

# System Flammotect 2 × 60 mm

Mixed penetration sealing system made of mineral fibre boards (2 × 60 mm) with ablative fire protection coating in accordance with ETA-22/0052



## Fire Resistance Class

max. EI 120 in accordance with EN 13501-2

## Areas of Application

- Flexible walls
- Rigid walls
- Rigid floors
- Sandwich panel walls
- Timber construction (CLT walls and floors)
- Shaft walls

## Benefits

- No cladding of the aperture edge required.
- Covers a great number of non-standard pipes with fire protection wrap and collar.
- Fire protection collars can be fastened with coarse thread screws.
- Single-sided installation in front of wall or on top of / below floor possible.

## Services

		max. Ø
	Cables	≤ 80
	Cable bundles	≤ 100 / ≤ 21
	Cable trays	✓
	Single conduits	≤ 16
	Wave guides and coaxial cables	≤ 51.1
	single	≤ 63
	bundled	≤ 100 / ≤ 32
	single	≤ 32
	speedpipes	≤ 50, single Ø ≤ 14
	Non-combustible pipes with insulation made of mineral wool	≤ 323.9 (steel) ≤ 108.0 (copper)
	Non-combustible pipes with FEF insulation	≤ 219.1 (steel) ≤ 108.0 (copper)
	Non-combustible pipes with PIR insulation	≤ 219.1 (steel) ≤ 108.0 (copper)
	Combustible pipes	≤ 160
	Multilayer pipes	≤ 75
	HVAC split line combinations	✓
	Double solar pipes NanoSun <sup>2</sup>	DN 40

\*All specifications in mm

## System Flammotect 2 × 60 mm

### System data

	Flexible wall	Rigid wall	Rigid floor	Timber wall	Timber floor	Sandwich panel wall	Shaft wall
<b>Thickness of structural element</b>	≥ 100	≥ 100	≥ 150	≥ 100	≥ 140	≥ 100	≥ 40
<b>Sealing thickness</b>	≥ 120	≥ 120	≥ 150	≥ 120	≥ 150	≥ 120	≥ 120
<b>Maximum sealing size</b>	1400 × 2000 / 2000 × 1400, without cladded aperture edge: 600 × 800 / 800 × 600	1400 × 2000 / 2000 × 1400	1400 × 2000 / 910 × 8700	600 × 1000 / 1000 × 600	600 × 1000 / 420 × 3500	1000 × 1000	≥ 450 × 370

All specifications in mm

### Products



#### FLAMMOTECT-A Coating

5 kg pail – Art. no. 01155132  
12.5 kg pail – Art. no. 01155131



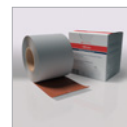
#### FLAMMOTECT-A Filler

5 kg pail – Art. no. 01155135  
12.5 kg pail – Art. no. 01155134  
310 ml cartridge – Art. no. 01155115  
600 ml flow pack – Art. no. 01155153



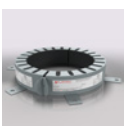
#### FLAMMOTECT-A Solid emulsion

5 kg pail – Art. no. 01155121  
12.5 kg pail – Art. no. 01155136



#### NBR-plus Fire protection wrap

Roll, 5 m × 125 mm  
(separable into 2 × 62.5 mm)  
– Art. no. 0760150133  
Roll, 10 m × 125 mm  
(separable into 2 × 62.5 mm)  
– Art. no. 01261941



#### AWM II fire protection collar

Ø 32 mm – Ø 160 mm

Dimensions [mm]	Inner Ø collar [mm]	Outer Ø collar [mm]	Overall height [mm]	Number of tabs [n]	Art. no.
32	36–40	50–54	26.0	2	01142032
40	44–48	58–62	26.0	2	01142040
50	54–57	68–71	26.0	2	01142050
63	67–70	94–97	26.0	4	01142063
75	79–83	106–110	26.0	4	01142075
90	94–100	132–138	26.6	4	01142090
110	114–120	155–161	26.6	4	01142110
125	129–135	172–178	40.0	4	01142125
140	144–152	200–206	40.0	6	01142140
160	164–169	220–225	40.0	6	01142160

# System Flammotect 2 × 60 mm

## Products



**KSL-W**  
**Fire protection wrap**

Roll, 10 m × 50 mm self-adhesive  
– Art. no. 15510  
Roll, 20 m × 50 mm self-adhesive  
– Art. no. 15520  
Roll, 10 m × 100 mm self-adhesive  
– Art. no. 15530



