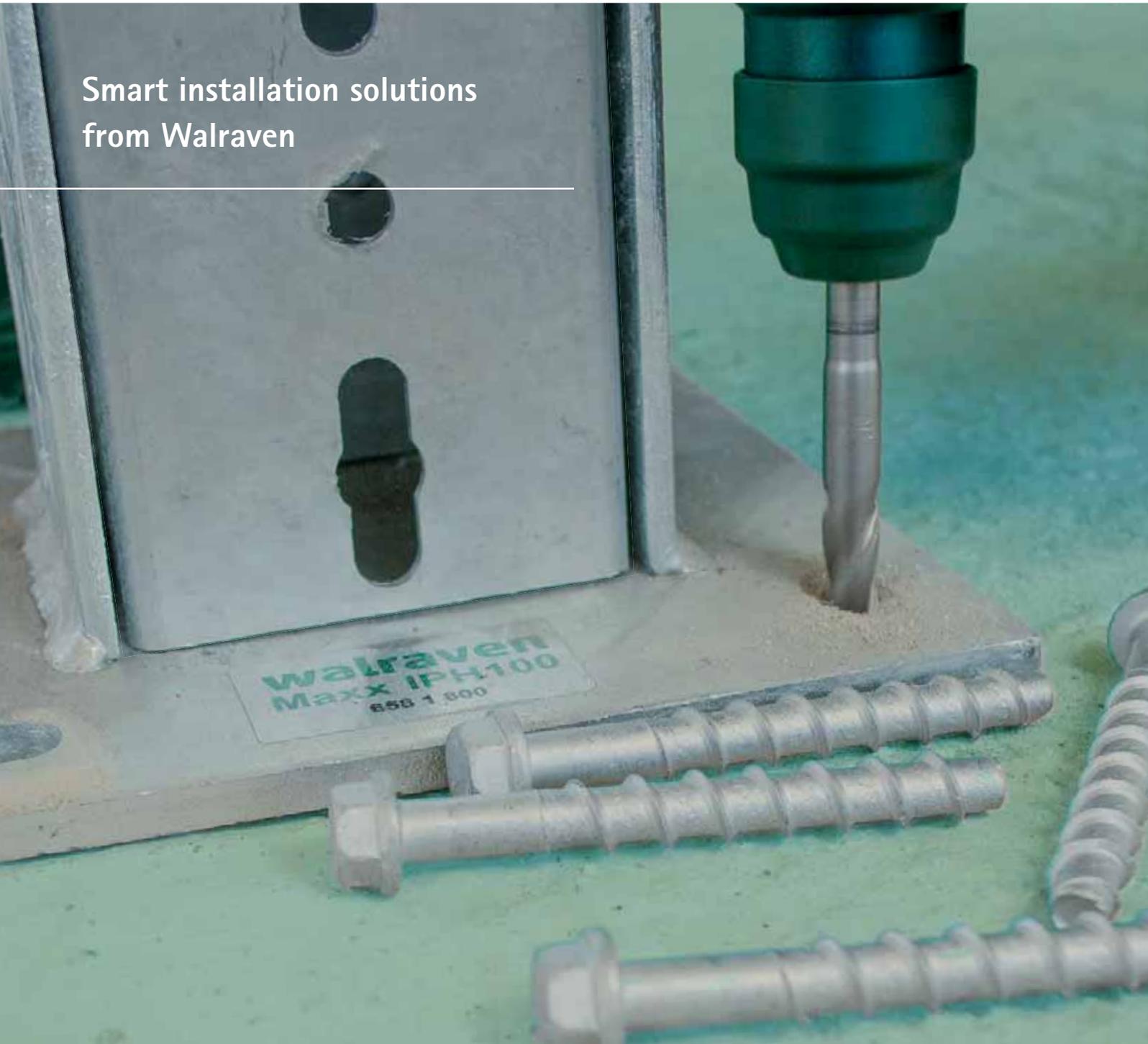


Smart installation solutions  
from Walraven



## Mechanical & Electrical Catalogue

2020



# Maxx

## Heavy frame modular support system

A complete solution for all industrial and heavy duty applications

- Quick and easy to install
- Avoids the need for on site fabrication or welding
- FREE technical advice service, from engineering to onsite construction support

## Installation of rooftop duct supports

Avantor, a company based in Gliwice (Poland) delivers chemical products and materials for laboratories. The installation of ventilation ducts on the rooftop of their business premises provided some interesting challenges.

### The problem

The site required ventilation ducts to be installed in a very confined space. In addition, the ducts could not be attached to the roof or the walls. Therefore, Avantor asked Walraven for help in designing a bespoke rooftop support solution.

### Walraven's bespoke rooftop solution

Our standard rooftop solutions BIS Yeti and BIS Urus could not be used here. Therefore, we opted for our heavy frame system: Maxx. With this system we installed the large ventilation ducts

above each other in layers. These were attached to the main substructure of the building because the roof and walls could not be used.

We produced all the required parts ourselves. This meant we could supply everything to the location at Avantor within 48 hours. Avantor were very pleased with the speed of service, and the fact that we fully prepared and completed everything ourselves. From estimating to execution, we provided all the information and performed all the work.

### How can we help you?

If you have an unusual or challenging installation problem we may be able to help. Call your Walraven Regional Sales Manager (RSM) to discuss your query, or contact us using the information below.

Call us +44 (0)1295 75 34 00

Email us [technical.uk@walraven.com](mailto:technical.uk@walraven.com)

See page 58 for information about our Maxx system.

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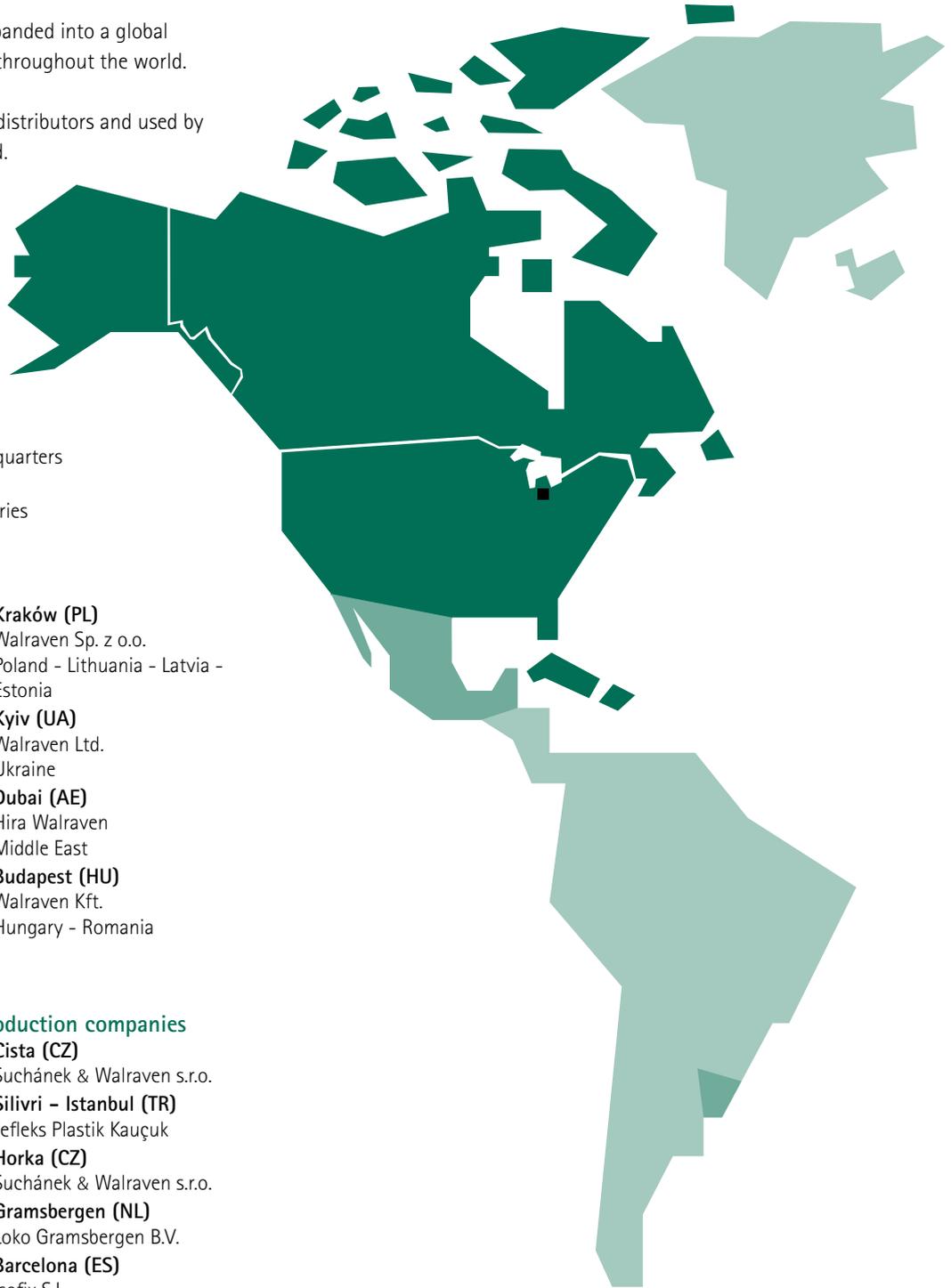
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# Walraven Group

Walraven manufactures and supplies a wide range of electrical and mechanical fixings, fire protection systems and sanitary systems.

Since our foundation in 1942 we've expanded into a global organisation with over 950 employees throughout the world.

Our products are sold through leading distributors and used by thousands of installers across the world.



## Mijdrecht (NL)

- **J. van Walraven Holding B.V.** – Headquarters
- **Walraven B.V.** – The Netherlands
- **Walraven International** – Other countries
- **J. van Walraven B.V.**

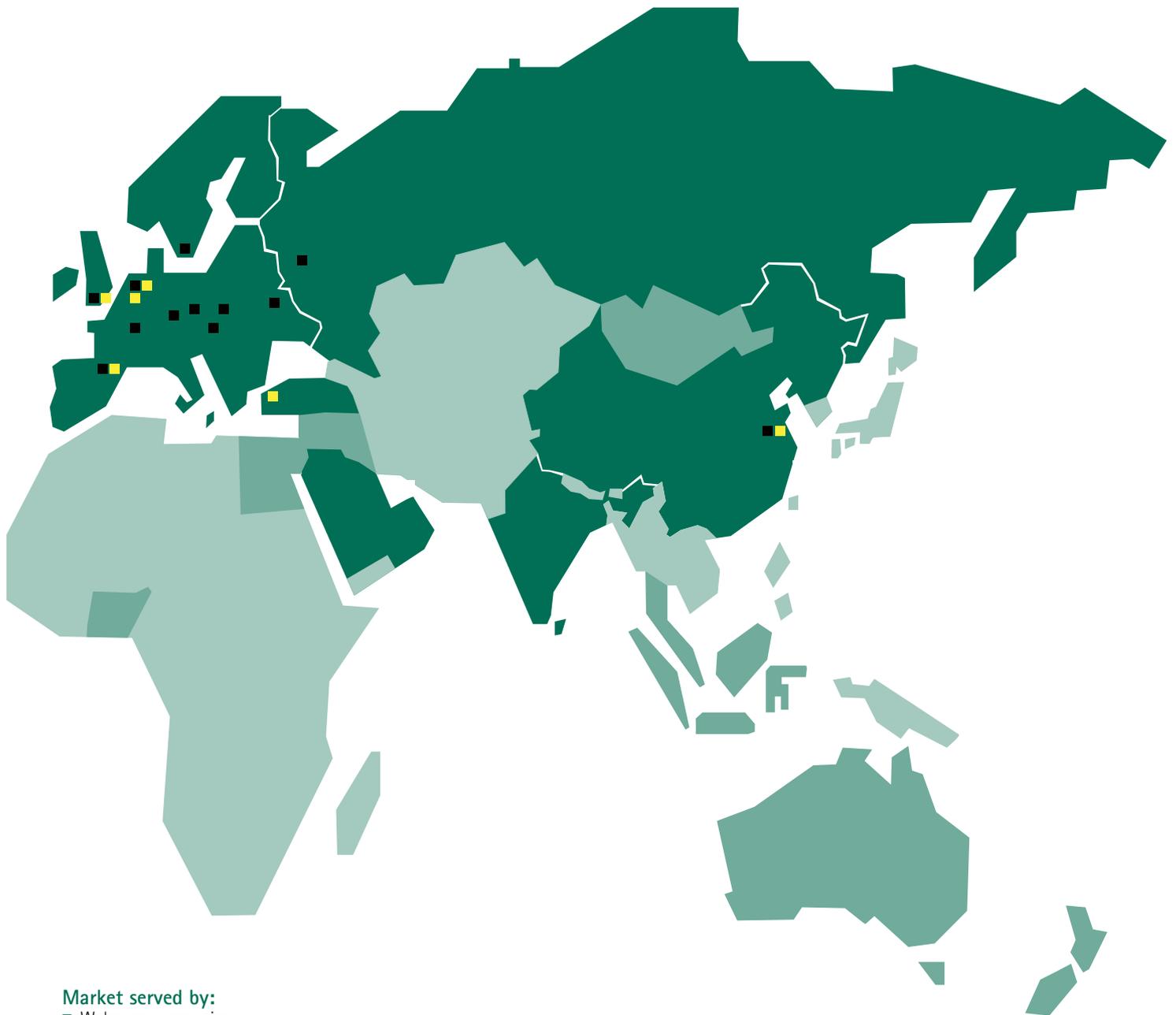
## Sales companies

- **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
- **Barcelona (ES)**  
Isofix Walraven Iberia S.L.  
Spain – Portugal
- **Walled Lake (US)**  
Walraven, Inc.  
United States of America –  
Canada
- **Moscow (RU)**  
Walraven LLC  
Russia
- **Shanghai (CN)**  
Walraven Shanghai, Ltd.  
China
- **Malmö (SE)**  
Walraven Nordic AB  
Sweden – Denmark – Norway –  
Finland – Iceland

- **Kraków (PL)**  
Walraven Sp. z o.o.  
Poland – Lithuania – Latvia –  
Estonia
- **Kyiv (UA)**  
Walraven Ltd.  
Ukraine
- **Dubai (AE)**  
Hira Walraven  
Middle East
- **Budapest (HU)**  
Walraven Kft.  
Hungary – Romania

## Production companies

- **Cista (CZ)**  
Suchánek & Walraven s.r.o.
- **Silivri – Istanbul (TR)**  
Jefleks Plastik Kauçuk
- **Horka (CZ)**  
Suchánek & Walraven s.r.o.
- **Gramsbergen (NL)**  
Loko Gramsbergen B.V.
- **Barcelona (ES)**  
Isofix S.L.
- **Horka (CZ)**  
SWO Tooling s.r.o.
- **Banbury (UK)**  
Walraven Ltd.
- **Changshu (CN)**  
Walraven Metal Products  
(Changshu) Co. Ltd



Market served by:  
■ Walraven companies  
■ Agents

## 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 specialism 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. Our focus is on ease of use, time-saving during assembly and the highest degree of reliability when operational. A large number of innovations and patents is the result.

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 a founding member 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 accessories (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)

Results are checked by an independent testing institute.

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

Certified products are recognisable by:



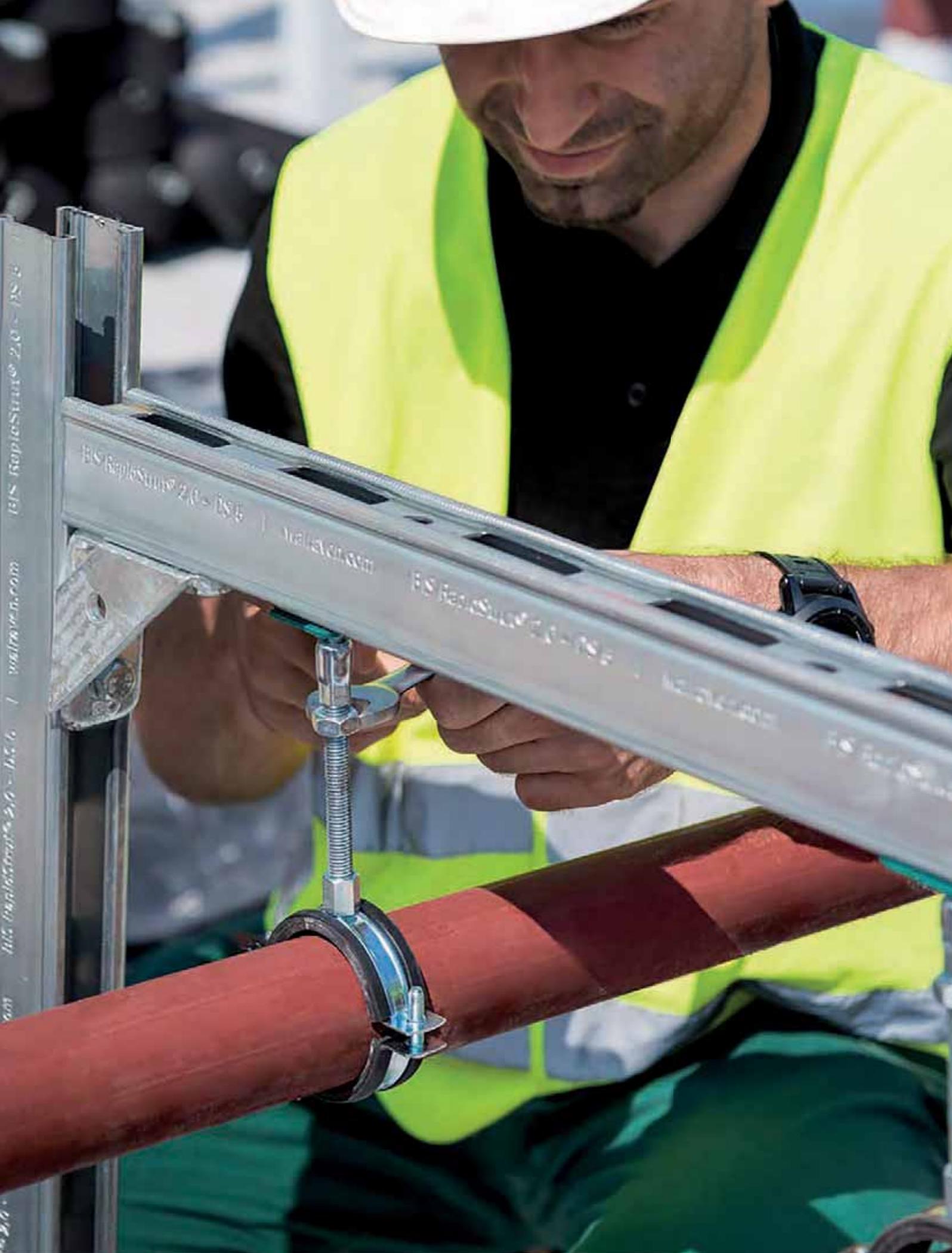
RAL-GZ 655/B  
Cert.Nr. 2010-23



RAL-GZ 656  
Cert.Nr. 2011-09

To find out more about RAL visit:

[www.walraven.com/en/technical-information/ral-quality/](http://www.walraven.com/en/technical-information/ral-quality/)



walraven

# Explanation Max. Allowed Load

## Maximum allowed load:

Where maximum allowed loads are included in the article tables, the values are determined by either:

- a Walraven developed measuring method
- or 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.

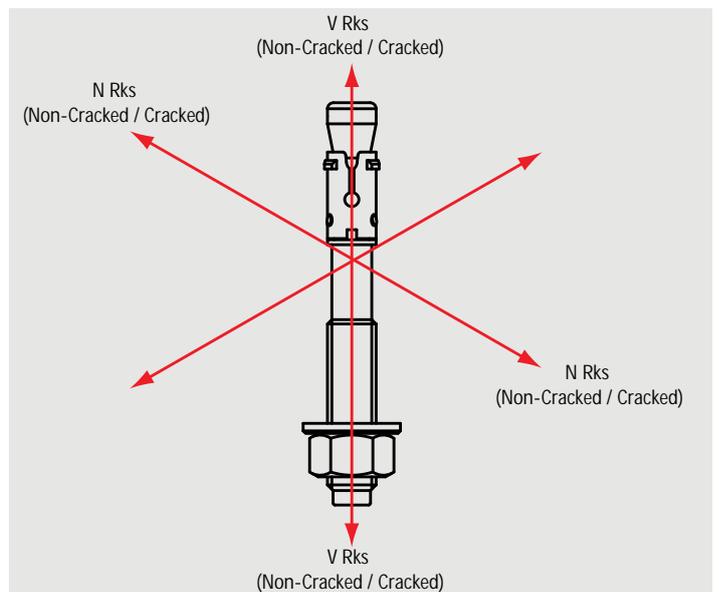
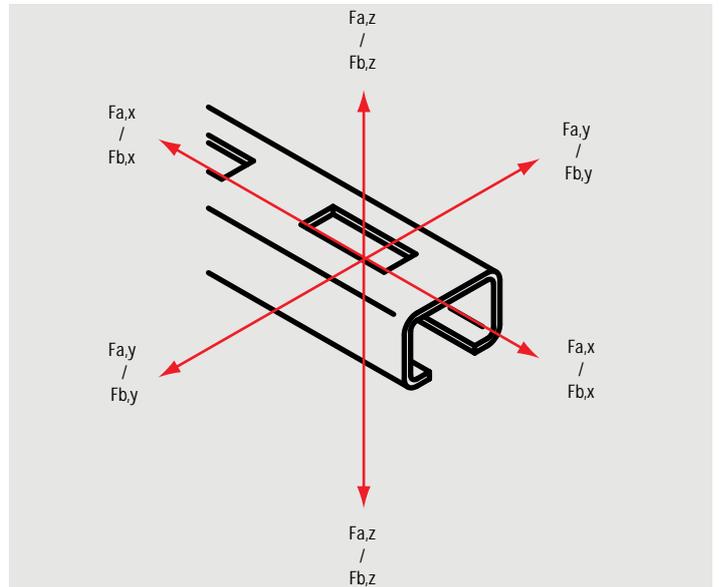
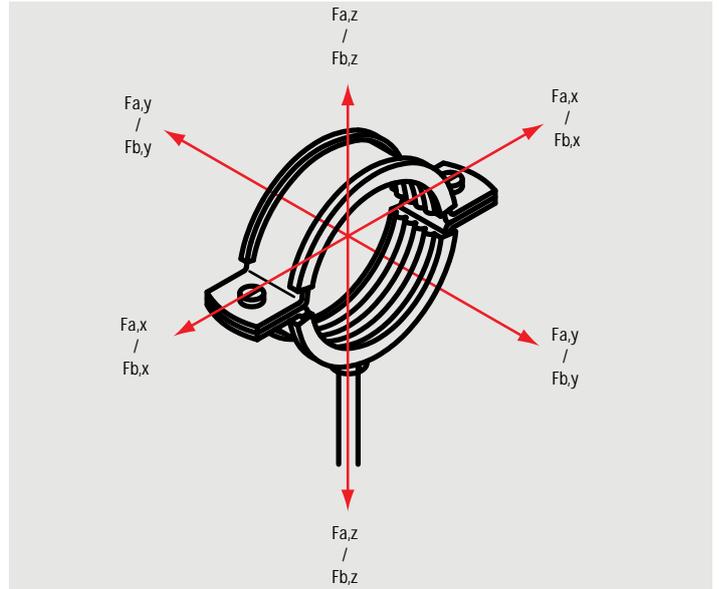
Maximum allowed loads may not always be shown in the printed catalogue. Please see our on-line catalogue for all complete product loading data.

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

- Fa = maximum allowed load
- Fb = breaking load

## Force directions for anchors

- 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



# Project Engineering

## From the experts at Walraven

### Experience solving technical problems

Working with fixing and fire protection systems can be complex due to advancing technology and changing building requirements. When preparing or executing a project you may encounter a problem that you cannot solve yourself. Walraven Project Engineering has vast experience in solving technical problems.

### From engineering to onsite construction support

Around our products we offer a wide range of technical consultancy in the areas of:

- Support for pipe work, air ducts or cable ducts
- Support for technical installations on rooftops (such as solar panels, climate installations)
- Secondary constructions
- Clamp fixing advice and plans
- Pipe and cable penetrations through fire rated separations
- Prefabrication service
- Calculations
- Assembly instructions
- Onsite construction support



### Our expertise is available to you!

Based on your individual requirements our Project Engineering staff deliver you a proposal, well grounded with detailed calculations, AutoCAD drawings and parts lists.

Email [technical.uk@walraven.com](mailto:technical.uk@walraven.com) or call 01295 753400

# Metal Pipe Clamps with Lining

## BISMAT® Flash



### Features and benefits

- single screw, fast-fit 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



Part No	D (mm)	D (")	G	RAL	Pack 1
337 4 018	15 - 18		M8/10	RAL <sup>2</sup>	50
337 4 023	20 - 23	1/2	M8/10	RAL <sup>2</sup>	50
337 4 028	25 - 28	3/4	M8/10	RAL <sup>2</sup>	50
337 4 035	32 - 35	1	M8/10	RAL <sup>2</sup>	50
337 4 043	40 - 43	1 1/4	M8/10	RAL <sup>2</sup>	50
337 4 051	48 - 51	1 1/2	M8/10	RAL <sup>2</sup>	50
337 4 056	53 - 56	-	M8/10	RAL <sup>2</sup>	50
337 4 063	57 - 63	2	M8/10	RAL <sup>2</sup>	50

RAL<sup>2</sup> = 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.

## BISMAT® Flash



Insert pipe



Close clamp / push screw



Done!

## 2S Clamp with Lining (M8/10)



RAL  
certificate pending

### Features and Benefits

- standard two-screw clamp
- for every day use on steel, copper or multilayer pipes
- gapless range from Ø 10-225mm
- rubber lining grips in steel parts to prevent sliding of the lining
- screws secured with anti-loss washer
- medium safe load according to RAL GZ-655
- material: steel
- zinc plated
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No	D (mm)	D (")	G	Pack 1
3343 5 014	10 - 14	- 1/4	M8/10	50
3343 5 019	15 - 19		M8/10	50
3343 5 024	20 - 24	1/2	M8/10	50
3343 5 030	25 - 30	3/4	M8/10	50
3343 5 037	31 - 37	1	M8/10	50
3343 5 046	38 - 46	1 1/4	M8/10	50
3343 5 052	47 - 52	1 1/2	M8/10	50
3343 5 061	53 - 61	2	M8/10	50
3343 5 067	62 - 67	-	M8/10	50
3343 5 074	68 - 74	-	M8/10	50
3343 5 081	75 - 81	2 1/2	M8/10	50
3343 5 087	82 - 87	-	M8/10	50
3343 5 095	88 - 95	3	M8/10	50
3343 5 103	96 - 103	-	M8/10	50
3343 5 112	104 - 112	-	M8/10	25
3343 5 118	113 - 118	4	M8/10	25
3343 5 127	119 - 127	-	M8/10	25
3343 5 137	128 - 137	-	M8/10	25
3343 5 144	138 - 144	5	M8/10	25
3343 5 153	145 - 153	-	M8/10	25
3343 5 162	154 - 162	-	M8/10	15
3343 5 172	163 - 172	6	M8/10	15
3343 5 183	173 - 183	-	M8/10	15
3343 5 194	184 - 194	-	M8/10	15
3343 5 205	195 - 205	-	M8/10	15
3343 5 216	206 - 216	-	M8/10	10
3343 5 225	217 - 225	8	M8/10	10

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

**RAL**  
certificate pending

**Features and benefits**

- advanced two-screw clamp with premium design
- quick closing mechanism
- 2 component EPDM 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
- sound insulating lining according to DIN4109
- advanced geometry for increased strength
- medium to high safe load according to RAL GZ-655 and RAL GZ-656
- 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	Pack 1
3108 5 014	10 - 14	1/4	8	M8/10	50
3108 5 019	15 - 19		10	M8/10	50
3108 5 023	20 - 23	1/2	15	M8/10	50
3108 5 028	25 - 28	3/4	20	M8/10	50
3108 5 035	31 - 35	1	25	M8/10	50
3108 5 039	36 - 39	-	-	M8/10	50
3108 5 045	40 - 45	1 1/4	32	M8/10	50
3108 5 052	48 - 52	1 1/2	40	M8/10	50
3108 5 058	54 - 58	-	-	M8/10	50
3108 5 064	60 - 64	2	50	M8/10	50
3108 5 070	66 - 70	-	-	M8/10	50
3108 5 079	75 - 79	2 1/2	65	M8/10	50
3108 5 083	80 - 83	-	-	M8/10	50
3108 5 091	88 - 91	3	80	M8/10	25
3108 5 097	92 - 97	-	-	M8/10	25
3108 5 105	100 - 105	-	-	M8/10	25
3108 5 115	108 - 115	4	100	M8/10	25
3108 5 130	125 - 130	-	-	M8/10	25
3108 5 140	133 - 140	5	125	M8/10	25
3108 5 160	152 - 160	-	-	M8/10	25
3108 5 169	165 - 169	6	150	M8/10	10
3128 5 180	176 - 180	-	-	M10	15
3128 5 200	192 - 200	-	-	M10	15
3128 5 210	205 - 210	-	-	M10	10
3128 5 225	219 - 225	8	200	M10	10

**Bifix® 5000 G2 (BUP1000)**

**RAL**  
certificate pending

**Features and Benefits**

- advanced two-screw clamp with premium design
- for installing all types of plastic pipes
- with quick closing mechanism
- with removable spacer washers 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
- inner part of lining is flush to improve sliding of pipe in clamp
- age resistant lining
- sound insulating lining according DIN 4109
- medium to high safe load according to RAL GZ-655 and RAL GZ-656

Part No	D (mm)	G	Pack 1
318 8 016	16	M8/10	50
318 8 020	20	M8/10	50
318 8 025	25	M8/10	50
318 8 032	32	M8/10	50
318 8 040	40	M8/10	50
318 8 050	50	M8/10	50
318 8 056	56	M8/10	50
318 8 063	63	M8/10	50
318 8 075	75	M8/10	50
318 8 090	90	M8/10	25
318 8 110	110	M8/10	25
318 8 125	125	M8/10	25
318 8 135	135	M8/10	25
318 8 160	160	M8/10	10
318 8 200	200	M8/10	10

**BIS Heavy Duty Clamp HD1501 (BUP1000)**



**Features and Benefits**

- two-part clamp with two locking bolts
- high safe working load
- one side opening for easier installation
- bolts secured with anti-loss washer
- with CO2 welded connection nut
- material: steel
- noise insulating lining, EPDM rubber, black
- also available with red silicone lining heat resistant up to +200°C
- age resistant lining
- sound insulating lining according DIN 4109
- 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 (")	G	Fa,z	Pack 1
3313 8 019	15 - 19		M8/10	1,500	25
3313 8 023	19 - 23	1/2	M8/10	1,500	25
3313 8 029	25 - 29	3/4	M8/10	1,500	25
3313 8 035	30 - 35	1	M8/10	1,500	25
3313 8 045	40 - 45	1 1/4	M8/10	1,500	25
3313 8 051	46 - 51	1 1/2	M8/10	1,500	25
3313 8 059	53 - 59	-	M8/10	1,500	25
3313 8 064	59 - 64	2	M8/10	1,500	25
3314 8 071	65 - 71	-	M10/12	2,300	25
3314 8 078	72 - 78	2 1/2	M10/12	2,300	25
3314 8 085	79 - 85	-	M10/12	2,300	25
3314 8 092	86 - 92	3	M10/12	2,300	25
3314 8 109	101 - 109	-	M10/12	2,300	25
3314 8 116	108 - 116	4	M10/12	2,300	25
3314 8 133	125 - 133	-	M10/12	2,300	25
3314 8 140	132 - 140	5	M10/12	2,300	15
3314 8 169	159 - 169	6	M10/12	3,800	15
3314 8 188	178 - 188	-	M10/12	3,800	15
3314 8 204	194 - 204	-	M10/12	3,800	15
3314 8 213	203 - 213	-	M10/12	3,800	15
3314 8 227	217 - 227	8	M10/12	3,800	2

**BIS Heavy Duty Clamp HD1501 (BUP1000) – M16**



**Features and Benefits**

- two-part clamp with two locking bolts
- high safe working load
- one side opening for easier installation
- bolts secured with anti-loss washer
- with CO2 welded connection nut
- material: steel
- noise insulating lining, EPDM rubber, black
- also available with red silicone lining heat resistant up to +200°C
- age resistant lining
- sound insulating lining according DIN 4109
- 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 (")	G	Fa,z	Pack 1
3316 8 227	217 - 227	8	M16	3,800	2
3316 8 250	240 - 250	-	M16	3,800	2
3316 8 275	265 - 275	10	M16	9,200	2
3316 8 325	315 - 325	12	M16	9,200	2
3316 8 364	354 - 364	14	M16	9,200	2
3316 8 408	398 - 408	16	M16	9,200	2
3316 8 458	448 - 458	18	M16	9,200	2
3316 8 509	499 - 509	20	M16	9,200	2

**BISMAT® 2000 'S'**



**Features and benefits**

- single screw clamp for high temperature installations
- material: steel
- zinc plated
- lining: red silicone rubber, heat resistant up to 200°C
- age resistant lining
- sound insulating lining according DIN 4109
- tested for fire safety

Part No	D (mm)	D (")	G	RAL	Pack 1
340 4 018	15 - 18		M8/10	RAL <sup>2</sup>	50
340 4 023	20 - 23	1/2	M8/10	RAL <sup>2</sup>	50
340 4 028	25 - 28	3/4	M8/10	RAL <sup>2</sup>	50
340 4 035	31 - 35	1	M8/10	RAL <sup>2</sup>	50
340 4 043	40 - 43	1 1/4	M8/10	RAL <sup>2</sup>	50
340 4 053	48 - 53	1 1/2	M8/10	RAL <sup>2</sup>	50
340 4 063	57 - 63	2	M8/10	RAL <sup>2</sup>	50

RAL<sup>2</sup> = 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.

