

Sealing products for
optimum protection



Fire Protection Systems



Fire Protection Systems



Fire safe, smoke tight and noise insulating ⊕

⊕ Wide range of sealing products for optimum protection against fire

⊕ Combined use of certified BIS Pacifyre® and Tangit FP products



Fire Protection Systems

Fire safe, smoke-tight and noise insulating

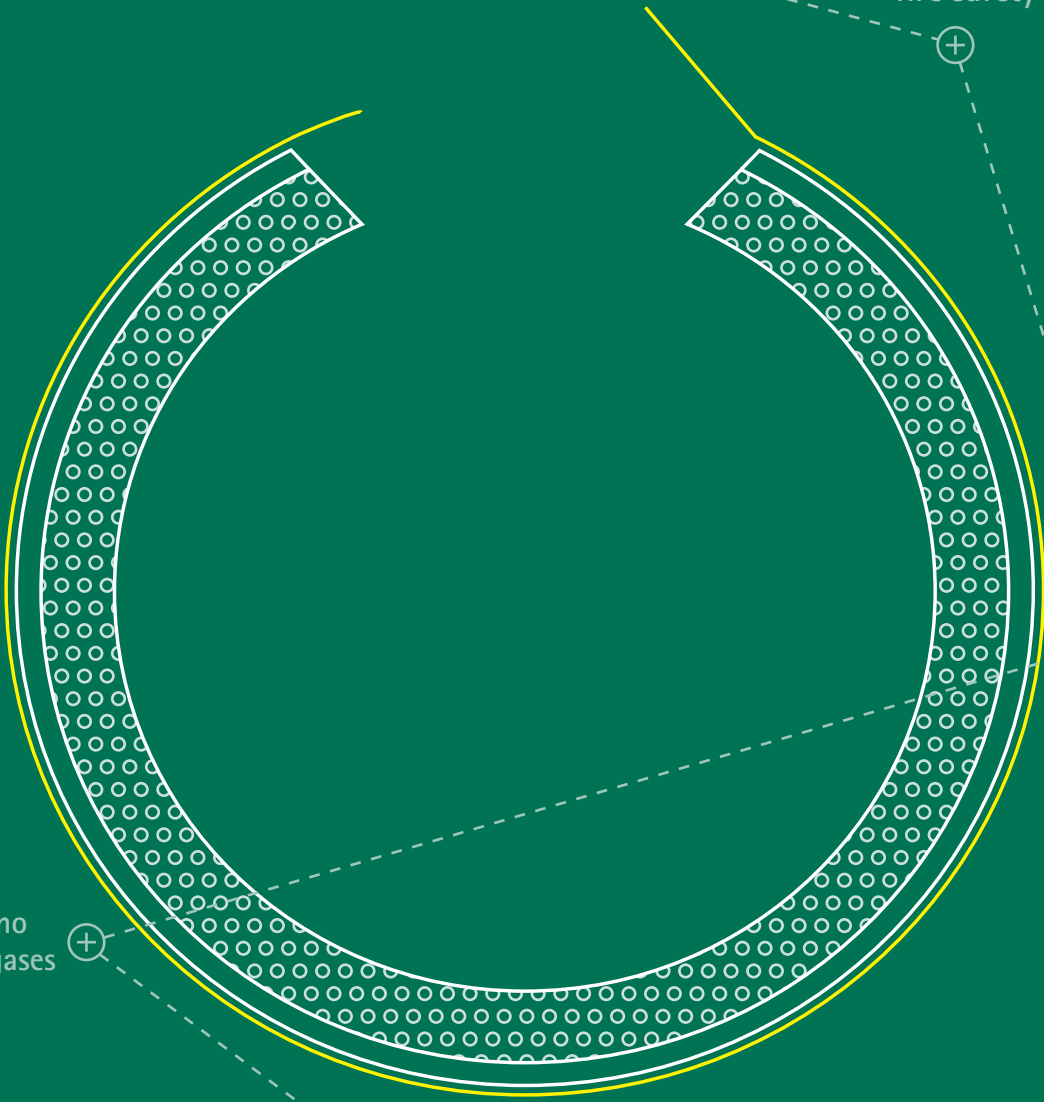
Optimum protection against fire

The Walraven Fire Protection Systems consists of a wide range of sealing products for passive fire protection of mechanical and electrical installations. Our range includes different types of fire sleeve, fire collars, fire protection foam, coatings, intumescent sealants and mortar for fire safe, smoke tight and noise insulating sealing.

The strength of the Fire Protection Systems lies in the combined use of certified BIS Pacifyre® and Tangit FP products.



BIS Pacifyre® MK II



Complies with fire safety standards



Fire, smoke and noise barrier



Emits no toxic gases



Easy installation



BIS Pacifyre® MK II Fire Sleeve

Easy self-installation in accordance with the standards

Broad safety applications

The BIS Pacifyre® MK II Fire Sleeve is a single component fire sleeve with which you can make an aperture for smoke free and fire resistant pipes. In homes, factories, hospitals, offices or other residential buildings the BIS Pacifyre® MK II is installed around pipes through floors, ceilings, solid walls and modular walls. BIS 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 the proper way.

Strong in fire resistance

It shows in all fire tests that the BIS Pacifyre® MK II Fire Sleeve complies 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 clear. In short, the BIS Pacifyre® MK II Fire Sleeve is an innovative, effective and reliable product.



"Simple and innovative"

Dutch Building Prize Jury

The BIS Pacifyre® MK II Fire Sleeve has been extensively tested by independent authorities in various countries throughout Europe (according to 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



Visit our website www.walraven.com for an up-to-date overview.

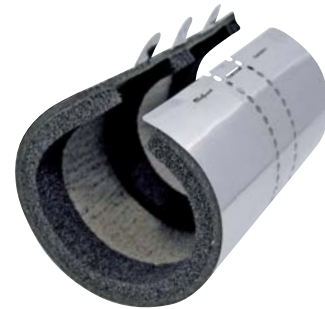


BIS Pacifyre® MK II Fire Sleeve

Fire, smoke and noise barrier

Operational benefits

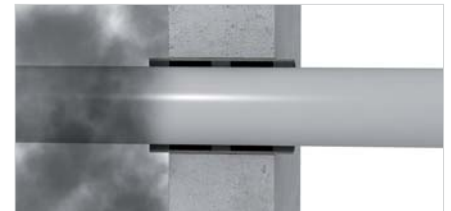
- Prevents:
 - The spreading of fire
 - The spreading of smoke
 - The conduction of noise
- Remains operational for decades without maintenance
- Expansion and contraction of the pipe remains possible
- Contains no dangerous materials
- Emits no toxic gases or smoke in the event of a fire



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 BIS 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.

