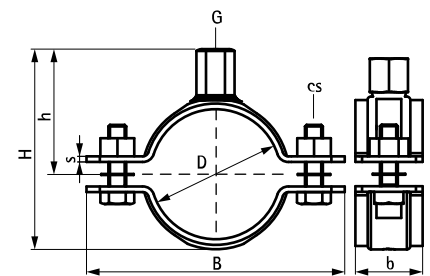
M12 - M16



Features and Benefits

- two-part clamp with two locking bolts
- heavy design
- with CO₂ welded connection nut
- material: stainless steel 1.4401 (A4) - EN 10088, AISI 316

Part No.	D (mm)	D (°)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	cs	F _{a,z} (N)	Pack 1
33077078	72 - 78	2½	65	M12	134	102	62	25 x 3.0	M10 x 30 mm	2,200	5
33077085	79 - 85	-	-	M12	141	109	66	25 x 3.0	M10 x 30 mm	2,200	5
33077092	86 - 92	3	80	M12	148	116	69	25 x 3.0	M10 x 30 mm	2,200	5
33077099	93 - 99	-	-	M12	155	123	72	25 x 3.0	M10 x 30 mm	2,200	5
33077106	98 - 106	-	-	M12	174	132	77	30 x 4.0	M10 x 40 mm	4,100	5
33077116	108 - 116	4	100	M12	184	142	82	30 x 4.0	M10 x 40 mm	4,100	5
33077123	115 - 123	-	-	M12	191	149	85	30 x 4.0	M10 x 40 mm	4,100	5
33077133	125 - 133	-	-	M12	201	159	91	30 x 4.0	M10 x 40 mm	4,100	5
33077140	132 - 140	5	125	M12	208	166	94	30 x 4.0	M10 x 40 mm	4,100	5
33077149	139 - 149	-	-	M12	217	175	99	30 x 4.0	M10 x 40 mm	4,100	5
33077169	159 - 169	6	150	M12	257	195	109	40 x 4.0	M12 x 50 mm	4,900	5
33077183	173 - 183	-	-	M12	271	209	116	40 x 4.0	M12 x 50 mm	4,900	5
33077202	192 - 202	-	-	M12	290	228	125	40 x 4.0	M12 x 50 mm	4,900	5
33077219	208 - 219	-	-	M12	307	245	134	40 x 4.0	M12 x 50 mm	4,900	5
33077227	217 - 227	8	200	M12	315	253	138	40 x 4.0	M12 x 50 mm	4,900	5
33077241	229 - 241	-	-	M12	329	267	145	40 x 4.0	M12 x 50 mm	4,900	5
33077250	240 - 250	-	-	M16	338	282	154	40 x 4.0	M12 x 50 mm	4,900	5
33077264	254 - 264	-	-	M16	352	296	161	40 x 4.0	M12 x 50 mm	4,900	5
33077275	265 - 275	10	250	M16	363	307	167	40 x 4.0	M12 x 50 mm	4,900	5
33077289	279 - 289	-	-	M16	377	321	174	40 x 4.0	M12 x 50 mm	4,900	5
33077325	315 - 325	12	300	M16	415	359	192	40 x 4.0	M12 x 50 mm	4,900	5
33077341	329 - 341	-	-	M16	429	373	200	40 x 4.0	M12 x 50 mm	4,900	5



Complementary

- 554 BIS Stainless Steel Fixpoint Console FPC 'Medium'
- 556 BIS Stainless Steel Expansion Guide Assembly
- 570 BIS RapidStrut® Stainless Steel Fixing Rail

Complementary

- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 604 BIS Stainless Steel Threaded Rod
- 596 BIS Stainless Steel Wall Plate Resistance Welded

BIS Stainless Steel U-Clamp

(M 12 05)

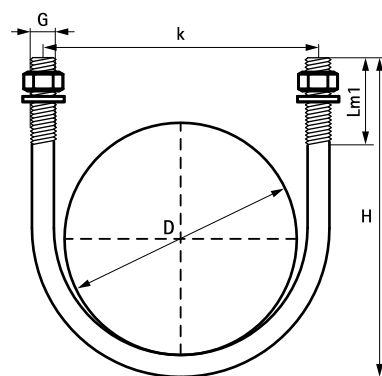
for pipe \varnothing 1/4 - 12" (13,5 - 323,9 mm)



Features and Benefits

- U-clamp with thread
- including nuts and washers
- material: stainless steel 1.4401 (AISI 316)

Part No.	D (mm)	D (")	DN	G	H (mm)	Lm1 (mm)	k (mm)	Pack 1
2084706021	21.5	1/2	15	M6	55	25	30	100
2084708027	26.9	3/4	20	M8	59	25	35	100
2084708034	33.7	1	25	M8	70	35	47	100
2084708042	42.4	1 1/4	32	M8	75	35	51	100
2084708049	48.3	1 1/2	40	M8	85	35	60	25
2084708060	60.3	2	50	M8	99	35	71	25
2084708076	76.1	2 1/2	65	M8	121	42	93	25
2084710090	88.9	3	80	M10	126	35	99	25
2084710114	114.3	4	100	M10	159	50	123	25
2084712140	139.7	5	125	M12	191	50	152	25
2084716219	219.1	8	200	M16	280	60	236	10
2084716273	273.0	10	250	M16	340	55	305	10
2084718323	323.9	12	300	M16	388	60	350	10



BIS Stainless Steel Suspension Band

(M 13 05)

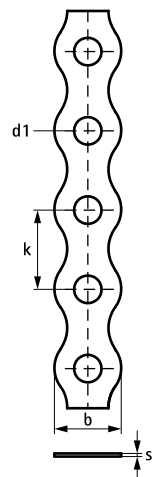
for vertical PVC downpipes, parallel conducts and suspended installations, etc.



Features and Benefits

- flexible system with multiple applications
- dispenser cassette allows easy handling and storage
- material: stainless steel 1.4401 (AISI 316)

Part No.	L	b x s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1	App.
0833012	10 m	12 x 0.8	5.0	14.0	1,160	10	roll
0833017	10 m	17 x 0.8	7.0	20.0	1,560	10	roll
0833026	10 m	26 x 1.0	8.0	25.0	3,690	10	roll



BIS Stainless Steel Expansion Joint Bracket

(M 14 10)

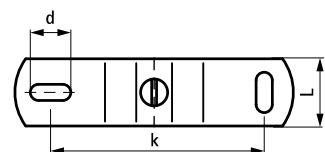
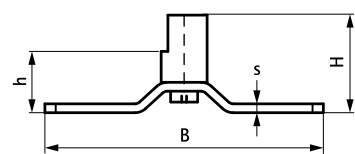
accessories BIS PVC pipe clamps



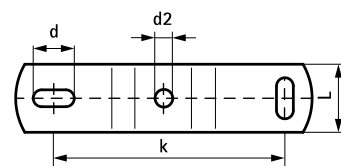
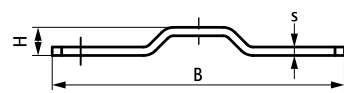
Features and Benefits

- for fixing of rain water pipe over expansion joints
- with 'claws' which grip on to the band
- material: connection bracket made of stainless steel 1.4404 (AISI 316L); connector made of PC (polycarbonate), grey

Part No.	Model	L	B	H	h	s	d1	d2	k	Colour	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
1487000	Stainless steel with threaded connector	25 mm	104	36	25	3	15 x 6	-	80	Grey (RAL 7035)	50
1487010	Stainless steel	25 mm	104	10	-	3	15 x 6	6.5	80	-	200



1487000



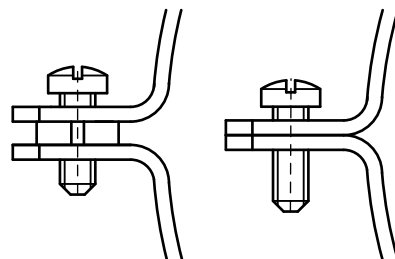
1487010

BIS Bifix[®] 415 Stainless Steel

(M 15 05)

for plastic pipes Ø 32 - 200 mm

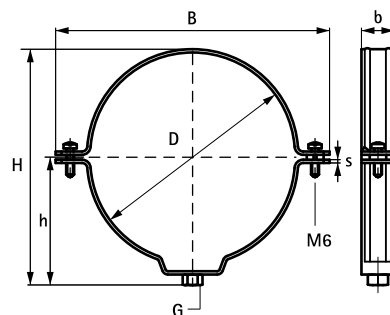
M8



Features and Benefits

- two-screw clamp
- with quick locking system
- with removable spacer washers, making the clamp suitable for either sliding or anchoring
- inside profile to protect pipes from damage
- material: stainless steel 1.4404 (AISI 316L)

Part No.	D (mm)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4157032	32	25	M8	71	53	32	20 x 1.5	1,310	25
4157040	40	32	M8	85	61	36	20 x 1.5	1,310	25
4157050	50	40	M8	96	63	40	20 x 1.5	1,310	25
4157070	70	-	M8	109	89	50	20 x 1.5	1,310	25
4157075	75	70	M8	114	94	54	20 x 1.5	1,310	25
4157080	80	-	M8	119	101	56	20 x 1.5	1,310	25
4157090	90	80	M8	129	109	61	20 x 1.5	1,310	25
4157100	100	-	M8	139	119	66	20 x 1.5	1,310	25
4157110	110	100	M8	149	129	71	20 x 1.5	1,310	25
4157125	125	125	M8	164	145	80	20 x 1.5	1,310	25
4157160	160	150	M8	208	180	96	20 x 1.5	1,310	25
4157200	200	200	M8	247	221	117	20 x 1.5	1,310	25

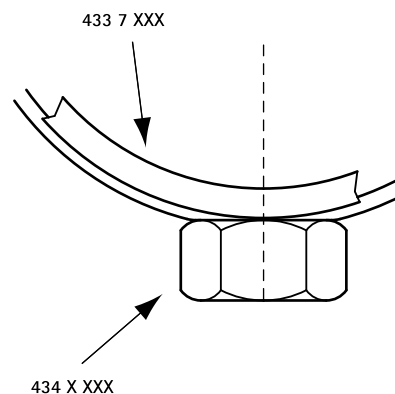


BIS 434 Stainless Steel Clamp for PE-Pipe

(M 15 10)

for plastic pipes \varnothing 32 - 200 mm

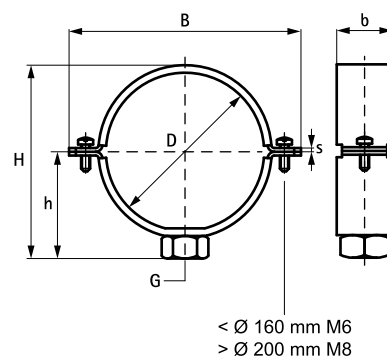
M10



Features and Benefits

- two-screw clamp
- for rigid fixing point fastening it is necessary to use metal clamp liners (Part No. 4337XXX)
- screws secured with anti-loss washer
- material: stainless steel 1.4401 (AISI 316)

Part No.	D (mm)	DN	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4347032	32	25	M10	75	50	30	30 x 3.0	4,160	50
4347040	40	32	M10	82	58	34	30 x 3.0	4,160	50
4347050	50	40	M10	92	69	39	30 x 3.0	4,160	50
4347056	56	50	M10	98	74	42	30 x 3.0	4,160	50
4347063	63	57	M10	105	81	45	30 x 3.0	4,160	50
4347075	75	70	M10	117	94	51	30 x 3.0	4,160	25
4347090	90	80	M10	132	108	59	30 x 3.0	4,160	25
4347110	110	100	M10	152	128	69	30 x 3.0	4,160	25
4347125	125	125	M10	167	143	76	30 x 3.0	4,160	25
4347160	160	150	M10	202	178	92	30 x 3.0	4,160	25
4347200	200	200	M10	278	218	112	30 x 3.0	4,160	10
4387200	200	200	G1"	278	251	147	30 x 3.0	3,180	25
4387250	250	250	G1"	330	301	172	30 x 3.0	3,180	10
4387315	315	315	G1"	393	363	202	30 x 3.0	3,180	10



Complementary

- 595 BIS Stainless Steel Wall Plate Resistance Welded
- 599 BIS Stainless Steel Hanger Bolt
- 66 BIS Metal Liner 434 Clamp

Complementary

- 67 BIS Lining 434 Clamp

BIS Clamp with Lining for Spiral Ducts (M8)

(M 16 05)

for spiral ducts Ø 100 - 400 mm

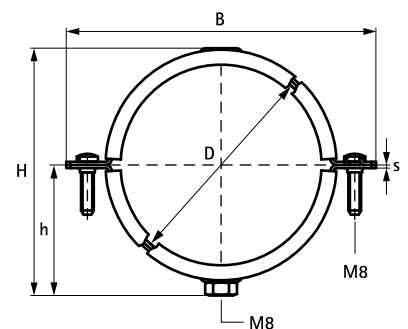
M8



Features and Benefits

- two-part clamp with two locking bolts
- with quick locking system
- material: stainless steel 1.4404 (AISI 316L)
- noise insulating lining, EPDM rubber, black
- sound insulating lining according DIN 4109

Part No.	D (mm)	G	B (mm)	H (mm)	h (mm)	b x s (mm)	F _{a,z} (N)	Pack 1
4137080	80	M8	127	97	52	25 x 1.5	850	25
4137100	100	M8	147	117	63	25 x 1.5	850	25
4137125	125	M8	172	142	74	25 x 1.5	850	25
4137150	150	M8	197	167	87	25 x 1.5	850	25
4137160	160	M8	207	178	92	25 x 1.5	850	25
4137200	200	M8	247	217	112	25 x 1.5	850	25
4137225	225	M8	272	243	124	25 x 1.5	850	25
4137250	250	M8	297	267	136	25 x 1.5	850	25
4137300	300	M8	347	317	162	25 x 1.5	850	25
4137315	315	M8	361	332	169	25 x 1.5	850	25
4137355	355	M8	402	372	189	25 x 1.5	850	25
4137400	400	M8	446	417	212	25 x 1.5	850	25
4137560	560	-	625	586	293	25 x 2.5	850	3
4137600	600	-	654	634	317	25 x 2.5	850	3
4137630	630	-	695	656	328	25 x 2.5	850	3



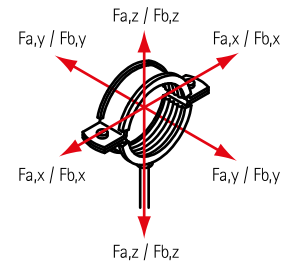
BIS Stainless Steel Fixpoint Console FPC 'Medium'

(M 19 02)



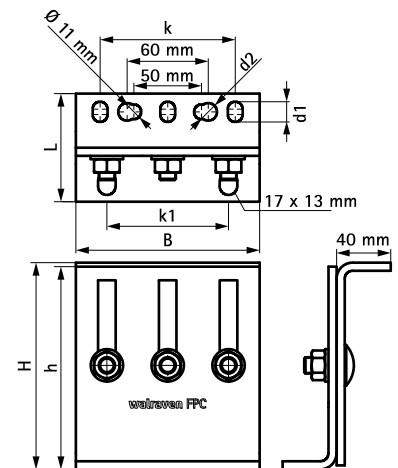
Features and Benefits

- flexible use console module for high forces (depending on the situation, detailed design by technical service)
- can be used as a pipe connection point in conjunction with 2 or 3 heavy-duty clamps type Stainless Steel Heavy Duty Clamps and Stainless Steel Heavy Duty Clamps with Lining
- tightening torque 75 Nm for the console fixing screws
- material: metal parts made of stainless steel 1.4404 (A4) - EN 10088, AISI 316L; bolts, nuts, washers made of stainless steel 1.4401 (A4) - EN 10088, AISI 316



Part No.	L	B	H	h	d1	d2	k	k1	F _{a,z}	F _{a,y}	F _{a,x}	Pack 1
	80 mm	136	153 - 268	150	15 x 11	Ø 13.0	100	90	(N)	(N)	(N)	1 *
6697206									14,300	11,500	3,200	

** Depending on the situation, please contact Walraven Technical Support for advice on safe loads. Note! Console, Clamps and Anchors are to be ordered separately.*



Complementary

- 545 BIS Bifix® 300 Stainless Steel
- 544 BIS Bifix® 1301 Stainless Steel
- 546 Stainless Steel Heavy Duty Clamp with Lining

Complementary

- 547 Stainless Steel Heavy Duty Clamp
- 502 WTB1 Throughbolt Anchor

BIS Stainless Steel Expansion Device (M10)

(M 19 05)

single expansion device for pipe extensions

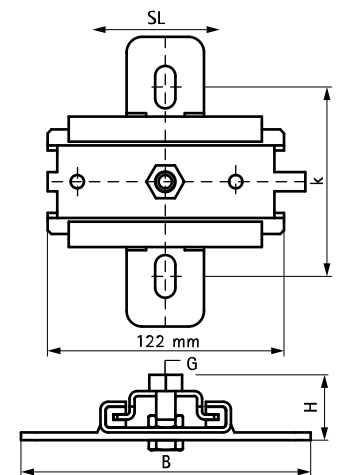


Features and Benefits

- single bracket for pipe extensions
- suitable for ceiling mounting (suspended) and floor mounting (standing mounted)
- fix in combination with RapidStrut Rails and Cantilever arms or directly on the building structure
- can be combined with stainless steel pipe clamps M10
- metal parts made of stainless steel 1.4404; plastic parts made of PA (polyamide)
- friction coefficient $\mu = 0.18$; Sliding friction coefficient $\mu = 0.14$
- temperature resistance up to $+120\text{ }^\circ\text{C}$

Part No.	Model	G	B (mm)	H (mm)	d1 (mm)	k (mm)	SL (max.) (mm)	F _{a,z} (N)	F _{a,z 2} (N)	Pack 1
6667410	Single	M10	150	46	20 x 12.5	100	80	2,300	2,300	10

F_{a,z} = standing mounted; F_{a,z 2} = suspended.



Complementary

- 544 BIS Bifix® 1301 Stainless Steel
- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

Complementary

- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 581 BIS Strut Stainless Steel Tee-Bolt
- 600 BIS Stainless Steel Hexagon Head Screw

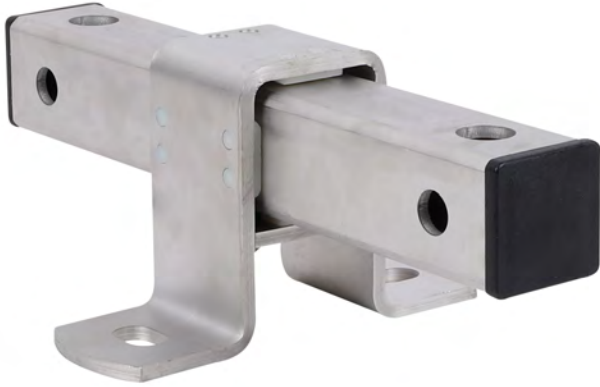
Alternative

- 160 BIS Slide Block GFRP (BUP1000)

BIS Stainless Steel Expansion Guide Assembly

(M 19 10)

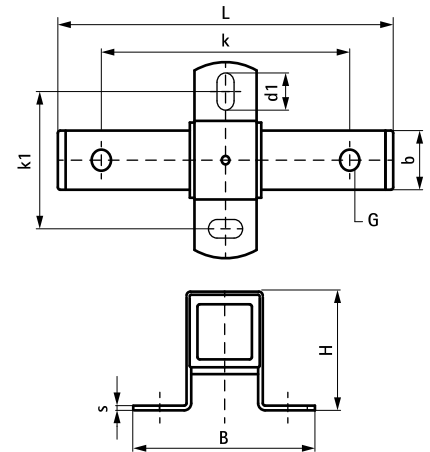
fixing with sliding assemblies



Features and Benefits

- stable and safe double support for pipe expansion
- fix directly on the building structure or in combination with rail systems
- suitable for ceiling mounting (suspended) and floor mounting (standing mounted)
- tapped with different sized connecting holes (13/17 mm) on opposing faces
- can be combined with HD1501 or HD500 clamps
- material: metal parts made of stainless steel 1.4404 (A4) - EN 10088, AISI 316; sliding strips made of PE colour white, endcaps made of PE colour black

Part No.	Type	G	L	B	H	b	s	d1	k	k1	SL (max.)	F _{a,z} (N)	F _{a,z} (kg)	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)			
6667813	FG3	Ø 13.0 mm / 17.0 mm	255 mm	146	90	40	5.0	20 x 13	200	100	120	7,500	750	5



Complementary

- 545 BIS Bifix® 300 Stainless Steel
- 544 BIS Bifix® 1301 Stainless Steel
- 546 Stainless Steel Heavy Duty Clamp with Lining

Complementary

- 547 Stainless Steel Heavy Duty Clamp
- 609 WTB1 Throughbolt Anchor SSt

BIS RapidRail® Stainless Steel Fixing Rail

(M 20 05)

suspension and support



6507001

6507015

6507002

Features and Benefits

- C-profile
- for a quick and easy fixing
- with continuous perforation
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- material: stainless steel 1.4404 (AISI 316L)



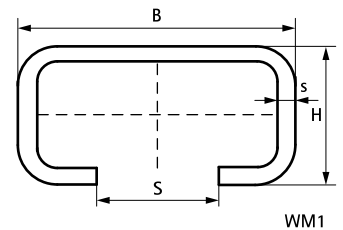
RAL-GZ 655/C
Cert.Nr. 2012-07

Part No.	Type	L	B (mm)	H (mm)	s (mm)	S (mm)	RAL	BndS	BndL
6507001	WM1	2 m	30	15	2.00	15	-	20	480
6507015	WM15	2 m	30	20	1.75	15	-	20	480
6507002	WM2	2 m	30	30	2.00	15	RAL ¹	20	400

RAL¹ = tested, certified and monitored by a third party according to RAL-GZ 655/C.

For detailed technical information about our RAL marked products, please see the RAL datasheet in our web catalogue.

For more information about the max. allowed load ($F_{0,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'.



WM1

Complementary

- 560 BIS RapidRail® Stainless Steel Slide Nut
- 562 BIS RapidRail® Stainless Steel Hammerfix

BIS RapidRail® Stainless Steel Cantilever Arm

(M 25 05)

fixing to wall or ceiling



6607120

6607230

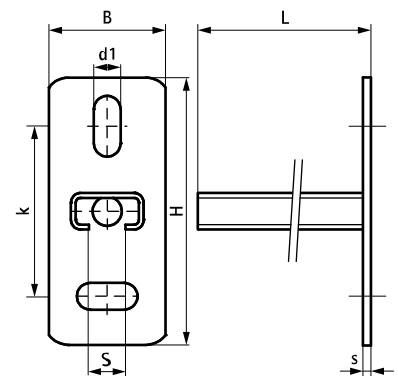
6607250

Features and Benefits

- wall plate with welded C-profile
- slots at 90° to each other to simplify fixing
- CO₂ welded
- material: stainless steel 1.4404 (AISI 316L)

Part No.	L	B	H	s1	d1	S	k	From Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6607120	200 mm	48	110	5.0	25 x 11	15	70	WM1 - 30x15	20
6607230	300 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	10
6607250	500 mm	48	110	5.0	25 x 11	15	70	WM2 - 30x30	20

For more information about the max. allowed load ($F_{o,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidRail®'.