**Endless Collar**  
**Fire protection collar**

Set with 10 m fire protection strip, 3 m stainless steel strap and 18 fasteners –  
Art. no. 01145303



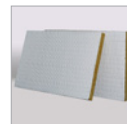
**Mineral wool A1**

Reaction to fire class in acc. with  
EN 13501-1: A1  
Melting point ≥ 1000 °C  
10 kg bag – Art. no. 01183000



**Mineral fibre board**  
**in acc. with EN 13162**

Criteria: density ≥ 150 kg/m<sup>3</sup>  
Reaction to fire class A1 in acc. with  
EN 13501:1  
Melting point ≥ 1000 °C.  
(TR10) tensile strength vertical to board  
surface ≥ 10 kPa according to EN 1607  
Thickness ≥ 60 mm



**Mineral fibre boards**

pre-coated on one side with  
FLAMMOTECT-A  
Dimensions 1000 × 600 × 60 mm  
Box with 4 pcs. – Art. no. 01182165



**Label**

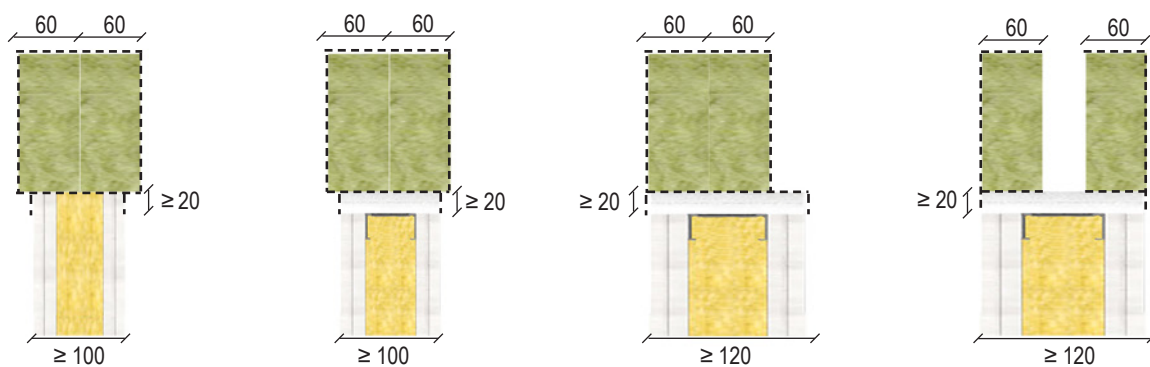
1 piece – Art. no. 14003

## Design variants

All specifications in mm

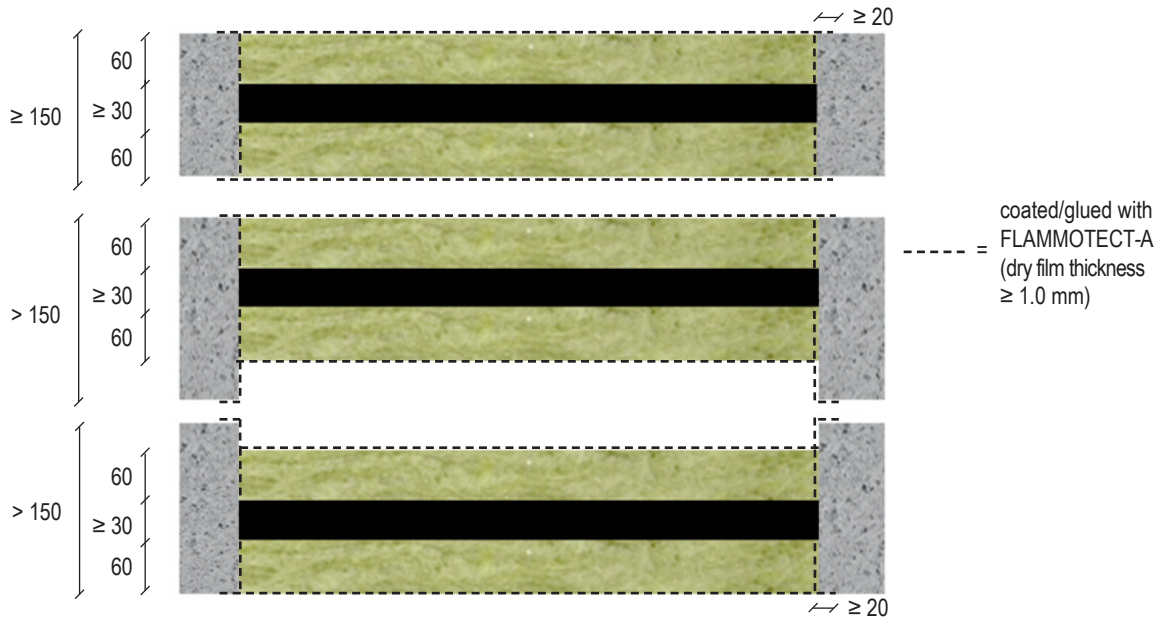
### Flexible wall and rigid wall

----- = coated with FLAMMOTECT-A  
(dry film thickness ≥ 1.0 mm)

