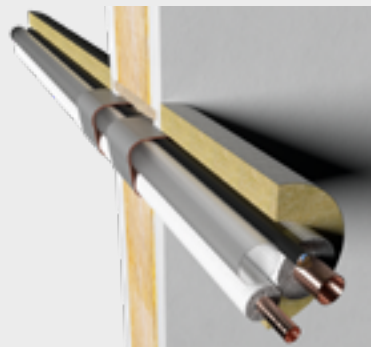


# System Catalogue

Our solutions for passive structural fire protection



Subject to errors, misprints and changes. All information contained in this brochure reflects the state of the art or, if applicable, the requirements of the pertinent standard at the time of printing (02/2026).  
Details about the legal and technical prerequisites applicable to your specific project and its environment, along with the relevant manufacturer specifications are available upon request.  
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Material quantities indicated in this brochure are approximate only. Quantity requirements depend on the type and size of the actual penetration opening as well as on its occupancy rate (percent fill); detailed information can be gleaned from the pertinent installation instructions.  
Publisher: Flamro Brandschutz-Systeme GmbH, Gluesinger Strasse 86, 21217 Seevetal, Germany, registered in the Commercial Register of Lüneburg District Court under HRB 208235, Managing Directors: Dr. Jens Reiners and Thomas Kopp

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### Note:

This catalogue is interactive between the contents and the product pages.

If you wish to go directly to the product pages, simply click the required page number for the product or the product name in the contents.

Clicking the underlined product name on the relevant product page then takes you back to the contents.



## FLAMRO® – the strong quality brand for preventive structural fire protection solutions

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As part of the Saverto Group, Flamro has long been recognised in Germany as a quality brand for holistic passive structural fire protection. FLAMRO® has now also established itself as a quality brand in this sector on the international market – still with the usual svt expertise.

For over 50 years, Saverto and Flamro have ensured the safety of people and property. As an experienced developer and manufacturer of preventive fire protection solutions, Flamro offers an extensive range of products that protect human lives, limit property damage, prevent operational failures, and avoid environmental damage in case of fire. From cable, pipe, mixed, and joint penetration seals via cable ducts with special fitting pieces to fire protection bandages, coatings, and collars – when it comes to preventive fire protection solutions, the name FLAMRO® stands for quality worldwide.

## Made in Germany – with international certifications

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Limiting property damage, preventing operational failures, avoiding environmental damage, and – above all – protecting human lives, health, and property; these are our goals, which can only be achieved with uncompromising quality. At Flamro, we manufacture all of our products in-house and adapt them to various international standards. This includes, for example, solutions certified according to UL 1479/ASTM E814, UL 2079/ASTM E1966, FM 3971, and EN 1366.

The high standards of our FLAMRO® products and systems are achieved through meticulous preliminary testing at our own fire testing facilities in Germany and recognised certification from renowned and accredited testing laboratories. In short: with Flamro, you can trust in “Made in Germany” quality.

# Increased safety – through our own research and development

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As part of the Saverto Group, Flamro stands for innovation. Based on the latest findings of current research, all FLAMRO® products and systems do not only undergo rigorous fire protection tests, but are also constantly further developed. Besides safety, a diverse product range and practical user-friendliness also play an important role.

At Flamro, research and development therefore always go hand in hand in a forward-looking direction. This is why Flamro is now one of the world's major manufacturers in the field of passive structural fire protection. We can offer you both certified standard products and customised fire protection solutions.

With Flamro, you are always on the safe side.

## Our services for you

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We offer customised solutions for penetration sealing, cable ducts, cable bandages and coatings as well as practical training for you and your employees. Using our know-how, we will assist you with any questions or issues you may have regarding preventive structural fire protection.

## FLAMRO® Product Guide

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In just a few clicks, you will quickly find the best passive fire protection solution for your construction project.

The FLAMRO® Product Guide is available at:  
[flamro.com/eu/services/product-guide](https://flamro.com/eu/services/product-guide)



## FLAMRO® Calculator

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Provide just a few details to find out what material quantities you need to install a FLAMRO® penetration sealing system.

The FLAMRO® Material & Cost Calculator is available at:  
[calc.flamro.com](https://calc.flamro.com)




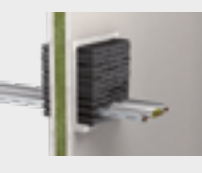
# System overview

System		System Novasit BM	System Novasit BM 240	System Flammotect 1 × 60 mm	System Flammotect 1 × 80 mm
					
		Details page 10	Details page 12	Details page 14	Details page 16
Areas of application		Solid wall, solid floor	Solid wall, solid floor	Plasterboard wall, solid wall, solid floor, sandwich panel wall, timber construction	Plasterboard wall, solid wall, solid floor
Fire resistance class as per EN 13501-2		max. EI 120	max. EI 240	EI 30 – EI 60 (max. EI 90)	EI 90 (max. EI 120)
	Cable	✓	✓	✓	✓
	Cable bundles	✓	✓	✓	✓
	Cable trays	✓	✓	✓	✓
	Wave guides/coaxial cables	✓		✓	
	EIC Single	✓		✓	✓
	EIC Bundle	✓		✓	✓
	speedpipes	✓		✓	
	Combustible pipes	✓		✓	
	Multilayer pipes	✓		✓	
	Non-combustible pipes with mineral fibre insulation	✓		✓	
	Non-combustible pipes with FEF insulation	✓		✓	
	HVAC split line combinations	✓		✓	✓
	Double solarpipes NanoSun²	✓		✓	
	Hydraulic hoses	✓			

System Flammotect 2 × 50 mm	System Flammotect 2 × 60 mm	System Flammotect 4 × 60 mm	System Flammotect OSI	System Flammotect Easy Seal	System DG-SC
					
Details page 18	Details page 20	Details page 22	Details page 24	Details page 26	Details page 28
Plasterboard wall, solid wall, solid floor, sandwich panel wall, timber construction	Plasterboard wall, solid wall, solid floor, sandwich panel wall, timber construction	Solid wall, solid floor	Plasterboard wall, solid wall, solid floor, shaft wall	Plasterboard wall, solid wall, solid floor	Plasterboard wall, solid wall, solid floor, shaft wall
EI 90 (max. EI 120)	EI 90 – EI 120	max. EI 240	max. EI 120	max. EI 120	max. EI 120
✓	✓	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓
✓	✓	✓	✓		
✓	✓			✓	✓
✓	✓		✓	✓	✓
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			✓		
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✓	✓		✓	✓	✓
✓	✓		✓	✓	✓
	✓			✓	✓

# System overview

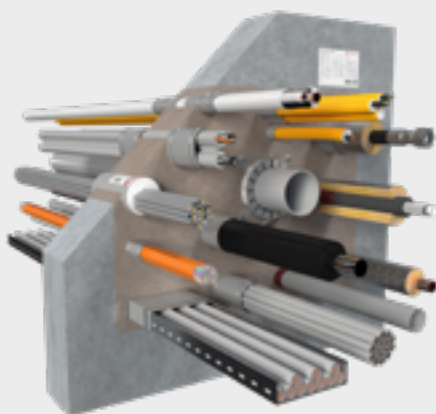
System		System AWM II	System FSC 4	System KSL-W	System EC Endless Collar
					
		Details page 30	Details page 32	Details page 34	Details page 36
Areas of application		Plasterboard wall, solid wall, solid floor	Plasterboard wall, solid wall, solid floor	Plasterboard wall, solid wall, solid floor	Plasterboard wall, solid wall, solid floor
Fire resistance class as per EN 13501-2		max. EI 120	max. EI 240	max. EI 180	max. EI 240
	Cable				
	Cable bundles				
	Cable trays				
	Wave guides/coaxial cables				
	EIC Single				
	EIC Bundle				
	speedpipes				
	Combustible pipes	✓	✓	✓	✓
	Multilayer pipes		✓	✓	✓
	Non-combustible pipes with mineral fibre insulation				
	Non-combustible pipes with FEF insulation				✓
	HVAC split line combinations				
	Double solarpipes NanoSun²				
	Hydraulic hoses				

System AWM II KS	System NBR-plus	System Cable Tube	System Cable Tube ML	BK-N fire protection pillows
				
Details page 38	Details page 40	Details page 42	Details page 44	Details page 46
Plasterboard wall, solid wall, solid floor	Plasterboard wall, solid wall, solid floor	Plasterboard wall, solid wall, solid floor, timber construction	Plasterboard wall, solid wall	Plasterboard wall, solid wall, solid floor
max. EI 120	max. EI 120	max. EI 120	max. EI 120	max. EI 120
		✓	✓	✓
		✓		✓
				✓
		✓		
✓		✓	✓	
✓		✓		
		✓		
		✓		
	✓			
	✓	✓		

# System Novasit BM

## Fire resistance class: max. EI 120

Combination penetration seal made of fire protection compound for a variety of different services



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Mortar sealing system with a low thickness for a fire resistance of up to 120 minutes
- ✓ Design variant with a seal thickness of only 100 mm
- ✓ Can be applied in plasterboard walls
- ✓ No need to alter or adapt the aperture shape
- ✓ Easy processing – due to excellent adhesiveness and stability of the mortar, formwork is not necessary in most cases

## Features

- ✓ One component, hydraulically hardening, resistant to age
- ✓ Suitable for manual installation and pump processing
- ✓ Resistant to splash water

## System data

<b>Proof of usability</b>		ETA-22/0051
<b>Thickness of structural element</b>	Plasterboard wall	≥ 100
	Solid wall	≥ 150
	Solid floor	≥ 150
<b>Maximum seal size</b>	Plasterboard wall	550 × 600
	Solid wall	1200 × 2000 or 2000 × 1200
	Solid floor	1200 × 2000

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 80
	Cable bundles	≤ 100 / ≤ 21
	Cable trays	✓
	EIC Single	≤ 100 ≤ 63 / ≤ 21 (≤ 100 / ≤ 50 in floors)
	EIC Bundle	≤ 100 / ≤ 32 / ≤ 21
	speedpipes	24 × ≤ 7 7 × ≤ 10 5 × ≤ 12
	Combustible pipes	≤ 160
	Multilayer pipes	≤ 63
	Non-combustible pipes with mineral fibre insulation	≤ 323.9 (steel, stainless steel, cast iron) ≤ 108 (copper)
	Non-combustible pipes with FEF insulation	≤ 170 (steel, stainless steel, cast iron) ≤ 108 (copper)
	HVAC split line combinations	✓
	Double solarpipes NanoSun <sup>2</sup>	≤ DN 25
	Hydraulic hoses	≤ 55.9

All specifications in mm

## Products

	<b>NOVASIT BM</b> <b>fire protection compound</b> bag 20 kg – Art. no. 01161000 pail 10 kg – Art. no. 01161010
	<b>FLAMMOTECT-A</b> <b>fire protection coating</b> pail 12.5 kg – Art. no. 01155134 pail 5 kg – Art. no. 01155135 310 ml cartridge – Art. no. 01155115
	<b>NBR-plus</b> <b>fire protection wrap</b> roll, 10 m × 125 mm (separable into 2 × 62.5 mm) – Art.-no. 01261941
	<b>KSL-W</b> <b>fire protection fabric</b> roll 20 m × 50 mm – Art. no. 15520 roll 10 m × 50 mm – Art. no. 15510
	<b>Cable Tube CT</b> Ø 60 mm / length 150 mm – Art. no. 01276101 Ø 90 mm / length 150 mm – Art. no. 01279101 Ø 90 mm / length 200 mm – Art. no. 01279201 Ø 90 mm / length 300 mm – Art. no. 01279301 Ø 120 mm / length 150 mm – Art. no. 01271151 Ø 120 mm / length 200 mm – Art. no. 01271201 Ø 120 mm / length 300 mm – Art. no. 01271301
	<b>Lamella mat Klimarock</b> 6100 × 500 × 30 mm – Art. no. 01187100
	<b>AWM II</b> <b>fire protection collar</b> Art. no. 01142032 - 01142160

## Material consumption

Seal size [m <sup>2</sup> ]*	Configuration		
	0 %	30 %	60 %
<b>0.01</b>	1.5	1.05	0.6
<b>0.02</b>	3.0	2.1	1.2
<b>0.03</b>	4.5	3.15	1.8
<b>0.05</b>	7.5	5.25	3.0
<b>0.10</b>	15.0	10.5	6.0
<b>0.20</b>	30.0	21.0	12.0
<b>0.30</b>	45.0	31.5	18.0
<b>0.50</b>	75.0	52.5	30.0
<b>1.00</b>	150.0	105.0	60.0

