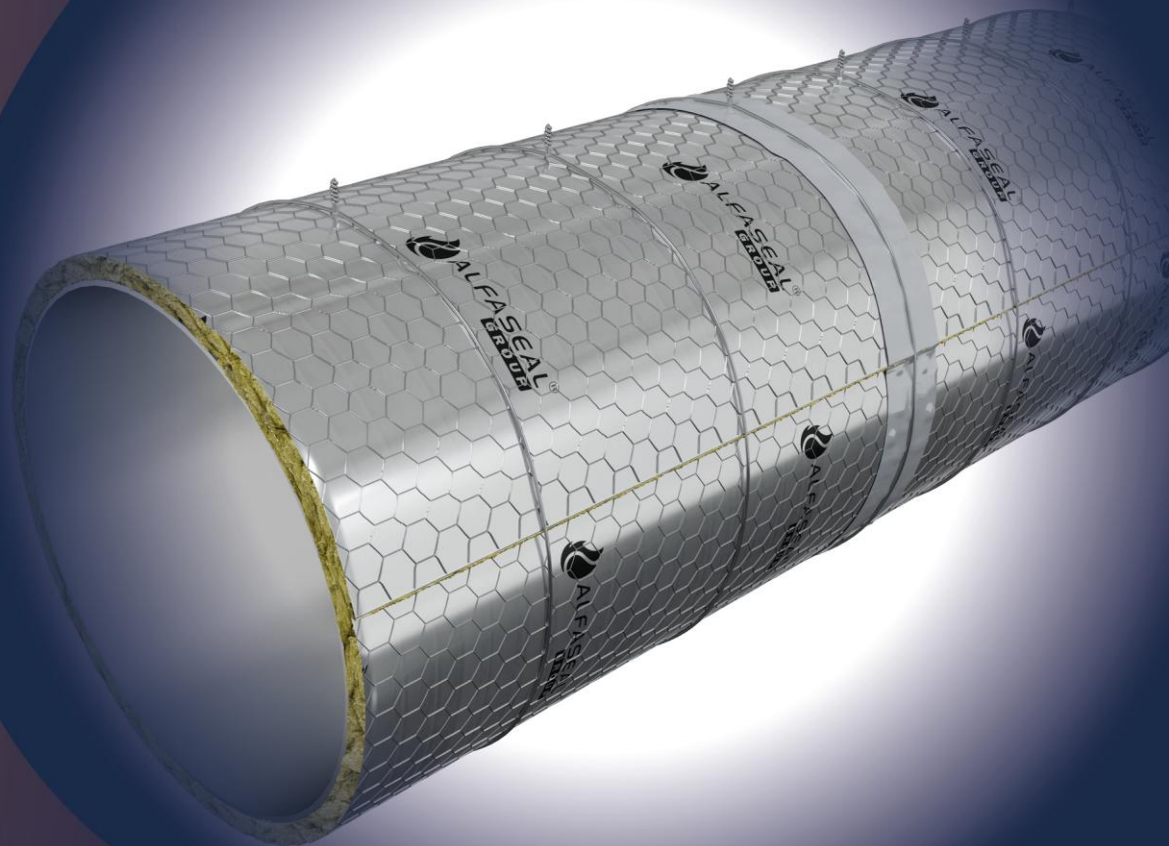


ALFA FIREGUARD 3

Fire protection mat for ventilation ducts

TDS TECHNICAL DATA SHEET



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ALFA FIREGUARD 3

Fire protection mat for ventilation ducts

TDS TECHNICAL DATA SHEET

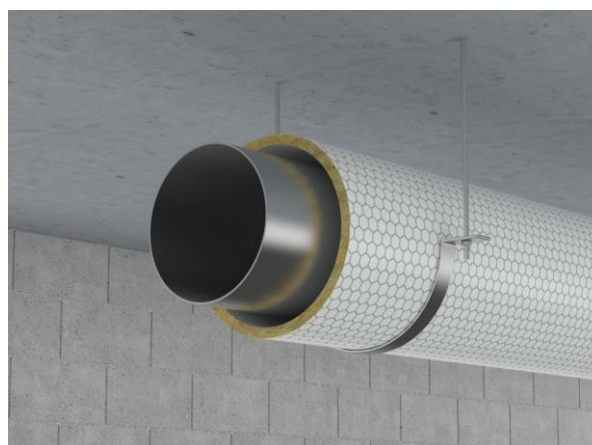
→ PRODUCT DESCRIPTION

The **ALFA FIREGUARD 3** is a flexible mat designed for fire protection of metal ventilation ducts (in accordance with EN1366-1) exposed to external fire. The product is a rock wool cushion quilted on a metal mesh. The exposed side is covered with a wire aluminium foil, while the internal side has a glass wool fabric treated with an ablative product. With its reduced 30 mm thickness, the cushion is easy to apply even on curved profiles and does not overload the support tie rods, which are certified without protection.

