

Installation Instruction and Declaration of Performance

Air Fire Tech System RORCOL

according to the European
Technical Assessment ETA-13/0758

RORCOL V30

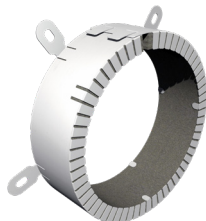
EI120
EI90



for plastic pipes

RORCOL V60

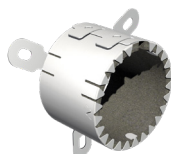
EI120
EI90



for plastic pipes, extended
field of application

RORCOL AV60

EI120
EI90



for multi-layer composite
pipes, cables and metal pipes

RORCOL M

EI120
EI90



for metal pipes

Fire protective gap filler



used to close the gap
between separating
element and
penetrating element

Mounting tool



used as an extension

INSTALLATION INSTRUCTION

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DECLARATION OF PERFORMANCE

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Important:

Please read this Installation Instruction and Declaration of Performance carefully and keep them for future reference.

The installation must be carried out exclusively in accordance with this Installation Instruction and Declaration of Performance. Deviations due to the installation may result in a considerable reduction in the fire resistance time.

Typographical and printing errors as well as technical changes cannot be ruled out.

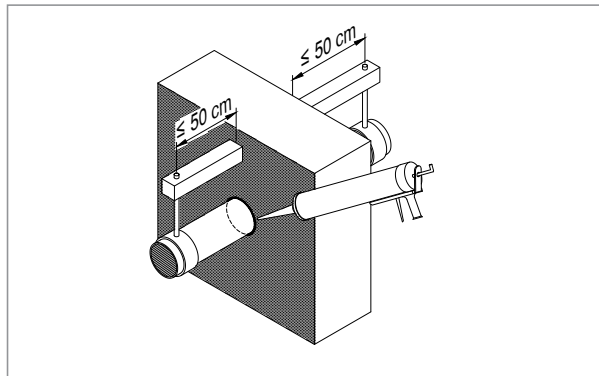
For penetration elements and classifications not mentioned in this Installation Instruction, please contact AIR FIRE TECH.

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Installation steps

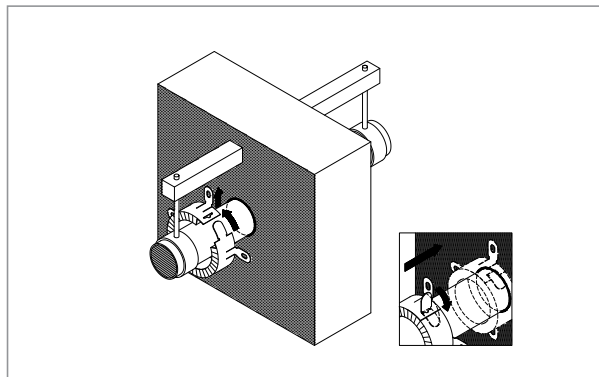
The pipe collars RORCOL are opened via the closure system, positioned around the pipe and fastened to the separating element of the penetration.



1

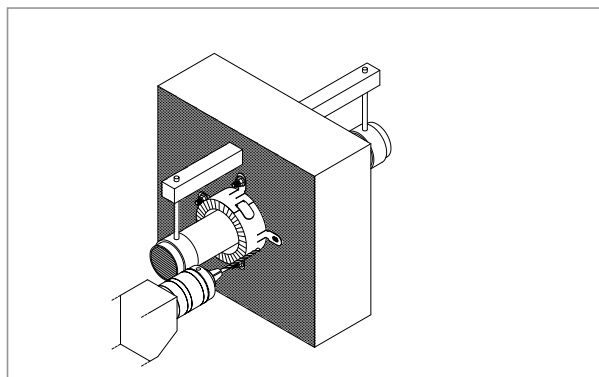
Seal annular gap ≤ 10 mm with fire protective gap filler BFM/K310 or acc. to the installation details.

Non-combustible service support construction max. 50 cm (max. 25 cm for plastic conduits and cables) on both sides of the wall or on the top side of the floor.



2

Open the pipe collar and position it around the pipe or insulated pipe.

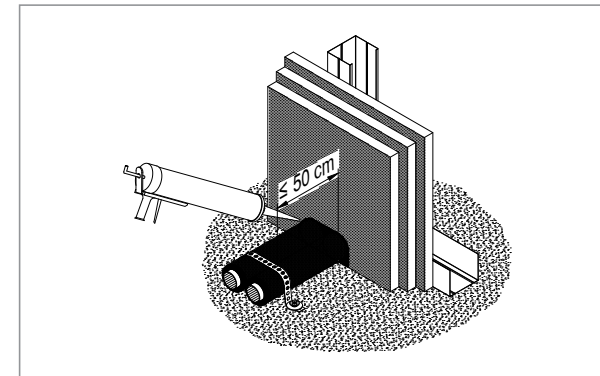


3

Mount the pipe collar acc. to the separating element and installation details.