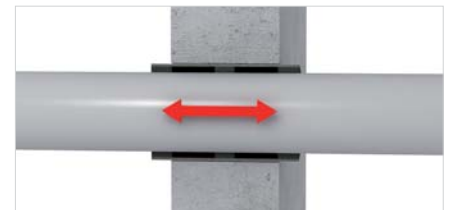


■ Perfect smoke seal

Free pipe expansion and noise barrier

In normal day-to-day operation pipes shrink and swell. 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 BIS 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 BIS Pacifyre® MK II Fire Sleeve have been tested extensively by independent authorities in the United Kingdom and Germany.

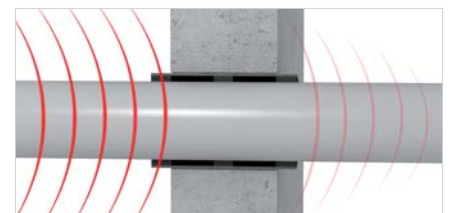
Sound reduction with a metal pipe in a modular wall

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 contact noise

BIS 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 noise proofing!



■ Reduction of noise transmission

BIS Pacifyre® MK II Fire Sleeve

Installation Instructions

The BIS Pacifyre® MK II Fire Sleeve is installed simply and 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 BIS 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

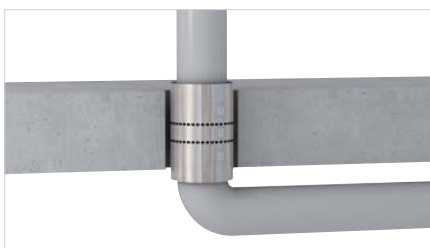


5. Fill the opening with acrylic, foam or mortar



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

For almost all situations



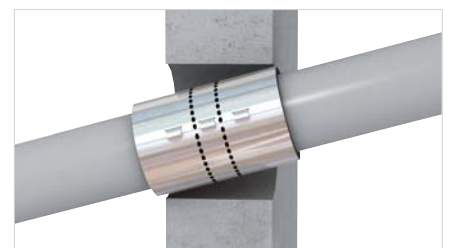
Small distance

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



Close spacing

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

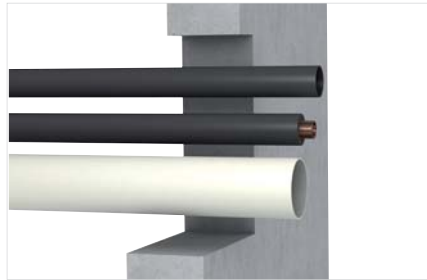


BIS Pacifyre® MK II Fire Sleeve

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 BIS Pacifyre® MK II Fire Sleeve in action

At a temperature in excess of 140 °C the intumescent in the BIS 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 BIS Pacifyre® MK II seals the aperture against fire by completely crushing the pipe. Smoke and fire have no chance of entering

the adjoining areas. The BIS 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 BIS Pacifyre® MK II starts to work and the residents have time to reach safety



Composition

The BIS 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



BIS Pacifyre® MK II Fire Sleeve

Selection tables

The BIS 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	215 1 015017
18 - 20	215 1 018020
23 - 28	215 4 024026
29 - 36	215 4 030032
38 - 44	215 4 039041
46 - 52	215 4 048050
48 - 55	215 4 051053
52 - 58	215 4 054056
55 - 61	215 4 057059
61 - 67	215 4 063065
70 - 79	215 4 075077
74 - 82	215 4 078080
86 - 94	215 4 090092
95 - 103	215 4 099101
104 - 113	215 4 108110
120 - 128	215 8 123125
131 - 139	215 8 135137
136 - 144	215 8 138140
155 - 164	215 8 159161
175 - 184	215 8 180182
195 - 204	215 2 198200

Other dimensions on request.

Drilling table

Part No.	Allowance (mm)					
	FP 430		FP 550		FPM	
	min.	max.	min.	max.	min.	max.
214 1 xxxxxx	25	65	45	125	125	225
215 1 xxxxxx	25	65	45	125	125	225
215 4 xxxxxx	30	70	50	130	130	230
215 8 xxxxxx	40	80	60	140	140	240
215 2 xxxxxx	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
10	17.2	15	214 1 015017	214 1 045047	214 1 054056	214 1 063065
-	-	18	214 1 018020	214 1 048050	214 1 057059	214 1 066068
15	21.3	22	214 1 021023	214 1 051053	214 1 060062	214 1 069071
20	26.9	28	214 1 027029	214 1 057059	214 1 066068	214 1 075077
25	33.7	35	214 1 033035	214 1 063065	214 1 072074	214 1 084086
32	42.4	42	214 1 042044	214 1 072074	214 1 081083	214 1 090092
40	48.3	-	214 1 048050	214 1 078080	214 1 087089	214 1 096098
-	-	54	214 1 054056	214 1 084086	214 1 093095	214 1 102104
50	60.3	-	214 1 060062	214 1 090092	214 1 099101	214 1 108110
-	64.0	-	214 1 063065	214 1 093095	214 1 102104	214 1 111113
-	-	66	214 1 066068	214 1 096098	214 1 105107	214 1 114116
65	76.1	76	214 1 075077	214 1 105107	214 1 114116	214 1 126128
80	88.9	89	214 1 087089	214 1 117119	214 1 129131	214 1 138140
-	-	108	214 1 108110	214 1 138140	214 1 147149	214 1 156158
100	114.3	-	214 1 114116	214 1 144146	214 1 153155	214 1 162164
125	139.7	-	214 1 138140	214 1 168170	214 1 180182	214 1 189191
150	168.3	-	214 1 168170	214 1 198200	214 1 207209	214 1 219221
200	219.1	-	214 1 219221	214 1 249251	214 1 258260	214 1 270272
250	273	-	214 1 273275	214 1 301303	214 1 313315	214 1 322324
10	17.2	15	214 1 015017	214 1 075077	214 1 096098	214 1 114116
-	-	18	214 1 018020	214 1 078080	214 1 096098	214 1 117119
15	21.3	22	214 1 021023	214 1 081083	214 1 102104	214 1 120122
20	26.9	28	214 1 027029	214 1 087089	214 1 105107	214 1 126128
25	33.7	35	214 1 033035	214 1 093095	214 1 114116	214 1 132134
32	42.4	42	214 1 042044	214 1 102104	214 1 120122	214 1 141143
40	48.3	-	214 1 048050	214 1 108110	214 1 126128	214 1 147149
-	-	54	214 1 054056	214 1 114116	214 1 132134	214 1 153155
50	60.3	-	214 1 060062	214 1 120122	214 1 138140	214 1 159161
-	64.0	-	214 1 063065	214 1 123125	214 1 144146	214 1 162164
-	-	66	214 1 066068	214 1 126128	214 1 144146	214 1 165167
65	76.1	76	214 1 075077	214 1 135137	214 1 156158	214 1 177179
80	88.9	89	214 1 087089	214 1 147149	214 1 168170	214 1 189191
-	-	108	214 1 108110	214 1 168170	214 1 186188	214 1 207209
100	114.3	-	214 1 114116	214 1 174176	214 1 192194	214 1 213215
125	139.7	-	214 1 138140	214 1 198200	214 1 219221	214 1 240242
150	168.3	-	214 1 168170	214 1 228230	214 1 249251	214 1 267269
200	219.1	-	214 1 219221	214 1 279281	214 1 298300	214 1 319321
250	273	-	214 1 273275	214 1 331333	214 1 352354	214 1 373375