\* Seal thickness 150 mm

Approx. values in kg

## Yield

NOVASIT BM

6–7 l water + 20 kg dry mortar

≈ 20 l ready-to-use wet mortar

≈ 20 l volume after hardening

# Novasit BM 240

## Fire resistance class: max. EI 240

Cable penetration seal made of fire protection compound for applications with particularly high requirements in terms of fire resistance



### Areas of application

- Solid wall, solid floor

## Highlights

- ✓ Meets exceptionally high requirements to fire resistance
- ✓ The sealing system prevents flame passage and an excessive rise of temperature for four hours

## Features


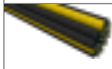

- ✓ One component, hydraulically hardening, resistant to age
- ✓ Suitable for manual installation and pump processing
- ✓ Resistant to splash water

## System data

<b>Proof of usability</b>		ETA-22/0051
<b>Thickness of structural element</b>	Solid wall	≥ 240
	Solid floor	≥ 200
<b>Maximum seal size</b>	Solid wall	600 × 600
	Solid floor	600 × 600



All specifications in mm

## Configuration

<b>Services</b>		<b>max. diameter</b>
	Cable	≤ 80
	Cable bundles	≤ 100 / ≤ 21
	Cable trays	✓

All specifications in mm

## Products

	<b>NOVASIT BM</b> <b>fire protection compound</b> bag 20 kg – Art. no. 01161000 pail 10 kg – Art. no. 01161010
	<b>DG-CR 1.5</b> <b>fire protection wrap</b> roll 10 m × 125 mm – Art. no. 01261931

## Yield

NOVASIT BM

6–7 l water + 20 kg dry mortar

≈ 20 l ready-to-use wet mortar

≈ 20 l volume after hardening

# System

## Flammotect 1 × 60 mm

### Fire resistance class: EI 30 – EI 60 (max. EI 90)

Mixed penetration sealing system made of mineral fibre boards (1 × 60 mm) with ablative fire protection coating



### Areas of application

- Plasterboard wall, solid wall, solid floor, timber construction (CLT walls and floors)

### Highlights

- ✓ Minimal dry film thickness on seal surface as well as on penetrating cables, cable bundles and cable trays, which also require only minimal coating
- ✓ Easy sealing of combustible standard and non-standard pipes in mixed penetration sealing systems with wrap or collar
- ✓ Approved for fire protection in timber construction.

### Features

- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The required dry film thicknesses can be applied in one step

## System data

Proof of usability		ETA-22/0052
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
	Timber wall	≥ 100
	Timber floor	≥ 140
	Sandwich panel wall	≥ 100
Maximum seal size	Plasterboard wall	1224 × 2000 or 2000 × 1224
	Solid wall	1224 × 2000 or 2000 × 1224
	Solid floor	10 000 × 1000
	Timber wall	600 × 1000 or 1000 × 600
	Timber floor	600 × 1000 or 420 × 3500
	Sandwich panel wall	1000 × 1000

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 80
	Cable bundles	≤ 100
	Cable trays	✓
	EIC   Single	≤ 32
	EIC   Bundle	≤ 100
	Wave guides/coaxial cables	≤ 51.1
	speedpipes	≤ 40
	Combustible pipes	≤ 160
	Multilayer pipes	≤ 63 / ≤ 75 / ≤ 110
	Non-combustible pipes with mineral fibre insulation	≤ 219.1 (steel, stainless steel, cast iron) ≤ 88.9 (copper)
	Non-combustible pipes with FEF insulation	≤ 219.1 (steel, stainless steel, cast iron) ≤ 88.9 (copper)
	HVAC split line combinations	✓
	Double solarpipes NanoSun²	≤ DN 40

All specifications in mm

## Products

	<p><b>FLAMMOTECT-A</b>  <b>fire protection coating</b>  <b>coating</b>          pail 12.5 kg – Art. no. 01155131          pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b>          pail 12.5 kg – Art. no. 01155136          pail 5 kg – Art. no. 01155121</p> <p><b>filler</b>          pail 12.5 kg – Art. no. 01155134          pail 5 kg – Art. no. 01155135          cartridge 310 ml – Art. no. 01155115</p>
	<p><b>NBR-plus</b>  <b>fire protection wrap</b>          roll, 10 m × 125 mm          (separable into 2 × 62.5 mm) –          Art.-no. 01261941</p>
	<p><b>AWM II</b>  <b>fire protection collar</b>          Art. no. 01142032 - 01142160</p>
	<p><b>KSL-W</b>  <b>fire protection fabric</b>          roll 20 m × 50 mm – Art. no. 15520          roll 10 m × 50 mm – Art. no. 15510</p>
	<p><b>Mineral fibre board pre-coated on both sides with FLAMMOTECT-A</b>          1000 × 600 × 60 mm – Art. no. 01182165</p>
	<p><b>Lamella mat Klimarock</b>          6100 × 500 × 30 mm – Art. no. 01187100</p>
	<p><b>Mineral wool</b>          bag 10 kg – Art. no. 01183000</p>

# System

## Flammotect 1 × 80 mm

### Fire resistance class: EI 90 – EI 120

Sealing system made of mineral fibre boards (1 × 80 mm) with ablative fire protection coating for electrical installations and HVAC split line combinations



#### Areas of application


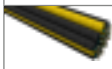




- Plasterboard wall, solid wall, solid floor

## System data

Proof of usability		ETA-22/0052
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
Maximum seal size	Plasterboard wall	600 × 2000 or 2000 × 600
	Solid wall	600 × 2000 or 2000 × 600
	Solid floor	600 × 2000 or 490 × 10 000

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 80
	Cable bundles	≤ 100
	Cable trays	✓
	EIC Single	≤ 63
	EIC Bundle	≤ 100
	HVAC split line combinations	✓

All specifications in mm

## Highlights

- ✓ 90 minutes of fire resistance with only one mineral fibre board layer
- ✓ Approved for sealing electrical installation conduits and pre-insulated refrigerant lines

## Features

- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The required dry film thicknesses can be applied in one step
- ✓ The consistency of the coating compound allows for a clean coating of the cables and the seal surface
- ✓ The coating remains flexible after drying and can be coated over with other materials

## Products

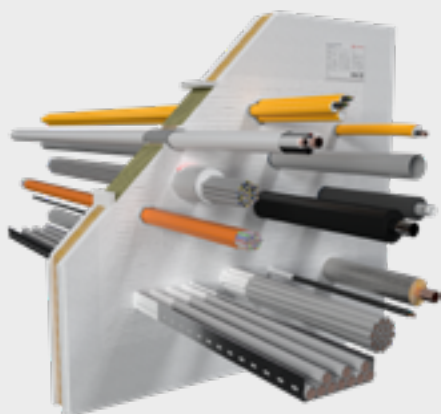
	<p><b>FLAMMOTECT-A</b> <b>fire protection coating</b> <b>coating</b> pail 12.5 kg – Art. no. 01155131 pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b> pail 12.5 kg – Art. no. 01155136 pail 5 kg – Art. no. 01155121</p> <p><b>filler</b> pail 12.5 kg – Art. no. 01155134 pail 5 kg – Art. no. 01155135 cartridge 310 ml – Art. no. 01155115</p>
	<p><b>NBR-plus</b> <b>fire protection wrap</b> roll, 10 m × 125 mm (separable into 2 × 62.5 mm) – Art.-no. 01261941</p>
	<p><b>Mineral fibre board pre-coated on both sides with FLAMMOTECT-A</b> 1000 × 600 × 80 mm – Art. no. 01182185</p>
	<p><b>Mineral wool</b> bag 10 kg – Art. no. 01183000</p>

# System

## Flammotect 2 × 50 mm

### Fire resistance class: EI 90 – EI 120

Mixed penetration sealing system (2 × 50 mm) with ablative fire protection coating



### Areas of application

- Plasterboard wall, solid wall, solid floor, timber construction (CLT walls and floors)

### Highlights

- ✓ Can be installed without cladding of the aperture edge
- ✓ Easy sealing of combustible standard and non-standard pipes in mixed penetration sealing systems with wrap or collar
- ✓ The fire protection collar is fastened with coarse thread screws
- ✓ Approved for fire protection in timber construction

### Features


- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The required dry film thicknesses can be applied in one step
- ✓ The coating can be coated over with other materials

### System data

Proof of usability		ETA-22/0052
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
	Timber wall	≥ 100
	Timber floor	≥ 140
	Sandwich panel wall	≥ 120
Maximum seal size	Plasterboard wall	1100 × 2200 or 2200 × 1100
	Solid wall	1100 × 2200 or 2200 × 1100
	Solid floor	2600 × 1000 or ∞ × 800
	Timber wall	600 × 1000 or 1000 × 600
	Timber floor	600 × 1000 or 400 × 3500
	Sandwich panel wall	1000 × 1000

All specifications in mm

### Configuration

Services		max. diameter
	Cable	≤ 80
	Cable bundles	≤ 100
	Cable trays	✓
	EIC   Single	≤ 63
	EIC   Bundle	≤ 125
	Wave guides/coaxial cables	≤ 51.1
	speedpipes	≤ 40
	Combustible pipes	≤ 160
	Multilayer pipes	≤ 63 / ≤ 75 / ≤ 32
	Non-combustible pipes with mineral fibre insulation	≤ 219.1 (steel) ≤ 88.9 (copper)
	Non-combustible pipes with FEF insulation	≤ 219.1 (steel) ≤ 88.9 (copper)
	HVAC split line combinations	✓

All specifications in mm

## Products

	<p><b>FLAMMOTECT-A</b>  <b>fire protection coating</b>  <b>coating</b>          pail 12.5 kg – Art. no. 01155131          pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b>          pail 12.5 kg – Art. no. 01155136          pail 5 kg – Art. no. 01155121</p> <p><b>filler</b>          pail 12.5 kg – Art. no. 01155134          pail 5 kg – Art. no. 01155135          cartridge 310 ml – Art. no. 01155115</p>
	<p><b>NBR-plus</b>  <b>fire protection wrap</b>          roll, 10 m × 125 mm          (separable into 2 × 62.5 mm) –          Art.-no. 01261941</p>
	<p><b>AWM II</b>  <b>fire protection collar</b>          Art. no. 01142032 - 01142160</p>
	<p><b>KSL-W</b>  <b>fire protection fabric</b>          roll 20 m × 50 mm – Art. no. 15520          roll 10 m × 50 mm – Art. no. 15510</p>
	<p><b>EC Endless Collar (U/U)</b>          Set with 10 m fire protection strip, 3 m          stainless steel strap and 18 fasteners          Art. no. 01145303</p>
	<p><b>Mineral fibre board pre-coated on one          side with FLAMMOTECT-A</b>          1000 × 600 × 50 mm – Art. no. 01181155</p>
	<p><b>Lamella mat Klimarock</b>          6100 × 500 × 30 mm – Art. no. 01187100</p>
	<p><b>Mineral wool</b>          bag 10 kg – Art. no. 01183000</p>

# System

## Flammotect 2 × 60 mm

### Fire resistance class: EI 90 – EI 120

Mixed penetration sealing system made of mineral fibre boards (2 × 60 mm) with ablative fire protection coating



### Areas of application

- Plasterboard wall, solid wall, solid floor, timber construction (CLT walls and floors)

### Highlights

- ✓ Can be installed without cladding of the aperture edge
- ✓ Easy sealing of combustible standard and non-standard pipes in mixed penetration sealing systems with wrap or collar
- ✓ The fire protection collar is fastened with coarse thread screws
- ✓ Approved for fire protection in timber construction

### Features















- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The required dry film thicknesses can be applied in one step
- ✓ The coating can be coated over with other materials

### System data

Proof of usability		ETA-22/0052
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
	Timber wall	≥ 100
	Timber floor	≥ 140
	Sandwich panel wall	≥ 120
Maximum seal size	Plasterboard wall	1400 × 2000
	Solid wall	1400 × 2000
	Solid floor	1400 × 2000
	Timber wall	600 × 1000 or 1000 × 600
	Timber floor	600 × 1000 or 420 × 3500
	Sandwich panel wall	1000 × 1000

All specifications in mm

### Configuration

Services		max. diameter
	Cable	≤ 80
	Cable bundles	≤ 100
	Cable trays	✓
	EIC   Single	≤ 63
	EIC   Bundle	≤ 100
	Wave guides/coaxial cables	≤ 51.1
	speedpipes	≤ 40
	Combustible pipes	≤ 160
	Multilayer pipes	≤ 75 / ≤ 32 / ≤ 75
	Non-combustible pipes with mineral fibre insulation	≤ 323.9 (steel) ≤ 108 (copper)
	Non-combustible pipes with FEF insulation	≤ 219.1 (steel) ≤ 108 (copper)
	Non-combustible pipes with PIR insulation	≤ 219.1 (steel) ≤ 88.9 (copper)
	HVAC split line combinations	✓
	Double solarpipes NanoSun <sup>2</sup>	≤ DN 40

