Firetect®

EKSPLUATĀCIJAS ĪPAŠĪBU DEKLARĀCIJA

(DoP)

DoP CPR-14/0251-aptinamais materiāls

Versija 19/2

1. Unikālā produkta identifikācija: **Firetect® Wrap + Wrap-'n-roll**

2. Paredzētais pielietojums: atveres aizdarīšana konstruktīvajām atverēm cauruļu šķērsošanas vietās, lai izveidotu ugunsgrēka blīvējumu un atjaunotu ugunsizturību

- standarta elastīgās sienas ≥ 100mm
- standarta cietas sienas ≥ 100 mm
- standarta cietas grīdas ≥ 150 mm

3. Ražotājs: KLF Building Products BV
Techniekweg 11, 4207 HC Gorinchem, Nīderlande

4. Pilnvarotais pārstāvis: nav piemērojams

5. AVCP sistēma: 1. sistēma

6a. Saskaņotais standarts: nav piemērojams
Paziņotā institūcija: nav piemērojams

6b. Eiropas novērtējuma dokuments (EAD): 350454-00-1104
Eiropas tehniskais novērtējums (ETA): ETA-14/0251
Veiktspējas noturības sertifikāts: 0960-CPR-SKGIKOB.011130.01.NL
Tehniskā novērtējuma institūcija (TAB): SKG-IKOB
Paziņotās institūcijas identifikācija: Nr. 0960

7. Deklarētās veiktspējas:

pamatprasības	īpašības	veiktspējām
BWR 1 Mehāniskā izturība + stabilitāte		neattiecas
BWR 2 Drošība ugunsgrēka gadījumā		
EN 13501-1	ugunsreakcija	F. klase
EN 13501-2	ugunsizturība	uz vienu testētu komplektu; EI 30 līdz EI 240,
	pielietošanas sfēra	skatīt BWR2 PIELIKUMU + A. PIELIKUMU.
BWR 3 Higiēna, veselība + vide		IA1, S/W3
EAD 350454-00-1104, §2.2.3	gaisa caurlaidība	npd
EAD 350454-00-1104, §2.2.4	ūdens caurlaidība	npd
EAD 350454-00-1104, §2.2.5	bīstamu vielu saturs, emisijas un/vai izdalīšanās	nav bīstams saskaņā ar Regulu (EK) Nr. 1272/2008 saskaņā ar CLP noteikumiem
BWR 4 Drošība + pieejamība izmantojot		
EAD 350454-00-1104, §2.2.6	mehāniskā izturība + stabilitāte	npd
EAD 350454-00-1104, §2.2.7	izturība pret triecienu / kustību	npd
EAD 350454-00-1104, §2.2.8	saķere	npd
EAD 350454-00-1104, §2.2.9	izturība:	Y_1 (izmantošanai iekštelpās)
BWR 5 Aizsardzība pret troksni		
EAD 350454-00-1104, §2.2.10	skaņas izolācija	npd
BWR 6 Enerģijas ekonomija + siltuma aizture		
EAD 350454-00-1104, §2.2.11	termālās īpašības	npd
EAD 350454-00-1104, §2.2.12	ūdens tvaiku caurlaidība	npd
Vispārīgo aspektu attiecība pret piemērotību izmantošanai		
EAD 350454-00-1104, §1.2.2	pieņemtais darba mūžs paredzētajam lietojumam	10 gadi

npd= nav noteikta veiktspēja

8. Specifiska tehniskā dokumentācija: nav piemērojams

Identificētā produkta veiktspēja atbilst deklarētajai veiktspējai Šī ekspluatācijas īpašību deklarācija ir izsniegta saskaņā ar Regulu 305/2011, uz augstāk identificētā ražotāja atbildību.

Parakstījis ražotājs un ražotāja vārdā:

atruna

pielietošanas sfēra (FoA)	**Firetect® Wrap + Wrap-'n-roll**
	testēts un sertificēts ETA-14/0251; ugunsizturības veiktspēja un montāžas metodes izmantošanai:

konstruktīvais elements [1)]

ugunsizturīgās sienas saskaņā ar EN 1363-1	- elastīga siena ≥100mm; metāla vai koka kniedes, A tipa ģipškartona plātnes + sienu siltināšana - cieta siena ≥100 mm: bloki/betons/mūris, blīvums ≥ 600 kg/m^3 - cieta siena ≥150 mm: bloki/betons/mūris, blīvums ≥ 600 kg/m^3
ugunsizturīgās grīdas saskaņā ar EN 1363-1	- cieta grīda ≥ 150 mm: (gāz) betons, blīvums ≥ 600kg/m^3

[1)] konstruktīvais elements jāklasificē saskaņā ar EN 13501-2 nepieciešamais ugunsizturības periods

ugunsizturība

pielietošanas sfēra :

EI **30** t/m EI **240**: Aptīšana + Wrap-'n-roll

saskaņā ar EN 13501-2 / 1366-3

konstruktīvās atveres cauruļu šķērsojumiem: [2)]

- PE/PP/PVC	≤ Ø160mm	arī ģipškartona plāksne
- PP-R	≤ Ø125mm	
- PP-MD	≤ Ø160mm	arī ar cauruļu ligzdām
- PP-MX	≤ Ø160mm	arī ar cauruļu ligzdām
- aluPE-X	≤ Ø75mm	arī ar cauruļu izolāciju + ģipškartona plāksnes
- PE-Xa	≤ Ø32 (54) mm	arī ar cauruļu izolāciju
- varš	≤ Ø76mm	ar cauruļvadu izolāciju
- tērauds	≤ Ø219mm	ar cauruļvadu izolāciju

[2)] atbalsta pakalpojumi; attālinātais atbalsts: skatiet principiālo detaļu

ekoloģiskie raksturlielumi	BREEAM	LEED	VOC Francija	EN 717-1§	EMICODE	M1	Iekštelpu gaiss
protokolu piemēri, noklikšķiniet, lai skat	☑	☑	A+	E1		☑	Comfort GOLD

stiprinājumi	cieši aptīts ar līmlenti nostipriniet stikla vati vai akmens vati atsevišķi (neietīt!) ar tērauda stiepli	skatiet TDS
apdare	uzklājiet dūmu blīvējumu ap cauruli ar akrila vai ģipša blīvējumu uz 2 pusēm	skatiet TDS

produkta informācija

DoP produktu sertifikācija; vairāk informācijas par CE būvizstrādājumu sertifikāciju, izmantojot ETAfiretect.eu/certification
- pilna DoP versija: ekspluatācijas atbilstības deklarācija + BWR2 PIELIKUMS + A PIELIKUMS; pēc pieprasījuma
- tiešsaistes AD versija: atbilstības deklarācija + PIELIKUMS BWR2; citu informāciju iespējams lejupielādēt firetect.eu/download
- FoA grafiki; piemērotākie produkti fireseal tipam + EI veidam + produkts/kopīgās detaļas
- TDS: vispārīgi lietošanas norādījumi + produkta specifikācijas

Skatiet firetect.eu/downloadatjaunotas versijas; produktu izstrāde + ugunsdrošības testi KLF ir nepārtraukti procesi.
Sazinieties ar KLF, lai saņemtucitas EI prasības un (ne)standarta vai kompleksas prasības uzstādīšanas vietā; e-pasts: info@klf.nl