### BISMAT® 2000 'S'



#### Features and benefits

- two-screw clamp for high temperature installations
- material: steel
- zinc plated
- lining: red silicone rubber, 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	Pack 1
340 4 080	73 - 80	2½	65	M8/10	50
340 4 091	83 - 91	3	80	M8/10	25
340 4 114	108 - 114	4	100	M8/10	25
340 4 141	133 - 141	5	125	M8/10	25
340 4 168	159 - 168	6	150	M8/10	10

### BIS Stand Pipe Bracket



#### Features and Benefits

- one-part console set with BISMAT® SL Guidance clamp
- 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	DN	D (mm)	Fa,y (N)	Pack 1
432 3 070	70	78	3,000	125
432 3 080	80	83	3,000	125
432 3 100	100	110	3,000	120
432 3 125	125	135	3,000	100
432 3 150	150	160	3,000	100
432 3 200	200	210	3,000	80

Max. allowed load (Fa,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

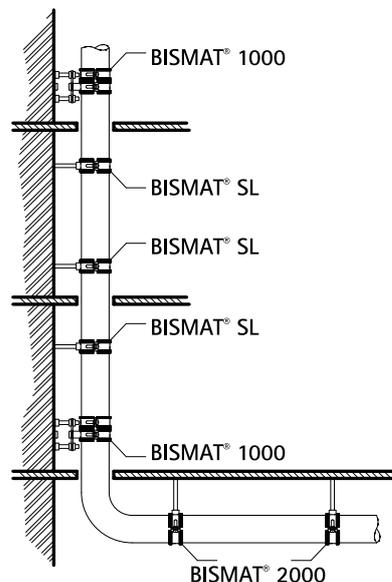
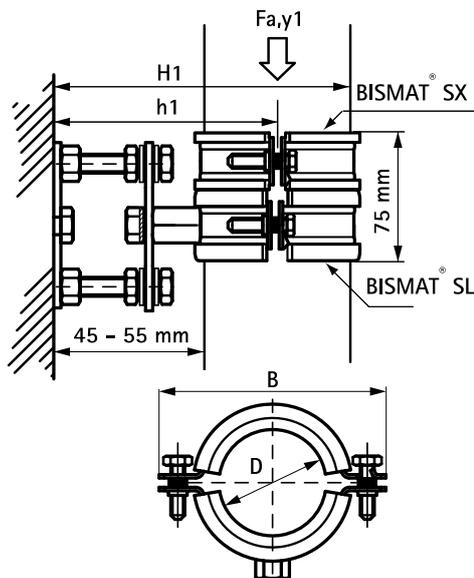
### BISMAT® 1000 Stand Pipe Clamp



#### Features and Benefits

- adjustable wall plate with BISMAT® SL Guidance clamp and BISMAT® SX Socket clamp
- unique set for installing cast iron or plastic stand pipes where noise insulation is required
- adjustable distance between pipe and wall
- to be mounted every 2nd floor
- 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	Pack 1
336 3 070	75	70	5
336 3 075	78	70	5
336 3 080	83	80	5
336 3 090	89	80	5
336 3 100	110	100	5
336 3 125	125	125	5
336 3 137	135	125	5
336 3 150	160	150	5
336 3 200	210	200	5



**BISMAT® SX Socket Clamp**



**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. 432 3 XXX)
- material: steel
- zinc plated
- EPDM rubber lining, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No	D (mm)	DN	Fa,y (N)	Pack 1
317 3 075	75	70	650	10
317 3 078	78	70	650	10
317 3 085	83	80	700	10
317 3 116	110	100	1,000	10
317 3 132	125	125	1,100	10
317 3 141	137	125	1,250	10
317 3 168	160	150	1,500	10
317 3 219	210	200	1,500	5

## Metal Pipe Clamps without Lining

### 2S Clamp (M8/10)



RAL  
certificate pending

#### Features and Benefits

- standard two-screw clamp
- for fixing insulated steel or copper pipes
- gapless range from Ø 10-225mm
- screws secured with anti-loss washers
- material: steel
- zinc plated
- medium safe load according to RAL GZ-655
- see page 18 for Phenolic insulation blocks to be used with these clamps

Part No	D (mm)	D (")	G	Pack 1
3303 5 014	10 - 14	- 1/4	M8/10	50
3303 5 019	15 - 19		M8/10	50
3303 5 024	20 - 24	1/2	M8/10	50
3303 5 030	25 - 30	3/4	M8/10	50
3303 5 037	31 - 37	1	M8/10	50
3303 5 046	38 - 46	1 1/4	M8/10	50
3303 5 052	47 - 52	1 1/2	M8/10	50
3303 5 061	53 - 61	2	M8/10	50
3303 5 067	62 - 67	-	M8/10	50
3303 5 074	68 - 74	-	M8/10	50
3303 5 081	75 - 81	2 1/2	M8/10	50
3303 5 087	82 - 87	-	M8/10	50
3303 5 095	88 - 95	3	M8/10	50
3303 5 103	96 - 103	-	M8/10	50
3303 5 112	104 - 112	-	M8/10	25
3303 5 118	113 - 118	4	M8/10	25
3303 5 127	119 - 127	-	M8/10	25
3303 5 137	128 - 137	-	M8/10	25
3303 5 144	138 - 144	5	M8/10	25
3303 5 153	145 - 153	-	M8/10	25
3303 5 162	154 - 162	-	M8/10	25
3303 5 172	163 - 172	6	M8/10	25
3303 5 183	173 - 183	-	M8/10	15
3303 5 194	184 - 194	-	M8/10	15
3303 5 205	195 - 205	-	M8/10	15
3303 5 216	206 - 216	-	M8/10	15
3303 5 225	217 - 225	8	M8/10	10



Ideal used with load-bearing insulated pipe supports

**Bifix® G2 (M8/10) (BUP1000)**

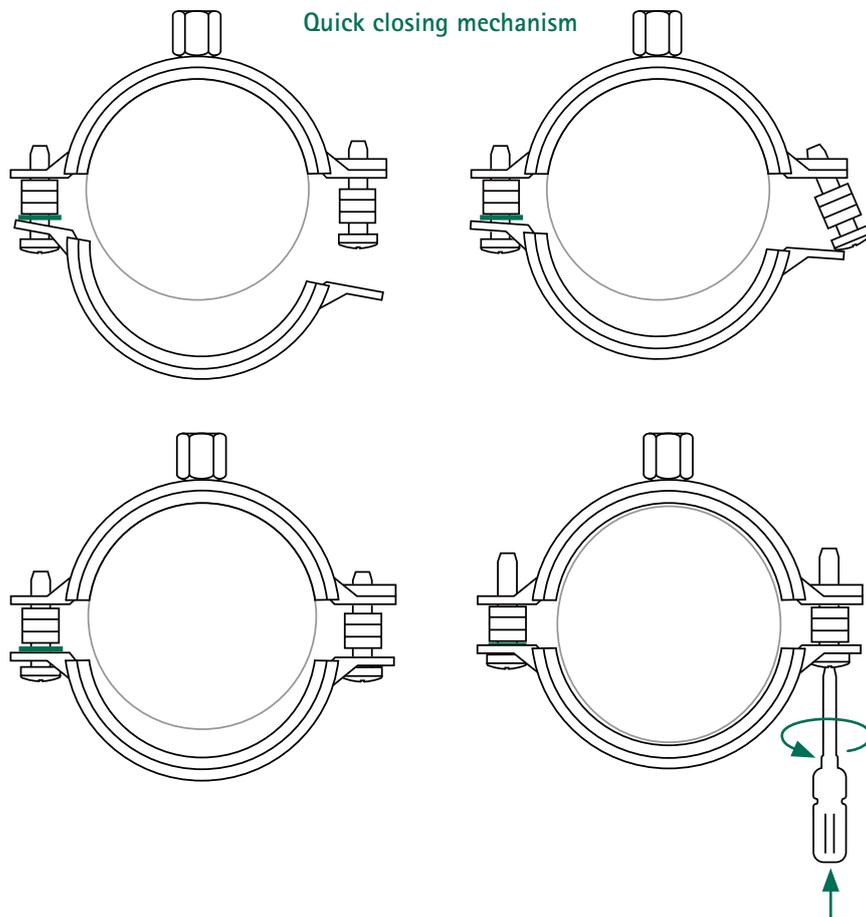


**RAL**  
certificate pending

**Features and Benefits**

- advanced two-screw clamp with premium design
- for fixing insulated steel or copper pipe
- with quick closing mechanism
- advanced geometry for increased strength
- 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
- medium to high safe load according to RAL GZ-655 and RAL GZ-656
- tested for fire safety

Part No	D (mm)	D (")	DN	G	Pack 1
300 8 014	10 - 14	1/4	8	M8/10	50
300 8 019	15 - 19		10	M8/10	50
300 8 023	20 - 23	1/2	15	M8/10	50
300 8 028	25 - 28	3/4	20	M8/10	50
300 8 035	31 - 35	1	25	M8/10	50
300 8 039	36 - 39	-	-	M8/10	50
300 8 045	40 - 45	1 1/4	32	M8/10	50
300 8 052	48 - 52	1 1/2	40	M8/10	50
300 8 058	54 - 58	-	-	M8/10	50
300 8 064	60 - 64	2	50	M8/10	50
300 8 070	66 - 70	-	-	M8/10	50
300 8 079	75 - 79	2 1/2	65	M8/10	50
300 8 083	80 - 83	-	-	M8/10	50
300 8 091	88 - 91	3	80	M8/10	50
300 8 105	100 - 105	-	-	M8/10	50
300 8 115	108 - 115	4	100	M8/10	25
300 8 130	125 - 130	-	-	M8/10	25
300 8 140	133 - 140	5	125	M8/10	25
300 8 160	152 - 160	-	-	M8/10	25
300 8 169	165 - 169	6	150	M8/10	25
300 8 180	176 - 180	-	-	M8/10	15
300 8 200	192 - 200	-	-	M8/10	15
300 8 210	205 - 210	-	-	M8/10	15
300 8 225	219 - 225	8	200	M8/10	15



## BIS Heavy Duty Clamp HD500 (BUP1000)



### Features and Benefits

- two-part clamp with two locking bolts
- high safe working load
- one side opening for easier installation
- 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
- tested for fire safety
- see page 18 for Phenolic insulation blocks to be used with these clamps

Part No	D (mm)	D (")	G	Fa,z (N)	Pack 1
3303 8 019	15 - 19		M8/10	2,100	25
3303 8 023	19 - 23	1/2	M8/10	2,100	25
3303 8 030	25 - 30	3/4	M8/10	2,100	25
3303 8 036	31 - 36	1	M8/10	2,100	25
3303 8 042	37 - 42	-	M8/10	2,100	25
3303 8 045	40 - 45	1 1/4	M8/10	2,100	25
3303 8 052	47 - 52	1 1/2	M8/10	2,100	25
3303 8 058	53 - 58	-	M8/10	2,100	25
3303 8 065	59 - 65	2	M8/10	2,100	25
3303 8 071	66 - 71	-	M8/10	2,100	25
3304 8 078	72 - 78	2 1/2	M10/12	4,000	25
3304 8 085	79 - 85	-	M10/12	4,000	25
3304 8 092	86 - 92	3	M10/12	4,000	25
3304 8 106	98 - 106	-	M10/12	4,000	25
3304 8 116	108 - 116	4	M10/12	4,000	25
3304 8 123	116 - 123	-	M10/12	4,000	25
3304 8 133	125 - 133	-	M10/12	4,000	25
3304 8 140	132 - 140	5	M10/12	4,000	25
3304 8 154	148 - 154	-	M10/12	4,000	15
3304 8 169	159 - 169	6	M10/12	8,200	15
3304 8 183	173 - 183	-	M10/12	8,200	15
3304 8 202	192 - 202	-	M10/12	8,200	15
3304 8 219	208 - 219	-	M10/12	8,200	15
3304 8 227	217 - 227	8	M10/12	8,200	2

## BIS Heavy Duty Clamp HD500 (BUP1000) – M16



### Features and Benefits

- two-part clamp with two locking bolts
- high safe working load
- one side opening for easier installation
- 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
- tested for fire safety

Part No	D (mm)	D (")	G	Fa,z (N)	Pack 1
3306 8 169	159 - 169	6	M16	8,200	15
3306 8 183	173 - 183	-	M16	8,200	15
3306 8 202	192 - 202	-	M16	8,200	15
3306 8 227	217 - 227	8	M16	8,200	2
3306 8 241	229 - 241	-	M16	8,200	2
3306 8 254	244 - 254	-	M16	8,200	2
3306 8 264	254 - 264	-	M16	8,200	2
3306 8 279	267 - 279	10	M16	8,200	2
3306 8 289	279 - 289	-	M16	12,000	2
3306 8 302	292 - 302	-	M16	12,000	2
3306 8 325	315 - 325	12	M16	12,000	2
3306 8 360	350 - 360	14	M16	12,000	2
3306 8 374	364 - 374	-	M16	12,000	2
3306 8 389	379 - 389	-	M16	12,000	2
3306 8 408	398 - 408	16	M16	12,000	2
3306 8 418	408 - 418	-	M16	12,000	2
3306 8 436	424 - 436	-	M16	12,000	2
3306 8 458	448 - 458	18	M16	12,000	2
3306 8 509	499 - 509	20	M16	12,000	2

**BIS Sprinkler Clamp TA41**



**Features and Benefits**

- one-part clamp
- for sprinkler pipes up to 8" (221 mm)
- with knurled nut for fixing to stud bolt or threaded rod
- material: steel
- clamp: pre-galvanized; nut: zinc plated
- with FM approval - certificate number 3024336
- UL listed - certificate number VFXT,EX9140

Part No	D (mm)	G	FM	UL	Pack 1
453 5 021	23	M10	FM	UL	100
453 5 027	28	M10	FM	UL	100
453 5 034	35	M10	FM	UL	100
453 5 042	44	M10	FM	UL	100
453 5 048	50	M10	FM	UL	100
453 5 060	62	M10	FM	UL	100
453 5 076	77	M10	FM	UL	50
453 5 089	90	M10	FM	UL	50
453 5 114	115	M10	FM	UL	25
453 5 140	142	M12	FM	UL	20
453 5 168	170	M12	FM	UL	15
453 5 219	221	M12	FM	UL	10

**BIS 434 Clamp for PE-Pipe**



**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. 433 7 XXX)
- screws secured with anti-loss washer
- material: steel
- zinc plated

Part No	D (mm)	DN	G	Pack 1
434 3 032	32	25	M10	50
434 3 040	40	32	M10	50
434 3 050	50	40	M10	50
434 3 056	56	50	M10	50
434 3 063	63	57	M10	50
434 3 075	75	70	M10	25
434 3 080	82	-	M10	25
434 3 090	90	80	M10	25
434 3 100	102	-	M10	25
434 3 110	110	100	M10	25
434 3 125	125	125	M10	25
434 3 160	160	150	M10	25
434 3 200	200	200	M10	12
434 3 225	225	-	M10	12
434 3 250	250	250	M10	8
434 3 315	315	315	M10	8

**BIS Metal Liner 434 Clamp**



**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	Pack 1
433 7 040	40	32	25
433 7 050	50	40	25
433 7 056	56	50	25
433 7 063	63	57	25
433 7 075	75	70	25
433 7 090	90	80	25
433 7 110	110	100	25
433 7 125	125	125	25
433 7 160	160	150	25
433 7 200	200	200	10
433 7 250	250	250	10
433 7 315	315	300	10

**BIS Lining 434 Clamp**



**Features and Benefits**

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

Part No	L	b x s (mm)	Pack 1
438 9 930	10 m	30 x 1.5	10

# Phenolic Insulation Blocks

# Phenolic Insulation Blocks

**BIS Phenblox®**



- Load bearing insulation block
- Self-adhesive closure tab
- Stepped joint faces
- CE Marked

**2S Clamps (M8/10)**



- Standard 2 screw clamp
- Screws secured with anti-loss washer
- Zinc plated finish

**BIS HD 500 Clamps**



- Heavy duty
- CO<sup>2</sup> welded connection nut
- Captive locking nuts and bolts
- BIS Ultraprotect® (BUP) coating

**Split Band Clips**



- 2 piece clamp
- Zinc plated finish

This chart is designed to help you select the right clamp and insulation block combination.

Pipe NB	Size (mm)	Size (Cu)	Product Type	Insulation thickness					
				15 mm	20 mm	25 mm	30 mm	40 mm	50 mm
-	-	15	Phenblox	8901015015	8901020015	8901025015	8901030015	8901040015	8901050015
			2S Clamp	33035046	33035061	33035067	33035081	33035095	33035118
			HD 500 Clamp	33038045	33038058	33038065	33048078	33048106	33048116
			Split Band Clip	B4093046	B4093056	B4093066	B4093077	B4093096	B4093122
15	21	22	Phenblox	8901015021	8901020021	8901025021	8901030021	8901040021	8901050021
			2S Clamp	33035052	33035061	33035074	33035081	33035103	33035127
			HD 500 Clamp	33038052	33038065	33038071	33048085	33048106	33048123
			Split Band Clip	B4093053	B4093063	B4093073	B4093081	B4093103	B4093122
20	27	28	Phenblox	8901015027	8901020027	8901025027	8901030027	8901040027	8901050027
			2S Clamp	33035061	33035067	33035081	33035087	33035112	33035127
			HD 500 Clamp	33038058	33038071	33048078	33048092	33048106	33048133
			Split Band Clip	B4093063	B4093070	B4093077	B4093089	B4093109	B4093127
25	34	35	Phenblox	8901015034	8901020034	8901025034	8901030034	8901040034	8901050034
			2S Clamp	33035067	33035074	33035087	33035095	33035118	33035137
			HD 500 Clamp	33038065	33048078	33048085	33048092	33048116	33048140
			Split Band Clip	B4093066	B4093077	B4093085	B4093096	B4093112	B4093139
32	42	42	Phenblox	8901015042	8901020042	8901025042	8901030042	8901040042	8901050042
			2S Clamp	33035074	33035087	33035095	33035103	33035127	33035144
			HD 500 Clamp	33048078	33048085	33048092	33048106	33048123	33048140
			Split Band Clip	B4093073	B4093083	B4093096	B4093103	B4093122	B4093143
40	48	-	Phenblox	8911015048	8911020048	8911025048	8911030048	8911040048	8911050048
			2S Clamp	33035081	33035095	33035103	33035112	33035137	33035153
			HD 500 Clamp	33048078	33048092	33048106	33048116	33048133	33048154
			Split Band Clip	B4093081	B4093089	B4093103	B4093109	B4093132	B4093152
-	-	54	Phenblox	8911015054	8911020054	8911025054	8911030054	8911040054	8911050054
			2S Clamp	33035087	33035095	33035112	33035118	33035137	33035162
			HD 500 Clamp	33048085	33048092	33048106	33048116	33048140	33048154
			Split Band Clip	B4093089	B4093096	B4093109	B4093114	B4093139	B4093159
50	60	-	Phenblox	8911015060	8911020060	8911025060	8911030060	8911040060	8911050060
			2S Clamp	33035095	33035103	33035112	33035127	33035144	33035162
			HD 500 Clamp	33048092	33048106	33048116	33048123	33048140	33048169
			Split Band Clip	B4093096	B4093103	B4093114	B4093122	B4093143	B4093168
-	-	66	Phenblox	8911015066	8911020066	8911025066	8911030066	8911040066	8911050066
			2S Clamp	33035103	33035112	33035118	33035127	33035153	33035172
			HD 500 Clamp	33048106	33048106	33048116	33048133	33048154	33048169
			Split Band Clip	B4093096	B4093109	B4093122	B4093127	B4093148	B4093168

## BIS Phenblox®



- Load bearing insulation block
- Self-adhesive closure tab
- Stepped joint faces
- CE Marked

## 2S Clamps (M8/10)



- Standard 2 screw clamp
- Screws secured with anti-loss washer
- Zinc plated finish

## BIS HD 500 Clamps



- Heavy duty
- CO<sup>2</sup> welded connection nut
- Captive locking nuts and bolts
- BIS Ultraprotect® (BUP) coating

## Split Band Clips



- 2 piece clamp
- Zinc plated finish

This chart is designed to help you select the right clamp and insulation block combination.

Pipe NB	Size (mm)	Size (Cu)	Product Type	Insulation thickness					
				15 mm	20 mm	25 mm	30 mm	40 mm	50 mm
65	76	76	Phenblox	8911015076	8911020076	8911025076	8911030076	8911040076	8911050076
			2S Clamp	33035112	33035118	33035127	33035137	33035162	33035183
			HD 500 Clamp	33048106	33048116	33048133	33048140	33048154	33048183
			Split Band Clip	B4093109	B4093122	B4093127	B4093139	B4093159	B4093180
80	89	-	Phenblox	8911015089	8911020089	8911025089	8911030089	8911040089	8911050089
			2S Clamp	33035127	33035137	33035144	33035153	33035172	33035194
			HD 500 Clamp	33048123	33048133	33048140	33048154	33048169	33048202
			Split Band Clip	B4093122	B4093132	B4093139	B4093152	B4093172	B4093190
-	-	108	Phenblox	8911015108	8911020108	8911025108	8911030108	8911040108	8911050108
			2S Clamp	33035144	33035153	33035162	33035172	33035194	33035216
			HD 500 Clamp	33048140	33048154	33048169	33048169	33048202	33048219
			Split Band Clip	B4093139	B4093148	B4093159	B4093168	B4093190	B4093212
100	114	-	Phenblox	8911015114	8911020114	8911025114	8911030114	8911040114	8911050114
			2S Clamp	33035144	33035162	33035172	33035183	33035194	33035216
			HD 500 Clamp	33048140	33048154	33048169	33048183	33048202	33048219
			Split Band Clip	B4093143	B4093159	B4093168	B4093180	B4093196	B4093220
-	-	133	Phenblox	8911015133	8911020133	8911025133	8911030133	8911040133	8911050133
			2S Clamp	33035172	33035183	33035183	33035194	33035216	N/A
			HD 500 Clamp	33048169	33048183	33048183	33048202	33048219	33068241
			Split Band Clip	B4093168	B4093172	B4093180	B4093196	B4093220	B4093240
125	140	-	Phenblox	8911015140	8911020140	8911025140	8911030140	8911040140	8911050140
			2S Clamp	33035172	33035183	33035194	33035205	33035225	N/A
			HD 500 Clamp	33048169	33048183	33048202	33048202	33068227	33068254
			Split Band Clip	B4093172	B4093180	B4093190	B4093202	B4093220	B4093240
-	-	159	Phenblox	8911015159	8911020159	8911025159	8911030160	8911040159	8911050159
			2S Clamp	33035194	33035205	33035216	33035225	N/A	N/A
			HD 500 Clamp	33048202	33048202	33048219	33048219	33068254	33068279
			Split Band Clip	B4093190	B4093202	B4093212	B4093220	B4093240	B4093260
150	168	-	Phenblox	8911215168	8911220168	8911225168	8911230168	8911240168	8911250168
			2S Clamp	33035205	33035216	33035225	N/A	N/A	N/A
			HD 500 Clamp	33048202	33048219	33048219	33068227	33068254	33068279
			Split Band Clip	B4093202	B4093212	B4093220	B4093232	B4093250	B4093270

Wood blocks and Calcium Silicate also available.

# Traditional Metal Pipe Supports

## IH100 / IH140 Split Band Clip



### Features and Benefits

- Type IH100: zinc plated, for steel pipe
- Type IH140: nylon coated, for copper pipe
- also available in:
  - self colour
  - hot dip galvanized
  - stainless steel

Part No	D (mm)	D (")	DN	Type	Pack 1
B410 3 021	21	1/2	15	IH100	25
B410 3 027	27	3/4	20	IH100	50
B410 3 034	34	1	25	IH100	50
B410 3 042	42	1 1/4	32	IH100	25
B410 3 048	48	1 1/2	40	IH100	25
B410 3 060	60	2	50	IH100	25
B410 3 076	76	2 1/2	65	IH100	15
B410 3 089	89	3	80	IH100	15
B410 3 114	114	4	100	IH100	15
B410 3 140	140	5	125	IH100	15
B410 3 168	168	6	150	IH100	10
B410 3 194	194	7	175	IH100	1
B410 3 219	219	8	200	IH100	1
B410 3 245	245	9	225	IH100	1
B410 3 273	273	10	250	IH100	1
B410 3 323	324	12	300	IH100	1
B410 6 015	15	-	-	IH140	25
B410 6 022	22	-	-	IH140	25
B410 6 028	28	-	-	IH140	25
B410 6 035	35	-	-	IH140	25
B410 6 042	42	-	-	IH140	25
B410 6 054	54	-	-	IH140	25
B410 6 066	66	-	-	IH140	1
B410 6 076	76	-	-	IH140	15
B410 6 108	108	-	-	IH140	1
B410 6 133	133	-	-	IH140	1
B410 6 159	159	-	-	IH140	1

**IH100 Split Band Clip Over Insulation ≤ 152 OD**

**Features and Benefits**

- standard finish: zinc plated
- also available in:
  - self colour
  - hot dip galvanized
- see page 18 for Phenolic insulation blocks to be used with these clamps

Part No	D (mm)	b x s (mm)	Pack 1
B409 3 046	46	30 x 3.0	1
B409 3 053	53	30 x 3.0	1
B409 3 056	56	30 x 3.0	1
B409 3 063	63	30 x 3.0	1
B409 3 066	66	30 x 3.0	1
B409 3 070	70	30 x 3.0	1
B409 3 073	73	30 x 3.0	1
B409 3 077	77	30 x 3.0	1
B409 3 081	81	30 x 3.0	1
B409 3 083	83	30 x 3.0	1
B409 3 085	85	30 x 3.0	1
B409 3 089	89	30 x 3.0	1
B409 3 096	96	30 x 3.0	1
B409 3 103	103	30 x 3.0	1
B409 3 109	109	40 x 3.0	1
B409 3 114	114	40 x 3.0	1
B409 3 122	122	40 x 3.0	1
B409 3 127	127	40 x 3.0	1
B409 3 132	132	40 x 3.0	1
B409 3 139	139	40 x 3.0	1
B409 3 143	143	40 x 3.0	1
B409 3 148	148	40 x 3.0	1
B409 3 152	152	40 x 3.0	1

**IH100 Split Band Clip Over Insulation > 155 OD**

**Features and Benefits**

- standard finish: zinc plated
- also available in:
  - self colour
  - hot dip galvanized
- see page 18 for Phenolic insulation blocks to be used with these clamps

Part No	D (mm)	b x s (mm)	Pack 1
B409 3 159	159	40 x 3.0	1
B409 3 168	168	40 x 3.0	1
B409 3 172	172	40 x 3.0	1
B409 3 180	180	40 x 3.0	1
B409 3 190	190	40 x 5.0	1
B409 3 196	196	40 x 5.0	1
B409 3 202	202	40 x 5.0	1
B409 3 212	212	40 x 5.0	1
B409 3 220	220	40 x 5.0	1
B409 3 225	225	40 x 5.0	1
B409 3 232	232	40 x 5.0	1
B409 3 240	240	40 x 5.0	1
B409 3 250	250	40 x 5.0	1
B409 3 260	260	40 x 5.0	1
B409 3 270	270	40 x 5.0	1
B409 3 280	280	50 x 6.0	1
B409 3 302	302	50 x 6.0	1
B409 3 320	320	50 x 6.0	1

IH103 / IH142 Saddle Guide



**Features and Benefits**

- Type IH103: zinc plated, for steel pipe
- Type IH142: nylon coated, for copper pipe
- with clearance to allow movement
- also available in:
  - self colour
  - hot dip galvanized

Part No	D (mm)	D (")	DN	Type	Pack 1
B320 3 024	24	1/2	15	IH103	50
B320 3 030	30	3/4	20	IH103	50
B320 3 037	37	1	25	IH103	50
B320 3 046	46	1 1/4	32	IH103	50
B320 3 054	54	1 1/2	40	IH103	50
B320 3 064	64	2	50	IH103	25
B320 3 082	82	2 1/2	65	IH103	25
B320 3 095	95	3	80	IH103	25
B320 3 120	120	4	100	IH103	25
B320 3 146	146	5	125	IH103	1
B320 3 176	176	6	150	IH103	25
B320 6 017	15	-	-	IH142	50
B320 6 024	22	-	-	IH142	50
B320 6 030	28	-	-	IH142	50
B320 6 038	35	-	-	IH142	50
B320 6 045	42	-	-	IH142	50
B320 6 058	54	-	-	IH142	50
B320 6 070	66	-	-	IH142	1
B320 6 112	108	-	-	IH142	1
B320 6 140	133	-	-	IH142	1

*PP-strip is used to isolate copper pipe from any supporting steel structure. Please refer to page Q 05 85. Please specify if required.*

IH104 / IH143 Saddle Clamp



**Features and Benefits**

- Type IH104: zinc plated, for steel pipe
- Type IH143: nylon coated, for copper pipe
- tight fit with pull down
- also available in:
  - self colour
  - hot dip galvanized
  - stainless steel