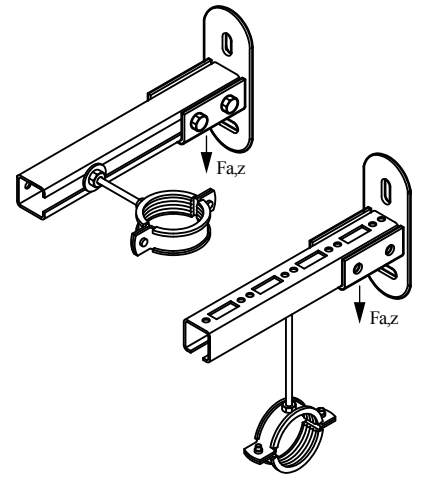
Complementary

- 566 BIS Stainless Steel Rail Prop
- 560 BIS RapidRail® Stainless Steel Slide Nut
- 562 BIS RapidRail® Stainless Steel Hammerfix

BIS RapidRail® Stainless Steel Wall Plate

(M 27 10)

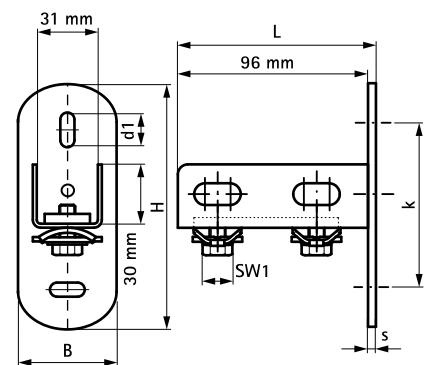
fixing to wall, floor or ceiling



Features and Benefits

- flexible base plate for rails
- for fixing to wall, floor or ceiling
- rail can be fixed with slot downwards or sideways
- suitable for rail WM1, 15, 2
- with pre-assembled BIS RapidRail® Sliding nut(s) for a quick fixing, and retains assembly in place before final tightening
- material: stainless steel 1.4401/1.4404 (A4) - EN10088, AISI 316/316L; spring(s) made of of POM (polyoxymethylene), blue (according to RAL 5015)

Part No.	L	B	H	s	d1	k	SW1	T _(max.)	F _{a,z}	Pack 1
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(Nm)	(N)	
6617210	100 mm	50	123	4.0	25 x 11	83	13	15.0	2,850	25



Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 609 WTb1 Throughbolt Anchor SSt
- 608 WD11 Drop-in Anchor SSt

BIS RapidRail® Stainless Steel Slide Nut

(M 29 05)

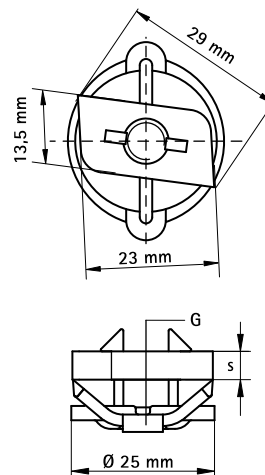
fixing to BIS RapidRail®



Features and Benefits

- slide nut with washer and BIS RapidRail® spring
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of stainless steel 1.4401 (AISI 316); spring(s) made of POM (polyoxymethylene), blue

Part No.	G	b x s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1	Pack 2
6517306	M6	13.5 x 4.0	7.5	WM1, 15, 2	2,000	50	500
6517308	M8	13.5 x 5.0	15.0	WM1, 15, 2	2,700	50	500
6517310	M10	14.0 x 5.0	15.0	WM1, 15, 2	2,900	50	500



Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

Alternative

- 562 BIS RapidRail® Stainless Steel Hammerfix

BIS Stainless Steel Slide Nut

(M 29 10)

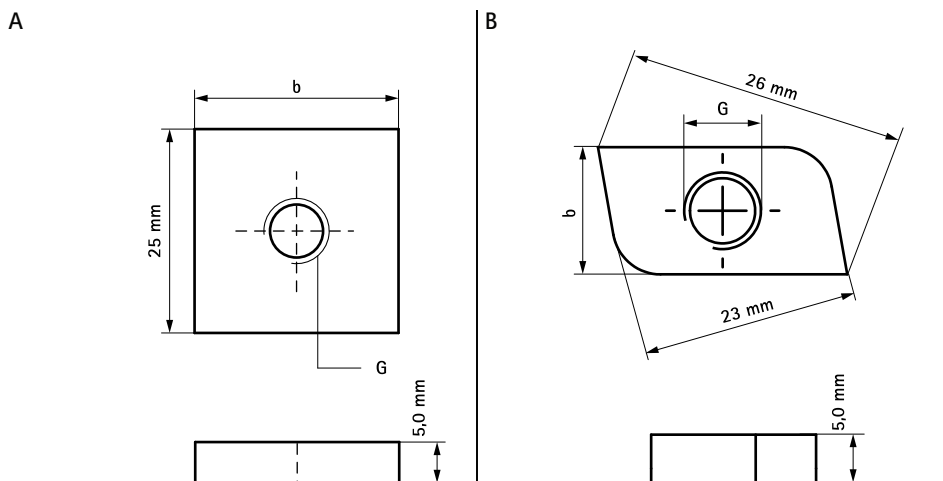
fixing to BIS RapidRail®



Features and Benefits

- because of shape the nut fits in rail
- material: stainless steel 1.4401 (AISI 316)

Part No.	G	b (mm)	s (mm)	T _(max.) (Nm)	For Rail	Pack 1	Pack 2
A 6511006	M6	25.0	5.0	7.5	WM1, 15, 2	50	250
B 6511008	M8	13.5	5.0	15.0	WM1, 15, 2	50	1,000
C 6511010	M10	14.0	5.0	15.0	WM1, 15, 2	50	1,000
A 6511012	M12	25.0	5.0	30.0	WM1, 15, 2	50	500



Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

Alternative

- 560 BIS RapidRail® Stainless Steel Slide Nut

BIS RapidRail® Stainless Steel Hammerfix

(M 29 25)

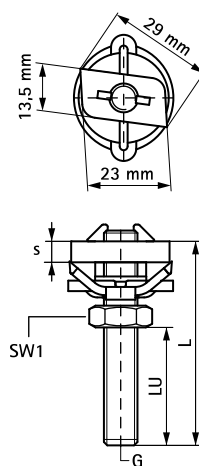
fixing to BIS RapidRail®



Features and Benefits

- slide nut with stud bolt, washer and BIS RapidRail® spring
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: metal parts made of stainless steel 1.4401 (AISI 316); spring(s) made of POM (polyoxymethylene), blue

Part No.	G	L	LU (mm)	b x s (mm)	SW1 (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1	Pack 2
6527062	M6	25 mm	11	13.5 x 4.0	10	7.5	WM1, 15, 2	2,000	25	250
6527084	M8	40 mm	25	13.5 x 5.0	13	15.0	WM1, 15, 2	2,700	25	250
6527088	M8	80 mm	65	13.5 x 5.0	13	15.0	WM1, 15, 2	2,700	25	250
6527094	M10	40 mm	22	14.0 x 5.0	17	15.0	WM1, 15, 2	2,900	25	250
6527098	M10	80 mm	62	14.0 x 5.0	17	15.0	WM1, 15, 2	2,900	25	250



Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

BIS Stainless Steel Washer (Flat)

(M 29 30)

fixing to BIS RapidRail®

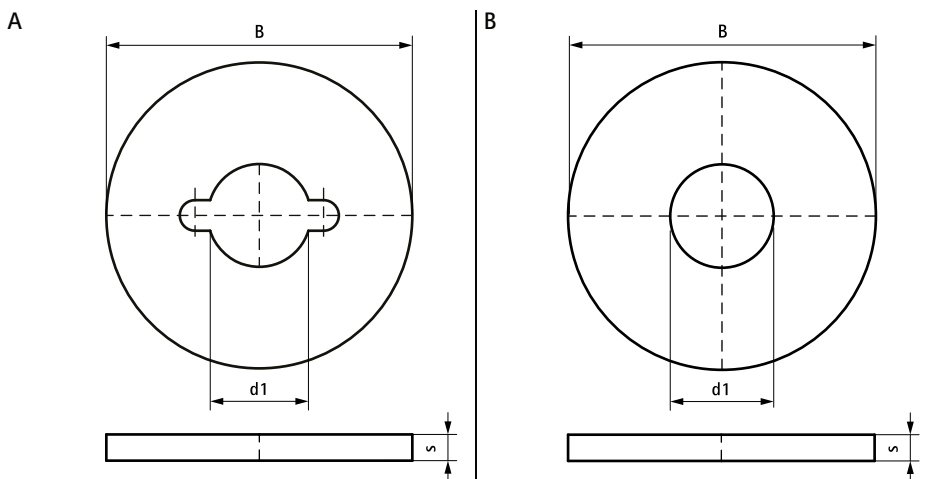
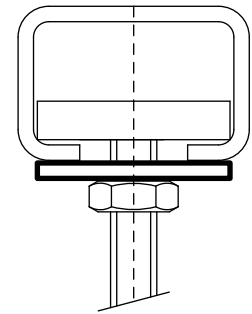


Features and Benefits

- flat washer
- material: stainless steel 1.4401 (AISI 316)

Part No.	Type	B (mm)	s (mm)	d1 (mm)	For Rail	Pack 1	Pack 2
A 6537006	A	25	2.50	Ø 6.5	WM1, 15, 2	50	500
A 6537008	A	25	2.50	Ø 8.5	WM1, 15, 2	50	500
A 6537010	A	25	2.50	Ø 10.5	WM1, 15, 2	50	500
B 6537012	B	28	3.00	Ø 14.0	WM1, 15, 2	50	500
B 6537016	B	30	3.00	Ø 17.0	WM1, 15, 2	50	500

Ø 10.5 and above tested for fire safety.



Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

BIS Stainless Steel Washer (Flat)

(M 29 35)

fixing to BIS RapidRail®



Features and Benefits

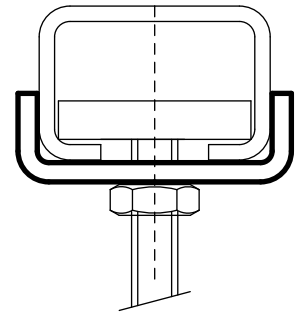
- material: stainless steel 1.4301 (AISI 304)

Part No.	Type	G	Pack 1	App.
6537608	DIN 9021	M8	100	pc.

BIS Stainless Steel Washer (U-shaped)

(M 29 40)

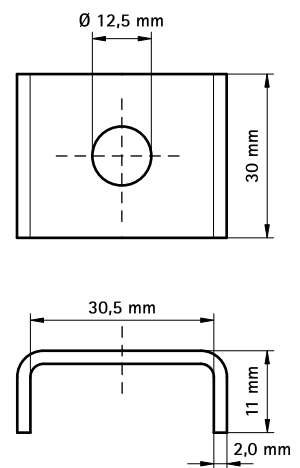
fixing to BIS RapidRail®



Features and Benefits

- U-shaped washer
- U-shaped for extra stability
- material: stainless steel 1.4401 (AISI 316)

Part No.	For Rail	Pack 1	Pack 2
6537813	WM1, 15, 2	50	250



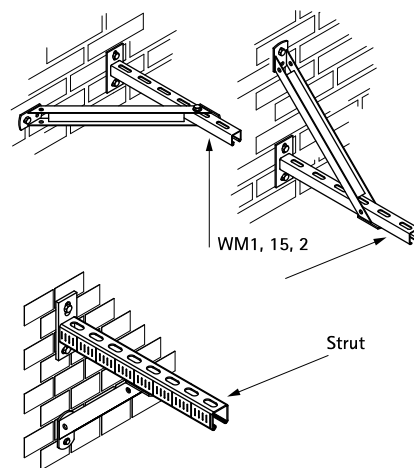
Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

BIS Stainless Steel Rail Prop

reinforcement of cantilever arm

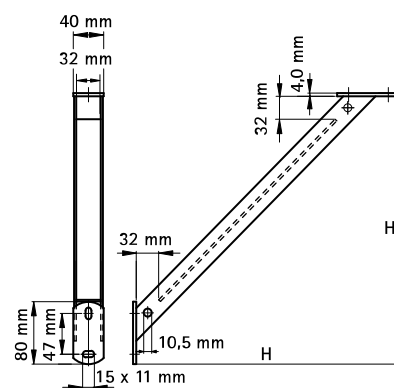
(M 32 05)



Features and Benefits

- 45° support bracket
- CO₂ welded
- for fixing support under, top or on side of a cantilever arm
- material: stainless steel 1.4401 (AISI 316)
- also used to strengthen rail constructions

Part No.	H (mm)	For Rail	Pack 1
6627220	200	WM1, 15, 2, Strut	10



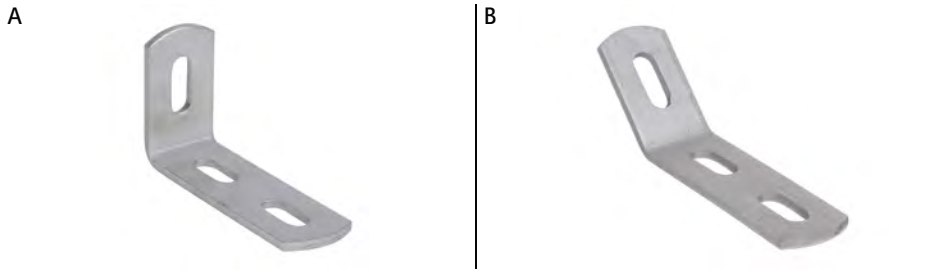
Complementary

- 557 BIS RapidRail® Stainless Steel Fixing Rail
- 558 BIS RapidRail® Stainless Steel Cantilever Arm

BIS Stainless Steel Rail Connector

(M 34 05)

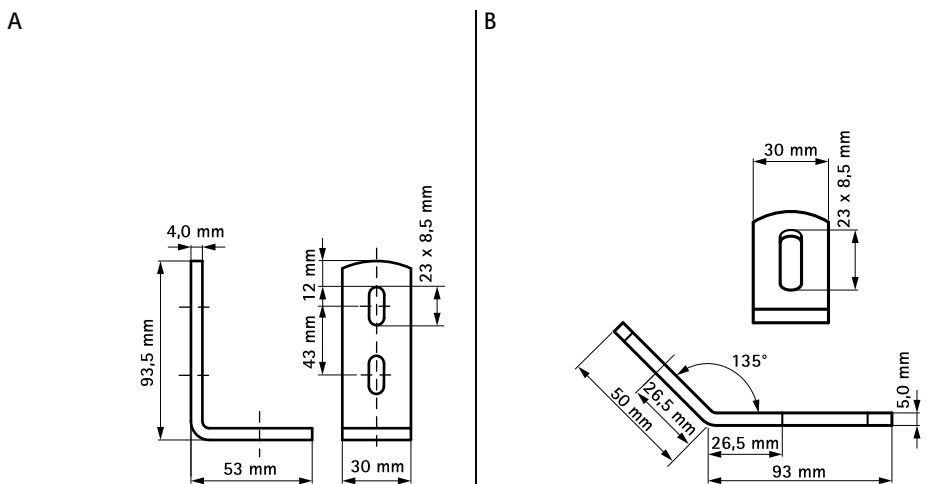
to make BIS RapidRail® fabrications



Features and Benefits

- to make rail fabrications
- material: stainless steel 1.4401 (AISI 316)

Part No.	a (°)	For Rail	Pack 1
A 6587090	90°	WM1, 15, 2	50
B 6587135	135°	WM1, 15, 2	50



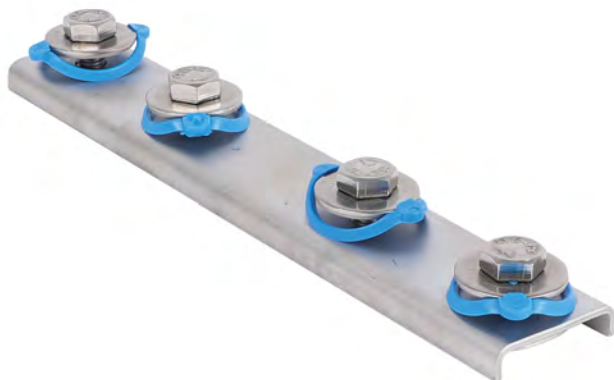
Complementary

557 BIS RapidRail® Stainless Steel Fixing Rail

BIS RapidRail® Stainless Steel Linear Connector

(M 34 10)

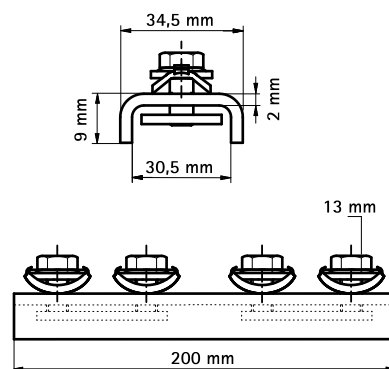
to make BIS RapidRail® fabrications



Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- suitable for rail WM1, 15, 2
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: stainless steel 1.4401/1.4404 (A4) - EN10088, AISI 316/316L; spring(s) made of of POM (polyoxymethylene), blue (according to RAL 5015)

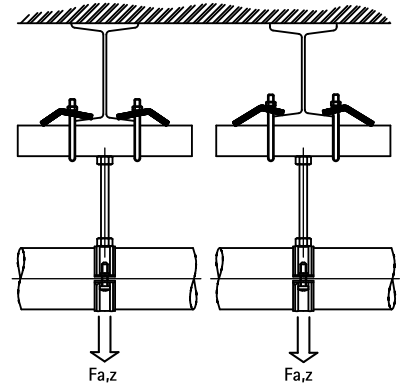
Part No.	T _(max.) (Nm)	For Rail	F _{a,x} (N)	Pack 1
6547001	15.0	WM1, 15, 2	1,547	25



BIS RapidRail® Stainless Steel Beam Clamp

(M 37 05)

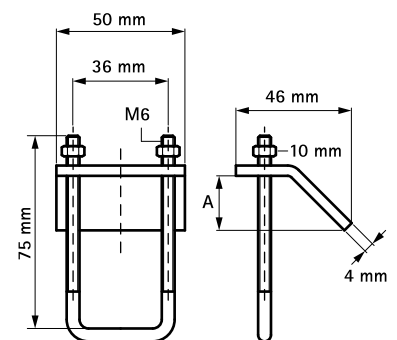
fixing to steel beam



Features and Benefits

- for a solid fixing to steel construction
- material: stainless steel 1.4401 (AISI 316)
- without the need for welding or drilling
- always use 2 beam clamps per fixing

Part No.	A (mm)	SW1 (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	Pack 1
6587011	< 16	10	7.5	WM1, 15, 2	4,500	50



Complementary

557 BIS RapidRail® Stainless Steel Fixing Rail

BIS RapidStrut® Stainless Steel Fixing Rail

(M 45 05)

suspension and support



6507X27

6507X47

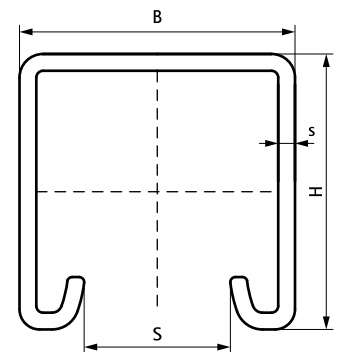
Features and Benefits

- universal rail system
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: stainless steel 1.4404 (AISI 316L)

Part No.	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL
6507327	3 m	41	21	2.50	22	30	300
6507627	6 m	41	21	2.50	22	60	600
6507347	3 m	41	41	2.50	22	30	150
6507647	6 m	41	41	2.50	22	60	300

Strut 41x41x2.5 and above tested for fire safety.

For more information about the max. allowed load ($F_{0,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



Complementary

- 574 BIS RapidStrut® Stainless Steel Slide Nut G2
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 581 BIS Strut Stainless Steel Tee-Bolt

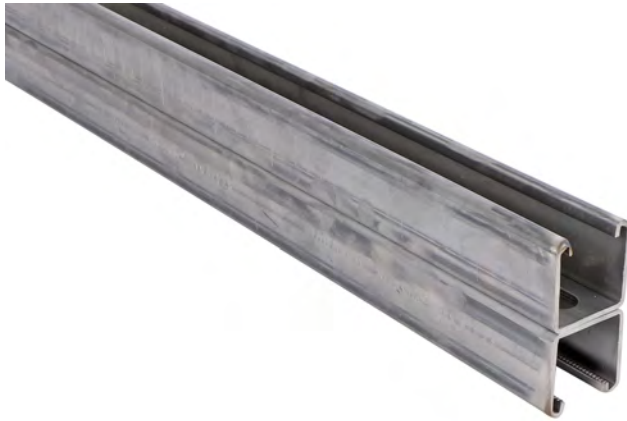
Complementary

- 573 BIS RapidStrut® Stainless Steel Base Plate G2

BIS RapidStrut® Stainless Steel Fixing Rail Double

(M 45 10)

suspension and support



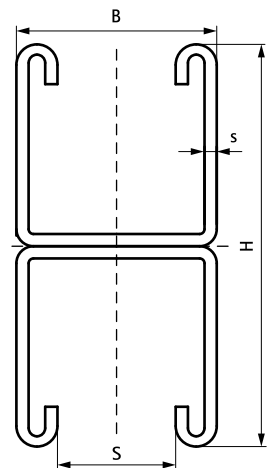
Features and Benefits

- universal rail system
- distance between rail end and first hole is always equal
- a continuous graduated centimetre scale on one side
- inward formed flanges with serrated profile for extra grip
- material: stainless steel 1.4404 (AISI 316L)
- for more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'

Part No.	L	B (mm)	H (mm)	s (mm)	S (mm)	BndS	BndL
6507646	6 m	41	82 (41 x 2)	2.50	22	60	300

Strut 41x41x2.5 and above tested for fire safety.

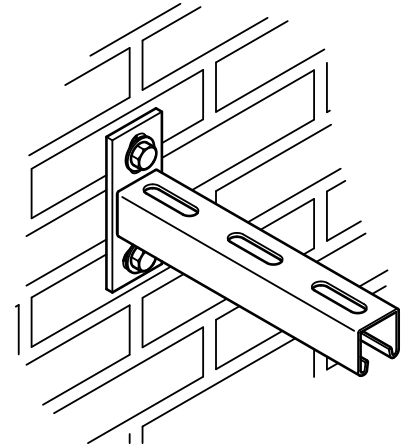
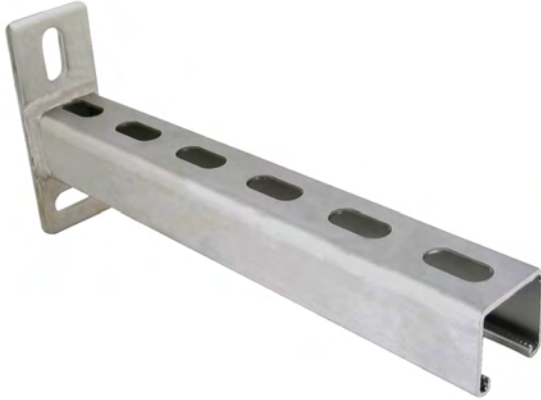
For more information about the max. allowed load ($F_{a,z}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



BIS RapidStrut® Stainless Steel Cantilever Arm

(M 50 05)

fixing to wall

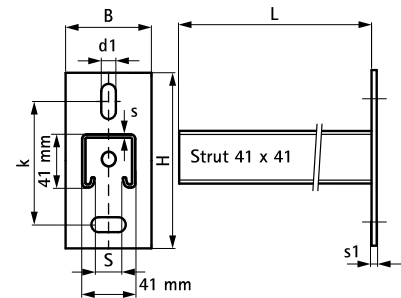


Features and Benefits

- wall plate welded on Strut Profile
- slots at 90° to each other to simplify fixing
- CO₂ welded
- inward formed flanges with serrated profile for extra grip
- material: stainless steel 1.4401 (AISI 316)

Part No.	L	B	H	s	s1	d1	S	k	From Rail	Pack 1
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
6607861	150 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	10
6607870	200 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	10
6607862	300 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	10
6607874	400 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	10
6607863	450 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	10
6607873	500 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	10
6607864	600 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	8
6607865	750 mm	45	130	2.5	8.0	30 x 13	22	87.5	Strut 41x41	8

For more information about the max. allowed load ($F_{0,2}$) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.