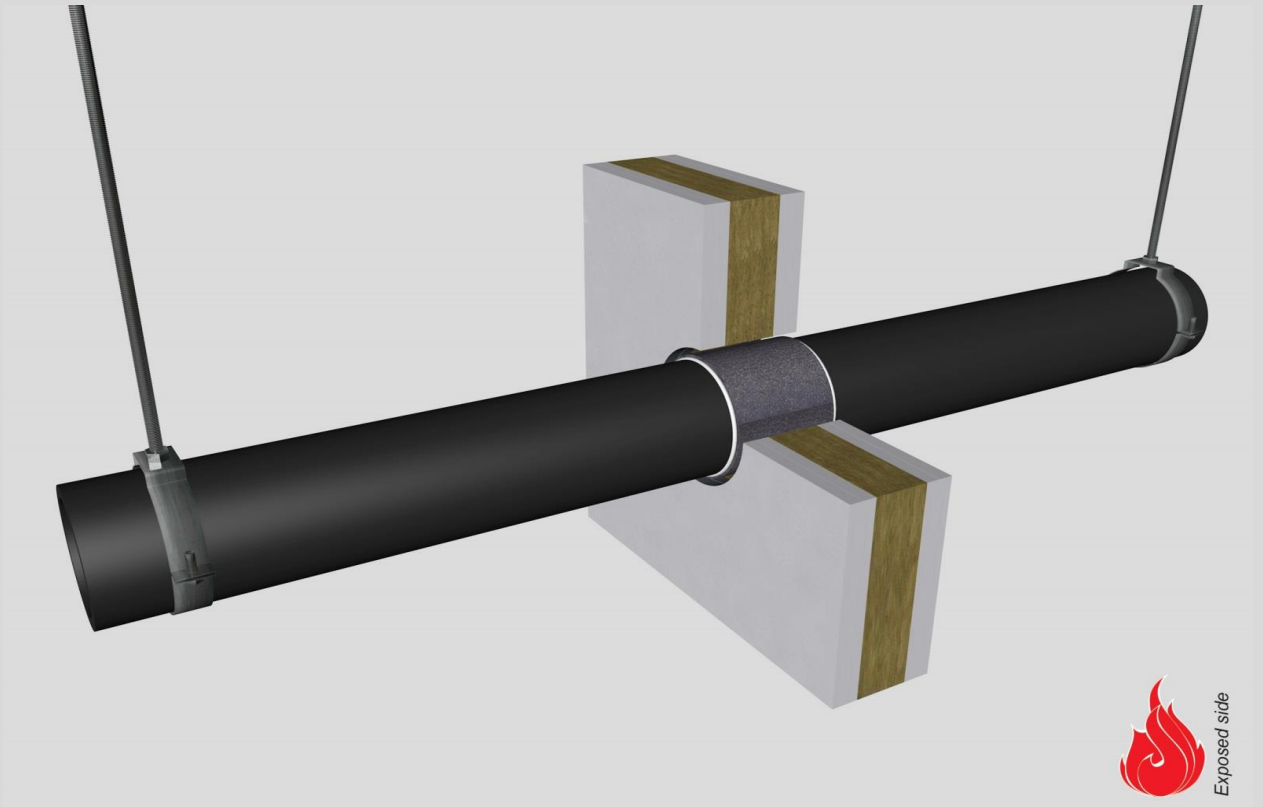
CE

ETA European Organisation for Technical Assessment

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	0286



PE + PP + PVC pipes

dØ (mm)	service type [1]	s1 (mm)	EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
up to											
Ø110	PE PVC PP	3,4 up to 10,0 2,7 up to 10,0 2,7 up to 6,3	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	132 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
max.											
Ø125	PE PVC PP	3,9 up to 11,7 3,1 up to 11,7 3,1 up to 7,1	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	133 mm	U/C + C/C	
individual test results											
Ø90	PE PVC PP	3,5 up to 8,2 3,0 up to 8,2 3,0 up to 8,2	EI 120	rigid walls ≥ 100 mm in FR mortar	π x Ø x	1	2 sides	-	200 x 1000 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
Ø110	PE	3,4	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	600 x 1200 mm	U/C + C/C	
				in PA board 2S 50 mm							

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm (wall) or ≤ 400mm (floor).

[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	0170

PE + PP + PVC pipes

dØ (mm)	service type [1]	s1 (mm)	EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
up to											
Ø110	PE PVC PP	3,4 up to 10,0 2,7 up to 10,0 2,7 up to 6,3	EI 180	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	120 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
Ø125	PE PVC PP	3,9 up to 11,7 3,1 up to 11,7 3,1 up to 7,1	EI 180	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	137 mm	U/C + C/C	
Ø140	PE PVC PP	4,9 up to 14,6 4,0 up to 14,6 4,0 up to 14,6	EI 180	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	176 mm	U/C + C/C	
max.											
Ø160	PE PVC PP	4,9 up to 14,6 4,0 up to 14,6 4,0 up to 14,6	EI 180	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	176 mm	U/C + C/C	
individual test results											
Ø110	PVC	3,4	EI 90	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	400 x 400 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
				in PA board 2S 50 mm							

* smokeseal Acrylic on 2 sides

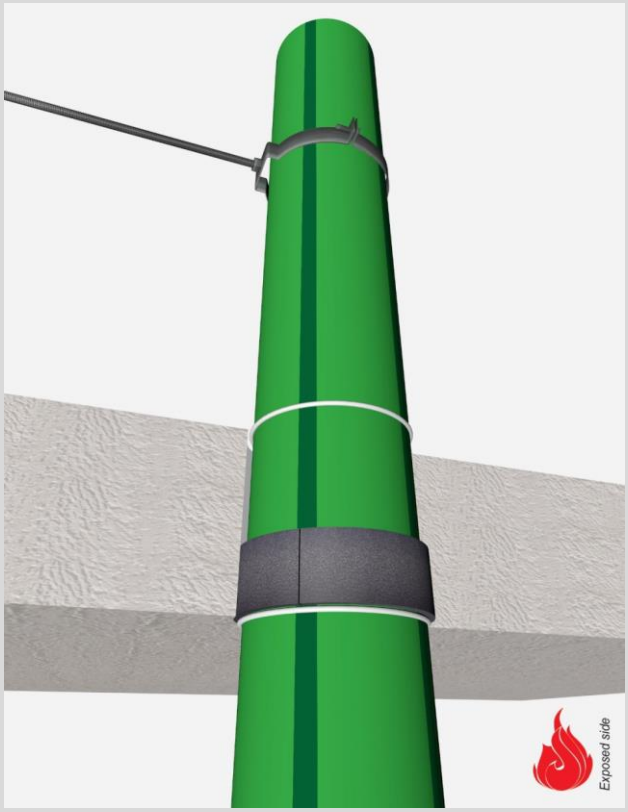
[1] Penetration services must be supported; support distance ≤ 400mm.

[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	24-55



PP-R pipes

service type dØ (mm)	s1 (mm)	pipe insulation min. 28 kg/m³ eg Uponor	EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
max.											
Ø125	11,4	-	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	132 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
	17,1	-	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	132 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 400mm.

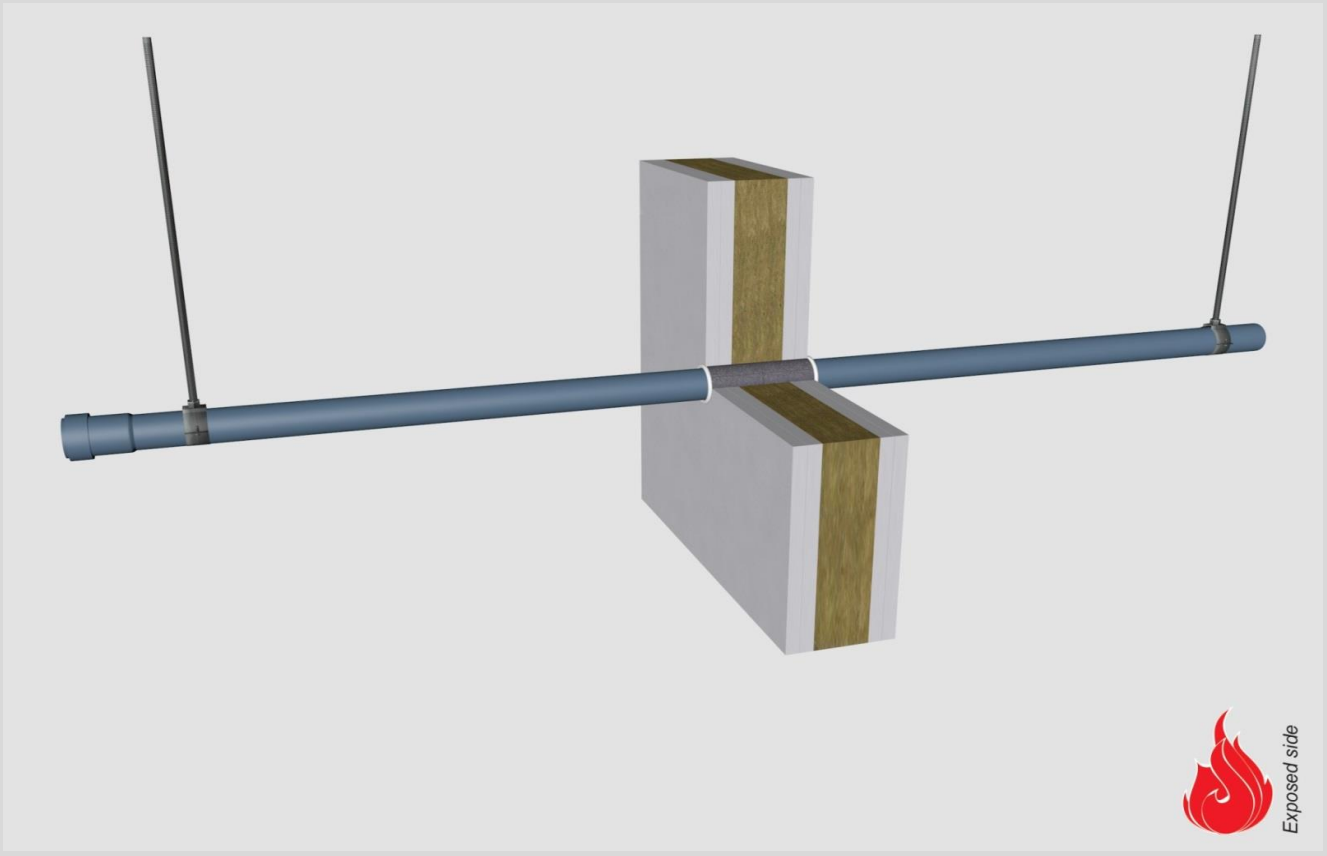
[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	19-61