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

BIS Pacifyre® & Tangit Fire Protection

The right combination

The BIS Pacifyre® MK II Fire Sleeve is part of the Fire Protection Systems. This system includes many other products, which can be combined perfectly, such as:

- Tangit FP 550 2C Fire Protection Foam
- Tangit FP 800 Fire Protection Coating
- BIS Pacifyre® FPM Fire Protection Mortar

Tangit products are extensively tested by:



Tangit FP 550 2C Fire Protection Foam

- For fire safe and smoke sealing of penetrations of pipes, cables, cable ducts (or in combination) in walls and ceilings
- For pipes (up till Ø 140 mm), electric cables (up till Ø 32 mm per cable) and cable ducts
- 90 minutes fire resistant and smoke tight
- According to EN 1366-3 resp. EN 13501-2
- Tangit FP 550 always to be used in combination with Tangit FP 800 Fire Protection Coating



218 1 550

Tangit FP 800 Fire Protection Coating

- Synthetic resin dispersion-based coating with intumescent properties
- For fire safe and smoke sealing of penetrations of pipes, cables, cable ducts (or in combination) in walls and ceilings
- Free from fibres, halogens, heavy metals or organic solvents
- 90 minutes fire resistant and smoke tight
- According to EN 1366-3 resp. EN 13501-2



218 1 800/218 1 801

BIS Pacifyre® FPM Fire Protection Mortar

- Cement based shrink free, fire resistant and smoke tight mortar
- For a fire safe sealing / filling of a gap around a fire sleeve in the wall or ceiling
- Also for filling joints, gaps and holes in walls and ceilings
- According to EN 998-2 & EN 1015-3 (Report MPA 220005479-06)
- Fire rating A1 (according to DIN 4102-4)



218 0 015300

BIS Pacifyre® ID-Card

- For marking, identification and inspection purposes of pipe penetrations sealed with BIS Pacifyre® products.
Part No. 214 9 999902 (card, for walls and ceilings)
Part No. 215 9 999902 (sticker, for pipes and in logs)



Operational benefits

Prevents:

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

BIS Pacifyre[®] MK II Fire Sleeve

Application possibilities

Walls

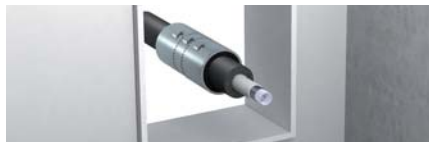
Metal pipes



Plastic pipes



Multi-layer pipes with insulation



1. Place BIS Pacifyre[®] MK II Fire Sleeve

2. Place Tangit FP 200 Sheeting Tape
(Part No. 218 1 200)

Floors

Metal pipes



Plastic pipes



Multi-layer pipes with insulation



1. Place BIS Pacifyre[®] MK II Fire Sleeve

2. Close seams between plasterboard panels
with Tangit FP 440 (Part No. 218 1 440)





3. Apply Tangit FP 550 2C Fire Protection Foam with the Tangit Pistol (Part No. 218 1 520)



4. Apply Tangit FP 800 Fire Protection Coating on the foam with an overlap of 3 cm on the wall



5. Fix BIS Pacifyre® ID-Card



3. Apply Tangit FP 550 2C Fire Protection Foam with the Tangit Pistol (Part No. 218 1 520)

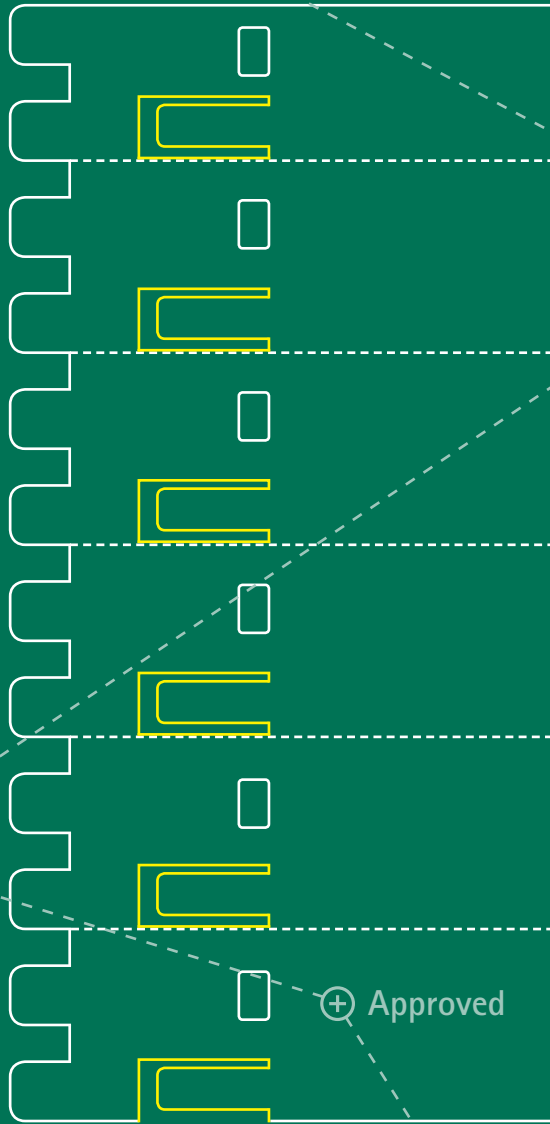


4. Apply Tangit FP 800 Fire Protection Coating on the foam with an overlap of 3 cm on the floor / ceiling



5. Fix BIS Pacifyre® ID-Card

BIS Pacifyre® EFC



⊕ Flexible

Efficient ⊕

⊕ Approved

⊕ Simple and easy to install

BIS Pacifyre® EFC Fire Collar

The problem solver for multiple situations!