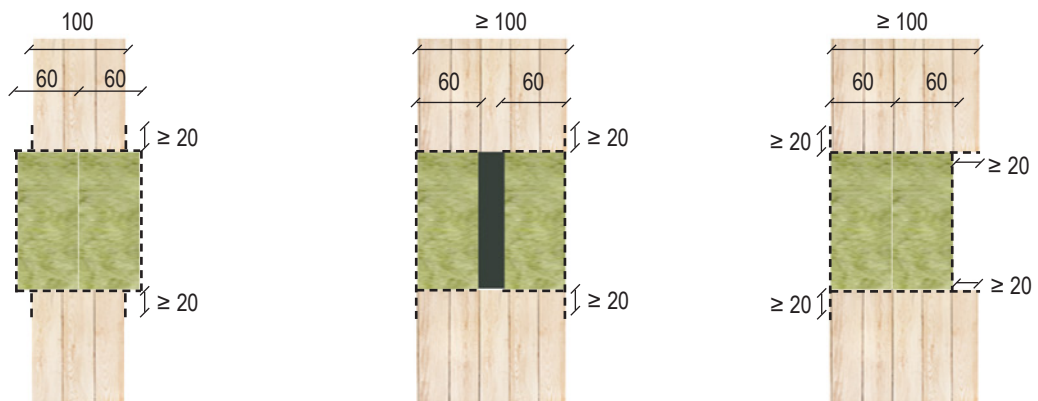


# System Flammotect 2 × 60 mm

## Rigid floor

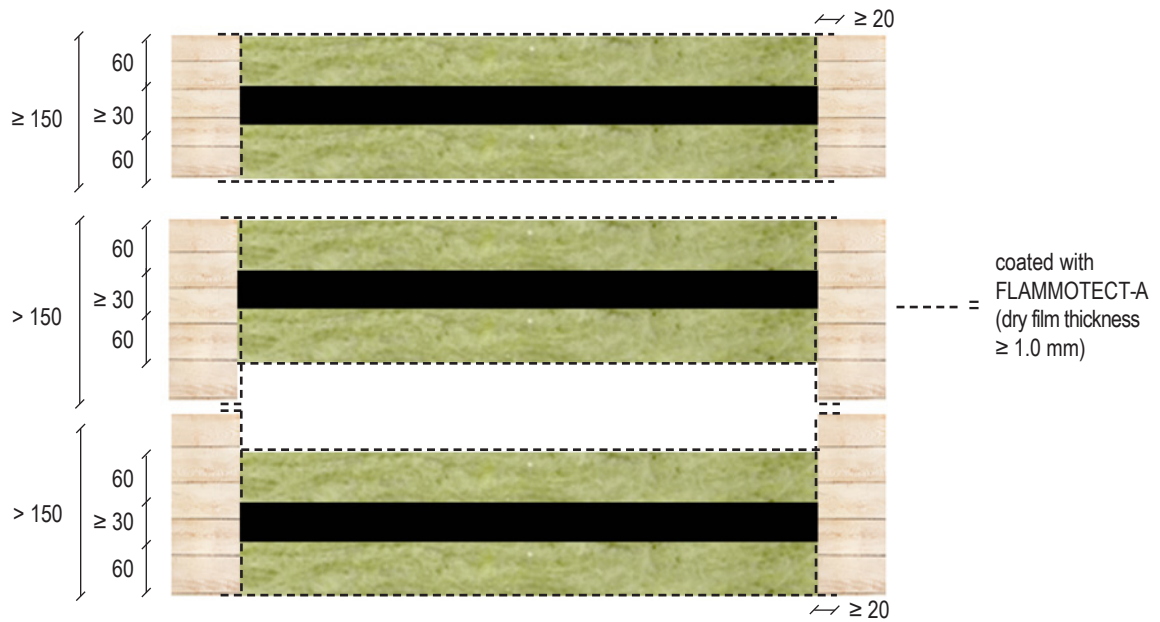


## Timber wall

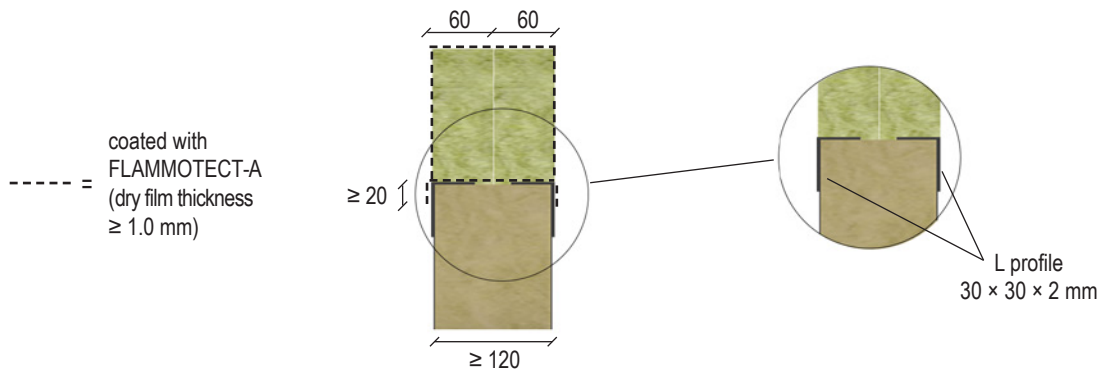


# System Flammotect 2 × 60 mm

## Timber floor



## Sandwich panel wall



## System Flammotect 2 × 60 mm

### Initial supports

Services	Wall	Floor
<b>Cables, cable bundles, cable support systems</b>	650	
Multilayer pipes		
Non-combustible pipes with mineral fibre insulation		
Non-combustible pipes with FEF oder PIR insulation		
<b>Combustible pipes</b>	500	
Double solar pipes NanoSun <sup>2</sup>		
Electrical installation conduits		
<b>Coaxial cables and wave guides</b>	250	
speedpipes		
HVAC split line combinations		

All specifications in mm

### Reduced clearance requirements

To facilitate installation we recommend spacing distances of at least 100 mm between services and to the aperture edge.

<b>Cables, cable bundles, cable support systems</b>	to each other	0 (100 mm between vertically aligned cable trays)
	to aperture edge	0
	to non-combustible pipes	50
	to combustible pipes with fire protection collar	20
<b>Electrical installation conduits</b>	to each other	0
<b>Non-combustible pipes</b>	to each other	0
<b>Combustible pipes with fire protection collar</b>	to each other	50
<b>HVAC split line combinations</b>	to each other	50
<b>All other services</b>	to aperture edge	25

All specifications in mm

All other spacing distances  $\geq 100$  mm. Consult the installation manual for a full list of all spacing distances.  
All specifications refer to distances between the respective insulations and additional measures if applicable.

## System Flammotect 2 × 60 mm

### Design variants (Fire resistance class EI 120)

Services	Dimensions	Fire protection measures	
Cables		Wall	Floor
Cables	Ø ≤ 21 mm	FLAMMOTECT-A fire protection coating 100 mm × 1 mm on both sides	
	Ø ≤ 80 mm	FLAMMOTECT-A fire protection coating 200 mm × 2 mm on both sides	
Cable bundles	Ø ≤ 100/21 mm	FLAMMOTECT-A fire protection coating 100 mm × 1 mm on both sides	