All specifications in mm

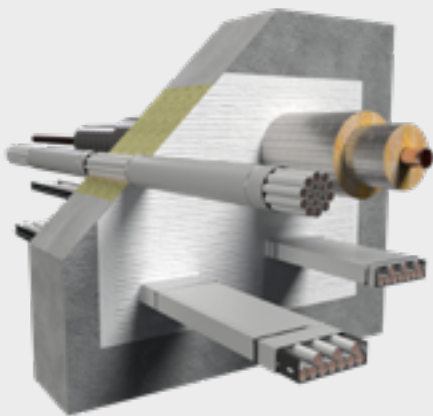
## Products

	<p><b>FLAMMOTECT-A</b>  <b>fire protection coating</b>  <b>coating</b>          pail 12.5 kg – Art. no. 01155131          pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b>          pail 12.5 kg – Art. no. 01155136          pail 5 kg – Art. no. 01155121</p> <p><b>filler</b>          pail 12.5 kg – Art. no. 01155134          pail 5 kg – Art. no. 01155135          cartridge 310 ml – Art. no. 01155115</p>
	<p><b>NBR-plus</b>  <b>fire protection wrap</b>          roll, 10 m × 125 mm          (separable into 2 × 62.5 mm) –          Art.-no. 01261941</p>
	<p><b>AWM II</b>  <b>fire protection collar</b>          Art. no. 01142032 - 01142160</p>
	<p><b>KSL-W</b>  <b>fire protection fabric</b>          roll 20 m × 50 mm – Art. no. 15520          roll 10 m × 50 mm – Art. no. 15510</p>
	<p><b>EC Endless Collar (U/U)</b>          Set with 10 m fire protection strip, 3 m          stainless steel strap and 18 fasteners          Art. no. 01145303</p>
	<p><b>Lamella mat Klimarock</b>          6100 × 500 × 30 mm – Art. no. 01187100</p>
	<p><b>Mineral wool</b>          bag 10 kg – Art. no. 01183000</p>

# System Flammotect 4 × 60 mm

## Fire resistance class: EI 240

Mixed penetration sealing system made of mineral fibre boards (4 × 60 mm) with ablative fire protection coating



### Areas of application

- Solid wall, solid floor

## Highlights

- ✓ Meets particularly high fire resistance requirements. The four-layer sealing system made of mineral fibre boards with an ablative fire protection coating for electrical installations prevents flame passage and an excessive rise of temperature for four hours.

## Features





- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The required dry film thicknesses can be applied in one step
- ✓ The coating can be coated over with other materials

## System data

Proof of usability		ETA-22/0052
Thickness of structural element	Solid wall	≥ 240
	Solid floor	≥ 200
Maximum seal size	Solid wall	600 × 600
	Solid floor	600 × 600

All specifications in mm

## Configuration

Services		max. diameter
 Cable		≤ 80
 Cable bundles		≤ 100
 Cable trays		✓
 Non-combustible pipes with mineral fibre insulation		≤ 323.9 (steel)

All specifications in mm

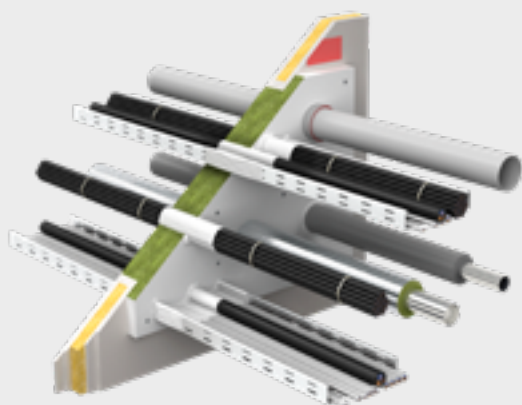
## Products

	<p><b>FLAMMOTECT-A</b> <b>fire protection coating</b> <b>coating</b> pail 12.5 kg – Art. no. 01155131 pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b> pail 12.5 kg – Art. no. 01155136 pail 5.0 kg – Art. no. 01155121</p> <p><b>filler</b> pail 12.5 kg – Art. no. 01155134 pail 5 kg – Art. no. 01155135 cartridge 310 ml – Art. no. 01155115</p>
	<p><b>DG-CR 0.7</b> <b>fire protection fabric</b> roll 20 m × 1100 mm – Art. no. 01260231</p>
	<p><b>Lamella mat Klimarock</b> 6100 × 500 × 30 mm – Art. no. 01187100</p>
	<p><b>Mineral wool</b> bag 10 kg – Art. no. 01183000</p>

# System Flammotect OSI

## Fire resistance class: max. EI 120

Mixed penetration sealing system made of mineral fibre boards (2 × 50 mm or 3 × 50 mm) with ablative fire protection coating for situations requiring one-sided installation



### Areas of application

- Plasterboard wall, solid wall, solid floor, shaft wall

## Highlights

- ✓ One-sided installation
- ✓ Only one mineral fibre board in the aperture area
- ✓ Construction of a surrounding frame is not necessary
- ✓ A screw connection to the building element is not required

## Features


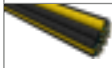









- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The required dry film thicknesses can be applied in one step
- ✓ The coating can be coated over with other materials

## System data

Proof of usability		ETA-22/0052
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
	Shaft wall	≥ 40
Maximum seal size	Plasterboard wall	800 × 1175 or 1175 × 800
	Solid wall	800 × 1175 or 1175 × 800
	Solid floor	1100 × 1300
	Shaft wall	370 × 450

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 80
	Cable bundles	≤ 100 / ≤ 21
	Cable trays	✓
	EIC   Single	≤ 32 / ≤ 21
	EIC   Bundle	≤ 100 / ≤ 32 / ≤ 21
	speedpipes	24 × ≤ 7 7 × ≤ 10 5 × ≤ 12
	Combustible pipes	≤ 160
	Multilayer pipes	≤ 63
	Non-combustible pipes with mineral fibre insulation	≤ 170 (steel) ≤ 88.9 (copper)
	Non-combustible pipes with FEF insulation	≤ 88.9
	HVAC split line combinations	✓

All specifications in mm

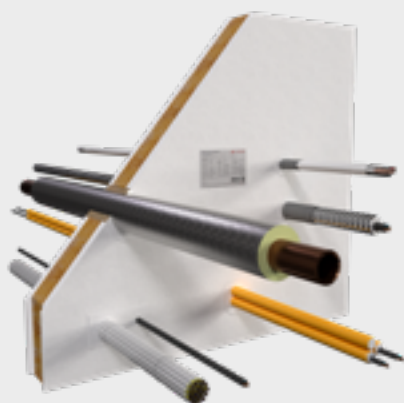
## Products

	<p><b>FLAMMOTECT-A</b>  <b>fire protection coating</b>  <b>coating</b>          pail 12.5 kg – Art. no. 01155131          pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b>          pail 12.5 kg – Art. no. 01155136          pail 5.0 kg – Art. no. 01155121</p> <p><b>filler</b>          pail 12.5 kg – Art. no. 01155134          pail 5 kg – Art. no. 01155135          cartridge 310 ml – Art. no. 01155115</p>
	<p><b>DG-CR BS</b>  <b>fire protection wrap</b>          roll 10 m × 100 mm – Art. no. 01264931</p>
	<p><b>DG-CR 1.5</b>  <b>fire protection wrap</b>          roll 10 m × 125 mm – Art. no. 01261931</p>
	<p><b>Mineral fibre board pre-coated on one side with FLAMMOTECT-A</b>          1000 × 600 × 50 mm – Art. no. 01181155</p>
	<p><b>Lamella mat Klimarock</b>          6100 × 500 × 30 mm – Art. no. 01187100</p>
	<p><b>Mineral wool</b>          bag 10 kg – Art. no. 01183000</p>

# System Flammotect Easy Seal

## Fire resistance class: max. EI 120

Easy-to-install sealing system made of mineral wool and ablative fire protection filler for single penetrations and small apertures with multiple penetrations



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Exceptionally quick way to install an approved sealing system for small openings
- ✓ Low material requirements
- ✓ Ideal for small seals and apertures that are irregular or hard to access
- ✓ Also suitable for HVAC split line combinations and solar pipes

## Features


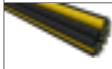






- ✓ A great number of approvals for the included products, for example resistance to humidity, freeze-thaw-changes, UV radiation, various oils and chemicals
- ✓ The coating remains flexible after drying and can be coated over with other materials

## System data

Proof of usability		ETA-22/0052
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
Maximum seal size	Plasterboard wall	500 × 200
	Solid wall	500 × 200
	Solid floor	350 × 150 or Ø 150

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 21
	Cable bundles	≤ 100
	EIC Single	≤ 32
	EIC Bundle	≤ 100
	Wave guides/coaxial cables	≤ 51.1
	Non-combustible pipes with mineral fibre insulation	≤ 219.1 (steel) ≤ 88.9 (copper)
	Non-combustible pipes with FEF insulation	≤ 219.1 (steel) ≤ 88.9 (copper)
	HVAC split line combinations	✓

All specifications in mm

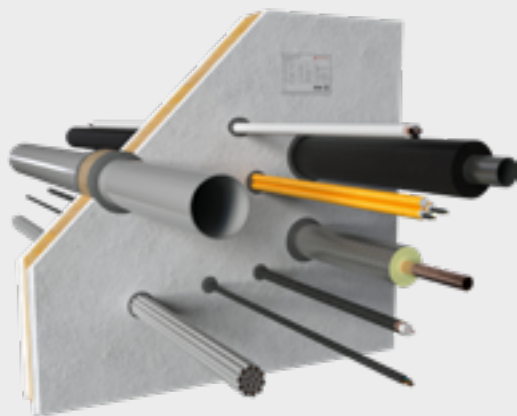
## Products

	<p><b>FLAMMOTECT-A</b> <b>fire protection coating</b> <b>coating</b> pail 12.5 kg – Art. no. 01155131 pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b> pail 12.5 kg – Art. no. 01155136 pail 5.0 kg – Art. no. 01155121</p> <p><b>filler</b> pail 12.5 kg – Art. no. 01155134 pail 5 kg – Art. no. 01155135 cartridge 310 ml – Art. no. 01155115</p>
	<p><b>NBR-plus</b> <b>fire protection wrap</b> roll, 10 m × 125 mm (separable into 2 × 62.5 mm) – Art.-no. 01261941</p>
	<p><b>Lamella mat Klimarock</b> 6100 × 500 × 30 mm – Art. no. 01187100</p>
	<p><b>Mineral wool</b> bag 10 kg – Art. no. 01183000</p>

# System DG-SC

## Fire resistance class: max. EI 120

Simple penetration sealing system with intumescent filler



### Areas of application

- Plasterboard wall, solid wall, shaft wall, solid floor

## Highlights

- ✓ Sealing system for easy and quick installation
- ✓ Particularly suitable for apertures with single services
- ✓ Annular gap widths from 10 mm to 50 mm
- ✓ Optionally with or without backfilling with mineral wool
- ✓ Suitable for cables, cable bundles, electrical installation conduits, refrigerant lines, combustible pipes and non-combustible pipes with insulations made of mineral wool or FEF

## Features


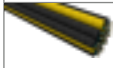










- ✓ Free of solvents and halogens
- ✓ Resistant to humidity, UV radiation, solvents
- ✓ Coatings can be applied subsequently

## System data

Proof of usability		ETA-16/0268
Thickness of structural element	Plasterboard wall, solid wall	≥ 100
	Solid floor	≥ 150
	Shaft wall	≥ 40
Maximum seal size	Plasterboard wall, solid wall	Annular gap 10-25/50
	Solid floor	Annular gap 10-25/50
	Shaft wall	Annular gap 10-25