Installation steps for Omega-application

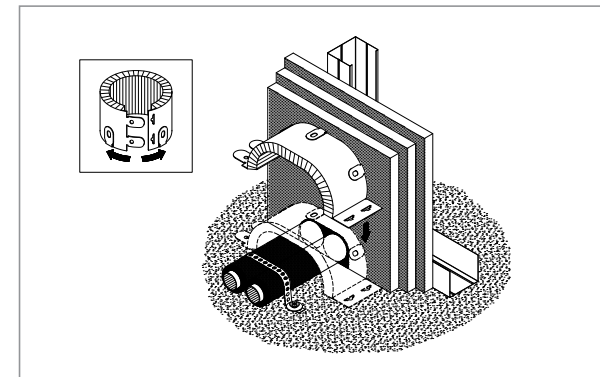
The pipe collars RORCOL V60 and AV60, used as Omega-application, are opened via the closure system and positioned around the pipe(s) at the separating element of the penetration. They are fixed to the adjacent building element (wall, ceiling or floor).



1

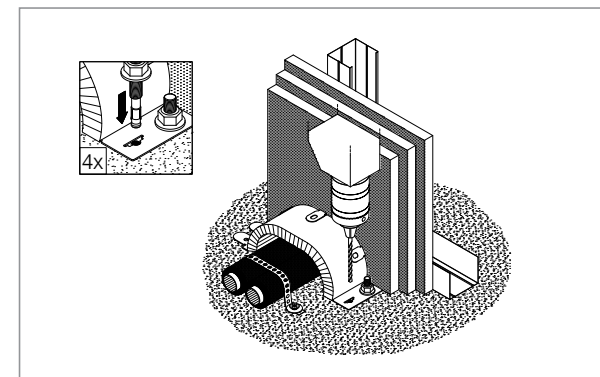
Seal annular gap and residual gap with fire protective gap filler BFM/K310 or acc. to the installation details.

Non-combustible service support construction max. 50 cm on both sides of the wall or on the top side of the floor.



2

Open the pipe collar and position it around the pipe(s) or insulated pipe(s).



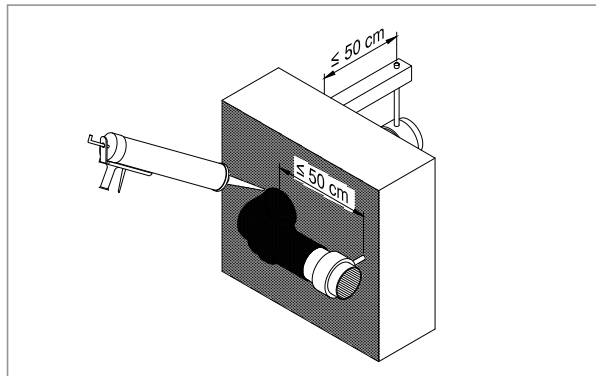
3

Mount the pipe collar with four screws acc. to the separating element and installation details.

Installation steps for U-application in walls

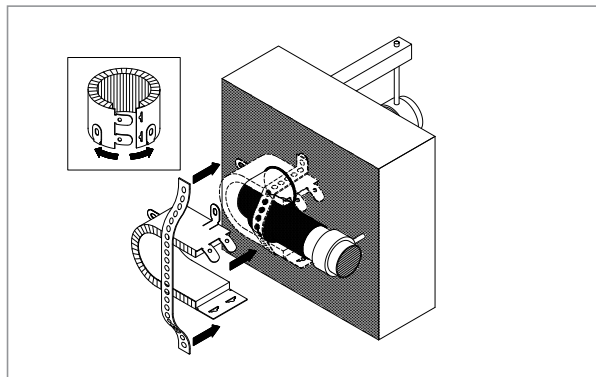
The pipe collar RORCOL V60, used as a U-application, is opened via the closure system, positioned around the pipe elbow and fixed to the wall of the pipe penetration.

Important: The dimension of the pipe collar must be selected one dimension larger than the dimension of the pipe!