Complementary

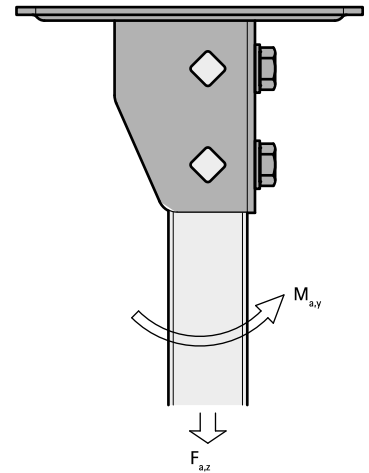
- 574 BIS RapidStrut® Stainless Steel Slide Nut G2
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 581 BIS Strut Stainless Steel Tee-Bolt

Complementary

- 573 BIS RapidStrut® Stainless Steel Base Plate G2

BIS RapidStrut® Stainless Steel Base Plate G2

(M 51 05)

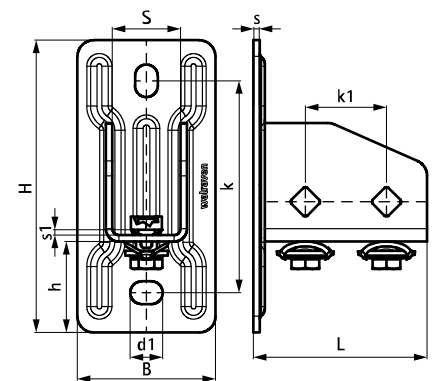


Features and Benefits

- flexible base plate for Strut rails
- suitable for all Strut rail up to 82mm height
- open side of rails 41x41 can be turned to all sides
- at high loads we advise to install with throughbolts
- timesaving with pre-assembled fasteners
- material: stainless steel 1.4401/1.4404 (A4) - EN10088, AISI 316/316L; spring(s) made of of POM (polyoxymethylene), blue (according to RAL 5015)

Part No.	L	B	H	h	s	s1	d1	S	k	k1	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(Nm)	
665875400	107 mm	85	180	56	4.0	5.0	20 x 14	42	130	50	3,636	5,151	485.0	10

F_{a,z}: max. allowed load in combination with 2 slide nuts M10, tightened with 40 Nm.
F_{a,z 2}: max. allowed load in combination with 2 throughbolts M10, tightened with 40 Nm.
M_{a,y}: max. moment in combination with 2 throughbolts M10, tightened with 40 Nm.



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 609 WTB1 Throughbolt Anchor SS

BIS RapidStrut® Stainless Steel Slide Nut G2

(M 52 05)

fixing to Strut rail

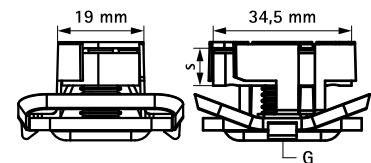
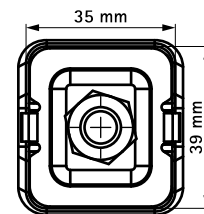


Features and Benefits

- slide nut with washer and BIS RapidStrut® spring
- to connect pipe clamps to rails by using threaded rods
- ready-to-use pre-assembled for a quick fixing, and retains assembly in place before final tightening
- material: stainless steel 1.4401 (A4) - EN 10088, AISI 316; spring(s) made of POM (PolyOxyMethylene), blue (according to RAL 5015)

Part No.	G	s (mm)	T _{inst} (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
665175108	M8	6.0	11	Strut	3,120	1,100	20	200
665175110	M10	8.0	15	Strut	5,000	1,250	20	200

*Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
More details can be found on the Technical Datasheet.*



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

BIS RapidStrut® Stainless Steel Slide Nut with Tabs

(M 52 08)

fixing to Strut rail

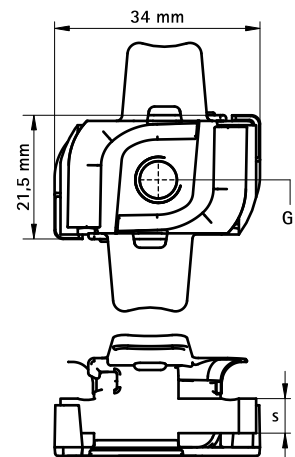


Features and Benefits

- slide nut with plastic 'tabs'
- for all types of Strut Rail
- for tight fixing of accessories (e.g. connectors) on rail
- with plastic tabs which simplifies inserting and positioning
- material: slide nut made of stainless steel 1.4401 (AISI 316); 'wings' made of PP (polypropylene), blue

Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1
651867006	M6	5.0	7.0	Strut	2,660	950	100
651867008	M8	6.0	25.0	Strut	4,500	2,200	100
651867010	M10	8.0	40.0	Strut	5,000	2,550	100
651867012	M12	9.0	50.0	Strut	5,000	2,950	100

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
More details can be found on the Technical Datasheet.

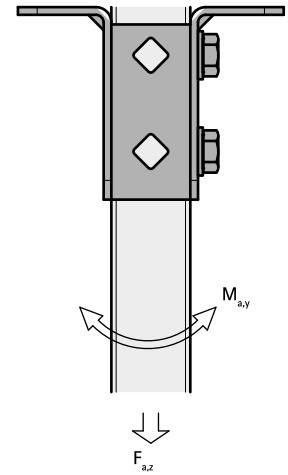


Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

BIS Strut Stainless Steel T-shape Base Plate

(M 53 10)

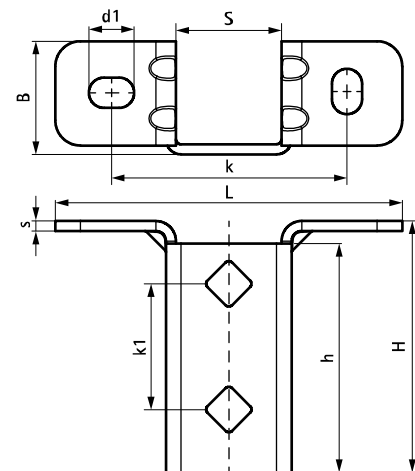


Features and Benefits

- highly flexible base plate for Strut rails
- open side of the rail can be turned to all sides
- extra safety by reinforced bending
- hole pattern is adapted to the hole pattern of Strut rails
- material: stainless steel 1.4401 (A4) - EN 10088, AISI 316

Part No.	L	B	H	h	s	d1	S	k	k1	F _{a,z}	F _{a,z 2}	M _{a,y}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	(N)	(Nm)	
66587361	138 mm	45	100	91	4.0	18 x 12	42	95	50	3,636	3,636	164.0	10

F_{a,z}: max. allowed load in combination with 2 slide nuts M10, tightened with 40 Nm.
F_{a,z 2}: max. allowed load in combination with 2 throughbolts M10, tightened with 40 Nm.
M_{a,y}: max. moment in combination with 2 throughbolts M10, tightened with 40 Nm.



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 609 WTB1 Throughbolt Anchor SSt

Complementary

- 608 WD11 Drop-in Anchor SSt
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

BIS Strut Stainless Steel Wall Plate (Hinged)

(M 53 15)

fixing to wall, floor or ceiling

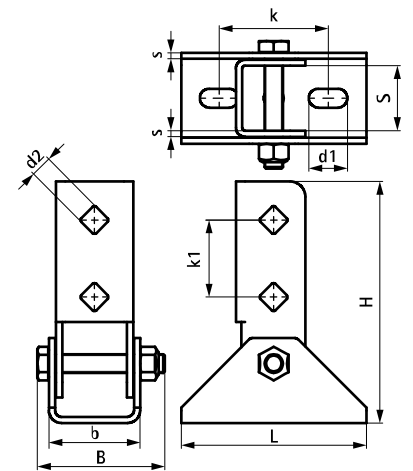


Features and Benefits

- wall plate with hinging U-profile
- for fixing of rail to wall, floor or ceiling
- rail can be fixed with slot downwards or sideways
- also used to strengthen constructions with Strut 41x41
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	L	B	H	b	s	d1	d2	S	k	k1	For Rail	F _{a,z 2}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		(N)	
66587814	120 mm	83	157	59	4.0	25x12.2	13.8	42	71	50	Strut	9,700	10 *

* Tested with rail 41x41x2.5 with throughbolts. More details can be found on the Technical Datasheet.



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

Complementary

- 609 WTB1 Throughbolt Anchor SSt
- 608 WD11 Drop-in Anchor SSt
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

BIS Strut Stainless Steel Adjustable Support

(M 53 20)

fixing to wall, floor or ceiling

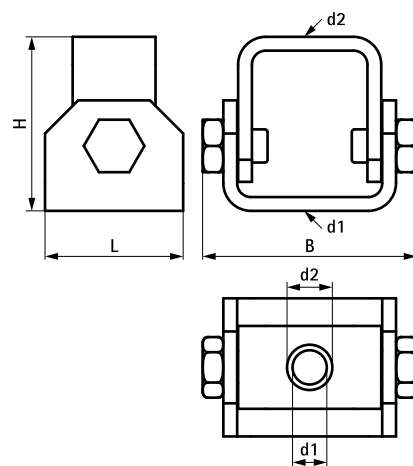


Features and Benefits

- especially for angled installations with bracings
- suitable for fixing to wall, ceiling, floor or directly on rails
- adjustable angle up to 90°
- with two holes Ø13 mm
- material: stainless steel 1.4401 (A4) - EN 10088, AISI 316

Part No.	L	B	H	d1	d2	For Rail	F _{a,z} (N)	Pack 1
66587718	50 mm	78 (mm)	63 (mm)	Ø 13.0 (mm)	Ø 13.0 (mm)	Strut	5,000	10

Max. allowed load: when used at an angle of 45° on wall/ceiling.



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

Complementary

- 604 BIS Stainless Steel Threaded Rod
- 609 WTB1 Throughbolt Anchor SSt
- 608 WDI1 Drop-in Anchor SSt

BIS Strut Stainless Steel Slide Nut

(M 55 04)

fixing to Strut rail

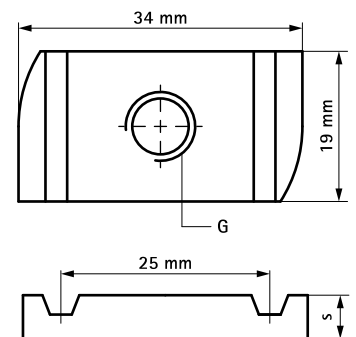


Features and Benefits

- for all types of Strut Rail
- for tight fixing of accessories (e.g. connectors) on rail
- material: stainless steel 1.4401 (AISI 316)

Part No.	G	s (mm)	T _(max.) (Nm)	For Rail	F _{a,z} (N)	F _{a,x} (N)	Pack 1	Pack 2
6517706	M6	5.0	7.0	Strut	2,660	950	25	250
6517708	M8	6.0	25.0	Strut	4,500	2,200	25	250
6517710	M10	8.0	40.0	Strut	5,000	2,550	25	250
6517712	M12	9.0	50.0	Strut	5,000	2,950	25	250

Tested values in combination with BIS RapidStrut® Rail 41x41x2.5mm.
More details can be found on the Technical Datasheet.



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

Alternative

- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

BIS Strut Stainless Steel Square Slide Nut

(M 55 06)

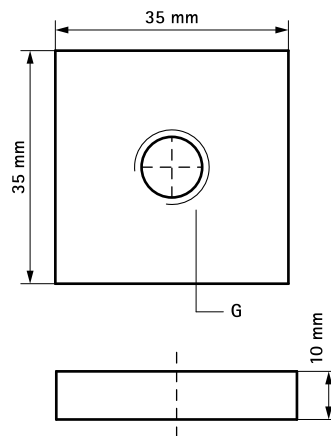
fixing to Strut rail



Features and Benefits

- extra massive slide nut to connect HD clamps M16 to Strut Rails
- material: stainless steel 1.4401 (A4) - EN 10088, AISI 316

Part No.	G	For Rail	Pack 1
6517716	M16	Strut	250



BIS Strut Stainless Steel Tee-Bolt

(M 55 12)

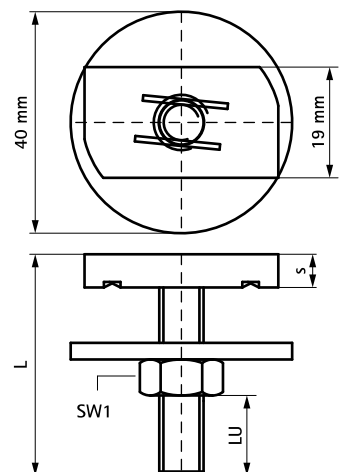
fixing to Strut rail



Features and Benefits

- slide nut with stud bolt and washer
- material: stainless steel

Part No.	G	L	LU (mm)	s (mm)	SW1 (mm)	For Rail	Pack 1	Pack 2
6527734	M8	40 mm	18.0	6.0	13	Strut	25	250
6527744	M10	50 mm	24.0	8.0	17	Strut	25	250
6527754	M12	50 mm	21.5	9.0	19	Strut	25	250



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

BIS Strut Stainless Steel Washer (Flat)

(M 55 16)

fixing to Strut rail

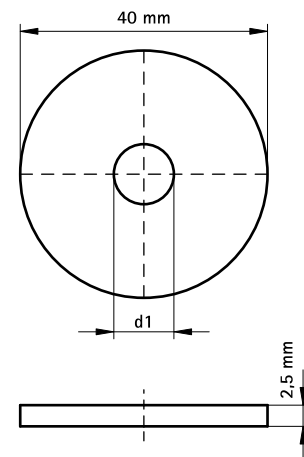


Features and Benefits

- flat washer
- material: stainless steel 1.4401 (AISI 316)

Part No.	d1 (mm)	For Rail	Pack 1
6537508	Ø 8.5	Strut	100
6537510	Ø 10.5	Strut	100
6537512	Ø 12.5	Strut	100

Ø 10.5 and above tested for fire safety.



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

BIS Strut Stainless Steel Washer (U-shaped)

(M 55 19)

to make Strut rail fabrications

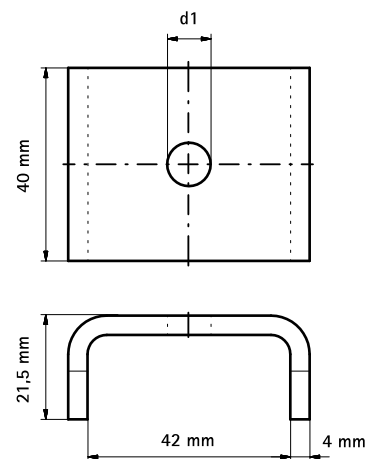


Features and Benefits

- U-shaped washer
- U-shaped for extra stability
- material: stainless steel 1.4401 (AISI 316)

Part No.	d1 (mm)	For Rail	Pack 1
6571008	Ø 9.0	Strut	50
6571010	Ø 11.0	Strut	50
6571012	Ø 13.0	Strut	50
6571016	Ø 17.0	Strut	50

Ø 11.0 and above tested for fire safety.



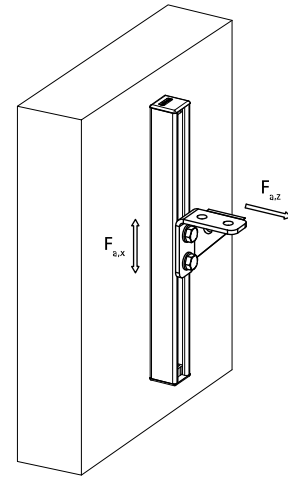
Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

BIS Strut Stainless Steel Connector 90° Rigid

(M 60 04)

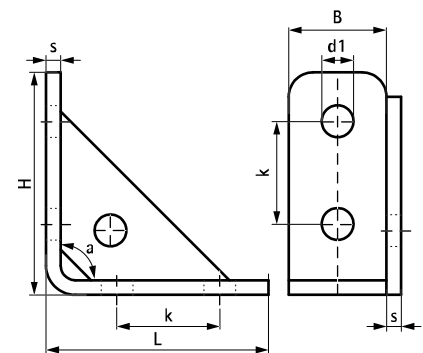
to make Strut rail fabrications



Features and Benefits

- reinforced connector to make rigid fabrications with Strut rails
- easy fitting due to rounded edges
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	L	B	H	s	d1	k	a	For Rail	F _{a,z}	F _{a,z 2}	F _{a,x}	F _{a,x 2}	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(°)		(N)	(N)	(N)	(N)	
66587291	110 mm	40	110	4	12.2	50	90°	Strut	4,000	8,000	3,000	7,000	25
<i>F_{a,z}</i> : max. allowed load acc. RAL GZ-655D (with rail 41x41x1.5). <i>F_{a,z2}</i> : max. allowed load (with rail 41x41x2.5). <i>F_{a,x}</i> : max. allowed load acc. RAL GZ-655D (with rail 41x41x1.5 and bolted 2 x M12 - 30Nm). <i>F_{a,x2}</i> : max. allowed load (with rail 41x41x2.5 and bolted 2 x M12 - 60Nm).													



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

Complementary

- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 600 BIS Stainless Steel Hexagon Head Screw
- 582 BIS Strut Stainless Steel Washer (Flat)

BIS Strut Stainless Steel Angle Connector 90°

(M 60 08)

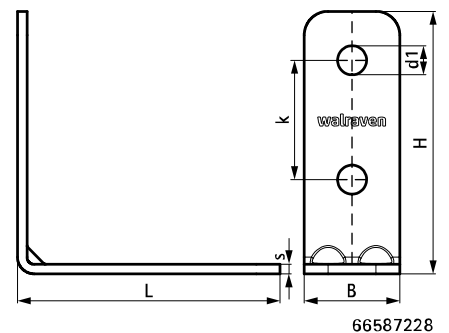
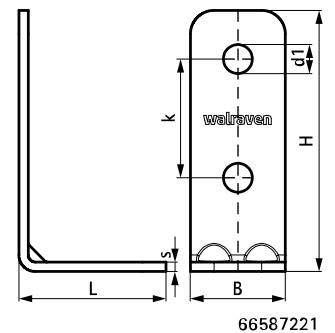
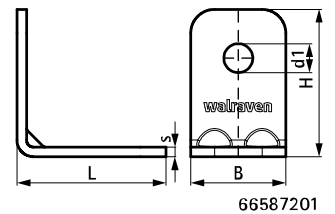
to make Strut rail fabrications



Features and Benefits

- angle connector for all Strut rails to make fabrications
 - the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
 - user friendly by rounded edges
 - with reinforced bend for extra strength
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	Model	L	B	H	s	d1	k	a	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(°)	
66587201	Short / short	62 mm	40	62	4.0	Ø 12.2	-	90	50
66587221	Short / long	62 mm	40	110	4.0	Ø 12.2	50	90	25
66587228	Long / long	110 mm	40	110	4.0	Ø 12.2	50	90	25



Complementary

- 572 BIS RapidStrut® Stainless Steel Cantilever Arm
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 600 BIS Stainless Steel Hexagon Head Screw

Complementary

- 582 BIS Strut Stainless Steel Washer (Flat)

BIS Strut Stainless Steel Angle Connector 135°

(M 60 09)

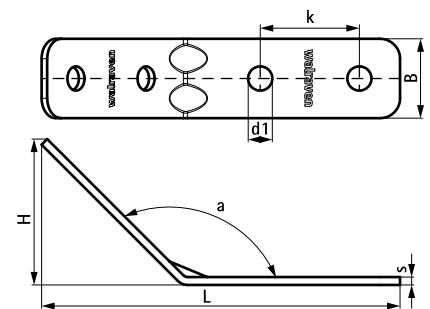
to make Strut rail fabrications



Features and Benefits

- angle connector for all Strut rails to make fabrications
 - the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
 - user friendly by rounded edges
 - with reinforced bend for extra strength
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	Model	L	B	H	s	d1	k	a	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)	(°)	
66587256	Long / long	180 mm	40	80	4.0	Ø 12.2	50	135	25



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm

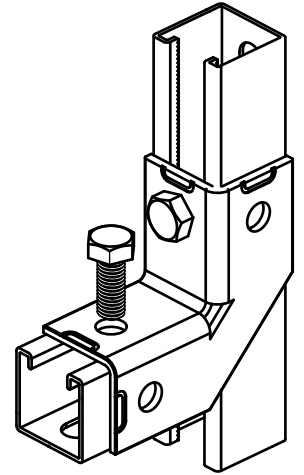
Complementary

- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 582 BIS Strut Stainless Steel Washer (Flat)
- 600 BIS Stainless Steel Hexagon Head Screw

BIS Strut Stainless Steel Connector 90° / 2D

(M 60 110)

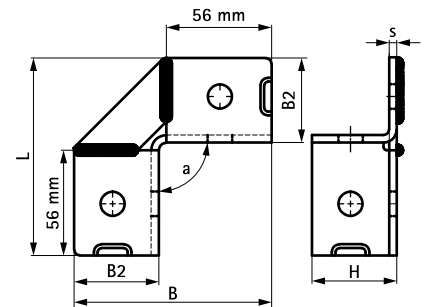
to make Strut rail fabrications



Features and Benefits

- flexible connector allows different rail positioning
- material: stainless steel 1.4401 (AISI 316)
- strong connection by surrounding the rail

Part No.	d (mm)	Model	L	B	B2	H	s	k	a	For Rail	Pack 1
66597914	13 mm	2+2 / 90	105 mm	105	45	45	4.0	-	90	Strut	10



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

BIS Strut Stainless Steel Cross Connector

(M 60 13)

to make Strut rail fabrications



66587292

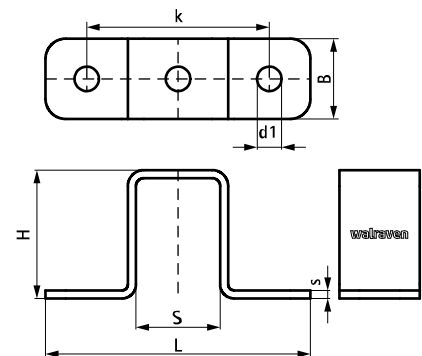
66587294

66587298

Features and Benefits

- connector to make cross connections between Strut rails
- to connect Strut rails to wall or ceiling
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- user friendly by rounded edges
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	L	B	H	s	d1	S	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
66587292	141	40	24	4.0	12.2	42	100	Strut 41x21	25
66587294	141	40	44	4.0	12.2	42	100	Strut 41x41	25
66587298	141	40	84	4.0	12.2	42	100	Strut 41x82	10



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 572 BIS RapidStrut® Stainless Steel Cantilever Arm
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

Complementary

- 600 BIS Stainless Steel Hexagon Head Screw
- 582 BIS Strut Stainless Steel Washer (Flat)

BIS Strut Stainless Steel T-Connector

(M 60 14)

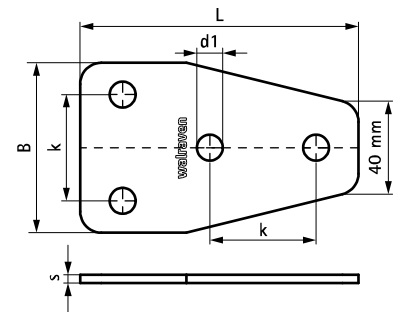
to make Strut rail fabrications



Features and Benefits

- T-connector for Strut rails
- the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- user friendly by rounded edges
- extra safety by two connecting points per direction
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	L	B	s	d1	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)		
66587301	131 mm	80	4.0	Ø 12.2	41	Strut	25



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

Complementary

- 600 BIS Stainless Steel Hexagon Head Screw
- 582 BIS Strut Stainless Steel Washer (Flat)

BIS Strut Stainless Steel U-Connector

(M 60 19)

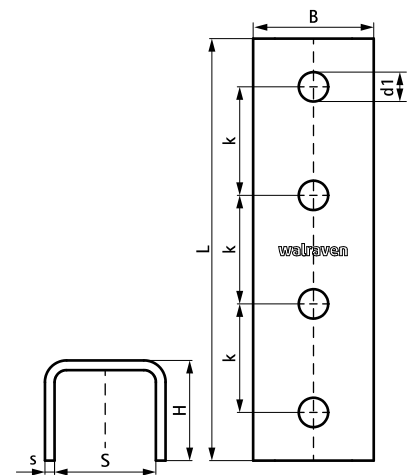
for linear connections of Strut Rails



Features and Benefits

- U-shaped for extra stability
 - longitudinal connector for all Strut rails
 - for strong connections and in combination with Double Strut rails it is advised to use linear connectors on both sides of the rail
 - the hole pattern is adapted to the hole pattern of Strut rails to use throughbolts
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	L	B	H	s	d1	S	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
66587121	175 mm	50	21.5	4.0	Ø 12.2	42	45	Strut 41x21	20
66587141	175 mm	50	41.5	4.0	Ø 12.2	42	45	Strut 41x41 + 41x41D	10