Part No	D (mm)	D (")	DN	Type	Pack 1
B310 3 021	21	1/2	15	IH104	25
B310 3 027	27	3/4	20	IH104	25
B310 3 034	34	1	25	IH104	25
B310 3 042	42	1 1/4	32	IH104	25
B310 3 048	48	1 1/2	40	IH104	25
B310 3 060	60	2	50	IH104	25
B310 3 076	76	2 1/2	65	IH104	25
B310 3 089	89	3	80	IH104	25
B310 3 114	114	4	100	IH104	25
B310 3 140	140	5	125	IH104	25
B310 3 168	168	6	150	IH104	25
B310 3 194	194	7	175	IH104	1
B310 3 219	219	8	200	IH104	1
B310 3 245	245	9	225	IH104	1
B310 3 273	273	10	250	IH104	1
B310 6 015	15	-	-	IH143	25
B310 6 022	22	-	-	IH143	25
B310 6 028	28	-	-	IH143	25
B310 6 035	35	-	-	IH143	25
B310 6 042	42	-	-	IH143	25
B310 6 054	54	-	-	IH143	25
B310 6 066	66	-	-	IH143	1
B310 6 076	76	-	-	IH143	25
B310 6 108	108	-	-	IH143	1
B310 6 133	133	-	-	IH143	1
B310 6 159	160	-	-	IH143	1

*PP-strip is used to isolate copper pipe from any supporting steel structure. Please refer to page Q 05 85. Please specify if required.*

### IH105 / IH144 Standard U Bolt



#### Features and Benefits

- Type IH105: zinc plated, for steel pipe
- Type IH144: nylon coated, for copper pipe
- other finishes available on request

Part No	D (mm)	D (")	DN	Type	Pack 1
B710 3 022	21	1/2	15	IH105	100
B710 3 023	27	3/4	20	IH105	100
B710 3 035	34	1	25	IH105	100
B710 3 042	42	1 1/4	32	IH105	100
B710 3 049	48	1 1/2	40	IH105	50
B710 3 061	60	2	50	IH105	50
B710 3 076	77	2 1/2	65	IH105	50
B710 3 089	92	3	80	IH105	50
B710 3 115	116	4	100	IH105	25
B710 3 140	142	5	125	IH105	25
B710 3 168	172	6	150	IH105	25
B710 3 219	220	8	200	IH105	1
B710 3 273	273	10	250	IH105	1
B710 3 324	324	12	300	IH105	1

*PP-strip is used to isolate copper pipe from any supporting steel structure. Please refer to page Q 05 85. Please specify if required.*

### IH105 / IH144 Extended U Bolt



#### Features and Benefits

- Type IH105: zinc plated, for steel pipe
- Type IH144: nylon coated, for copper pipe
- other finishes available on request

Part No	D (mm)	D (")	DN	Type	Pack 1
B712 3 035	34	1	25	IH105	100
B712 3 042	42	1 1/4	32	IH105	100
B712 3 049	48	1 1/2	40	IH105	50
B712 3 061	60	2	50	IH105	50
B712 3 076	77	2 1/2	65	IH105	50
B712 3 089	92	3	80	IH105	50
B712 3 115	116	4	100	IH105	25
B712 3 140	142	5	125	IH105	25
B712 3 168	172	6	150	IH105	25

*PP-strip is used to isolate copper pipe from any supporting steel structure. Please refer to page Q 05 85. Please specify if required.*

### IH120 / IH147 Roller Chair and Guide



#### Features and Benefits

- Type IH120: standard finish: zinc plated
- Type IH147: standard finish: self colour (Base / Chair), nylon coated (Guide)

Part No	D (mm)	D (")	DN	Type	Pack 1
B611 3 034	34	1	25	IH120	1
B611 3 048	48	1 1/4	40	IH120	1
B611 3 060	60	2	50	IH120	1
B611 3 076	76	2 1/2	65	IH120	1
B611 3 089	89	3	80	IH120	1
B611 3 114	114	4	100	IH120	1
B611 3 140	140	5	125	IH120	1
B611 3 168	168	6	150	IH120	1
B611 3 193	194	7	175	IH120	1
B611 3 219	219	8	200	IH120	1
B611 3 273	273	10	250	IH120	1
B611 3 323	323	12	300	IH120	1
B611 3 406	406	16	400	IH120	1

### IH121 Single Roller Bracket



**Features and Benefits**

- standard finish: zinc plated

Part No	D (mm)	D (")	DN	Pack 1
B620 3 034	34	1	25	1
B620 3 042	42	1¼	32	1
B620 3 048	48	1½	40	1
B620 3 060	60	-	50	1
B620 3 076	76	2½	65	1
B620 3 089	89	3	80	1
B620 3 114	114	4	100	1
B620 3 140	140	5	125	1
B620 3 168	168	6	150	1
B620 3 219	219	8	200	1
B620 3 273	273	10	250	1

*NB. Drop rods for hanging Roller Brackets should be as short and rigid as possible, to prevent 'swinging' (ideally 300 mm or less).*

### IH123 Heavy Duty Roller Bracket



**Features and Benefits**

- standard finish: zinc plated

Part No	D (mm)	D (")	DN	Pack 1
B623 3 034	34	1	25	1
B623 3 042	42	1¼	32	1
B623 3 048	48	1½	40	1
B623 3 060	60	2	50	1
B623 3 076	76	2½	65	1
B623 3 089	89	3	80	1
B623 3 114	114	4	100	1
B623 3 168	168	6	150	1
B623 3 219	219	8	200	1

*NB. Drop rods for hanging Roller Brackets should be as short and rigid as possible, to prevent 'swinging' (ideally 300 mm or less).*

### IH125 / IH151 Roller and Chair



**Features and Benefits**

- Type IH125: zinc plated, for steel pipe
- Type IH151: nylon coated, for copper pipe
- see also: IC-clamp (for conduit or cable); square nut (for threaded rod) or protective cap (to avoid damaging of protected surfaces)
- for sizes 15 NB to 50 NB see Part No. B615 3 000 on page T 05 55

Part No	D (mm)	D (")	DN	Type	Pack 1
B610 3 076	76	-	65	IH125	1
B610 3 089	89	3	80	IH125	1
B610 3 114	114	4	100	IH125	1
B610 3 139	140	5	125	IH125	1
B610 3 168	168	6	150	IH125	1
B610 3 219	219	8	200	IH125	1
B610 3 273	273	10	250	IH125	1
B610 3 323	324	-	300	IH125	1

*The Roller Support Bar is supplied with threaded rod and 2 nuts as shown, although it can be supplied using circlips, or welded washers on request.*

### BIS Sheet Metal Sleeve



#### Features and Benefits

- load spreading
- over laps insulation block to assist vapour seal
- prevents damage to insulation
- suitable for use with rollers
- material: steel
- pre-galvanized

Part No	D (mm)	Pack 1
234 0 150051	45 - 51	1
234 0 150064	58 - 66	1
234 0 150071	68 - 72	1
234 0 150077	75 - 79	1
234 0 150084	83 - 88	1
234 0 150092	90 - 95	1
234 0 150101	98 - 104	1
234 0 150110	107 - 111	1
234 0 150120	114 - 120	1
234 0 150122	122 - 130	1
234 0 150139	135 - 142	1
234 0 150148	144 - 150	1
234 0 150154	151 - 158	1
234 0 150164	162 - 169	1
234 0 150180	173 - 183	1
234 0 150189	188 - 194	1
234 0 150208	200 - 210	1
234 0 150218	213 - 220	1
234 0 150229	228 - 240	1
234 0 150248	240 - 248	1
234 0 150254	249 - 254	1
234 0 150260	256 - 260	1
234 0 150268	261 - 268	1

### PP Strip for IH142, IH143 and IH144



#### Features and Benefits

- material: PP (polypropylene), black

Part No	B (mm)	b x s (mm)	D1	Pack 1
B911 1 054	94	40 x 3.0	11	1
B911 1 061	101	40 x 3.0	11	1
B911 1 065	105	40 x 3.0	11	1
B911 1 069	109	40 x 3.0	11	1
B911 1 072	112	40 x 3.0	11	1
B911 1 075	115	40 x 3.0	11	1
B911 1 083	123	40 x 3.0	11	1
B911 1 087	127	40 x 3.0	11	1
B911 1 096	136	40 x 3.0	11	1
B911 1 102	142	40 x 3.0	11	1
B911 1 108	148	40 x 3.0	11	1
B911 1 114	154	40 x 3.0	11	1
B911 4 132	172	40 x 3.0	14	1
B911 4 138	178	40 x 3.0	14	1
B911 4 140	180	40 x 3.0	14	1

### IH200 Standard Eye Bolt (Open Eye)



#### Features and Benefits

- standard finish:
  - zinc plated

Part No	G	d1 (mm)	Pack 1
B665 3 608	M6	Ø 8	1
B665 3 610	M6	Ø 8	1
B665 3 615	M6	Ø 8	1
B665 3 808	M8	Ø 10	1
B665 3 815	M8	Ø 10	1
B665 3 008	M10	Ø 12	1
B665 3 015	M10	Ø 12	1
B665 3 022	M10	Ø 12	1
B665 3 030	M10	Ø 12	1
B665 3 108	M12	Ø 14	1
B665 3 115	M12	Ø 14	1
B665 3 122	M12	Ø 14	1
B665 3 215	M16	Ø 18	1

*Thread length on M6, M8, M10 and M12 x 80 is 35 mm.*

*Minimum eyebolt length on M16 and above is 150 mm.*

### IH212 Link Eye



#### Features and Benefits

- standard finish:
  - pre-galvanized
  - zinc plated

Part No	h (mm)	b x s (mm)	ST	Pack 1
B676 2 010	40	25 x 1.5	pre-galvanized	1
B676 2 012	50	25 x 1.5	pre-galvanized	1
B676 3 016	60	50 x 3.0	zinc plated	1

### IH270 Bow Nut



#### Features and Benefits

- standard finish: zinc plated

Part No	d (mm)	R	Pack 1
B698 3 010	18	M10	1
B698 3 012	20	M12	1
B698 3 016	20	M16	1
B698 3 020	25	M20	1
B698 3 024	30	M24	1

*Larger sizes available on request.*

# 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!

## Plastic Pipe Clamps

### BIS starQuick® Clamp (Grey)



**kiwa**



#### 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

Part No	D (mm)	D (")	DN	Type	Pack 1
085 4 010	10 - 12		6	SQ-10	100
085 4 012	12 - 14	1/4	8	SQ-12	100
085 4 015	14 - 16	-	-	SQ-15	100
085 4 018	16 - 20		10	SQ-17	100
085 4 022	20 - 23	1/2	15	SQ-20	50
085 4 028	24 - 28	3/4	20	SQ-25	50
085 4 031	28 - 32	-	-	SQ-28	50
085 4 035	32 - 35	1	25	SQ-32	50
085 4 038	35 - 40	-	-	SQ-36	25
085 4 042	40 - 44	1 1/4	32	SQ-40	25
085 4 050	44 - 50	-	-	SQ-47	25
085 4 054	48 - 55	1 1/2	40	SQ-51	15
085 4 063	59 - 65	2	50	SQ-59	15

### BIS starQuick® Clamp (White)



**kiwa**



#### 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

Part No	D (mm)	D (")	Type	KIWA	Pack 1
085 5 010	10 - 12		SQ-10	-	100
085 5 012	12 - 14	1/4	SQ-12	KIWA	100
085 5 015	14 - 16	-	SQ-15	KIWA	100
085 5 018	16 - 20		SQ-17	KIWA	100
085 5 022	20 - 23	1/2	SQ-20	KIWA	50
085 5 028	24 - 28	3/4	SQ-25	KIWA	50
085 5 031	28 - 32	-	SQ-28	KIWA	50
085 5 035	32 - 35	1	SQ-32	KIWA	50
085 5 038	35 - 40	-	SQ-36	KIWA	25
085 5 042	40 - 44	1 1/4	SQ-40	KIWA	25
085 5 050	44 - 50	-	SQ-47	-	25
085 5 054	48 - 55	1 1/2	SQ-51	-	15
085 5 063	59 - 65	2	SQ-59	-	15

### BIS starQuick® Clamp (Copper)



**kiwa**



#### 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 (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	Type	Pack 1
0855815	14 - 16	-	-	SQ-15	100
0855822	20 - 23	1/2	15	SQ-20	50
0855828	24 - 28	3/4	20	SQ-25	50

### BIS starQuick® Duo Wall Plate



#### Features and Benefits

- for fixing of two pipes with BIS starQuick® Clamps
- suitable for BIS 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

Part No	Model	Colour	Pack 1
085 4 000	-	Grey (RAL 7035)	100
085 4 300	With hammer-in screw	Grey (RAL 7035)	50
085 5 000	-	White (RAL 9003)	100

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

### BIS starQuick® Threaded Rod Adaptor



#### Features and Benefits

- to fix a BIS starQuick® Clamp to a threaded rod
- to add pipework quickly and simply to an existing installation
- material: PA (polyamide), grey (according to RAL 7035)

Part No	Model	G	Pack 1
085 4 356	SQ10 - SQ51	M6	100
085 4 358	SQ10 - SQ51	M8	100

### BIS starQuick® Distance Block



#### 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

Part No	L	B (mm)	H (mm)	Pack 1
085 4 510	27 mm	17	10	25

### BIS starQuick® Hammer-in Screw



#### Features and Benefits

- for fixing of BIS 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	L	HØ (mm)	Pack 1
085 4 301	40 mm	Ø 6 mm	25

### BIS starQuick® Rail



#### Features and Benefits

- for fixing of two or more pipes with BIS starQuick® Clamps without nut
- the BIS starQuick® Clamp is fixed to the rail using the BIS starQuick® Rail Adaptor (Part No. 085 4 313)
- material: PVC (polyvinylchloride), grey (according to RAL 7035)

Part No	L	Pack 1
085 4 316	150 mm	50
085 4 325	1 m	25

### BIS starQuick® Rail Adaptor



#### Features and Benefits

- suitable for BIS starQuick® Clamps up to SQ-32
- for fixing of a BIS starQuick® Clamp (without nut) on a BIS starQuick® Rail or on a Strut-Adaptor (Part No. 085 4 331)
- material: modified PA6 (polyamide), grey (according to RAL 7035)

Part No	For	Pack 1
085 4 313	BIS starQuick®	20

### BIS starQuick® Universal Rail Adaptor



#### Features and Benefits

- for fixing BIS 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
- material: modified PA6 (polyamide), grey (according to RAL 7035)

Part No	For Rail	Pack 1
085 4 332	WMO - 35 + Strut	50

**BIS starQuick® Fixing Nut**



**Features and Benefits**

- to make a threaded connection in a BIS 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
085 4 006	M6	Grey (RAL 7035)	100
085 5 006	M6	White (RAL 9003)	100
085 4 308	M8	Grey (RAL 7035)	100

**BIS starQuick® Push Plug**



**Features and Benefits**

- for fixing of a BIS 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)

Part No	G	L	Pack 1
610 1 063	M6	30 mm	50

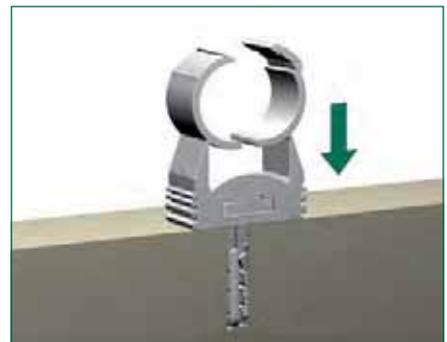
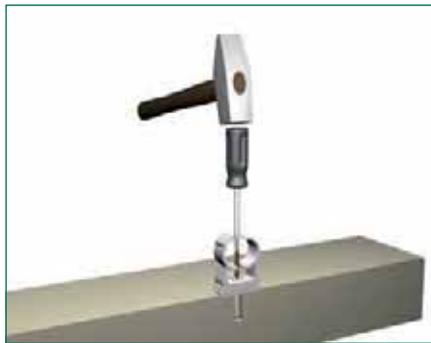
**BIS starQuick® Hammerfix**



**Features and Benefits**

- Part No. 085 4 338: for fixing of a BIS starQuick® Clamp on steel rail with a 15 mm slot (e.g. WM0, 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
085 4 338	M8	WM0 - 35	50



# Fixing Points and Sliding Devices

## BIS dB-FiX® 40 Noise Insulating Fixing Point



### Features and Benefits

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

Part No	G	Pack 1
669 7 005	M10	25

## BIS dB-FiX® 80 Fixing Point Assembly



### Features and Benefits

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

Part No	G	Pack 1
669 3 008	M10	10

## BIS dB-FiX® 200 Fixing Point Assembly



### Features and Benefits

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

Part No	G	Pack 1
669 3 020	M12	5

## BIS dB-FiX® 80 / 200 Mounting Kit



### Features and Benefits

- kit for pipe fixing between 2 BIS dB-FiX® Fixpoint Assemblies
- also used if extra stability is required
- material: steel
- zinc plated
- consists of:
  - 2 Mounting plates
  - 4 Hexagon nuts M10
  - 4 Hexagon nuts M12

Part No	B (mm)	s (mm)	d1 (mm)	k (mm)	Pack 1
669 3 100		5.0	14.0	225.5	1

## BIS Silentbloc

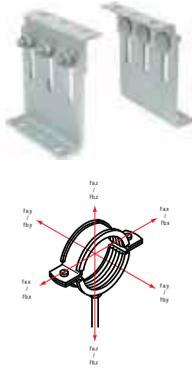


### Features and Benefits

- for vibration free fixing of devices to eg cantilever arms
- suitable for WM1, 15, 2, 30 and/or Strut
- material: vulcanized rubber, black; metal parts zinc plated
- sound insulating lining according to DIN 4109

Part No	G	For Rail	Pack 1
412 5 009	M8	WM1 - 30 + Strut	50

### BIS Fixpoint Console 'Light' (BUP1000)



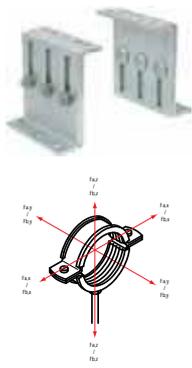
#### Features and Benefits

- 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)
- 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	H (mm)	Fa,y (N)	Pack 1
669 8 204	110 - 167	5,000	1

*Please contact Walraven Technical Support for advice on safe loads.  
Note: Console, Clamps and Anchors are to be ordered separately.*

### BIS Fixpoint Console 'Medium' (BUP1000)



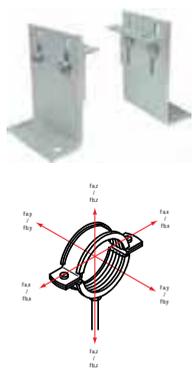
#### Features and Benefits

- suitable for BISOFIX® Cold FixPoint Clamps (see Walraven website and search 0881)
- 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
- 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	H (mm)	Fa,y (N)	Pack 1
669 8 206	153 - 268	11,500	1

*Please contact Walraven Technical Support for advice on safe loads.  
Note: Console, Clamps and Anchors are to be ordered separately.*

### BIS Fixpoint Console 'Heavy' (BUP1000)



#### Features and Benefits

- suitable for BISOFIX® Cold FixPoint Clamps (see Walraven website and search 0881)
- 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
- 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	H (mm)	Fa,y (N)	Pack 1
669 8 208	226 - 333	9,300	1

*Please contact Walraven Technical Support for advice on safe loads.  
Note: Console, Clamps and Anchors are to be ordered separately.*

## BIS Cu-FiX Fixing Point for Copper Pipe



### 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)

Part No	D (mm)	G	Pack 1
336 8 015	15	M10	10
336 8 018	18	M10	10
336 8 022	22	M10	10
336 8 028	28	M10	10
336 8 035	35	M10	10
336 8 042	42	M10	10
336 8 054	54	M10	10

## BIS Ball Swivel Hanger



### Features and Benefits

- recommended for metal pipes up to DN 50, plastic pipes up to DN 100
- for fixing to slide nut or on clamps
- 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	G1	G2	L	Pack 1
664 2 008	M8	M8	49 mm	50
664 2 010	M10	M10	49 mm	50
664 4 010	M10	M10	64 mm	50
664 2 108	M8	M8	74 mm	25
664 2 110	M10	M10	74 mm	25
664 2 112	M12	M12	90 mm	10

*Please note. Always use 2 ball swivel hangers (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.*

## BIS Expansion Joint



### 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	Pack 1
665 3 310	M10	M8/10	50

### BIS Expansion Device (BUP1000)



#### 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	SL (max) (mm)	Pack 1
666 8 310	Single	M8/10	100	5
666 8 312	Single	M10/12	100	5
666 8 316	Single	M16	100	5

### BIS Expansion Device



#### Features and Benefits

- single and double brackets for pipe extensions
- 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)
- friction coefficient  $\mu = 0.18$ ; Sliding friction coefficient  $\mu = 0.14$
- zinc plated
- temperature resistance up to +120 °C
- Part No. 666 3 416: temperature resistance up to +240 °C

Part No	Model	G	Pack 1
666 3 410	Single	M8/10	50
666 3 412	Single	M10/12	10
666 3 416	Single	M12/16	10
666 3 210	Double	M10/12	10

## BIS Expansion Guide Assembly (BUP1000)



### 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	Model	G	SL (max) (mm)	Pack 1
666 8 612	FG2	M10/12	60	5
666 8 813	FG3	Ø 13.0 mm / 17.0 mm	120	5

## BIS Slide Block GFRP (BUP1000)



### Features and Benefits

- flexible sliding element for pipe extensions
- can also be used as a cross-slide
- suitable for all BIS RapidStrut® Fixing Rail
- recommended for pipes up to DN100
- suitable for ceiling mounting (hanging) and floor mounting (standing mounted)
- material: hanger nut made of steel; plastic part made of Polyamide 6 (PA6), 30% glass fiber reinforced
- 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)	Pack 1
666 2 810	M10	70 mm	35	22	20



# BIS Aero<sup>®</sup> Clamps

The new generation of spiral duct clamps



Rubber lining is conjoined with the clamp



Trouble-free sliding of spiral duct clamp



Patented quick locking system



## Suspension Components for Air Ducts

### BIS Aero®



#### 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	Pack 1
411 5 080	80	M8	25
411 5 100	100	M8	25
411 5 125	125	M8	20
411 5 140	140	M8	20
411 5 150	150	M8	20
411 5 160	160	M8	20
411 5 180	180	M8	20
411 5 200	200	M8	20
411 5 225	225	M8	20
411 5 250	250	M8	20
411 5 280	280	M8	25
411 5 300	300	M8	25
411 5 315	315	M8	25
411 5 355	355	M8	25
411 5 400	400	M8	20
411 5 450	450	M8/10	3
411 5 500	500	M8/10	3
411 5 560	560	M8/10	3
411 5 600	600	M8/10	3
411 5 630	630	M8/10	3
411 5 710	710	-	3
411 5 800	800	-	3
411 5 900	900	-	3
411 5 999	1000	-	3
411 5 997	1120	-	3
411 5 998	1250	-	3

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

*D ≥ 710 mm without connection nut.*

*The max. allowed load (Fa,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.*

### BIS Support Bracket Rectangular Ductwork



#### Features and Benefits

- for fixing of rectangular air ducts
- material: metal parts made of steel; silent block made of TPE rubber, black
- zinc plated
- sound insulating lining according DIN 4109

Part No	Type	Pack 1
412 5 001	L	50
412 5 003	Z	50

### BIS Support Bracket Round Ductwork



#### Features and Benefits

- for fixing of round air ducts
- material: metal parts made of steel; silent block made of TPE rubber, black
- zinc plated

Part No	Type	Pack 1
412 5 005	A	50
412 5 004	V	50

### BIS Rubber Absorption Piece



#### Features and Benefits

- noise insulating element
- e.g. for noise insulating suspension of fixing rail in combination with threaded rod M10
- rubber absorption pieces are suitable to use with RapidStrut® Rails and RapidRail® Profiles
- material: metal parts made of steel; silent block made of TPE rubber, black
- zinc plated
- noise insulation up to 16dB(A) on average, when combined with RapidRail® 27x18, compared to directly installed clamps

Part No	Type	Pack 1
412 5 007	M	100
412 5 008	F	100
412 5 006	M + F	50

*The maximum allowed load can be higher under strict conditions and is depending on the frequency, for conditions and details please consult our technical department.*

### BIS Bifix® 412 Clamp for Spiral Ducts



#### Features and Benefits

- two-screw clamp
- with quick locking system
- material: steel
- pre-galvanized

Part No	D (mm)	G	Pack 1
412 5 063	63	M8	25
412 5 080	80	M8	25
412 5 090	90	M8	25
412 5 100	100	M8	25
412 5 112	112	M8	25
412 5 125	125	M8	25
412 5 130	130	M8	25
412 5 150	150	M8	25
412 5 160	160	M8	25
412 5 180	180	M8	25
412 5 200	200	M8	25
412 5 225	225	M8	25
412 5 250	250	M8	25
412 5 280	280	M8	25
412 5 300	300	M8	25
412 5 315	315	M8	25
412 5 355	355	M8	25
412 5 400	400	M8	20

# BIS RapidRail®

Fast and easy fixing



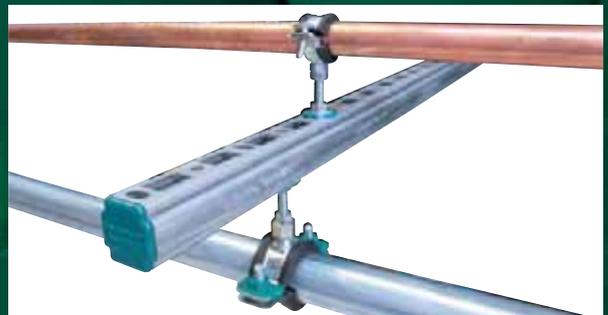
## Insert, lock, done

The accessories are pre-assembled and delivered 'ready to use' to site. The plastic spring allows the slide nut to be fixed into the rail easily 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 used on both sides of the rail.

*"RapidRail is our preferred bracketry system for installation projects. It's a great quality product and is fast and easy to install. We saved over 150hrs installation time using this product range. We would highly recommend Walraven products and services."*

Project Manager  
Luxury care home installations

## BIS RapidRail® Fixing System

### BIS RapidRail® Fixing Rail



#### Features and Benefits

- C-profile
- for a quick and easy fixing
- with continuous perforation (on request without 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
- yield strength 240 N/mm<sup>2</sup>
- pre-galvanized



RAL-GZ 655/C  
Cert.Nr. 2012-03

Part No	Type	L	B (mm)	H (mm)	RAL	Bundle (m)
650 5 000	WM0	2 m	27	18	RAL <sup>1</sup>	20
650 5 300	WM0	3 m	27	18	RAL <sup>1</sup>	30
650 5 600	WM0	6 m	27	18	RAL <sup>1</sup>	60
650 5 001	WM1	2 m	30	15	RAL <sup>1</sup>	20
650 5 301	WM1	3 m	30	15	RAL <sup>1</sup>	30
650 5 601	WM1	6 m	30	15	RAL <sup>1</sup>	60
650 5 015	WM15	2 m	30	20	RAL <sup>1</sup>	20
650 5 315	WM15	3 m	30	20	RAL <sup>1</sup>	30
650 5 615	WM15	6 m	30	20	RAL <sup>1</sup>	60
650 5 002	WM2	2 m	30	30	RAL <sup>1</sup>	20
650 5 302	WM2	3 m	30	30	RAL <sup>1</sup>	30
650 5 602	WM2	6 m	30	30	RAL <sup>1</sup>	60
650 5 030	WM30	2 m	30	45	RAL <sup>1</sup>	20
650 5 630	WM30	6 m	30	45	RAL <sup>1</sup>	60
650 5 235	WM35	2 m	38	40	-	20
650 5 335	WM35	3 m	38	40	-	30
650 5 635	WM35	6 m	38	40	-	60

RAL<sup>1</sup> = 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.

### BIS RapidRail® Cantilever Arm (BUP1000)



#### 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	For rail	Pack 1
660 3 015	150 mm	WM0 - 27x18	20
660 3 019	200 mm	WM0 - 27x18	20
660 3 030	300 mm	WM0 - 27x18	20
660 3 050	500 mm	WM0 - 27x18	20
660 3 715	150 mm	WM15 - 30x20	20
660 3 720	200 mm	WM15 - 30x20	20
660 3 725	250 mm	WM15 - 30x20	20
6603 6 820	200 mm	WM35 - 38x40	10
6603 6 825	250 mm	WM35 - 38x40	10
6603 6 835	350 mm	WM35 - 38x40	10
6603 6 840	400 mm	WM35 - 38x40	10
6603 6 850	500 mm	WM35 - 38x40	10

More sizes of cantilever arms are available. See our on-line catalogue for the full range.