The BIS Pacifyre® EFC is flexible in size and can be modified on site, giving you protection against the unexpected.

The BIS Pacifyre® EFC Fire Collar is suitable for insulated and non-insulated plastic (combustible) pipes up to an outside diameter of 160 mm, for insulated copper pipes up to 88.9 mm and for steel or stainless pipes up to 108 mm in diameter. Due to its low height of 42 mm and multiple approved special applications the fire collar can be assembled in almost any area.

High performance

The BIS Pacifyre® EFC consists of a high performance intumescent material and stainless steel band and hooks to secure the fire collar to the wall or floor. In the event of a fire, the intumescent material expands with a high pressure and seals the opening against flames and smoke.

Features and benefits

General

- Only one box for numerous penetrations and all pipe dimensions ($\varnothing \leq 160$ mm)
- Expansion and contraction of the pipe remains possible*
- Suitable for damp conditions
- Innovative, effective and safe

Safety

- Prevents the spreading of fire and smoke
- Strong intumescent fire strip
- Emits no toxic gases or smoke in the event of a fire
- Contains no dangerous materials

Test results

- Fire safe tested up to 240 minutes (EI)
- Tested according to EN 1366-3 and ETAG 026-2

* By using 4 mm (acoustic) PE-insulation



Efficient

As only a small number of intumescent layers are required, one BIS Pacifyre® EFC Fire Collar is sufficient to (fire proof) seal six pipes with an outer diameter of 110 mm, or 38 pipes with an outer diameter of 32 mm when adding the BIS Pacifyre® Refill Sets for more stainless steel components.

Installation benefits

- Simple and easy to install, without special training
- High flexibility due to close wall distance
- Max. 3 pipes through 1 fire collar ($\varnothing \leq 75$ mm) when space in between is ≤ 15 mm
- Zero distance between fire collars is possible
- Only 3 fixing points for a fire collar of 110 mm
- Suitable for corner penetrations that are difficult to access
- The required length of the stainless steel and intumescent strip can be determined on the job site
- Only the needed amount of intumescent band is required: minimal use of material per penetration
- Left-over material can be coupled and/or stuck to another BIS Pacifyre® EFC Fire Collar
- Maintenance free

Part No.: 213 2 100600

This carton box contains: 3 m stainless steel band, 10 m fire strip, 18 fixing brackets, 18 BIS Star Plugs, screws and rings, 6 BIS Pacifyre® EFC ID-Cards.

BIS Pacifyre® EFC Fire Collar

Applications

Approved for

- Solid walls with a thickness of ≥ 100 mm made of e.g.:
 - Mortared brick
 - Aerated concrete blocks
 - Reinforced concrete blocks
- Flexible walls (e.g. metal-stud) with a thickness of ≥ 94 mm
- Solid floors / ceilings with a thickness of ≥ 150 mm

Approved pipes

- PVC pipes $\varnothing \leq 160$ mm
- PE pipes $\varnothing \leq 160$ mm
- PP pipes $\varnothing \leq 160$ mm
- Mineral fibre pipe systems $\varnothing \leq 160$ mm, such as:
 - Poloplast – Polokal NG
 - Wavin – SI Tech
 - Geberit – Silent PP
 - Rehau – Raupiano Plus
 - Coes Blue Power
 - Valsir – TRIplus
 - Mainpex - Mainpower
- Multilayer pipes $\varnothing \leq 110$ mm, such as:
 - Fusiotherm Stabi
 - Uponor Unipipe
 - Alpex F50 / Alpex L
- Copper pipes $\varnothing \leq 88,9$ mm
- (Stainless) Steel pipes $\varnothing \leq 108$ mm

Approved insulations

Pipe systems can be insulated with:

- Synthetic rubber insulation (Armaflex, Kaiflex, Thermaflex, etc.) with a thickness of ≤ 35 mm
- Polyethylene insulation with a thickness of ≤ 4 mm

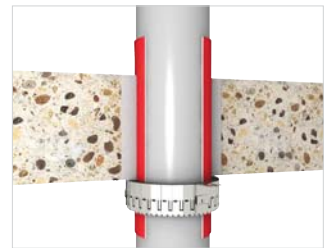
Approved seals

The rest gap between pipe and wall or ceiling can be sealed with:

- BIS Pacifyre® FPM Fire Protection Mortar



- Built-in situation light partition walls ≥ 100 mm



- Built-in situation ceilings ≥ 150 mm

Refill sets



Part No.: 213 2 100601

- 3 m Stainless Steel Band



Part No.: 213 2 100602

- 18 fixing brackets, 18 BIS Star Plugs, screws and rings



Part No.: 213 2 100603

- BIS Pacifyre® EFC ID-Card

BIS Pacifyre[®] EFC Fire Collar

Installation instructions



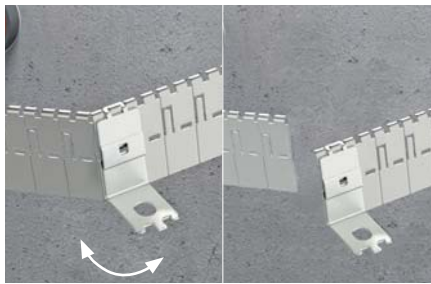
1. Install pipe and if desired apply insulation.



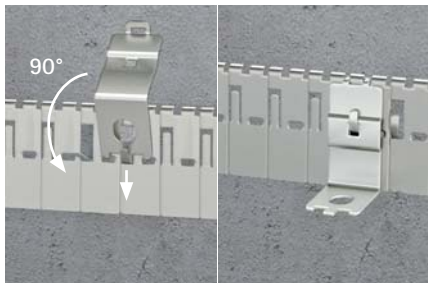
2. Make sure the annular space around the pipe is properly sealed and smoke tight with BIS Pacifyre[®] FPM Mortar or equivalent.