PP-MD pipes

Wrap

service type dØ (mm)	s1 (mm)	pipe socket	EI	constructive element [2]	Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø32	1,8	-	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	36 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
			EI 180	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	44 mm	U/C + C/C	
Ø50	2,0	-	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	55 mm	U/C + C/C	
			EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	54 mm	U/C + C/C	
Ø75	2,6	-	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	79 mm	U/C + C/C	
			EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	79 mm	U/C + C/C	
max.											
Ø110	3,8	-	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	118 mm	U/C + C/C	
		socket on 2 sides	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	160 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

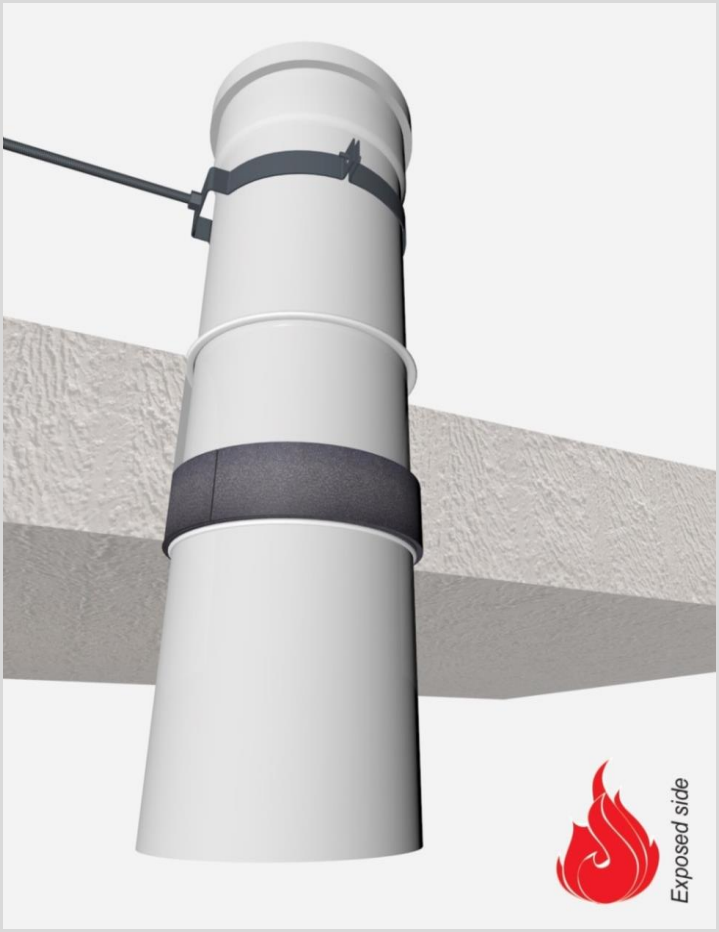
[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	22-20



PP-MD pipes

service type [1] dØ (mm)	s1 (mm)	pipe socket	EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø32	1,8	-	EI 180	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	44 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
Ø50	2,0	-	EI 240	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	54 mm	U/C + C/C	
Ø75	2,6	-	EI 240	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	79 mm	U/C + C/C	
Ø110	3,8	-	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	118 mm	U/C + C/C	
max.											
Ø160	5,4	-	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	180 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 400mm.

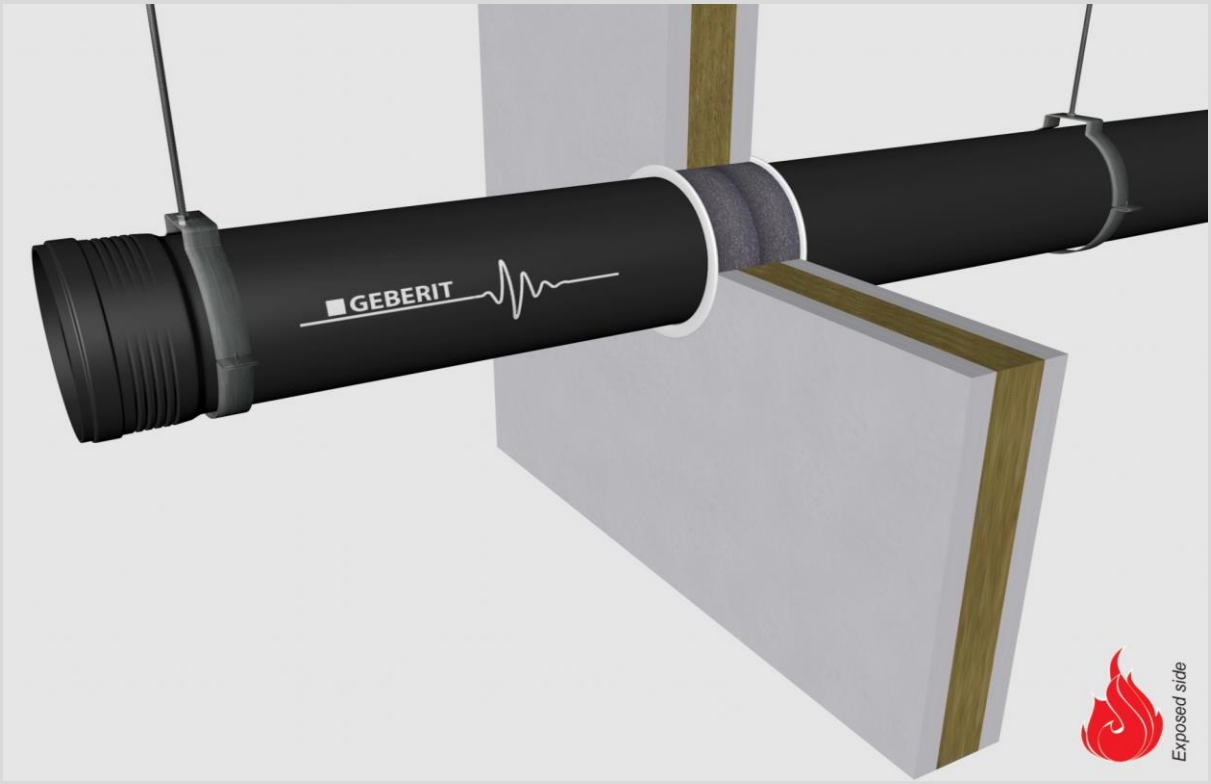
[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	23-25