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs

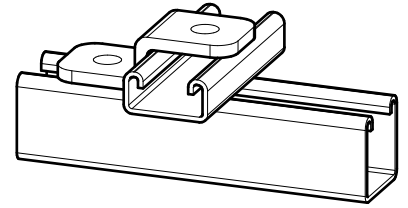
Complementary

- 600 BIS Stainless Steel Hexagon Head Screw
- 582 BIS Strut Stainless Steel Washer (Flat)

BIS Strut Stainless Steel Z-Connector

(M 60 23)

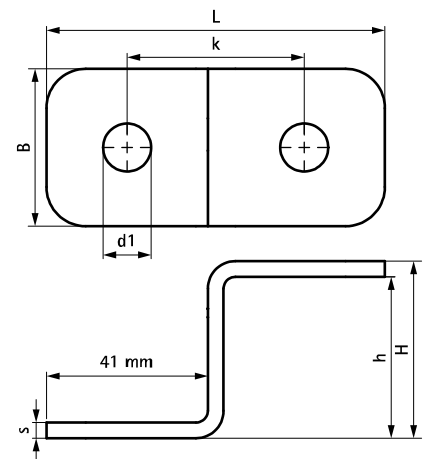
to make Strut rail fabrications



Features and Benefits

- to connect Strut rails to wall or ceiling
- connector to make Z-connections between Strut rails
- can also be used to hang threaded rods from the ceiling with the possibility to adjust the height even after the pipe clamp / pipe is installed
- user friendly by rounded edges
- material: stainless steel 1.4404 (A4) - EN 10088, AISI 316L

Part No.	L	B	H	h	s	d1	k	For Rail	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)		
66587504	86 mm	40	45	41	4.0	Ø 12.2	-	Strut 41x41	50



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 575 BIS RapidStrut® Stainless Steel Slide Nut with Tabs
- 600 BIS Stainless Steel Hexagon Head Screw

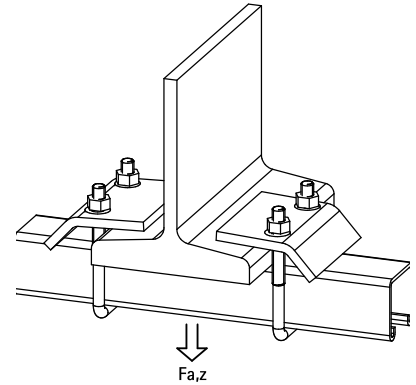
Complementary

- 582 BIS Strut Stainless Steel Washer (Flat)

BIS Strut Stainless Steel Beam Clamp

(M 62 16)

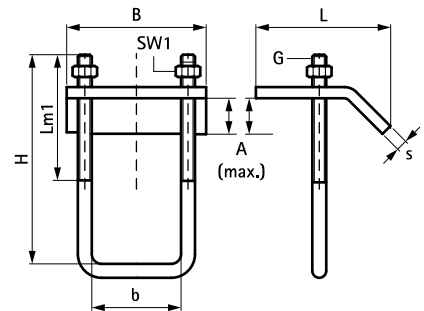
to connect Strut Rail to steel beam



Features and Benefits

- for a solid fixing under flanges without welding or drilling
- material: stainless steel 1.4401/1.4404 (A4) - EN 10088, AISI 316/316L
- always use 2 beam clamps per fixing

Part No.	A (mm)	G	L	B (mm)	H (mm)	s (mm)	Lm1 (mm)	SW1 (mm)	For Rail	F _{a,z} (N)	F _{a,z} (kg)	Pack 1
66587711	17.5	M10	69 mm	80	90	6.0	60	17	Strut 41x21 + 41x41	5,700		25
66587721	20.0	M10	69 mm	80	130	6.0	75	17	Strut 41x41D	5,700	570	25



Complementary

- 570 BIS RapidStrut® Stainless Steel Fixing Rail
- 571 BIS RapidStrut® Stainless Steel Fixing Rail Double

BIS Strut Stainless Steel Beam Clamp

(M 62 17)

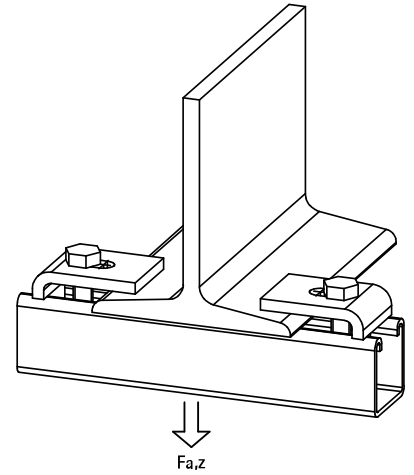
to make Strut rail fabrications



657 1 731



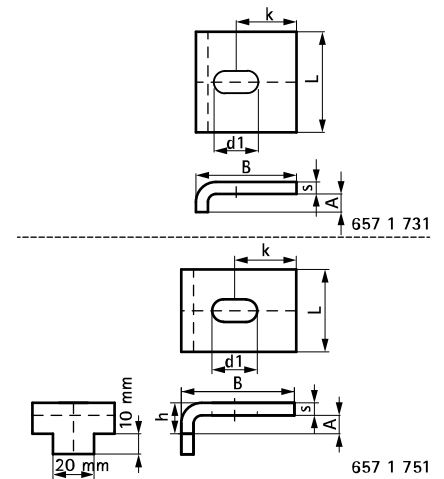
657 1 751



Features and Benefits

- for a solid fixing to steel construction
- material: stainless steel
- without the need for welding or drilling
- always use 2 beam clamps per fixing

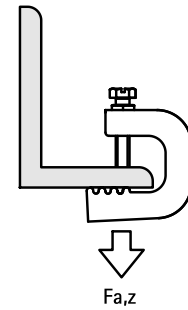
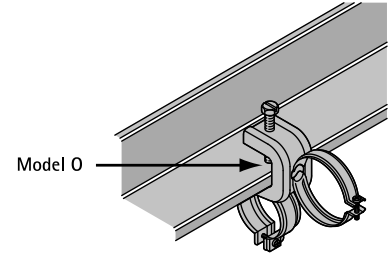
Part No.	A (mm)	L (mm)	B (mm)	h (mm)	s (mm)	d1 (mm)	k (mm)	F _{a,z} (N)	Pack 1
6571731	10	50 mm	50	-	6.0	22 x 11	30	8,000	50
6571751	10	40 mm	55	15	6.0	22 x 11	30	8,000	50



BIS Stainless Steel Beam Clamp Model O V2A

(M 62 25)

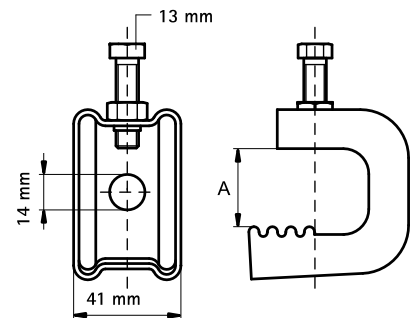
for flange



Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- up to flange thickness 45 mm
- with hole \varnothing 14 mm for fixing of BIS IC-clamp, stud bolt or S-Hook
- with serration for increased security
- material: stainless steel 1.4301 (AISI 304)
- see also: IC-clamp (for conduit or cable)

Part No.	A (mm)	$F_{a,z}$ (N)	Pack 1
6077720	≤ 20	1,100	25
6077730	≤ 30	1,200	25
6077745	≤ 45	1,300	25



BIS Stainless Steel Wall Plate Resistance Welded

(M 65 05)

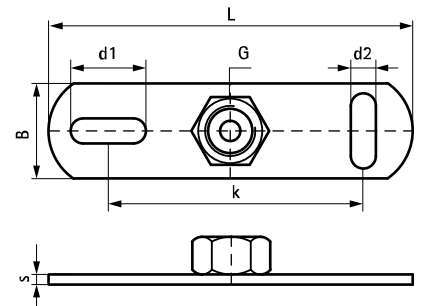
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded connection nut
- Part No. 670 7 OXX: material: stainless steel 1.4301 (AISI 304)
- Part No. 67170XX: material: stainless steel 1.4404 (AISI 316L)

Part No.	G	L	B	s	d1	d2	k	F _{a,z} (N)	Pack 1	Pack 2
			(mm)	(mm)	(mm)	(mm)	(mm)			
6707006	M6	80 mm	25	3.0	15 x 8.5	15 x 8.5	50	2,500	50	125
6707008	M8	80 mm	25	3.0	15 x 8.5	15 x 8.5	50	2,500	50	250
6707010	M10	80 mm	25	3.0	15 x 8.5	15 x 8.5	50	2,500	50	250
6717008	M8	80 mm	35	3.0	15 x 8.5	15 x 8.5	50	5,000	40	-
6717010	M10	145 mm	35	3.0	30 x 11.0	25 x 11.0	100	3,000	40	-



BIS Stainless Steel Wall Plate Resistance Welded

(M 65 07)

fixing to wall or ceiling



6717012

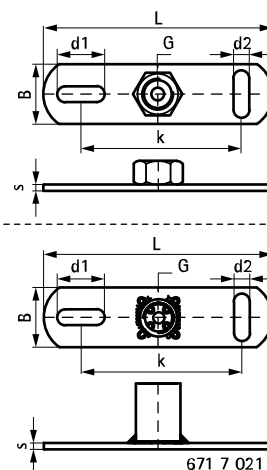
6717016

6717021

Features and Benefits

- slots at 90° to each other to simplify fixing
- material: stainless steel 1.4404 (AISI 316L)
- with CO₂ welded connection nut

Part No.	G	L	B	s	d1	d2	k	F _{a,z} (N)	Pack 1
			(mm)	(mm)	(mm)	(mm)	(mm)		
6717012	M12	145 mm	35	3.0	30 x 11.0	25 x 11.0	100	3,500	40
6717016	M16	145 mm	35	3.0	30 x 11.0	25 x 11.0	100	3,500	50
6717021	G1/2"	145 mm	35	3.0	30 x 11.0	25 x 11.0	100	3,000	50



Complementary

604 BIS Stainless Steel Threaded Rod

BIS Stainless Steel Wall Plate with Welded Stud Bolt 672

(M 65 10)

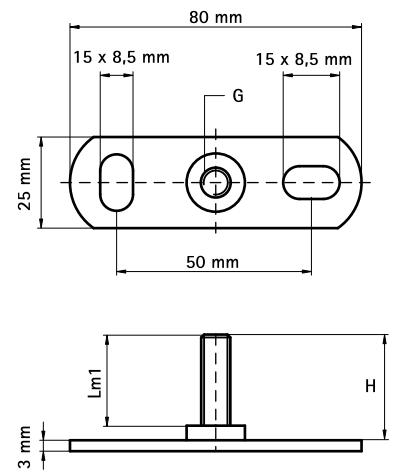
fixing to wall or ceiling



Features and Benefits

- slots at 90° to each other to simplify fixing
- material: stainless steel 1.4301 (AISI 304)
- with resistance welded male stud bolt

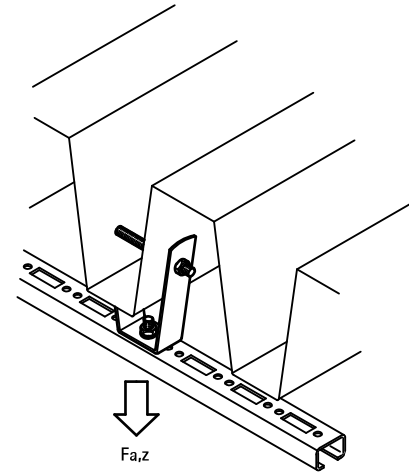
Part No.	G	H (mm)	Lm1 (mm)	F _{a,z} (N)	Pack 1	Pack 2
6727008	M8	44	35	2,500	50	200



BIS Stainless Steel Roofing Sheet Hanger

(M 67 05)

fixing to profiled roofing sheet

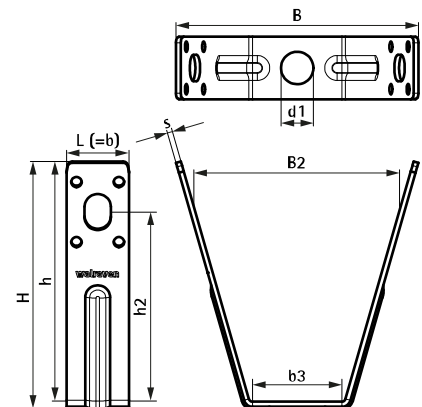


Features and Benefits

- for mounting to profiled roofing sheet by means of pop rivets or threaded rod
- material: stainless steel, A4
- for applications in environments requiring increased corrosion resistance
- variable distance to roof hanger by using a threaded rod

Part No.	L	B	B2	b3	H	h	s	d1	h2	Fa,z	Pack 1
		(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(N)	
6787001	25 mm	97.9	81.8	38	99.6	96.1	2.5	Ø 13.0 mm	75.7	2,300	50

Maximum load ($F_{a,z}$) depends on the load capacity of the trapezium shaped roofing sheet. Before mounting, the roof load capacity has to be confirmed by a structural engineer.



Complementary

429 BIS Hole Punching Plier

BIS Stainless Steel Hanger Bolt

fixing to wall or ceiling

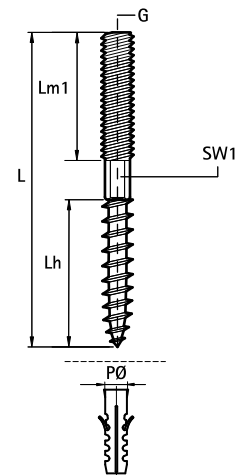
(M 75 05)



Features and Benefits

- material: stainless steel 1.4301 (AISI 304)

Part No.	G	L	Lh (mm)	Lm1 (mm)	PØ (mm)	Pack 1
6267805	M8	50 mm	23	27	10	100
6267808	M8	80 mm	35	35	10	100
6267810	M8	100 mm	50	40	10	100
6267812	M8	120 mm	50	40	10	100
6267816	M8	160 mm	45	50	10	50
6287006	M10	60 mm	20	40	12	100
6287008	M10	80 mm	40	40	12	100
6287012	M10	120 mm	50	40	12	50
6287016	M10	160 mm	60	50	12	50



BIS Stainless Steel Hexagon Head Screw

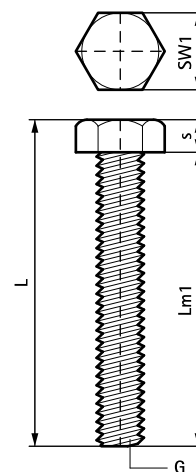
(M 80 05)



Features and Benefits

- material: stainless steel 1.4401 (AISI 316)

Part No.	Type	G	L	s (mm)	Lm1 (mm)	SW1 (mm)	Pack 1	Pack 2
6147825	DIN 933	M8	30 mm	5.0	25	13	100	-
6147840	DIN 933	M8	45 mm	5.0	40	13	100	-
6147860	DIN 933	M8	65 mm	5.0	60	13	50	200
6148025	DIN 933	M10	29 mm	4.0	25	17	100	-
6148040	DIN 933	M10	45 mm	5.0	40	17	100	-
6148060	DIN 933	M10	65 mm	5.0	60	17	50	100
6148225	DIN 933	M12	29 mm	4.0	25	19	50	100
6148240	DIN 933	M12	45 mm	5.0	40	19	50	200



Complementary

- 563 BIS Stainless Steel Washer (Flat)
- 601 BIS Stainless Steel Hexagon Nut

BIS Stainless Steel Hexagon Nut

(M 80 10)

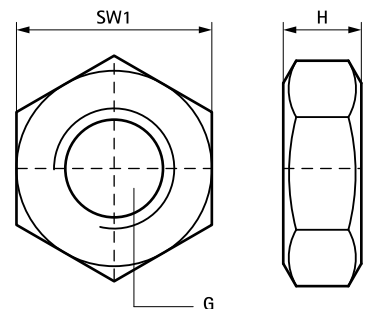


Features and Benefits

- material: stainless steel 1.4401 (AISI 316)

Part No.	Type	G	H (mm)	SW1 (mm)	Pack 1
6127006	DIN 934	M6	5.0	10	50
6127008	DIN 934	M8	6.5	13	50
6127010	DIN 934	M10	8.0	17	50
6127012	DIN 934	M12	10.0	19	100
6127016	DIN 934	M16	13.0	24	100

M10 and above tested for fire safety.



BIS Stainless Steel Chain (DIN 5685-1)

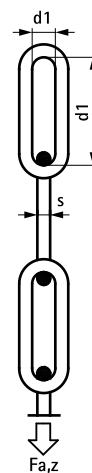
(M 85 05)



Features and Benefits

- long link
- according to DIN 5685-1
- material: stainless steel 1.4301 (AISI 304)

Part No.	L	s (mm)	d1 (mm)	F _{a,z} (N)	Pack 1
0917015	30 m	3.0	26 x 5.4	700	30
0917017	30 m	4.0	32 x 7.2	1,100	30



BIS Stainless Steel Stud Bolt

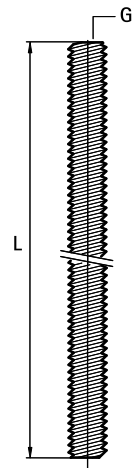
(M 90 03)

Features and Benefits

■ according to DIN 976-1

■ material: stainless steel 1.4301 (AISI 304)

Part No.	G	L	Pack 1	Pack 2
6317803	M8	30 mm	100	2,000
6317806	M8	60 mm	100	-
6317810	M8	100 mm	100	-
6317815	M8	150 mm	100	-



BIS Stainless Steel Threaded Rod

(M 90 05)

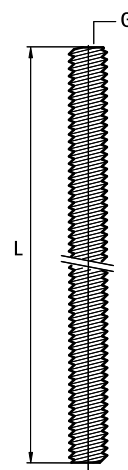
fixing to wall or ceiling



Features and Benefits

- according to DIN 976-1
- material: stainless steel

Part No.	Type	G	L	Material	BndS
6307006	DIN 976-1	M6	1 m	1.4301 (AISI 304)	100
6307008	DIN 976-1	M8	1 m	1.4301 (AISI 304)	50
6307010	DIN 976-1	M10	1 m	1.4301 (AISI 304)	25
6307012	DIN 976-1	M12	1 m	1.4301 (AISI 304)	20
6307016	DIN 976-1	M16	1 m	1.4301 (AISI 304)	10
6307020	DIN 976-1	M20	1 m	1.4301 (AISI 304)	5



Complementary

- 601 BIS Stainless Steel Hexagon Nut
- 563 BIS Stainless Steel Washer (Flat)
- 605 BIS Stainless Steel Stud Connector

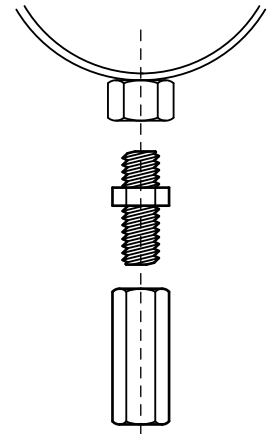
Complementary

- 607 BIS Stainless Steel Thread Adaptor
- 595 BIS Stainless Steel Wall Plate Resistance Welded

BIS Stainless Steel Stud Connector

adjustment of thread connection

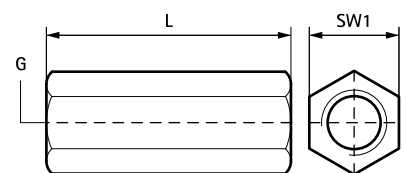
(M 90 10)



Features and Benefits

- to connect 2 male threaded components
- material: stainless steel 1.4301 (AISI 304)

Part No.	G	L	SW1 (mm)	F _{a,z} (N)	Pack 1
6457625	M6	25 mm	10	11,800	100
6457830	M8	30 mm	13	21,400	100
6457930	M10	30 mm	17	27,000	50
6457240	M12	40 mm	19	30,300	50



BIS Stainless Steel Stud Connector

(M 90 12)



Features and Benefits

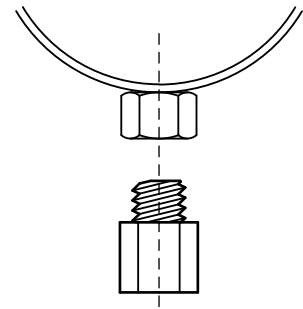
- material: stainless steel 1.4301 (AISI 304)

Part No.	G	L	F _{a,z} (N)	Pack 1	Pack 2
6457831	M8	30 mm	22,300	100	2,000
6457932	M10	30 mm	-	100	2,000

BIS Stainless Steel Thread Adaptor

(M 90 15)

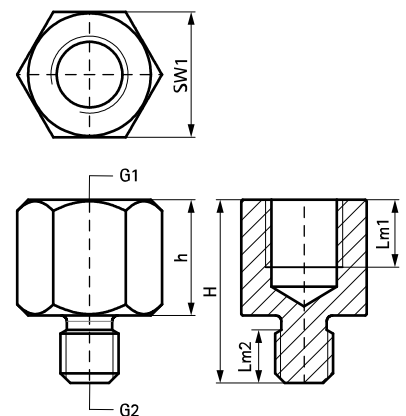
adjustment of thread connection



Features and Benefits

- to enlarge or reduce the thread size in the ■ material: stainless steel 1.4401 (AISI 316) connection of clamps, etc.

Part No.	H (mm)	h (mm)	G1	G2	Lm1 (mm)	Lm2 (mm)	SW1 (mm)	Pack 1	Pack 2
6477210	23	15	M10	M8	9.0	6.0	13	50	500
6477308	21	13	M8	M10	7.0	6.0	13	50	500
6477416	32	22	M16	M12	11.0	8.0	24	10	100
6477512	32	18	M12	M16	10.0	11.0	19	10	100
6477421	26	11	M10	G1/2	9.0	13.0	27	50	250



WDI1 Drop-in Anchor SSt

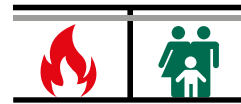
(M 95 21)

standard stainless steel drop-in anchor



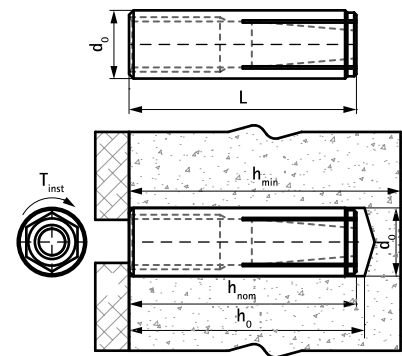
Features and Benefits

- simple and quick installation procedure
- medium load capacity
- made of stainless steel for use in external atmospheric environment
- no collar for anchor setting at greater hole depth
- material: stainless steel
- ETA ETAG001 Part 6 approval for multiple use for non-structural applications
- fire resistance class R30-R120 for design of anchorages under exposure to fire (M8-M16)
- substrate type:
 - cracked concrete
 - non-cracked concrete



Part No.	Code	Size	L	d ₀	h ₀	h _{min}	h _{nom}	Rec. Tension Load C20/25 Concrete (kN)	Pack 1	Pack 2
6103708	WDI1 SSt 8x30	M8	30 mm	10	≥ 32	80	≥ 30	0.68*	100	600
6103710	WDI1 SSt 10x40	M10	40 mm	12	≥ 42	80	≥ 40	1.09*	50	500
6103712	WDI1 SSt 12x50	M12	50 mm	15	≥ 53	100	≥ 50	1.56*	50	300
6103716	WDI1 SSt 16x65	M16	65 mm	20	≥ 70	130	≥ 65	2.81*	25	200

* Recommended loads: are stated for multiple use for non-structural applications according to ETAG001, Part 6; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4. The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design. For more information, please refer to the ETA report.