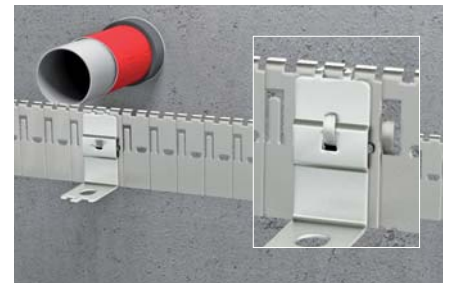
3. Wrap the fire strip (or insulation) around the pipe (note the number of layers required*). Attach with an overlap of 15 mm.



4. Cut desired length of stainless steel strip* by using fixing bracket. No additional tools needed.



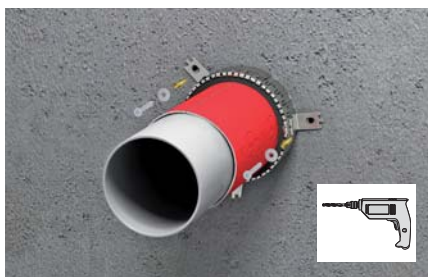
5. Place a fixing bracket by bending a "tab of stainless steel band" 90° by using the long nose of the fixing bracket.



6. Place fixing bracket and fold "tab of stainless steel band" back over fixing bracket. Distribute the needed amount of brackets equally over the stainless steel band.



7. At the end of the stainless steel strip bend 2 "tabs". Place both ends over each other and fold "tabs" back in place to close steel strip.



8. Fix to the wall or floor with the supplied plugs and screws. In drywall partitions, use threaded rods M6 and M8.



9. Apply a BIS Pacifyre[®] ID-Card to the wall/ floor for identification by inspection bodies.

* See consumption table next page

BIS Pacifyre[®] EFC Fire Collar

Consumption table

Combustible pipes (e.g. PVC / PE / PP)

Consumption of materials per collar		Pipe Ø (mm)									
		32	40	50	63	75	90	110	125	140	160
Intumescent	N° of layers	2	2	2	3	3	4	4	5 / 6*	6	6 / 8*
	Length (cm)	26	31	38	69	81	128	153	218 / 265*	293	330 / 450*
Stainless steel band	Sections (pcs)	12	14	16	19	22	25	29	33 / 34*	37	41 / 43*
	Length (cm)	18	20	24	29	33	39	45	51 / 52*	57	63 / 66*
Hooks	Amount (pcs)	2	2	2	3	3	3	3	4	4	4

Potential number of collars per 1 BIS Pacifyre [®] EFC Carton Box	Pipe Ø (mm)									
	32	40	50	63	75	90	110	125	140	160
	38,4	32,2	26,3	14,4	12,3	7,8	6,5	4,5	3,4	3

* Check the assembly instruction for more detailed information

All indications given are subject to change due to local conditions on site and are given only as a guide. The number of layers depends on the pipe material. Please see ETA-13/0793 or your national approval for more details.

Non-combustible pipes

Detailed information for non-combustible pipes can be found in the assembly instruction (placed in the BIS Pacifyre[®] EFC Carton Box) or on www.walraven.com.

*Now no need to order specific sizes
as the efficient and universal collar
can solve all complex situations.*

BIS Pacifyre® EFC Fire Collar

Special applications



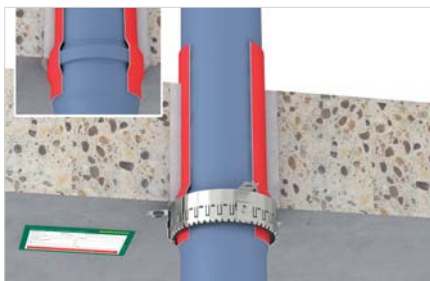
- Zero distance possible between the collars (non-insulated pipes).



- Zero distance possible between the collars (insulated pipes).



- Multilayer pipes up to outer diameter 110 mm insulated with synthetic rubber.



- Socket penetrations.



- Suitable for corner penetrations ($\frac{2}{3}$ fire collar). Distance between wall and pipe ≤ 10 mm.



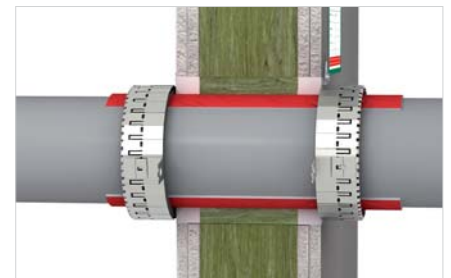
- Angled penetrations.



- Multiple penetrations (max. 3 pipes through 1 Fire Collar). Distance between pipes ≤ 15 mm.



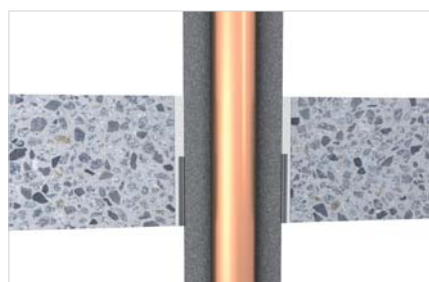
- Oval shaped installations for angled penetrations.



- Penetration through metal stud wall sealed with loose mineral wool and BIS Pacifyre® FPM Fire Protection Mortar.



- Non-combustible pipes with insulation into the wall.



- Non-combustible pipes with insulation into the floor.



- Non-combustible pipes with a collar on the underside of the floor.

BIS Pacifyre® EFC Fire Collar

The right combination

BIS Pacifyre® FPM Fire Protection Mortar

Fire protecting and smoke tight mortar (A1) for safe sealing of annular holes and joints
Part No.: 218 0 015300



BIS Pacifyre® EFC ID-Card

For marking, identification and inspection of the BIS Pacifyre® EFC Fire Collar
Part No.: 213 2 100603 (card, for walls and ceilings)



Fire rated fixing products

In the event of a fire, those present should be able to find a way out without delay. Therefore, it is vitally important that any escape routes or any emergency exits remain free of obstacles. Walraven offers an

extensive range of fixing solutions which have been tested for their fire resistance and can be supplied in accordance with RALGZ 656 and EN 1363 to enable a fire safe solution when fixing to pipes.