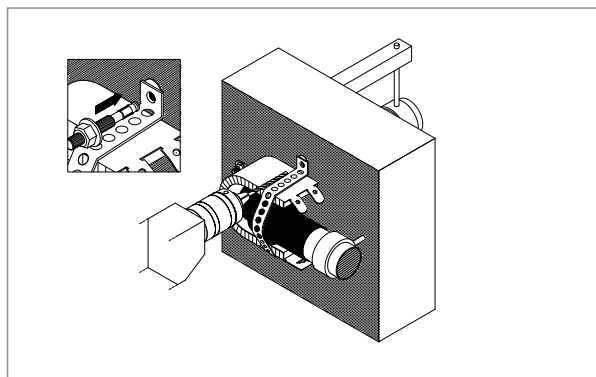
1

Seal annular gap and residual gap with fire protective gap filler BFM/K310 or acc. to the installation details.
Non-combustible service support construction max. 50 cm on both sides of the wall.



2

Open the pipe collar and position it around the insulated pipe elbow on the wall.
Position the perforated tape (provided by the customer) as tightly as possible over the pipe and the mounting lugs at the closure system of the pipe collar.



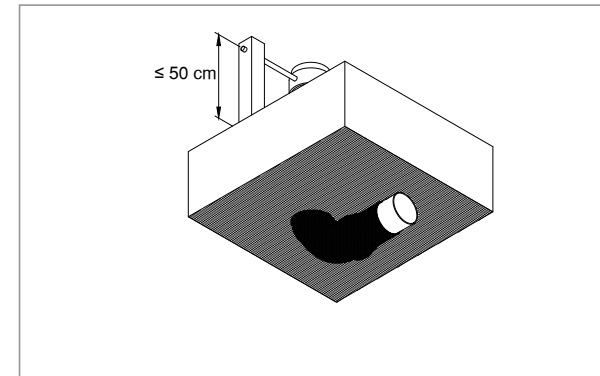
3

Mount the pipe collar and the perforated tape acc. to the separating element and installation details.

Installation steps for U-application in floors

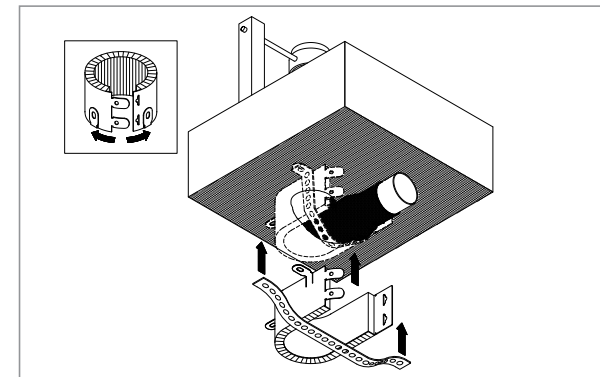
The pipe collar RORCOL V60, used as U-application, are opened via the closure system, positioned around the pipe elbow and fixed to the ceiling of the pipe penetration.

Important: The dimension of the pipe collar must be selected one dimension larger than the dimension of the pipe!



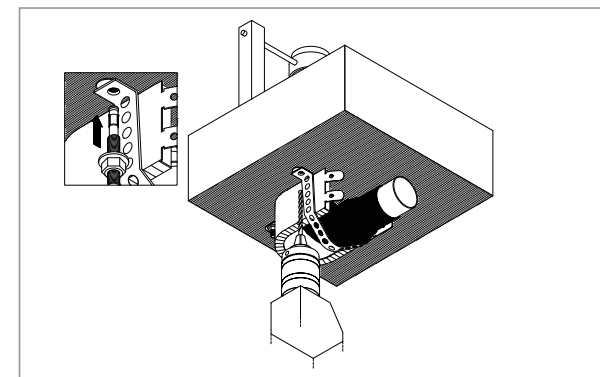
1

Seal annular gap and residual gap with fire protective gap filler BFM/K310 or acc. to the installation details.
Non-combustible service support construction max. 50 cm on the top side of the floor.



2

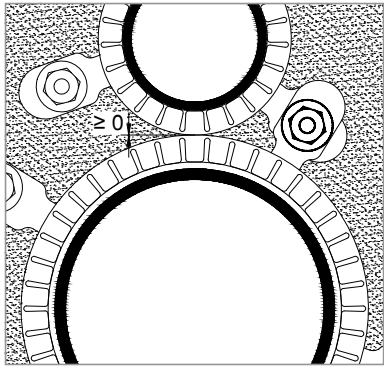
Open the pipe collar and position it around the insulated pipe elbows on the bottom side of the floor.
Position the perforated tape (provided by the customer) as tightly as possible over the pipe and the mounting lugs at the closure system of the pipe collar.



