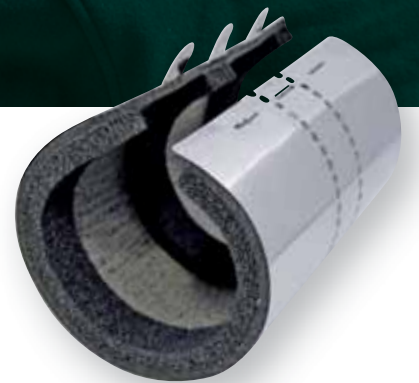


Fire, smoke and
noise barrier

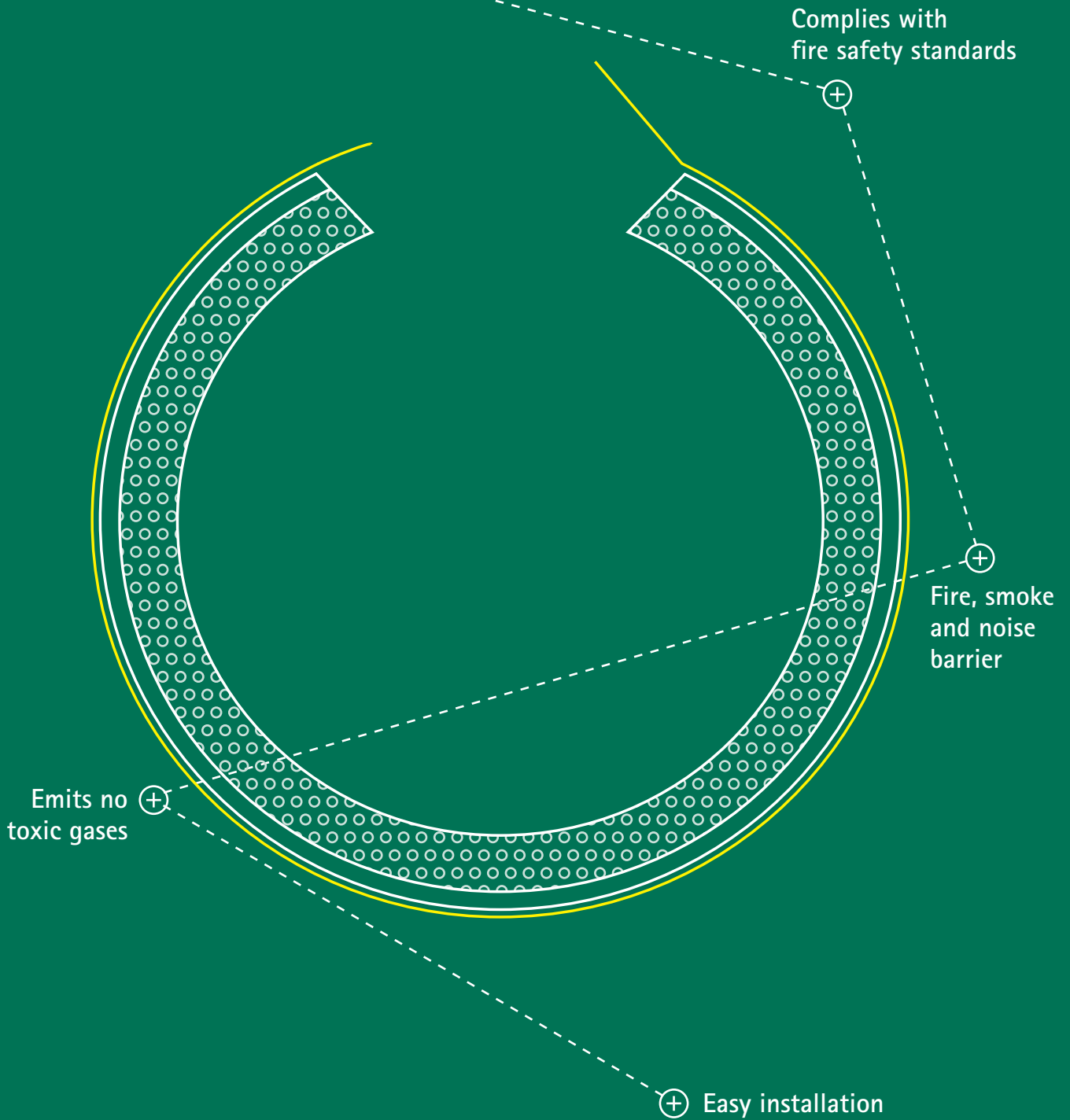


Pacifyre[®] MK II

Fire Sleeve



Pacifyre® MK II



Complies with fire safety standards

Fire, smoke and noise barrier

Emits no toxic gases

Easy installation

Inspired by smart solutions from the start

Walraven is a globally active company in the installation industry, founded in 1942. We have always been dedicated to make the work of our customers easier and more effective. With simple and smart solutions, comprehensive services and excellent support.