### BIS RapidRail® Wall Plate



#### Features and Benefits

- U-profile welded on wall plate
- for wall fixing of rail
- rail can be fixed with slot downwards or sideways
- slots at 90° to each other to simplify fixing
- 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	For Rail	Pack 1
661 3 200	WM0 - 30	25
661 3 235	WM35	25

### BIS RapidRail® Wall Plate (Hinged)



#### Features and Benefits

- wall plate with hinging U-profile
- also used to strengthen rail constructions
- for fixing of rail to sloping walls
- material: steel
- zinc plated

Part No	For Rail	Pack 1
661 3 250	WM1 - 30	20

### BIS Rail Prop



#### Features and Benefits

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

Part No	H (mm)	For Rail	Pack 1
662 8 220	250	WM0 - 30	10
662 8 230	350	WM0 - 30	10

### BIS Rail Junction Angle Bracket (zp)



#### Features and Benefits

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

Part No	For Rail	Pack 1
659 3 010	WM0 - 30	10

### BIS Rail Junction Angle Bracket (hdg)



#### Features and Benefits

- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- material: steel
- hot dip galvanized

Part No	For Rail	Pack 1
666 1 110	WM0 - 30	25

**BIS Corner Bracket**



**Features and Benefits**

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

Part No	For Rail	Pack 1
660 3 010	WM0 - 30	10

**BIS Rail Junction Assembly**



**Features and Benefits**

- for a solid fixing to steel construction without the need for welding or drilling
- always use 2 parts per fixing
- also suitable for fixing in risershafts
- material: steel
- zinc plated

Part No	For Rail	Pack 1
661 3 820	WM0 - 35	50

**BIS RapidRail® Rail Suspension Bracket**



**Features and Benefits**

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated



Part No	For rail	RAL	Pack 1
679 3 008	WM0 - 35	RAL <sup>1</sup>	50

*RAL<sup>1</sup> = 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® Slide Nut**



**Features and Benefits**

- slide nut with washer and BIS RapidRail® spring
- pre-assembled for quick fixing
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated

Part No	G	For Rail	Pack 1
651 3 106	M6	WM0 - 35	50
651 3 108	M8	WM0 - 35	50
651 3 110	M10	WM0 - 35	50

**BIS Slide Nut 651**



**Features and Benefits**

- material: steel
- zinc plated

Part No	Type	G	For Rail	Pack 1
651 3 006	651A	M6	WM0 (1 - 35)	100
651 3 008	651A	M8	WM0 (1 - 35)	100
651 3 010	651A	M10	WM0 (1 - 35)	100

*Moderately suitable for other railtypes.*

**BIS Angle Formed Slide Nut**



**Features and Benefits**

- material: steel
- zinc plated

Part No	G	For Rail	Pack 1
651 3 709	M8	WM1 - 35	25

## BIS RapidRail® Hammerfix



### Features and Benefits

- slide nut with stud bolt, washer and BIS RapidRail® spring
- suitable for 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	Pack 1
652 3 602	M6	20 mm	25
652 3 603	M6	30 mm	25
652 3 604	M6	40 mm	25
652 3 802	M8	25 mm	25
652 3 803	M8	30 mm	25
652 3 804	M8	40 mm	25
652 3 805	M8	50 mm	25
652 3 806	M8	60 mm	25
652 3 807	M8	70 mm	25
652 3 808	M8	80 mm	25
652 3 809	M8	90 mm	25
652 3 810	M8	100 mm	25
652 3 812	M8	120 mm	25
652 3 815	M8	150 mm	25
652 3 818	M8	180 mm	25
652 3 820	M8	200 mm	25
652 3 002	M10	25 mm	25
652 3 003	M10	30 mm	25
652 3 004	M10	40 mm	25
652 3 005	M10	50 mm	25
652 3 006	M10	60 mm	25
652 3 008	M10	80 mm	25
652 3 010	M10	100 mm	25
652 3 016	M10	160 mm	25

## Installation Guide



1. Insert



2. Turn 1/4 stroke



3. Slide



4. Lock

## BIS RapidRail® Ball Swivel Hanger



### 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 WMO, 1, 15, 2, 30, 35
- with inspection hole to check screw-in depth (attention: when the threaded rod is screwed-in too deep, the ball swivel is blocked)
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated



Part No	G	L	For Rail	RAL	Pack 1
652 0 100	M8	45 mm	WMO - 35	RAL <sup>1</sup>	25
652 0 200	M8	70 mm	WMO - 35	RAL <sup>1</sup>	25
652 0 110	M10	45 mm	WMO - 35	RAL <sup>1</sup>	25
652 0 210	M10	70 mm	WMO - 35	RAL <sup>1</sup>	25

*RAL<sup>1</sup> = 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.*

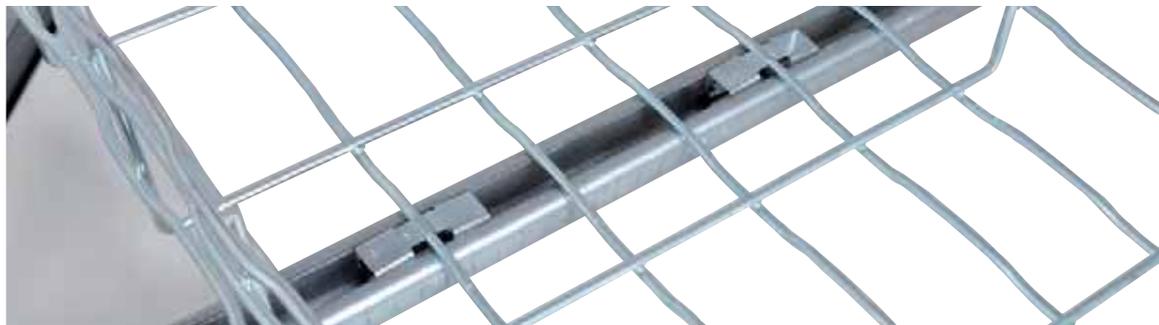
*Please note. Always use 2 ball swivel hangers (see application picture). The maximum length change that can be dealt with, depends on the fixing distance (ceiling - pipe). The height difference that occurs as a result, needs to be taken into consideration.*

### BIS RapidRail® Basket Retainer Clip



#### 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)



#### Part No

655 3 945

#### Pack 1

100

### BIS RapidRail® Connector 90°



#### Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- material: metal parts made of steel 1.0332; spring(s) made of POM (polyoxymethylene), green
- zinc plated



#### Part No

#### Model

#### For Rail

#### RAL

#### Pack 1

658 4 001	Long / long	WM0 - 35	RAL <sup>1</sup>	25
658 4 002	Short / long	WM0 - 35	RAL <sup>1</sup>	25
658 4 003	Short / short	WM0 - 35	RAL <sup>1</sup>	25
658 4 011	Long / long	WM0 - 35	RAL <sup>1</sup>	25

*RAL<sup>1</sup> = 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°



#### Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- to make rail fabrications
- 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

#### For Rail

#### RAL

#### Pack 1

658 4 051	Long / long	WM0 - 35	RAL <sup>1</sup>	25
658 4 052	Short / long	WM0 - 35	RAL <sup>1</sup>	25
658 4 053	Short / short	WM0 - 35	RAL <sup>1</sup>	25

*RAL<sup>1</sup> = 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



#### Features and Benefits

- to make rail fabrications
- suitable for WM0, 1, 15, 2, 30, 35
- with pre-assembled double slide nut
- material: steel
- zinc plated



Part No	a °	Pack 1
658 3 109	90°	25
658 3 113	135°	25

### BIS Rail Connector



#### Features and Benefits

- to make rail fabrications
- material: steel
- zinc plated



Part No	a °	For Rail	Pack 1
658 5 090	90°	WM0 - 35	50
658 5 135	135°	WM0 - 35	50

### BIS RapidRail® Connector



#### Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- 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	For Rail	RAL	Pack 1
654 3 001	WM0 - 35	RAL <sup>1</sup>	25

*RAL<sup>1</sup> = 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® T- and X-Connector



#### Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- 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	Type	For Rail	RAL	Pack 1
658 4 090	T	WM0 - 35	RAL <sup>1</sup>	25
658 4 091	X	WM0 - 35	RAL <sup>1</sup>	25

*RAL<sup>1</sup> = 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® Cross Connector



#### Features and Benefits

- connector with pre-assembled BIS RapidRail® Slide nut(s)
- 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	For Rail	RAL	Pack 1
658 4 152	WM15	RAL <sup>1</sup>	25
658 4 153	WM2	-	25
658 4 156	WM35	-	25

*RAL<sup>1</sup> = 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® Beam Clamp



#### 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)	For Rail	Pack 1
658 5 011	< 16	WM0 - 30	50
658 5 014	< 20	WM35	50

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

### BIS Rail Beam Clamp



#### Features and Benefits

- beam clamp
- always use 2 beam clamps per fixing
- material: steel
- zinc plated

Part No	For Rail	L	Pack 1
658 3 060	WM1, 15, 2	60 mm	50
658 3 090	WM1 - 30	90 mm	50

### BIS Rail End Cap



#### Features and Benefits

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

Part No	For Rail	Colour	Pack 1
656 6 000	WM0 (27x18 mm), WM15 (30x20 mm)	Green	50
656 6 001	WM1 (30x15 mm)	Green	50
656 6 002	WM2 (30x30 mm)	Green	25
656 6 035	WM35 (38x40 mm)	Green	20

### BIS Rubber Strip



#### Features and Benefits

- noise insulating lining for rail
- material: EPDM rubber, black
- sound insulating lining according DIN 4109

Part No	L	For Rail	Pack 1
656 8 001	30 m	WM0 - 35	30

# BIS UltraProtect® 1000

Support system for indoor and outdoor use



## Corrosion resistance

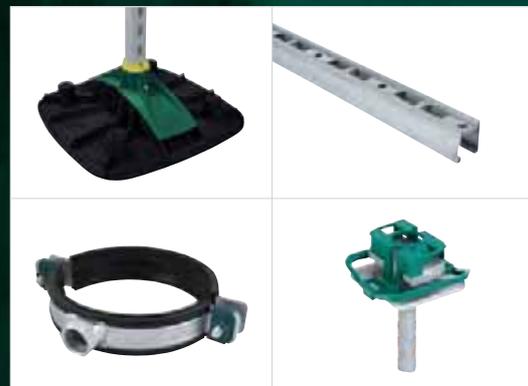
- C1 - C4 / ISO 12944-2

## Salt spray test

- 1000 hours / ISO 9227\*

## Complementary system

- Perfectly combines with other products



\* Until the occurrence of maximum 5% red rust.

## For indoor & outdoor use

- Unique system, composition and corrosion resistance
- For fixing or supporting mechanical installations, solar systems and more

### Optimal protection

---

- All applied surface treatments effortlessly withstand a salt spray test of at least 1000 hours\*
- Suitable for corrosive environments (C1–C4 in accordance with ISO 12944-2)



### Better than Hot Dip Galvanizing

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- Higher corrosion resistance: 1000 hours\* versus 300 - 600 hours (with a layer thickness of 50 - 80 µm)
- Threaded products are also well protected
- Products feel smooth and are also visually appealing



### Complementary system

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- The products in the BIS UltraProtect® 1000 system combine together perfectly
- Can also be combined with zinc plated, pre-galvanized or hot dip galvanized products\*\*

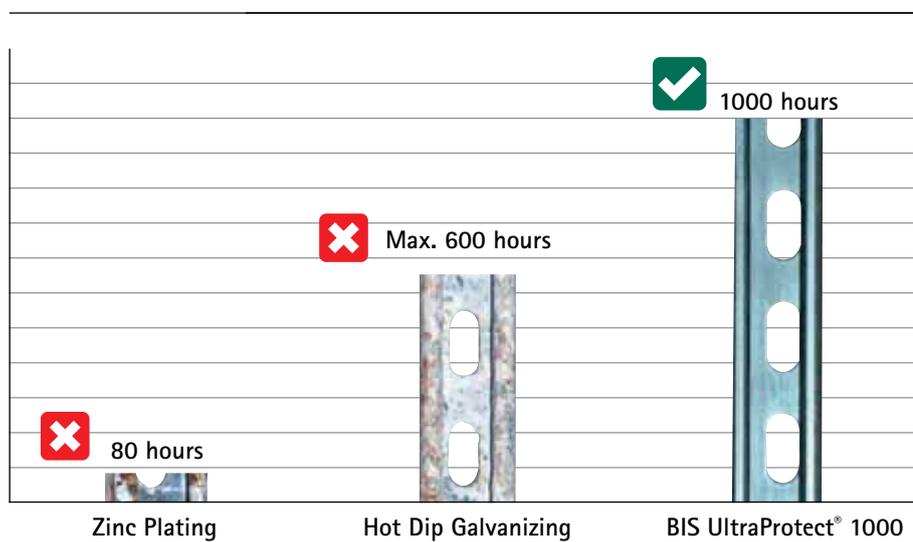


\* Until the occurrence of maximum 5% red rust.

\*\* FAQs and installation tips can be found on our website [www.walraven.com/en/bis-ultraprotect1000/](http://www.walraven.com/en/bis-ultraprotect1000/)



### The proof after 1000 hours salt spray test



# BIS RapidStrut® Fixing System

## BIS RapidStrut® Fixing Rail DS 5 (BUP1000)



### Features and Benefits

- 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
- material: steel 1.0242

Part No	L	B x H x s (mm)	BndS (m)
650 8 352	3 m	41x51x2.0	30
650 8 652	6 m	41x51x2.0	60

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

## BIS RapidStrut® Fixing Rail (pg)



### Features and Benefits

- universal rail system
- with continuous perforation (on request without 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. 650 5 X85 (Strut 2.5 mm) material: steel 1.0332
- yield strength 240 N/mm<sup>2</sup>
- pre-galvanized
- strut 41x41x2.5 and above tested for fire safety



Part No	Model	L	B x H x s (mm)	RAL	BndS (m)
650 5 324	Perforated	3 m	41x21x1.50	RAL <sup>1</sup>	30
650 5 624	Perforated	6 m	41x21x1.50	RAL <sup>1</sup>	60
650 5 325	Perforated	3 m	41x21x2.50	RAL <sup>1</sup>	30
650 5 625	Perforated	6 m	41x21x2.50	RAL <sup>1</sup>	60
650 5 344	Perforated	3 m	41x41x1.50	RAL <sup>1</sup>	30
650 5 644	Perforated	6 m	41x41x1.50	RAL <sup>1</sup>	60
650 5 345	Perforated	3 m	41x41x2.50	RAL <sup>1</sup>	30
650 5 645	Perforated	6 m	41x41x2.50	RAL <sup>1</sup>	60
650 5 665	Perforated	6 m	41x62x2.50	-	60
650 5 685	Perforated	6 m	41x82x2.50	-	60

RAL<sup>1</sup> = tested, certified and monitored by a third party according to RAL-GZ 655/C. Strut 41x41x2.5 and above tested for fire safety.

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 (Fa,z) please refer to the loading tables or our online datasheet 'Technical Details BIS RapidStrut®'.

## BIS RapidStrut® Cantilever Arm (BUP1000)



### 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
- tested for fire safety
- surface protection: BIS UltraProtect® 1000

Part No	L	For Rail	Pack 1
660 3 831	200 mm	Strut 41x21x2.5	10
660 3 832	300 mm	Strut 41x21x2.5	10
660 3 833	450 mm	Strut 41x21x2.5	10
660 3 834	600 mm	Strut 41x21x2.5	10
660 3 861	150 mm	Strut 41x41x2.5	10
660 3 870	200 mm	Strut 41x41x2.5	10
660 3 862	300 mm	Strut 41x41x2.5	10
660 3 871	400 mm	Strut 41x41x2.5	10
660 3 863	450 mm	Strut 41x41x2.5	10
660 3 873	500 mm	Strut 41x41x2.5	10
660 3 864	600 mm	Strut 41x41x2.5	8
660 3 865	750 mm	Strut 41x41x2.5	8

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

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

### BIS RapidStrut® Cantilever Arm 41x41D (BUP1000)



#### 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: BIS UltraProtect® 1000
- tested for fire safety



Part No	L	For Rail	Pack 1
660 3 883	450 mm	Strut 41x41Dx2.5	8
660 3 884	600 mm	Strut 41x41Dx2.5	4
660 3 885	750 mm	Strut 41x41Dx2.5	4

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

For more information about the max. allowed load (Fa,z) please refer to the loading tables or our online datasheet Technical Details BIS RapidStrut®.

### BIS Strut Wall Plate (Hinged) (BUP1000)



#### 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: BIS UltraProtect® 1000

Part No	For Rail	Pack 1
6658 8 814	Strut	10

### BIS Adjustable Support



#### 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

Part No	For Rail	ST	Pack 1
6658 8 818	Strut	BIS UltraProtect® 1000	10

Max. allowed load: when used at an angle of 45° on wall/ceiling.

### BIS Rail Prop (BUP1000)



#### Features and Benefits

- 45° support bracket
- for fixing support under, top or on side of a cantilever arm
- also used to strengthen rail constructions
- material: steel 1.0332
- surface protection: BIS UltraProtect® 1000

Part No	For Rail	Pack 1
6628 8 530	Strut + WM35	10

### BIS Flexible Rail Prop



#### Features and Benefits

- flexible angle support bracket
- 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)	Fa,z N	Pack 1
662 1 083	929	83	92	7500	1

### BIS Rail Junction Angle Bracket (BUP1000)



**Features and Benefits**

- one-part support
- for fixing support under, top or on side of a cantilever arm
- material: steel 1.0332
- surface protection: BIS UltraProtect® 1000

Part No	For Rail	Pack 1
6593 8 020	Strut + WM35	10

### BIS Strut Angle Bracket (BUP1000)



**Features and Benefits**

- one-part support
- for fixing support under, top or on side of a cantilever arm
- material: steel 1.0332
- surface protection: BIS UltraProtect® 1000

Part No	For Rail	Pack 1
6603 8 020	Strut + WM35	10

### BIS RapidStrut® Slide Nut G2 (BUP1000)



**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	Pack 1
6651 8 5106	M6	20
6651 8 5108	M8	20
6651 8 5110	M10	20
6651 8 5112	M12	20

### BIS Strut Slide Nut (BUP1000)



**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: BIS UltraProtect® 1000
- tested for fire safety



Part No	G	For Rail	s (mm)	Pack 1
6518 8 006	M6	Strut	5.0	100
6518 8 008	M8	Strut	6.0	100
6518 8 010	M10	Strut	8.0	100
6518 8 012	M12	Strut	9.0	100

### BIS Strut Slide Nut (zp)



**Features and Benefits**

- material: slide nut made of steel 1.0332; spring made of spring steel DIN17223 (class A)
- zinc plated
- tested for fire safety



Part No	G	L	For Rail	Pack 1
651 7 006	M6	-	Strut	100
651 7 008	M8	-	Strut	100
651 7 010	M10	-	Strut	100
651 7 012	M12	-	Strut	100

*M10 and above tested for fire safety.*

### BIS Strut Slide Nut (hdg)



#### Features and Benefits

- material: slide nut made of steel 1.0332; spring made of spring steel DIN17223 (class A)
- hot dip galvanized
- tested for fire safety



Part No	G	L	For Rail	Pack 1
651 8 006	M6	-	Strut	100
651 8 008	M8	-	Strut	100
651 8 010	M10	-	Strut	100
651 8 012	M12	-	Strut	100
651 8 106	M6	13 mm	Strut 41x21	100
651 8 108	M8	13 mm	Strut 41x21	100
651 8 110	M10	13 mm	Strut 41x21	100
651 8 112	M12	13 mm	Strut 41x21	100
651 8 206	M6	33 mm	Strut 41x41	100
651 8 208	M8	33 mm	Strut 41x41	100
651 8 210	M10	33 mm	Strut 41x41	100
651 8 212	M12	33 mm	Strut 41x41	100

M10 and above tested for fire safety.

### BIS RapidStrut® Slide Nut with Plastic Tabs (BUP1000)



#### 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: BIS UltraProtect® 1000
- tested for fire safety



Part No	G	For Rail	s (mm)	Pack 1
6518 6 8006	M6	Strut	5.0	100
6518 6 8008	M8	Strut	6.0	100
6518 6 8010	M10	Strut	8.0	100
6518 6 8012	M12	Strut	9.0	100

M10 and above tested for fire safety.

### BIS RapidStrut® Hammerfix G2 (BUP1000)



#### 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	Pack 1
6527 8 5804	M8	40 mm	15
6527 8 5805	M8	50 mm	15
6527 8 5806	M8	60 mm	5
6527 8 5808	M8	80 mm	5
6527 8 5810	M8	100 mm	5
6527 8 5004	M10	40 mm	15
6527 8 5006	M10	60 mm	5
6527 8 5008	M10	80 mm	5
6527 8 5204	M12	40 mm	5
6527 8 5206	M12	60 mm	5

**BIS RapidStrut® Hammerfix 'U' G2 (BUP1000)**



**Features and Benefits**

- slide nut with stud bolt, U-shaped 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: BIS UltraProtect® 1000

Part No	G	L	Pack 1
6652 8 5006	M10	60 mm	50

**BIS RapidStrut® Ball Swivel Hanger**



**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
- 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	Pack 1
6653 0 805	M8	80 mm	25
6653 0 005	M10	80 mm	25

*Please note. Always use 2 ball swivel hangers. 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.*

**BIS Strut Washer – U-shaped (BUP1000)**



**Features and Benefits**

- U-shaped washer
- U-shaped for extra stability
- material: steel 1.0332
- tested for fire safety

Part No	d1 (mm)	Pack 1
6658 8 010	Ø 11.0	50

*Also available in stainless steel 1.4401 (AISI 316).*



### BIS RapidStrut® Rail Connector 90° G2 (BUP1000)



#### Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- 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	Model	Type	Pack 1
6658 8 5102	Short / short	2 sides pre-assembled	50
6658 8 5202	Short / short	2 sides pre-assembled	50
6658 8 5203	Short / long	2 sides pre-assembled	25
6658 8 5205	Long / long	2 sides pre-assembled	20

### BIS RapidStrut® Rail Connector 135° G2 (BUP1000)



#### Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- 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

Part No	Model	Type	Pack 1
6658 8 5235	Long / long	2 sides pre-assembled	20
6658 8 5330	Short / long	1 side pre-assembled	25

### BIS RapidStrut® Rail Connector G2 (BUP1000)



#### Features and Benefits

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- 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

Part No	Type	L	Pack 1
6658 8 5184	2 x M10	82 mm	50
6658 8 5186	4 x M10	164 mm	25

**BIS RapidStrut® Rail T- and X-Connector G2 (BUP1000)**



**Features and Benefits**

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- 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

Part No	Type	Pack 1
6658 8 5213	T	20
6658 8 5223	X	15

**BIS RapidStrut® Cross Connector G2 (BUP1000)**



**Features and Benefits**

- connector with pre-assembled BIS RapidStrut® Slide nut(s)
- 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

Part No	h (mm)	For Rail	Pack 1
6658 8 5402	20	Strut 41x21	25
6658 8 5404	40	Strut 41x41	25
6658 8 5405	50	Strut 41x51 (BIS RapidStrut® DS 5)	25
6658 8 5406	60	Strut 41x62	15
6658 8 5408	80	Strut 41x82	10

**BIS Strut 'Heavy Duty' Beam Clamp**



**Features and Benefits**

- solid cast iron beam clamp for suspension of heavy loads onto beams without welding or drilling
- for fixing of all Strut to a steel beam
- material: steel
- hot dip galvanized

Part No	A (mm)	For Rail	Pack 1
607 2 002	2 - 35 mm	Strut	20

**BIS Strut Inter Flange Clamp**



**Features and Benefits**

- set of two clamping plates, to be installed in combination with Strut Rail
- suitable for 41 x 41 and 41 x 21 strut profiles
- 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 hot-dip galvanized); fasteners: zinc plated ISO 2081-Fe/Zn5/A (EN ISO 2081:2008)

Part No	L	B (mm)	H (mm)	F a,z (N)	Pack 1
607 8 031	58	105	46	2,100	10

### BIS Strut Rail End Cap



#### Features and Benefits

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

Part No	For Rail	Pack 1
656 6 021	Strut 41x21	50
656 6 041	Strut 41x41	50
656 6 051	Strut 41x51 (BIS RapidStrut® DS 5)	40

*For profile with 62/82/164 mm insert end caps next to each other.*

### BIS Strut PVC Profile



#### Features and Benefits

- closing strip for rail
- reduces the risk of dirt / moisture ingress
- simplifies cleaning / maintenance
- material: PVC (polyvinylchloride), white

Part No	L	For Rail	Pack 1
656 6 999	3 m	Strut	25

### BIS Strut Rubber Strip



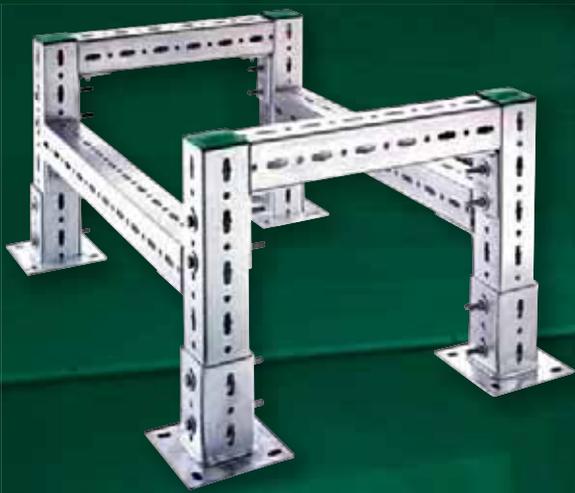
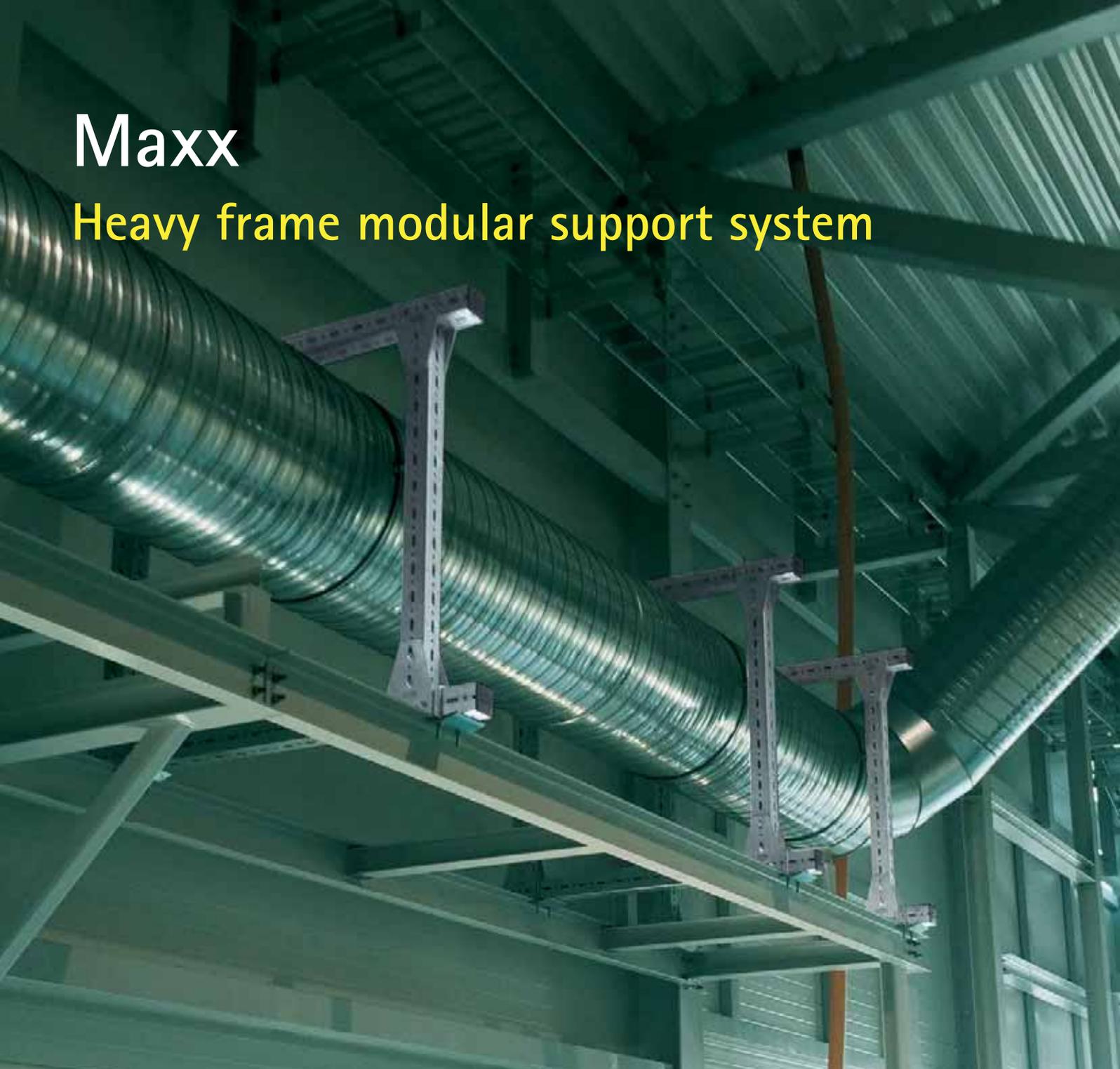
#### Features and Benefits

- push in strip
- noise insulating lining for rail
- also usable for threaded rod M6, M8 or M10
- material: EPDM rubber, black
- sound insulating lining according DIN 4109

Part No	R (")	L	Pack 1
656 8 041	1/4 - 1/2	30 m	30

# Maxx

## Heavy frame modular support system



**A complete solution for all industrial and heavy duty applications**

- Quick and easy to install
- Avoids the need for on site fabrication or welding
- FREE technical advice service, from engineering to onsite construction support

# Maxx Fixing System for Industrial Installations

## Maxx Heavy Rail Profile



### Features and benefits

- closed square profile
- offers support for fixings to pipes and devices
- with continuous perforation on all sides
- material: steel
- hot dip galvanized

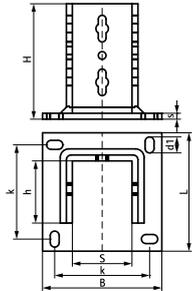
Part No	G	L	B (mm)	H (mm)	Pack 1
6501 9 610	IP100	6 m	100	100	1
6501 9 612	IP120	6 m	100	120	1

## Maxx Wall Plate



### Features and benefits

- U-profile welded on wall plate
- for fixing rail to wall or floor
- allows fixing for cantilever arms with Maxx Heavy Rail Profile
- slots are compatible with mounting profiles
- CO2 welded
- material: steel
- hot dip galvanized



Part No	G	L	B (mm)	H (mm)	h
658 1 800	IPH 100	220 mm	220	195	100
658 1 801	IPH 120	220 mm	220	195	115

## Maxx Profile Connector 90°



### Features and benefits

- for perpendicular connection to Heavy Rail Profiles
- with slotted holes for easy fixing
- material: steel
- hot dip galvanized

Part No	Type	Model	Pack 1
668 1 015	IPC90/3	3 holes	1

## Maxx Hammerfix



### Features and benefits

- pre-assembled and ready to use for a quick fixing in profile perforation by a push and 90° turn
- after mounting hammerfix the nut must be tightened with a wrench
- material: steel, strength class 8.8
- hot dip galvanized
- to be used in combination with BIS Washers (Part no. 6538 1 012) and BIS Hexagon Nuts (Part No. 6128 1 012)

Part No	Type	G	LU (mm)	Pack 1
6521 9 204	IPH	M12	40	25
6521 9 207	IPH	M12	75	25

### Maxx Bolt Set (ZTD)



#### Features and benefits

- for fixing in profile perforation
- hexagon nut with collar
- material: steel, strength class 8.8
- surface treatment: Zink-Thermo-Diffusion
- consists of:
  - 1 bolt
  - 1 nut
  - 1 washer

Part No	Model	G	L	Pack 1
6145 8 1213	Maxx 100 Bolt Set	M12	140 mm	25
6145 8 1216	Maxx 120 Bolt Set	M12	160 mm	25
6145 8 1614	Maxx 100 Bolt Set	M16	140 mm	25
6145 8 1616	Maxx 120 Bolt Set	M16	160 mm	25

### Maxx Linear Connector



#### Features and benefits

- matches the shape and dimension of Maxx Heavy Rail Profile and Maxx Hammerfix
- front connection with Heavy Rail Profile
- delivery and assembly always in pairs (1 piece = set of 2 half shells)
- material: steel
- hot dip galvanized

Part No	Type	L	d1 (mm)	Pack 1
658 9 335	IPLC	335 mm	40 x 15	1

### Maxx T-Connector



#### Features and benefits

- for perpendicular connection to Heavy Rail Profiles
- easy fitting due to rounded edges
- material: steel
- hot dip galvanized

Part No	Type	B (mm)	H (mm)	d1 (mm)	Pack 1
658 9 901	IPTC	185	282	45 x 17	1

### Maxx End Cap



#### Features and benefits

- for clean finishing of rail end, covers all burrs
- easy to fix securely
- suitable for Maxx Profile IP100 and IP120
- material: PE (polyethylene)

Part No	Type	Pack 1
656 6 810	IPEC100	1
656 6 812	IPEC120	1

### Maxx Beam Clamp



#### 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
- hot dip galvanized

Part No	Type	A (mm)	G	Pack 1
658 9 100	IPBC100	10 - 25	M12	1

### Maxx Cross Connector



#### Features and benefits

- to aid fabrication with Heavy Rail Profiles
- material: steel
- hot dip galvanized

Part No	Type	L	B (mm)	d1 (mm)	Pack 1
658 9 101	IPCC100	257 mm	95	45 x 17	1

### Maxx 3D Coupler



#### Features and benefits

- to aid fabrication with Heavy Rail Profiles
- material: steel
- hot dip galvanized

Part No	Type	H (mm)	d1 (mm)	Pack 1
658 9 900	IPCS100	285	45 x 17	1

# Your challenge, our support



Every rooftop is different. Fortunately, Walraven understands the specific challenges that come with developing rooftop solutions and working at height.

In addition to a comprehensive range of robust, durable and easy-to-install products, our experts and engineers are always available to share their years of expertise and advise you on the safest, most durable and cost-effective solutions for your installation.