A selection of our fire rated fixing products



■ BISMAT® Flash



■ BISMAT® 2000



■ BIS HD 1501



■ BIS HD 500



■ BISMAT® 5000



■ BIS RapidStrut® Rail



■ BIS RapidStrut®
Slide Nuts



■ WCS Concrete Screws



■ BIS Star plugs



■ BIS Sprinkler Clamps

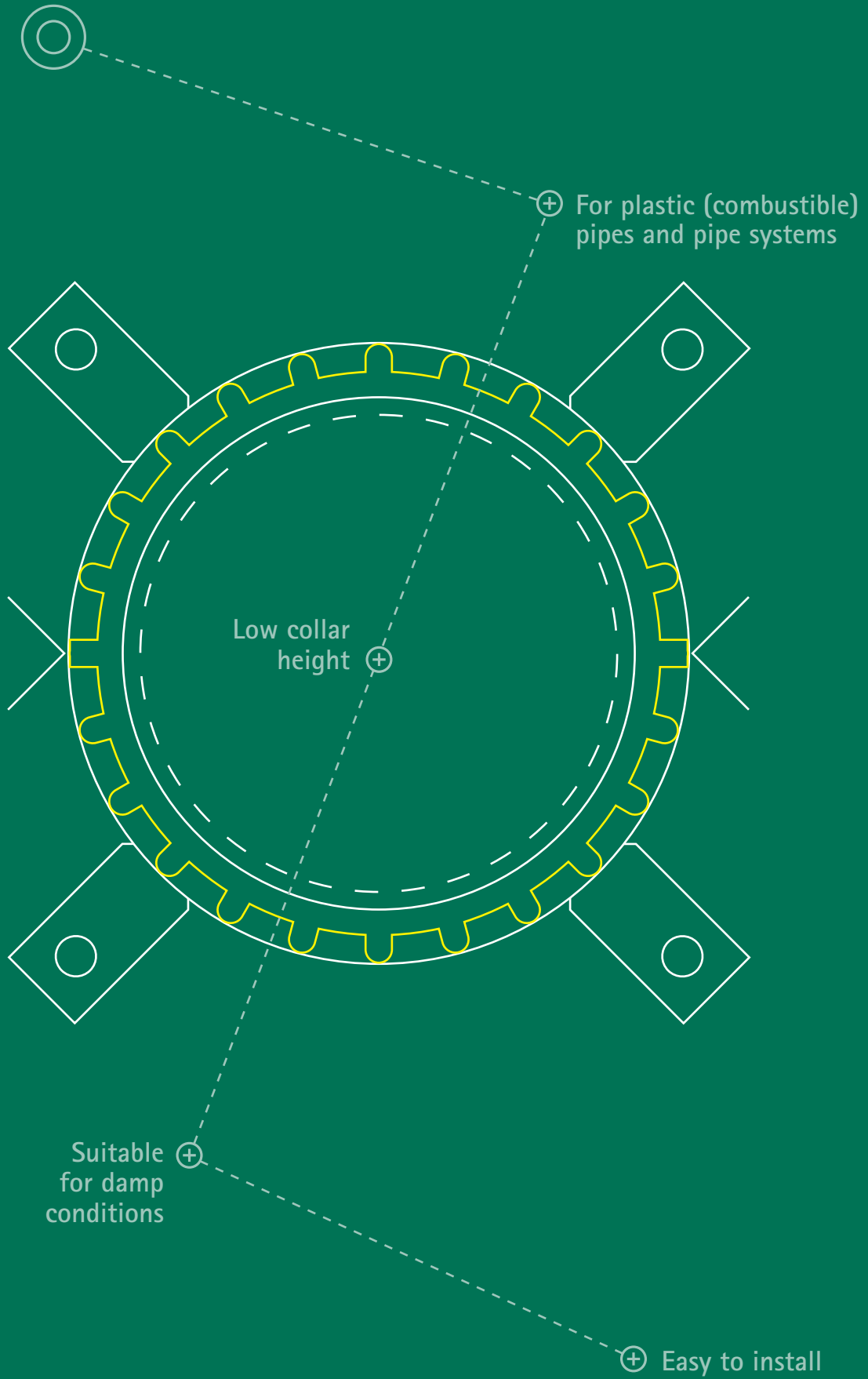




Endless solutions in one

The BIS Pacifyre® EFC has been extensively tested and proven to provide safety for the building occupants. With stainless steel metal refill sets it is not only durable, left over materials can be used with the next BIS Pacifyre® EFC. This gives you the most efficient solution.

BIS Pacifyre® AWM III



BIS Pacifyre® AWM III Fire Collar

Proven performance

Built up fire collar for plastic (combustible) pipes and pipe systems as well as for apertures in walls (solid or light partition) and ceilings with fire protection requirements in accordance with legislation. The BIS Pacifyre® AWM III Fire Collar has been extensively tested by institutes in various countries and easily meets today's building regulations according to EN 13501-2. The test results are acknowledged by various test institutes throughout Europe.



Applications

Approved pipes / pipe systems in EI240 quality:

- Noise reducing pipe systems e.g.:
 - Friatec: Friaphon®, dBlue
 - Geberit: Silent-db20, Silent-PP
 - Wavin: Wavin AS, SiTech
 - PipeLife: PP Master
 - Rehau: Raupiano PLUS
- Combustible pipe systems (up to outer diameter 200 mm) in all common pipe materials, e.g.:
 - PVC
 - PP
 - PE
 - PE-X
 - ABS or ASA
- Pipes (up to outer diameter 200 mm) for central dust extraction and pneumatic dispatch systems

Approved insulations and seals:

- PE-noise insulation ≤ 9 mm
- Synthetic rubber insulation ≤ 32 mm
- ≤ 10 mm Tangit FP 430 Fire Protection Acrylic Sealant
- ≤ 10 mm mineral wool (loose)
- Mortar, plaster, concrete (e.g. BIS Pacifyre® FPM Fire Protection Mortar)

Note: Walraven recommends to mark each individual penetration with a BIS Pacifyre® AWM III Fire Collar by means of a BIS Pacifyre® ID-Card.

Features and benefits

- Zero distance is possible between fire collars
- Low collar height, allowing building of bends, sockets and T-joints close to the wall or ceiling
- In problematic built-in situations the use of an oversized collar is permitted (up to max. 3 sizes bigger)
- Build in is possible without additional fixings (by simply bending and sliding the fixing tabs)
- Suitable for damp conditions
- Should be fixed on both sides of the wall / ceiling
- Easily installed due to 2 part collar construction
- Various finish possibilities, e.g.: acrylic sealant, mortar, etc.