All specifications in mm

## Configuration

Services	max. diameter
 Cable	≤ 61
 Cable bundles	≤ 180
 EIC Single	≤ 32
 EIC Bundle	≤ 100
 Wave guides/coaxial cables	≤ 51.1
 Combustible pipes • PVC-U, PE-100, PP-H • Geberit Silent-Pro • Geberit Silent-PP • Geberit Silent-db20 • REHAU RAUPIANO PLUS • Wavin SiTech+ • POLOPLAST POLO-KAL NG • POLOPLAST POLO-KAL XS • POLOPLAST POLO-KAL 3S • Ostendorf Skolan (dB) • Valsir Triplus • Pipelife MASTER 3 PLUS • FRIATEC FRIAPHON	≤ 110
 Multilayer pipes • Geberit Mepla • REHAU RAUTITAN stabil • KE KELIT KELOX MSV Rohr • Uponor Uni Pipe PLUS • FRÄNKISCHE alpex / alpex F50	≤ 75
 Non-combustible pipes without insulation	
copper	≤ 22
steel	≤ 48.3
 Non-combustible pipes with mineral fibre insulation	≤ 114 (steel) ≤ 88.9 (copper)
 Non-combustible pipes with FEF insulation	≤ 54
 HVAC split line combinations	✓
 Double solar pipes NanoSun <sup>2</sup>	✓

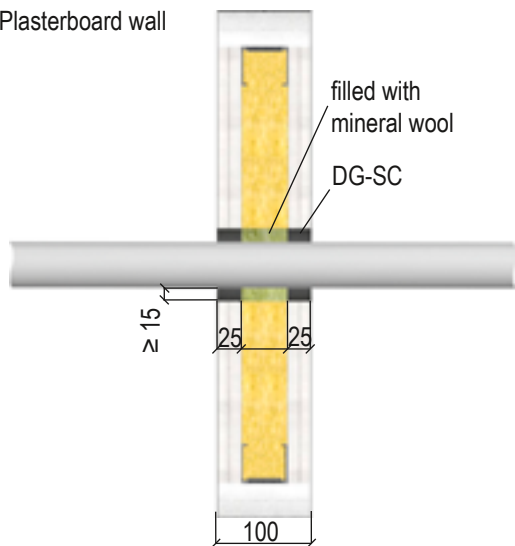
All specifications in mm

## Products

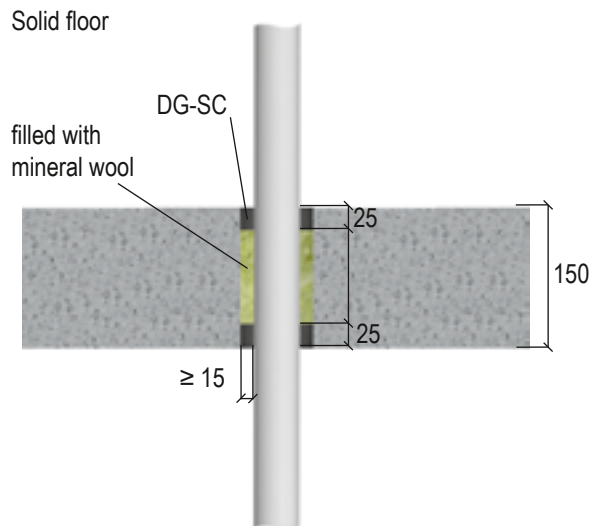
	<b>DG-SC</b> cartridge 310 ml – Art. no. 01157100
	<b>Mineral wool</b> bag 10 kg – Art. no. 01183000

## Design variants

Plasterboard wall



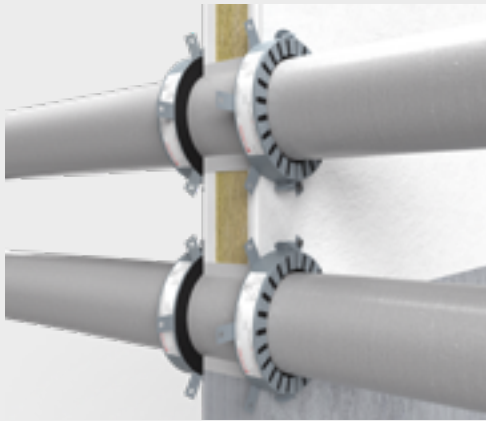
Solid floor



# System AWM II

## Fire resistance class: max. EI 120

Fire protection collar as single penetration seal for insulated and non-insulated combustible pipes with or without soundproofing tube



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Compact fire protection collar for easy installation
- ✓ Quick assembly due to locking system with an integrated option to alter the size
- ✓ For sealing combustible pipes with an outer diameter of up to 500 mm
- ✓ For a great variety of approved drain and supply pipes
- ✓ Pipes can be optionally insulated with PE soundproofing tubes or FEF insulations

## Features

- ✓ Resistant to humidity, freeze-thaw-cycles and UV radiation (usage category X)
- ✓ Flat collar construction

## System data

Proof of usability		ETA-17/0753
Thickness of structural element	Plasterboard wall, solid wall	≥ 100
	Solid floor	≥ 150
	Timber wall	≥ 100
	Timber floor	≥ 140
	Shaft wall	≥ 100






All specifications in mm

## Configuration

Services	max. diameter
Combustible pipes	
• GF CoolFit 4.0	≤ 500
• PVC-U, PE-HD	≤ 400
• aquatherm blue pipe SDR 11 MF RP, SDR 17,6 MF RP • aquatherm green pipe SDR 9 MF RP	≤ 355
• PP • GF COOL-FIT 4.0F • aquatherm green pipe SDR 11 S	≤ 315
• aquatherm blue pipe SDR 9 MF RP OT, SDR 11 MF RP OT	≤ 250
• GF COOL-FIT 2.0/2.0F	≤ 200
• POLOPLAST POLO-KAL 3S • POLOPLAST POLO-KAL NG • POLOPLAST POLO-KAL XS • Geberit Silent-PP • Geberit Silent-Pro • Geberit Silent-db20 • REHAU RAUPIANO PLUS • REHAU RAUPIANO LIGHT • REHAU RAUSILENTO • GF GF Silenta Premium • Wavin AS+ • Wavin SiTech+ • Pipelife MASTER 3 • Pipelife MASTER 3 PLUS • SANHA Master 3 • KE KELIT PHONEX AS • Valsir Triplus	≤ 160
• CONEL DRAIN • Ostendorf Skolan dB • aquatherm green pipe SDR 6 S	≤ 110
• COES Blue Power	≤ 100
• aquatherm green pipe SDR 7,4 S	≤ 63
• Pelletschlauch PVC-Cu, PUR-Cu	≤ 60
• aquatherm blue pipe SDR 9 MF RP	≤ 32

All specifications in mm

## Products

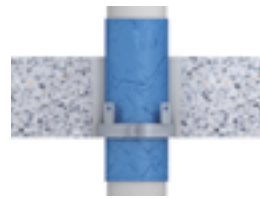
	<b>GFM</b> <b>fire protection mortar</b> bag 25 kg – Art. no. 01167000
	<b>FLAMMOTECT-A</b> <b>fire protection coating</b> <b>filler</b> cartridge 310 ml – Art. no. 01155115
	<b>AWM II</b> <b>fire protection collar</b> Art. no. 01142032 - 01142500
	<b>Set of fasteners 2 AWM II Ø 32-50 mm</b> Art. no. 01146050 <b>Set of fasteners 4 AWM II Ø 63-125 mm</b> Art. no. 01146125 <b>Set of fasteners 6 AWM II Ø 140-160 mm</b> Art. no. 01146160 <b>Set of fasteners 8 AWM II Ø 180-200 mm</b> Art. no. 01146200 <b>Set of fasteners 10 AWM II Ø 225-250 mm</b> Art. no. 01146250 <b>Set of fasteners 12 AWM II Ø 280-400 mm</b> Art. no. 01146400 <b>Set of fasteners 14 AWM II Ø 450-500 mm</b> Art. no. 0707002070
	<b>Mineral wool</b> bag 10 kg – Art. no. 01183000

## Dimensions

Collar size Ø	Internal Ø D2	External Ø D1	Installation height H1	Number of tabs [n]	Size adjustable
32	40	50	26	2	✓
40	48	58	26	2	
50	57	68	26	2	
63	70	94	26	4	
75	83	106	26	4	
90	100	132	26.6	4	
110	120	155	26.6	4	
125	135	172	40	4	
140	152	200	40	6	
160	169	220	40	6	
180	184	264	40	8	-
200	204	284	40	8	
225	239	328	51.5	10	
250	264	353	51.5	10	
280	289	378	51.5	12	
315	328	417	51.5	12	
355	370	459	51.5	12	
400	415	504	51.5	12	

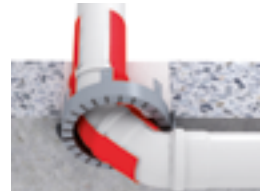
All specifications in mm

## Design variants



### Application with mortar

Grouted collar ≤ 110 mm  
Grouted tabs ≤ 200 mm



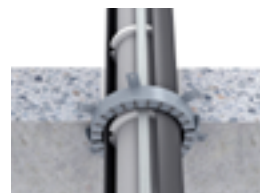
### Application on 2 × 45° bends



### Diagonal penetrations



### Pipes with FEF insulation or PE soundproofing tube



### Double pipe systems



### GF COOL-FIT 2.0 and 4.0

Diameter ≤ 500 mm



### aquatherm blue pipe / green pipe

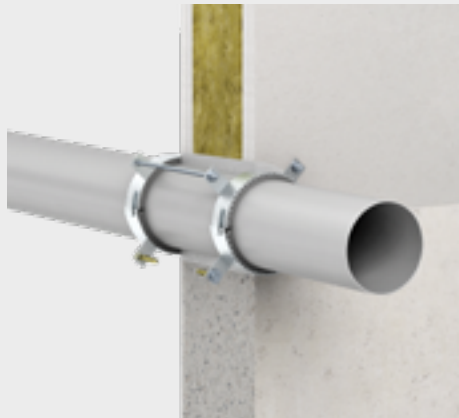
Diameter ≤ 355 mm with or without FEF insulation

\* application and design variants depending on type of pipe

# System FSC 4

## Fire resistance class: EI 240 – U/C

Easy-to-install fire protection collar for sealing combustible pipes up to medium diameters



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Fire protection collar, optimised for sealing combustible pipes with an outer diameter of up to 160 mm
- ✓ Optimised for drainage and standard pipes as well as basic applications

## Features

- ✓ Resistant to humidity, freeze-thaw-cycles and UV radiation (usage category Y<sub>1</sub>)

## System data

<b>Proof of usability</b>		ETA-15/0907
<b>Thickness of structural element</b>	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150



All specifications in mm

## Configuration

Services	max. diameter
Combustible pipes	
<ul style="list-style-type: none"> <li>• PVC-U</li> <li>• PP</li> <li>• POLOPLAST POLO-KAL NG</li> <li>• REHAU RAUPIANO PLUS</li> <li>• PVC-U</li> <li>• PE</li> <li>• Wavin SiTech+</li> </ul>	≤ 160
<ul style="list-style-type: none"> <li>• PE</li> <li>• COES Blue Power</li> <li>• Wavin SiTech+</li> <li>• aquatherm green pipe MF</li> <li>• Geberit Silent-PP</li> <li>• PP</li> <li>• POLOPLAST POLO-KAL NG</li> </ul>	≤ 110
<ul style="list-style-type: none"> <li>• Valsir Triplus</li> </ul>	≤ 90
Multilayer pipes	
<ul style="list-style-type: none"> <li>• Uponor Uni Pipe PLUS</li> </ul>	≤ 110

All specifications in mm

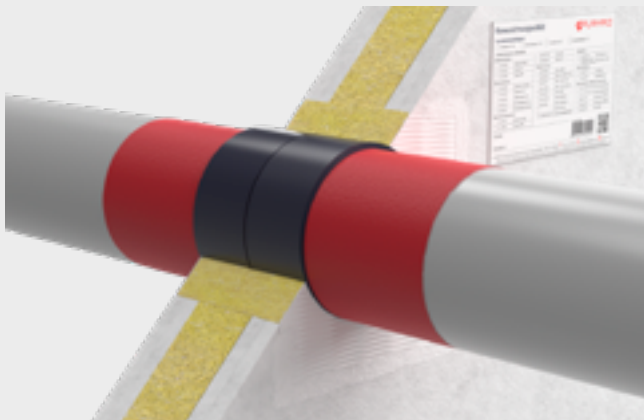
## Products

	<p><b>GFM</b> <b>fire protection mortar</b> bag 25 kg – Art. no. 01167000</p>
	<p><b>FSC 4</b> <b>fire protection collar</b> Art. no. 01148050 - 01148160</p>