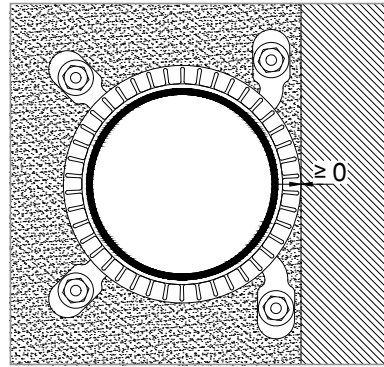
3

Mount the pipe collar and the perforated tape acc. to the separating element and installation details.

Pipe collars

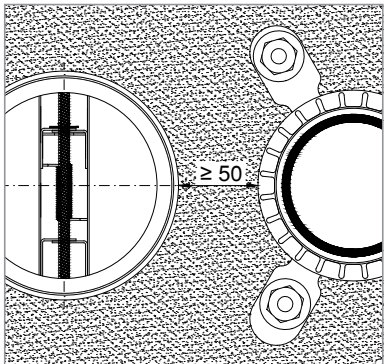


Concerted screw fastening of up to four pipe collars



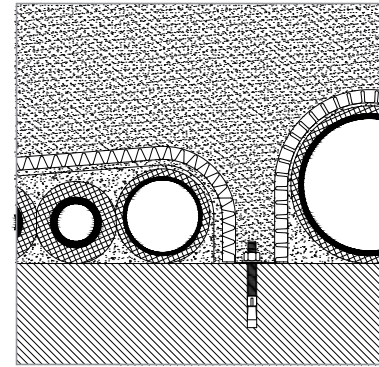
Distance to adjacent separating element - Twisted mounting lugs

Fire dampers

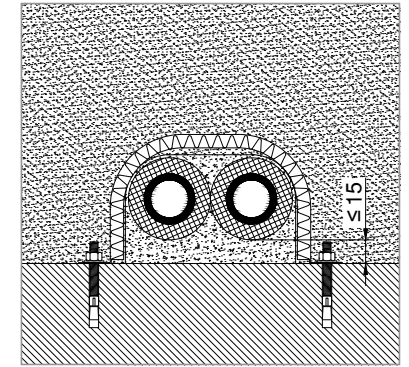


Distance to AIR FIRE TECH fire dampers (1139-CPR-1046/12) ≥ 50 mm.

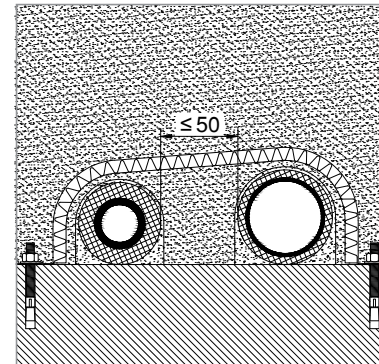
Omega-application



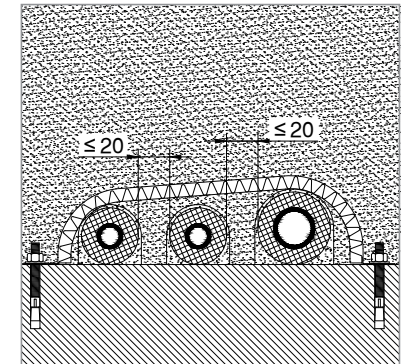
Concerted screw fastening



Distance between adjacent separating element and pipe(s) ≤ 15



Distance between two pipes ≤ 50



Distance between pipes for multiple pipe penetrations ≤ 20

Note

In walls, the pipe collars must be installed on one or both sides, in floors the pipe collars must be installed on the bottom side. When applying and installing the product, make sure to meet the requirements of additional national laws and regulations that may exist. The product must not be modified or exposed to mechanical load. The risk of spread of fire downwards caused by burning material, which drips through a pipe downwards to floors below, is not assessed with this European Technical Assessment. The installation must be carried out exclusively by authorised personnel. The applicability of the manufacturers' products for the given specific requirements has to be checked by the user.

For penetration elements and classifications not mentioned in this Installation Instruction, please contact AIR FIRE TECH.

Insulation

Continued-sustained insulations (CS) must have a minimum length of 500 mm in both directions measured from the surface of the separating element, local-sustained insulations (LS) must have a minimum length of 100 mm in both directions.

For detailed insulation materials and thicknesses, see "Permissible Insulations" table - page 26-27 and installation details.

Pipe end configurations

Plastic pipes are tested U/U (uncapped/uncapped) for ventilated pipe systems (sewage pipes, rainwater pipes, etc.).

Multi-layer composite pipes and thick-walled plastic pipes are tested U/C (uncapped/capped) for closed pipe systems (e.g. water pipes, heating pipes, etc.).

Metal pipes are tested U/C (uncapped/capped).

Pellet conveying tubes are tested U/U (uncapped/uncapped).