- Aperture with optional noise insulation



BIS Pacifyre® AWM III Fire Collar



■ Built-in situation solid and light partition walls ≥ 100 mm



■ Built-in situation ceilings ≥ 150 mm

Technical details

Pipe		Fire Collar		Part No.	Number of fixing tabs
Outer diameter (mm)	Inner diameter (mm)	Outer diameter (mm)	Height (mm)		
32	38	47	26	213 5 032034	2
40	46	55	26	213 5 040042	2
50	56	65	26	213 5 050052	2
63	69	82	26	213 5 063065	4
75	81	94	26	213 5 075077	4
90	96	114	26	213 5 090092	4
100/110	116	134	26	213 5 110112	4
125	132	150	40	213 5 125125	4
135/140	144	168	40	213 5 140140	4
160	164	188	40	213 5 160160	4
180	184	218	40	213 5 180180	4
200	204	238	40	213 5 200200	4

Other dimensions on request.

The right combination

Tangit FP 430 Fire Protection Acrylic Sealant

For fire resistance and smoke tight filling of annular holes or joints ≤ 10 mm.
Part No. 218 1 430



BIS Pacifyre® FPM Fire Protection Mortar

Fire protecting and smoke tight mortar (A1/M60) for safe sealing of annular holes and joints.
Part No. 218 0 015300



BIS Pacifyre® ID-Card

For marking, identification and inspection. For all BIS Pacifyre® pipe penetrations.
Part No. 21X 9 9999XX (card or sticker)

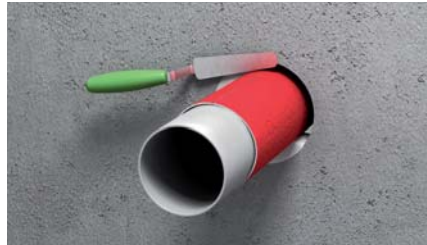


BIS Pacifyre® AWM III Fire Collar

Installation instructions



1. Install pipe and if necessary apply noise insulation



2. Ensure smoke tight seal of the annular hole (e.g. with BIS Pacifyre® FPM Fire Protection Mortar or Tangit FP 430 Fire Protection Acrylic Sealant)



3. Select the correct collar size (in problematic built-in situations the use of an oversized collar is permitted up to max. 3 sizes bigger)



4. Drill (bending and sliding of fixing tabs is permitted)



5. Fix using the screws supplied



6. Apply the BIS Pacifyre® ID-Card

Note: The built-in guidelines of the general building regulations must be adhered to.

Special applications



■ Zero distance possible between the collars



■ Combustible pipes up to 200 mm outer diameter



■ Fixing tabs mortared (90° reversed)



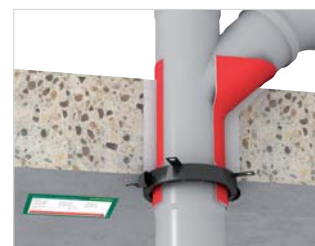
■ With PE-Insulation ≤ 9 mm (or ≤ 32 mm synthetic rubber insulation)



■ Bends directly under the ceiling



■ Also suitable for diagonal penetrations



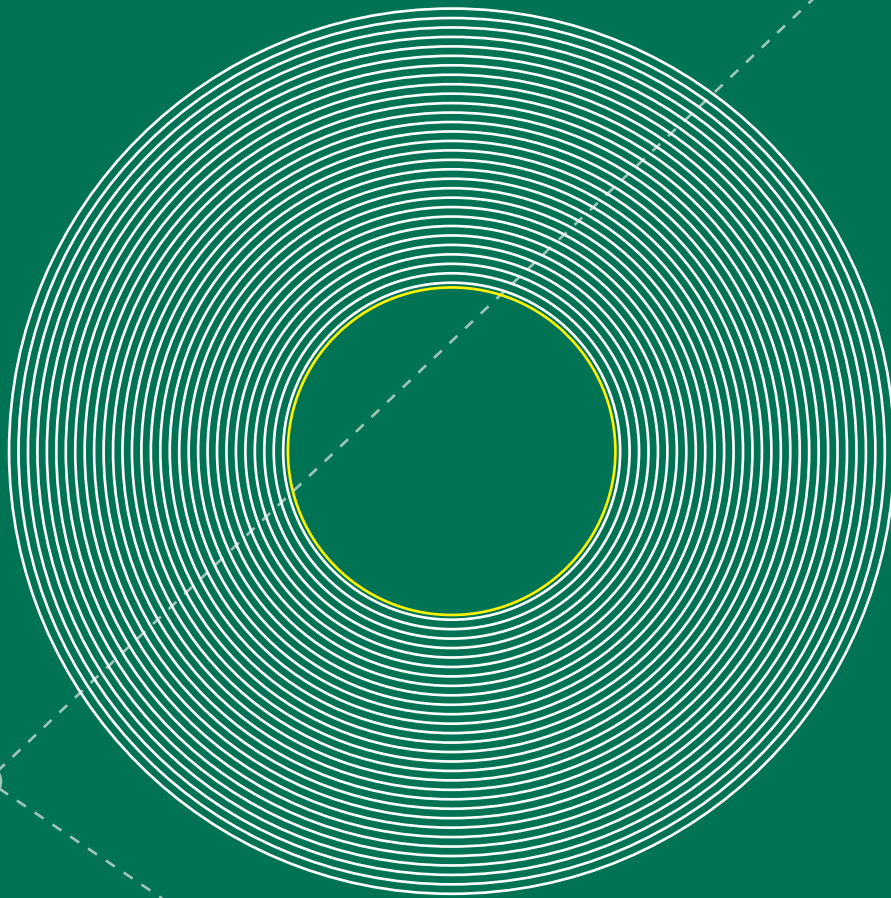
■ T-joint close to penetration



BIS Pacifyre® IWM III



+ Can be used while exposed to weathering



+ Also applicable on thin shaft walls

+ One roll for many applications

+ Highly flexible and easy to use due to thin layers and self-adhesive backing

BIS Pacifyre® IWM III Fire Strip

All purpose solution

Fire Strip for plastic (combustible) pipes and pipe systems. For apertures in walls (solid or light partition walls) and ceilings with fire protection requirements in accordance with legislation. The BIS Pacifyre® IWM III Fire Strip has been extensively tested by test institutes in various countries and easily meets today's building regulations according to EN 13501-2. The test results are acknowledged by various test institutes throughout Europe.