Single cables (subsequent installation)	Ø ≤ 21 mm	no additional measures required	
Coaxial cables / wave guides		Wall	Floor
All types	Ø ≤ 28 mm	FLAMMOTECT-A fire protection coating 200 mm × 2 mm on both sides	
RADIAFLEX RFS	Ø ≤ 48.2 mm	FLAMMOTECT-A fire protection coating 100 mm × 1 mm on both sides	FLAMMOTECT-A fire protection coating 200 mm × 1 mm on both sides
		–	Lamella mat ≥ 250 × 20–30 mm on both sides
CELLFLEX RFS	Ø ≤ 50.3 mm	FLAMMOTECT-A fire protection coating 100 mm × 1 mm on both sides	FLAMMOTECT-A fire protection coating 200 mm × 1 mm on both sides
		–	Lamella mat ≥ 250 × 20–30 mm on both sides
HELIAX CommScope	Ø ≤ 51.1 mm	FLAMMOTECT-A fire protection coating 100 mm × 1 mm on both sides	FLAMMOTECT-A fire protection coating 200 mm × 1 mm on both sides
		–	Lamella mat ≥ 250 × 20–30 mm on both sides
Electrical installation conduits		Wall	Floor
Conduits made of plastic, single	Ø ≤ 32 mm with/without cables	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 1 layer	Fire protection wrap NBR-plus Width 125 mm, 1 × 1 layer
	Ø ≤ 63 mm with/without cables	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers	–
Conduits made of plastic, bundled	Ø ≤ 100 mm, conduit Ø ≤ 32 mm with/without cables	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers
Conduits made of steel, single	Conduit Ø ≤ 32 mm with/without cables	Lamella mat ≥ 250 × 30 mm on both sides (LS/LI)	
speedpipes		Wall	Floor
speedpipes, single or bundled, with/without cables	Bundle Ø ≤ 50 mm, Single pipe Ø ≤ 14 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 1 layer	Fire protection wrap NBR-plus Width 125 mm, 1 × 1 layer
Non-combustible pipes with mineral fibre pipe shell (CS) Bulk density ≥ 80 kg/m <sup>3</sup> , melting point ≥ 1000 °C, class min. A2		Wall	Floor
Copper, steel, stainless steel, cast iron	Ø ≤ 88.9. Insulation thickness: 20–30 mm	no additional measures required	
	Ø ≤ 108.0. Insulation thickness: 30–40 mm		
Steel, stainless steel, cast iron	Ø ≤ 170.0. Insulation thickness: ≥ 40 mm	–	Protective insulation with lamella mat 500 × 30 on upper side