Walraven. The value of smart

Easy self- installation

In accordance with passive fire protection requirements.

Broad safety applications

The Pacifyre® 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 Pacifyre® MK II is installed around pipes through floors, ceilings, solid walls and modular walls. Pacifyre® MK II Fire Sleeves ensure fire compartments that effortlessly comply with the building regulations.

When to use?

In accordance with the building regulations for fire protection every building must be divided into fire compartments. Unprotected apertures for mechanical and electrical installations (pipes and cables) compromise the fire resistance of the walls, floors and ceilings of such a fire compartment. Therefore, Walraven advises to close unprotected apertures in a proper way.

Strong in fire resistance

It shows in all fire tests that the Pacifyre® MK II Fire Sleeve complies amply with all standards. You can ensure a very simple and trustworthy fire resistant aperture without the need for any training.

The cost and time savings are crystal clear. In short, the Pacifyre® MK II Fire Sleeve is an innovative, effective and reliable product.



Simple and innovative

Dutch Building Prize Jury

The Pacifyre® MK II Fire Sleeve has been extensively tested by independent authorities in various countries throughout Europe (according EN 1366-3 resp. EN 13501-2).

A summary of the results:

Fire resistance	Metal pipes	Plastic pipes
Wall of aerated concrete blocks	EI 240	EI 120
Modular wall	EI 120	EI 120
Ceilings	EI 240	EI 120



This product has, besides many local certificates, also an ETA (no. 20-0732) and an UL-eu certificate (No. 01055). Visit walraven.com/pacifyre for all technical documents.



A dramatic night scene of a fire. In the foreground, the silhouettes of firefighters are visible against the bright, intense light of a large fire in the background. The fire is consuming a structure, with thick smoke and flames rising into the dark sky. The ground is wet and reflective, mirroring the light from the fire. The overall atmosphere is one of a high-stakes emergency response.

Pacifyre[®] MK II

Operational benefits

- The spreading of fire
- The spreading of smoke
- The conduction of noise

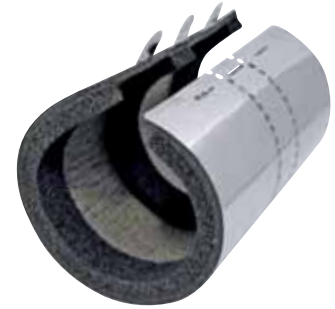
walraven.com/pacifyre

Fire, smoke and noise barrier

Operational benefits

Prevents:

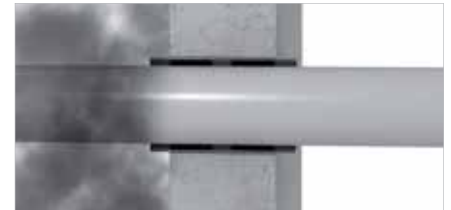
- The spreading of fire
- The spreading of smoke
- The conduction of noise
- Remains operational for decades without maintenance
- Expansion and contraction of the pipe remains possible
- Contains no dangerous materials
- Emits no toxic gases or smoke in the event of a fire



Smoke seal

When a fire burns, it generates carbon dioxide, water vapor, carbon monoxide, particulate matter, chemicals and hazardous gases. Most victims of fires (ca. 95%) die from smoke or toxic gases, not from burns.

Thanks to its three foam strips the Pacifyre® MK II Fire Sleeve is a perfect seal. Also, at lower temperatures it allows smoke no chance of penetrating other areas in any situation.