PP-MX pipes

Wrap

service type [1] dØ (mm)	s1 (mm)	pipe socket exposed side	non-standard config.	EI	constructive element [2]	Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø50	2,7	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	60 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
		socket on 1 side	socket flush with wall	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	64 mm	U/C + C/C	
		socket on 1 side	socket flush with wall	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
Ø110	4,2	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	121 mm	U/C + C/C	
		-		EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	121 mm	U/C + C/C	
		socket on 1 side	socket flush with wall	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	130 mm	U/C + C/C	
		socket on 1 side	socket flush with wall	EI 60	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	130 mm	U/C + C/C	
Ø125	4,7	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	137 mm	U/C + C/C	
		-		EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	137 mm	U/C + C/C	
max.												
Ø160	5,7	-		EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	172 mm	U/C + C/C	
		-		EI 90	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	172 mm	U/C + C/C	
		socket on 1 side	socket flush with wall	EI 120	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	178 mm	U/C + C/C	
		socket on 1 side	socket flush with wall	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	178 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

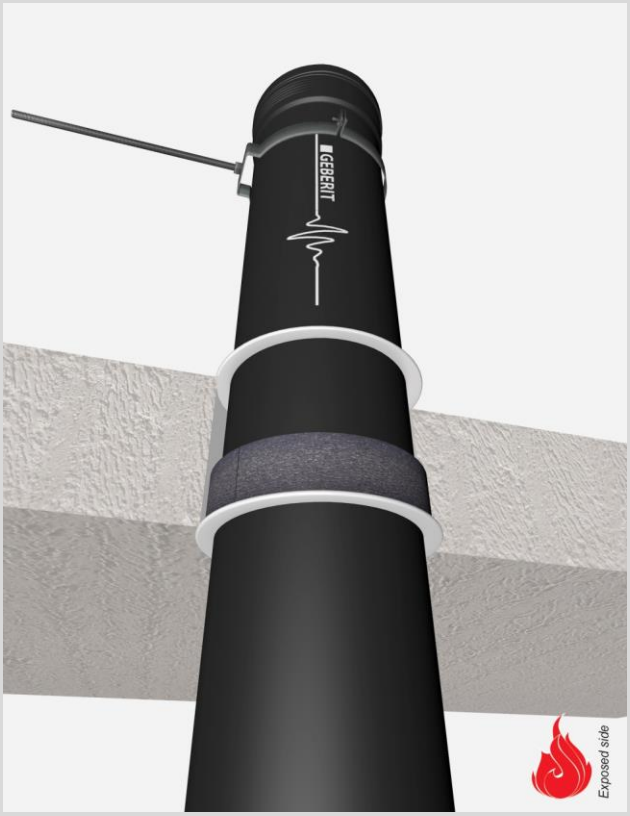
[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	24-34



PP-MX pipes

service type [1] dØ (mm)	s1 (mm)	pipe socket exposed side	non-standard config.	EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø50	2,7	-		EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	63 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		socket on 1 side	socket flush with floor	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	63 mm	U/C + C/C	
Ø110	4,2	-		EI 180	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	120 mm	U/C + C/C	
		socket on 1 side	socket flush with floor	EI 60	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	132 mm	U/C + C/C	
Ø125	4,7	-		EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	150 mm	U/C + C/C	
		socket on 1 side	socket flush with floor	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	150 mm	U/C + C/C	
max.												
Ø160	5,7	-		EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	180 mm	U/C + C/C	
		socket on 1 side	socket flush with floor	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	185 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 400mm.

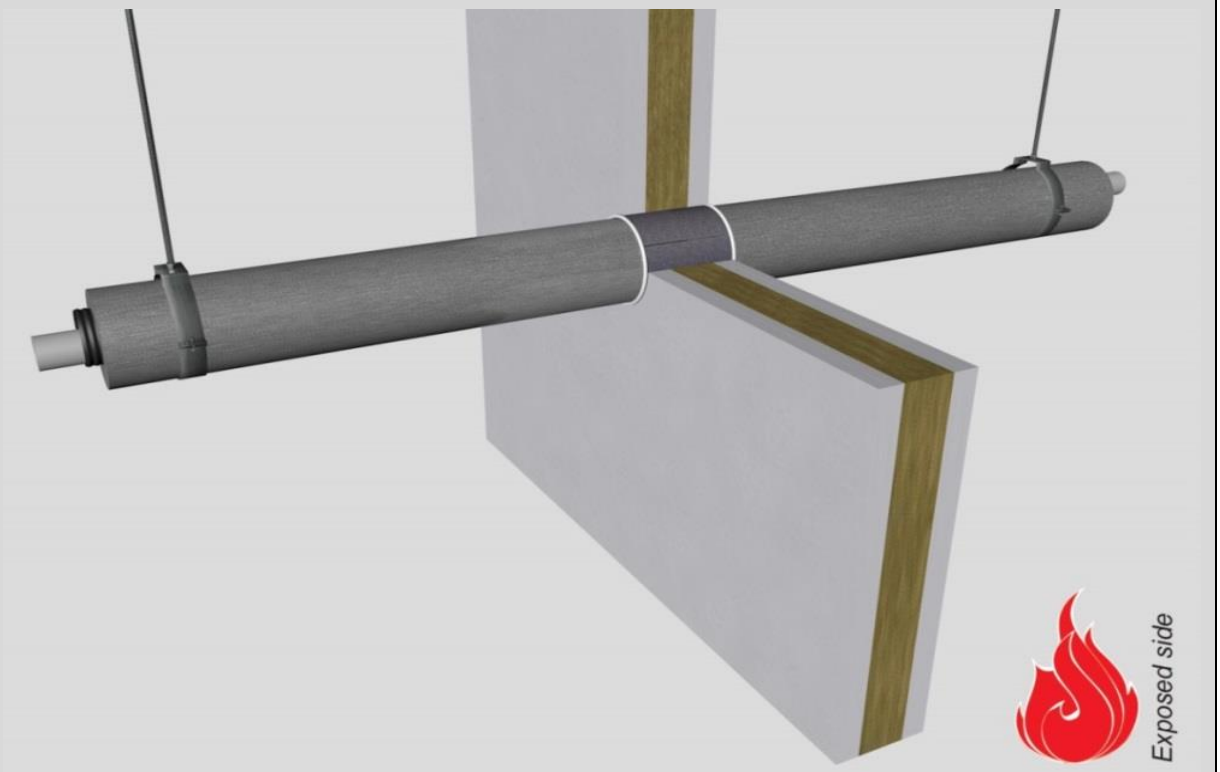
[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°
- 'eccentric to zero' position in opening is allowed

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	21-9



PE-Xa pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation min. 28 kg/m³ eg Uponor		EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
up to												
Ø15/28	2,5	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	32 mm	U/C + C/C	
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	32 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	56 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
Ø16/25	2,2	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	29 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	32 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	49 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
max.												
Ø32/54	4,4	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	58 mm	U/C + C/C	
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	63 mm	U/C + C/C	
		polyolefin 20mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	102 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	102 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

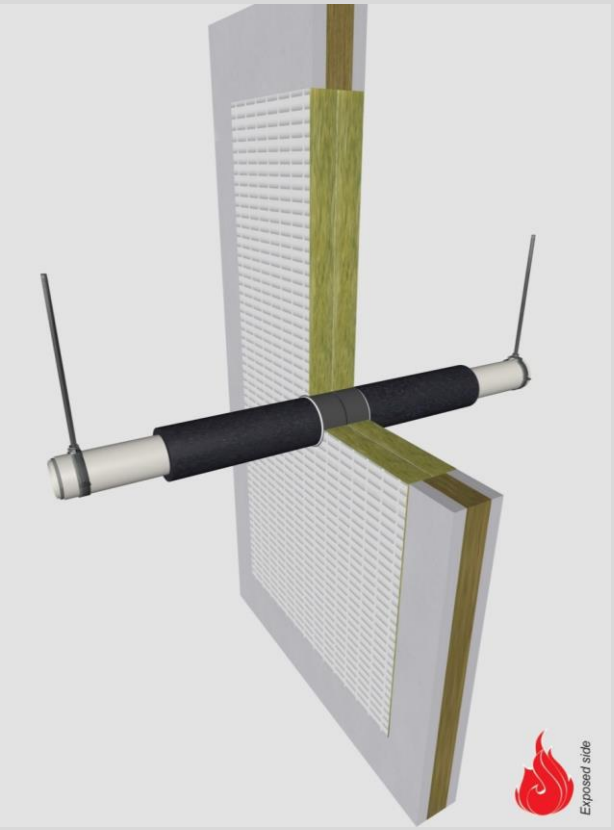
[1] Penetration services must be supported; support distance ≤ 500mm.