Applications

Approved pipes / pipe systems in EI240 quality:

- Noise reducing pipe systems (insulated or non-insulated) e.g.:
 - Friatec: Friaphon®, dBlue
 - Geberit: Silent-db20, Silent-PP
 - Wavin: Wavin AS, SiTech
 - PipeLife: PP Master
 - Rehau: Raupiano PLUS
- Combustible pipe systems (up to outer diameter 200 mm) in all common pipe materials, e.g.:
 - PVC
 - PP
 - PE
 - PE-X
 - ABS or ASA
- Multi-layer pipes ≤ 110 mm (insulated or non-insulated)
- Pipes (up to outer diameter 200 mm) for central dust extraction and pneumatic dispatch systems

Approved insulations and seals:

- Synthetic rubber insulation ≤ 32 mm
- ≤ 10 mm Tangit FP 430 Fire Protection Acrylic Sealant
- Mortar, plaster, concrete (e.g. BIS Pacifyre® FPM Fire Protection Mortar)

Note: Walraven recommends to mark each individual penetration with a BIS Pacifyre® IWM III Fire Strip by means of a BIS Pacifyre® ID-Card.

Features and benefits

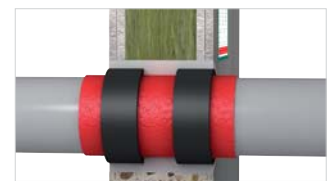
- Zero distance is possible between the pipe apertures
- Suitable for 40 mm shaft walls
- No tools, drilling or extra fixing materials needed
- Only one roll for numerous penetrations
- Easy to apply: simply place the strip around the pipe, slide into the aperture, finished.
- A small number of layers required, so a smaller drill hole is possible
- Also suitable for areas which are difficult to access, e.g.: corners
- High flexibility due to self-adhesive strip
- Suitable for damp conditions
- Easy on site modification

Technical details

- Dimension: 12.5 m x 50 mm x 2.0 mm
- Self-adhesive over entire length
- Part No. 213 6 050125



■ Aperture with optional noise insulation



■ Built-in situation solid and light partition walls ≥ 100 mm



■ Built-in situation ceilings ≥ 150 mm



BIS Pacifyre® IWM III Fire Strip

Application and consumption tables

For plastic pipes

Outer diameter (mm)	Pipes (non-insulated)			Pipes insulated with synthetic rubber						
	Number of layers	Length (mm)	Number of penetrations with 1 roll (pc.)	Number of layers	Fire Strip length at insulation thickness					
					6 mm	9 mm	13 mm	19 mm	25 mm	32 mm
16	1	76	164	1	113	132	157	195	233	277
20	1	88	142	1	126	145	170	208	245	289
25	1	104	120	1	142	161	186	223	261	305
32	1	126	99	1	164	183	208	245	283	327
40	1	151	82	2	352	390	440	516	591	679
50	1	183	68	2	414	453	503	578	654	742
63	1	223	56	2	496	534	585	660	735	823
75	1	261	47	2	571	610	660	735	811	899
90	2	591	21	3	986	1.043	1.119	1.232	1.345	1.477
110	2	717	17	3	1.174	1.232	1.307	1.420	1.533	1.665

Note: specified lengths are applicable for ceiling penetrations. In wall penetrations all specified lengths should be doubled! Information for pipes > Ø 110 mm available on request.

For multi-layer pipes

Outer diameter (mm)	Pipes (non-insulated)			Pipes insulated with synthetic rubber						
	Number of layers	Length (mm)	Number of penetrations with 1 roll (pc.)	Number of layers	Fire Strip length at insulation thickness					
					6 mm	9 mm	13 mm	19 mm	25 mm	32 mm
16	2	126	99	2	201	239	289	365	440	528
20	2	151	82	2	227	264	315	390	465	553
25	2	183	68	2	258	296	346	421	497	585
32	2	227	55	2	302	340	390	465	541	629
40	2	277	45	2	352	390	440	516	591	679
50	4	654	19	4	805	880	981	1.131	1.282	1.458
63	4	817	15	4	968	1.043	1.144	1.295	1.445	1.621
75	4	968	12	4	1.119	1.194	1.295	1.445	1.596	1.772
90	4	1.156	10	4	1.307	1.383	1.483	1.634	1.785	1.961
110	4	1.408	8	4	1.559	1.634	1.735	1.885	2.036	2.212

Note: specified lengths are applicable for ceiling penetrations. In wall penetrations all specified lengths should be doubled! Information for pipes > Ø 110 mm available on request.

BIS Pacifyre® IWM III Fire Strip

Installation instructions



1. Install pipe and if necessary apply noise insulation



2. Wrap the strip around the pipe (or insulation) with an overlap of 20 mm (note the number of layers required)



3. Slide the strip into the wall / ceiling (ensuring it is flush to the surface)



4. Ensure smoke tight seal of the annular hole (e.g. with BIS Pacifyre® FPM Fire Protection Mortar or Tangit FP 430 Fire Protection Acrylic Sealant)



5. Double check the penetration



6. Apply the BIS Pacifyre® ID-Card

Note: The built-in guidelines of the general building regulations must be adhered to.

Special applications



Zero distance is possible between the pipe apertures



Combustible pipes up to outer diameter 200 mm non-insulated or insulated with synthetic rubber



Multi-layer pipes up to outer diameter 110 mm (non-insulated)



Multi-layer pipes up to outer diameter 110 mm insulated with synthetic rubber



BIS Pacifyre® IWM III Fire Strip

The right combination

The BIS Pacifyre® IWM III Fire Strip is part of the Walraven Fire Protection Systems.

This system includes many other products, which can be combined perfectly, such as:

Tangit FP 430 Fire Protection Acrylic Sealant

For fire resistance and smoke tight filling of annular holes or joints ≤ 10 mm.
Part No. 218 1 430



BIS Pacifyre® FPM Fire Protection Mortar

Fire protecting and smoke tight mortar (A1/M60) for safe sealing of annular holes and joints.
Part No. 218 1 300



BIS Pacifyre® ID-Card

For marking, identification and inspection. For all BIS Pacifyre® pipe penetrations.
Part No.: 21X 9 9999XX (card, or sticker)



Dozens of solutions out of 1 roll that will provide perfect protection against fires. Simple, fast and effective.

Operational benefits

Prevents:

- the fire from spreading
- the smoke from spreading
- the need for countless product sizes.



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Find out how we can help

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!

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