Complementary

- 497 WDI1 Setting Tool
- 516 WIS Brush
- 517 WIS Blow Pump

Complementary

- 522 WDI1 SD Stop Drill Bit
- 523 WSDS+ 3CE Concrete Drill Bit

WTB1 Throughbolt Anchor SSt

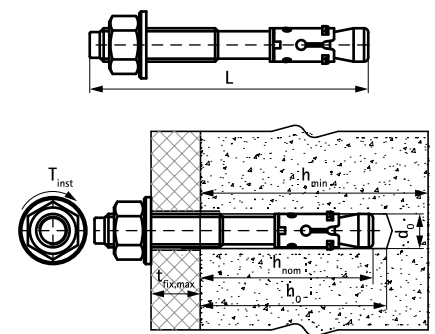
(M 95 22)

high performance stainless steel expansion anchor for cracked concrete



Features and Benefits

- high load capacity
- pre- and through-fixing
- made of stainless steel for use in external atmospheric environment
- two embedment depths provide installation flexibility
- material: stainless steel, A4
- ETA Option 1 approval for cracked and non-cracked concrete
- fire resistance class R30-R120 for design of anchorages under exposure to fire
- substrate type:
 - cracked concrete
 - non-cracked concrete
 - stone



Part No.	Code	Size	L	d ₀	h ₀	h _{min}	h _{nom}	t _{fix,max}	Rec. Tension Load C20/25 Uncracked Concrete (kN)	Rec. Tension Load C20/25 Cracked Concrete (kN)	Pack 1
				(mm)	(mm)	(mm)	(mm)	(mm)			
609871080	WTB1 SSt 8x75	M8	75 mm	8	55	100	55	10	3.57*	2.38*	100
609871081	WTB1 SSt 8x115	M8	115 mm	8	55	100	55	50	3.57*	2.38*	100
609871100	WTB1 SSt 10x95	M10	95 mm	10	69	100	69	15	7.62*	4.29*	50
609871101	WTB1 SSt 10x130	M10	130 mm	10	69	100	69	50	7.62*	4.29*	50
609871120	WTB1 SSt 12x125	M12	125 mm	12	80	140	80	30	11.90*	5.71*	50
609871121	WTB1 SSt 12x150	M12	150 mm	12	80	140	80	55	11.90*	5.71*	50

* Recommended loads: are stated for single anchors; apply to anchors correctly installed at maximum embedment depth; include partial safety factor and an overall partial safety factor for action of 1.4.
 The partial safety factor for action depends on the type of loading and shall be taken from national regulations. All anchor failure modes and the entire relevant product European Technical Assessment must be considered for anchor design.
 For more information, please refer to the ETA report.

Complementary

- 516 WIS Brush
- 517 WIS Blow Pump
- 522 WD11 SD Stop Drill Bit

Complementary

- 523 WSDS+ 3CE Concrete Drill Bit

WIS Threaded Rod SSt

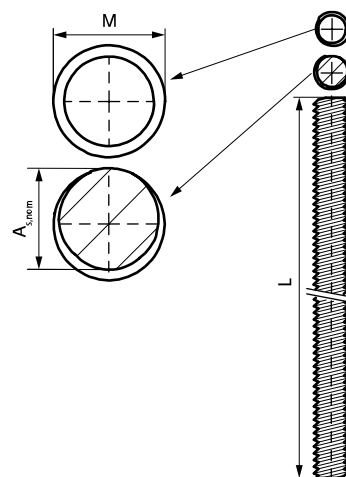
(M 95 24)



Features and Benefits

- according to DIN 976-1
- thread with 60° angle provides best performance
- material: stainless steel 1.4401 (AISI 316)

Part No.	Code	Thread (M)	L	A _{s,nom} (mm ²)	BndS
63079108	WIS TR SSt M8x1000	M8	1 m	36.6	50
63079110	WIS TR SSt M10x1000	M10	1 m	58.0	25
63079112	WIS TR SSt M12x1000	M12	1 m	84.3	20
63079116	WIS TR SSt M16x1000	M16	1 m	157.0	20



Complementary

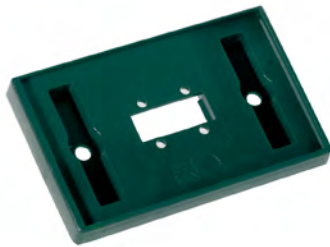
- 523 WSDS+ 3CE Concrete Drill Bit
- 513 WIS Chemical Anchor WPSF100
- 514 WIS Chemical Anchor WVSF200

Complementary

- 560 BIS RapidRail® Stainless Steel Slide Nut
- 561 BIS Stainless Steel Slide Nut
- 601 BIS Stainless Steel Hexagon Nut

BIS IKS-2000[®] Text Card Holder

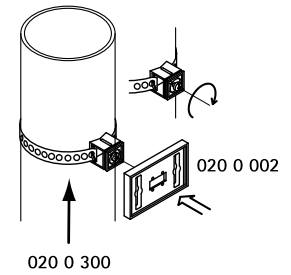
(N 30 05)



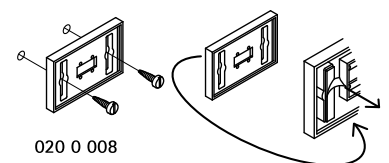
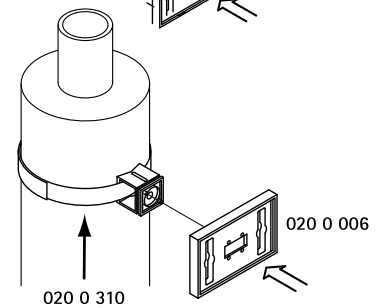
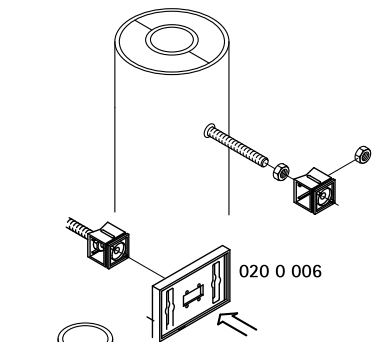
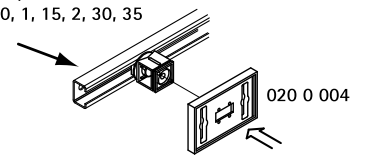
Features and Benefits

- material: mounting cube made of PA (polyamide - nylon6); text card holder made of PP (polypropylene)
- temperature resistance from -15 °C to +80 °C

Part No.	Model	Pack 1	Pack 2
0200002	With threaded connector for fixing by BIS IKS 2000 [®] Mounting Band (Part No. 020 0 300)	10	100
0200004	With threaded connector and slide nut for fixing to BIS RapidRail [®] type WMO, 1, 15, 2, 30 or 35	10	250
0200006	With threaded connector for fixing to threaded rod or by BIS IKS-2000 [®] Velcro (Part No. 020 0 310)	10	250
0200008	Self-adhesive or for fixing on walls using screws	10	100
0200032	Universal holder with transparent cover plate	250	-
0200040	Transparent cover plate	250	-



BIS RapidRail[®]
WMO, 1, 15, 2, 30, 35

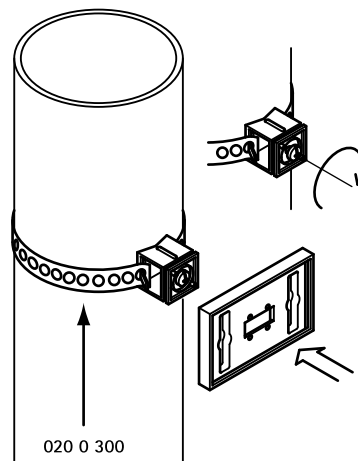


Complementary

- 612 BIS IKS-2000[®] Mounting Band
- 613 BIS IKS-2000[®] Velcro

BIS IKS-2000[®] Mounting Band

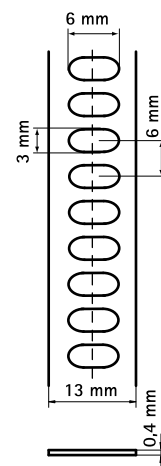
(N 30 10)



Features and Benefits

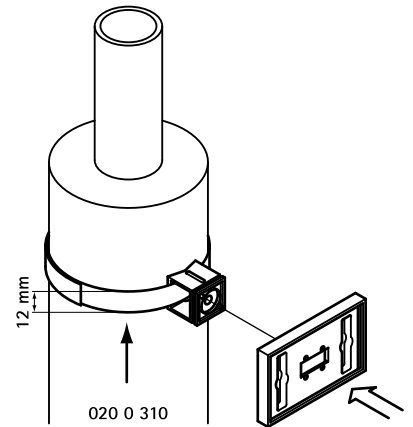
- for fastening of IKS Text Card Holders
- material: stainless steel 1.4404 (AISI 316L)

Part No.	L	Pack 1	Pack 2	App.
0200300	20 m	1	10	roll



BIS IKS-2000[®] Velcro

(N 30 15)



Features and Benefits

- for fastening of IKS Text Card Holders

Part No.	L	b (mm)	Pack 1	Pack 2	App.
0200310	25 m	12	1	48	roll

BIS IKS 2000[®] Text Card (DIN 2403)

(N 35 05)

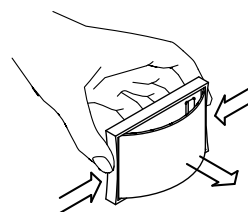
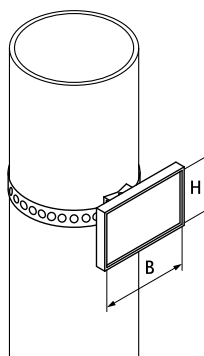
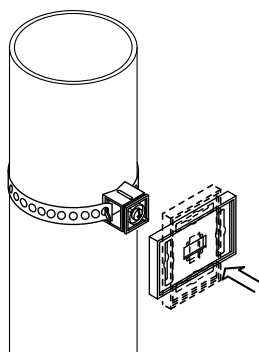
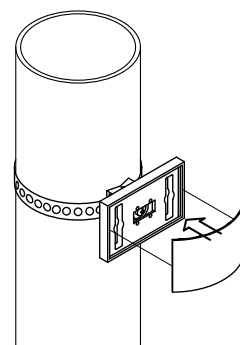
identification of pipes



Features and Benefits

- text card colours according to DIN 2403
- various printing possibilities (full-colours, logo, symbols, barcode, etc.)
- full-colour only on white text card
- Part No. 020 0 02X: printing (1 colour or full-colour)
- material: hard PVC (polyvinylchloride)
- resistant to UV, ozone and chemicals
- resistant to scratches, washable

Part No.	B (mm)	H (mm)	Colour	Medium	Pack 1	Pack 2
0200101	86	54	White	-	1	250
0200102	86	54	Green	water	1	500
0200103	86	54	Blue	oxygen	1	500
0200104	86	54	Red	steam	1	500
0200105	86	54	Grey	air	1	500
0200106	86	54	Yellow	flammable gasses	1	500
0200112	86	54	Transparent	-	1	100
0200021	-	-	1-colour	-	1	-
0200024	-	-	Full-colour	-	1	-



BIS Manifold Fixing

(0 05 05)

fixing for manifold-units Ø 3/4 - 1.1/2" (26,9 - 48,3 mm)

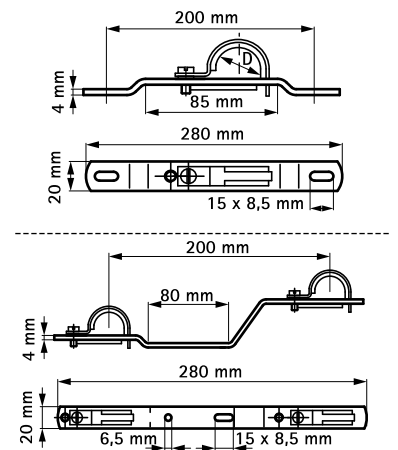


Features and Benefits

- material: steel
- zinc plated
- sound proofing lining made of natural rubber, black
- sound insulating lining according DIN 4109

Part No.	D (mm)	D (")	Model	Pack 1
3944001	26.9	3/4	Single	50
3944002	34.0	1	Single	50
3944007	48.3	1 1/2	Single	40
3944021	26.9	3/4	Double	25
3943227	26.9	3/4	Double	25
3944027	48.3	1 1/2	Double	25

Other types on request.



BIS Shouldered Masonry Nail

(0 15 10)

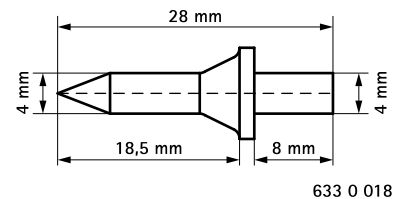
for floor clamps



Features and Benefits

- Part No. 6330018: can be hammered into concrete without pre-drilling a hole
- Part No. 6330018: material: steel 1.1740, tempered
- Part No. 6900000: with hand protection and ergonomic hand grip

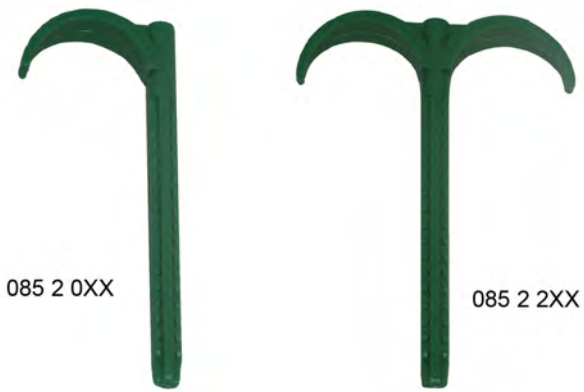
Part No.	Model	Pack 1	Pack 2
6330018	BIS Shouldered Masonry Nail	100	3,000
6900000	BIS Hammer-in tool	1	-



BIS Plug Clamp

for floor pipe 28 mm

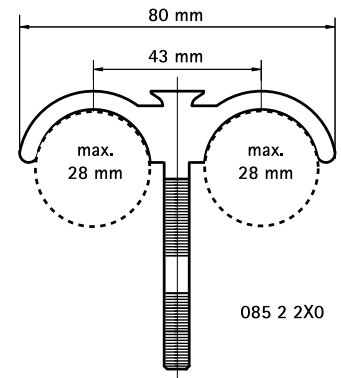
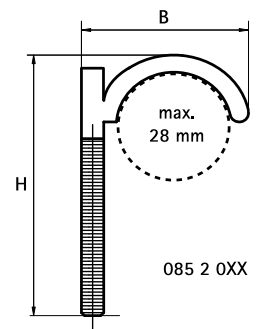
(0 15 15)



Features and Benefits

- to fix pipe-in-pipe pipes before casting
- material: PA (polyamide), green
- top floor layer

Part No.	D (mm)	Model	B (mm)	H (mm)	Pack 1	Pack 2
0852050	28	Single	45	75	100	1,000
0852080	28	Single	45	115	50	1,000
0852013	28	Single	42	135	50	-
0852250	28	Double	80	75	50	500
0852280	28	Double	80	115	50	500
0852213	28	Double	76	135	50	-



BIS Tacker System

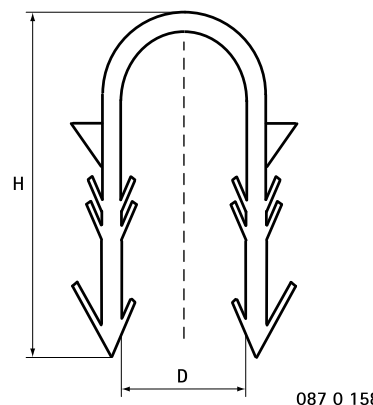
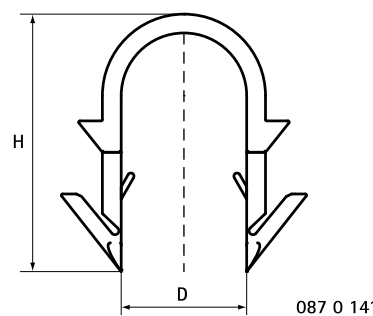
(0 15 20)

for floor pipe \varnothing 14 - 20 mm



Features and Benefits

- the BIS Tacker system consists of wide and stable clamps and a problem free tacker device
- Part No. 693 0 001: Tacker device for a quick processing of tacker clamps (KA8 and KAL)
- Part No. 0870141 (type KA8): for insulating plates from 25 mm thickness with foil
- Part No. 0870158 (type KAL): for insulating plates from 40 mm thickness without foil (e.g. Styrodur®, Styropor®)
- for floor pipe up to \varnothing 20 mm
- Part No. 6930001: Tacker device for a quick processing of tacker clamps (KA8 and KAL)
- by means of self-adhesive tape attached together per 20 pieces
- material: PP (polypropylene), black



Part No.	D (mm)	Model	Type	H (mm)	Pack 1	Pack 2
6930001	0.0	Tacker	KA	-	1	-

BIS Twinlok® Test Plug

(P 16 05)

temperature, pressure and flow measurements

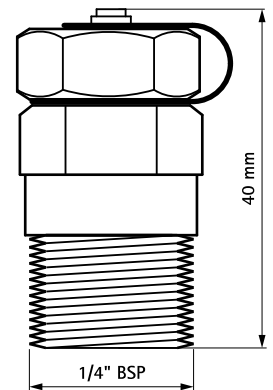


Features and Benefits

- for temperature, pressure and flow measurements
- 1/4" BSPT Thread
- max. pressure 500 P.S.I. (35 bar)
- EPDM core
- max. temperature 135 °C

Part No.	Model	Pack 1	Pack 2
0634000	Test Plug, brass	10	100
0634001	Test Plug, brass, extended	5	50
0634009	Test Plug, stainless steel	10	100

Note: The use of Silicone oil is recommended as a lubricant when inserting probes, to avoid possible damage to the Twinlok® Test Plug core.



Pressure and Temperature Gauge

(P 16 10)

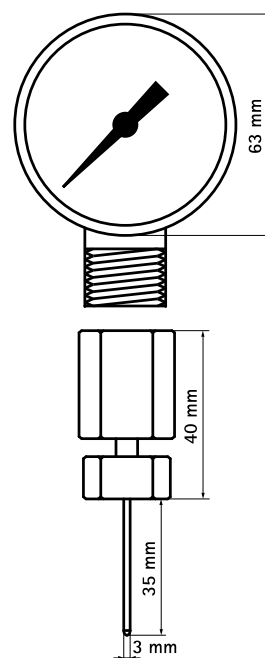
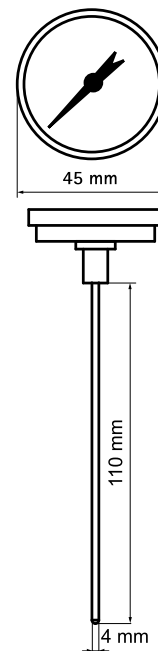
temperature, pressure and flow measurements



Features and Benefits

- calibrated in P.S.I. and Bar
- liquid filled gauges also available

Part No.	Model	Type	Pack 1
0634533	Pressure gauge adaptor probe	1/4" BSP	1



CS P1 PU Foam Gun

to apply fire resistant sealant

(U 08 65)



Features and Benefits

- easy to handle, good dosing
- for applying Tangit FP 100 Fire Protection 1C Foam

Part No.	Model	Cont.	Pack 1
2181111	CS P1 PU Foam Gun	-	1

Technical Information / Indexes

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Information: Steel Pipes

Steel pipe suitable for screwing				Weight			L (max.)*
D		s	empty	filled	insulated	m	
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)		(kg / m)
10.2	1/8	6	2.00	0.41	0.44	0.59	1.25
13.5	1/4	8	2.35	0.65	0.71	0.88	1.50
17.2	3/8	10	2.35	0.85	0.97	1.17	2.25
21.3	1/2	15	2.65	1.22	1.42	1.63	2.75
26.9	3/4	20	2.65	1.58	1.95	2.20	3.00
33.7	1	25	3.25	2.44	3.02	3.51	3.50
42.4	1 1/4	32	3.25	3.14	4.15	4.86	3.75
48.3	1 1/2	40	3.25	3.61	4.98	5.94	4.25
60.3	2	50	3.65	5.10	7.31	8.83	4.75
76.1	2 1/2	65	3.65	6.51	10.23	12.77	5.50
88.9	3	80	4.05	8.47	13.59	17.08	6.00
114.3	4	100	4.50	12.10	20.80	26.31	6.00
139.7	5	125	4.85	16.20	29.47	35.45	6.00
165.1	6	150	4.85	19.20	38.16	44.83	6.00

Steel pipe (seamless)				Weight			L (max.)*
D		s	empty	filled	insulated	m	
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)		(kg / m)
10.2	1/8	6	1.6	0.34	0.38	0.53	1.25
13.5	1/4	8	1.8	0.52	0.60	0.77	1.50
17.2	3/8	10	1.8	0.68	0.83	1.02	2.25
21.3	1/2	15	2.0	0.96	1.19	1.40	2.75
26.9	3/4	20	2.3	1.40	1.79	2.22	3.00
33.7	1	25	2.6	1.99	2.63	3.12	3.50
42.4	1 1/4	32	2.6	2.55	3.64	4.39	3.75
48.3	1 1/2	40	2.6	2.93	4.39	5.39	4.25
60.3	2	50	2.9	4.11	6.44	8.03	4.75
76.1	2 1/2	65	2.9	5.24	9.12	11.70	5.50
88.9	3	80	3.2	6.76	12.10	15.72	6.00
114.3	4	100	3.6	9.83	18.83	24.25	6.00
139.7	5	125	4.0	13.40	27.02	33.05	6.00
168.3	6	150	4.5	18.20	38.37	43.66	6.00
219.1	8	200	6.3	33.10	67.75	72.95	6.00
273.0	10	250	6.3	41.40	96.11	104.15	6.00
323.9	12	300	7.1	55.50	131.57	141.56	6.00
355.6	14	350	8.0	68.60	160.95	170.74	6.00
406.4	16	400	8.8	86.30	207.05	217.91	6.00
457.0	18	450	10.0	110.00	262.67	274.44	6.00
508.0	20	500	11.0	135.00	323.79	335.87	6.00
610.0	24	600	12.5	184.00	457.26	471.16	6.00

Norm:
DIN EN 10255 - 11/2004

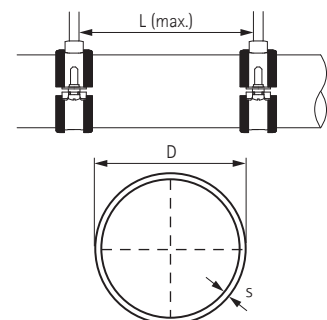
Material:
Steel 33-2, according to DIN 17100

Insulation:
mineral wool (density = 80 kg/m³)

Norm:
DIN EN 10220 - 03/2003

Material:
Steel 37

Insulation:
mineral wool (density = 80 kg/m³)



This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.

* Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!