Plastic conduits are tested U/C (uncapped/capped). They must be sealed on at least one side of the penetration seal with commercially available silicone sealant.

Service support construction

Plastic pipes, multi-layer composite pipes and metal pipes must be fixed by means of a non-combustible service support construction max. 50 cm on both sides of the wall or on the top side of the floor.

Plastic conduits, cables and pellet conveying tubes must be fixed by means of non-combustible service support construction max. 25 cm on both sides of the wall or on the top side of the floor. The fixing must be selected so that the pipe clamp encloses the pipe as tightly as possible and ensures rigid suspension. Simply placing the pipe in or out of the pipe clamp is not permitted.

Pipe collar fixing

The pipe collar must be fixed with non-combustible screws and non-combustible dowels. For detailed information on fixings, see the table "Permissible separating elements" - page 14-15.

Use condition

The pipe penetration seal "Air Fire Tech System RORCOL" is intended for use at temperatures below 0 °C and with exposure to UV, but with no exposure to rain, and can therefore – according to EAD 350454-00-1104 clause 2.2.9.3.1 – be categorized as type Y₁. Since the requirements for type Y₁ are met, also the requirements for type Y₂, Z₁ and Z₂ are fulfilled.

Although a penetration seal is intended for indoor applications only, the construction process may result in it being subjected to more exposed conditions for a period before the building envelope is closed. For this case provisions shall be made to protect temporarily exposed penetration seals.

It is assumed that...

- ...damages to the penetration seal are repaired accordingly,
- ...the installation of the penetration seal does not affect the stability of the adjacent building element – even in case of fire,
- ...the lintel or floor above the penetration seal is designed structurally and in terms of fire protection such that no additional mechanical load (other than its own weight) is imposed to the penetration seal,
- ...the thermal movement in the pipe work will be accommodated in such way that it does not impose a load on the penetration seal,
- ...the installations are fixed to the adjacent building element in accordance with the relevant regulations in such a way that , in case of fire, no additional mechanical load is imposed to the penetration seal,
- ...the support of the installations is maintained for the required period of fire resistance and
- ...pneumatic dispatch systems, compressed air systems, etc. are switched off by additional means in case of fire.

Safety

Keep out of the reach of children.

Keep away from food, drinks and animal foodstuffs.

Not suitable for consumption.

Storage and transport

Dry at min. 3 °C to max. 35 °C.



Prüf-, Inspektions- und
Zertifizierungsstelle



Zertifikat der Leistungsbeständigkeit

1139-CPR-0523/13 (3. Neufassung)

Gemäß der Verordnung (EU) Nr. 305/2011 des Europäischen Parlaments und des Rates vom 9. März 2011 (Bauprodukteverordnung - CPR), gilt dieses Zertifikat für die Bauprodukte

Brandschutzprodukte zum Abdichten und Verschließen von Fugen und Öffnungen und zum Aufhalten von Feuer im Brandfall: Abschottungen mit der Handelsbezeichnung „Air Fire Tech System RORCOL“

in Verkehr gebracht unter dem Namen oder der Handelsmarke von

Air Fire Tech Brandschutzsysteme GmbH
A-1130 Wien, Stranzenberggasse 7b/1/2

und hergestellt im Herstellungsbetrieb

Air Fire Tech Brandschutzsysteme GmbH
Werk Bad Vöslau

Dieses Zertifikat bescheinigt, dass alle Vorschriften über die Bewertung und Überprüfung der Leistungsbeständigkeit beschrieben in der

ETA-13/0758, herausgegeben am 02.06.2020

und

EAD 350454-00-1104

entsprechend System 1 für die in der ETA ausgewiesene Leistung angewendet werden und dass die vom Hersteller durchgeführte werkseigene Produktionskontrolle bewertet wurde zur Sicherstellung der

Leistungsbeständigkeit des Bauprodukts.

Dieses Zertifikat wurde erstmals am 7. Mai 2014 ausgestellt. Die vorliegende 3. Neufassung des Zertifikates 1139-CPR-0523/13 ersetzt die 2. Neufassung des Zertifikates vom 18. September 2018 und bleibt gültig, solange weder die ETA, das EAD, das Bauprodukt, das AVCP-Verfahren noch die Herstellbedingungen im Werk wesentlich geändert werden und sofern es nicht von der notifizierten Produktzertifizierungsstelle ausgesetzt oder zurückgezogen wird.