[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	0266



aluPE-X pipes

Wrap

service type [1] dØ (mm)	s1 (mm)	pipe insulation min. 60 kg/m³ eg Armaflex		EI	constructive element [2]	Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
up to												
Ø16	2,0	synth. rubber 13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	50 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	600x1200 mm	U/C + C/C	
Ø25	2,5	synth. rubber 13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	59 mm	U/C + C/C	
		13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	600x1200 mm	U/C + C/C	
		13mm	700 LS + LI + CS + CI	EI 90	rigid walls ≥ 100 mm							
					in FR mortar	π x Ø x	1	2 sides	*	200x1000 mm	U/C + C/C	
Ø63	6,0	synth. rubber 13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	97 mm	U/C + C/C	
		13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	600x1200 mm	U/C + C/C	
		13mm	700 LS + LI + CS + CI	EI 90	rigid walls ≥ 100 mm							
					in FR mortar	π x Ø x	1	2 sides	*	200x1000 mm	U/C + C/C	
max.												
Ø75	7,5	synth. rubber 13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	109 mm	U/C + C/C	
		13mm	700 LS + LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	600x1200 mm	U/C + C/C	
		13mm	700 LS + LI + CS + CI	EI 90	rigid walls ≥ 100 mm							
					in FR mortar	π x Ø x	1	2 sides	*	200x1000 mm	U/C + C/C	

in PA board 2S 50 mm

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

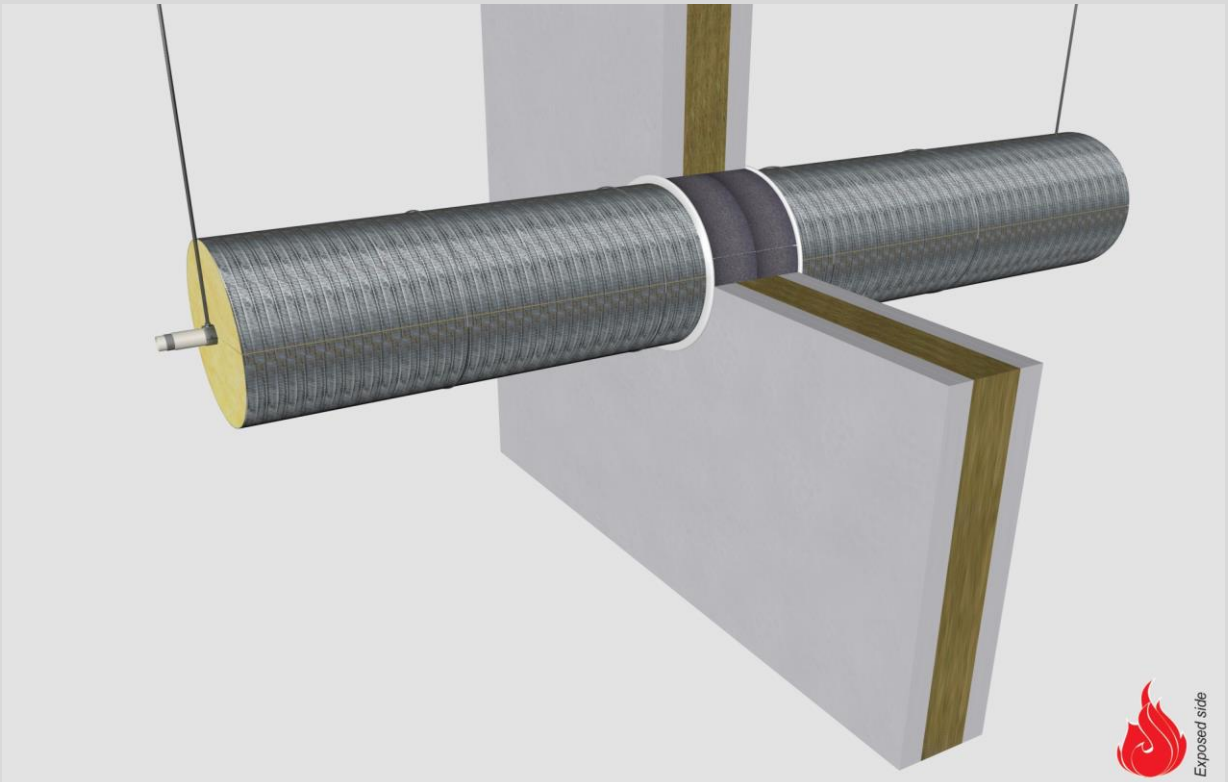
[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	23-2



aluPE-X pipes

Wrap

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø16	2,0	glass / rock wool 20mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	60 mm	U/C + C/C	
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	64 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	80 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	84 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	100 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	104 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	124 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	124 mm	U/C + C/C	
		60mm	00 LI + CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	148 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	148 mm	U/C + C/C	
		80mm	00 LI + CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	188 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	188 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
max.												
Ø75	7,5	glass / rock wool 20mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	119 mm	U/C + C/C	
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	123 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	139 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	143 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	159 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	163 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	183 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	183 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	207 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	207 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	247 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	247 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

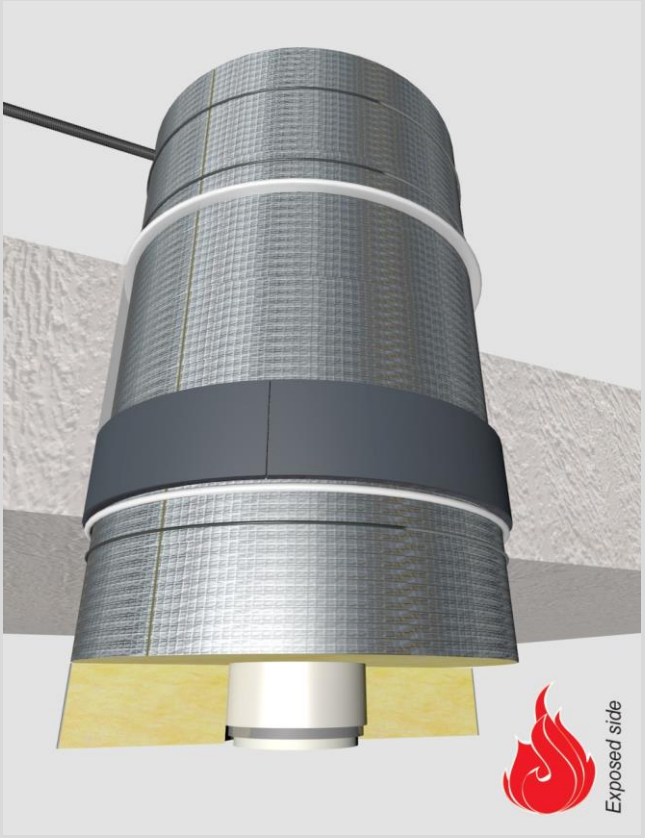
[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- angle: perpendicular + all angles between 90° and 45°

principl principle detail Firetect®

tested prop tested property	fire resistance
test metho test method	EN 1366-3
service no. service no.	22-10



aluPE-X pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø16	2,0	glass / rock wool 20mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	64 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		30mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	84 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	104 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	124 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	148 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	188 mm	U/C + C/C	
max.												
Ø75	7,5	glass / rock wool 20mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	123 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	143 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	163 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	183 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	207 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	247 mm	U/C + C/C	