Information: Steel Pipes / Cast Iron Pipe

Welded steel pipe				Weight			L (max.)*
D		s	empty	filled	insulated	(kg / m)	
(mm)	(")						(DN)
10.2	1/8	6	1.6	0.34	0.38	0.53	1.25
13.5	1/4	8	1.8	0.52	0.60	0.77	1.50
17.2	3/8	10	1.8	0.68	0.83	1.02	2.25
21.3	1/2	15	2.0	0.95	1.19	1.40	2.75
26.9	3/4	20	2.0	1.23	1.64	2.07	3.00
33.7	1	25	2.0	1.56	2.25	2.74	3.50
42.4	1 1/4	32	2.3	2.27	3.39	4.17	3.75
48.3	1 1/2	40	2.3	2.61	4.11	5.13	4.25
60.3	2	50	2.3	3.29	5.73	7.38	4.75
76.1	2 1/2	65	2.6	4.71	8.66	11.29	5.50
88.9	3	80	2.9	6.15	11.57	15.17	6.00
114.3	4	100	3.2	8.77	17.91	23.31	6.00
139.7	5	125	3.6	12.10	25.88	31.92	6.00
168.3	6	150	4.0	16.20	36.57	43.16	6.00
219.1	8	200	4.5	23.80	58.78	66.55	6.00
273.0	10	250	5.0	33.00	88.13	96.81	6.00
323.9	12	300	5.6	44.00	121.84	131.49	6.00
355.6	14	350	5.6	48.30	142.06	153.04	6.00
406.4	16	400	6.3	62.20	184.80	196.81	6.00
457.0	18	450	6.3	70.00	226.01	239.27	6.00
508.0	20	500	6.3	77.90	270.56	286.13	6.00

Cast iron pipe				Weight			L (max.)*
D		s	empty	filled	insulated	(kg / m)	
(mm)	Tol. (mm)						(DN)
48		40	3.0	3.10	4.48	-	2.00
58		50	3.5	4.30	6.34	-	2.00
78	+2.0 / -1.0	70	3.5	5.90	9.86	-	2.00
83		75	3.5	6.30	10.83	-	2.00
110		100	3.5	8.40	16.73	-	1.50
135		125	4.0	11.80	24.46	-	1.50
160	+2.0 / -2.0	150	4.0	14.10	32.24	-	1.50
210		200	5.0	23.10	54.50	-	1.50
274	+2.5 / -2.5	250	5.5	33.30	87.60	-	1.50
326		300	6.0	43.20	120.60	-	1.50
429	+2.0 / -3.0	400	8.1	77.65	211.49	-	1.50
532	+2.0 / -3.5	500	9.0	107.21	314.71	-	1.50
635	+2.0 / -4.0	600	9.9	140.95	438.20	-	1.50

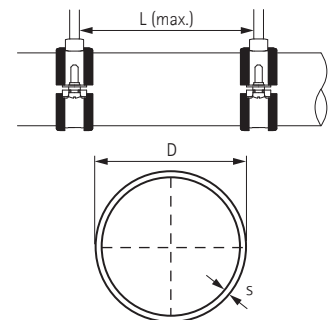
Norm:
DIN EN 10220 - 03/2003

Material:
Steel 37-2

Insulation:
mineral wool (density = 80 kg/m³)

Norm:
DIN 19522 - 01/2000

Material:
Cast iron according to ISO 185 (EN 587)



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* Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!

Information: Copper Pipe / PE-Pipe

Copper pipe				Weight			L (max.)*
D			s	empty	filled	insulated	
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)	(kg / m)	m
10.0	-	-	1.0	0.25	0.30	0.45	1.00
12.0	-	10	1.0	0.31	0.39	0.55	1.25
15.0	-	-	1.0	0.39	0.52	0.70	1.25
18.0	-	15	1.0	0.48	0.68	0.87	1.50
22.0	-	20	1.0	0.59	0.90	1.11	2.00
28.0	-	25	1.5	1.11	1.60	2.05	2.25
35.0	-	32	1.5	1.41	2.21	2.70	2.75
42.0	-	40	1.5	1.70	2.89	3.69	3.00
54.0	-	50	2.0	2.91	4.87	6.19	3.50
64.0	-	-	2.0	3.47	6.29	8.19	4.00
76.1	-	65	2.0	4.14	8.22	10.93	4.25
88.9	-	80	2.0	4.86	10.52	14.26	4.75
108.0	-	-	2.5	7.37	15.70	20.98	5.00
133.0	-	-	3.0	10.90	23.57	29.50	5.00
159.0	-	-	3.0	13.09	31.46	38.06	5.00
219.0	-	-	3.0	18.12	53.73	61.87	5.00
267.0	-	-	3.0	22.10	75.60	-	5.00

Norm:

EN 1057 - 05/1996 (ex. DIN 1786)

Material:

Copper according to EN 1412

Insulation:

 mineral wool (density = 80 kg/m³)

PE pipe				Weight			L (max.)*
D			s	empty	filled	insulated	
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)	(kg / m)	m
50	-	-	1.8	0.29	1.98	-	1.05
63	-	-	2.0	0.40	3.13	-	1.20
75	-	-	2.3	0.55	4.44	-	1.30
90	-	-	2.8	0.79	6.38	-	1.45
110	-	-	3.4	1.17	9.53	-	1.60
125	-	-	3.9	1.51	12.29	-	1.70
140	-	-	4.3	1.88	15.43	-	1.80
160	-	-	4.9	2.42	19.13	-	1.90
180	-	-	5.5	3.07	25.49	-	2.00
200	-	-	6.2	3.84	31.47	-	2.00
225	-	-	6.9	4.77	39.79	-	2.25
250	-	-	7.7	5.92	49.12	-	2.50
280	-	-	8.6	7.40	61.64	-	2.80
315	-	-	9.7	9.37	77.96	-	3.15

Norm:

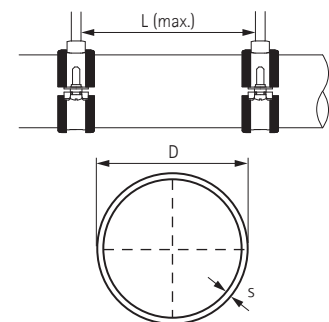
DIN 8074 - 08/1999

Series: 16

SDR: 33

Material:

HD PE



This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.

* Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!

Information: PE-Pipe / PVC-Pipe

PE pipe				Weight			L
D			s	empty	filled	insulated	(max.)*
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)	(kg / m)	m
40	-	-	1.8	0.23	1.27	-	0.95
50	-	-	2.0	0.31	1.98	-	1.05
63	-	-	2.5	0.49	3.13	-	1.20
75	-	-	2.9	0.68	4.43	-	1.30
90	-	-	3.5	0.98	6.39	-	1.45
110	-	-	4.2	1.43	9.53	-	1.60
125	-	-	4.8	1.84	12.29	-	1.70
140	-	-	5.4	2.32	15.42	-	1.80
160	-	-	6.2	3.04	20.14	-	1.90
180	-	-	6.9	3.79	25.47	-	2.00
200	-	-	7.7	4.69	31.44	-	2.00
225	-	-	8.6	5.89	39.79	-	2.25
250	-	-	9.6	7.30	49.12	-	2.50
280	-	-	10.7	9.10	61.60	-	2.80
315	-	-	12.1	11.60	77.98	-	3.00

PVC pipe				Weight			L
D			s	empty	filled	insulated	(max.)*
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)	(kg / m)	m
40	-	-	1.8	0.33	1.37	-	0.90
50	-	-	1.8	0.42	2.11	-	1.10
63	-	-	1.9	0.56	3.31	-	1.20
75	-	-	2.2	0.78	4.69	-	1.35
90	-	-	2.7	1.13	6.75	-	1.50
110	-	-	3.2	1.64	10.07	-	1.70
125	-	-	3.7	2.13	12.99	-	1.80
140	-	-	4.1	2.65	16.29	-	1.95
160	-	-	4.7	3.44	21.24	-	2.10
180	-	-	5.3	4.37	26.90	-	2.20
200	-	-	5.9	5.37	33.17	-	2.30
225	-	-	6.6	6.76	41.97	-	2.40
250	-	-	7.3	8.31	51.81	-	2.50
280	-	-	8.2	10.40	64.95	-	2.80
315	-	-	9.2	13.20	82.26	-	3.00

Norm:
DIN 8074 - 08/1999

Series:
12,5

SDR:
26

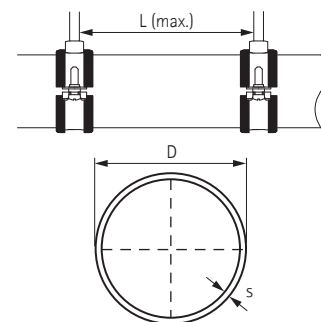
Material:
HD PE

Norm:
DIN 8062 - 11/1988

Series:
3

SDR:
34,3

Material:
PVC-U (unplasticized)



This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.

* Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!

Information: PVC-Pipe

PVC pipe				Weight			L
D			s	empty	filled	insulated	(max.)*
(mm)	(")	(DN)	(mm)	(kg / m)	(kg / m)	(kg / m)	m
25	-	-	1.5	0.17	0.55	-	0.65
32	-	-	1.8	0.26	0.90	-	0.70
40	-	-	1.9	0.35	1.38	-	0.90
50	-	-	2.4	0.55	2.16	-	1.10
63	-	-	3.0	0.85	3.40	-	1.20
75	-	-	3.6	1.22	4.83	-	1.35
90	-	-	4.3	1.75	6.95	-	1.50
110	-	-	5.3	2.61	10.37	-	1.70
125	-	-	6.0	3.34	13.36	-	1.80
140	-	-	6.7	4.18	16.76	-	1.95
160	-	-	7.7	5.47	21.88	-	2.10
180	-	-	8.6	6.88	27.69	-	2.20
200	-	-	9.6	8.51	34.17	-	2.30
225	-	-	10.8	10.80	43.28	-	2.40
250	-	-	11.9	13.20	53.37	-	2.50
280	-	-	13.4	16.60	66.93	-	2.80
315	-	-	15.0	20.90	84.66	-	3.00

Norm:

DIN 8062 - 11/1988

Series:

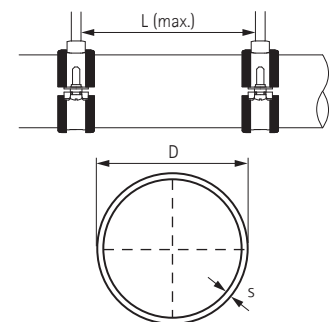
4

SDR:

21

Material:

PVC-U (unplasticized)

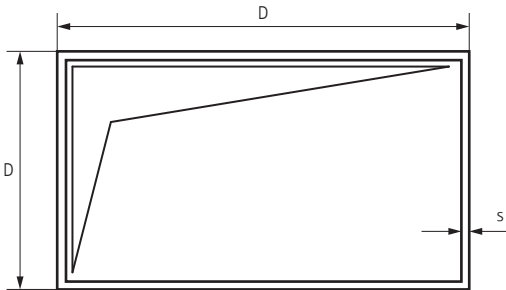


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* Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!

Information: Air Ducts (Non-Insulated)

Declaration of weight in kg/m



D (mm)	s = 0.75 mm			s = 0.88 mm						D (mm)
	200	224	250	280	315	355	400	450	500	
200	6.1	6.5	6.9	8.6	9.2	10.0	10.8	11.7	12.6	200
224	-	6.9	7.3	9.1	9.7	10.4	11.2	12.1	13.0	224
250	-	-	7.7	9.5	10.1	10.9	11.7	12.6	13.5	250
280	-	-	-	10.1	10.7	11.4	12.2	13.1	14.0	280
315	-	-	-	-	11.3	12.0	12.8	13.7	14.6	315
355	-	-	-	-	-	12.8	13.6	14.5	15.4	355
400	-	-	-	-	-	-	14.4	15.3	16.2	400
450	-	-	-	-	-	-	-	16.2	17.1	450
500	-	-	-	-	-	-	-	-	18.0	500

Values for the calculation:

Density air duct: Steel plate $\rho_p = 7,850 \text{ kg/m}^3$

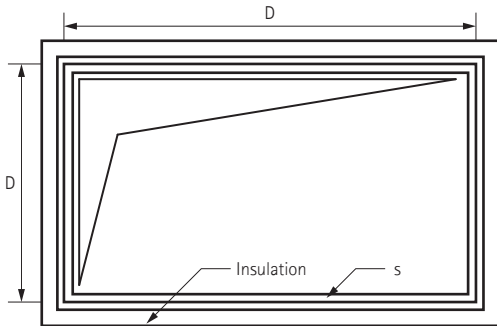
Weights for flanges and duct bracing were estimated.

D (mm)	s = 1.00 mm						s = 1.13 mm						s = 1.5 mm					D (mm)
	560	630	710	800	900	1,000	1,120	1,250	1,400	1,600	1,800	2,000	2,240	2,500	2,800	3,150		
200	15.5	16.9	18.6	20.4	22.5	24.5	30.4	33.4	36.9	41.5	46.1	50.7	62.3	68.9	76.5	85.5	200	
224	16.0	17.4	19.1	20.9	22.9	25.0	31.0	34.0	37.5	42.1	46.7	51.3	62.9	69.5	77.1	86.1	224	
250	16.5	18.0	19.6	21.4	23.5	25.5	31.6	34.6	38.1	42.7	47.3	51.9	63.5	70.2	77.8	86.7	250	
280	17.1	18.6	20.2	22.0	24.1	26.1	32.3	35.3	38.7	43.4	48.0	52.6	64.3	70.9	78.6	87.5	280	
315	17.9	19.3	20.9	22.8	24.8	26.8	33.1	36.1	39.6	44.2	48.8	53.4	65.2	71.8	79.5	88.4	315	
355	18.7	20.1	21.7	23.6	25.6	27.7	34.0	37.0	40.5	45.1	49.7	54.3	66.2	72.8	80.5	89.4	355	
400	19.6	21.0	22.7	24.5	26.5	28.6	35.1	38.1	41.5	46.1	50.7	55.4	67.4	74.0	81.6	90.6	400	
450	20.6	22.0	23.7	25.5	27.6	29.6	36.2	39.2	42.7	47.3	51.9	56.5	68.6	75.3	82.9	91.8	450	
500	21.6	23.1	24.7	26.5	28.6	30.6	37.4	40.4	43.8	48.4	53.0	57.7	69.9	76.5	84.2	93.1	500	
560	22.9	24.3	25.9	27.8	29.8	31.8	38.7	41.7	45.2	49.8	54.4	59.0	71.4	78.1	85.7	94.7	560	
630	-	25.7	27.3	29.2	31.2	33.3	40.4	43.4	46.8	51.4	56.0	60.7	73.2	79.9	87.5	96.4	630	
710	-	-	29.0	30.8	32.9	34.9	42.2	45.2	48.7	53.3	57.9	62.5	75.3	81.9	89.5	98.5	710	
800	-	-	-	32.7	34.7	36.7	44.3	47.3	50.7	55.4	60.0	64.6	77.6	84.2	91.8	100.8	800	
900	-	-	-	-	36.7	38.8	46.6	49.6	53.0	57.7	62.3	67.3	80.1	86.7	94.4	103.3	900	
1,000	-	-	-	-	-	40.8	48.9	51.9	55.4	60.0	64.6	69.2	82.7	89.3	96.9	105.9	1,000	
1,120	-	-	-	-	-	-	51.7	54.7	58.1	62.7	67.3	72.0	85.7	92.4	100.0	108.9	1,120	
1,250	-	-	-	-	-	-	-	57.7	61.1	65.7	70.3	75.0	89.0	95.7	103.3	112.3	1,250	
1,400	-	-	-	-	-	-	-	-	64.6	69.2	73.8	78.4	92.9	99.5	107.2	116.1	1,400	
1,600	-	-	-	-	-	-	-	-	-	73.8	78.4	83.0	98.0	104.6	112.3	121.2	1,600	
1,800	-	-	-	-	-	-	-	-	-	-	83.0	87.6	103.1	109.7	117.4	126.3	1,800	
2,000	-	-	-	-	-	-	-	-	-	-	-	92.3	108.2	114.8	122.5	131.4	2,000	
2,240	-	-	-	-	-	-	-	-	-	-	-	-	114.3	120.9	128.6	137.5	2,240	
2,500	-	-	-	-	-	-	-	-	-	-	-	-	-	127.6	135.2	144.1	2,500	
2,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	142.9	151.8	2,800	
3,150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160.7	3,150	

This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.

Information: Air Ducts (Insulated)

Declaration of weight in kg/m



D (mm)	s = 0.75 mm			s = 0.88 mm						D (mm)
	200	224	250	280	315	355	400	450	500	
200	9.2	9.9	10.3	12.2	13.1	14.0	15.1	16.3	17.6	200
224	-	10.4	10.8	12.8	13.6	14.6	15.7	16.9	18.1	224
250	-	-	11.4	13.4	14.3	15.3	16.3	17.6	18.8	250
280	-	-	-	14.2	15.0	16.0	17.1	18.3	19.5	280
315	-	-	-	-	15.9	16.8	17.9	19.1	20.4	315
355	-	-	-	-	-	17.8	18.9	20.1	21.3	355
400	-	-	-	-	-	-	20.0	21.2	22.4	400
450	-	-	-	-	-	-	-	22.4	23.7	450
500	-	-	-	-	-	-	-	-	24.9	500

Values for the calculation:

Density air duct: Steel plate zp. = 7,850 kg/m³

Density insulation: Mineral wool = approx. 80 kg/m³

Weights for flanges and duct bracing were estimated.

D (mm)	s = 1.0 mm						s = 1.13 mm						s = 1.25 mm				D (mm)
	560	630	710	800	900	1,000	1,120	1,250	1,400	1,600	1,800	2,000	2,240	2,500	2,800	3,150	
200	20.9	22.8	24.9	27.3	30.0	32.7	39.4	43.2	47.7	53.5	59.4	65.3	78.4	86.7	96.2	107.4	200
224	21.5	23.4	25.6	28.0	30.6	33.3	40.1	43.9	48.4	54.3	60.1	66.0	79.1	87.4	97.0	108.2	224
250	22.2	24.1	26.2	28.7	31.3	34.0	40.9	44.7	49.1	55.0	60.9	66.8	80.0	88.3	97.8	109.0	250
280	23.0	24.9	27.1	29.5	32.1	34.8	41.8	45.6	50.0	55.9	61.8	67.7	80.9	89.2	98.8	110.0	280
315	24.0	25.8	28.0	30.4	33.1	35.8	42.8	46.6	51.0	56.9	62.8	68.7	82.0	90.3	99.9	111.1	315
355	25.0	26.9	29.1	31.4	34.2	36.8	44.0	47.8	52.2	58.1	64.0	69.9	83.3	91.6	101.2	112.4	355
400	26.2	28.1	30.3	32.7	35.4	38.0	45.3	49.1	53.5	59.4	65.3	71.2	84.8	93.1	102.6	113.8	400
450	27.6	29.5	31.6	34.0	36.7	39.4	46.8	50.6	55.0	60.9	66.8	72.7	86.4	94.7	104.2	115.4	450
500	28.9	30.8	33.0	35.4	38.0	40.7	48.2	52.1	56.5	62.4	68.3	74.2	88.0	96.2	105.8	117.0	500
560	30.5	32.4	34.6	37.0	39.7	42.3	50.0	53.8	58.3	64.2	70.0	75.9	89.9	98.2	107.7	118.9	560
630	-	34.3	36.4	38.9	41.5	44.2	52.1	55.9	60.3	66.2	72.1	78.0	92.1	100.4	110.0	121.1	630
710	-	-	38.6	41.0	43.7	46.4	54.4	58.3	62.7	68.6	74.5	80.4	94.7	103.0	112.5	123.7	710
800	-	-	-	43.4	46.1	48.8	57.1	60.9	65.3	71.2	77.1	83.0	97.5	105.8	115.4	126.6	800
900	-	-	-	-	48.8	51.5	60.0	63.9	68.3	74.2	80.1	86.0	100.7	109.0	118.6	129.8	900
1,000	-	-	-	-	-	54.1	63.0	66.8	71.2	77.1	83.0	88.9	103.9	112.2	121.8	132.9	1,000
1,120	-	-	-	-	-	-	66.5	70.3	74.8	80.7	86.5	92.4	107.7	116.0	125.6	136.8	1,120
1,250	-	-	-	-	-	-	-	74.2	78.6	84.5	90.4	96.3	111.9	120.2	129.8	140.9	1,250
1,400	-	-	-	-	-	-	-	-	83.0	88.9	94.8	100.7	116.7	125.0	134.5	145.7	1,400
1,600	-	-	-	-	-	-	-	-	-	94.8	100.7	106.6	123.1	131.4	140.9	152.1	1,600
1,800	-	-	-	-	-	-	-	-	-	-	106.6	112.5	129.4	137.7	147.3	158.5	1,800
2,000	-	-	-	-	-	-	-	-	-	-	-	118.4	135.8	144.1	153.7	164.9	2,000
2,240	-	-	-	-	-	-	-	-	-	-	-	-	143.5	151.8	161.4	172.5	2,240
2,500	-	-	-	-	-	-	-	-	-	-	-	-	-	160.1	169.6	180.8	2,500
2,800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179.2	190.4	2,800
3,150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	201.6	3,150

This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.

Information: Material Properties Plastics

ABS – Acrylonitrile–Butadiene–Styrene

Temperature-resistance:

Permanently up to 70 °C, briefly up to 85 °C and to about minus 40 °C*.

Resistant to:

Formic acid, citric acid, lactic acid.

Conditionally resistant to:

Hydrochloric acid, sulphuric acid.

Not resistant to:

Acetone, petrol, benzene, solvents for paints and lacquers, butyric acid, chlorine, acetic acid, nitric acid.

PA – PolyAmide (Nylon)

Temperature-resistance:

Permanently up to about 90 °C, briefly up to about 130 °C and to about minus 40 °C*.

Resistant to:

Petrol, benzene, diesel oil, acetone, solvents for paints and lacquers, oils and greases.

Low tendency to stress cracking.

Not resistant to:

Bleach, most acids, chlorine.

PA–GV – Polyamide, fibreglass reinforced

Temperature-resistance:

Permanently up to about 100–110 °C, briefly up to 160 °C and to about minus 40 °C*.

Resistant to:

Petrol, benzene, diesel oil, acetone, solvents for paints and lacquers, oils and greases.

Low tendency to stress cracking.

Not resistant to:

Bleach, most acids, chlorine.

PE – PolyEthylene

Temperature-resistance:

Hard types permanently up to about 90 °C, briefly up to about 105 °C
soft types permanently up to about 80 °C, briefly up to about 100 °C
and to about minus 40 °C*.

Resistant to:

Alkalis and inorganic acids.

Conditionally resistant to:

Acetone, organic acids, petrol, benzene, diesel oil, most oils.

Not resistant to:

Chlorine, hydrocarbons, oxidising acids.

POM – PolyOxyMethylene

(polyacetal, polyformaldehyde)

Temperature-resistance:

Permanently up to about 100 °C, briefly up to about 130 °C and to minus 40 °C*.

Resistant to:

Acetone, ether, petrol, weak acetic acid, benzene, heating oil, oils and greases, toluene.

Not resistant to:

Methylene chloride, trichloroethylene, hydrochloric acid, nitric acid, sulphuric acid.

PP – PolyPropylene

Temperature-resistance:

Permanently about 90 °C, briefly up to about 110 °C and to about minus 30 °C*.

Resistance to chemicals generally as for polyethylene.

PS – PolyStyrene

Temperature-resistance:

Because of its relatively high sensitivity to the effects of chemicals, its use is not recommended at temperatures above normal room temperature, about 25 °C.

Resistance to cold: to about minus 40 °C*.

Resistant to:

Alkalis, most acids, alcohol.

Conditionally resistant to:

Oils and greases.

Not resistant to:

Butyric acid, concentrated nitric acid, concentrated acetic acid, acetone, ether, petrol and benzene, solvents for paints and lacquers, chlorine, diesel fuel.

PVC (hard) – PolyVinylChloride (hard)

Temperature-resistance:

Permanently up to about 65 °C, briefly up to about 75 °C and to about minus 30 °C*.

Resistant to:

Weak acids, alkalis, oils and greases, petrol.

Not resistant to:

Strong acids, benzene, acetone, iodine, toluene, trichloroethylene.

*The minus values apply only for parts in the quiescent condition with no severe impact stress.

Information: Surface Treatment

To improve the corrosion resistance of steel products, Walraven uses all kinds of methods. Below you will find an overview:

BIS UltraProtect® 1000 system

The BIS UltraProtect® 1000 system is the ideal and most durable solution for securing or supporting mechanical installations, solar systems and many other types of installations. The products in the BIS UltraProtect® 1000 system have very high corrosion resistance and can be applied in C1-C4 environments. BIS UltraProtect® 1000 products effortlessly withstand a salt spray test of at least 1,000 hours* (in accordance with ISO 9227).

Although the system utilizes a relatively thin protective coating, the corrosion resistance is high. Not only does the BIS UltraProtect® 1000 system offer a smooth and fine finish, the products are also visually appealing. An additional benefit of the relatively thin protective coating is that threaded products are also well protected against corrosion.