To find out how we can support you, visit [walraven.com/en/rooftop](https://walraven.com/en/rooftop)

# Rooftop Supports

## BIS Yeti® 480 Support System (BUP1000)



### Features and Benefits

- modular supporting system for climate installations, solar panels, walkways, pipe work, cable ways, etc.
- adjustable up to 7° to compensate roof pitch
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- resistant to UV and chemical influences
- BIS Yeti 480 H-set consisting of:
  - 2 x BIS Yeti® 480 vertical, including non-slip anti-vibration mat (made of rubber)
  - 2 x BIS Strut Rail End Cap
  - 2 x BIS Strut Connector 90°
  - 6 x hexagon head bolts and slide nuts

Part No	Model	For Rail	Pack 1
6768 5 001	Vertical, including non-slip anti-vibration mat	Strut 41x41 + DS 5 (41x51)	1
6768 5 101	Horizontal, including non-slip anti-vibration mat	Strut 41x41 + DS 5 (41x51)	1
6768 5 301	H-set (without Strut Rail)	Strut 41x41 + DS 5 (41x51)	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 Yeti® Ballast Block



### Features and Benefits

- Ballast Block for BIS Yeti® 480 Support System
- easy to install, without tools
- stackable due to special design
- increases stability against wind loads
- material: reinforced concrete

Part No	L	B (mm)	H (mm)	Pack 1
6768 5 401	380 mm	100	140	1

## BIS Yeti® 335 Support System (BUP1000)



### Features and Benefits

- modular supporting system for climate installations, solar panels, walkways, pipe work, cable ways, etc.
- for flat roofs
- mouldings made of WPC, a composite of recycled plastic and wood fibre
- resistant to UV and chemical influences
- BIS Yeti 335 H-set consisting of:
  - 2 x BIS Yeti® 335 including non-slip antivibration mat (made of rubber)
  - 2 x BIS Strut Rail End Cap
  - 2 x BIS Strut Connector 90°
  - 6 x hexagon head bolts and slide nuts

Part No	Model	For Rail	Pack 1
6768 5 201	Including non-slip anti- vibration mat	Strut 41x41 + DS 5 (41x51)	1
6768 5 302	H-set (without Strut Rail)	Strut 41x41 + DS 5 (41x51)	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 Yeti® 335 Frame Set**



**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

Part No	Model	Pack 1
6768 5 501	BIS Yeti® 335 for 1 installation appliance	1
6768 5 502	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**



**Features and Benefits**

- modular supporting system for light rooftop installations
- flexible and cost-effective solution for pipes, cable-trays, air duct channels etc.
- for horizontal (with Strut 41x21x2.0 and 41x21x2.5) and vertical applications
- with non-slip anti-vibration mat
- with unique click-mechanism for quick and safe installation

Part No	Model	L	B (mm)	For Rail	Fa,z	N	Pack 1
6768 5 130	Including non-slip anti-vibration mat	130 mm	130	Strut 41x21	2.500	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 Ursus Foot Support System (BUP1000)



### 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

Part No	Model	L	Pack 1
6768 7 250	Horizontal, including rail	250 mm	1
6768 7 400	Horizontal, including rail	400 mm	1
6768 7 600	Horizontal, including rail	600 mm	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.*

## Britclips<sup>®</sup>

The number one brand for electrical fixings

Walraven Britclips<sup>®</sup> offer a complete range of high quality fixings for electrical services and cable management.

Made in the UK!



# Britclips® Electrical Fixings

## Beam Clips

### Britclips® Beam Clip



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with fixing hole (Ø 6.5 mm) to fix S-hook, bolt/ nut, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	h (mm)	Pack 1
EM 5002 0 004	BC125	2 - 4	21	100
EP 5002 0 004	BC125	2 - 4	21	25
EM 5002 0 009	BC250	5 - 9	23	100
EP 5002 0 009	BC250	5 - 9	23	25
EM 5002 0 016	BC500	10 - 16	29	100
EP 5002 0 016	BC500	10 - 16	29	25
EM 5002 0 020	BC750	17 - 20	34	100
EP 5002 0 020	BC750	17 - 20	34	25
EM 5002 0 030	BC1000	23 - 30	40	100

*For use with static loads only.*

### Britclips® Beam Clip / Cable Tie



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- with fixing hole (Ø 6.5 mm) to fix S-hook, bolt/ nut, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Model	Pack 1
EM 5033 0 204	BCCT12-10	2 - 4	With tie (L = 292 mm)	100
EM 5033 0 109	BCCT25-5.5	5 - 9	With tie (L = 160 mm)	100
EM 5033 0 209	BCCT25-10	5 - 9	With tie (L = 292 mm)	100
EM 5033 0 116	BCCT50-5.5	10 - 16	With tie (L = 160 mm)	50
EM 5033 0 216	BCCT50-10	10 - 16	With tie (L = 292 mm)	50
EM 5033 0 120	BCCT75-5.5	17 - 20	With tie (L = 160 mm)	50
EM 5033 0 220	BCCT75-10	17 - 20	With tie (L = 292 mm)	50
EM 5033 0 230	BCCT100-10	23 - 30	With tie (L = 292 mm)	25

*For use with static loads only.*

### Britclips® Beam Clip / Reversed Cable Tie



#### 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 CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Model	Pack 1
EM 5032 0 204	BCCT12-10R	2 - 4	With tie (L = 292 mm)	100
EM 5032 0 109	BCCT25-5.5R	5 - 9	With tie (L = 160 mm)	100
EM 5032 0 209	BCCT25-10R	5 - 9	With tie (L = 292 mm)	100
EM 5032 0 116	BCCT50-5.5R	10 - 16	With tie (L = 160 mm)	50
EM 5032 0 216	BCCT50-10R	10 - 16	With tie (L = 292 mm)	50
EM 5032 0 120	BCCT75-5.5R	17 - 20	With tie (L = 160 mm)	50
EM 5032 0 220	BCCT75-10R	17 - 20	With tie (L = 292 mm)	50
EM 5032 0 230	BCCT100-10R	23 - 30	With tie (L = 292 mm)	25

*For use with static loads only.*

### Britclips® Beam Clip / Saddle Combination



#### 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 CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Pack 1
EM 5033 0 004	BCCT12	2 - 4	100
EM 5033 0 009	BCCT25	5 - 9	100
EM 5033 0 016	BCCT50	10 - 16	100
EM 5033 0 020	BCCT75	17 - 20	50
EM 5033 0 030	BCCT100	23 - 30	50

*For use with static loads only.*

### Britclips® Beam Clip / Reversed Saddle Combination



#### 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 CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Pack 1
EM 5032 0 004	BCCT12R	2 - 4	100
EM 5032 0 009	BCCT25R	5 - 9	100
EM 5032 0 016	BCCT50R	10 - 16	50
EM 5032 0 020	BCCT75R	17 - 20	50
EM 5032 0 030	BCCT100R	23 - 30	50

*For use with static loads only.*

### Britclips® Beam Clip / Conduit Combination



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- conduit clip swivels 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5016 2 009	BCC25-50	20	5 - 9	100
EM 5016 2 016	BCC50-50	20	10 - 16	50
EM 5016 2 020	BCC75-50	20	17 - 20	50
EM 5016 2 030	BCC100-50	20	23 - 30	25
EM 5016 2 509	BCC25-75	25	5 - 9	50
EM 5016 2 516	BCC50-75	25	10 - 16	50
EM 5016 2 520	BCC75-75	25	17 - 20	50
EM 5016 2 530	BCC100-75	25	23 - 30	25

*For use with static loads only.*

### Britclips® Reversed Beam Clip / Conduit Combination



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5014 2 009	BCC25-50R	20	5 - 9	50
EM 5014 2 016	BCC50-50R	20	10 - 16	50
EM 5014 2 020	BCC75-50R	20	17 - 20	50
EM 5014 2 030	BCC100-50R	20	23 - 30	50
EM 5014 2 509	BCC25-75R	25	5 - 9	100
EM 5014 2 516	BCC50-75R	25	10 - 16	50
EM 5014 2 520	BCC75-75R	25	17 - 20	50
EM 5014 2 530	BCC100-75R	25	23 - 30	50

*For use with static loads only.*

### Britclips® Beam Clip / Locking Unit Combination



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	h (mm)	Pack 1
EM 5012 2 404	BLCC12-50	20 - 22	2 - 4	16	100
EM 5012 2 409	BLCC25-50	20 - 22	5 - 9	16	50
EM 5012 2 416	BLCC50-50	20 - 22	10 - 16	30	50
EM 5012 2 420	BLCC75-50	20 - 22	17 - 20	32	50
EM 5012 2 430	BLCC100-50	20 - 22	23 - 30	50	25
EM 5012 2 504	BLCC12-575	20 - 25	2 - 4	16	100
EM 5012 2 509	BLCC25-575	20 - 25	5 - 9	16	50
EM 5012 2 516	BLCC50-575	20 - 25	10 - 16	30	50
EM 5012 2 520	BLCC75-575	20 - 25	17 - 20	32	50
EM 5012 2 530	BLCC100-575	20 - 25	23 - 30	50	25
EM 5012 2 604	BLCC12-75	23 - 25	2 - 4	16	100
EM 5012 2 609	BLCC25-75	23 - 25	5 - 9	16	50
EM 5012 2 616	BLCC50-75	23 - 25	10 - 16	30	50
EM 5012 2 620	BLCC75-75	23 - 25	17 - 20	32	50
EM 5012 2 630	BLCC100-75	23 - 25	23 - 30	50	25
EM 5012 3 209	BLCC25-100	26 - 32	5 - 9	16	100
EM 5012 3 216	BLCC50-100	26 - 32	10 - 16	30	50
EM 5012 3 220	BLCC75-100	26 - 32	17 - 20	32	50

*For use with static loads only.*

### Britclips® Beam Clip / Horizontal Stud M6 x 9



#### 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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	h (mm)	Pack 1
EM 5052 0 604	BC125-M69SH	2 - 4	20	100
EM 5052 0 609	BC250-M69SH	5 - 9	21	100
EM 5052 0 616	BC500-M69SH	10 - 16	30	100
EM 5052 0 620	BC750-M69SH	17 - 20	32	100
EM 5052 0 630	BC1000-M69SH	23 - 30	50	50

*For use with static loads only.*

### Britclips® Light Duty Rod Hanger M6



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- suitable for M6 threaded rod
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5042 5 609	BC250-M6	5 - 9	M6	100
EM 5042 5 616	BC500-M6	10 - 16	M6	100

*For use with static loads only.*

### Britclips® Push Fastener



#### Features and Benefits

- for a solid fixing to flanges without welding or drilling
- with flexible strip to support cables
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Pack 1
EM 5032 7 504	PF125	2 - 4	100
EM 5032 7 509	PF250	5 - 9	100
EM 5032 7 516	PF500	10 - 16	100
EM 5032 7 520	PF750	17 - 20	100

*For use with static loads only.*

### Britclips® Beam Clip / Threaded Rod Hanger



#### 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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	H (mm)	Pack 1
EM 5042 0 604	RH6MT-12	2 - 4	M6	44	100
EM 5042 0 804	RH8MT-12	2 - 4	M8	44	100
EM 5042 1 004	RH10MT-12	2 - 4	M10	44	100
EM 5042 0 609	RH6MT-25	5 - 9	M6	51	100
EM 5042 0 809	RH8MT-25	5 - 9	M8	51	100
EM 5042 1 009	RH10MT-25	5 - 9	M10	51	100
EM 5042 0 616	RH6MT-50	10 - 16	M6	56	100
EM 5042 1 016	RH10MT-50	10 - 16	M10	56	100
EM 5042 0 620	RH6MT-75	17 - 20	M6	63	100
EM 5042 0 820	RH8MT-75	17 - 20	M8	63	100

*For use with static loads only.*

### Britclips® Universal Beam Clip / Double Cable



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5119 9 013	H5-8-DCC	7 - 12	8.0 - 12.5	50
EM 5119 9 020	H9-12DCC	7 - 12	14.0 - 20.0	25

*For use with static loads only.*

### Britclips® Universal Beam Clip



#### 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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5142 0 607	H2-4	3.0 - 7.0	M6	100
EM 5142 0 613	H5-8	8.0 - 12.5	M6	100
EM 5142 0 620	H9-12	14.0 - 20.0	M6	50

*For use with static loads only.*

### Britclips® Universal Beam Clip M6 x 8



#### Features and Benefits

- for a solid fixing under flanges without welding or drilling
- suitable for horizontal and vertical flanges
- with stud bolt M6 x 8 mm for fixing of clamp, conduit junction box, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5152 0 607	H2-4S	3.0 - 7.0	M6	100
EM 5152 0 613	H5-8S	8.0 - 12.5	M6	100
EM 5152 0 620	H9-12S	14.0 - 20.0	M6	50

*For use with static loads only.*

### Britclips® Universal Beam Clip / Conduit Combination



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- conduit clip swivels 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5113 2 007	50H2-4	20	3.0 - 7.0	100
EM 5113 2 013	50H5-8	20	8.0 - 12.5	50
EM 5113 2 020	50H9-12	20	14.0 - 20.0	50
EM 5113 2 507	75H2-4	25	3.0 - 7.0	100
EM 5113 2 513	75H5-8	25	8.0 - 12.5	50
EM 5113 2 520	75H9-12	25	14.0 - 20.0	50

*For use with static loads only.*

### Britclips® Side Mounted Beam Clip / Conduit Combination



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- conduit clip swivels 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5114 2 013	50H5-8SM	20	8.0 - 12.5	50
EM 5114 2 020	50H9-12SM	20	14.0 - 20.0	50
EM 5114 2 513	75H5-8SM	25	8.0 - 12.5	50
EM 5114 2 520	75H9-12SM	25	14.0 - 20.0	50

*For use with static loads only.*

### Britclips® Universal Beam Clip / Locking Conduit Combination



#### Features and Benefits

- for a solid fixing under flanges without welding or drilling
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5112 2 407	HM50L	20 - 22	3.0 - 7.0	50
EM 5112 2 413	HN50L	20 - 22	8.0 - 12.5	50
EM 5112 2 420	HO50L	20 - 22	14.0 - 20.0	50
EM 5112 2 507	HM575L	20 - 25	3.0 - 7.0	50
EM 5112 2 513	HN575L	20 - 25	8.0 - 12.5	50
EM 5112 2 520	HO575L	20 - 25	14.0 - 20.0	50
EM 5112 2 613	HN75L	23 - 25	8.0 - 12.5	50
EM 5112 2 620	HO75L	23 - 25	14.0 - 20.0	50
EM 5112 3 207	HM100L	26 - 32	3.0 - 7.0	50

*For use with static loads only.*

### Britclips® Universal Pipe Clip



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- Part No. EM 5117 1 213: suits up to 12 mm diameter cable
- Part No. EM 5117 1 213: is for use with rail types: BS110, BS113, UIC54 and UIC 60
- material: Britclips® Universal Beam Clips made of spring steel (type CS70); Britclips® Pipe Clips made of steel
- surface treatment: Britclips® Universal Beam Clips: Delta-Tone 9000 (480 hours); Britclips® Pipe Clips: zinc plated

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5117 1 213	HP5-12	12	8.0 - 12.5	100
EM 5117 1 513	HP5-15	15	8.0 - 12.5	50

*For use with static loads only.*

### Britclips® Master Clamp



#### 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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	G	Pack 1
EM 5342 0 717	MC	2 - 17	M6	Ø 6.5 mm	100
EP 5342 0 717	MC	2 - 17	M6	Ø 6.5 mm	25
EM 5342 1 117	MC10	2 - 17	M6	Ø 11.0 mm	100

*For use with static loads only.*

### Britclips® Master Clamp / Conduit Combination



#### 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)
- conduit clip swivels 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5314 2 518	CH750	25	2 - 17	50

*For use with static loads only.*

### Britclips® Master Clamp / Light Duty Cable Tray Bracket



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- for light duty cable trays
- material: Britclips® Master Clamps made of spring steel (type CS70); Britclips® Light Duty Cable Tray Bracket made of steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Pack 1
EM 5392 0 017	MC-CTB	2 - 17	100

*For use with static loads only.*

### Britclips® Master Clamp / Locking Conduit Clip Combination



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- suitable for pipe or cable fixing
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5312 2 418	CHL500	20 - 22	2 - 17	50
EM 5312 2 518	CHL575	20 - 25	2 - 17	50
EM 5312 2 618	CHL750	23 - 25	2 - 17	50
EM 5312 3 218	CHL1000	26 - 32	2 - 17	25

*For use with static loads only.*

## Britclips® Master Clamp / Side Mounted Locking Conduit Clip

**Features and Benefits**

- for a solid fixing to steel construction without the need for welding or drilling
- suitable for pipe or cable fixing
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5312 2 417	CHL500V	20 - 22	2 - 17	50
EM 5312 2 517	CHL575V	20 - 25	2 - 17	50
EM 5312 3 217	CHL1000V	26 - 32	2 - 17	25

*For use with static loads only.*

## Britclips® Master Clamp / Threaded Rod Hanger

**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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5342 0 617	MRH6MT	2 - 17	M6	100
EM 5342 0 817	MRH8MT	2 - 17	M8	100
EM 5342 1 017	MRH10MT	2 - 17	M10	100

*For use with static loads only.*

## Britclips® Master Clamp / Adjustable Rod Hanger

**Features and Benefits**

- for a solid fixing to steel construction without the need for welding or drilling
- with threaded rod clip (rod height adjustable by sliding)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5362 0 817	MTRH8	2 - 17	M8	100

*For use with static loads only.*

## Britclips® Master Clamp / Cable Tie

**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 saddle for cable tie attachment (up to width 7.6 mm)
- material: bracket made of spring steel (type CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Model	Pack 1
EM 5332 0 017	MCCT	2 - 17	No tie	100

*For use with static loads only.*

# Britclips<sup>®</sup> RSWB

## Rapid Sliding Wall Bracket



### The perfect solution for fitting electrical boxes, conduit and pipes.

- Multi-purpose bracket for use in stud walls or floor joists
- Simple mounting
- High quality galvanised steel finish
- Combines with other Walraven fixings

# 5949 1016



# 5949 1624

- Two sizes now available
- See page 88



1. Supplied in connected pairs, simply snap the brackets apart.



2. The brackets can be extended to fit between studs that are 16 to 24 inches apart.



3. Bend the bracket ends to fix onto the studs.

## Cable Run Clips

### Britclips® Cable Run Clip Flange 2–7 mm



#### Features and Benefits

- for quick fixing of cables
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5202 0 604	CR25	4.5 - 5.5	2 - 4	100
EM 5202 0 704	CR26	6.0 - 7.0	2 - 4	100
EP 5202 0 704	CR26	6.0 - 7.0	2 - 4	25
EM 5202 0 904	CR27	7.0 - 9.0	2 - 4	100
EP 5202 0 904	CR27	7.0 - 9.0	2 - 4	25
EM 5202 1 104	CR210	10.0 - 11.0	2 - 4	100
EP 5202 1 104	CR210	10.0 - 11.0	2 - 4	25
EM 5202 1 404	CR212	12.0 - 14.0	2 - 4	100
EP 5202 1 404	CR212	12.0 - 14.0	2 - 4	25
EM 5202 1 804	CR215	15.0 - 18.0	2 - 4	100
EP 5202 1 804	CR215	15.0 - 18.0	2 - 4	25
EM 5202 2 404	CR219	19.0 - 24.0	2 - 4	100
EP 5202 2 404	CR219	19.0 - 24.0	2 - 4	25
EM 5202 3 004	CR225	25.0 - 30.0	2 - 4	100
EP 5202 3 004	CR225	25.0 - 30.0	2 - 4	25
EM 5202 0 607	CR45	4.5 - 5.5	4 - 7	100
EM 5202 0 707	CR46	6.0 - 7.0	4 - 7	100
EP 5202 0 707	CR46	6.0 - 7.0	4 - 7	25
EM 5202 0 907	CR47	7.0 - 9.0	4 - 7	100
EP 5202 0 907	CR47	7.0 - 9.0	4 - 7	25
EM 5202 1 107	CR410	10.0 - 11.0	4 - 7	100
EP 5202 1 107	CR410	10.0 - 11.0	4 - 7	25
EM 5202 1 407	CR412	12.0 - 14.0	4 - 7	100
EP 5202 1 407	CR412	12.0 - 14.0	4 - 7	25
EM 5202 1 807	CR415	15.0 - 18.0	4 - 7	100
EP 5202 1 807	CR415	15.0 - 18.0	4 - 7	25
EM 5202 2 407	CR419	19.0 - 24.0	4 - 7	100
EP 5202 2 407	CR419	19.0 - 24.0	4 - 7	25
EM 5202 3 007	CR425	25.0 - 30.0	4 - 7	100
EP 5202 3 007	CR425	25.0 - 30.0	4 - 7	25

*For use with static loads only.*

### Britclips® Cable Run Clip Flange 8–12 mm



#### Features and Benefits

- for quick fixing of cables
- Part No's EM/EP 5202 0 020: adaptor for fastening of maximum 3 cable run clips (type CR)
- Part No's EM/EP 5202 0 020: adaptor for fastening of maximum 3 cable run clips (type CR)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Model	Pack 1
EM 5202 0 612	CR85	4.5 - 5.5	8 - 12	-	100
EM 5202 0 712	CR86	6.0 - 7.0	8 - 12	-	100
EP 5202 0 712	CR86	6.0 - 7.0	8 - 12	-	25
EM 5202 0 912	CR87	7.0 - 9.0	8 - 12	-	100
EP 5202 0 912	CR87	7.0 - 9.0	8 - 12	-	25
EM 5202 1 112	CR810	10.0 - 11.0	8 - 12	-	100
EP 5202 1 112	CR810	10.0 - 11.0	8 - 12	-	25
EM 5202 1 412	CR812	12.0 - 14.0	8 - 12	-	100
EP 5202 1 412	CR812	12.0 - 14.0	8 - 12	-	25
EM 5202 1 812	CR815	15.0 - 18.0	8 - 12	-	100
EP 5202 1 812	CR815	15.0 - 18.0	8 - 12	-	25
EM 5202 2 412	CR819	19.0 - 24.0	8 - 12	-	100
EP 5202 2 412	CR819	19.0 - 24.0	8 - 12	-	25
EM 5202 3 012	CR825	25.0 - 30.0	8 - 12	-	100
EP 5202 3 012	CR825	25.0 - 30.0	8 - 12	-	25
EM 5202 0 020	CRA	0.0	12 - 20	Fits CR25 - CR225	100
EP 5202 0 020	CRA	0.0	12 - 20	Fits CR25 - CR225	25

*For use with static loads only.*

### Britclips® Slide-on Cable Clip



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- material: spring steel (type CS70)
- zinc plated

Part No	Code	d (mm)	A (mm)	Pack 1
EM 5202 0 806	SOCC1	6 - 8	3 - 6	100

*For use with static loads only.*

### Britclips® Cable Run / Cable Tie Clip



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Pack 1
EM 5232 3 412	CRCT2-12	3 - 12	100
EM 5232 3 425	CRCT12-20	12 - 25	100

*For use with static loads only.*

### Britclips® Slide-on Cable Clip (CG)



#### Features and Benefits

- for a solid fixing to steel construction without the need for welding or drilling
- for quick fixing of cables
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	L	Pack 1
EM 5202 1 609	CG16	3 - 16	3 - 5 / 5 - 7	48 mm	100
EM 5202 2 009	CG20	7 - 20	8 - 9 / 10 - 11	41 mm	100

*When flange thickness increases, value of the thickness of the cable decreases.*

*For use with static loads only.*

### Britclips® Double Cable Clip



#### Features and Benefits

- direct attachment to walls or ceilings
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	d1 (mm)	Pack 1
EM 5822 5 000	DCC	7 - 12	∅ 6	100

*For use with static loads only.*

## Threaded Rod Clips

### Britclips® Support Clip



#### Features and Benefits

- for quick fixing to threaded rods or flanges without welding or drilling
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	R	Pack 1
EM 5592 2 008	SC750	16 - 20	6 - 9	M6 - M8	100
EP 5592 2 008	SC750	16 - 20	6 - 9	M6 - M8	25
EM 5592 2 510	SC1000	16 - 20	6 - 9	M6 - M8 / M10	100
EP 5592 2 510	SC1000	16 - 20	6 - 9	M6 - M8 / M10	25
EM 5592 3 210	SC1250	25 - 32	6 - 9	M6 - M8 / M10	50

*For use with static loads only.*

### Britclips® Utility Clip



#### 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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	G	Pack 1
EM 5502 0 008	UC250	3 - 7	M4 - M8	M4	100
EM 5502 0 012	UC375	9 - 14	M10 - M12	M6	100

*For use with static loads only.*

### Britclips® Utility Conduit Clip



#### Features and Benefits

- for quick fixing to threaded rods or flanges without welding or drilling
- conduit clip swivels 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	R	Pack 1
EM 5514 2 508	UCC750	25	3 - 7	M4 - M8	25
EM 5514 2 512	UCC37-75	25	9 - 14	M10 - M12	25

*For use with static loads only.*

### Britclips® Utility Locking Conduit Clip



#### Features and Benefits

- for quick fixing to threaded rods or flanges without welding or drilling
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	R	Pack 1
EM 5512 2 408	ULCC50	20 - 22	3 - 7	M4 - M8	25
EM 5512 2 608	ULCC75	23 - 25	3 - 7	M4 - M8	25
EM 5512 2 508	ULCC575	20 - 25	3 - 7	M4 - M8	25
EM 5512 2 412	ULCC37-50	20 - 22	9 - 14	M10 - M12	25
EM 5512 2 612	ULCC37-75	23 - 25	9 - 14	M10 - M12	25
EM 5512 2 512	ULCC37-575	20 - 25	9 - 14	M10 - M12	25

*For use with static loads only.*

### Britclips® Utility Clip / Light Duty Cable Tray Bracket



#### Features and Benefits

- for quick fixing to threaded rods or flanges without welding or drilling
- for light duty cable trays
- material: Britclips® Utility Clips made of spring steel (type CS70); Britclips® Light Cable Tray Support Bracket made of steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5592 0 008	UC250-CTB	3 - 7	M4 - M8	50
EM 5592 0 012	UC375-CTB	9 - 14	M10 - M12	100

*For use with static loads only.*

### Britclips® Threaded Rod Deck Hanger



#### Features and Benefits

- for fixing to roofing sheets
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	Pack 1
EM 5442 0 800	HDC8MT	M8	100
EM 5442 1 000	HDC10MT	M10	100

*For use with static loads only.*

*Safe load dependent on thickness of roof sheet.*

### Britclips® Threaded Rod Hanger



#### Features and Benefits

- stud bolts adjustable
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	d1 (mm)	Pack 1
EM 5942 0 600	RH6MT	M6	Ø 6.8	100
EM 5942 0 800	RH8MT	M8	Ø 6.8	100
EM 5942 1 000	RH10MT	M10	Ø 6.8	100

*For use with static loads only.*

### Britclips® Right Angle Threaded Rod Hanger



#### Features and Benefits

- angle bracket 90°
- with threaded rod holder (rod height adjustable by screwing)
- material: Britclips® Threaded Rod Hanger made of spring steel (type CS70); Britclips® Right Angle Bracket made of steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	d1 (mm)	Pack 1
EM 5942 0 601	RHA-6MT	M6	Ø 6.5	100
EM 5942 0 801	RHA-8MT	M8	Ø 6.5	100
EM 5942 1 001	RHA-10MT	M10	Ø 6.5	100

*For use with static loads only.*

### Britclips® Straight Shank Threaded Rod Hanger



#### Features and Benefits

- straight bracket
- with fixing hole (Ø 6.5 mm) vertical to fix S-hook, bolt/nut, etc.
- with threaded rod holder (rod height adjustable by screwing)
- material: Britclips® Threaded Rod Hanger made of spring steel (type CS70); Britclips® Straight Shank Bracket made of steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	d1 (mm)	Pack 1
EM 5942 0 803	RHS-8MT	M8	Ø 6.5	100
EM 5942 1 003	RHS-10MT	M10	Ø 6.5	100

*For use with static loads only.*

### Britclips® Right Angle Threaded Rod Hanger



#### Features and Benefits

- angle bracket 90°
- with threaded rod clip (rod height adjustable by sliding)
- material: Britclips® Height Adj Threaded Rod Hanger made of spring steel (type CS70); Britclips® Right Angle Bracket made of steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	d1 (mm)	Pack 1
EM 5962 0 800	RHA-TRH8	M8	Ø 6.5	100

*For use with static loads only.*

## Ceiling Clips

### Britclips® T Bar / Twist On Clip (AC)



#### Features and Benefits

- twist on fixing
- for fixing to the ceiling grid
- with stud bolt M6 (length see table) for fixing of clamp, conduit junction box, etc.
- spin nut included
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	G	B (mm)	Pack 1
EM 5652 1 603	AC15	M6 x 16 mm	15	100
EM 5652 1 604	AC25	M6 x 16 mm	25	100
EP 5652 1 604	AC25	M6 x 16 mm	25	25
EM 5652 5 104	AC25-2	M6 x 51 mm	25	100

*For use with static loads only.*

### Britclips® T Bar / Twist On Clip (OAC)



#### Features and Benefits

- twist on fixing
- for fixing to the ceiling grid
- with stud bolt M6 (length see table) for fixing of clamp, conduit junction box, etc.
- spin nut included
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	h (mm)	Pack 1
EM 5652 0 907	OAC25-9	9	100
EM 5652 1 607	OAC25-16	16	100
EM 5652 2 507	OAC25-25	25	100

*For use with static loads only.*

### Britclips® T Bar Clip



#### Features and Benefits

- twist on fixing
- for fixing to the ceiling grid
- with stud bolt M6 (length see table) for fixing of clamp, conduit junction box, etc.
- two-part adjustment, for fixing without damaging the grid
- spin nut included
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	h (mm)	Pack 1
EM 5652 0 627	AC1000	16	100

*For use with static loads only.*

### Britclips® Decor Sign Hanger



#### Features and Benefits

- twist on fixing
- for fixing to the ceiling grid
- with fixing hole (Ø 7.0 mm) to fix S-hook, etc.
- material: spring steel (type CS70)

Part No	Code	d1 (mm)	ST	Pack 1
EM 5609 0 025	HSH2	7.0	epoxy-coated (white)	100

*For use with static loads only.*

### Britclips® Sign Hanger



#### Features and Benefits

- twist on fixing
- for fixing to the ceiling grid
- with fixing hole (Ø 7.0 mm) to fix S-hook, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D1 (mm)	Pack 1
EM 5602 0 725	HSH	7.0	100

*For use with static loads only.*

### Britclips® T Bar Straight Bracket



#### Features and Benefits

- for fixing to the ceiling grid
- straight, with hole (Ø 6.5 mm) for universal connection
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D1 (mm)	Pack 1
EM 5602 0 002	ABCS	6.5	100

*For use with static loads only.*

### Britclips® T Bar Angle Bracket



#### Features and Benefits

- for fixing to the ceiling grid
- angle bracket 90°
- with drilling hole (Ø 6.5 mm) for a universal connection
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D1 (mm)	Pack 1
EM 5602 0 001	ABC	6.5	100

*For use with static loads only.*

### Britclips® T Bar Angle Bracket Cable Tie



#### Features and Benefits

- for fixing of cables on top of ceiling grid
- with saddle for cable tie attachment (up to width 7.6 mm)
- material: bracket made of spring steel (type CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	Model	Pack 1
EM 5602 1 090	ABCT	No tie	100
EM 5602 1 096	ABCT-5.5	With tie (L = 160 mm)	100
EM 5602 1 095	ABCT-10	With tie (L = 292 mm)	100

*For use with static loads only.*

## Purlin Hangers

### Britclips® Z Purlin Hanger



#### Features and Benefits

- hold fast 45°
- for fixing to purlins
- with fixing hole (Ø 6.5 mm) vertical to fix S-hook, bolt/nut, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	H (mm)	d1 (mm)	Pack 1
EM 5702 0 103	ZP1	≤2.5	48	6.5	100

*For use with static loads only.*

### Britclips® Angled Profile Clip



#### Features and Benefits

- hold fast 45°
- for fixing to purlins
- with fixing hole (Ø 6.5 mm) vertical to fix S-hook, bolt/nut, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	d1 (mm)	Pack 1
EM 5702 0 105	ZP3	1 - 5	6.5	100

*For use with static loads only.*

### Britclips® Z Purlin Threaded Rod Hanger



#### Features and Benefits

- hold fast 45°
- for fixing to purlins
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5743 0 603	ZP6MT	≤2.5	M6	100
EM 5742 0 803	ZP8MT	≤2.5	M8	100
EM 5742 1 003	ZP10MT	≤2.5	M10	100