Head of the certification body
Dipl.-Ing. Martin Fehringner
Oberstadtbaurat (city planning councillor)

Vienna, 2 July 2020



Head of the testing, inspection
and certification body
Dipl.-Ing. Georg Pommer
Senate Councillor

MA 39 – CE 2020-0792 – Rinnböckstraße 15/2, 1110 Wien, post@ma39.wien.gv.at

DECLARATION OF PERFORMANCE

No. 2020/RORCOL in accordance with Annex III of Regulation (EU) No. 305/2011
(Construction Products Regulation)

- 1. Unique identification code of the product-type:**
 - Pipe collar RORCOL V30
 - Pipe collar RORCOL V60
 - Pipe collar RORCOL AV60
 - Pipe collar RORCOL M
 - Fire protective gap filler BFM/K310
 - Mounting tool MH/RORCOL
- 2. Intended use:**
 - Penetration sealing for combustible pipes, non-combustible pipes and cables through walls and floors according to Installation Instruction of ETA-13/0758
- 3. Manufacturer:**
 - AIR FIRE TECH Brandschutzsysteme GmbH
 - Stranzenberggasse 7b/1/2
 - 1130 Vienna
 - AUSTRIA
- 4. System(s) of AVCP:**
 - System 1
- 5. European Assessment Document:**
 - EAD 350454-00-1104,
 - Edition September 2017

European Technical Assessment: ETA-13/0758 of 02/06/2020








Technical Assessment Body: Österreichisches Institut für Bautechnik (OIB)

Notified body: NB 1139 – Magistratsabteilung 39 – Prüf-, Überwachungs- und Zertifizierungsstelle der Stadt Wien
- 6. Declared performance:**

Essential performance	Performance	Harmonised technical specification
Reaction to fire	Class E	EN 13501-1
Dangerous substances	None	Council Directive 67/548/EEC, Regulation (EC) no 1272/2008 and EOTA Technical Report TR 034
Durability and utalizableity	Use condition Y ₁	EOTA Technical Report TR 024

DECLARATION OF PERFORMANCE

Permissible separating elements/fixings

Separating element / application	
SW EI90	 <p>Shaft walls ≥ EI90 Lining on one side with 2x20, 3x15 or 2x25 mm Gypsum plasterboards DF or DFR acc. to EN 520 or GM-FH2 acc. to EN 15283-1 Minimum width of steel studs (CW profiles): 50 mm with or without mineral wool</p>
SW EI60	 <p>Shaft walls ≥ EI60 Lining on one side with 2x15 mm Gypsum plasterboards DF or DFR acc. to EN 520 or GM-FH2 acc. to EN 15283-1 Minimum width of steel studs (CW profiles): 50 mm with or without mineral wool</p>
MW	 <p>Rigid walls Thickness ≥ 100 mm Density ≥ 500 kg/m³ Concrete and masonry components</p>
LW	 <p>Flexible walls Thickness ≥ 100 mm Steel studs (CW profiles) or timber studs*, Lined on both faces with a minimum thickness of 12.5 mm and at least 2 layers, boards with classification A2-s1,d0 or A1 acc. to EN 13501-1 *Minimum distance between timber studs and penetration seals 100 mm, gap filled with mineral wool (melting point ≥ 1000 °C)</p>
HW	 <p>Cross-laminated timber walls ETA-06/0138 - 150 mm cross-laminated timber, ETA-06/0138 - 100 mm cross-laminated timber + 15 mm gypsum plasterboards type DF on both sides acc. to EN 520</p>
MD	 <p>Rigid floors Thickness ≥ 150 mm Density ≥ 500 kg/m³</p>
HD	 <p>Cross-laminated timber floors ETA-06/0009 - 200 mm cross-laminated timber, ETA-06/0138 - 140 mm cross-laminated timber + 12.5 mm gypsum plasterboard type DF acc. to EN 520, ETA-06/0138 - 90 mm cross-laminated timber + 2x15 mm gypsum plasterboard type DF acc. to EN 520</p>