# System Flammotect 2 × 60 mm

Services	Dimensions	Fire protection measures	
Non-combustible pipes with mineral fibre insulation (LS/LI/CS/CI) Bulk density ≥ 80 kg/m <sup>3</sup> , melting point ≥ 1000 °C, class min. A2		Wall	Floor
Copper, steel, stainless steel, cast iron	Ø ≤ 42.0 mm	Lamella mat ≥ 200 × 20–30 mm on both sides	Lamella mat ≥ 425 × 30–100 mm on both sides
	Ø ≤ 54.0 mm		Lamella mat ≥ 750 × 30–100 mm on both sides + protective insulation made of lamella mat 500 × 30 mm
	Ø ≤ 88.9 mm	Lamella mat ≥ 450 × 30–100 mm on both sides	Lamella mat ≥ 1000 × 30 mm on both sides + protective insulation made of lamella mat 500 × 30 mm
	Ø ≤ 108.0 mm	Lamella mat ≥ 1000 × 30 mm on both sides + protective insulation made of lamella mat 500 × 30 mm	
Steel, stainless steel, cast iron	Ø ≤ 114.3 mm	Lamella mat ≥ 450 × 30–100 mm on both sides	Lamella mat ≥ 425 × 30–100 mm on both sides
	Ø ≤ 170.0 mm	Lamella mat ≥ 1000 × 60 mm on both sides + protective insulation made of lamella mat 500 × 30 mm	Lamella mat ≥ 1175 × 30 mm on both sides
	Ø ≤ 219.1 mm	Lamella mat ≥ 1200 × 30–100 mm on both sides	
	Ø ≤ 323.9 mm	–	Lamella mat ≥ 1250 × 60 mm on both sides + protective insulation made of lamella mat 1000 × 60 mm
Non-combustible pipes with FEF insulation in acc. with EN 14304 (CS)		Wall	Floor
Copper, steel, stainless steel, cast iron	Ø ≤ 54.0 mm, insulation thickness 19–38 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers
	Ø ≤ 60.0 mm, insulation thickness 13–40 mm	–	
	Ø ≤ 88.9 mm, insulation thickness 19–38 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers	Fire protection wrap NBR-plus Width 125 mm, 1 × 2-layers (EI 90)
	Ø ≤ 88.9 mm, insulation thickness 25 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers
	Ø ≤ 88.9 mm, insulation thickness 9–32 mm	–	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers + protective insulation FEF 500 × 30 mm
Steel, stainless steel, cast iron	Ø ≤ 88.9 mm, insulation thickness 19–38 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers (EI 90)
	Ø ≤ 114.3 mm, insulation thickness 19–38 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers + protective insulation FEF 250 × 19 mm	–
	Ø ≤ 159 mm, insulation thickness 25–38 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers + protective insulation FEF 250 × 19 mm	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers + protective insulation FEF 250 × 25 mm (EI 90)
	Ø ≤ 219.1 mm, insulation thickness 25–38 mm	Fire protection wrap NBR-plus Width 62.5 mm, 2 × 2 layers + protective insulation FEF 600 × 38 mm	Fire protection wrap NBR-plus Width 125 mm, 1 × 2 layers + protective insulation FEF 250 × 38 mm (EI 90)
Non-combustible pipes with FEF insulation ArmaFlex Protect (LS/CS)		Wall	Floor
Copper, steel, stainless steel, cast iron	Ø ≤ 22.0 mm	ArmaFlex Protect ≥ 1000 × 20 mm	