*For use with static loads only.*

### Britclips® Purlin Clamp



#### Features and Benefits

- hold fast 90°
- for fixing to purlins
- material: steel
- pre-galvanized

Part No	Code	d1 (mm)	Pack 1
EM 5702 0 025	HPC1	11.0	100

*For use with static loads only.*

### Britclips® Purlin Clip



#### Features and Benefits

- hold fast 90°
- for fixing to purlins
- with fixing hole (Ø 6.5 mm) vertical to fix S-hook, bolt/nut, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	d1 (mm)	Pack 1
EM 5702 0 015	HPC2	6.5	100

*For use with static loads only.*

### Britclips® Purlin Clip / Threaded Rod Hanger



#### Features and Benefits

- hold fast 90°
- for fixing to purlins
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	Pack 1
EM 5742 0 615	HPC6MT	M6	100
EM 5742 0 815	HPC8MT	M8	100
EM 5742 1 015	HPC10MT	M10	100

*For use with static loads only.*

### Britclips® Purlin Clip / Cable Tie



#### Features and Benefits

- hold fast 90°
- for fixing to purlins
- with saddle for cable tie attachment (up to width 7.6 mm)
- material: bracket made of spring steel (type CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	Model	Pack 1
EM 5732 0 015	HPCCT	No tie	100

*For use with static loads only.*

### Britclips® Vertical Flange Clip



#### 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 CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	H (mm)	d1 (mm)	Pack 1
EM 5702 0 005	VF1	1 - 5	39	6.5	100
EP 5702 0 005	VF1	1 - 5	39	6.5	25
EM 5702 0 007	VF2	5 - 7	40	6.5	100

*For use with static loads only.*

### Britclips® Light Duty Flange Clip



#### Features and Benefits

- for fixing to vertical flanges
- with fixing hole (Ø 6.5 mm) horizontal to fix S-hook, bolt/nut, etc.
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	d1 (mm)	Pack 1
EM 5702 0 605	VF3	1 - 5		100

*For use with static loads only.*

### Britclips® Vertical Flange Cable Saddle



#### Features and Benefits

- for fixing to vertical flanges
- with saddle for cable tie attachment (up to width 7.6 mm)
- material: bracket made of spring steel (type CS70); tie-wrap clip of PA (polyamide), black
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	Model	Pack 1
EM 5732 0 005	VFCT1	1 - 5	No tie	100
EM 5732 1 405	VFCT1-5.5	1 - 5	With tie (L = 160 mm)	100

*For use with static loads only.*

### Britclips® Vertical Flange Threaded Rod Hanger



#### Features and Benefits

- for quick and easy fixing to vertical flanges
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5742 0 605	VF1-6MT	1 - 5	M6	100
EM 5742 0 805	VF1-8MT	1 - 5	M8	100
EM 5742 1 005	VF1-10MT	1 - 5	M10	100
EM 5742 1 105	VF1-12P	1 - 5	Ø 11 mm	100
EM 5742 0 607	VF2-6MT	5 - 7	M6	100
EM 5742 0 807	VF2-8MT	5 - 7	M8	100
EM 5742 1 007	VF2-10MT	5 - 7	M10	100

*For use with static loads only.*

### Britclips® Z Purlin Clamp



#### Features and Benefits

- for fixing to vertical flanges
- for threaded rod up to M10
- material: steel
- zinc plated

Part No	Code	R	Pack 1
EM 5743 1 185	ZHD2	Ø 11 mm	50

*For use with static loads only.*

### Britclips® Vertical Flange Clip / Locking Conduit Combination



#### Features and Benefits

- for fixing to vertical flanges
- suitable for pipe or cable fixing
- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5718 2 505	VFCL1-575	20 - 25	1 - 5	100

*For use with static loads only.*

### Britclips® Vertical Flange Adjustable Rod Hanger



#### Features and Benefits

- for fixing to vertical flanges
- with threaded rod clip (rod height adjustable by sliding)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5762 0 805	VF1-TRH8	1 - 5	M8	100

*For use with static loads only.*

### Britclips® Angled Profile Clip / Rod Hanger



#### Features and Benefits

- hold fast 45°
- for fixing to purlins
- with threaded rod holder (rod height adjustable by screwing)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	A (mm)	R	Pack 1
EM 5743 0 605	ZP3-6MT	1 - 5	M6	100
EM 5743 0 805	ZP3-8MT	1 - 5	M8	100
EM 5743 1 005	ZP3-10MT	1 - 5	M10	100

*For use with static loads only.*

## Composite Deck Hangers

### Britclips® Multiwedge Deck Hanger



#### Features and Benefits

- for fixing to Ward Multideck 60 and Multideck 80
- for providing threaded rod suspension
- zinc plated

Part No	Code	R	Pack 1
EM 5899 2 006	LMW6	M6	50
EM 5899 2 008	LMW8	M8	50
EM 5899 2 010	LMW10	M10	50

*For use with static loads only.*

*Safe load dependent on thickness of roof sheet.*

### Britclips® Alphawedge Deck Hanger



#### Features and Benefits

- for fixing to Richard Lee Ribdeck AL, Ribdeck E60 and Ribdeck 80
- for providing threaded rod suspension
- zinc plated

Part No	Code	R	Pack 1
EM 5899 1 008	LAW8	M8	50
EM 5899 1 010	LAW10	M10	50

*For use with static loads only.*

*Safe load dependent on thickness of roof sheet.*

### Britclips® Suspension Clip / Single Clip



#### Features and Benefits

- for fixing to composite flooring systems
- with thread connection or fixing hole for universal fixing
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	R	Pack 1
EM 5842 0 619	HOL3-6MT	M6	100
EM 5842 0 819	HOL3-8MT	M8	100
EM 5842 1 019	HOL3-10-MT	M10	100

*For use with static loads only.*

### Britclips® Suspension Clip / Conduit Clip



#### Features and Benefits

- for fixing to composite flooring systems
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	Pack 1
EM 5812 2 519	HOL575L	20 - 25	50

*For use with static loads only.*

### Britclips® Dovetail Cable Hanger (HOL2)



#### Features and Benefits

- for fixing to composite flooring systems
- simple push in fixing
- for fixing up to 4 cables
- rotates through 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	S (mm)	Pack 1
EM 5822 1 216	HOL2-1	12 - 16	100
EM 5822 1 222	HOL2-2	17 - 22	100

*For use with static loads only.*

### Britclips® Dovetail Cable Hanger (HOL2-xC)



#### Features and Benefits

- for fixing to composite flooring systems
- for cable fixing in roof deck
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	d1 (mm)	S (mm)	Pack 1
EM 5822 0 001	HOL2-SC	Ø 6.0	12 - 16	100
EM 5822 0 002	HOL2-LC	Ø 6.0	17 - 22	100

*For use with static loads only.*

### Britclips® Dovetail Cable Hanger (HOL1)



#### Features and Benefits

- for fixing to composite flooring systems
- also anchors CR25-CR225 Cable Clips
- with provision for fixing of cable flange clip
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	Pack 1
EM 5822 0 000	HOL1	20	100

*For use with static loads only.*

### Britclips® Wedge Nut



#### Features and Benefits

- for fixing to composite flooring systems
- with thread connector
- material: steel
- zinc plated

Part No	Type	R	L	a °	Pack 1
621 3 006	HW6	M6	12.5 mm	15.0°	100
621 3 008	HW8	M8	12.5 mm	15.0°	100
621 3 010	HW10	M10	12.5 mm	15.0°	100
621 3 108	HW8SR	M8	13.0 mm	11.5°	100
621 3 110	HW10SR	M10	13.0 mm	11.5°	100
621 3 206	HMWA6	M6	10.0 mm	23.5°	100
621 3 208	HMWA8	M8	10.0 mm	23.5°	100
621 3 406	HMW6	M6	9.5 mm	14.0°	100
621 3 408	HMW8	M8	9.5 mm	14.0°	100

*For use with static loads only.*

### Britclips® TR60 Deck Hanger



#### Features and Benefits

- for fixing to SNO deck type TR60 and TR80
- material: steel
- zinc plated

Part No	Code	R	Pack 1
EM 5899 3 006	LTR6	M6	50
EM 5899 3 008	LTR8	M8	50
EM 5899 3 010	LTR10	M10	50

*For use with static loads only.*

## Conduit Clips

### Britclips® Metal Framing Conduit Clip



#### Features and Benefits

- for engaging in metal Strut and supporting conduit
- conduit held in place by setting screw
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	For Rail	Pack 1
EM 5780 0 025	MF75	20 - 25	Strut	100

*For use with static loads only.*

### Britclips® Snap-in Conduit Clip



#### Features and Benefits

- universally applicable
- snaps securely in position
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	d1 (mm)	Pack 1
EM 5914 2 000	CC500	20	Ø 6.5	100
EM 5914 2 500	CC750	25	Ø 6.5	100

*For use with static loads only.*

### Britclips® Double Run Conduit Mount



#### Features and Benefits

- supports multi directional conduit
- conduit clip swivels 360°
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	d (mm)	Pack 1
EM 5914 2 020	CC50-50	20	20	100
EM 5914 2 025	CC50-75	20	25	100
EM 5914 2 525	CC75-75	25	25	100

*For use with static loads only.*

### Britclips® Double Run Locking Conduit Mount



#### Features and Benefits

- conduit clip swivels 360°
- conduit clip with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	d (mm)	Pack 1
EM 5912 2 525	HLCC57-57	20 - 25	20 - 25	50
EM 5912 2 626	HLCC75-75	23 - 25	23 - 25	50
EM 5912 2 632	HLCC75-100	23 - 25	26 - 32	50

*For use with static loads only.*

### Britclips® Cable / Conduit Clamp



#### Features and Benefits

- engages horizontal flanges
- supports services running at right angles to the supporting flange
- pre-galvanized

Part No	Code	D (mm)	A (mm)	Pack 1
EM 5555 1 222	GCCU22	16 - 22	≤12	50
EM 5555 1 228	GCCU28	22 - 28	≤12	50

*For use with static loads only.*

### Britclips® Locking Conduit Clip



#### Features and Benefits

- universally applicable
- with jaw locking (use pliers to lock)
- material: spring steel (type CS70)
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	d1 (mm)	Pack 1
EM 5912 1 700	HLCC25	11 - 17	Ø 6.5	100
EM 5912 2 400	HLCC50	20 - 22	Ø 6.5	100
EM 5912 2 500	HLCC575	18 - 24	Ø 6.5	100

*For use with static loads only.*

## Britclips® Miscellaneous

### Britclips® Suspension Clip



#### Features and Benefits

- for fixing to SNO deck type TR60 and TR80
- material: steel
- zinc plated

Part No	Code	Pack 1
EM 5903 0 000	HSC1	100
EP 5903 0 000	HSC1	25

*For use with static loads only.*

### Britclips® Bridle Ring



#### Features and Benefits

- universally applicable cable(bundle) holder with thread M6
- material: steel
- zinc plated

Part No	Code	Pack 1
EM 5903 0 600	BR500	50

*For use with static loads only.*

### Britclips® Right Angle Bracket



#### Features and Benefits

- angle bracket 90°
- with fixing hole (Ø 6.5 mm) vertical to fix S-hook, bolt/nut, etc.
- material: steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	d (mm)	Pack 1
EM 5902 0 000	RHA	Ø 6.5	100
EM 5902 0 001	RHA2	Ø 11.0	100

*For use with static loads only.*

### Britclips® Pipe Clip



#### Features and Benefits

- to secure pipe vertically or horizontally to masonry, concrete or timber surfaces
- material: steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	d1 (mm)	Pack 1
EM 5916 1 200	P12	12	Ø 6.5	100
EM 5916 1 500	P15	15	Ø 6.5	100
EM 5916 2 500	P25	25	Ø 6.5	100

*For use with static loads only.*

### Britclips® Channel Clamp



#### Features and Benefits

- to secure pipe vertically or horizontally to masonry, concrete or timber surfaces
- material: steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	D (mm)	Pack 1
EM 5555 1 822	GCCA22	16 - 22	50
EM 5555 1 828	GCCA28	22 - 28	50

*For use with static loads only.*

### Britclips® Cable Tie Saddle



#### Features and Benefits

- anchors cable ties
- material: PA (polyamide), black

Part No	Code	Pack 1
EM 5932 0 000	HLKC	100

*For use with static loads only.*

### Britclips® Ceiling Bracket



#### Features and Benefits

- angle bracket 90°
- material: steel
- bright zinc plated

Part No	Code	d1 (mm)	Pack 1
EM 5902 0 007	HCB1	Ø 4	100

*For use with static loads only.*

### Britclips® Heavy Duty Threaded Clamp



#### 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)
- material: malleable iron
- bright zinc plated

Part No	Code	A (mm)	R	h (mm)	Pack 1
600 3 996	HLC	18	M6	35	50

*For use with static loads only.*

### Britclips® Light Duty Cable Tray Support Bracket



#### Features and Benefits

- versatile support
- for a variety of applications
- material: steel
- surface treatment: Delta-Tone 9000 (480 hours)

Part No	Code	d1 (mm)	Pack 1
EM 5795 0 068	CTB	Ø 6.5	100

*For use with static loads only.*

### Britclips® Heavy Duty Bracket System



#### Features and Benefits

- material: mild steel

Part No	Code	A (mm)	L	d1 (mm)	Pack 1
607 9 220	HH101/200	6 - 13	200 mm	Ø 10	10
607 9 230	HH101/300	6 - 13	300 mm	Ø 10	10
607 9 240	HH101/400	6 - 13	400 mm	Ø 10	10

*For use with static loads only.*

### Britclips® Heavy Duty Bracket System HH1



#### Features and Benefits

- material: mild steel

Part No	Code	A (mm)	L	d1 (mm)	Pack 1
607 9 000	HH1	6 - 13	38	55	50

*For use with static loads only.*

### Britclips® Heavy Duty Bracket System HH103



#### Features and Benefits

- material: mild steel

Part No	Code	A (mm)	L	d1 (mm)	Pack 1
607 9 115	HH103/150	6 - 13	150 (mm) - beam width 125 mm	Ø 10	10
607 9 120	HH103/200	6 - 13	200 (mm) - beam width 175 mm	Ø 10	10

*For use with static loads only.*

**Britclips® RSWB (Rapid Sliding Wall Bracket)**



**Features and Benefits**

- extendable bracket for faster mounting of electrical boxes, conduit and pipework
- suitable for use in stud walls and floor joists
- shorter version expands from 10-16"
- longer version expands from 16-24"
- can be fixed to wood or metal joists
- quicker and easier to install than traditional methods
- can be set at multiple depths
- combine with starQuick clamps or RapidRail Hammerfix for even faster fixing
- material: steel
- pre-galvanised

Part No	Length	Pack Quantity
5949 1016	10-16" (25-40cm)	50
5949 1624	16-24" (40-60cm)	50



**NEW 10-16" RSWB – ideal for fixing pipes in floor joists. Use with the BIS starQuick® clamps for an even faster fixing!**

Installers who have used the RSWB say:

"Handy for running pipe under floors"

"Time saver in every way"

"A solution to many problems"

"These are a game changer"

# Fixing Accessories

## BIS Suspension Band (Curved) – Steel



### Features and Benefits

- flexible system with multiple applications
- dispenser cassette allows easy handling and storage
- material: steel
- pre-galvanized

Part No	L	b x s (mm)	Pack 1
083 5 012	10 m	12 x 0.8	10
083 5 017	10 m	17 x 0.8	10
083 5 026	10 m	26 x 1.0	10

## BIS Wall Plate 670



### Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded connection nut
- material: steel
- zinc plated

Part No	G	Pack 1
670 3 006	M6	50
670 3 008	M8	50
670 3 009	M8/10	50
670 3 010	M10	50
670 3 016	M16	50

## BIS Wall Plate 671



### Features and Benefits

- slots at 90° to each other to simplify fixing
- Part No. 671 3 OXX: with resistance welded connection nut
- Part No. 671 9 OXX: with CO2 welded connection nut
- material: steel
- zinc plated

Part No	G	Pack 1
671 3 010	M10	40
671 3 012	M12	40
671 3 016	M16	50
671 3 021	G½	50
671 9 012	M12	50
671 9 027	G¾	50
671 9 033	G1	50

## BIS Wall Plate 672 (Male Thread)



### Features and Benefits

- slots at 90° to each other to simplify fixing
- with resistance welded male stud bolt
- material: steel
- zinc plated

Part No	G2	Pack 1
672 3 006	M6 x 25	50
672 3 108	M8 x 10	50
672 3 008	M8 x 25	50
672 3 110	M10 x 12	50
672 3 010	M10 x 35	50

## BIS Duplo Fixing Plate



### 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	Pack 1
674 3 001	M8	116.5 mm	50
674 3 002	M8	146.4 mm	50

*Max. allowed load: based on using largest value for k for suspension.*

### BIS Beam Clamp Model C



#### 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

Part No	A (mm)	R	FM	VdS	Pack 1
600 3 006	≤23	M6	-	-	50
600 3 208	≤18	M8	-	VdS	50
600 3 008	≤23	M8	-	VdS	50
600 3 010	≤20	M10	FM	VdS	50
600 3 310	≤28	M10	FM	VdS	25
600 3 012	≤26	M12	FM	VdS	25
600 3 016	≤28	M16	FM	VdS	25
600 3 905	≤18	Ø 9 mm	-	VdS	50
600 3 908	≤23	Ø 9 mm	-	VdS	50
600 3 910	≤20	Ø 11 mm	FM	VdS	50
600 3 912	≤26	Ø 13 mm	FM	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.*

### BIS Beam Clamp Model O



#### 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 Ø 14 mm for fixing of BIS IC-clamp, stud bolt or S-Hook
- with serration for increased security
- material: steel
- surface treatment: Dacromet

Part No	A (mm)	Pack 1
607 7 020	≤20	25
607 7 030	≤30	25
607 7 045	≤45	25

### BIS Beam Clamp Model O – Accessories



#### Features and Benefits

- Part No. 607 7 2XX: for fixing of clamps or cables to BIS Beam clamp model 'O' (Part No. 607 7 0XX)
- material: clamp and square nut made of steel
- Part No. 607 7 2XX: surface treatment: Dacromet

Part No	Model	D (mm)	G	Pack 1
607 7 220	BIS IC-Clamp	16.0 - 20.0	M5	50
607 7 225	BIS IC-Clamp	20.4 - 25.0	M5	50
607 7 231	BIS IC-Clamp	26.9 - 31.8	M5	50
607 7 238	BIS IC-Clamp	33.7 - 38.0	M6	50
607 7 244	BIS IC-Clamp	40.0 - 44.5	M6	50

### BIS Swivel Beam Clamp Model E



#### Features and Benefits

- multidirectional clamp
- for suspension of light components to pitched beams without welding or drilling
- up to flange thickness 24 mm
- articulation to 30° sideways, 45° forwards
- material: steel
- surface treatment: Dacromet

Part No	A (mm)	G	Pack 1
607 6 000	≤24	M10	10

## BIS Swivel Beam Clamp Model P



### Features and Benefits

- multidirectional clamp
- 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	A (mm)	G	FM	VdS	Pack 1
607 8 008	≤17	M8	-	VdS	10
607 8 010	≤17	M10	FM	VdS	25

FM and VdS Approval to 25° articulation.

## BIS Roofing Sheet Hanger VdS



### Features and Benefits

- for mounting to profiled roofing sheet by means of pop rivets or threaded rod
- variable distance to roof hanger by using a threaded rod
- material: steel
- pre-galvanized
- with VdS-approval - certificate number G 4070033



Part No	G	VdS	Pack 1
678 5 001	Ø 13.0 mm	VdS	50
678 5 008	M8	VdS	50
678 5 010	M10	VdS	50

Maximum load (Fa,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 Hole Punching Plier



### Features and Benefits

- for trapezium shaped roofing sheets up to max. 1.5 mm thickness
- robust and durable design
- replaceable punching pins, Part No. 692 0 013
- supplied with Ø 10.5 mm punching pins

Part No	Model	Minimum Jaw Opening	Maximum Jaw Opening	Pack 1
692 0 012	BIS Hole punching pliers	25mm	90mm	1

## BIS Height Adjuster



### Features and Benefits

- 30 mm continuously variable height adjustable
- for stud bolt M8 or M10
- can also be used as rail suspension element
- material: steel 1.0332
- zinc plated

Part No	R	Pack 1
679 3 810	M8 - M10	50

## BIS Pipe Reinforcement



### 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
- 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	Pack 1
063 5 316	16	With click-effect	3 m	75
063 5 320	20	With click-effect	3 m	75
063 5 325	25	With click-effect	3 m	75
063 5 332	32	With click-effect	3 m	75
063 5 340	40	With click-effect	3 m	15
063 5 350	50	With click-effect	3 m	15
063 5 356	56	-	3 m	15
063 5 363	63	With click-effect	3 m	15
063 5 375	75	With click-effect	3 m	15
063 5 390	90	With click-effect	3 m	15
063 5 391	110	With click-effect	3 m	15
063 5 392	125	-	3 m	15
063 5 393	160	-	3 m	30

## BIS Hanger Bolt (BUP1000)



### Features and Benefits

- with hexagon for fine setting
- material: steel
- surface protection: BIS UltraProtect® 1000

Part No	G	L	Pack 1
6268 0 810	M8	100 mm	100
6268 0 820	M8	200 mm	50
6268 1 010	M10	100 mm	50
6268 1 020	M10	200 mm	50

## BIS Hanger Bolt



### Features and Benefits

- with hexagon for fine setting
- material: steel
- zinc plated

Part No	G	L	Pack 1
626 3 606	M6	60 mm	100
626 3 609	M6	90 mm	100
626 3 612	M6	120 mm	100
626 3 615	M6	150 mm	100
626 3 805	M8	50 mm	100
626 3 806	M8	60 mm	100
626 3 808	M8	80 mm	100
626 3 810	M8	100 mm	100
626 3 812	M8	120 mm	100
626 3 815	M8	150 mm	50
626 3 818	M8	180 mm	50
626 3 820	M8	200 mm	50
628 3 006	M10	60 mm	50
628 3 008	M10	80 mm	50
628 3 010	M10	100 mm	50
628 3 011	M10	110 mm	50
628 3 012	M10	120 mm	50
628 3 014	M10	140 mm	50
628 3 018	M10	180 mm	50
628 3 020	M10	200 mm	50

## BIS Threaded Shoulder Wood Screw Model A



### Features and Benefits

- material: steel
- zinc plated

Part No	G	L	Pack 1
635 3 850	M8	50 mm	100
635 3 860	M8	60 mm	100
635 3 880	M8	80 mm	100

### BIS Suspension Eye (Female Threaded)



#### Features and Benefits

- closed design to maximize loading
- material: steel
- zinc plated

Part No	G	D1 (mm)	Pack 1
680 3 008	M8	Ø 8.5	100
680 3 010	M10	Ø 10.5	100
680 3 012	M12	Ø 10.5	100

### BIS Eye Bolt Assembly



#### Features and Benefits

- material: mild steel
- zinc plated

Part No	Code	Pack 1
067 0 961	HEBC6	100
067 0 965	HEBO6	100

### BIS Hexagon Nut (BUP1000)



#### Features and Benefits

- material: steel
- surface protection: BIS UltraProtect® 1000
- tested for fire safety



Part No	G	Pack 1
6128 1 008	M8	100
6128 1 010	M10	100
6128 1 012	M12	100
6128 1 016	M16	100

M10 and above tested for fire safety.

### BIS Hexagon Nut



#### Features and Benefits

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



Part No	Type	G	Pack 1
612 3 006	ISO 4032	M6	100
612 3 008	ISO 4032	M8	100
612 3 010	ISO 4032	M10	100
612 3 012	ISO 4032	M12	100
612 3 016	ISO 4032	M16	100
612 3 020	ISO 4032	M20	100

M10 and above tested for fire safety.

### BIS Socket Head Bolt (BUP1000)



#### Features and Benefits

- for fixing of fixing rail
- material: steel, strength class 8.8
- according to ISO 4762
- surface protection: BIS UltraProtect® 1000

Part No	G	L	Pack 1
6138 0 825	M8	25 mm	200
6138 0 860	M8	60 mm	200

Required bolt or screw depends on rail hole pattern.

### BIS S-Hook



#### Features and Benefits

- material: steel
- zinc plated

Part No	D (mm)	s (mm)	d1 (mm)	Pack 1
694 1 040	11.0	4.0	5.0 mm	100

### BIS Spring Hook



#### Features and Benefits

- material: mild steel
- zinc plated

Part No	Code	Pack 1
639 3 010	HSH60	100

### BIS Stud Bolt (BUP1000)



#### Features and Benefits

- according to DIN 976-1
- material: steel
- tested for fire safety
- surface protection: BIS UltraProtect® 1000



Part No	Type	G	L	Pack 1
6318 1 010	DIN 976-1	M8	100 mm	100
6318 1 020	DIN 976-1	M8	200 mm	50
6328 1 010	DIN 976-1	M10	100 mm	100
6328 1 020	DIN 976-1	M10	200 mm	50

*M10 and above tested for fire safety.*

### BIS Stud Bolt



#### Features and Benefits

- according to DIN 976-1
- material: steel
- zinc plated
- tested for fire safety



Part No	Type	G	L	Pack 1
631 3 802	DIN 976-1	M8	25 mm	100
631 3 803	DIN 976-1	M8	30 mm	100
631 3 804	DIN 976-1	M8	40 mm	100
631 3 805	DIN 976-1	M8	50 mm	100
631 3 806	DIN 976-1	M8	60 mm	100
631 3 807	DIN 976-1	M8	70 mm	100
631 3 808	DIN 976-1	M8	80 mm	100
631 3 809	DIN 976-1	M8	90 mm	100
631 3 810	DIN 976-1	M8	100 mm	100
631 3 812	DIN 976-1	M8	120 mm	50
631 3 815	DIN 976-1	M8	150 mm	50
631 3 818	DIN 976-1	M8	180 mm	50
631 3 820	DIN 976-1	M8	200 mm	50
632 3 002	DIN 976-1	M10	25 mm	50
632 3 003	DIN 976-1	M10	30 mm	50
632 3 004	DIN 976-1	M10	40 mm	50
632 3 005	DIN 976-1	M10	50 mm	50
632 3 006	DIN 976-1	M10	60 mm	50
632 3 007	DIN 976-1	M10	70 mm	50
632 3 008	DIN 976-1	M10	80 mm	50
632 3 009	DIN 976-1	M10	90 mm	50
632 3 010	DIN 976-1	M10	100 mm	50
632 3 012	DIN 976-1	M10	120 mm	50
632 3 015	DIN 976-1	M10	150 mm	50
632 3 016	DIN 976-1	M10	160 mm	50
632 3 018	DIN 976-1	M10	180 mm	50
632 3 020	DIN 976-1	M10	200 mm	50

*M10 and above tested for fire safety.*

## BIS Threaded Rod (BUP1000)



### Features and Benefits

- according to DIN 976-1
- material: steel, strength class 4.8
- tested for fire safety
- surface protection: BIS UltraProtect® 1000



Part No	Type	Thread (M)	L	BndS
6308 1 008	DIN 976-1	M8	1 m	50
6308 2 008	DIN 976-1	M8	2 m	25
6308 1 010	DIN 976-1	M10	1 m	25
6308 2 010	DIN 976-1	M10	2 m	20
6308 1 012	DIN 976-1	M12	1 m	20
6308 2 012	DIN 976-1	M12	2 m	15
6308 1 016	DIN 976-1	M16	1 m	20
6308 2 016	DIN 976-1	M16	2 m	10

M10 and above tested for fire safety.

## BIS Threaded Rod



### Features and Benefits

- according to DIN 976-1
- material: steel, strength class 4.8
- zinc plated
- tested for fire safety



Part No	Type	Thread (M)	L	BndS
630 3 006	DIN 976-1	M6	1 m	100
630 3 206	DIN 976-1	M6	2 m	50
630 3 306	DIN 976-1	M6	3 m	50
630 3 008	DIN 976-1	M8	1 m	50
630 3 208	DIN 976-1	M8	2 m	25
630 3 308	DIN 976-1	M8	3 m	25
630 3 010	DIN 976-1	M10	1 m	25
630 3 210	DIN 976-1	M10	2 m	20
630 3 310	DIN 976-1	M10	3 m	20
630 3 012	DIN 976-1	M12	1 m	20
630 3 212	DIN 976-1	M12	2 m	15
630 3 312	DIN 976-1	M12	3 m	15
630 3 014	DIN 976-1	M14	1 m	10
630 3 016	DIN 976-1	M16	1 m	10
630 3 216	DIN 976-1	M16	2 m	10
630 3 316	DIN 976-1	M16	3 m	1
630 3 020	DIN 976-1	M20	1 m	5
630 3 024	DIN 976-1	M24	1 m	5

## BIS Stud Connector



### Features and Benefits

- to connect 2 male threaded components
- material: steel
- zinc plated

Part No	G	L	Pack 1
645 3 625	M6	25 mm	100
645 3 830	M8	30 mm	100
645 3 930	M10	30 mm	50
645 3 940	M10	40 mm	50
645 3 240	M12	40 mm	50
645 3 016	M16	48 mm	200

## BIS Thread Adaptor (M/F)



### 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	G	L	Pack 1
647 3 008	M8	M6	100
647 3 206	M6	M8	100
647 3 210	M10	M8	100
647 3 212	M12	M8	50
647 3 221	G1/2	M8	50
647 3 306	M6	M10	100
647 3 308	M8	M10	100
647 3 312	M12	M10	50
647 3 316	M16	M10	50
647 3 321	G1/2	M10	25
647 3 408	M8	M12	50
647 3 410	M10	M12	50
647 3 416	M16	M12	50
647 3 510	M10	M16	50
647 3 512	M12	M16	50
647 3 521	M16	G1/2	50

M10 and above tested for fire safety.

## BIS DobyGrip Loop



### 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

Part No	L	S (mm)	Pack 1
0948 1 101	1 m	1.0	10
0948 1 102	2 m	1.0	10
0948 1 103	3 m	1.0	10
0948 1 105	5 m	1.0	10
0948 1 201	1 m	2.0	10
0948 1 202	2 m	2.0	10
0948 1 203	3 m	2.0	10
0948 1 205	5 m	2.0	10

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 Stud



### 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

Part No	G	L	s (mm)	Pack 1
0948 2 261	M6	1 m	2.0	10
0948 2 262	M6	2 m	2.0	10
0948 2 263	M6	3 m	2.0	10
0948 2 265	M6	5 m	2.0	10
0948 2 281	M8	1 m	2.0	10
0948 2 282	M8	2 m	2.0	10
0948 2 283	M8	3 m	2.0	10
0948 2 285	M8	5 m	2.0	10

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 Snap End Hook



### 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

Part No	L	s (mm)	Pack 1
0948 6 201	1 m	2.0	10
0948 6 202	2 m	2.0	10
0948 6 203	3 m	2.0	10

*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 Wire Reel



### 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

Part No	L	s (mm)	Pack 1
0948 9 115	150 m	1.0	1
0948 9 215	150 m	2.0	1

*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 Lock



### Features and Benefits

- reduces installation time compared to conventional methods
- Part No. 0948 9 001: for use in combination with 1 mm diameter BIS DobyGrip wires
- Part No. 0948 9 000: for universal use in combination with 1 mm as well as 2 mm diameter BIS DobyGrip wires
- Part No. 0948 9 001: suitable for a maximum load of 10kg (1 mm wire diameter) with a 5:1 safety factor
- Part No. 0948 9 000: suitable for a maximum load of 10kg (1 mm wire diameter) or 50kg (2 mm wire diameter) with a 5:1 safety factor
- material: body of Zamak 5 zinc alloy; retaining spring of stainless steel (AISI 304); gripping wheel of sintered steel

Part No	L	B (mm)	Pack 1
0948 9 001	20 mm	16.5	50
0948 9 000	30 mm	25.0	20

*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



### 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.
- material: 7x7 stranded galvanized steel wire rope
- 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

Part No	Model	Pack 1
0948 9 300	Lighting Kit	2

*Loads tested to a 5:1 safety factor.*

*All ratings were determined by independent testing by Northumbria University and witnessed by Lloyds Register.*

### BIS Wire Rope



#### Features and Benefits

- material: mild steel
- pre-galvanized
- packed per reel

Part No	L	s (mm)	Pack 1
639 0 303	30 m	3.0	1
639 0 305	50 m	3.0	1
639 0 310	100 m	3.0	1
639 0 410	100 m	4.0	1

### BIS Rope Grip and Eyelet



#### Features and Benefits

- material: mild steel
- pre-galvanized

Part No	d1 (mm)	s (mm)	Pack 1
639 1 312	12.0	3.0	20
639 1 412	15.0	5.0	20
639 2 308	8.0 x 5.5	3.0	20
639 2 412	12.0 x 7.5	5.0	20

### BIS Hook and Eye Rope Tensioner



#### Features and Benefits

- material: mild steel
- pre-galvanized

Part No	d1 (mm)	k (mm)	Pack 1
639 3 210	10	175 - 255	20
639 3 312	12	245 - 325	20

### BIS Anchor Ring



#### Features and Benefits

- material: mild steel
- pre-galvanized

Part No	B (mm)	H (mm)	s (mm)	Pack 1
639 3 000	50	50	5.0	10

### BIS HK



#### 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)

Part No	Model	CTS	Pack 1
6107 3 134	HK, without cap	CSTB	200
6107 3 224	HK, with cap	CSTB	100

Max. allowed load (Fa) in concrete (350 kg/m<sup>3</sup>), drill hole Ø 8 mm.  
Safety margin 1:4.