DECLARATION OF PERFORMANCE

Pipe collar fixing	Annular gap / residual gap	Page
<ul style="list-style-type: none"> ■ Dry-wall screws ≥ Ø3.5 x 45 mm with Ø20 mm washers (3x15, 2x25 mm) ■ Chipboard screws ≥ Ø6.0 x 40 mm (3x15, 2x25 mm) ■ Cavity dowels ≥ M6 with Ø20 mm washers 	<ul style="list-style-type: none"> ■ ≤ 10 mm with fire protective gap filler or non-combustible material over the entire thickness of the separating element ■ ≤ 15 mm with fire protective gap filler over the entire thickness of the separating element 	28
<ul style="list-style-type: none"> ■ Cavity dowels ≥ M6 with Ø20 mm washers 	<ul style="list-style-type: none"> ■ ≤ 10 mm with fire protective gap filler or non-combustible material over the entire thickness of the separating element 	34
<ul style="list-style-type: none"> ■ Metallic anchors or metallic plugs with screws ≥ M6 with Ø20 mm washers ■ Chipboard screws ≥ Ø6.0 x 55 mm (only for aerated concrete) 	<ul style="list-style-type: none"> ■ ≤ 10 mm with fire protective gap filler or non-combustible material over the entire thickness of the separating element ■ 5-20 mm with non-combustible material or mineral wool over the entire thickness of the separating element 	36
<ul style="list-style-type: none"> ■ Threaded bars ≥ M6 with Ø20 mm washers and nuts (when surface-mounted) ■ Dry-wall screws ≥ Ø3.5 x 35 mm with Ø20 mm washers (when flush mounted) 	<ul style="list-style-type: none"> ■ ≤ 10 mm with fire protective gap filler or non-combustible material over the thickness of the lining 	40
<ul style="list-style-type: none"> ■ Chipboard screws ≥ Ø6.0 x 120 mm 	<ul style="list-style-type: none"> ■ ≤ 10 mm with fire protective gap filler or non-combustible material over the entire thickness of the separating element ■ 5-20 mm mm with fire protective gap filler or non-combustible material at least 25 mm deep and mineral wool over the entire thickness of the separating element 	42
<ul style="list-style-type: none"> ■ Metallic anchors or metallic plugs with screws ≥ M6 with Ø20 mm washers ■ Chipboard screws ≥ Ø6.0 x 55 mm (only for aerated concrete) 	<ul style="list-style-type: none"> ■ ≤ 10 mm with fire protective gap filler or non-combustible material on the top side of the floor, at least 20 mm deep ■ ≤ 30 mm with mineral wool over the entire thickness of the separating element 	44
<ul style="list-style-type: none"> ■ Chipboard screws ≥ Ø6.0 x 90 mm with Ø20 mm washers 	<ul style="list-style-type: none"> ■ see installation details 	48

DECLARATION OF PERFORMANCE

Permissible pipes

Pipe collar	Material or fabricate	Standard or manufacturer	Permissible separating elements / outer pipe diameter									Pipe end configuration												
			SW		MW	LW	HW		MD	HD														
			Ei90	Ei60			150	130		200	152.5		120											
RORCOL V30 and RORCOL V60	PE-HD Pipelife PE100	EN 12201-2, DIN 8074/DIN 8075	50						125												U/U			
	PE-HD Geberit PE Geberit Silent-db20 Wavin PE	EN 1519-1, DIN 8074/DIN 8075	≤ 110		≤ 200		≤ 135		≤ 135		≤ 110	≤ 125	≤ 110											
	PVC-U	EN 1401-1, DIN 8061/DIN 8062	110-125		≤ 250	≤ 200			110-125															
	PVC-U	EN 1452-2, DIN 8062	≤ 110		≤ 110				≤ 110															
	PP	EN ISO 15874-2, DIN 8077/DIN 8078	≤ 50		≤ 110				≤ 110			50												
	PP CONEL Drain Geberit Silent-PP Geberit Silent-Pro Ostendorf HT PhonEX® AS Pipelife Master 3 PLUS RAUPIANO LIGHT Rehau HT Valsir PP Valsir Silere Wavin AS HT PLUS	EN 1451-1, DIN 8077/DIN 8078	≤ 110		≤ 160		≤ 160	≤ 110	≤ 160	110	≤ 50													
	DYKAStil®	DYKA B.V.	≤ 75		≤ 75		≤ 75		≤ 160		≤ 50													
	FRIAPHON®	Friatec AG	≤ 110		≤ 160				≤ 160		110-125													
	POLO-KAL 3S	POLOPLAST GMBH & CO KG			≤ 135				≤ 135															
	POLO-KAL NG	POLOPLAST GMBH & CO KG	≤ 110		≤ 160				≤ 160	110														
	POLO-KAL XS	POLOPLAST GMBH & CO KG	≤ 110		≤ 200				≤ 200	110														
	RAUPIANO PLUS	REHAU Gesellschaft m.b.H	≤ 110		≤ 110				≤ 110	110														
	RAUTITAN flex	REHAU Gesellschaft m.b.H	≤ 110		≤ 160				≤ 160		110-125													
	RAUTITAN flex	REHAU Gesellschaft m.b.H	≤ 25		50				≤ 63		50													
	RORCOL V60	Pellflex/AS	HY-POWER Produktions und Handels GmbH			58																	U/U	
		Pellflex PU/AS	HY-POWER Produktions und Handels GmbH			58																		
		PP MASTER SN12	Pipelife Austria GmbH & Co KG			200-250																		