# System KSL-W

## Fire resistance class: max. EI 180

Fire protection fabric for sealing penetrations with combustible pipes



### Areas of application

- Plasterboard wall, solid wall, solid floor, shaft wall

## Highlights

- ✓ Intumescent fire protection wrap for sealing combustible pipes and multilayer pipes
- ✓ A great number of approved drainage and multilayer pipes
- ✓ Optionally insulated with PE soundproofing tubes or FEF insulations
- ✓ Quick and easy installation – without dowels or drillings

## Features



- ✓ Flexible material for easily handling and wrapping pipes
- ✓ Resistant to humidity, freeze-thaw-cycles and UV radiation (usage category X)
- ✓ Only one product required for all pipe diameters

## System data

Proof of usability		ETA-18/0885
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
	Shaft wall	≥ 40

All specifications in mm

## Configuration

Services	max. diameter
 Combustible pipes <ul style="list-style-type: none"> <li>• PVC-U, PE-HD, PP</li> <li>• Geberit Silent-PP</li> <li>• Geberit Silent-Pro</li> <li>• KE KELIT PHONEX AS-PLUS</li> <li>• Pipelife MASTER 3 PLUS</li> <li>• POLOPLAST POLO-KAL NG</li> <li>• CONEL DRAIN</li> <li>• Geberit Silent-db20</li> <li>• Wavin SiTech+</li> <li>• POLOPLAST POLO-KAL XS</li> <li>• REHAU RAUPIANO PLUS</li> <li>• REHAU RAUPIANO LIGHT</li> <li>• GF Silenta Premium</li> </ul>	≤ 110
 Multilayer pipes <ul style="list-style-type: none"> <li>• Geberit Mepla</li> <li>• REHAU RAUTITAN stabil</li> <li>• KE KELIT KELOX</li> </ul>	≤ 75 ≤ 40 ≤ 75

All specifications in mm

## Products

	<b>GFM</b> <b>fire protection mortar</b> bag 25 kg – Art. no. 01167000
	<b>FLAMMOTECT-A</b> <b>fire protection coating filler</b> cartridge 310 ml – Art. no. 01155115
	<b>Mineral wool</b> bag 10 kg – Art. no. 01183000
	<b>KSL-W</b> <b>fire protection fabric</b> roll 20 m × 50 mm – Art. no. 15520 roll 10 m × 50 mm – Art. no. 15510

# Material consumption

## Required length of combustible pipes

Insulation thickness	Pipe Ø	16	32	40	50	56	63	75	90	110	160
	Number of layers										
without insulation	2	0.15	0.25	0.30	0.35	0.40	-				
	4	-					0.95	1.10	1.30	1.55	-
	6	-									
PE noise insulation 5	2	0.20	0.30	0.35	0.40	0.45	-				
	4	-					1.05	1.20	1.40	1.65	-
	6	-									
FEF 19	2	0.40	0.50	0.60	0.70	0.75	-				
	4	-					1.35	1.50	1.70	1.90	-
	6	-									

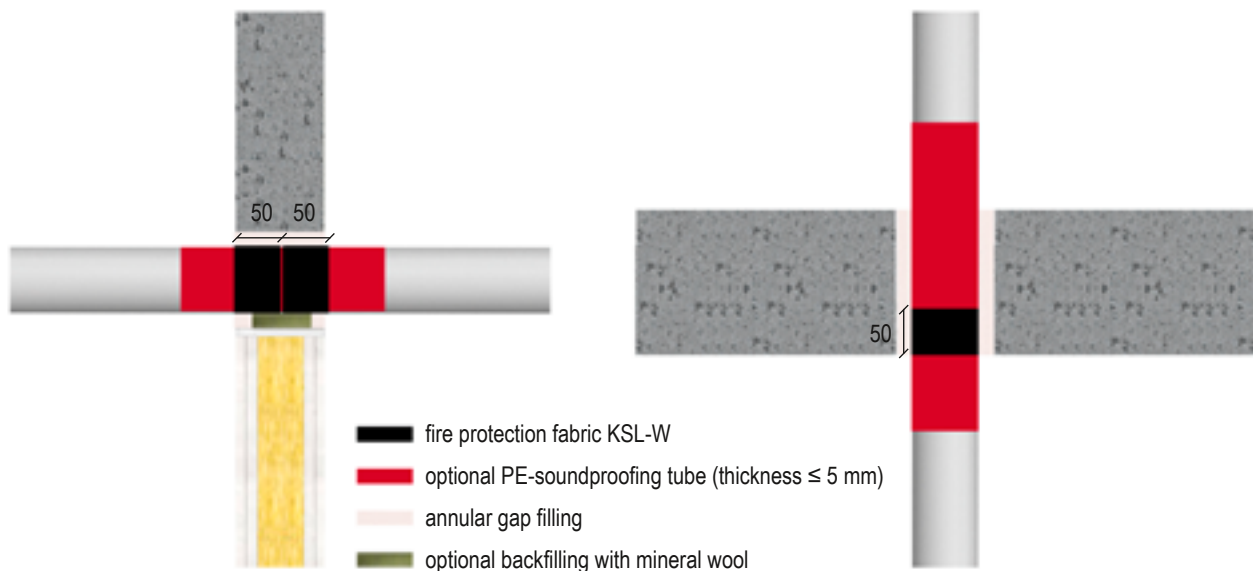
All specifications in mm

## Required length of multilayer pipes

Insulation thickness	Pipe Ø	16	20	25	32	40	50	75
	Number of layers							
9-13	1	0.16	0.18	0.19	0.21	-		
	2	-				0.50	0.55	0.75
19	1	0.22	0.24	0.26	0.28	-		
	2	-				0.60	0.65	0.80
25	1	0.25	0.27	0.29	0.31	-		
	2	-				0.70	0.75	0.90
32	1	0.30	0.33	0.36	0.40	-		
	2	-				0.80	0.90	1.00

All specifications in mm

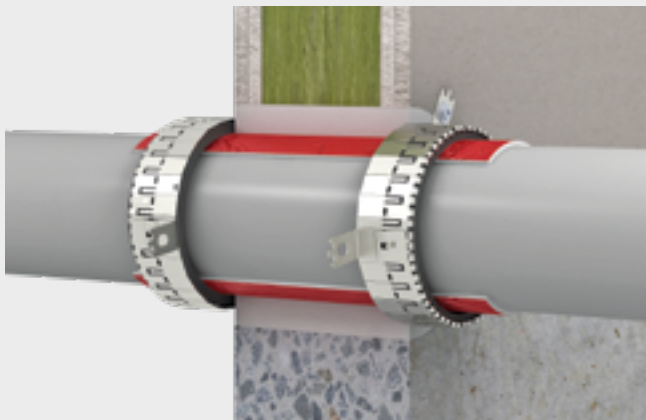
## Design variants



# System EC Endless Collar

## Fire resistance class: max. EI 240

Endless collar with versatile design variants for sealing combustible and non-combustible pipes



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Individually adaptable fire protection collar for combustible pipes with an outer diameter of up to 160 mm
- ✓ Many different types of application, for example in corners, on multiple or diagonal penetrations or for installation on pipe sleeves
- ✓ A great number of approved drainage and multilayer pipes
- ✓ Pipes optionally insulated with PE soundproofing tubes or FEF insulations
- ✓ Also for sealing non-combustible pipes with FEF insulations

## Features




- ✓ Resistant to humidity, freeze-thaw-cycles and UV radiation (usage category Y<sub>1</sub>)

## System data

<b>Proof of usability</b>		ETA-22/0054
<b>Thickness of structural element</b>	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150

All specifications in mm

## Configuration

Services	max. diameter
 Combustible pipes <ul style="list-style-type: none"> <li>• PVC</li> <li>• PE-HD</li> <li>• PP</li> <li>• Geberit Silent-PP</li> <li>• POLOPLAST POLO-KAL NG</li> <li>• Valsir Triplus</li> </ul>	≤ 160
	<ul style="list-style-type: none"> <li>• COES BluePower</li> <li>• Wavin SiTech+</li> <li>• REHAU RAUPIANO PLUS</li> </ul>
 Multilayer pipes <ul style="list-style-type: none"> <li>• Uponor Uni Pipe PLUS</li> <li>• alpex F50 PROFIL, alpex L</li> </ul>	≤ 110
 Non-combustible pipes with FEF insulation	≤ 108 (copper-, steel- and stainless steel pipes)

All specifications in mm

## Products

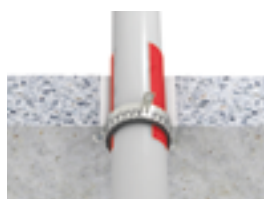
	<b>Endless Collar U/U pipe collar</b> Set with 10 m fire protection strip, 3 m stainless steel strap and 18 fasteners – Art. no. 01145303
	<b>Endless Collar U/C pipe collar</b> Set with 10 m fire protection strip, 3 m stainless steel strap und 18 fasteners – Art. no. 01145310
	<b>BSS fire protection foam</b> cartridge 180 g – Art. no. 32004 cartridge 480 g – Art. no. 32010
	<b>mastic gun</b> manual gun – Art. no. 32100 battery operated gun – Art. no. 32101
	<b>GFM fire protection mortar</b> bag 25 kg – Art. no. 01167000

# Material consumption

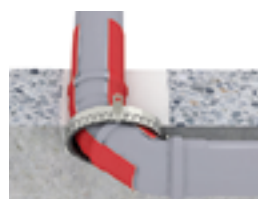
Design variant	External Ø [mm]	Layers [pcs.]	Length fire protection wrap		Length of metal strap				Lugs [pcs.]
			PE noise insulation (4 mm)		PE soundproofing tube (4 mm)				
			without	with	without		with		
			length [mm]	length [mm]	length [mm]	metal links [pcs.]	length [mm]	metal links [pcs.]	
Straight	32	2	250	320	192	12	224	14	2
	40		320	360	224	14	240	15	
	50		375	440	256	16	272	17	
	63	3	685	780	288	18	320	20	3
	75		800	895	336	21	368	23	
	90	4	1290	1400	400	25	432	27	
	110		1545	1660	464	29	496	31	
	125	5	2190	2425	512	32	544	34	4
	140	6	2860	3050	576	36	608	38	
160	3365		3530	640	40	672	42		

Design variant	External Ø [mm]	Layers [pcs.]	Lugs [pcs.]	Design variant	External Ø [mm]	Layers [pcs.]	Lugs [pcs.]
2 × 45° pipe bends	32	3	3	Corner installation	32	3	2
	50				50		
	63	4	4		63	4	3
	75				75		
	90	5	4		90	5	
110	110						

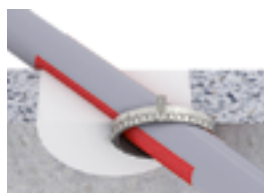
## Design variants



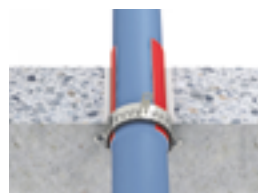
Straight pipe gland



Attachment to 2 × 45° bends (only with U/U version)



Inclined pipe gland



Attachment to sleeves



Multiple gland



Corner solution with 2/3 wrapping (only with U/U version)

# System AWM II KS

## Fire resistance class: max. EI 120

Fire protection collar for sealing single or bundled electrical installation conduits



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Suitable for single and bundled electrical installation conduits

## Features



- ✓ Resistant to humidity, freeze-thaw-cycles and UV radiation (usage category X)
- ✓ Flat collar construction

## System data

Proof of usability		ETA-11/0372
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150

All specifications in mm

## Configuration

Services			max. diameter
	EIC	Single	≤ 63 / ≤ 63
	EIC	Bundle	≤ 75 / ≤ 125

All specifications in mm

## Products

	<b>GFM</b> <b>fire protection mortar</b> bag 25 kg – Art. no. 01167000
	<b>AWM II</b> <b>fire protection collar</b> Art. no. 01142032 - 01142125
	<b>Set of fasteners 2 AWM II Ø 32-50 mm</b> Art. no. 01146050 <b>Set of fasteners 4 AWM II Ø 63-125 mm</b> Art. no. 01146125

## Dimensions

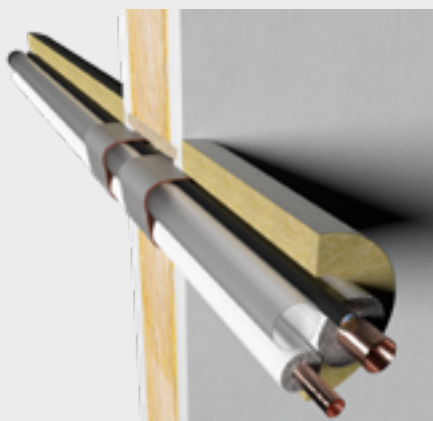
AWM II Dimensi- ons Ø	Internal Ø	External Ø	Installed height	Number of tabs [n]
32	36–40	50–54	26.0	2
40	44–48	58–62	26.0	2
50	54–57	68–71	26.0	2
63	67–70	94–97	26.0	4
75	79–83	106–110	26.0	4
90	94–100	132–138	26.6	4
110	114–120	155–161	26.6	4
125	129–135	172–178	40.0	4
140	144–152	200–206	40.0	6
160	164–169	220–225	40.0	6