Wrap

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

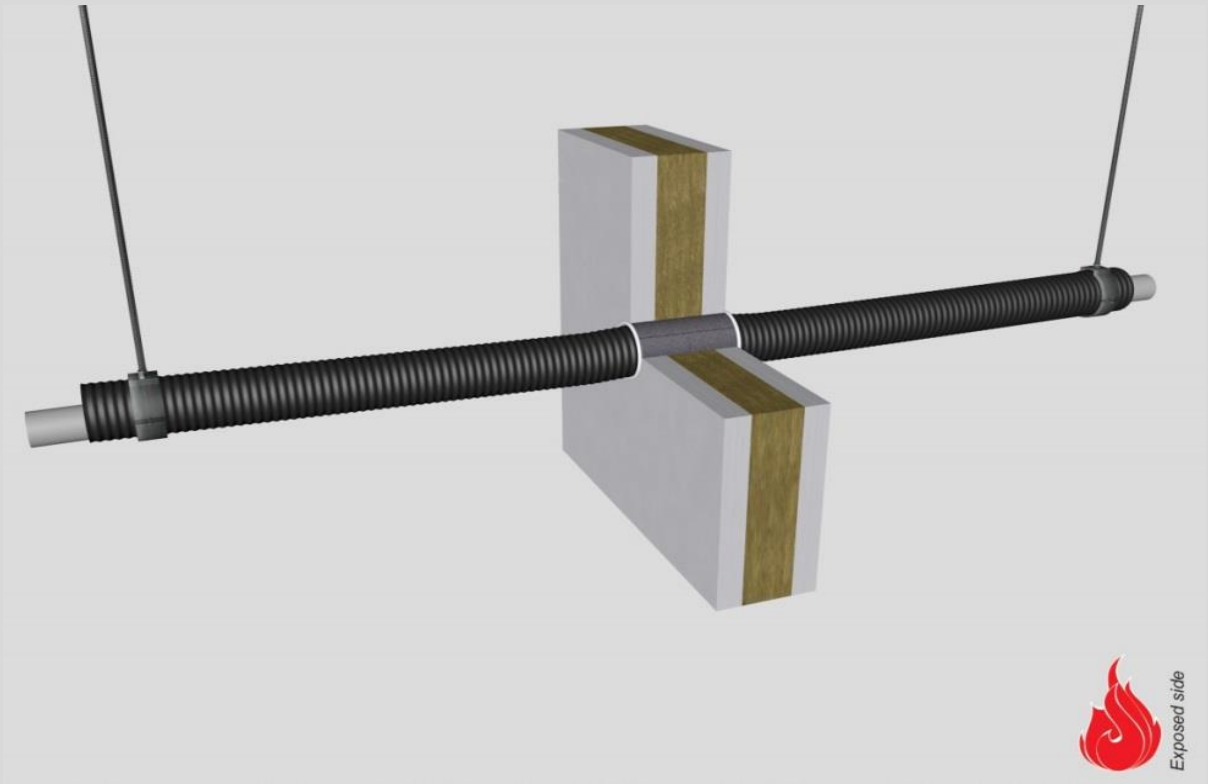
[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°
- 'eccentric to zero' position in opening is allowed

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	19-17



PE-Xa pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation min. 28 kg/m³ eg Uponor		EI	constructive element [2]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
up to												
Ø15/28	2,5	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	32 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	32 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	56 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
Ø16/25	2,2	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	29 mm	U/C + C/C	
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	32 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	49 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
max.												
Ø32/54	4,4	-		EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	58 mm	U/C + C/C	
		-		EI 240	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	63 mm	U/C + C/C	
		polyolefin 20mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	102 mm	U/C + C/C	
		polyolefin 10mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	102 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

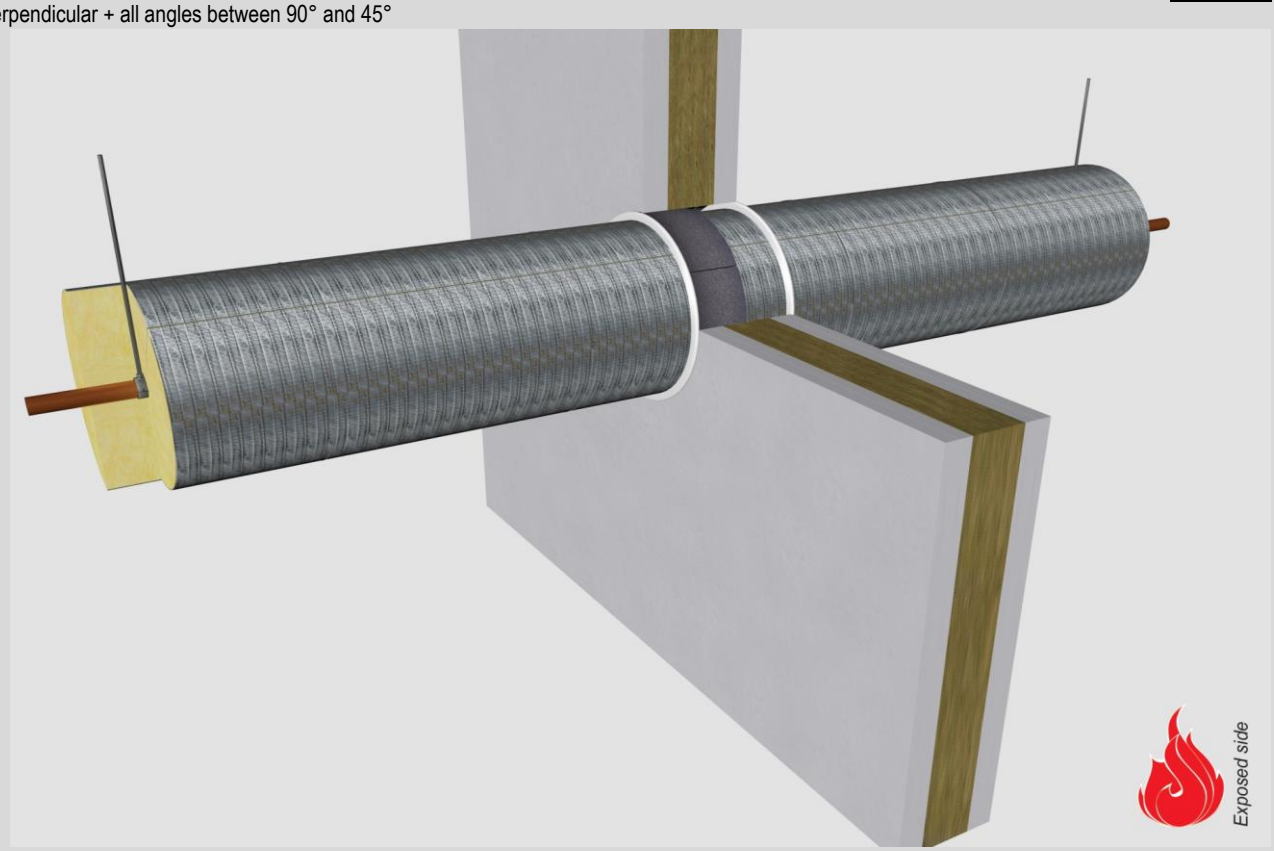
[2] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	23-5



copper pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø8	1,0	PA coating	200 LI	EI 90	flexible walls ≥ 100 mm	-	-	2 sides	-	8 mm	C/U + U/C + CC	perpendicular + all angles between 90° and 45°
Ø15	1,0	glass / rock wool 20mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	59 mm	C/U + U/C + CC	
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + CC	
		22mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	63 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	79 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	83 mm	U/C + CC	
		40mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	99 mm	C/U + U/C + CC	
		40mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	103 mm	U/C + CC	
		50mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	123 mm	C/U + U/C + CC	
		50mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	123 mm	U/C + CC	
		60mm	1200 LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	147 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	147 mm	U/C + C/C	
		80mm	1200 LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	187 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	202 mm	U/C + C/C	
Ø22	1,1	glass / rock wool 22mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	86 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	86 mm	C/U + U/C + CC	
Ø35	1,5	glass / rock wool 22mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	99 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	99 mm	C/U + U/C + CC	