→ APPLICATION

Rectangular ventilation ducts: Size maximum 1250 x 1000 mm

Round ventilation ducts: Size maximum Ø1000 mm



→ AVAILABILITY

Product name	Specification	Article number
ALFA FIREGUARD 3	6000 x 1000 x 30 mm	INFGMATT
ALFA BAND 3	25 m	INFGBD25
ALFA FIREGUARD WIRE	1 mm / 50 m	INFGWR1MM
ALFA FIREGUARD MOUNTING KEY		INFGKEY

→ TECHNICAL DATA

Weight	~ 5 kg/m ²
Size	1 roll of mat: 6000 x 1000 x 30 mm 1 roll of mat = 6 m ² 1 pallet = 10 rolls
Density	ρ = 100 kg/m ³
Thermal conductivity	λ = 0,035 W/(mK)
Water absorption	≤ 1 kg/m ²
Cuttability	Tak
Colour	Inside – white Outside - silver
ALFA BAND 3 consumption	~10-12 linear meter for 1 roll of mat ALFA FIREGUARD 3 (6 m ²)

→ COMPLIANCE

- Test standard:
EN 1366-1 / EAD 350142-00-1106
- European Technical Assessment:
ETA 25/0029 of 16/01/2025
- Declaration of Performance:
DoP 1/2025
- Certificate of Constancy of Performance
1292/CPR/116247

→ TRANSPORT AND STORAGE

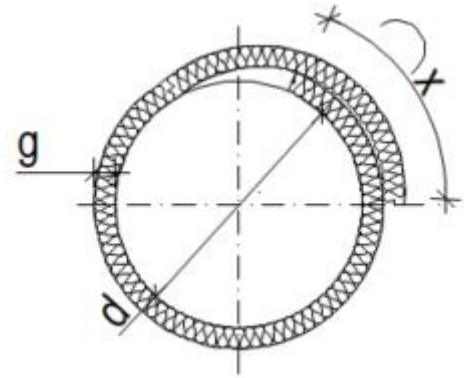
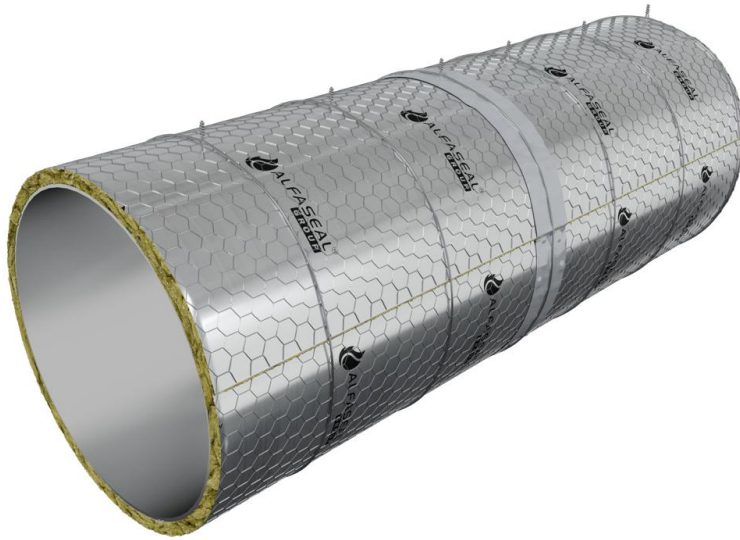
Transport and store in a dry place.
Protect against moisture.

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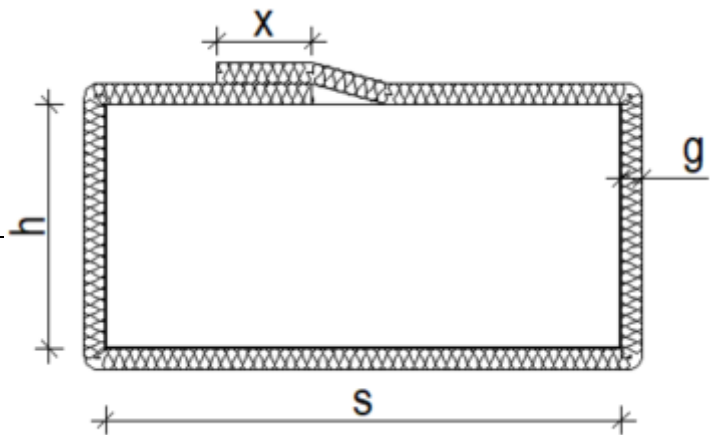
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➔ INSTALLATION METHOD