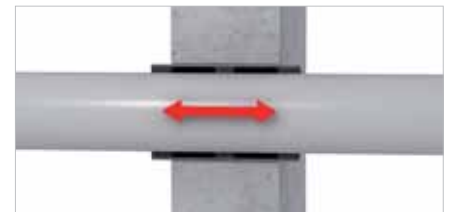


Perfect smoke seal

Free pipe expansion and noise barrier

In normal day-to-day operation pipes expand and contract. This can be because of temperature or pressure fluctuations or fluids running through the pipe. When such a pipe is in direct contact with the building, it produces noise.

Thanks to the three foam strips in the Pacifyre® MK II Fire Sleeve the pipe can expand and contract freely. Noise transmission from one room to another and contact noises are being absorbed and reduced.



Free expansion and contraction

The noise reducing properties of the Pacifyre® MK II Fire Sleeve have been tested extensively by independent authorities in the United Kingdom and Germany.



Reduction of contact noise

Sound reduction with a metal pipe in a modular wall

Weighted Sound Reduction Index (WSRI)	Rw 49-50
Test in accordance with:	BS 2750, Part 3 (Sound Research Laboratories Ltd UK) SRL Test Report C/98/5L/7424/1
Fraunhofer Institut	S9712 - Technical Comment on Noise Control Performance



Reduction of noise transmission

Pacifyre® MK II Fire Sleeve is one of the few fire stops that, as well as being fire resistant, also offers good smoke sealing and sound proofing!

Pacifyre® MK II Fire Sleeve

Installation Instructions

The Pacifyre® MK II Fire Sleeve is installed easily without using special fixing materials. Only one pair of hands is needed for the whole installation.

After wrapping the sleeve around the pipe, the closing tabs are bent and locked. Then slide the sleeve into the aperture. You then fill the rest of the opening with

fire resistant acrylic, foam or mortar. Fill out the Pacifyre® ID-Card and place it next to the aperture and the job is done.



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. 214999903)

For nearly all situations



Small spaces

Places with difficult accessibility (for example an aperture that is only accessible from one side) cause no problems. The Pacifyre® MK II Fire Sleeve can also be used when the distance between the wall or ceiling and pipe is very small.



Close spacing

The Pacifyre® MK II Fire Sleeve is kept in place due to its closing tabs. It has no obtrusive fixing tabs, which is an advantage when parallel running pipes are installed. Thanks to its compact design the centre distance between pipes is very small.



Any direction

The Pacifyre® MK II Fire Sleeve can be used for horizontal, vertical and even diagonal running pipes!

Pacifyre® MK II Fire Sleeve

Easy to install

Installation benefits

- Simple and easy to install, without special training
- Just one sleeve per aperture
- Close wall distance
- Close spacing
- For pipes in any direction



1. Open aperture



2. Completely finished aperture

The Pacifyre® MK II Fire Sleeve in action

At a temperature in excess of 140 °C the intumescent in the Pacifyre® MK II Fire Sleeve starts to swell. In case of a metal pipe, the stop seals the space between pipe

and wall against fire. With a plastic pipe the Pacifyre® MK II Fire Sleeve seals the aperture against fire by completely crushing the pipe. Smoke and fire have no chance of entering

the adjoining areas. The Pacifyre® MK II Fire Sleeve has protected those present and has given them time to reach safety.



1. Fire breaks out in a fire compartment



2. The fire spreads and the residents are warned



3. The Pacifyre® MK II Fire Sleeve starts to work and the residents have time to reach safety



Composition

The Pacifyre® MK II Fire Sleeve comprises of:

1. Three foam strips (smoke seal and noise barrier)
2. A layer of intumescent (seal in the event of a fire)
3. A sleeve of stainless steel for counter pressure and protection

"Just the thing!"

Dutch Building Prize Jury

Selection tables

The Pacifyre® MK II Fire Sleeve is available in all common pipe sizes for both non-insulated plastic pipes and metal pipes (insulated or non-insulated). Other dimensions are available on request.

Plastic pipe

Pipe Ø (mm)	Part No.
15 - 17	2151015017
18 - 20	2151018020
23 - 28	2154024026
29 - 36	2154030032
38 - 44	2154039041
46 - 52	2154048050
48 - 55	2154051053
52 - 58	2154054056
55 - 61	2154057059
61 - 67	2154063065
70 - 79	2154075077
74 - 82	2154078080
86 - 94	2154090092
95 - 103	2154099101
104 - 113	2154108110
120 - 128	2158123125
131 - 139	2158135137
136 - 144	2158138140
155 - 164	2158159161
175 - 184	2158180182
195 - 204	2152198200

Other dimensions on request.