# Heavy Duty Anchors

Mechanical and chemical anchoring solutions for every installation

## A complete range!

- Drop-in anchors
- Concrete screws
- Throughbolt anchors
- Highload anchors
- Shield anchors
- Ceiling anchors
- Chemical anchors

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# Heavy Duty Anchors

## WDI1 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
- substrate type:
  - cracked concrete
  - non-cracked concrete

Part No	Size	L	d <sub>o</sub> (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
610 3 006	M6	25 mm	8	0.52*	100
610 3 008	M8	30 mm	10	1.02*	100
610 3 010	M10	40 mm	12	1.55*	50
610 3 012	M12	50 mm	15	2.19*	50
610 3 016	M16	65 mm	20	4.53*	25

\* = 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.

## WDI1L Drop-in Anchor Lipped



### 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
- substrate type:
  - cracked concrete
  - non-cracked concrete

Part No	Size	L	d <sub>o</sub> (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
610 3 106	M6	25 mm	8	0.52*	100
610 3 108	M8	30 mm	10	1.02*	100
610 3 110	M10	40 mm	12	1.55*	50
610 3 112	M12	50 mm	15	2.19*	50
610 3 116	M16	65 mm	20	4.53*	25

\* = 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.

## WDI1R Drop-in Anchor Short



### 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
- substrate type:
  - cracked concrete
  - non-cracked concrete

Part No	Size	L	d <sub>o</sub> (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
610 3 206	M6	25 mm	8	1.67*	100
610 3 208	M8	25 mm	10	1.90*	100
610 3 210	M10	25 mm	12	2.14*	50
610 3 212	M12	25 mm	15	2.14*	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.

## WDI1 Setting Tool



### Features and Benefits

- for setting Walraven WDI1 Drop-in Anchors

Part No	For	Pack 1
690 2 106	WDI1 6x25	10
690 2 108	WDI1 8x30	10
690 2 110	WDI1 10x40	10
690 2 112	WDI1 12x50	10
690 2 116	WDI1 16x65	10

## WDI1R Setting Tool Set



### 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	LU (mm)	do (mm)	For	Pack 1
690 2 208	25	10	WDI1R M8	1
690 2 210	25	12	WDI1R M10	1

## WTB1 Throughbolt Anchor



### 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	Size	L	do (mm)	Rec. Tension Load C20/25 Uncracked Concrete kN	Pack 1
6098 3 1080	M8	80 mm	8	3.57*	100
6098 3 1081	M8	100 mm	8	3.57*	50
6098 3 1082	M8	115 mm	8	3.57*	50
6098 3 1100	M10	95 mm	10	5.71*	50
6098 3 1101	M10	115 mm	10	5.71*	50
6098 3 1102	M10	130 mm	10	5.71*	50
6098 3 1120	M12	120 mm	12	9.52*	50
6098 3 1121	M12	135 mm	12	9.52*	50
6098 3 1160	M16	140 mm	16	16.67*	25

\* = 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.

### WTB7 Throughbolt Anchor



#### 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	Size	L	do (mm)	Rec. Tension Load C20/25 Un-cracked Concrete kN	Pack 1
6098 3 7080	M8	75 mm	8	4.76*	100
6098 3 7081	M8	95 mm	8	4.76*	100
6098 3 7082	M8	115 mm	8	4.76*	100
6098 3 7100	M10	95 mm	10	4.76*	50
6098 3 7101	M10	115 mm	10	4.76*	50
6098 3 7102	M10	130 mm	10	4.76*	50
6098 3 7120	M12	100 mm	12	9.92*	50
6098 3 7121	M12	120 mm	12	9.92*	50
6098 3 7122	M12	150 mm	12	9.92*	50
6098 3 7123	M12	180 mm	12	9.92*	50
6098 3 7160	M16	150 mm	16	15.71*	25

\* = 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.

### WCS1N Concrete Screw



#### 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 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
  - precast pre-stressed hollow core slabs

Part No	Size	L	do (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
625 3 606	6	35 mm	6	0.60*	50
625 3 696	6	55 mm	6	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.

## WCS1M Concrete Screw



## 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 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
  - precast pre-stressed hollow core slabs

Part No	Size	L	d <sub>o</sub> (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
625 3 104	6	35 mm	6	0.60*	100
625 3 106	6	55 mm	6	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.

## WCS1P Concrete Screw



## 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 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
  - precast pre-stressed hollow core slabs

Part No	Size	L	d <sub>o</sub> (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
625 3 006	6	40 mm	6	0.60*	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.

### WCS1H Concrete Screw



**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 ETAG001 Part 6 approval 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
- substrate type:
  - cracked concrete
  - non-cracked concrete
  - precast pre-stressed hollow core slabs

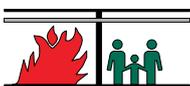
Part No	Size	L	do (mm)	Rec. Tension Load C20/25 Uncracked Concrete kN	Pack 1
625 3 306	6	60 mm	6	4.29*	100
625 3 408	8	70 mm	8	7.62*	50
625 3 418	8	80 mm	8	7.62*	50
625 3 428	8	100 mm	8	7.62*	50
625 3 438	8	120 mm	8	7.62*	50
625 3 509	10	90 mm	10	11.90*	50
625 3 510	10	100 mm	10	11.90*	50
625 3 512	10	120 mm	10	11.90*	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.*

### WCA1 Ceiling Anchor



**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	Size	L	do (mm)	Rec. Tension Load C20/25 Concrete kN	Pack 1
6096 3 604	6	36 mm	6	1.43*	100
6096 3 665	6	65 mm	6	1.43*	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.*

To see our full range of Heavy Duty Anchors go to [www.walraven.com/en/anchors](http://www.walraven.com/en/anchors)

# Light Duty Plugs and Anchors

## WUP Uni Plug



### Features and Benefits

- high load capacity
- can be used with wood screws, chipboard screws and metric bolts
- suitable for variety of substrates
- 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

Part No	L	do (mm)	ho (mm)	is,min (mm)	Pack 1
610 0 706	30 mm	6	40	34	100
610 0 708	40 mm	8	50	44	100
610 0 710	50 mm	10	70	54	50
610 0 712	60 mm	12	70	64	25

*Given recommended tension loads have been reached using a maximum diameter wood screw and include a safety factor of 5.*

## WEP Expansion Plug



### Features and Benefits

- can be used with wood screws, chipboard screws and metric bolts
- suitable for variety of 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

Part No	L	do (mm)	ho (mm)	Pack 1
6100 1 005	25 mm	5	35	100
6100 1 006	30 mm	6	40	100
6100 1 008	40 mm	8	55	100
6100 1 010	50 mm	10	65	50
6100 1 012	60 mm	12	80	25
6100 1 014	70 mm	14	90	20

*Given recommended tension loads have been reached using a maximum diameter wood screw and include a safety factor of 5.*

## WNP Nail Plug



### Features and Benefits

- quick and easy to install
- pre-assembled
- through-fixing
- can be adjusted or dismantled
- Application:
  - skirtings
  - cable clamps
  - profiles
  - cabinets
- material: steel
- material: high quality PA6 polyamide
- zinc plated
- substrate type:
  - natural stone

Part No	L	do (mm)	ho (mm)	Pack 1
6223 0 503	30 mm	5	40	100
6223 0 604	40 mm	6	50	100
6223 0 606	60 mm	6	70	100
6223 0 806	60 mm	8	70	100
6223 0 808	80 mm	8	90	100
6223 0 810	100 mm	8	110	100

*Given recommended loads include a safety factor of 5.*

**WPF Plasterboard Fixings**



**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 ø 3.5-5.0 mm wood or chipboard screws
- Application:
  - interior decorations
  - pictures
  - lamps
  - electrical fittings
- material: steel
- zinc plated
- substrate type:
  - chipboard
  - plasterboard

Part No	Model	ds,w (mm)	is, (mm)	is,min (mm)	Pack 1
611 0 092	Screw excluded	3.5 - 5	-	27	3000
611 0 063	Screw excluded	3.5 - 5	-	27	200
611 0 234	Screw included	4	30	27	25
611 0 263	Screw included	4	30	27	200
611 0 334	Screw included	4	50	27	25

*\* 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**



**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	L	do (mm)	ds,m (mm)	Pack 1
610 5 400	35 mm	8	M4	100
610 5 501	37 mm	10	M5	100
610 5 502	50 mm	10	M5	100
610 5 601	37 mm	12	M6	100
610 5 603	63 mm	12	M6	100

*Given recommended loads include a safety factor of 3.*

**WRX Metal Plug**



**Features and Benefits**

- self-drilling
- back twist lock allows screw removal without movement of the plug
- Application:
  - interior decorations
  - electrical fittings
- substrate type:
  - lightweight concrete
  - gypsum
  - chipboard
  - plasterboard

Part No	L	ds,m (mm)	ls (mm)	Pack 1
622 9 903	32 mm	4.5	30	100

*Given recommended loads include a safety factor of 3.*

### WRX Plastic Plug



#### Features and Benefits

- self-drilling
- back twist lock allows screw removal without movement of the plug
- Application:
  - interior decorations
  - electrical fittings
- substrate type:
  - plasterboard

Part No	L	d <sub>s,m</sub> (mm)	l <sub>s</sub> (mm)	Pack 1
622 9 904	32 mm	4.5	30	100

*Given recommended loads include a safety factor of 3.*

### BIS Star Plug



#### 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)
- 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. 610 3 860: zinc plated, blue passivated
- tested for fire safety
- tested according to DIN EN 1363-1: 1999-10

Part No	L	s (mm)	HØ (mm)	Pack 1
610 3 632	32 mm	6.0	7-8	100
610 3 838	38 mm	8.0	9-11	100
610 3 860	60 mm	8.0	9-11	100
610 3 960	60 mm	10.0	10-12	100

*Max. allowed load (Fa,x) in concrete (safety margin 1:3).*

*Exact drill hole diameter depends on the strength and the hardness of the building material.*



	Fa,z (N)	
	90 min.	120 min.
610 3 838	350	350
610 3 860	650	500
610 3 960	800	650

### BIS Toggle Plug (Stud-end)



#### Features and Benefits

- U-profile with rotating shaft with stud bolt
- for fixing in hollow walls and hollow ceilings or profiled roofing sheets
- Part No. 067 0 604: for fixing of sprinkler pipes to roofing sheets (max. DN 50 - 2") according to VdS directives
- material: metal parts made of steel; protective washer made of rubber (Part No. 067 0 604)
- zinc plated
- with VdS-approval - certificate number G 4890027

Part No.	Model	G	L	VdS	Pack 1
067 0 602	Stud-end	M6	100 mm	-	25
067 0 603	Stud-end	M8	100 mm	-	25
067 0 604	Stud-end	M10	100 mm	VdS	25

*The loading values of the plug depend on the surface (commonly trapezium sheet, loading capacity per m<sup>2</sup> determining).*



Cert.Nr.  
G 4890027

### BIS Toggle Bolt



#### Features and Benefits

- for fixing in hollow walls
- material: metal parts made of steel; spacer collar of EPDM rubber; washer of PP (polypropylene)
- pre-galvanized

Part No	G	L	Pack 1
067 0 600	M10	180 mm	20

*The max. allowed load (Fa,z) depends on the application, for a detailed load calculation please contact Walraven technical support.*

# Stainless Steel Pipe Support Fixings

## Stainless Steel Pipe Support Fixings

### BIS Bifix® 1301 Stainless Steel



#### Features and Benefits

- two-screw clamp
- with quick locking system
- material: stainless steel 1.4404 (AISI 316L)
- noise insulating lining, EPDM rubber, black
- age resistant lining
- sound insulating lining according DIN 4109

Part No	D (mm)	D (")	G	Pack 1
312 7 018	15 - 19		M10	50
312 7 023	20 - 23	1/2	M10	50
312 7 029	25 - 28	3/4	M10	50
312 7 035	31 - 35	1	M10	50
312 7 043	40 - 43	1 1/4	M10	50
312 7 049	47 - 51	1 1/2	M10	50
312 7 056	52 - 56	-	M10	50
312 7 063	57 - 64	2	M10	50
312 7 067	64 - 67	-	M10	25
312 7 076	70 - 76	2 1/2	M10	25
312 7 085	79 - 85	-	M10	25
312 7 091	86 - 91	3	M10	25
312 7 106	100 - 106	-	M10	25
312 7 116	108 - 116	4	M10	25
312 7 132	124 - 132	-	M10	25
312 7 141	133 - 141	5	M10	25
312 7 168	159 - 168	6	M10	15
312 7 210	200 - 210	-	M10	15
312 7 219	210 - 219	8	M10	10

### BIS Bifix® 300 Stainless Steel



#### Features and Benefits

- two-screw clamp
- with quick locking system
- material: stainless steel 1.4404 (AISI 316L)



Part No	D (mm)	D (")	G	RAL	Pack 1
301 7 017	15 - 19		M8	-	50
301 7 022	20 - 22	1/2	M8	-	50
301 7 030	25 - 28	3/4	M8	-	50
301 7 034	31 - 35	1	M8	-	50
301 7 042	40 - 43	1 1/4	M8	-	50
301 7 051	47 - 51	1 1/2	M8	-	50
301 7 060	54 - 60	-	M8	-	50
302 7 068	62 - 68	-	M10	RAL <sup>1</sup>	50
302 7 076	72 - 76	-	M10	RAL <sup>1</sup>	25
302 7 085	79 - 85	-	M10	RAL <sup>1</sup>	25
302 7 089	85 - 89	3	M10	RAL <sup>1</sup>	25
302 7 105	100 - 105	-	M10	RAL <sup>1</sup>	25
302 7 111	106 - 111	-	M10	RAL <sup>1</sup>	25
302 7 118	110 - 118	4	M10	RAL <sup>1</sup>	25
302 7 127	122 - 127	-	M10	RAL <sup>1</sup>	25
302 7 134	129 - 134	-	M10	RAL <sup>1</sup>	25
302 7 144	139 - 144	5	M10	RAL <sup>1</sup>	25
302 7 155	150 - 155	-	M10	RAL <sup>1</sup>	25
302 7 162	157 - 162	-	M10	RAL <sup>1</sup>	25
302 7 169	164 - 169	6	M10	RAL <sup>1</sup>	25
302 7 200	193 - 200	-	M10	RAL <sup>1</sup>	15

RAL<sup>1</sup> = 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.

### BIS RapidRail® Stainless Steel Fixing Rail



**Features and Benefits**

- C-profile
- for a quick and easy fixing
- with continuous perforation (on request without 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)

Part No	L	Rail Type	RAL	BndS
650 7 015	2 m	WM15 - 30x20	-	20

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

### BIS RapidRail® Stainless Steel Slide Nut



**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	For Rail	Pack 1
651 7 306	M6	WM1, 15, 2	50
651 7 308	M8	WM1, 15, 2	50
651 7 310	M10	WM1, 15, 2	50

### BIS RapidRail® Stainless Steel Hammerfix



**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	For Rail	Pack 1
652 7 062	M6	25 mm	WM1, 15, 2	25
652 7 084	M8	40 mm	WM1, 15, 2	25
652 7 088	M8	80 mm	WM1, 15, 2	25
652 7 094	M10	40 mm	WM1, 15, 2	25
652 7 098	M10	80 mm	WM1, 15, 2	25

### BIS Stainless Steel Rail Connector



**Features and Benefits**

- to make rail fabrications
- material: stainless steel 1.4401 (AISI 316)

Part No	For Rail	a°	Pack 1
658 7 090	WM1, 15, 2	90°	50
658 7 135	WM1, 15, 2	135°	50

### BIS RapidRail® Stainless Steel Beam Clamp



**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: stainless steel 1.4401 (AISI 316)

Part No	A (mm)	For Rail	SW1 (mm)	Pack 1
658 7 011	< 16	WM1, 15, 2	10	50

### BIS RapidStrut® Stainless Steel Fixing Rail



#### 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)
- tested for fire safety



Part No	L	B x H x s (mm)	BndS
650 7 327	3 m	41x21x2.50	30
650 7 627	6 m	41x21x2.50	60
650 7 347	3 m	41x41x2.50	30
650 7 647	6 m	41x41x2.50	60

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



#### 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)
- tested for fire safety



Part No	L	From Rail	Pack 1
660 7 861	150 mm	Strut 41x41	10
660 7 862	300 mm	Strut 41x41	10
660 7 863	450 mm	Strut 41x41	10
660 7 864	600 mm	Strut 41x41	8
660 7 865	750 mm	Strut 41x41	8

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 Strut Stainless Steel Slide Nut



#### Features and Benefits

- material: stainless steel 1.4401 (AISI 316)
- tested for fire safety



Part No	G	For Rail	Pack 1
651 7 706	M6	Strut	25
651 7 708	M8	Strut	25
651 7 710	M10	Strut	25
651 7 712	M12	Strut	25

M10 and above tested for fire safety.

### BIS Strut Stainless Steel Tee-Bolt



#### Features and Benefits

- slide nut with stud bolt and washer
- material: stainless steel
- tested for fire safety



Part No	G	L	For Rail	Pack 1
652 7 734	M8	40 mm	Strut	25
652 7 744	M10	50 mm	Strut	25

M10 and above tested for fire safety.

### BIS Stainless Steel Beam Clamp Model O V2A



**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 Ø 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)	Pack 1
607 7 720	≤20	25
607 7 730	≤30	25
607 7 745	≤45	25

### BIS Stainless Steel Wall Plate 670 and 671



**Features and Benefits**

- slots at 90° to each other to simplify fixing
- with resistance welded connection nut
- Part No. 671 7 021: with CO2 welded threaded boss
- Part No. 670 7 0XX: material: stainless steel 1.4301 (AISI 304)
- Part No. 671 7 0XX: material: stainless steel 1.4404 (AISI 316L)

Part No	G	L	Pack 1
670 7 006	M6	80 mm	50
670 7 008	M8	80 mm	50
670 7 010	M10	80 mm	50
671 7 010	M10	145 mm	40
671 7 021	G½	145 mm	50

### BIS Stainless Steel Wall Plate with Welded Stud Bolt 672



**Features and Benefits**

- slots at 90° to each other to simplify fixing
- with resistance welded male stud bolt
- material: stainless steel 1.4301 (AISI 304)

Part No	G	Pack 1
672 7 008	M8 x 35	50

### BIS Stainless Steel Hanger Bolt



**Features and Benefits**

- material: stainless steel 1.4301 (AISI 304)

Part No	G	L	Pack 1
626 7 805	M8	50 mm	100
626 7 810	M8	100 mm	100
628 7 006	M10	60 mm	100
628 7 012	M10	120 mm	50

### BIS Stainless Steel Hexagon Nut



**Features and Benefits**

- material: stainless steel 1.4401 (AISI 316)
- tested for fire safety

Part No	Type	G	Pack 1
612 7 008	ISO 4032	M8	50
612 7 010	ISO 4032	M10	100
612 7 012	ISO 4032	M12	100
612 7 016	ISO 4032	M16	100

M10 and above tested for fire safety.



### BIS Stainless Steel Threaded Rod



#### Features and Benefits

- according to DIN 976-1
- material: stainless steel
- tested for fire safety



Part No	G	L	BndS
630 7 006	M6	1 m	100
630 7 008	M8	1 m	50
630 7 010	M10	1 m	25
630 7 012	M12	1 m	20
630 7 016	M16	1 m	10
630 7 020	M20	1 m	5

M10 and above tested for fire safety.

### BIS Stainless Steel Stud Connector



#### Features and Benefits

- to connect 2 male threaded components
- material: stainless steel 1.4301 (AISI 304)

Part No	G	L	Pack 1
645 7 625	M6	25 mm	100
645 7 830	M8	30 mm	100
645 7 930	M10	30 mm	50
645 7 240	M12	40 mm	50

### BIS Stainless Steel Thread Adaptor



#### Features and Benefits

- to enlarge or reduce the thread size in the connection of clamps, etc.
- material: stainless steel 1.4401 (AISI 316)
- tested for fire safety



Part No	G2	G2	Pack 1
647 7 210	M10	M8	50
647 7 308	M8	M10	50

### IH100 Stainless Steel Split Band Clip GR316



#### Features and Benefits

- standard finish:
  - stainless steel

Part No	D (mm)	D (")	DN	Pack 1
B410 7 021	21	1/2	15	1
B410 7 034	34	1	25	1
B410 7 048	48	1 1/2	40	1
B410 7 060	60	2	50	1
B410 7 076	76	2 1/2	65	1
B410 7 089	89	3	80	1
B410 7 114	114	4	100	1
B410 7 140	140	5	125	1
B410 7 168	168	6	150	1
B410 7 219	219	8	200	1
B410 7 273	273	10	250	1

### IH104 Stainless Steel Saddle Clamp



#### Features and Benefits

- standard finish:
  - stainless steel

Part No	D (mm)	D (")	DN	Pack 1
B310 7 021	21	1/2	15	1
B310 7 027	27	3/4	20	1
B310 7 034	34	1	25	1
B310 7 042	42	1 1/4	32	1
B310 7 048	48	1 1/2	40	1
B310 7 060	60	2	50	1
B310 7 076	76	2 1/2	65	1
B310 7 089	89	3	80	1
B310 7 114	114	4	100	1
B310 7 140	140	5	125	1
B310 7 168	168	6	150	1

# Test Plugs and Manifold Fixings

## BIS Twinlock® Test Plugs



unique twin core valve system

- Unique twin core valve system
- Absolute safe pressure readings
- Greater accuracy
- Space saving
- Versatile use

### BIS Twinlok® Test Plug



#### 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
063 4 000	Test Plug, brass	10
063 4 001	Test Plug, brass, extended	5
063 4 009	Test Plug, stainless steel	10

*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



#### Features and Benefits

- calibrated in P.S.I. and Bar
- liquid filled gauges also available

Part No	Model	Type	Pack 1
063 4 510	Pressure	0-100 PSI	1
063 4 512	Pressure	0-150 PSI	1

### BIS Manifold Fixing



#### Features and Benefits

- material: steel
- zinc plated
- sound proofing lining made of natural rubber, black
- sound insulating lining according DIN 4109

Part No	Model	D (mm)	D (")	Pack 1
394 3 227	Double	26.9	3/4	25

*Other types on request.*

# Pacifyre<sup>®</sup> MK II Fire Sleeve

Fire, smoke and noise barrier



## Broad safety applications

The BIS Pacifyre<sup>®</sup> MK II Fire Sleeve is a single component fire sleeve with which you can make an aperture for pipes smoke free and fire resistant. In homes, factories, hospitals, offices or other residential buildings the BIS Pacifyre<sup>®</sup> MK II is installed around pipes through floors, ceilings, solid walls and modular walls. BIS Pacifyre<sup>®</sup> MK II Fire Sleeves ensure fire compartments that effortlessly comply with the building regulations.

Find out more about this unique fire sleeve on our website.

We also have a fire stopping guide online at [walraven.com/en/fire-stopping-guide](http://walraven.com/en/fire-stopping-guide)

# Fire Protection Systems

## Pacifyre® MK II Fire Sleeve (P)



### Features and Benefits

- for plastic pipes
- suitable for use in fire batts
- for pipe penetrations in accordance with e.g. DIN 4102-11 or DIN EN 1366-3 in walls (solid walls or light partition walls) and ceilings with fire protection requirements
- the sleeve provides a guaranteed protection against fire, smoke and noise
- expansion and contraction of the pipe remains possible
- minimum space required, therefore can be applied in areas of hard accessibility
- a higher flexibility due to minimal overhang on wall and ceiling seals
- no tools, drilling or extra fixing materials needed
- simple and easy to install
- maintenance free
- noise reduction test report from IRB (Fraunhofer Institut - Germany) available
- tested according to EN 1366-3
- in accordance with many EU country building regulations

Part No	D (mm)	DN	Pack 1
215 1 015017	15 - 17	15	1
215 1 018020	18 - 20	20	1
215 4 024026	23 - 28	25	1
215 4 030032	29 - 36	32	1
215 4 039041	38 - 44	40	1
215 4 048050	46 - 52	50	1
215 4 051053	48 - 55	52	1
215 4 054056	52 - 58	56	1
215 4 063065	61 - 67	63	1
215 4 075077	70 - 79	75	1
215 4 078080	74 - 82	80	1
215 4 090092	86 - 94	90	1
215 4 108110	104 - 113	110	1
215 8 123125	120 - 128	125	1
215 8 159161	155 - 164	160	1

*For Pacifyre® MK II Fire Sleeves in other sizes, please contact your Walraven Sales Company.*



1. Wrap the sleeve around the pipe



2. Fold the tabs in proper position



3. Bend and lock the tabs



4. Slide the sleeve into the aperture and centre it



5. Fill the opening with acrylic, foam or mortar



6. Pacifyre® ID-Card (Part No. 214 9 999903)

## Pacifyre® MK II Fire Sleeve (M) – Small



### Features and Benefits

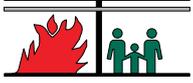
- for pipe penetrations of insulated or non-insulated metal pipes in accordance with e.g. BS476-20, in walls (solid walls or light partition walls) and ceilings with fire protection requirements
- suitable for use in fire batts
- the sleeve provides a guaranteed protection against fire, smoke and noise
- expansion and contraction of the pipe remains possible
- minimum space required, therefore can be applied in areas of hard accessibility
- a higher flexibility due to minimal overhang on wall and ceiling seals
- no tools, drilling or extra fixing materials needed
- simple and easy to install
- maintenance free
- noise reduction test report from IRB (Fraunhofer Institut - Germany) available
- tested according to EN 1366-3
- in accordance with many EU country building regulations

Part No	D (mm)	D (")	DN	Pack 1
214 1 015017	15 - 17		10	1
214 1 018020	18 - 20	-	-	1
214 1 021023	21 - 23	1/2	15	1
214 1 024026	24 - 26	-	-	1
214 1 027029	27 - 29	3/4	20	1
214 1 030032	30 - 32	-	-	1
214 1 033035	33 - 35	1	25	1
214 1 036038	36 - 38	-	-	1
214 1 039041	39 - 41	-	-	1
214 1 042044	42 - 44	1 1/4	32	1
214 1 045047	45 - 47	-	-	1
214 1 048050	48 - 50	1 1/2	40	1
214 1 051053	51 - 53	-	-	1
214 1 054056	54 - 56	-	-	1
214 1 057059	57 - 59	-	-	1
214 1 060062	60 - 62	2	50	1
214 1 063065	63 - 65	-	-	1
214 1 066068	66 - 68	-	-	1
214 1 069071	69 - 71	-	-	1
214 1 072074	72 - 74	-	-	1
214 1 075077	75 - 77	2 1/2	65	1
214 1 078080	78 - 80	-	-	1
214 1 081083	81 - 83	-	-	1
214 1 084086	84 - 86	-	-	1
214 1 087089	87 - 89	3	80	1
214 1 090092	90 - 92	-	-	1
214 1 093095	93 - 95	-	-	1
214 1 096098	96 - 98	-	-	1
214 1 099101	99 - 101	-	-	1
214 1 102104	102 - 104	-	-	1
214 1 105107	105 - 107	-	-	1
214 1 108110	108 - 110	-	-	1

For Pacifyre® MK II Fire Sleeves in other sizes, please contact your Walraven Sales Company.