## System Flammotect 2 × 60 mm

Services	Dimensions	Fire protection measures	
		Wand	Decke
<b>Non-combustible pipes with PF insulation in acc. with EN 14314</b>			
Copper, steel, stainless steel, cast iron	Ø ≤ 28.0 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 1 layer	<b>Fire protection wrap NBR-plus</b> Width 125 mm, 1 × 1 layer
	Ø ≤ 54.0 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 2 layers	<b>Fire protection wrap NBR-plus</b> Width 125 mm, 1 × 2 layers
<b>Non-combustible pipes with PIR insulation in acc. with EN 14308 (CS)</b>			
Copper, steel, stainless steel, cast iron	Ø ≤ 42.0 mm, insulation thickness 20 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 2 layers (EI 90)	–
	Ø ≤ 42.0 mm, insulation thickness 60 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 3 layers	
	Ø ≤ 54.0 mm, insulation thickness 30 mm	–	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 2 layers
	Ø ≤ 88.9 mm, insulation thickness 40 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 2 layers (EI 90)	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 2 layers
	Ø ≤ 88.9 mm, insulation thickness 100 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 4 layers	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 4 layers (EI 90)
Steel, stainless steel, cast iron	Ø ≤ 219,1 mm, insulation thickness 60–100 mm	<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 4 layers	
<b>HVAC split line combinations</b>			
		<b>Wall</b>	<b>Floor</b>
Copper pipes (2 × Ø 18/18 mm) pre-insulated with PEF (9 mm) + 1 pipe PVC (Ø 25 mm) + 3 cables (Ø ≤ 14 mm)		<b>Fire protection wrap NBR-plus</b> Width 62.5 mm, 2 × 2 layers	<b>Fire protection wrap NBR-plus</b> Width 125 mm, 1 × 2 layers
<b>Combustible pipes with/without soundproofing tube and fire protection collar</b>			
		<b>Wall</b>	<b>Floor</b>
PVC-U, PVC-C, PE-HD, ABS, SAN+PVC PP	Ø ≤ 160 mm	<b>Fire protection collar AWM II</b> on both sides (EI 90)	<b>Fire protection collar AWM II</b> on lower side (EI 90)
Geberit Silent dB20 Geberit Silent Pro Geberit Silent PP Poloplast POLO-KAL NG Poloplast POLO-KAL XS Valsir Triplus Wavin SiTech+	Ø ≤ 160 mm		
REHAU RAUPIANO PLUS REHAU RAUPIANO LIGHT REHAU RAUSILENTO Wavin AS Wavin AS+ GF Silenta Premium Hakan Silenta Premium Pipelife MASTER 3 PLUS KÉ KELIT PHONEX AS	Ø ≤ 160 mm		–
REHAU RAUPIANO LIGHT REHAU RAUSILENTO CONEL DRAIN Poloplast POLO-KAL 3S GF Silenta Premium Hakan Silenta Premium	Ø ≤ 110 mm		<b>Fire protection collar AWM II</b> on lower side (EI 90)