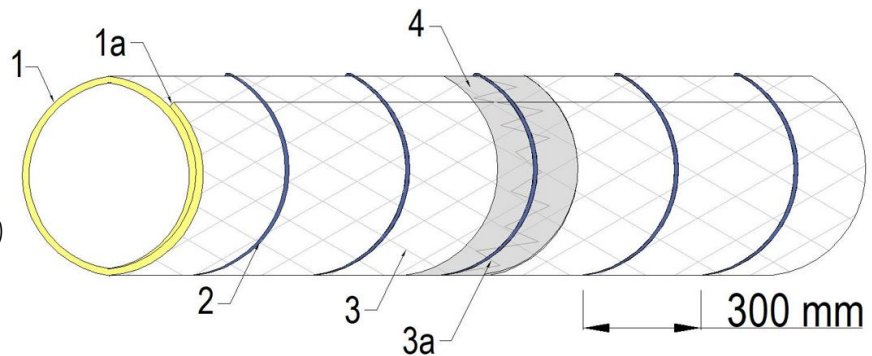
1a. ROUND CROSS-SECTION. Calculate length of the mat L:
 $L = \pi(d+2g) + x$, where:
 d – diameter of the duct
 g = 30mm – thickness of the mat
 x = 150mm - overlap

1b. RECTANGULAR CROSS-SECTION. Calculate length of the mat L:
 $L = 2s+2h + 4g + x$, where:
 s – width of the duct
 h – height of the duct
 g = 30mm – thickness of the mat
 x = 150mm - overlap



2. Cut the mat **ALFA FIREGUARD 3** to the designated length.
3. Wrap the cut section of the mat around the duct with overlap ≥ 150 mm.
 Secure the mat with steel wire 1 mm thick for every 300 mm (three loops for linear meter).
 Repeat the steps from point 1 to 3 to cover the ventilation duct with a second parallel layer.
4. Use **ALFA BAND 3** self-adhesive tape to the transverse joint between the two sections of the mat.
 Protect **ALFA BAND 3** by placing a 1 mm thick wire around tape placed on the ventilation duct.

- 1 – **ALFA FIREGUARD 3** mat
- 1a – overlap the mat according to the guidelines above
- 2 – securing the mat with steel wire – one wrap of 1 mm thick wire for every 300 mm
- 3 – factory mesh mat
- 3a – sewing the mesh (connecting the cut wires)
- 4 – self-adhesive tape **ALFA BAND 3**



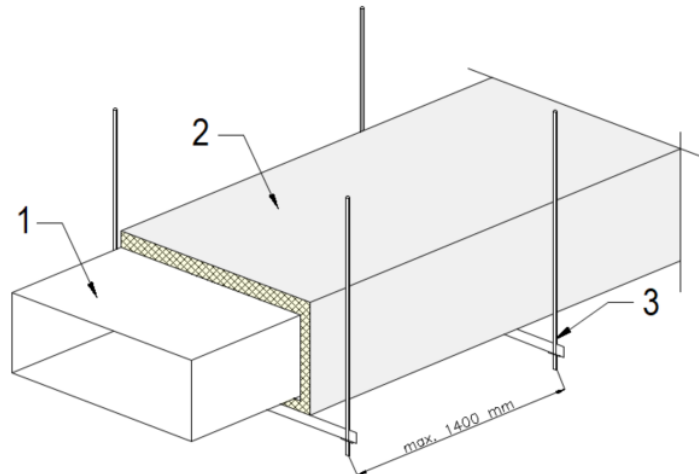
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→ DUCT SUSPENSION

- 1 – Steel ventilation duct with dimensions w x h
- 2 – ALFA FIREGUARD 3 fire-retardant mat, 30 mm thick
- 3 – Hangers mounted at a maximum spacing of 1400 mm



Steel ducts protected with **ALFA FIREGUARD 3** mat should be suspended from partitions using suspensions (threaded rods and mounting rails or steel clamps). The size of individual suspension system components is selected so that the tensile stresses in the vertical suspension elements (threaded rods, anchors) do not exceed the values in the table below. The maximum distance between suspensions is 1400 mm. The suspension elements do not require additional fire protection.