All specifications in mm

# System NBR-plus

## Fire resistance class: max. EI 120

Penetration seal for non-combustible pipes with FEF and mineral wool insulation as well as HVAC split line combinations



### Areas of application

- Plasterboard wall, solid wall, solid floor, timber construction (CLT walls and floors)

## Highlights

- ✓ Intumescent fire protection wrap for sealing insulated non-combustible pipes with an outer diameter of up to 323.9 mm and HVAC split line combinations.
- ✓ Low material requirements in walls (wrap can be separated) and floors (application only on lower side)
- ✓ Sealing of annular gap with various materials (among them mortar and gypsum)
- ✓ All customary insulations with elastomeric foam (FEF) are covered

## Features





- ✓ Resistant to humidity, freeze-thaw-cycles and UV radiation (usage category X)
- ✓ Flexible material for the easy handling and wrapping of pipes

## System data

<b>Proof of usability</b>		ETA-21/0461
<b>Thickness of structural element</b>	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
	Timber wall	≥ 100
	Timber floor	≥ 140

All specifications in mm

## Configuration

Services	max. diameter
 Non-combustible pipes with FEF insulation	≤ 323.9 (steel) ≤ 88.9 (copper)
 Non-combustible pipes with mineral wool insulation	≤ 219.1 (steel) ≤ 88.9 (copper)
 Non-combustible pipes with PUR insulation	≤ 54
 HVAC split line combinations	✓

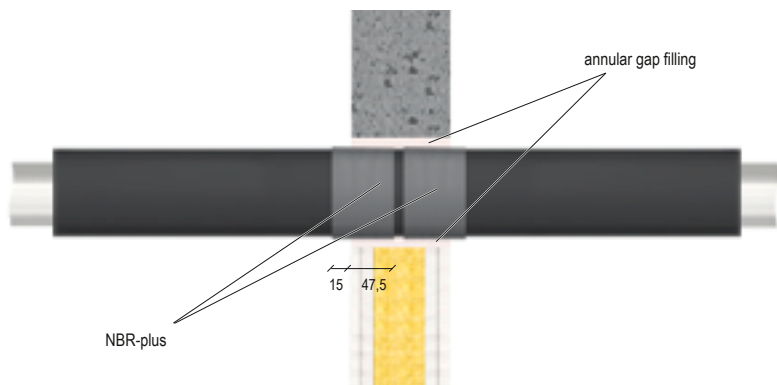
All specifications in mm

## Products

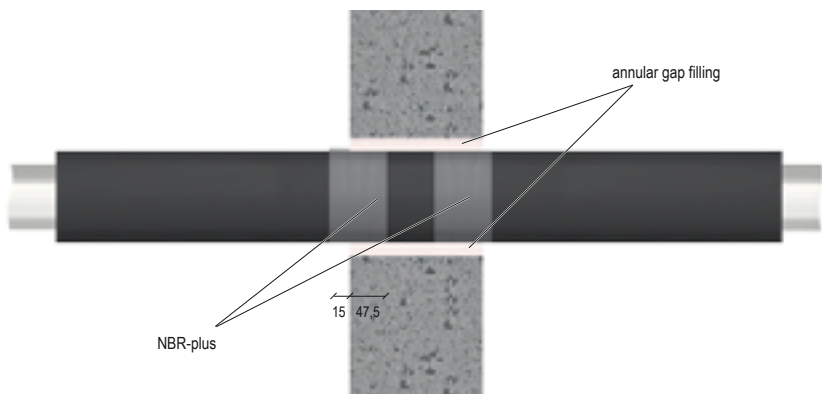
	<b>NBR-plus fire protection wrap</b> roll, 10 m × 125 mm (separable into 2 × 62.5 mm) – Art.-no. 01261941
	<b>GFM fire protection mortar</b> bag 25 kg – Art. no. 01167000
	<b>FLAMMOTECT-A fire protection coating filler</b> cartridge 310 ml – Art. no. 01155115
	<b>Mineral wool</b> bag 10 kg – Art. no. 01183000

# Design variants

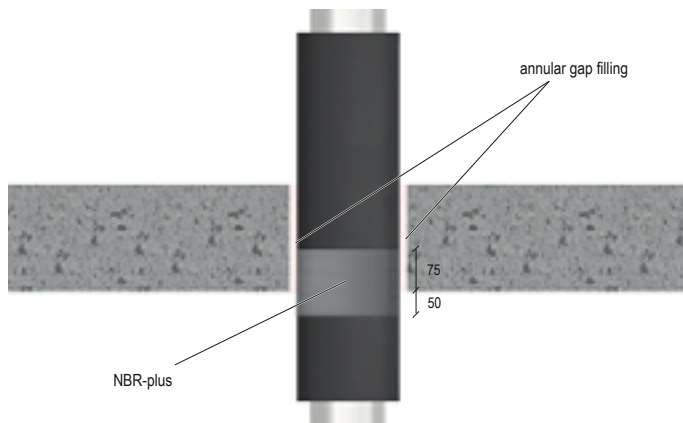
## Design in plasterboard walls and solid walls $\geq 100$ mm



## Design in plasterboard walls and solid walls $\geq 150$ mm



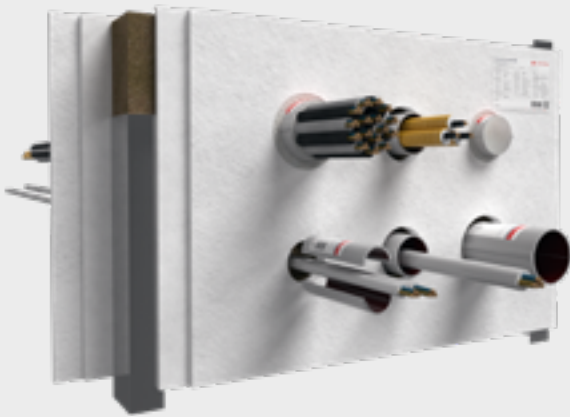
## Design in solid floors $\geq 150$ mm



# System Cable Tube

## Fire resistance class: max. EI 120

Particularly easy to install penetration seal consisting of two pipe half-shells with internal fire protection fabric



### Areas of application

- Plasterboard wall, solid wall, solid floor, timber construction (CLT walls and floors)

## Highlights

- ✓ The entire 100 % of the cable tube's cross section can be used
- ✓ Easy subsequent installation is possible
- ✓ Also suitable for cable sealing in timber construction

## Features






- ✓ Single or group arrangement for sealing installed services or as a reserve penetration seal for subsequent installations
- ✓ Various diameters and lengths available
- ✓ For example suitable for 68 mm socket or 100 mm core drillings
- ✓ Subsequent installations are possible without effort and special tools
- ✓ Plastic half shells are connected via click lock

## System data

Proof of usability		ETA-22/0053
Thickness of structural element	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 125
	Timber wall	≥ 100
	Timber floor	≥ 140
Maximum seal size	Plasterboard wall	1200 × 2000 or 2000 × 1200
	Solid wall	1200 × 2000 or 2000 × 1200
	Solid floor	640 × ∞

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 80 (CT 300) ≤ 21 (CT 150 / CT 200)
	Cable bundles	≤ 100 / ≤ 21
	Wave guides/coaxial cables	≤ 28.5 mm
	EIC Single	≤ 63 / ≤ 21
	EIC Bundle	≤ 107 / ≤ 32 / ≤ 21
	speedpipes	24 × ≤ 7 7 × ≤ 10 5 × ≤ 12
	Combustible pipes	≤ 32
	HVAC split line combinations	✓

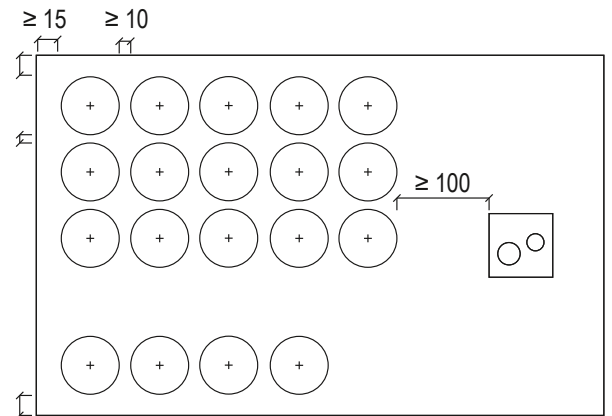
All specifications in mm

## Products

	<p><b>Cable Tube CT</b>            Ø 60 mm / length 150 mm – Art. no. 01276101            Ø 90 mm / length 150 mm – Art. no. 01279101            Ø 90 mm / length 200 mm – Art. no. 01279201            Ø 90 mm / length 300 mm – Art. no. 01279301            Ø 120 mm / length 150 mm – Art. no. 01271151            Ø 120 mm / length 200 mm – Art. no. 01271201            Ø 120 mm / length 300 mm – Art. no. 01271301</p>
	<p><b>GFM</b>  <b>fire protection mortar</b>            bag 25 kg – Art. no. 01167000</p>
	<p><b>NOVASIT BM</b>  <b>fire protection compound</b>            bag 20 kg – Art. no. 01161000            pail 10 kg – Art. no. 01161010</p>
	<p><b>FLAMMOTECT-A</b>  <b>fire protection coating</b>  <b>filler</b>            cartridge 310 ml – Art. no. 01155115</p>
	<p><b>NBR-plus</b>  <b>fire protection wrap</b>            roll, 10 m × 125 mm            (separable into 2 × 62.5 mm) –            Art.-no. 01261941</p>
	<p><b>Mineral wool</b>            bag 10 kg – Art. no. 01183000</p>

## Application

### Grouped array of several cable tubes



All specifications in mm

# System Cable Tube ML

## Fire resistance class: max. EI 120

Penetration seal for electrical installations for electrical installation, designed for use in raised floors



### Areas of application

- Plasterboard wall, solid wall

## Highlights

- ✓ Designed for installation in raised floors
- ✓ The cable tube is installed directly on the bare floor
- ✓ 100 % of the cable box can be used for services
- ✓ Zero distance to each other and to the side edge of the aperture

## Features


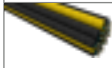


- ✓ Easy assembly and subsequent installation
- ✓ Half shell for one-sided installation
- ✓ Can also be assembled around already installed services

## System data

<b>Proof of usability</b>		ETA-22/0053
<b>Thickness of structural element</b>	Plasterboard wall	≥ 100
	Solid wall	≥ 100
<b>Maximum seal size</b>	Plasterboard wall	2000 × 150
	Solid wall	2000 × 150

All specifications in mm

## Configuration

Services		max. diameter
	Cable	≤ 50
	Cable bundles	100 % / ≤ 21
	EIC Single	≤ 32 / ≤ 21
	EIC Bundle	100 % / ≤ 32 / ≤ 21

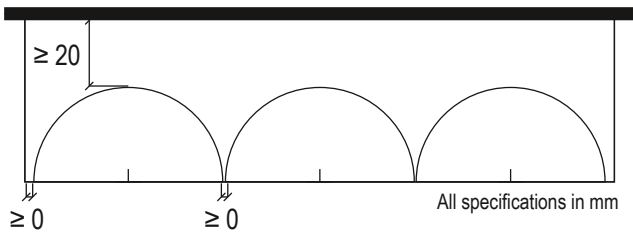
All specifications in mm

## Products

	<b>Cable Tube ML</b> length 200 mm – Art. no. 01272201
	<b>GFM</b> <b>fire protection mortar</b> bag 25 kg – Art. no. 01167000
	<b>NOVASIT BM</b> <b>fire protection compound</b> bag 20 kg – Art. no. 01161000 pail 10 kg – Art. no. 01161010
	<b>FLAMMOTECT-A</b> <b>fire protection coating</b> <b>filler</b> cartridge 310 ml – Art. no. 01155115
	<b>Mineral wool</b> bag 10 kg – Art. no. 01183000