# System Flammotect 2 × 60 mm

Services	Dimensions	Fire protection measures	
Combustible pipes with/without soundproofing tube and fire protection wrap		Wall	Floor
PVC-U, PVC-C, PE-HD, ABS, SAN+PVC PP	Ø ≤ 110 mm		
Geberit Silent dB20 Geberit Silent Pro Geberit Silent PP Poloplast POLO-KAL NG Poloplast POLO-KAL XS REHAU RAUPIANO PLUS REHAU RAUPIANO LIGHT REHAU RAUSILENTO CONEL DRAIN GF Silenta Premium Hakan Silenta Premium Pipelife MASTER 3 KE KELIT PHONEX AS Wavin SITECH+	Ø ≤ 110 mm	<b>Fire protection wrap KSL-W</b> on both sides Ø ≤ 50 mm 2 layers Ø ≤ 110 mm 4 layers	<b>Fire protection wrap KSL-W</b> on lower side Ø ≤ 50 mm 2 layers Ø ≤ 110 mm 4 layers
Combustible pipes with FEF insulation in acc. with EN 14304 (B-s3, d0) and fire protection collar		Wall	Floor
PP	Ø ≤ 110 mm, insulation thickness 6–32 mm	<b>Fire protection collar AWM II</b> on both sides	<b>Fire protection collar AWM II</b> on lower side
Combustible pipes with FEF insulation in acc. with EN 14304 (B-s3, d0) and fire protection wrap (CS)		Wall	Floor
PP-H	Ø ≤ 75 mm, insulation thickness 9.0–22.0 mm	<b>Fire protection wrap KSL-W</b> on both sides 3 layers	–
Geberit Silent dB20 REHAU RAUPIANO LIGHT REHAU RAUSILENTO CONEL DRAIN	Ø ≤ 160 mm, insulation thickness 17.0–19.0 mm		<b>Fire protection wrap KSL-W</b> on both sides Ø ≤ 50 mm 2 layers Ø ≤ 110 mm 4 layers Ø ≤ 135 mm 5 layers Ø ≤ 160 mm 6 layers
Geberit Silent PP Hakan Silenta Premium	Ø ≤ 125 mm, insulation thickness 17.0–18.5 mm	–	
Geberit Silent Pro Pipelife MASTER 3 PLUS Poloplast POLO-KAL NG Poloplast POLO-KAL XS Wavin SITECH Wavin SITECH+ Wavin AS+	Ø ≤ 110 mm, insulation thickness 17.0–18.0 mm	–	
Multilayer pipes with FEF insulation in acc. with EN 14304 (B-s3, d0) (CS)		Wall	Floor
Geberit Mepla	Ø ≤ 32 mm, insulation thickness 8–35 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
	Ø ≤ 75 mm, insulation thickness 9–40 mm	<b>Fire protection wrap KSL-W</b> on both sides 2 layers	<b>Fire protection wrap KSL-W</b> on lower side 2 layers
REHAU RAUTITAN stabil	Ø ≤ 32 mm, insulation thickness 8–35 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
	Ø ≤ 40 mm, insulation thickness 9–35 mm	<b>Fire protection wrap KSL-W</b> on both sides 2 layers	<b>Fire protection wrap KSL-W</b> on lower side 2 layers
KE KELIT KELOX	Ø ≤ 32 mm, insulation thickness 8–35 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
	Ø ≤ 75 mm, insulation thickness 9–40 mm	<b>Fire protection wrap KSL-W</b> on both sides 2 layers	<b>Fire protection wrap KSL-W</b> on lower side 2 layers
Henco	Ø ≤ 32 mm, insulation thickness 8–32 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	–
Henco	Ø ≤ 32 mm, insulation thickness 6–13 mm		

## System Flammotect 2 × 60 mm

Services	Dimensions	Fire protection measures	
		Wall	Floor
<b>Multilayer pipes with PEF insulation (CS)</b>			
Geberit Mepla	Ø ≤ 32 mm, insulation thickness 6–13 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
REHAU RAUTITAN stabil	Ø ≤ 32 mm, insulation thickness 4–26 mm		
KE KELIT KELOX	Ø ≤ 32 mm, insulation thickness 4–13 mm		
Henco	Ø ≤ 32 mm, insulation thickness 6–13 mm		
<b>Multilayer pipes with PF insulation (LS)</b>			
Geberit Mepla	Ø > 40 – ≤ 75 mm, insulation thickness 30 mm	<b>Fire protection wrap KSL-W</b> on both sides 2 layers	<b>Fire protection wrap KSL-W</b> on lower side 2 layers
FRÄNKISCHE alpex F50 PROFI	Ø ≤ 32 mm, insulation thickness 20 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
FRÄNKISCHE alpex L	Ø ≤ 75 mm, insulation thickness 30 mm	<b>Fire protection wrap KSL-W</b> on both sides 2 layers	<b>Fire protection wrap KSL-W</b> on lower side 2 layers
Uponor Uni Pipe PLUS	Ø 32 mm, insulation thickness 20–30 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
Henco	Ø ≤ 90 mm, insulation thickness 15–20 mm	<b>Fire protection wrap KSL-W</b> on both sides 1 layer	<b>Fire protection wrap KSL-W</b> on lower side 1 layer
	Ø ≤ 90 mm, insulation thickness 30 mm	<b>Fire protection wrap KSL-W</b> on both sides 2 layers	<b>Fire protection wrap KSL-W</b> on lower side 2 layers
<b>Multilayer pipes with mineral fibre pipe shell (CS)</b> Bulk density ≥ 80 kg/m <sup>3</sup> , melting point ≥ 1000 °C, class min. A2			
Geberit Mepla	Ø ≤ 75 mm	<b>pipe shell</b> CS × ≥ 20 mm	
<p>Fire protection collars AWM II are fastened with coarse thread screws or continuous threaded rods.</p> <p>Fire protection wraps KSL-W must be installed with 0–5 mm protrusion from the seal.</p> <p>Fire protection wraps NBR-plus with a width of 62.5 mm must be installed with 12.5–15 mm protrusion from the seal.</p> <p>Fire protection wraps NBR-plus with a width of 125 mm must be installed with 50 mm protrusion from the seal.</p>			