The BIS UltraProtect® 1000 products, including threaded items such as bolts, nuts and threaded rods, have superior corrosion resistance.**

Zinc plating (blue)

The protective coating is applied in an electrolytic process after cleaning, degreasing and pickling. The thickness of the layer of zinc is between 5 and 15 µm and is determined by the current intensity and the duration of the galvanizing process. After the galvanizing process the products are passivated to extend the protection period.

Pre-galvanizing

Pre-galvanizing is a continuous thermal galvanizing process applied before material treatment in manufacturing processes. The strip steel is guided through a bath containing liquid zinc after having been cleaned, degreased and pickled. The thickness of the layer of zinc is between 20 and 25 µm. Later the steel is cut to the required width. The sides of this cut material are not galvanized. This is also the case with any holes that may be drilled in the pre-galvanized material. The sides of material thinner than 1,5 mm are protected somewhat by the zinc layer on the top and bottom by the electrolytic process of 'pulling together'.

This surface protection is suitable for threaded products, which are to be used indoors or in a non-corrosive environment.

* Until the occurrence of maximum 5% red rust.

** The warranty conditions are applicable for C1-C4 corrosive environments according to ISO 12944-2. See our website walraven.com for further information.

Hot dip galvanizing

The products to be treated are cleaned, degreased and pickled and subsequently put into an immersion bath of liquid zinc. The immersion bath has a temperature of 550 °C. In this process an alloy of zinc/iron develops on the surface and is then covered by a layer of pure zinc.

The thickness of the zinc layer varies between 50 and 100 µm. In consequence the process is less suitable for products with threaded holes or rods. Hot dip galvanized products are suitable for indoor as well as outdoor use and also for damp and light-corrosive environments.

The application for hot dip galvanizing processes is limited to the heavy systems.

Stainless steel 316 (1.4401) and 316L (1.4404)

Stainless steel 316 is one of the best corrosion resistant types of stainless steel. It offers a superior corrosion resistance in many corrosive environments. The protective layer is damaged by treatments such as punching, drilling and welding. That is why, after the last treatment, all stainless steel products receive an extra treatment which pickles and passivates to restore the protective layer. Products from stainless steel 316 can be applied in aggressive situations such as a sea climate and industry.

Powder coating

A protective layer of epoxy powder in any specified color is baked onto pre-treated products. The pre-treatment may differ per product and per application. In marine environment, the most durable solution is the combination of BIS UltraProtect® 1000 combined with powder coating.

The combined treatment reaches well over 1,000 hours in salt spray test without any signs of red rust.

Information: Surface Treatment (cont.)

Delta-Tone 9000

Delta-Tone 9000 consists of zinc and aluminium particles that are held together by an inorganic binder. This offers an effective protection against corrosion even with a limited thickness of the coating. Delta-Tone 9000 is applied in an immersion/centrifugal or spray process and then dried at a temperature of 200 °C. With this method an even layer is formed over the whole product with a thickness of 10 – 12 µm. Subsequently Delta-Tone 9000 forms a connection with the metal underneath.

In contrast to electrolytic and thermal galvanizing, with Delta-Tone 9000 there is no danger of hydrogen embrittlement in materials with an increased carbon content, such as spring steel. To improve the corrosion resistance, the process can be repeated which increases the thickness each time by 10 – 12 µm.

Products protected by Delta-Tone 9000 are suitable for outdoor use as well as moderate corrosive environments.

Surface treatment	Thickness protection layer (µm)	Hours until 5% red rust*
BIS UltraProtect® 1000	- **	1,000
Zinc plating (blue)	5 - 10	72
Pre-galvanizing	20 - 25	150
Hot dip galvanizing	50 - 80	300 - 600
Powder coating	100	1,000
Delta-Tone 9000	10 - 12	480

* Until the occurrence of maximum 5% red rust.

** Method and thickness protection layer differ per product.

Walraven products are not treated with surface treatments containing Chromium 6.

Salt-spray test

To compare the protection duration of various surface treatments, a salt-spray test is carried out according to ISO 9227. In this test products are placed in a closed cabinet and sprayed with a salt solution. The products will start to corrode. The point at which 'white' and then 'red' rust appears is noted down.

This test does not give a perfect protection duration (this depends on the surroundings in which the product is applied), but does offer a comparative view of the various surface treatments.

Information: Thermal Expansion

ABS – Acrylonitrile–Butadiene–Styrene

Temperature-resistance:

Permanently up to 70 °C, briefly up to 85 °C and to about minus 40 °C*.

Resistant to:

Formic acid, citric acid, lactic acid.

Conditionally resistant to:

Hydrochloric acid, sulphuric acid.

Not resistant to:

Acetone, petrol, benzene, solvents for paints and lacquers, butyric acid, chlorine, acetic acid, nitric acid.

PA – PolyAmide (Nylon)

Temperature-resistance:

Permanently up to about 90 °C, briefly up to about 130 °C and to about minus 40 °C*.

Resistant to:

Petrol, benzene, diesel oil, acetone, solvents for paints and lacquers, oils and greases.

Low tendency to stress cracking.

Not resistant to:

Bleach, most acids, chlorine.

PA–GV – Polyamide, fibreglass reinforced

Temperature-resistance:

Permanently up to about 100-110 °C, briefly up to 160 °C and to about minus 40 °C*.

Resistant to:

Petrol, benzene, diesel oil, acetone, solvents for paints and lacquers, oils and greases.

Low tendency to stress cracking.

Not resistant to:

Bleach, most acids, chlorine.

PE – PolyEthylene

Temperature-resistance:

Hard types permanently up to about 90 °C, briefly up to about 105 °C
soft types permanently up to about 80 °C, briefly up to about 100 °C
and to about minus 40 °C*.

Resistant to:

Alkalis and inorganic acids.

Conditionally resistant to:

Acetone, organic acids, petrol, benzene, diesel oil, most oils.

Not resistant to:

Chlorine, hydrocarbons, oxidising acids.

POM – PolyOxyMethylene

(polyacetal, polyformaldehyde)

Temperature-resistance:

Permanently up to about 100 °C, briefly up to about 130 °C and to minus 40 °C*.

Resistant to:

Acetone, ether, petrol, weak acetic acid, benzene, heating oil, oils and greases, toluene.

Not resistant to:

Methylene chloride, trichloroethylene, hydrochloric acid, nitric acid, sulphuric acid.

PP – PolyPropylene

Temperature-resistance:

Permanently about 90 °C, briefly up to about 110 °C and to about minus 30 °C*.

Resistance to chemicals generally as for polyethylene.

PS – PolyStyrene

Temperature-resistance:

Because of its relatively high sensitivity to the effects of chemicals, its use is not recommended at temperatures above normal room temperature, about 25 °C.

Resistance to cold: to about minus 40 °C*.

Resistant to:

Alkalis, most acids, alcohol.

Conditionally resistant to:

Oils and greases.

Not resistant to:

Butyric acid, concentrated nitric acid, concentrated acetic acid, acetone, ether, petrol and benzene, solvents for paints and lacquers, chlorine, diesel fuel.

PVC (hard) – PolyVinylChloride (hard)

Temperature-resistance:

Permanently up to about 65 °C, briefly up to about 75 °C and to about minus 30 °C*.

Resistant to:

Weak acids, alkalis, oils and greases, petrol.

Not resistant to:

Strong acids, benzene, acetone, iodine, toluene, trichloroethylene.

*The minus values apply only for parts in the quiescent condition with no severe impact stress.

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0635325	440	08505225	95	0855015	82	0880139	135	0909200	392
0635332	440	08506120	95	0855018	82	0880159	135	0909201	392
0635340	440	0852013	617	0855022	82	0880168	135	0909211	392
0635350	440	0852050	617	0855028	82	0880219	135	0909250	392
0635356	440	0852080	617	0855031	82	0880273	135	0909251	392
0635363	440	0852213	617	0855035	82	0880324	135	0909920	393
0635375	440	0852250	617	0855038	82	0880355	135	0910013	463
0635390	440	0852280	617	0855042	82	0880368	135	0910015	463
0635391	440	0854000	85	0855050	82	0880406	135	0910017	463
0635392	440	0854006	92	0855054	82	0880458	135	0912022	464
0635393	440	0854007	92	0855063	82	0880508	135	0912025	464
0828012	62	0854010	79	0855812	83	0880609	135	0912027	464
0828015	62	0854012	79	0855815	83	0881076	139	0912030	464
0828022	62	0854015	79	0855818	83	0881088	139	0913032	464
0828028	62	08540155	81	0855822	83	0881114	139	0917015	602
0828035	62	0854018	79	0855828	83	0881133	139	0917017	602
0830012	401	0854022	79	0855831	83	0881139	139	09409005	488
0830017	401	0854028	79	08580602	398	0881159	139	09481101	482
0830117	401	0854031	79	08580702	398	0881168	139	09481102	482
0831012	401	0854035	79	08580802	398	0881219	139	09481103	482
0831017	401	0854038	79	08580902	398	0881273	139	09481105	482
0831026	401	0854042	79	08581002	398	0881323	139	09481201	482
0832019	402	0854050	79	08590602	397	0881355	139	09481202	482
0832714	402	0854054	79	08590702	397	0881368	139	09481203	482
0832719	402	0854063	79	08590802	397	0881406	139	09481205	482
0832728	402	08541075	80	08590902	397	0900401	396	09482261	483
0833012	549	08541090	80	08591002	397	0900402	396	09482262	483
0833015	403	08541110	80	0860017	60	0900403	396	09482265	483
0833017	549	0854300	85	0860021	60	0900406	395	09482281	483
0833026	549	0854301	88	0860027	60	0901290	394	09482282	483
0833915	403	0854307	92	0861017	60	0901300	394	09482283	483
0834117	405	0854308	92	0861021	60	0901370	394	09482285	483
0835000	436	0854313	90	0861027	60	0903200	394	09486201	484

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09486202	484	2025020	316	2084300100	53	220100351	133	3008160	42
09486203	484	2025022	316	2084306017	51	220100421	133	3008169	42
09489000	486	2025024	316	2084306021	51	220100481	133	3008180	42
09489001	486	2025026	316	2084306027	51	220100541	133	3008200	42
09489115	485	2055007	317	2084306034	51	220100601	133	3008210	42
09489215	485	2055008	317	2084308027	51	220100761	133	3008225	42
09489300	487	2055009	317	2084308034	51	220100891	133	3017017	545
1401065	97	2055010	317	2084308042	51	220101141	133	3017022	545
1411065	97	2055012	317	2084308049	51	220101401	133	3017030	545
1452006	98	2055013	317	2084308060	51	220101681	133	3017034	545
1452008	98	2055014	317	2084308076	51	220102191	133	3017042	545
1481000	99	2055016	317	2084310090	51	220200171	134	3017051	545
1481010	99	2055020	317	2084310114	51	220200211	134	3017060	545
1487000	550	2055022	317	2084310140	51	220200271	134	3017076	545
1487010	550	2055023	317	2084310168	51	220200351	134	3017089	545
2005012	321	2055024	317	2084310220	51	220200421	134	3017118	545
2005014	321	2055025	317	2084312140	51	220200481	134	3027068	545
2005016	321	2055026	317	2084314168	51	220200541	134	3027076	545
2005018	321	2061006	319	2084316219	51	220200601	134	3027085	545
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2005030	321	2061016	319	2084708027	548	220201141	134	3027111	545
2005040	321	2061019	319	2084708034	548	220201401	134	3027118	545
2005050	321	2061022	319	2084708042	548	220201681	134	3027127	545
2005055	321	2061029	319	2084708049	548	220202191	134	3027134	545
2005060	321	2061035	319	2084708060	548	2622010	143	3027144	545
2005070	321	2061041	319	2084708076	548	2622015	143	3027155	545
2005075	321	2062006	319	2084710090	548	2622020	143	3027162	545
2005085	321	2062010	319	2084710114	548	2622025	143	3027169	545
2005090	321	2062013	319	2084712140	548	2622032	143	3027200	545
2005095	321	2062016	319	2084716219	548	2622040	143	3027219	545
2005100	321	2062019	319	2084716273	548	2622050	143	31085014	17
2005105	321	2062022	319	2084718323	548	2622065	144	31085019	17
2005110	321	2062029	319	2085306021	52	2622070	144	31085023	17
2005120	321	2062035	319	2085308027	52	2622080	144	31085028	17
2005130	321	2062041	319	2085308034	52	2622100	144	31085035	17
2005140	321	2063010	319	2085308042	52	2622125	144	31085039	17
2005150	321	2063013	319	2085308049	52	2622150	144	31085045	17
2005170	321	2063016	319	2085308060	52	3008014	42	31085052	17
2005200	321	2063019	319	2085308076	52	3008019	42	31085058	17
2005225	321	2063022	319	2085310090	52	3008023	42	31085064	17
2005250	321	2063029	319	2085310114	52	3008028	42	31085070	17
2015021	315	2063035	319	2085312140	52	3008035	42	31085079	17
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2015033	315	2081310025	50	2105090	320	3008045	42	31085091	17
2015042	315	2081310032	50	2105110	320	3008052	42	31085097	17
2015048	315	2081310040	50	2105140	320	3008058	42	31085105	17
2015060	315	2081312050	50	2105160	320	3008064	42	31085115	17
2025004	316	2081312065	50	2105200	320	3008070	42	31085130	17
2025006	316	2081312080	50	2105225	320	3008079	42	31085140	17
2025008	316	2081316100	50	2105250	320	3008083	42	31085160	17
2025010	316	2081316125	50	2105315	320	3008091	42	31085169	17
2025012	316	2081316150	50	2181111	621	3008105	42	3117015	544
2025014	316	2081320200	50	220100171	133	3008115	42	3117018	544
2025016	316	2081320250	50	220100211	133	3008130	42	3117023	544
2025018	316	2081320300	50	220100271	133	3008140	42	3117029	544

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3117035	544	31285083	18	33025046	43	33068183	46	33078140	47
3117043	544	31285091	18	33025052	43	33068202	46	33078154	47
3117049	544	31285097	18	33025061	43	33068227	46	33078183	47
3117056	544	31285105	18	33025067	43	33068241	46	33078202	47
3117063	544	31285115	18	33035014	44	33068254	46	33078219	47
3117067	544	31285130	18	33035019	44	33068264	46	33078227	47
3117076	544	31285140	18	33035024	44	33068279	46	33078254	47
3117091	544	31285160	18	33035030	44	33068289	46	33078279	47
3117106	544	31285169	18	33035037	44	33068302	46	33078289	47
3117116	544	31285180	18	33035046	44	33068325	46	33078325	47
31185014	16	31285200	18	33035052	44	33068360	46	33078360	47
31185019	16	31285210	18	33035061	44	33068374	46	33078408	47
31185023	16	31285225	18	33035067	44	33068389	46	33078436	47
31185028	16	3173075	36	33035074	44	33068408	46	33078458	47
31185035	16	3173078	36	33035081	44	33068418	46	33078509	47
31185039	16	3173085	36	33035087	44	33068436	46	33078564	47
31185045	16	3173116	36	33035095	44	33068458	46	33088169	49
31185052	16	3173132	36	33035103	44	33068509	46	33088183	49
31185058	16	3173141	36	33035112	44	33077078	547	33088202	49
31185064	16	3173168	36	33035118	44	33077085	547	33088227	49
31185070	16	3173219	36	33035127	44	33077092	547	33088254	49
31185079	16	3188016	33	33035137	44	33077099	547	33088289	49
31185083	16	3188020	33	33035144	44	33077106	547	33088325	49
3127018	544	3188025	33	33035153	44	33077116	547	33088360	49
3127023	544	3188032	33	33035162	44	33077123	547	33088408	49
3127029	544	3188040	33	33035172	44	33077133	547	33088458	49
3127035	544	3188050	33	33035183	44	33077140	547	33088509	49
3127043	544	3188056	33	33035194	44	33077149	547	33088564	49
3127049	544	3188058	33	33035205	44	33077169	547	33138019	25
3127056	544	3188063	33	33035216	44	33077183	547	33138023	25
3127063	544	3188075	33	33035225	44	33077202	547	33138029	25
3127067	544	3188078	33	33038019	45	33077219	547	33138035	25
3127076	544	3188090	33	33038023	45	33077227	547	33138045	25
3127085	544	3188110	33	33038030	45	33077241	547	33138051	25
3127091	544	3188125	33	33038036	45	33077250	547	33138059	25
3127106	544	3188135	33	33038042	45	33077264	547	33138064	25
3127116	544	3188160	33	33038045	45	33077275	547	33148071	25
3127132	544	3188200	33	33038052	45	33077289	547	33148078	25
3127141	544	3205015	57	33038058	45	33077325	547	33148085	25
3127168	544	3205022	57	33038065	45	33077341	547	33148092	25
3127210	544	3205028	57	33038071	45	33078019	47	33148109	25
3127219	544	3205033	57	33048078	45	33078023	47	33148116	25
3127225	544	3211015	29	33048085	45	33078030	47	33148133	25
3127250	544	3211022	29	33048092	45	33078036	47	33148140	25
31285014	18	3215015	29	33048106	45	33078042	47	33148169	25
31285019	18	3215017	29	33048116	45	33078045	47	33148188	25
31285023	18	3215021	29	33048123	45	33078052	47	33148204	25
31285028	18	3215027	29	33048133	45	33078058	47	33148213	25
31285035	18	3215033	29	33048140	45	33078065	47	33148227	25
31285039	18	3225015	96	33048154	45	33078071	47	33168169	26
31285045	18	3225022	96	33048169	45	33078078	47	33168188	26
31285052	18	33025014	43	33048183	45	33078085	47	33168204	26
31285058	18	33025019	43	33048202	45	33078092	47	33168213	26
31285064	18	33025024	43	33048219	45	33078106	47	33168227	26
31285070	18	33025030	43	33048227	45	33078116	47	33168250	26
31285079	18	33025037	43	33068169	46	33078133	47	33168275	26

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33168364	26	33435014	24	3368028	153	3396140	20	3404091	15
33168408	26	33435019	24	3368035	153	3396160	20	3404114	15
33168458	26	33435024	24	3368042	153	3396169	20	3404141	15
33168509	26	33435030	24	3368054	153	3396180	20	3404168	15
33177078	546	33435037	24	3373018	11	3396200	20	3408050	37
33177085	546	33435046	24	3373023	11	3396210	20	3408070	37
33177092	546	33435052	24	3373028	11	3396225	20	3408075	37
33177109	546	33435061	24	3373035	11	33965014	21	3408090	37
33177116	546	33435067	24	3373043	11	33965019	21	3408100	37
33177133	546	33435074	24	3373051	11	33965023	21	3408125	37
33177140	546	33435081	24	3373056	11	33965028	21	3408137	37
33177169	546	33435087	24	3373063	11	33965035	21	3408150	37
33177188	546	33435095	24	3374018	11	33965039	21	3408200	37
33177204	546	33435103	24	3374023	11	33965045	21	3413014	12
33177213	546	33435112	24	3374028	11	33965052	21	3413018	12
33177227	546	33435118	24	3374035	11	33965058	21	3413023	12
33177250	546	33435127	24	3374043	11	33965064	21	3413028	12
33177275	546	33435137	24	3374051	11	33965070	21	3413035	12
33177325	546	33435144	24	3374056	11	33965079	21	3413039	12
33178019	27	33435153	24	3374063	11	33965083	21	3413043	12
33178023	27	33435162	24	3385012	28	33965091	21	3413045	12
33178029	27	33435172	24	3385016	28	33965105	21	3413053	12
33178035	27	33435183	24	3385018	28	33965115	21	3413054	12
33178045	27	33435194	24	3385022	28	33965130	21	3413063	12
33178051	27	33435205	24	3385028	28	33965140	21	3423168	13
33178059	27	33435216	24	3385036	28	33965160	21	3423210	13
33178064	27	33435225	24	3385042	28	33965169	21	3423219	13
33178071	27	3362018	19	3385048	28	33965180	21	3483018	32
33178078	27	3362023	19	3385057	28	33965200	21	3483023	32
33178085	27	3362028	19	3385060	28	33965210	21	3483028	32
33178092	27	3362035	19	3385070	28	33965225	21	3483035	32
33178109	27	3362043	19	3385076	28	3403018	12	3483043	32
33178116	27	3362051	19	3385089	28	3403023	12	3483053	32
33178133	27	3362054	19	3385108	28	3403028	12	3505015	58
33178140	27	3362062	19	3385114	28	3403035	12	3505022	58
33178169	27	3363014	19	3393218	31	3403043	12	3505028	58
33178188	27	3363018	19	3393223	31	3403053	12	3515015	58
33178204	27	3363023	19	3393228	31	3403054	12	3515022	58
33178213	27	3363028	19	3393235	31	3403063	12	3515028	58
33178227	27	3363035	19	3396014	20	3403064	13	3535015	30
33178250	27	3363043	19	3396019	20	3403070	13	3535017	30
33178275	27	3363051	19	3396023	20	3403080	13	3535021	30
33178325	27	3363054	19	3396028	20	3403091	13	3535027	30
33178364	27	3363062	19	3396035	20	3403105	13	3535033	30
33178408	27	3363070	35	3396039	20	3403114	13	3861021	59
33178458	27	3363075	35	3396045	20	3403119	13	3861027	59
33178509	27	3363080	35	3396052	20	3403125	13	3861033	59
33335014	23	3363090	35	3396058	20	3403141	13	3861043	59
33335019	23	3363100	35	3396064	20	3404018	14	3861061	59
33335024	23	3363125	35	3396070	20	3404023	14	3862040	59
33335030	23	3363137	35	3396079	20	3404028	14	3862050	59
33335037	23	3363150	35	3396083	20	3404035	14	3862070	59
33335046	23	3363200	35	3396091	20	3404043	14	3862100	59
33335052	23	3368015	153	3396105	20	3404053	14	3943227	615
33335061	23	3368018	153	3396115	20	3404063	14	3944001	615

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3944021	615	4120110	166	4337063	66	4389930	67	4620049	55
3944027	615	4120130	166	4337075	66	4443032	64	4620057	55
4001080	68	4120150	166	4337090	66	4443040	64	4620061	55
4001100	68	4120180	166	4337110	66	4443050	64	4620077	55
4031080	69	4120200	166	4337125	66	4443056	64	4620089	55
4031100	69	4125001	164	4337160	66	4443063	64	4620108	55
4103080	163	4125003	164	4337200	66	4443070	64	4620115	55
4103100	163	4125004	165	4337250	66	4443075	64	4620133	55
4103112	163	4125005	165	4337315	66	4443080	64	4620140	55
4103125	163	4125020	168	4343025	65	4443090	64	4620159	55
4103140	163	4125031	167	4343032	65	4443100	64	4620169	55
4103150	163	4125036	167	4343040	65	4443110	64	4620194	55
4103160	163	4137080	553	4343050	65	4443125	64	4620216	55
4103180	163	4137100	553	4343056	65	4443160	64	4620220	55
4103200	163	4137125	553	4343063	65	4443200	64	4620267	55
4103225	163	4137150	553	4343075	65	4448032	63	4620273	55
4103250	163	4137160	553	4343080	65	4448040	63	4620318	55
4103280	163	4137200	553	4343090	65	4448050	63	4620324	55
4103300	163	4137225	553	4343100	65	4448056	63	4621020	56
4103315	163	4137250	553	4343110	65	4448063	63	4621022	56
4103355	163	4137300	553	4343125	65	4448070	63	4621027	56
4103400	163	4137315	553	4343160	65	4448075	63	4621030	56
4103450	163	4137355	553	4343200	65	4448080	63	4621034	56
4103500	163	4137400	553	4343225	65	4448090	63	4621038	56
4103560	163	4137560	553	4343250	65	4448100	63	4621043	56
4103600	163	4137600	553	4343315	65	4448110	63	4621045	56
4103630	163	4137630	553	4347032	552	4448125	63	4621049	56
4115080	162	4157032	551	4347040	552	4448160	63	4621057	56
4115100	162	4157040	551	4347050	552	4448200	63	4621061	56
4115125	162	4157050	551	4347056	552	4503023	54	4621077	56
4115140	162	4157070	551	4347063	552	4503027	54	4621089	56
4115150	162	4157075	551	4347075	552	4503033	54	4621108	56
4115160	162	4157080	551	4347090	552	4503038	54	4621115	56
4115180	162	4157090	551	4347110	552	4503042	54	4621133	56
4115200	162	4157100	551	4347125	552	4503048	54	4621140	56
4115225	162	4157110	551	4347160	552	4503058	54	4621159	56
4115250	162	4157125	551	4347200	552	4503060	54	4621169	56
4115280	162	4157160	551	4383032	65	4503076	54	4621220	56
4115300	162	4157200	551	4383040	65	4503085	54	4621273	56
4115315	162	4191810	70	4383050	65	4503089	54	4621324	56
4115355	162	4200008	61	4383056	65	4503106	54	4708001	75
4115400	162	4200010	61	4383063	65	4503114	54	4708003	74
4115450	162	4200012	61	4383075	65	4503139	54	4708005	71
4115500	162	4200015	61	4383090	65	4503168	54	4708006	71
4115560	162	4200018	61	4383110	65	4503183	54	4708009	73
4115600	162	4200022	61	4383125	65	4503202	54	4708010	73
4115630	162	4200028	61	4383140	65	4503219	54	4708011	75
4115710	162	4323070	34	4383160	65	4620020	55	4708024	71
4115800	162	4323080	34	4383161	65	4620022	55	4708028	73
4115900	162	4323100	34	4383200	65	4620025	55	4708030	71
4115997	162	4323125	34	4383225	65	4620027	55	4708031	73
4115998	162	4323150	34	4383250	65	4620030	55	4718050	72
4115999	162	4323200	34	4383315	65	4620034	55	4718075	72
4120080	166	4337040	66	4387200	552	4620038	55	4718110	72