>> contined on page 2

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

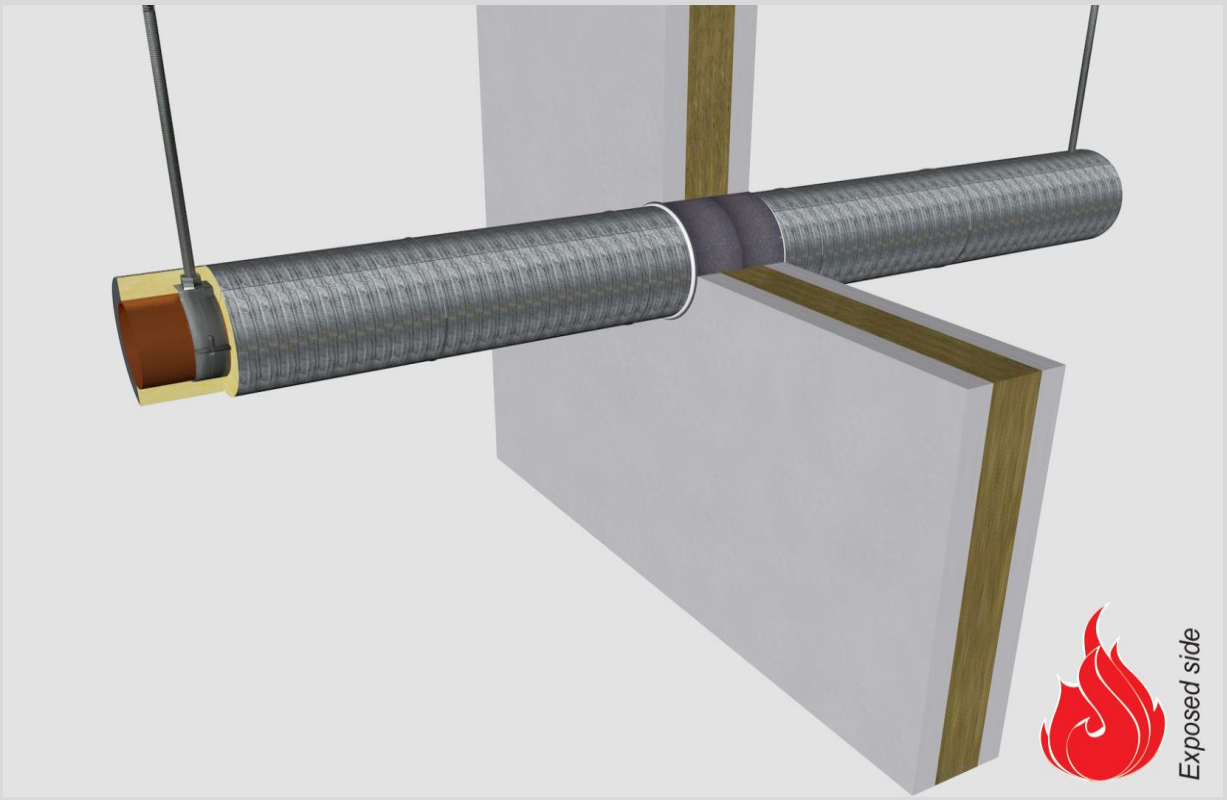
[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	21-13



copper pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
max.												
Ø76	2,1	glass / rock wool 20mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	124 mm	C/U + U/C + CC	perpendicular + all angles between 90° and 45°
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	132 mm	U/C + CC	
		30mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	144 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	144 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	160 mm	C/U + U/C + CC	
		40mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	164 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	184 mm	C/U + U/C + CC	
		50mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	202 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	208 mm	C/U + U/C + CC	
		60mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	208 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	248 mm	C/U + U/C + CC	
		80mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	248 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

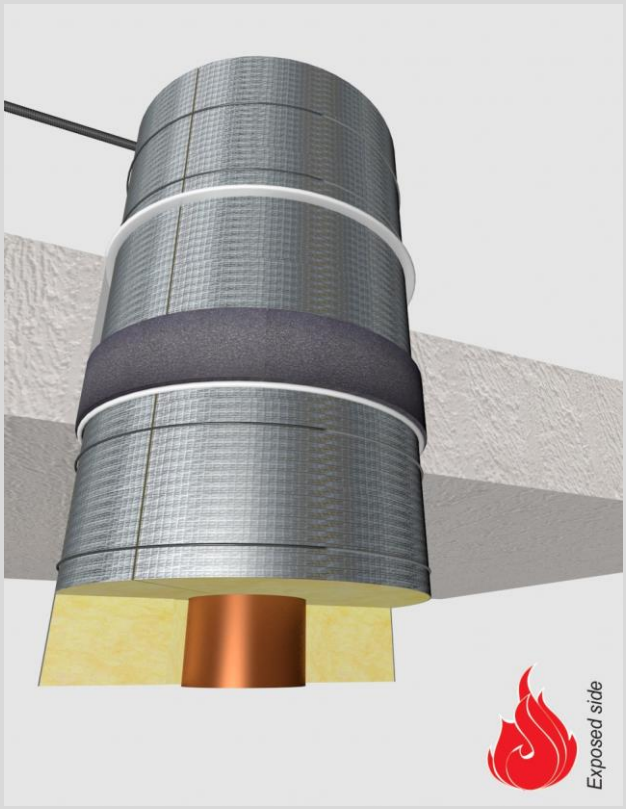
[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:
- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- angle: perpendicular + all angles between 90° and 45°

principle detail

Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	22-7



copper pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Wrap: Firetect pipe wrap length π x Ø x	no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø15	1,0	glass / rock wool 20mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	63 mm	U/C + C/C	perpendicular + all angles between 90° and 45°
		22mm	1200 CS + CI	EI 180	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	63 mm	C/U + U/C + C/C	
		30mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	83 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 180	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	63 mm	C/U + U/C + C/C	
		40mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	103 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	123 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	147 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	202 mm	U/C + C/C	
Ø22	1,1	glass / rock wool 22mm	1200 CS + CI	EI 180	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	86 mm	C/U + U/C + C/C	
		30mm	1200 CS + CI	EI 180	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	86 mm	C/U + U/C + C/C	
Ø35	1,5	glass / rock wool 22mm	1200 CS + CI	EI 180	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	99 mm	C/U + U/C + C/C	
		30mm	1200 CS + CI	EI 180	rigid floors ≥ 150 mm	π x Ø x	1	1 side	*	99 mm	C/U + U/C + C/C	
max.												
Ø76	2,1	glass / rock wool 20mm	1200 CS + CI	EI 240	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	132 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	144 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	164 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	2	1 side	*	202 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	208 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	rigid floors ≥ 150 mm	π x Ø x	3	1 side	*	248 mm	U/C + C/C	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 400mm.

[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period.

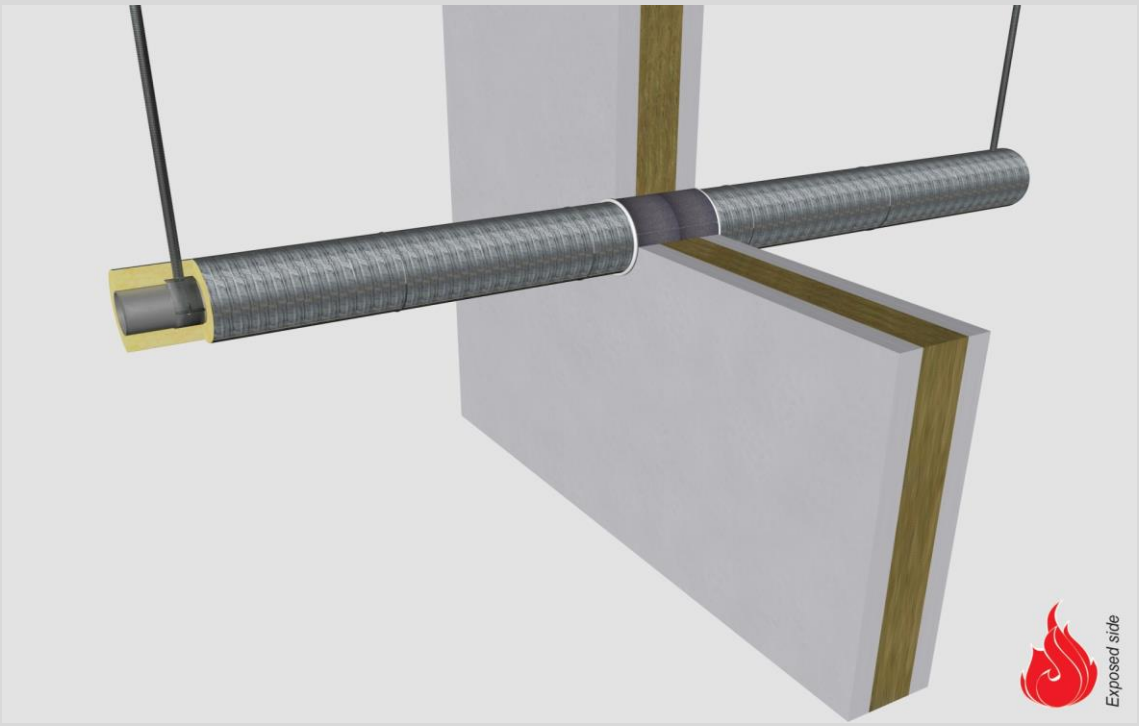
Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail

Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	21-19



steel pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø8	1,0	PA coating	200 LI	EI 90	flexible walls ≥ 100 mm	-	-	2 sides	-	8 mm	C/U + U/C + CC	perpendicular + all angles between 90° and 45°
Ø15	1,0	glass / rock wool 20mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	59 mm	C/U + U/C + CC	
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	63 mm	U/C + C/C	
		22mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	63 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	79 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	83 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	99 mm	C/U + U/C + CC	
		40mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	103 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	123 mm	C/U + U/C + CC	
		50mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	123 mm	U/C + C/C	
		60mm	200 LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	147 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	147 mm	U/C + C/C	
		80mm	200 LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	187 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	202 mm	U/C + C/C	
Ø22	1,1	glass / rock wool 22mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	86 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	86 mm	C/U + U/C + CC	
Ø35	1,5	glass / rock wool 22mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	99 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	1	2 sides	*	99 mm	C/U + U/C + CC	
Ø42,2	3,25	glass / rock wool 20mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	86 mm	C/U + U/C + CC	
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	102 mm	C/U + U/C + C/C	
		30mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	106 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	110 mm	C/U + U/C + C/C	
		40mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	126 mm	C/U + U/C + CC	
		40mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	130mm	C/U + U/C + C/C	

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* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

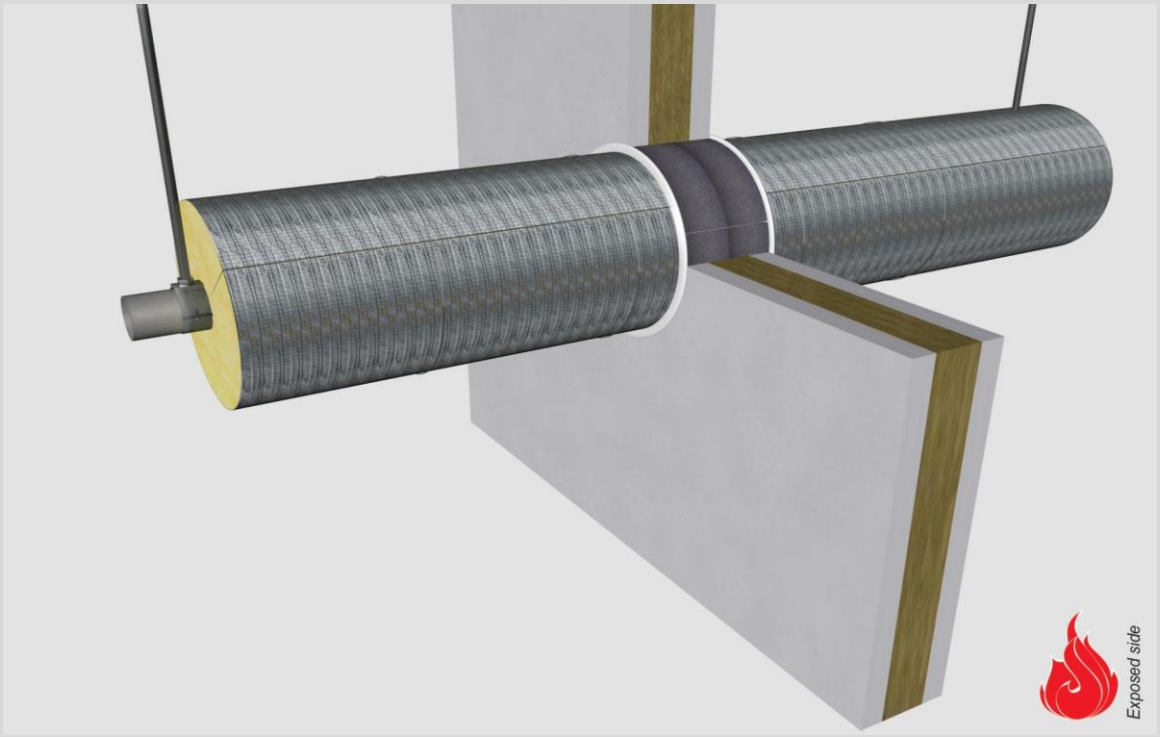
[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**

Notes:

- installation instructions in TDS
- apply smokeseal Firetect Acrylic on 2 sides
- **other pipe dØ + s1** (thickness) are allowed within range and same pipe material
- EI for flexible walls ≥100mm is also applicable for **rigid walls** ≥100mm
- angle: perpendicular + all angles between 90° and 45°

principle detail Firetect®

tested property	fire resistance
test method	EN 1366-3
service no.	23-1



steel pipes

service type [1] dØ (mm)	s1 (mm)	pipe insulation [2] min. 75 kg/m³ eg Climpipe, Rockwool or U Protect Pipe Section Alu2		EI	constructive element [3]	Wrap: Firetect pipe wrap length π x Ø x	Wrap: no. of layers	application 1 or 2 sides	finish required	max. opening in construction	pipe end configuration	max. angle
Ø42,2	3,25	glass / rock wool 50mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	150 mm	C/U + U/C + CC	perpendicular + all angles between 90° and 45°
		50mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	150 mm	C/U + U/C + C/C	
		60mm	1200 CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	174 mm	C/U + U/C + CC	
		60mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	174 mm	C/U + U/C + C/C	
		80mm	200 LI + CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	214 mm	C/U + U/C + CC	
		80mm	1200 CS + CI	EI 180	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	220 mm	C/U + U/C + C/C	
Ø76	2,1	glass / rock wool 20mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	124 mm	C/U + U/C + CC	
		20mm	1200 CS + CI	EI 240	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	132 mm	U/C + C/C	
		30mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	144 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	144 mm	U/C + C/C	
		40mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	160 mm	C/U + U/C + CC	
		40mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	164 mm	U/C + C/C	
		50mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	184 mm	C/U + U/C + CC	
		50mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	2	2 sides	*	202 mm	U/C + C/C	
		60mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	208 mm	C/U + U/C + CC	
		60mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	208 mm	U/C + C/C	
		80mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	248 mm	C/U + U/C + CC	
		80mm	1200 CS + CI	EI 120	rigid walls ≥ 150 mm	π x Ø x	3	2 sides	*	248 mm	U/C + C/C	
max.												
Ø219,1	4,5	glass / rock wool 20mm	1200 CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	263 mm	C/U + U/C + CC	
		30mm	1200 CS + CI	EI 60	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	283 mm	C/U + U/C + CC	
		40mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	1	2 sides	*	303 mm	C/U + U/C + CC	
		50mm	1200 CS + CI	EI 120	flexible walls ≥ 100 mm	π x Ø x	2	2 sides	*	327 mm	C/U + U/C + CC	
		60mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	351 mm	C/U + U/C + CC	
		80mm	1200 CS + CI	EI 90	flexible walls ≥ 100 mm	π x Ø x	3	2 sides	*	391 mm	C/U + U/C + CC	

* smokeseal Acrylic on 2 sides

[1] Penetration services must be supported; support distance ≤ 500mm.

[2] Pipe insulation must be fastened individually (not wrapped!) with steel wire: at max. 50mm + 300mm from constructive element.

[3] Constructive element must be classified acc. EN 13501-2 for the required fire resistance period. **EI for flexible walls ≥100mm is also applicable for rigid walls ≥100mm!**