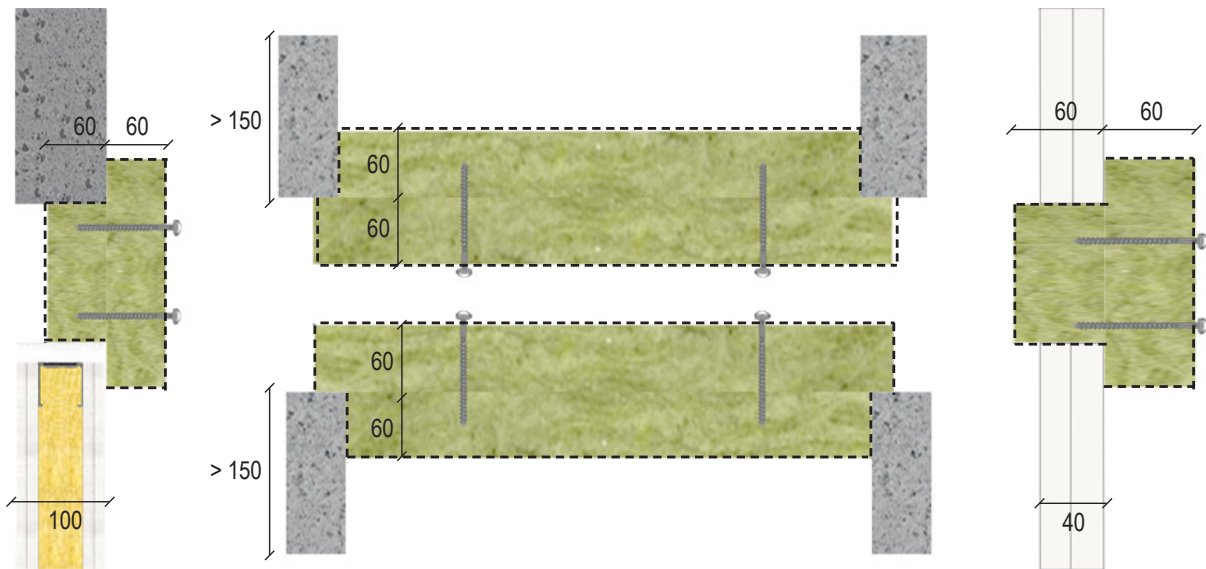
# System Flammotect 2 × 60 mm

Design variants for one-sided installation  
(fire resistance class EI 90)

Flexible wall and rigid wall

Rigid floor

Shaft wall



----- = coated/glued with FLAMMOTECT-A (dry film thickness ≥ 1.0 mm)

Cables in one-sided installation		Wall	Floor (lower side)	Floor (upper side)	Shaft wall
Cables	Ø ≤ 21 mm	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 1 mm on both sides	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 1 mm on both sides		Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 1 mm on both sides
	Ø ≤ 50 mm	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 2 mm on both sides*	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 2 mm on both sides		–
	Ø ≤ 80 mm	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 2 mm on both sides*	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 2 mm on both sides	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 2 mm on both sides	–
Cable bundles with cables Ø ≤ 21 mm	Ø ≤ 100 mm	Fire protection coating <b>FLAMMOTECT-A</b> 150 mm × 1 mm on both sides			
		Fire protection wrap <b>NBR-plus</b> Width 2 × 62.5 mm or 1 × 125 mm, 1 layer	Fire protection wrap <b>NBR-plus</b> Width 2 × 62.5 mm or 1 × 125 mm, 1 layer		Fire protection wrap <b>NBR-plus</b> Width 2 × 62.5 mm or 1 × 125 mm, 1 layer

\* Seal thickness raised to 3 × 60 mm



**NOTE:**

The presented data are merely intended to serve as an overview. For a comprehensive presentation please consult the installation instructions.