**Pacifyre® MK II Fire Sleeve (M) – Medium**



**Features and Benefits**

- for pipe penetrations of insulated or non-insulated metal pipes in accordance with e.g. BS476-20, in walls (solid walls or light partition walls) and ceilings with fire protection requirements
- suitable for use in fire batts
- the sleeve provides a guaranteed protection against fire, smoke and noise
- expansion and contraction of the pipe remains possible
- minimum space required, therefore can be applied in areas of hard accessibility
- a higher flexibility due to minimal overhang on wall and ceiling seals
- no tools, drilling or extra fixing materials needed
- simple and easy to install
- maintenance free
- noise reduction test report from IRB (Fraunhofer Institut - Germany) available
- tested according to EN 1366-3
- in accordance with many EU country building regulations

Part No	D (mm)	D (")	DN	Pack 1
214 1 111113	111 - 113	-	-	1
214 1 114116	114 - 116	4	100	1
214 1 117119	117 - 119	-	-	1
214 1 120122	120 - 122	-	-	1
214 1 123125	123 - 125	-	-	1
214 1 126128	126 - 128	-	-	1
214 1 129131	129 - 131	-	-	1
214 1 132134	132 - 134	-	-	1
214 1 135137	135 - 137	-	-	1
214 1 138140	138 - 140	5	125	1
214 1 141143	141 - 143	-	-	1
214 1 144146	144 - 146	-	-	1
214 1 147149	147 - 149	-	-	1
214 1 150152	150 - 152	-	-	1
214 1 153155	153 - 155	-	-	1
214 1 156158	156 - 158	-	-	1
214 1 159161	159 - 161	-	-	1
214 1 162164	162 - 164	-	-	1
214 1 165167	165 - 167	-	-	1
214 1 168170	168 - 170	6	150	1
214 1 171173	171 - 173	-	-	1
214 1 174176	174 - 176	-	-	1
214 1 177179	177 - 179	-	-	1
214 1 180182	180 - 182	-	-	1
214 1 183185	183 - 185	-	-	1
214 1 186188	186 - 188	-	-	1
214 1 189191	189 - 191	-	-	1
214 1 192194	192 - 194	-	-	1
214 1 195197	195 - 197	-	-	1

*For Pacifyre® MK II Fire Sleeves in other sizes, please contact your Walraven Sales Company.*



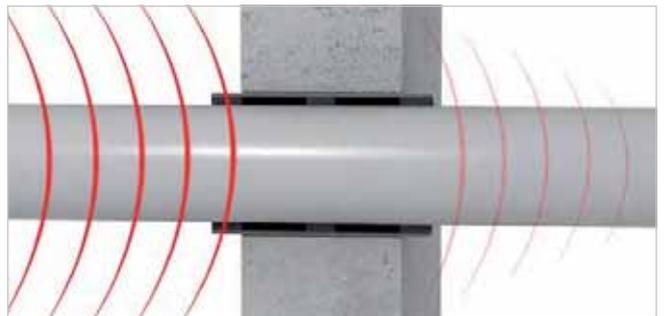
■ Perfect smoke seal



■ Reduction of contact noise



■ Free expansion and contraction



■ Reduction of noise transmission

## Pacifyre® MK II Fire Sleeve (M) – Large



### Features and Benefits

- for pipe penetrations of insulated or non-insulated metal pipes in accordance with e.g. BS476-20, in walls (solid walls or light partition walls) and ceilings with fire protection requirements
- suitable for use in fire batts
- the sleeve provides a guaranteed protection against fire, smoke and noise
- expansion and contraction of the pipe remains possible
- minimum space required, therefore can be applied in areas of hard accessibility
- a higher flexibility due to minimal overhang on wall and ceiling seals
- no tools, drilling or extra fixing materials needed
- simple and easy to install
- maintenance free
- noise reduction test report from IRB (Fraunhofer Institut - Germany) available
- tested according to EN 1366-3
- in accordance with many EU country building regulations

Part No	D (mm)	D (")	DN	Pack 1
214 1 198200	198 - 200	-	-	1
214 1 201203	201 - 203	-	-	1
214 1 204206	204 - 206	-	-	1
214 1 207209	207 - 209	-	-	1
214 1 210212	210 - 212	-	-	1
214 1 213215	213 - 215	-	-	1
214 1 216218	216 - 218	-	-	1
214 1 219221	219 - 221	8	200	1
214 1 222224	222 - 224	-	-	1
214 1 225227	225 - 227	-	-	1
214 1 228230	228 - 230	-	-	1
214 1 231233	231 - 233	-	-	1
214 1 234236	234 - 236	-	-	1
214 1 237239	237 - 239	-	-	1
214 1 240242	240 - 242	-	-	1
214 1 243245	243 - 245	-	-	1
214 1 246248	246 - 248	-	-	1
214 1 249251	249 - 251	-	-	1
214 1 252254	252 - 254	-	-	1
214 1 255257	255 - 257	-	-	1
214 1 258260	258 - 260	-	-	1
214 1 261263	261 - 263	-	-	1
214 1 264266	264 - 266	-	-	1
214 1 267269	267 - 269	-	-	1
214 1 270272	270 - 272	-	-	1
214 1 273275	273 - 275	10	250	1

*For Pacifyre® MK II Fire Sleeves in other sizes, please contact your Walraven Sales Company.*

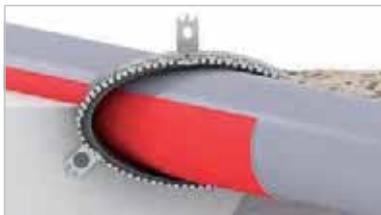
## Pacifyre® EFC Fire Collar



### Features and Benefits

- the Endless Fire Collar (EFC) is a boxed fire collar for maximum flexibility and adjustment
- for metal and plastic pipes
- suited to more complex installations such as angled penetrations, multiple penetration with zero distance between the pipes, corner penetrations and more.
- suitable for damp conditions
- problem solver: easy on-site modification
- only 1 box for numerous penetrations and all pipe dimensions up to outer diameter 160 mm
- high flexibility due to self-adhesive strip
- no waste
- all fixing materials included
- tested according to EN 1366-3
- European approval: ETA-13/0793

Part No	Cont.	Pack 1
213 2 100600	Carton box	1
213 2 100601	3 m Stainless Steel Band	1
213 2 100602	Refill set: 18 fixing hooks + plugs, screws and washers	1
213 2 100603	ID Card	1



**Pacifyre® BFC**



**Features and Benefits**

- a great standard fire collar with added reassurance of ETA certification and CE Mark
- for plastic (combustible) pipes up to Ø 160mm
- easy to install
- suitable for damp conditions
- for thin- and thick-walled pipes
- for flexible walls, solid walls and ceilings
- up to 2 hours fire protection in wall penetrations
- up to 4 hours fire protection on floor/ ceiling penetrations
- oversized for increased flexibility
- low height of 42.5 mm

Part No	D (mm)	Model	L	# of fixing points needed	Pack 1
213 3 000050	0 - 50	2 layers	267 mm	2	2
213 3 000063	51 - 63	3 layers	313 mm	3	2
213 3 000075	64 - 75	3 layers	345 mm	3	2
213 3 000090	76 - 90	4 layers	423 mm	3	2
213 3 000110	91 - 110	4 layers	487 mm	3	2
213 3 000125	111 - 125	5 layers	533 mm	4	2
213 3 000140	126 - 140	6 layers	595 mm	4	2
213 3 000160	141 - 160	6 layers	659 mm	4	2

**Pacifyre® AWM III Fire Collar**



**Features and benefits**

- built-up fire collar for plastic (combustible) pipes
- high spec collar for complex installations
- suitable for damp conditions
- low collar height, allowing building of bends, sockets and T-joints close to the wall or ceiling
- build in is possible without additional fixings (by simply bending and sliding the fixing tabs)
- in problematic built-in situations the use of an oversized collar is permitted (up to max. 3 sizes bigger)
- easily installed due to 2 part collar construction
- maintenance free
- zero distance is possible between fire collars
- tested according to EN 1366-3
- European approval: ETA-13/0906

Part No	D (mm)	d (mm)	Model	Pack 1
213 5 032034	15 - 32	38	2 fixing tabs	10
213 5 040042	20 - 40	46	2 fixing tabs	10
213 5 050052	25 - 50	56	2 fixing tabs	10
213 5 063065	32 - 63	69	4 fixing tabs	10
213 5 075077	40 - 75	81	4 fixing tabs	10
213 5 090092	50 - 90	96	4 fixing tabs	10
213 5 110112	63 - 110	116	4 fixing tabs	10
213 5 125125	75 - 125	132	4 fixing tabs	10
213 5 140140	90 - 140	144	4 fixing tabs	2
213 5 160160	110 - 160	164	4 fixing tabs	2
213 5 180180	125 - 180	184	4 fixing tabs	2
213 5 200200	140 - 200	204	4 fixing tabs	2

**Pacifyre® FPM**



**Features and Benefits**

- for sealing around:
  - Pacifyre Sleeves, Collars or Strips
  - cables and pipes
- recommended for sealing ventilation flaps, ventilation ducts and fire protection doors (leading firestop element should refer to a class A1 fire rated mortar sealant)
- can be used by hand or with a mortar gun
- non shrink
- good surface adhesion
- complies with DIN 4102, EN 13501, EN 998-2

Part No	Cont.	Pack 1
218 0 015300	15 kg	1

## Pacifyre® ID-Card



### Features and Benefits

- for identification of pipe penetrations sealed with Pacifyre® products

Part No	Model	Pack 1
214 9 999903	Card for walls and ceilings	1

## Pacifyre® S Silicone Fire Sealant

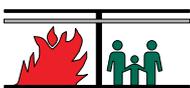


### Features and Benefits

- fire resistant and smoke tight up to 4 hours
- suitable for linear joints in walls and floors with max. 25% movement
- for sealing annular joints around pipes, fire collars and fire sleeves or wraps
- very good adhesion to most substrates
- easy to apply
- colour fast and UV-stable
- remains permanently elastic after curing
- skin formation in approx. 20 min.
- curing rate 1mm/24h
- 16 shore A hardness
- indoor emission level A+
- temperature resistance from -10 °C to +140 °C
- application temperature: +5 °C up to +30 °C
- fire class B1 (DIN 4102-2)
- CE marked
- tested and approved according to EN 1366-4 and EN 1366-3
- for more information, please refer to the Declaration of Performance / ETA, [www.walraven.com/pacifyre](http://www.walraven.com/pacifyre)

Part No	Cont.	Colour	CE	ETA	Pack 1
218 0 100020	300 ml	White	CE	ETA - 16/1007	12

## Pacifyre® A Acrylic Fire Sealant



### Features and Benefits

- fire resistant and smoke tight up to 4 hours
- suitable for static linear joints in walls and floors with max. 10% movement
- for sealing annular joints around pipes, fire collars and fire sleeves or wraps
- for sealing cracks in concrete and plaster
- excellent adhesion to many porous substrates
- intumescent when in contact with fire
- colour fast, waterproof and paintable after curing
- remains elastic after curing
- skin formation in approx. 20 min.
- shrinkage approx. 15% (DIN 52451)
- activation temperature  $\geq 120$  °C
- indoor emission level A+
- temperature resistance from -20 °C to +80 °C
- application temperature: +5 °C up to +30 °C
- CE marked
- tested and approved according to EN 1366-4 and EN 1366-3
- for more information, please refer to the Declaration of Performance / ETA, [www.walraven.com/pacifyre](http://www.walraven.com/pacifyre)

Part No	Cont.	Colour	CE	ETA	Pack 1
218 0 100010	300 ml	White	CE	ETA - 16/1008	12

# Technical Information

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- Pipe dimensions and weights
- Surface treatments
- Material properties – plastics
- Thermal expansion examples

## Standard Steel Pipe Sizes

Steel			Copper
inch NB	Metric NB	Pipe O/D	Pipe O/D
1/2"	15	21.3	15.0
3/4"	20	26.9	22.0
1"	25	33.7	28.0
1 1/4"	32	42.4	35.0
1 1/2"	40	48.3	42.0
2"	50	60.3	54.0
2 1/2"	65	76.1	66.0 / 67.0
3"	80	88.9	76.0
4"	100	114.3	108.0
5"	125	139.7	133.0
6"	150	168.3	159.0
7"	175	193.7	-
8"	200	219.1	219.0
9"	225	244.5	-
10"	250	273.0	270.0
12"	300	323.9	323.0
14"	350	355.6	
16"	400	406.4	
18"	450	457.0	
20"	500	508.0	
22"	550	559.0	
24"	600	610.0	

For plastic, stainless and mannesman pipe, all pipe outside diameters are dependant on pipe specification.

### Load / weight conversion details

- 1 N = 98 g (0.098 kg)
- 10 N = 980 g (0.98 kg)
- 100 N = 9.81 kg
- 1,000 N = 1 KN = 98.06 kg
- 10,000 N = 10 KN = 980.6 kg
- 1 kg = 10.2 N
- 10 kgs = 102 N
- 100 kgs = 1,020 N = 1.02 KN
- 1,000 kgs = 10,200 N = 10.2 KN

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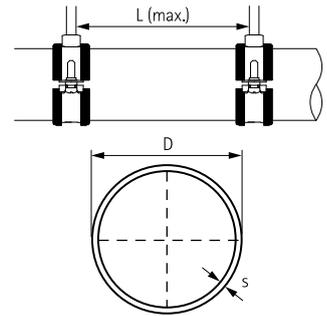
*\*Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!*

# Information: Steel Pipes

Steel pipe suitable for screwing				Weight			L (max.)* (m)
D (mm)	D (")	DN	s (mm)	empty (kg/m)	filled (kg/m)	insulated (kg/m)	
10.2		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		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 1/4	25	3.25	2.44	3.02	3.51	3.50
42.4	1 1/2	32	3.25	3.14	4.15	4.86	3.75
48.3	1	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

**Norm:**  
DIN EN 10255 - 11/2004  
**Material:**  
Steel 33-2, according to DIN 17100

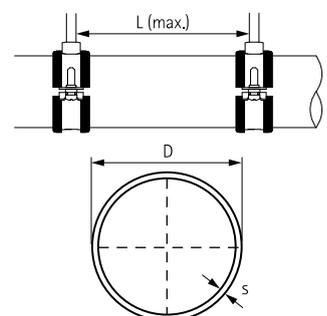
**Insulation:**  
mineral wool (density = 80kg/m<sup>3</sup>)



Steel pipe (seamless)				Weight			L (max.)* (m)
D (mm)	D (")	DN	s (mm)	empty (kg/m)	filled (kg/m)	insulated (kg/m)	
10.2		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		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 1/4	25	2.6	1.99	2.63	3.12	3.50
42.4	1 1/2	32	2.6	2.55	3.64	4.39	3.75
48.3	1	40	2.6	2.93		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 10220 - 03/2003  
**Material:**  
Steel 37

**Insulation:**  
mineral wool (density= 80 kg/m<sup>3</sup>)



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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: Steel Pipes/ Cast Iron Pipe

D (mm)	Welded steel pipe			Weight			L (max.)* (m)
	D (")	DN	s (mm)	empty (kg/m)	filled (kg/m)	insulated (kg/m)	
10.2		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		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 1/4	25	2.0	1.56	2.25	2.74	3.50
42.4	1 1/2	32	2.3	2.27	3.39	4.17	3.75
48.3	1	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

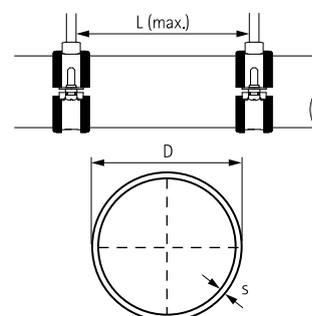
**Norm:**

DIN EN 10220 - 03/2003

**Material:**

Steel 37-2

**Insulation:**

 mineral wool (density = 80kg/m<sup>3</sup>)


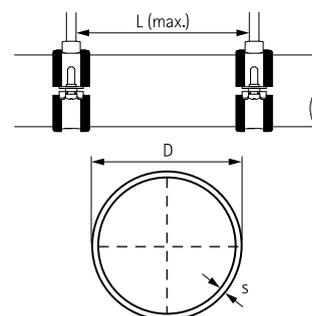
D (mm)	Cast iron pipe			Weight			L (max.)* (m)
	Tol. (mm)	DN	s (mm)	empty (kg/m)	filled (kg/m)	insulated (kg/m)	
48	+2.0 / -1.0	40	3.0	3.10	4.48	-	2.00
58	+2.0 / -1.0	50	3.5	4.30	6.34	-	2.00
78	+2.0 / -1.0	70	3.5	5.90	9.86	-	2.00
83	+2.0 / -1.0		3.5	6.30	10.83	-	2.00
110	+2.0 / -1.0	100	3.5	8.40	16.73	-	1.50
135	+2.0 / -2.0	125		11.80	24.46	-	1.50
160	+2.0 / -2.0	150		14.10	32.24	-	1.50
210	+2.0 / -2.0	200	5.0	23.10	54.50	-	1.50
274	+2.5 / -2.5	250	5.5	33.30	87.60	-	1.50
326	+2.5 / -2.5	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:**

Cast iron according to ISO 185 (EN 587)



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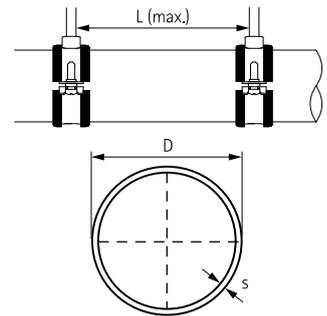
\*Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!

## Information: Copper Pipe / PE-Pipe

D (mm)	Copper pipe			empty (kg/m)	Weight		L (max.)* (m)
	D (")	DN	s (mm)		filled (kg/m)	insulated (kg/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

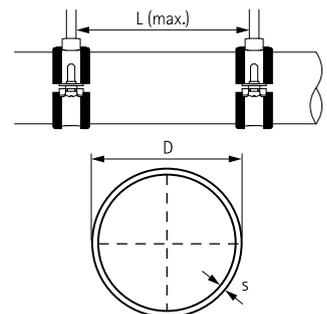
**Norm:**  
EN 1057 - 05/1996 (ex. DIN 1786)  
**Material:**  
Copper according to EN 1412

**Insulation:**  
mineral wool (density = 80kg/m<sup>3</sup>)



D (mm)	PE pipe			empty (kg/m)	Weight		L (max.)* (m)
	D (")	DN	s (mm)		filled (kg/m)	insulated (kg/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



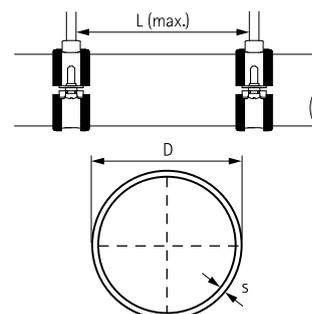
*This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.*

*\*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

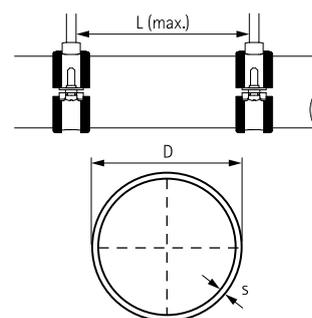
D (mm)	PE pipe			empty (kg/m)	Weight		L (max.)* (m)
	D (")	DN	s (mm)		filled (kg/m)	insulated (kg/m)	
40	-	-	1.8	0.23	1.27	-	0.95
50	-	-	2.0	0.31	1.98	-	1.05
63	-	-	2.5	0.49	3.13	-	1.20
75	-	-	2.9	0.68	4.43	-	1.30
90	-	-	3.5	0.98	6.39	-	1.45
110	-	-	4.2	1.43	9.53	-	1.60
125	-	-	4.8	1.84	12.29	-	1.70
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

**Norm:**  
DIN 8074 - 08/1999  
**Series:** 12,5  
**SDR:** 26  
**Material:**  
HD PE



D (mm)	PVC pipe			empty (kg/m)	Weight		L (max.)* (m)
	D (")	DN	s (mm)		filled (kg/m)	insulated (kg/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 8062 - 11/1988  
**Series:** 3  
**SDR:** 34,3  
**Material:**  
PVC-U (unplasticized)



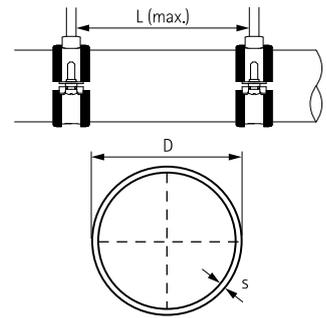
*This datasheet is to be used as a tool for selecting the correct fixing materials only. Although Walraven does everything possible to ensure the accuracy of all data within this sheet, we cannot be held responsible for information supplied by third parties, i.e. standardisation institutes and pipe manufacturers.*

*\*Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!*

## Information: PVC-Pipe

D (mm)	PVC pipe			empty (kg/m)	Weight		L (max.)* (m)
	D (")	DN	s (mm)		filled (kg/m)	insulated (kg/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)

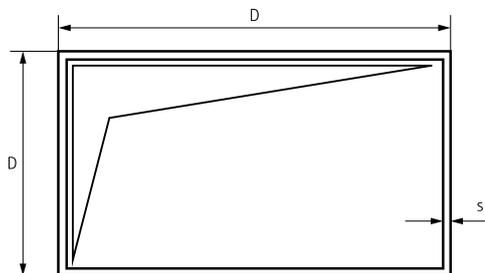


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*\*Maximum recommended fixing distance according to DIN 1988-2 (TRWI). The exact distances depend on the specific pipe-type and -manufacturer!*

# 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 zp. = 7,850 kg/m<sup>3</sup>

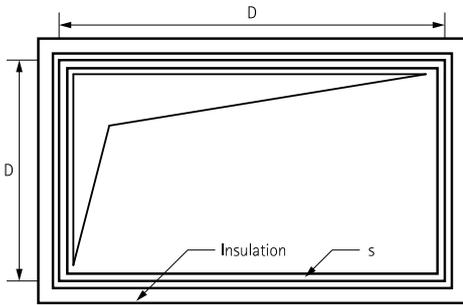
Weights for flanges and duct bracing were estimated.

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
1000	-	-	-	-	-	40.8	48.9	51.9	55.4	60.0	64.6	69.2	82.7	89.3	96.9	105.9	1000
1120	-	-	-	-	-	-	51.7	54.7	58.1	62.7	67.3	72.0	85.7	92.4	100.0	108.9	1120
1250	-	-	-	-	-	-	-	57.7	61.1	65.7	70.3	75.0	89.0	95.7	103.3	112.3	1250
1.400	-	-	-	-	-	-	-	-	64.6	69.2	73.8	78.4	92.9	99.5	107.2	116.1	1.400
1600	-	-	-	-	-	-	-	-	-	73.8	78.4	83.0	98.0	104.6	112.3	121.2	1600
1800	-	-	-	-	-	-	-	-	-	-	83.0	87.6	103.1	109.7	117.4	126.3	1800
2000	-	-	-	-	-	-	-	-	-	-	-	92.3	108.2	114.8	122.5	131.4	2000
2240	-	-	-	-	-	-	-	-	-	-	-	-	114.3	120.9	128.6	137.5	2240
2500	-	-	-	-	-	-	-	-	-	-	-	-	-	127.6	135.2	144.1	2500
2800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	142.9	151.8	2800
3150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	160.7	3150

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# 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/m<sup>3</sup>

Density insulation: Mineral wool= approx. 80 kg/m<sup>3</sup>

Weights for flanges and duct bracing were estimated.

D (mm)	s = 1.00 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
1000	-	-	-	-	-	54.1	63.0	66.8	71.2	77.1	83.0	88.9	103.9	112.2	121.8	132.9	1000
1120	-	-	-	-	-	-	66.5	70.3	74.8	80.7	86.5	92.4	107.7	116.0	125.6	136.8	1120
1250	-	-	-	-	-	-	-	74.2	78.6	84.5	90.4	96.3	111.9	120.2	129.8	140.9	1250
1400	-	-	-	-	-	-	-	-	83.0	88.9	94.8	100.7	116.7	125.0	134.5	145.7	1400
1600	-	-	-	-	-	-	-	-	-	94.8	100.7	106.6	123.1	131.4	140.9	152.1	1600
1800	-	-	-	-	-	-	-	-	-	-	106.6	112.5	129.4	137.7	147.3	158.5	1800
2000	-	-	-	-	-	-	-	-	-	-	-	118.4	135.8	144.1	153.7	164.9	2000
2240	-	-	-	-	-	-	-	-	-	-	-	-	143.5	151.8	161.4	172.5	2240
2500	-	-	-	-	-	-	-	-	-	-	-	-	-	160.1	169.6	180.8	2500
2800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	179.2	190.4	2800
3150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	201.6	3150

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## Information: Surface Treatments

To improve the corrosion resistance of steel products, Walraven uses different types of surface treatment, which offer differing levels of protection. Here is some information about the main types of surface treatment that we use:

### 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. They effortlessly withstand a salt spray test of at least 1000 hours\* (in accordance with ISO 9227). The salt spray test shows that the corrosion resistance of BIS UltraProtect® 1000 products is considerably higher than that of, for example, Hot Dip Galvanised products (approximately 300-600 hours).

Although the system utilises 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 and will last at least 20 years\*\*!

### Zinc plating

The products to be treated are cleaned, degreased and pickled. The protective coating is then applied in an electrolytic process. The thickness of the layer of zinc is between 1 and 20 µm (0,001 - 0,020 mm) 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. Zinc plating provides a thinner coating than hot dip galv making it unsuitable for outdoor applications.

### Pre-galvanized

Also known as Sendzimir galvanization. Pre-galvanizing is a continuous thermal galvanizing process. The strip steel is guided through a bath containing liquid zinc after having been cleaned, degreased and pickled. 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 method is well suited for products with a screw thread, which are to be used indoors or in a non-corrosive environment.

### Hot Dip galvanizing

Also known as 'thermal galvanizing', 'full bath galvanizing' or 'centrifugal 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 150 µm (0,050 - 0,150 mm). Consequently the process is less suitable for products with screw thread. Hot Dip galvanized products are suitable for inside as well as outside use and also for damp and light-corrosive environments.

### Dacromet

With Dacromet, in an immersion/centrifugal process, steel is given a metallic coating based upon zinc and aluminium flakes in a chrome solution and is then dried at a temperature of 321°C.

Through the immersion process an even layer covers the whole product. This process results in a protective layer of approximately 8 µm.

In contrast to electrolytic and thermal galvanizing, with Dacromet there is no danger of hydrogen embrittlement in materials with an increased carbon content, such as spring steel. As the zinc is embedded with the chromium particles the corrosion process develops very slowly in comparison with a protection layer of pure zinc.

Dacromet retains its corrosion protecting properties at temperatures up to approximately 250°C. Products protected by Dacromet are suitable for outside use as well as moderate corrosive environments.

\* Until the occurrence of maximum 5% red rust

\*\* The warranty conditions and more information can be found on our website [www.walraven.com/en/bis-ultraprotect1000](http://www.walraven.com/en/bis-ultraprotect1000)

## 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 layer of thickness.

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 DeltaTone 9000 forms a connection with the metal underneath and the surface consists of a layer of inorganic material with zinc and aluminium flakes.

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 outside use as well as moderate corrosive environments.

### Stainless steel 316 (1.4401)

Stainless steel 316 is one of the best corrosion resistant types of stainless steel. It offers a superior corrosion resistance compared to many other types of stainless steel in very many corrosive environments.

The protective layer is damaged by treatments such as punching, rilling and welding. That is why, after the last treatment, all stainless steel products receive an extra treatment which pickles and passivates to repair the protective layer.

Products from stainless steel 316 can be applied in aggressive situations such as a sea climate and industry.

### 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 space 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.

### Results of salt-spray test

Surface treatment	Thickness protection layer (µm)	Hours until 5% red rust*
BIS Ultra Protect® 1000 system	-**	1,000
Zinc plating, blue passivation	8 - 10	72
Zinc plating, yellow passivation	8 - 10	80
Pre-galvanized	25	150
Hot-dip galvanizing	50 - 80	300 - 600
Dacromet	8	600***
Delta-Tone 9000	10 - 12	480

\* Until the occurrence of maximum 5% red rust

\*\* Method and thickness of protection layer differ per product

\*\*\* Test stopped

## 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.

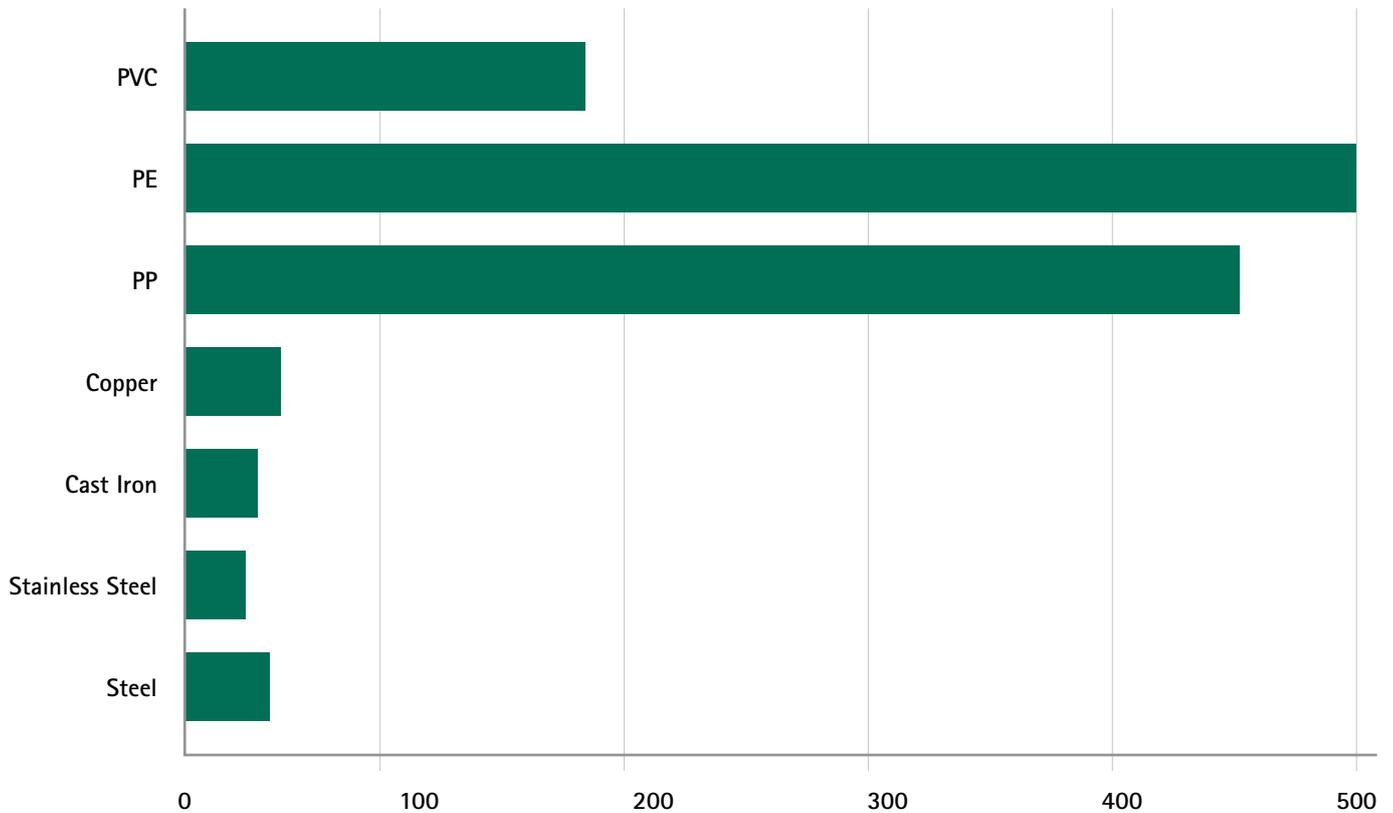
**Not resistant to:**

Strong acids, benzene, acetone, iodine, toluene, trichloroethylene.

\*The minus values apply only for parts in the quiescent condition with no severe impact stress.

# Information: Thermal Expansion

Thermal expansion per pipe type (mm)



Pipe length: 50 metres, Temperature difference: +50 °C

Pipe material	Expansion (mm/m °C)*
PVC	0.0700
PE	0.2000
PP	0.1800
Copper	0.0170
Cast iron	0.0115
Stainless Steel	0.0100
Steel	0.0120

\*indication

### Calculation method :

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

$\Delta L$  = length change in mm

L = pipe length in metres

$\alpha$  = linear expansion coefficient

$\Delta T$  = temperature difference T-max. - T-min.

### Example 1:

Pipe material: Steel

Pipe length : 20 metres

T-max. = +60 °C

T-min. = +20 °C

Installation temperature : +20 °C

$$\Delta T = +60 \text{ °C} - +20 \text{ °C} = 40 \text{ °C}$$

(difference minimum/maximum temperature)

$$\Delta L = 20 \times 0.012 \times 40 = 9.6 \text{ mm}$$

(expansion in mm = 20 x 40 x  $\alpha$  = 9.6 mm)

Please note: if the installation temperature is higher than T-min. (for example coolant pipes) the pipe will contract a certain length.

### Example 2:

Pipe material: Stainless Steel

Pipe length: 50 metres

T-max. = +30 °C

T-min. = -30 °C

Installation temperature: +20 °C

$$\Delta T \text{ warm} = +30 \text{ °C} - +20 \text{ °C} = 10 \text{ °C}$$

$$\Delta T \text{ cold} = +20 \text{ °C} - -30 \text{ °C} = 50 \text{ °C}$$

$$\Delta T \text{ total} = \Delta T \text{ warm} + \Delta T \text{ cold} = 10 \text{ °C} + 50 \text{ °C} = 60 \text{ °C}$$

$$\Delta L \text{ warm} = 50 \times 0.01 \times 10 = 5 \text{ mm expansion}$$

$$\Delta L \text{ cold} = 50 \times 0.01 \times 50 = 25 \text{ mm contraction}$$

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EM 5555 1 222	85	EM 5742 1 015	81	EM 5916 1 200	86	EP 5903 0 000	86



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## 2S clamps

New and improved! Standard pipe clamps, gapless range. The newly optimised 2S clamps from Walraven are available in a full range of sizes from Ø 10 to 225 mm. With anti-loss washers to prevent the loss of screws, this range makes daily pipe installation easier. For every day use on steel, copper or multilayer pipes, with or without insulation.

See pages 8 and 13 for more information.



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