Load type	Maximum stresses (N/mm ²)	
	t* ≤ 60 min	60 min < t* ≤ 120 min
Tensile stresses in all vertical elements	9	6

* t – required fire resistance time

→ FIRE RESISTANCE CLASSIFICATION

Ventilation duct type	Duct position	Fire resistance class
RECTANGULAR	Vertical	EI 120 (ve O → I) S
	Horizontal	EI 120 (ho O → I) S
ROUND	Vertical	EI 180 (ve O → I) S
	Horizontal	EI 120 (ho O → I) S

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➔ SOLUTION DETAILS

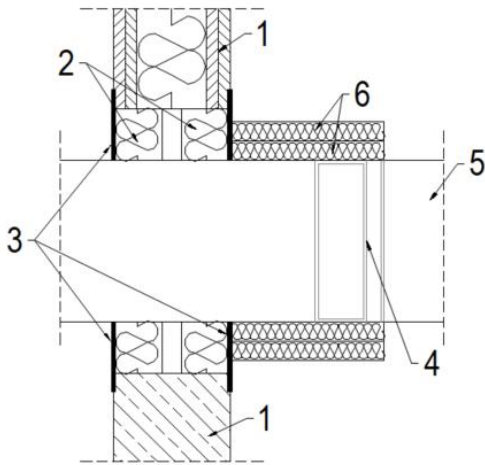
Fig.1	Penetration seal of the ventilation duct through rigid floor	Fig.2	Penetration seal of the ventilation duct through rigid walls
<p>1 – rigid floor, EI 120;</p> <p>2 - filling made of INTU FR UNIBOARD (density $\geq 140 \text{ kg/m}^3$);</p> <p>3 – steel duct;</p> <p>4 – ALFA FIREGUARD 3 fire protection mat.</p>		<p>1 – rigid wall, EI 120;</p> <p>2 - filling made of INTU FR UNIBOARD (density $\geq 140 \text{ kg/m}^3$);</p> <p>3 – steel duct;</p> <p>4 – ALFA FIREGUARD 3 fire protection mat.</p>	
Fig.3	Penetration seal of the ventilation duct (with fire damper) through rigid walls - filling with mortar		
		<p>1 – rigid wall;</p> <p>2 – filling with cement mortar;</p> <p>3 – additional layer of ALFA FIREGUARD 3 mat $\geq 100 \text{ mm}$ long;</p> <p>4 – fire damper;</p> <p>5 – ventilation duct wrapped with one layer of ALFA FIREGUARD 3 fire protection mat.</p>	

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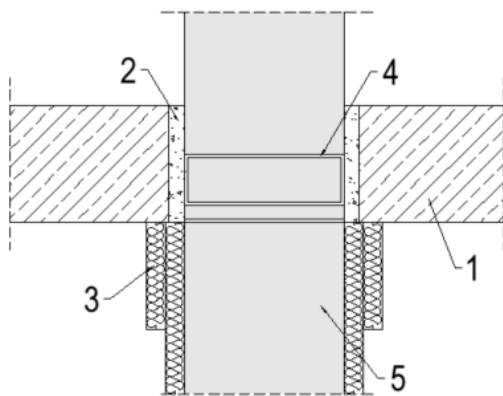
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Fig.4 Protection of the ventilation duct (with fire damper) penetration through rigid or flexible walls



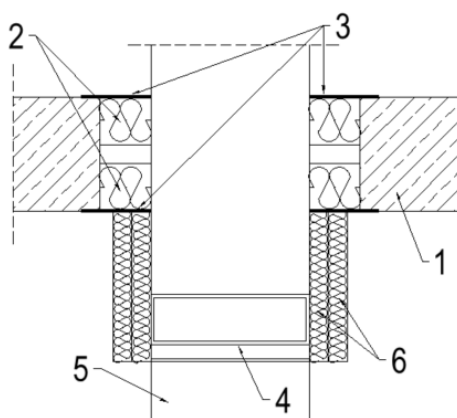
- 1 – rigid or flexible wall;
- 2 – filling partition with 2 x mineral wool boards with minimum density 150 kg/m³ and thickness min. 50 mm, painted with fire-resistant ablative paint for example **INTU FR COAT A**;
- 3 – overlap on the partition by ablative fire resistance paint **INTU FR COAT A**;
- 4 – fire damper;
- 5 – steel ventilation duct;
- 6 – 2 layers (non-standard solution) of fire protection flexible mat **ALFA FIREGUARD 3**.

Rys.5 Penetration seal of the ventilation duct (with fire damper) through rigid floors - filling with mortar



- 1 – rigid floor;
- 2 – filling with cement mortar;
- 3 – additional layer of **ALFA FIREGUARD 3** mat ≥ 100 mm long;
- 4 – fire damper;
- 5 – ventilation duct wrapped with one layer of **ALFA FIREGUARD 3** fire protection mat.

Rys.6 Protection of the ventilation duct (with fire damper outside the compartmentation) penetration through rigid or flexible walls



- 1 – rigid floor;
- 2 – filling partition with 2 x mineral wool boards with minimum density 150 kg/m³ and thickness min. 50 mm, painted with fire-resistant ablative paint for example **INTU FR COAT A**;
- 3 – overlap on the partition by ablative fire resistance paint **INTU FR COAT A**;
- 4 – fire damper;
- 5 – steel ventilation duct;
- 6 – 2 layers (non-standard solution) of fire protection flexible mat **ALFA FIREGUARD 3**.