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4923035	196	52021107	376	6073600	326	60990811	521	6105502	530
4923135	196	52021112	377	6073800	326	60991013	521	6105601	530
50020004	365	52021404	376	6077020	422	60991016	521	6105603	530
50020009	365	52021407	376	6077030	422	6099113	513	6107006	500
50020016	365	52021412	377	6077045	422	60991219	521	6107008	500
50020020	365	52021804	376	6077220	423	6099123	514	6107010	500
50020030	365	52021807	376	6077225	423	60991622	521	6107012	500
50122409	367	52021812	377	6077231	423	6099980	516	61073134	525
50122416	367	52022009	379	6077238	423	6099981	516	61073224	525
50122420	367	52022404	376	6077244	423	6099982	516	6110063	529
50122430	367	52022407	376	6077720	594	6099985	517	6110092	529
50122609	367	52022412	377	6077730	594	6099986	518	6110234	529
50122616	367	52023004	376	6077745	594	6099988	518	6110263	529
50122620	367	52023007	376	6078008	424	6099989	518	6110334	529
50122630	367	52023012	377	6078010	424	6099992	515	6114031	533
50123216	367	52323412	378	6078031	328	61001005	527	6114053	533
50123220	367	52323425	378	6096300800	524	61001006	527	6114092	533
50320009	366	53420717	375	60963604	509	61001008	527	6114121	533
50320016	366	55020008	381	60963665	509	61001010	527	6114143	533
50320020	366	55922510	380	6096408	510	61001012	527	6117063	535
50320030	366	56090025	383	6096410	510	61001014	527	6117153	535
50327504	370	57020005	384	6096412	510	6100706	526	6118331	536
50420609	371	57420605	385	6097017	519	6100708	526	6118371	536
50420616	371	57420805	385	6097018	519	6100710	526	6118411	536
50420809	371	57421005	385	6097020	519	6100712	526	6118461	536
50420816	371	5952060	100	609831080	502	6101063	93	6119141	534
50425609	369	5952080	100	609831081	502	6103006	494	6119641	534
50425616	369	6003006	420	609831082	502	6103008	494	6119653	534
50520604	368	6003008	420	609831100	502	6103010	494	6119731	534
50520609	368	6003010	420	609831101	502	6103012	494	6119753	534
50520616	368	6003012	420	609831102	502	6103016	494	6123006	454
50520620	368	6003016	420	609831120	502	6103106	495	6123007	454
50520630	368	6003206	420	609831121	502	6103108	495	6123008	454
51122413	374	6003208	420	609831160	502	6103110	495	6123009	454
51122420	374	6003310	420	609832120	504	6103112	495	6123010	454
51122613	374	6003905	420	609832121	504	6103116	495	6123012	454
51122620	374	6003906	420	609832150	504	6103206	496	6123014	454
51123207	374	6003908	420	609832151	504	6103208	496	6123016	454
51420607	372	6003910	420	609832180	504	6103210	496	6123020	454
51420613	372	6003912	420	609837080	503	6103212	496	6123021	454
51420620	372	6008008	419	609837081	503	6103510	511	6127006	601
51520607	373	6008010	419	609837082	503	6103512	511	6127008	601
51520613	373	6008910	419	609837100	503	6103608	501	6127010	601
51520620	373	6015110	421	609837101	503	6103610	501	6127012	601
51803216	364	6015112	421	609837102	503	6103612	501	6127016	601
5191000	433	6015210	425	609837120	503	6103616	501	61281008	453
52020020	377	6070000	228	609837121	503	6103632	537	61281010	453
52020604	376	6070300	229	609837122	503	6103708	608	61281012	453
52020607	376	6070400	229	609837123	503	6103710	608	61281016	453
52020704	376	6071000	228	609837160	503	6103712	608	6133010	460
52020707	376	6071300	230	609871080	609	6103716	608	6133011	460
52020712	377	6071400	230	609871081	609	6103838	537	6133012	460
52020904	376	6071500	230	609871100	609	6103860	537	6133015	460
52020907	376	6071600	230	609871101	609	6103960	537	61380825	459
52020912	377	6072002	327	609871120	609	6105400	530	61380860	459
52021104	376	6073400	326	609871121	609	6105501	530	61380880	459

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61381025	459	6174413	456	6263606	442	6303208	472	6323007	470
61381030	459	6174431	456	6263609	442	6303210	472	6323008	470
61381230	459	6174516	456	6263612	442	6303212	472	6323009	470
61381260	459	6174519	456	6263615	442	6303216	472	6323010	470
6141230	449	6174525	456	6263805	442	6303306	472	6323012	470
6143620	449	6174530	456	6263806	442	6303308	472	6323015	470
6143630	449	6174535	456	6263807	442	6303310	472	6323016	470
6143816	449	6174536	456	6263808	442	6303312	472	6323018	470
6143820	449	6183805	461	6263809	442	6303316	472	6323020	470
6143825	449	6183806	461	6263810	442	63039108	520	6323024	470
6143830	449	6183807	461	6263812	442	63039110	520	63281010	469
6143835	449	6183808	461	6263815	442	63039112	520	63281020	469
6143840	449	6183809	461	6263816	442	63039116	520	6330018	616
6143860	449	6183810	461	6263818	442	6307006	604	6333618	540
6143880	449	6183812	461	6263820	442	6307008	604	6333625	540
6143891	449	6185405054	462	6267805	599	6307010	604	6333630	540
6143892	449	6185505054	462	6267808	599	6307012	604	6333640	540
6143894	449	6185506044	462	6267810	599	6307016	604	6333655	540
6143920	449	6185606044	462	6267812	599	6307020	604	6353625	443
6143925	449	6193006	461	6267816	599	63079108	610	6353635	443
6143930	449	6193008	461	62680820	441	63079110	610	6353650	443
6143935	449	6193010	461	62681010	441	63079112	610	6353660	443
6143940	449	6213006	386	62681020	441	63079116	610	6353680	443
6143950	449	6213008	386	6283006	442	63081008	471	6353740	443
6143960	449	6213010	386	6283008	442	63081010	471	6353750	443
6143980	449	6213106	386	6283010	442	63081012	471	6353760	443
6143990	449	6213108	386	6283011	442	63081016	471	6353770	443
6144030	449	6213110	386	6283012	442	63082008	471	6353780	443
6144040	449	6213208	386	6283014	442	63082010	471	6353835	443
6144050	449	6213408	386	6283018	442	63082012	471	6353850	443
6144640	449	62230604	528	6283020	442	63082016	471	6353860	443
614581213	339	62230606	528	6283210	442	6313602	470	6353880	443
614581216	339	62230806	528	6283212	442	6313802	470	6353890	443
614581614	339	62230808	528	6283214	442	6313803	470	6356150	444
614581616	339	62230810	528	6287006	599	6313804	470	6356170	444
6147825	600	6223808	539	6287008	599	6313805	470	6356630	444
6147840	600	6223810	539	6287012	599	6313806	470	6356640	444
6147860	600	6223812	539	6287016	599	6313807	470	6356650	444
6148025	600	6223815	539	6293021	474	6313808	470	6356840	444
6148040	600	6229903	531	6293133	474	6313809	470	6356860	444
6148060	600	6229904	532	6293221	474	6313810	470	6373640	538
61480825	448	6253006	507	6293227	474	6313812	470	6373740	538
61480830	448	6253104	506	6293233	474	6313815	470	6373750	538
61480860	448	6253106	506	6298221	473	6313818	470	6373850	538
61480880	448	6253304	508	6298233	473	6313820	470	6390303	489
61481016	448	6253306	508	6303006	472	6317803	603	6390305	489
61481025	448	6253408	508	6303007	472	6317806	603	6390310	489
61481030	448	6253418	508	6303007F	472	6317810	603	6392308	490
61481060	448	6253428	508	6303008	472	6317815	603	6393000	492
61481080	448	6253438	508	6303010	472	63181010	469	6393210	491
61481225	448	6253506	508	6303012	472	63181020	469	6413006	476
61481230	448	6253509	508	6303014	472	6323002	470	6413008	476
61481260	448	6253510	508	6303016	472	6323003	470	6413158	475
61481280	448	6253512	508	6303020	472	6323004	470	6413258	475
6148225	600	6253606	505	6303024	472	6323005	470	6413358	475
6148240	600	6253696	505	6303206	472	6323006	470	6413458	475

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6413558	475	6501646	250	6505600	173	6515012	199	6523003	204
6413658	475	6501666	250	6505601	173	6515210	203	6523004	204
6443908	418	6501686	250	6505602	173	6517006	276	6523005	204
6453016	478	65018227	247	6505603	177	6517008	276	6523006	204
6453240	478	65018242	247	6505615	173	6517010	276	6523008	204
6453625	478	65018247	247	6505620	246	6517012	276	6523010	204
6453725	478	65018327	247	6505622	246	6517016	279	6523016	204
6453830	478	65018342	247	6505624	246	6517306	560	6523602	204
6453930	478	65018347	247	6505625	246	6517308	560	6523603	204
6453940	478	65018367	247	6505626	249	6517310	560	6523604	204
6455006	481	65018387	247	6505630	173	6517706	579	6523802	204
6455008	481	65018627	247	6505635	173	6517708	579	6523803	204
6455010	481	65018640	247	6505640	246	6517710	579	6523804	204
6457240	605	65018642	247	6505642	246	6517712	579	6523805	204
6457625	605	65018647	247	6505644	246	6517716	580	6523806	204
6457830	605	65018667	247	6505645	246	65178016	278	6523807	204
6457831	606	65018687	247	65056453	246	6518006	277	6523808	204
6457930	605	6504018	388	6505646	249	6518008	277	6523809	204
6457932	606	6504020	176	6505665	246	6518010	277	6523810	204
6458240	477	6504025	176	65056653	246	6518012	277	6523812	204
6458830	477	6504026	389	6505666	249	6518106	277	6523815	204
6458940	477	6504028	176	6505685	246	6518108	277	6523818	204
6459030	480	6504125	388	6505686	249	6518110	277	6523820	204
6459620	480	6505000	173	65058252	245	6518112	277	6523903	206
6459630	480	6505001	173	65058352	245	6518206	277	6525004	207
6459820	480	6505002	173	65058652	245	6518208	277	6525203	207
6459830	480	6505003	177	65059224	248	6518210	277	6525803	207
6463650	478	6505015	173	65059244	248	6518212	277	6525804	207
6473008	479	6505017	175	65059324	248	6518606	281	6525806	207
6473108	479	6505030	173	65059344	248	6518608	281	6527062	562
6473206	479	6505222	246	6505944050	248	6518610	281	6527084	562
6473207	479	6505224	246	6505944100	248	6518612	281	6527088	562
6473210	479	6505225	246	65059624	248	651867006	575	6527094	562
6473212	479	6505235	173	65059644	248	651867008	575	6527098	562
6473221	479	6505242	246	6507001	557	651867010	575	6527734	581
6473306	479	6505244	246	6507002	557	651867012	575	6527744	581
6473308	479	6505245	246	6507015	557	651868006	280	6527754	581
6473312	479	6505293	178	6507327	570	651868008	280	652785004	282
6473316	479	6505294	178	6507347	570	651868010	280	652785006	282
6473321	479	6505297	179	6507627	570	651868012	280	652785008	282
6473408	479	6505298	179	6507646	571	65188006	275	652785204	282
6473410	479	6505300	173	6507647	570	65188008	275	652785206	282
6473416	479	6505301	173	6511006	561	65188010	275	652785804	282
6473421	479	6505302	173	6511008	561	65188012	275	652785805	282
6473510	479	6505315	173	6511010	561	6519006	198	652785806	282
6473512	479	6505317	175	6511012	561	6519008	198	652785808	282
6473521	479	6505322	246	6513006	198	6519010	198	652785810	282
6473621	479	6505324	246	6513008	198	6519910	200	65278606	284
6473721	479	6505325	246	6513010	198	6519911	200	6527934	285
6477210	607	6505335	173	6513106	197	6519912	200	6527935	285
6477308	607	6505342	246	6513108	197	6519913	200	6527944	285
6477416	607	6505344	246	6513110	197	6520100	205	6531012	451
6477421	607	6505345	246	6513208	202	6520110	205	6533006	451
6477512	607	6505365	246	6513709	201	6520200	205	6533008	451
6479421	22	6505385	246	6515008	199	6520210	205	6533010	451
6484321	479	6505515	173	6515010	199	6523002	204	6533012	451

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6533016	451	6566003	233	6594005	309	6603866	251	66519910	307
6533020	451	6566021	329	6594010	311	6603867	251	665285006	283
6533306	209	6566030	231	6594015	311	6603870	251	66530005	286
6533308	209	6566035	231	6594020	312	6603871	251	6653008	155
6533310	209	6566041	329	6594025	310	6603873	251	66530805	286
6533312	209	6566051	329	6594030	314	6603883	253	6653310	156
6533316	209	6566062	329	6594031	314	6603884	253	66580312	299
6533408	210	6566082	329	6594032	314	6603885	253	66581711	322
6533410	210	6566810	340	6594035	313	6603886	253	66581721	322
6533412	210	6566812	340	6601894	254	6603923	251	66581821	294
6533506	288	6566999	330	6601911	182	6603926	251	66581822	294
6533508	288	6568001	232	6601912	182	6603928	251	66581823	294
6533510	288	6568041	331	6601913	182	6607120	558	66583602	268
6533512	288	6568042	331	6601914	182	6607230	558	66583736	325
6533606	451	6571008	583	6601915	182	6607250	558	66583741	323
6533608	451	6571010	583	6603010	190	6607861	572	66583761	324
6533610	451	6571012	583	6603015	180	6607862	572	66583801	262
6533612	451	6571016	583	6603019	180	6607863	572	66583802	262
6533990	452	6571731	593	6603030	180	6607864	572	66583804	257
6533992	452	6571751	593	6603050	180	6607865	572	66583810	261
6533996	452	6583060	226	6603115	180	6607870	572	66587121	590
6533998	452	6583090	226	6603120	180	6607873	572	66587141	590
6535008	211	6583109	216	6603125	180	6607874	572	66587201	585
6535010	211	6583113	216	6603130	180	66090110	255	66587221	585
6535109	211	6583309	217	6603215	180	6613200	183	66587228	585
6535110	211	6584001	214	6603220	180	6613235	183	66587256	586
6535112	211	6584002	214	6603225	180	6613250	184	66587291	584
6535312	212	6584003	214	6603230	180	6613300	185	66587292	588
6537006	563	6584011	214	6603240	180	6613820	191	66587294	588
6537008	563	6584051	215	6603245	180	6617210	559	66587298	588
6537010	563	6584052	215	6603250	180	6621083	265	66587301	589
6537012	563	6584053	215	6603335	181	6623326	187	66587361	576
6537016	563	6584090	222	6603355	181	6627220	566	66587504	591
6537508	582	6584091	222	66036805	180	6628220	186	665875400	573
6537510	582	6584150	223	66036820	180	6628230	186	66587711	592
6537512	582	6584151	223	66036825	180	66288530	264	66587718	578
6537608	564	6584152	223	66036835	180	6642008	154	66587721	592
6537813	565	6584153	223	66036840	180	6642010	154	66587814	577
65381008	208	6584156	223	66036850	180	6642108	154	66588009	289
65381010	208	6584202	387	66036860	180	6642110	154	66588010	289
65381012	208	6584203	387	66036875	180	6642112	154	66588012	289
65381016	208	6584204	387	6603715	180	6644010	154	66588016	289
65381308	450	6584205	387	6603720	180	66513108	273	66588121	301
65381310	450	6585003	227	6603725	180	66513110	273	66588141	301
65381312	450	6585011	225	66038020	267	66513112	273	66588201	291
65381316	450	6585014	225	6603828	252	66513116	274	66588207	291
65381508	287	6585090	218	6603829	252	66513121	274	66588221	291
65381510	287	6585135	218	6603831	251	665175108	574	66588228	291
65381512	287	6587011	569	6603832	251	665175110	574	66588242	296
6543001	220	6587090	567	6603833	251	66518308	272	66588256	296
6543004	221	6587135	567	6603834	251	66518310	272	66588270	297
6547001	568	6591090	219	6603861	251	66518312	272	66588291	293
6553945	213	6593010	188	6603862	251	665185106	271	66588292	306
6566000	231	65938020	266	6603863	251	665185108	271	66588294	306
6566001	231	6594000	308	6603864	251	665185110	271	66588295	306
6566002	231	6594001	309	6603865	251	665185112	271	66588296	306

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66588298	306	6703008	408	67685502	347	6902208	498	I130000070	101
66588299	306	6703009	408	67685532	349	6902210	498	I130000076	101
66588301	303	6703010	408	67685534	350	6902306	499	I130000089	101
66588361	258	6703016	408	67687250	356	6902308	499	I130000102	101
66588502	304	6703021	408	67687400	356	6902310	499	I130000108	101
66588504	304	6707006	595	67687601	356	6902511	512	I130000114	101
665885102	290	6707008	595	67690060	353	6920012	429	I130000133	101
665885184	298	6707010	595	67690080	353	6920013	430	I130000140	101
665885186	298	6708008	412	67690100	353	6920017	429	I130000160	101
665885202	290	6708010	412	67690130	353	6920050	435	I130000168	101
665885203	290	6709021	409	67691050	352	6923230	193	I133008008	103
665885213	302	6713008	411	67691080	352	6923235	194	I133008010	103
665885223	302	6713010	411	67691100	352	6923240	193	I133008012	103
665885235	295	6713012	411	67691120	352	6923245	194	I133008015	103
665885330	295	6713016	411	67692100	352	6923250	193	I133008018	103
665885400	256	6713021	411	67695010	352	6930001	618	I133008022	103
665885402	305	6717008	595	67695015	352	6940006	468	I133008028	103
665885404	305	6717010	595	67695100	352	6940008	468	I133008035	103
665885405	305	6717012	596	67696100	352	6941030	465	I133008042	103
665885406	305	6717016	596	67698100	352	6941040	465	I133008048	103
665885408	305	6717021	596	67699000	354	6941050	465	I133008054	103
665885421	300	6719012	413	6781013	382	6942030	467	I133008057	103
66588641	259	6719016	413	6781106	382	6942040	467	I133008060	103
66588682	259	6719021	413	6781108	382	6951010	522	I133008064	103
66588814	260	6719027	413	6781110	382	6951012	522	I133008070	103
66588818	263	6719033	413	6785001	427	69520611	523	I133008076	103
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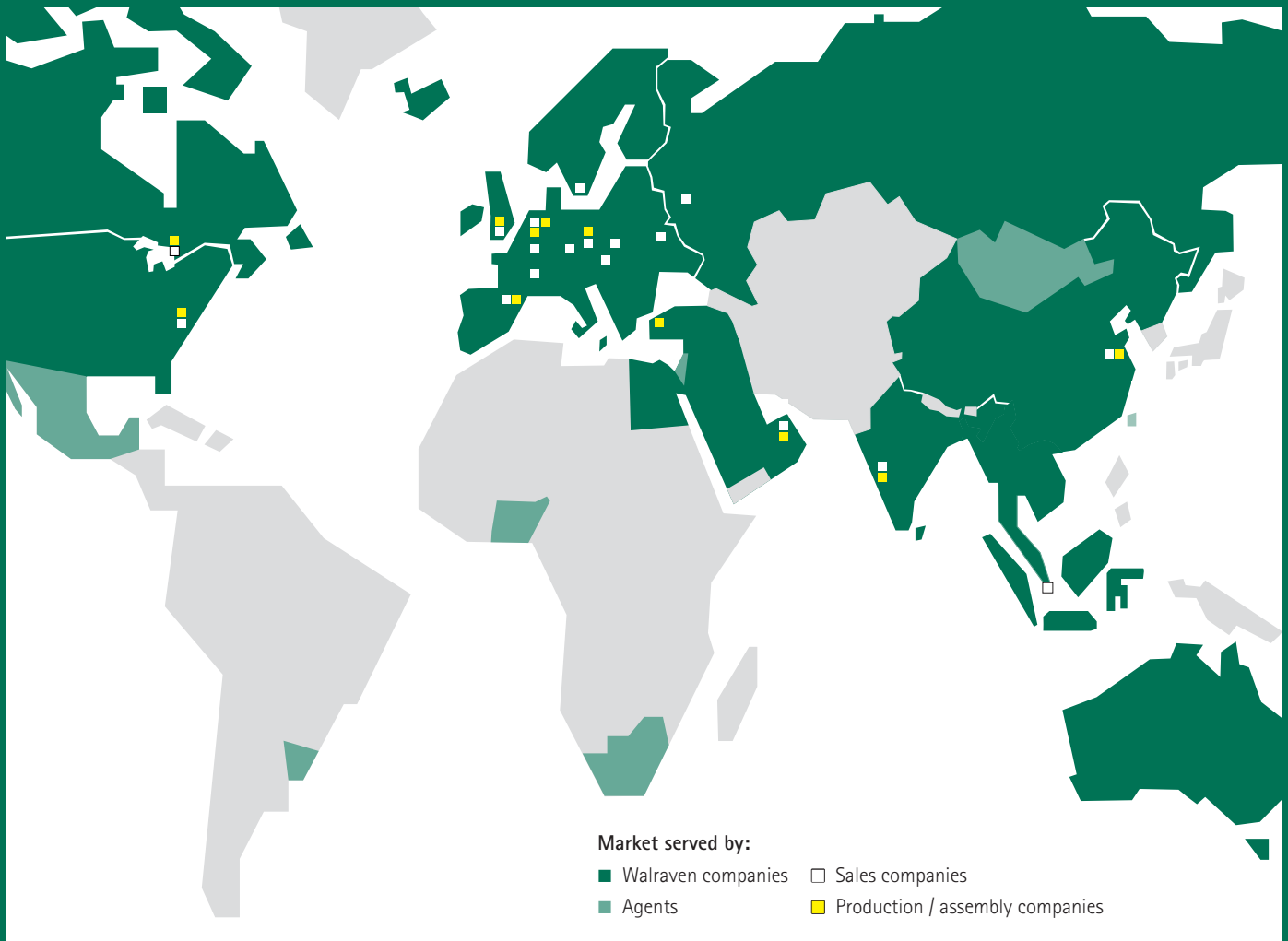
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