Drilling table

Part No.	Allowance (mm)					
	FP 430		FP 550		FPM	
	min.	max.	min.	max.	min.	max.
2141xxxxxx	25	65	45	125	125	225
2151xxxxxx	25	65	45	125	125	225
2154xxxxxx	30	70	50	130	130	230
2158xxxxxx	40	80	60	140	140	240
2152xxxxxx	50	90	70	150	150	250

Drill Ø =

Pipe Ø + 2 x insulation + allowance* or

Pipe Ø + allowance*

* Allowance = 2 x thickness MK II + 2 x min./max. joint width

For holes to be drilled: select your available drill size within the min. / max. allowance given above.

Metal pipe (insulated)

DN	Pipe Ø (mm)		Non-insulated	Insulation thickness (mm)		
	Steel + Stainless	Copper		15	20	25
				30	40	50
10	17.2	15	2141015017	2141045047	2141054056	2141063065
-	-	18	2141018020	2141048050	2141057059	2141066068
15	21.3	22	2141021023	2141051053	2141060062	2141069071
20	26.9	28	2141027029	2141057059	2141066068	2141075077
25	33.7	35	2141033035	2141063065	2141072074	2141084086
32	42.4	42	2141042044	2141072074	2141081083	2141090092
40	48.3	-	2141048050	2141078080	2141087089	2141096098
-	-	54	2141054056	2141084086	2141093095	2141102104
50	60.3	-	2141060062	2141090092	2141099101	2141108110
-	64.0	-	2141063065	2141093095	2141102104	2141111113
-	-	66	2141066068	2141096098	2141105107	2141114116
65	76.1	76	2141075077	2141105107	2141114116	2141126128
80	88.9	89	2141087089	2141117119	2141129131	2141138140
-	-	108	2141108110	2141138140	2141147149	2141156158
100	114.3	-	2141114116	2141144146	2141153155	2141162164
125	139.7	-	2141138140	2141168170	2141180182	2141189191
150	168.3	-	2141168170	2141198200	2141207209	2141219221
200	219.1	-	2141219221	2141249251	2141258260	2141270272
250	273	-	2141273275	2141301303	2141313315	2141322324
10	17.2	15	2141015017	2141075077	2141096098	2141114116
-	-	18	2141018020	2141078080	2141096098	2141117119
15	21.3	22	2141021023	2141081083	2141102104	2141120122
20	26.9	28	2141027029	2141087089	2141105107	2141126128
25	33.7	35	2141033035	2141093095	2141114116	2141132134
32	42.4	42	2141042044	2141102104	2141120122	2141141143
40	48.3	-	2141048050	2141108110	2141126128	2141147149
-	-	54	2141054056	2141114116	2141132134	2141153155
50	60.3	-	2141060062	2141120122	2141138140	2141159161
-	64.0	-	2141063065	2141123125	2141144146	2141162164
-	-	66	2141066068	2141126128	2141144146	2141165167
65	76.1	76	2141075077	2141135137	2141156158	2141177179
80	88.9	89	2141087089	2141147149	2141168170	2141189191
-	-	108	2141108110	2141168170	2141186188	2141207209
100	114.3	-	2141114116	2141174176	2141192194	2141213215
125	139.7	-	2141138140	2141198200	2141219221	2141240242
150	168.3	-	2141168170	2141228230	2141249251	2141267269
200	219.1	-	2141219221	2141279281	2141298300	2141319321
250	273	-	2141273275	2141331333	2141352354	2141373375

Other dimensions on request. For rubber or elastomer please contact us.