# Application

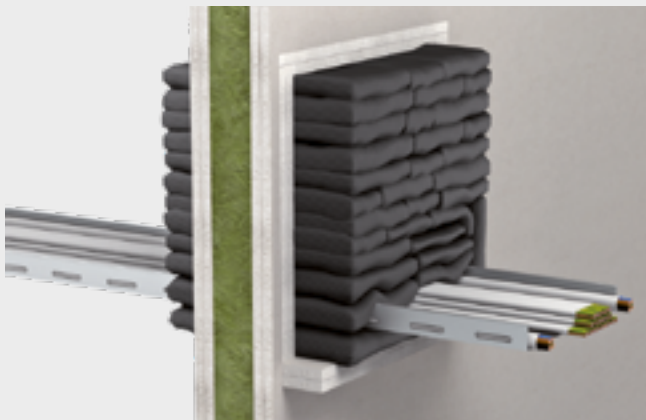
## Grouped array of several cable tubes



# System BK-N

## Fire resistance class: EI 90 – EI 120 (max. EI 180)

Penetration seal made of fire protection pillows for temporary or permanent closure of cable penetrations



### Areas of application

- Plasterboard wall, solid wall, solid floor

## Highlights

- ✓ Suitable for the temporary and permanent sealing of cables
- ✓ Easy subsequent installation of services
- ✓ Penetrating services do not require additional coating
- ✓ Approved for a cable diameter of up to 80 mm
- ✓ The versatile fire protection pillows can be easily adapted to services

## Features


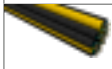

- ✓ Reusable pillows in three sizes
- ✓ Quick and dust-free installation without special tools

## System data

<b>Proof of usability</b>		ETA-17/0904
<b>Thickness of structural element</b>	Plasterboard wall	≥ 100
	Solid wall	≥ 100
	Solid floor	≥ 150
<b>Maximum seal size</b>	Plasterboard wall	600 × 600
	Solid wall	600 × 600
	Solid floor	600 × 600


All specifications in mm

## Configuration

<b>Services</b>		<b>max. diameter</b>
	Cable	≤ 80
	Cable bundles	≤ 100 / ≤ 21
	Cable trays	✓

All specifications in mm

## Product

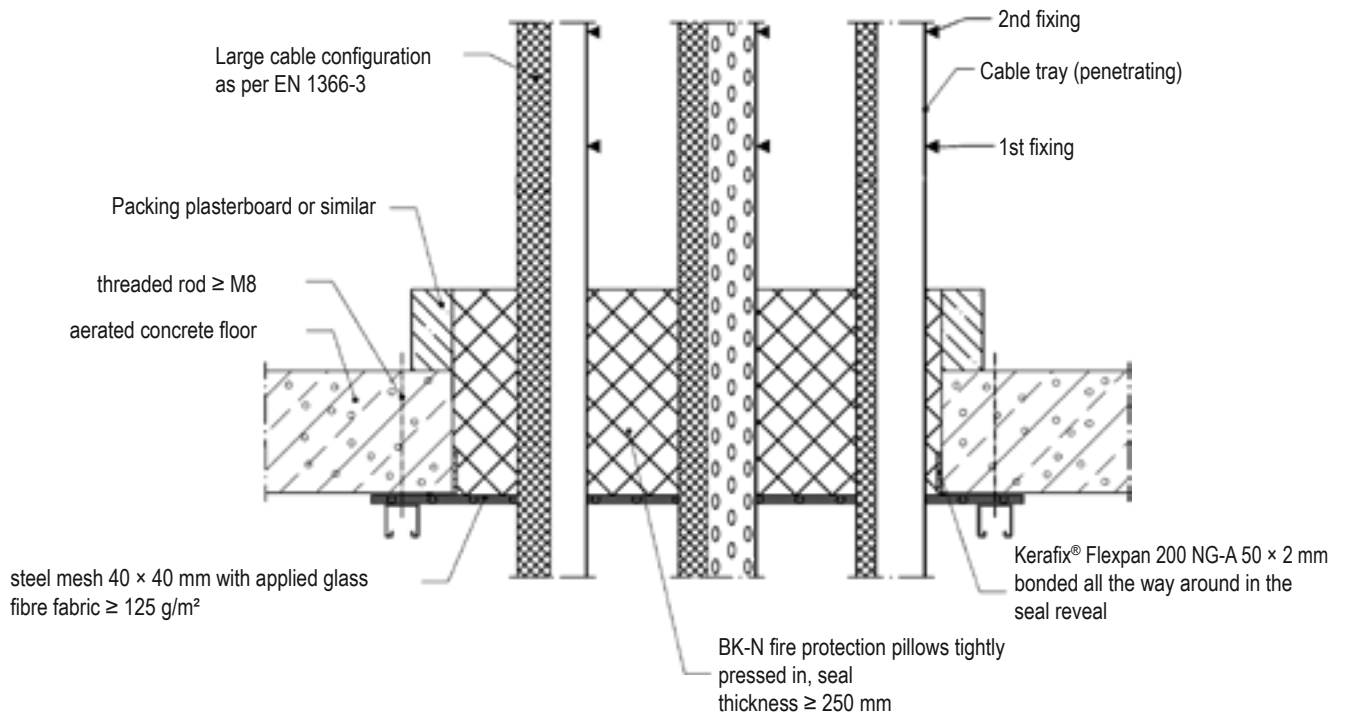
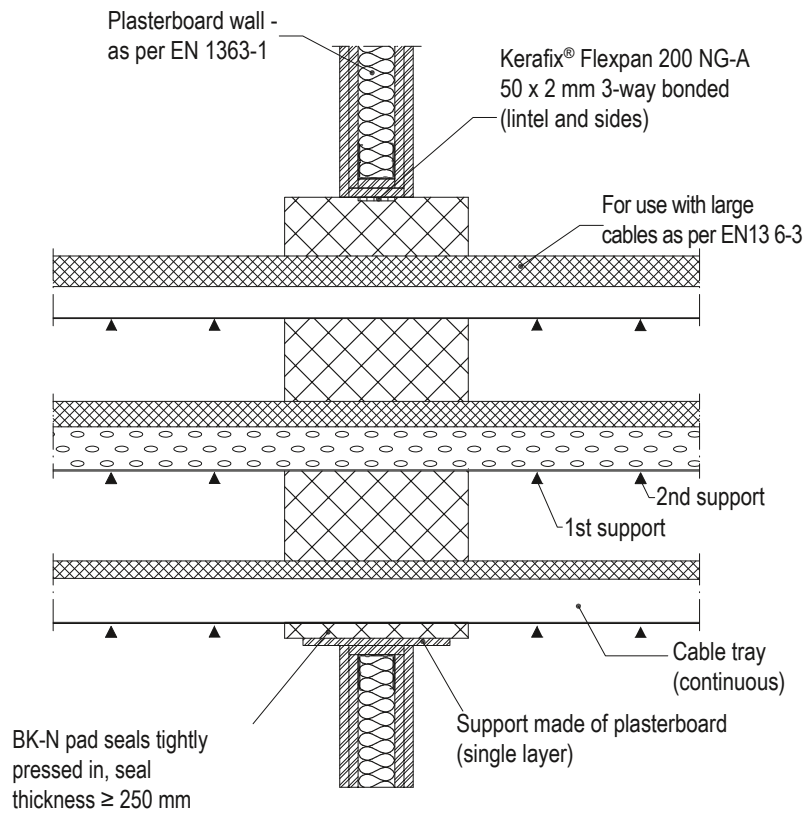
	<p><b>BK-N</b> <b>fire protection pillows</b></p> <p>BK-N S 250 × 40 × 15 mm – Art. no. 12060            BK-N M 250 × 100 × 25 mm – Art. no. 12130            BK-N L 250 × 175 × 25 mm – Art. no. 12180</p>
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## Material consumption

<b>Material consumption BK-N</b>				
<b>Opening size [m<sup>2</sup>]</b>	<b>Configuration</b>			
	0 %	10 %	30 %	60 %
	Size L + M + S			
<b>0.01</b>	0 + 1 + 3	0 + 1 + 2	0 + 1 + 1	0 + 1 + 0
<b>0.02</b>	2 + 2 + 0	2 + 0 + 3	2 + 0 + 1	0 + 2 + 0
<b>0.04</b>	5 + 1 + 3	5 + 1 + 1	4 + 0 + 2	2 + 1 + 1
<b>0.05</b>	7 + 0 + 2	5 + 0 + 3	4 + 1 + 3	3 + 1 + 2
<b>0.10</b>	14 + 2 + 2	12 + 2 + 2	9 + 1 + 3	6 + 0 + 2
<b>0.20</b>	28 + 4 + 4	23 + 4 + 4	17 + 2 + 6	12 + 1 + 4
<b>0.30</b>	42 + 5 + 6	35 + 6 + 6	25 + 3 + 8	16 + 1 + 4
<b>0.36</b>	50 + 4 + 4	42 + 6 + 6	30 + 6 + 6	19 + 2 + 4

Approx. values in units

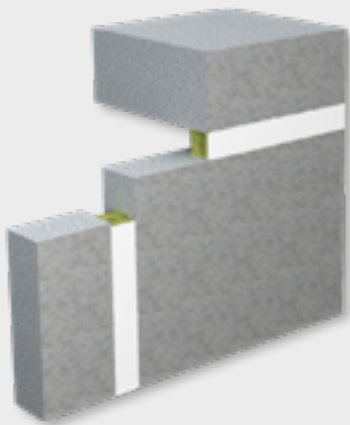
# Design variants



# System Flammotect Joint Seal

## Fire resistance class: EI 60 – EI 120

Versatile joint sealing system made of mineral fibre products and ablative fire protection coating



### Areas of application

Joints between solid walls, between floors and between walls and floors

## Highlights

- ✓ For the easy and quick sealing of joints
- ✓ Effortless installation due to various design variants
- ✓ One-sided installation
- ✓ Joint widths up to 200 mm are possible

## Features

- ✓ The coating is resistant to humidity, freeze-thaw-cycles, UV radiation as well as various oils and chemicals
- ✓ Also in walls fire protection coating only needs to be applied on one side (for instance when using a lamella mat)
- ✓ The coating remains flexible after drying and can be coated over with other materials

## System data






<b>Proof of usability</b>		ETA-18/0237
<b>Thickness of structural element</b>	Solid wall	≥ 100
	Solid floor	≥ 150
<b>Maximum seal size</b>	Solid wall	Joint width ≤ 200
	Solid floor	Joint width ≤ 200

All specifications in mm

## Products

	<p><b>FLAMMOTECT-A</b> <b>fire protection coating</b></p> <p><b>coating</b> pail 12.5 kg – Art. no. 01155131 pail 5 kg – Art. no. 01155132</p> <p><b>solid emulsion</b> pail 12.5 kg – Art. no. 01155136 pail 5 kg – Art. no. 01155121</p> <p><b>filler</b> pail 12.5 kg – Art. no. 01155134 pail 5 kg – Art. no. 01155135 cartridge 310 ml – Art. no. 01155115</p>
	<p><b>Mineral wool</b> bag 10 kg – Art. no. 01183000</p>
	<p><b>Lamella mat Klimarock</b> 6100 × 500 × 30 mm – Art. no. 01187100</p>

## Design variants

		Lamella mat	Loose mineral wool	Fire protection filler	Mineral fibre boards (two layers)	Mineral fibre boards (one layer)
						
<b>Installation in</b>		solid wall, solid floor	solid wall, solid floor	solid wall, solid floor	solid wall, solid floor	solid floor
<b>Thick- ness of building element [mm]</b>	Wall	≥ 100	≥ 100	≥ 100	≥ 150	-
	Floor	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150
<b>Minimal joint depth [mm]</b>		≥ 90	≥ 75	≥ 8	≥ 100	≥ 50
<b>Maximum joint width [mm]</b>		≤ 100	Wall: 30 mm Floor: 20 mm	≤ 13	≤ 200	≤ 200
<b>Fire resistance class</b>		EI 120	EI 120	EI 120	EI 120	EI 60
		H-X-B-W 00-W 100 T-X-B-W 00-W 100	H-X-B-W 00-W 20	H-X-B-W 00-W 04 V-X-B-W 00-W 04 T-X-B-W 00-W 04	H-X-B-W 00-W 200 V-X-B-W 00-W 200 T-X-B-W 00-W 200	H-X-B-W 00-W 200

# System AC Putty

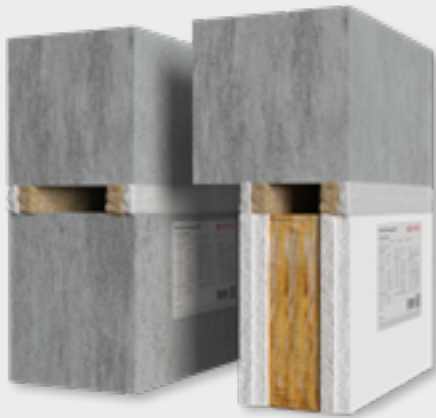
## Fire resistance class:

EI 240 - T - X - F - W 00-30

EI 240 - V - X - F - W 00-30

EI 180 - H - X - F - W 00-100

The system can be used to seal linear joints or gaps



## Areas of application

Joints between solid walls, between floors and between walls and floors

## Highlights

- ✓ Easy-to-install joint seal made of mineral wool and fire protection acrylic
- ✓ One-sided installation possible
- ✓ Joint widths up to 100 mm

## Features


- ✓ Easily inserted and evened
- ✓ Can be coated over
- ✓ Odourless, free of solvents and halogens

## System data

Proof of usability		ETA-21/0108
Thickness of structural element	Solid wall	≥ 100
	Solid floor	≥ 150
Maximum seal size		Joint width ≤ 100 mm

All specifications in mm

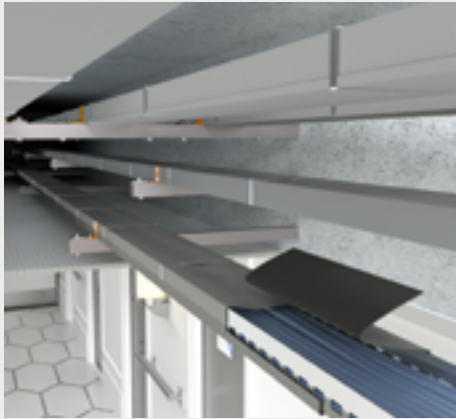
## Product

	<b>AC Putty</b> cartridge 310 ml – Art. no. 30005
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# System DG-CR 0.7

Fire protection bandage for wrapping cable systems



## Areas of application

For indoor and outdoor use

## Highlights

- ✓ Cleaning the cable systems before application is not necessary
- ✓ Easy subsequent installation without further application
- ✓ Measuring the film thickness is not required
- ✓ Can be used to wrap cables of photovoltaic systems for firewalls

## Features


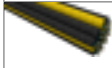

- ✓ Intumescent coating on the inside and resistant glass fabric on the outside
- ✓ Recoatable
- ✓ Weather-resistant – suitable for indoor and outdoor use
- ✓ Resistant to humidity, freeze-thaw-cycles, UV radiation and various oils and chemicals

## System data

	ETA-16/0268 IEC 60332-3-22 DIN EN 60332-3-22 / VDE 0482-332-3-22 Test of flame spread: Cat. A: 2018 for 120 min DNV GL Certificate No.: TAE00003BR IEC 60331-21 DIN IEC 60331-21 / VDE 0482-331-21:2017-06 Test of circuit integrity maintenance: Various tests up to 60 min for different types of cables and voltage areas passed successfully. More information on request.
<b>Certificate of usability</b>	
<b>Application of metal strap</b>	spacing ≤ 500 mm
<b>Longitudinal overlap of bandage</b>	≥ 50
<b>Application temperature</b>	≥ +5 °C
<b>Properties</b>	Resistant to moisture, weather and UV radiation; tear-resistant

All specifications in mm

## Configuration

Services	max. diameter
 Cable	✓
 Cable bundles	✓
 Cable trays	✓

## Product

	<p><b>DG-CR 0.7</b> <b>fire protection fabric</b> roll 20 m × 1100 mm – Art. no. 01260201</p> <p><b>metal strap</b> 100 m × 15 mm – Art. no. 01234000</p> <p><b>sealing clips</b> 1000 pcs. – Art. no. 01234100</p>
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## Design variants



Wrapping for entire cable support structures



Wrapping for cables in trays



Wrapping for cable systems fastened with clamps or on brackets



Wrapping for cable systems fastened with clamps or on brackets



Wrapping for freely suspended cable systems.

# System FLAMMOTECT-A

Ablative coating system for protecting cable installations from fire and other external factors



## Areas of application

For indoor and outdoor use

## Highlights

- ✓ High film thicknesses can be applied in one go
- ✓ Highly suitable for airless spray guns
- ✓ No electrical derating necessary
- ✓ Various certificates for use in nuclear facilities

## Features


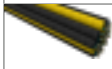

- ✓ Resistant to moisture, freeze-thaw cycling, UV radiation as well as various oils and chemicals
- ✓ No spalling of material because of mechanical stress, high coating flexibility
- ✓ Solvent and halogen free
- ✓ Free of asbestos, lead, mercury, hexavalent chromium and polybrominated biphenyl ethers

## System data


<b>Certificate of usability</b>	ETA-14/0418
	IEC 60332-3-22 DIN EN 60332-3-22 / VDE 0482-332-3-22 Test of flame spread: Cat. A: 2018 for 60 min. Dry film thickness $\geq 0,5$ mm
	IEC 60331-21 DIN IEC 60331-21 / VDE 0482-331-21:2017-06 Test of circuit integrity main- tenance: Various tests up to 90 min for different types of cables and voltage areas passed successfully. More information on request.
	FM Approval Class 3971 Certified dry film thickness of 1,6 mm

All specifications in mm

## Configuration

Services		max. diameter
	Cable	✓
	Cable bundles	✓
	Cable trays	✓

## Product







	<b>FLAMMOTECT-A</b> <b>fire protection coating</b> <b>coating</b> pail 12.5 kg – Art. no. 01155131 pail 5 kg – Art. no. 01155132
	<b>solid emulsion</b> pail 12.5 kg – Art. no. 01155136 pail 5 kg – Art. no. 01155121
	<b>filler</b> pail 12.5 kg – Art. no. 01155134 pail 5 kg – Art. no. 01155135 cartridge 310 ml – Art. no. 01155115

## Resistances

Ageing resistance	Aging does not have an effect to the general properties of FLAMMOTECT-A
	<b>Artificial ageing without impairment</b> <b>Indoor / outdoor areas:</b> Extreme temperature changing from +71 °C to -40 °C, UV radiation and humidity
	<b>Long-term ageing without impairment</b> <b>Outdoor areas:</b> Material was exposed for five years to outdoor weathering without any changes in its reaction to fire (MPA Nordrhein-Westfalen (notified body 0432), report no. 230006109-1) <b>Indoor areas:</b> Material was stored for 10 years in an indoor area without any changes in its reaction to fire (MPA Braunschweig (notified body 0761), report no. 3224/821/11)
Weather resistance	Use category X (product suitable for use in areas exposed to weathering)
Salt water resistance	Long-term exposure to salt water in acc. with FM3971, EOTA TR024, EN ISO 2812-1
Radiation resistance	Certified as radiation resistant at a radiation dosage of $1.0 \times 10^6$ Gy (108 rad)
Resistance against aggressive deactivation media	Approved to withstand various types of deactivation media, e.g. nitric acid, sodium hydroxide, boric acid
Chemical resistance	The chemical resistance was assessed in accordance with DIN EN ISO 2812-1 (Paints and varnishes – Determination of resistance to liquids – Part 1: Immersion in liquids other than water).

# Product overview

	<b>NOVASIT BM</b> fire protection compound	bag 20 kg pail 10 kg	Art. no. 01161000 Art. no. 01161010
	<b>GFM</b> fire protection mortar	bag 25 kg	Art. no. 01167000
	<b>FLAMMOTECT-A</b> fire protection coating	<b>coating</b> pail 12,5 kg pail 5 kg <b>solid emulsion</b> pail 12,5 kg pail 5 kg <b>filler</b> pail 12,5 kg pail 5 kg cartridge 310 ml	Art. no. 01155131 Art. no. 01155132  Art. no. 01155136 Art. no. 01155121  Art. no. 01155134 Art. no. 01155135 Art. no. 01155115
	<b>Mineral fibre board 50 mm</b> pre-coated on one side with FLAMMOTECT-A	1000 × 600 × 50 mm	Art. no. 01181155
	<b>Mineral fibre board 60 mm</b> pre-coated on one side with FLAMMOTECT-A	1000 × 600 × 60 mm	Art. no. 01181165
	<b>Mineral fibre board 60 mm</b> pre-coated on both sides with FLAMMOTECT-A	1000 × 600 × 60 mm	Art. no. 01182165
	<b>Mineral fibre board 80 mm</b> pre-coated on both sides with FLAMMOTECT-A	1000 × 600 × 80 mm	Art. no. 01182185
	<b>DG-SC</b>	cartridge 310 ml	Art. no. 01157000

	<b>AWM II fire protection collar</b>	Ø 32 mm Ø 40 mm Ø 50 mm Ø 63 mm Ø 75 mm Ø 90 mm Ø 110 mm Ø 125 mm Ø 140 mm Ø 160 mm Ø 180 mm Ø 200 mm Ø 225 mm Ø 250 mm Ø 280 mm Ø 315 mm Ø 355 mm Ø 400 mm Ø 450 mm Ø 500 mm	Art. no. 01142032 Art. no. 01142040 Art. no. 01142050 Art. no. 01142063 Art. no. 01142075 Art. no. 01142090 Art. no. 01142110 Art. no. 01142125 Art. no. 01142140 Art. no. 01142160 Art. no. 01142180 Art. no. 01142200 Art. no. 01142225 Art. no. 01142250 Art. no. 01142280 Art. no. 01142315 Art. no. 01142355 Art. no. 01142400 Art. no. 01142450 Art. no. 01142500
	<b>Set of fasteners 2 AWM II</b> <b>Set of fasteners 4 AWM II</b> <b>Set of fasteners 6 AWM II</b> <b>Set of fasteners 8 AWM II</b> <b>Set of fasteners 10 AWM II</b> <b>Set of fasteners 12 AWM II</b> <b>Set of fasteners 14 AWM II</b>	Ø 32-50 mm Ø 63-125 mm Ø 140-160 mm Ø 180-200 mm Ø 225-250 mm Ø 280-400 mm Ø 450-500 mm	Art. no. 01146050 Art. no. 01146125 Art. no. 01146160 Art. no. 01146200 Art. no. 01146250 Art. no. 01146400 Art. no. 0707002070
	<b>FSC 4 fire protection collar</b>	Ø 50 mm Ø 63 mm Ø 75 mm Ø 90 mm Ø 110 mm Ø 125 mm Ø 140 mm Ø 160 mm	Art. no. 01148050 Art. no. 01148063 Art. no. 01148075 Art. no. 01148090 Art. no. 01148110 Art. no. 01148125 Art. no. 01148140 Art. no. 01148140
	<b>EC Endless Collar</b> Set with 10 m fire protection strip, 3 m stainless steel strap and 18 fasteners  <b>Stainless steel strap for EC collar</b> <b>Fasteners for EC collar</b>	U/U U/C  length 3 m 18 pcs.	Art. no. 01145303 Art. no. 01145310  Art. no. 01145304 Art. no. 01145305
	<b>Cable Tube CT</b>	Ø 60 mm / length 150 mm Ø 90 mm / length 150 mm Ø 90 mm / length 200 mm Ø 90 mm / length 300 mm Ø 120 mm / length 150 mm Ø 120 mm / length 200 mm Ø 120 mm / length 300 mm	Art. no. 01276101 Art. no. 01279101 Art. no. 01279201 Art. no. 01279301 Art. no. 01271151 Art. no. 01271201 Art. no. 01271301
	<b>Cable Tube ML</b>	length 200 mm	Art. no. 01272201

# Product overview

	<b>NBR-plus fire protection wrap</b>	roll 10 m × 125 mm (separable into 2 × 62.5 mm)	Art. no. 01261941
	<b>KSL-W fire protection fabric</b>	roll 20 m × 50 mm roll 10 m × 50 mm	Art. no. 15520 Art. no. 15510
	<b>DG-CR 0.7</b>	<b>fire protection fabric</b> roll 20 m × 1100 mm <b>metal strap</b> 100 m × 15 mm <b>sealing clips</b> 1000 pcs.	Art. no. 01260201  Art. no. 01234000  Art. no. 01234100
	<b>BK-N fire protection pillows</b>	BK-N S 250 × 40 × 15 mm BK-N M 250 × 100 × 25 mm BK-N L 250 × 175 × 25 mm	Art. no. 12060 Art. no. 12130 Art. no. 12180
	<b>Lamella mat Klimarock</b>	6100 × 500 × 30 mm	Art. no. 01187100
	<b>Mineral wool</b>	bag 10 kg	Art. no. 01183000

**Space for your notes**

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**We welcome your inquiries!**

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