Pacifyre® MK II

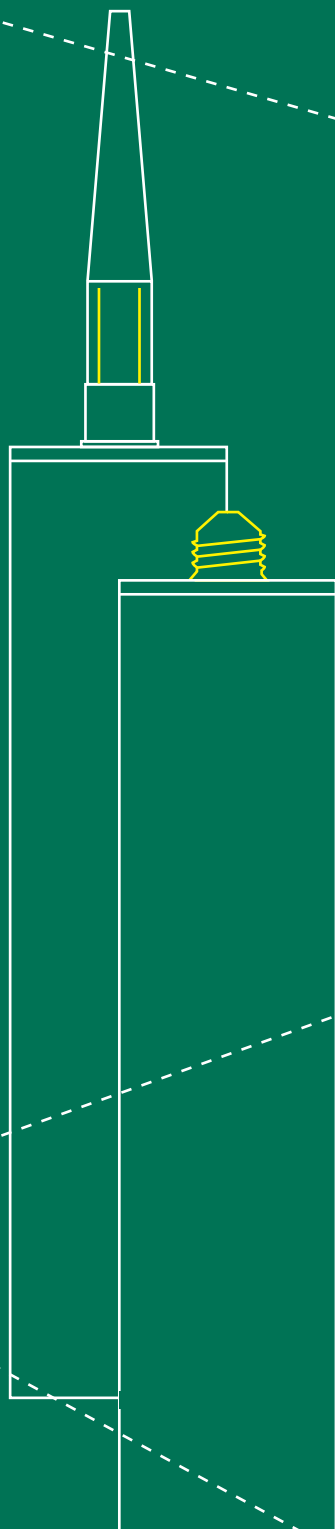
- Easy to install to minimise risk of incorrect installation
- Suitable for renovations and remedial fire stopping
- Unique product feature to suit more complex building requirements

walraven.com/pacifyre

Pacifyre® A and S



Tested and approved



Excellent
adhesion
to most
substrates



For use in walls
and floors



Fire resistant and
smoketight



Pacifyre® A and S Fire Sealants

For preventing the spread of fire and smoke through joints in walls and floors

Pacifyre® A: Acrylic Fire Sealant

Features and Benefits

- Fire resistant and smoketight 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
- Activation temperature $\geq 120^{\circ}\text{C}$
- Temperature resistant between -20°C and $+80^{\circ}\text{C}$
- Application temperature between $+5^{\circ}\text{C}$ and $+30^{\circ}\text{C}$
- Indoor emission level A+
- Colour-fast, waterproof and paintable after curing
- Remains elastic after curing
- Skin formation in approx. 20 min.
- Shrinkage approx. 15% (DIN 52451)

Pacifyre® S: Silicone Fire Sealant

Features and Benefits

- Fire resistant and smoketight 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
- 16 Shore A hardness
- Temperature resistant between -10°C and $+140^{\circ}\text{C}$
- Application temperature between $+5^{\circ}\text{C}$ and $+30^{\circ}\text{C}$
- Indoor emission level A+
- Colour-fast and UV-stable
- Remains permanently elastic after curing
- Skin formation in approx. 20 min.
- Curing rate 1mm/24h
- Fire class B1 (DIN 4102-2)

Product Overview

Product	Part No.	ETA	DoP	Colour	Cont.	Pack 1
Pacifyre® A Acrylic Fire Sealant	2180100010	ETA 16/1008	0749 CPR 16-1008	White	300 ml	12
Product	Part No.	ETA	DoP	Colour	Cont.	Pack 1
Pacifyre® S Silicone Fire Sealant	2180100020	ETA 16/1007	0749 CPR 16-1007	White	300 ml	12

Pacifyre® A and S Complementary products

- Pacifyre® MK II (215xxxxxxx)
- Pacifyre® EFC (2132100x00)
- Pacifyre® BFC (2133000xxx)
- Pacifyre® ID-Card/Sticker (21x99999xx)
- Tangit 2C PP6 Foam Gun (2181526)
- WIS Dispenser Gun (6099986)

Easy to install



1. Slide the sleeve into the aperture and centre it



2. Put some mineral wool as backfilling, fill 25 mm in the depth with Acrylic or Silicone Fire Sealant



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

For more information see walraven.com/pacifyre

Find out how we can support you

Would you like to find out more about any of the solutions described in this brochure?
Or would you like to discuss how we could help you find the best possible solution for your project? Get in touch today!

United Kingdom Ireland

Walraven Ltd.

18 Wildmere Industrial Estate
Banbury (GB)
Oxon, OX16 3JU
Tel. +44 (0)1295 75 34 00
sales.uk@walraven.com

Other countries

Walraven International

P.O. Box 15
3640 AA Mijdrecht (NL)
Tel. +31 (0)297 23 30 00
Fax +31 (0)297 23 30 99
export@walraven.com



Walraven Group

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