DECLARATION OF PERFORMANCE

Permissible pipes

Pipe collar	Material or fabricate	Standard or manufacturer	Permissible separating elements / outer pipe diameter										Pipe end configuration
			SW		MW	LW	HW		MD	HD			
			Ei90	Ei60						150	130		200
RORCOL AV60	Metal pipes	Reaction to fire class A1 acc. to EN 13501-1, with a melting point \geq steel and thermal conductivity \leq steel	≤ 28		≤ 76		≤ 54		≤ 76			≤ 35	U/C
	Metal pipes	Reaction to fire class A1 acc. to EN 13501-1, with a melting point \geq copper and thermal conductivity \leq copper	≤ 28		≤ 22		≤ 18		≤ 28				
	"alpx Mehrschichtverbundrohr"	FRÄNKISCHE ROHRWERKE Gebr. Kirchner GmbH & Co. KG	≤ 20		≤ 63								
	"CLEVERFIT Radial"	Rettig Heating Sp. z o.o	≤ 32		≤ 63				≤ 63				
	"EASYTEC Installationsrohr"	Rettig Austria GmbH	≤ 32		≤ 63				≤ 63				
	"Geberit-Mepla-Rohr"	Geberit Vertriebs GmbH	≤ 32	≤ 26	≤ 63		26-32, 63	≤ 32	≤ 63		26, 63		
	"HENCO Mehrschichtverbundrohr"	HENCO Industries NV	≤ 32		≤ 20	20			20		20		
	"JRG Sanipex MT"	Georg Fischer JRG AG	≤ 32	≤ 26	≤ 40	40			≤ 63				
	"K06 KELIT ALU-Verbundrohr PN20"	KE KELIT Kunststoffwerk GmbH			20, 75-90								
	"KAN-therm Aluminium-Verbundrohr"	KAN-therm GmbH	≤ 32		≤ 63				≤ 20				
	"KELOX® Modulrohr"	KE KELIT Kunststoffwerk GmbH	≤ 32	≤ 25	≤ 63				≤ 63				
	"MT-Verbundrohr"	Winkler GmbH	≤ 26		40				≤ 63	20			
	"POLYSAN Mehrschichtverbundrohr"	Polysan HandelsgesmbH & Co KG	≤ 32		≤ 20	20			20		20		
	"PRINETO Nanoflex-Rohr"	IVT Installations- und Verbindungstechnik GmbH & CO. KG								21			
	"PRINETO Stabil-Rohr"	IVT Installations- und Verbindungstechnik GmbH & CO. KG	≤ 33		≤ 63				≤ 63	21			
	"PYTHON Getränkeleitung"	Python Systems AG	40, 80										
	"RAUTITAN stabil"	REHAU Gesellschaft m.b.H.	≤ 25		≤ 40				≤ 63				
	"Raxofix-Mehrschichtverbundrohr"	Viega GmbH	≤ 32		≤ 63				≤ 63				
	"Roth Systemrohr Alu-Laserplus®"	ROTH WERKE GMBH	≤ 26		≤ 63				≤ 63				
	"TECEflex Verbundrohr"	TECE GmbH	≤ 32	≤ 26	≤ 63		26, 63		≤ 63		26, 63		
"TECElogo Verbundrohr"	TECE GmbH	≤ 25		≤ 63				≤ 63					
"Uponor Verbundrohr"	Uponor Vertriebs GmbH	≤ 32		≤ 63				≤ 63					
	Plastic conduits with an outer diameter of ≤ 50 mm (with/without cable with an outer diameter of ≤ 21 mm)		✓		✓		✓		✓				
	Tied bundles up to a total diameter ≤ 100 mm containing plastic conduits with an outer diameter of ≤ 50 mm (with/without cable with an outer diameter of ≤ 21 mm)		✓		✓				✓				
	All types of sheathed cables (except waveguides) currently and commonly used in building practice in Europe with an outer diameter of ≤ 21 mm		✓		✓		✓		✓				
	Tied bundles up to a total diameter ≤ 100 mm containing sheathed cables (except waveguides) currently and commonly used in building practice in Europe with an outer diameter of ≤ 21 mm		✓		✓				✓				

DECLARATION OF PERFORMANCE

Pipe collar	Material or fabricate	Standard or manufacturer	Permissible separating elements / outer pipe diameter										Pipe end configuration
			SW		MW	LW	HW		MD	HD			
			Ei90	Ei60						150	130		200
RORCOL M	Metal pipes	Reaction to fire class A1 acc. to EN 13501-1, with a melting point \geq steel and thermal conductivity \leq steel			≤ 76					≤ 76			U/C

DECLARATION OF PERFORMANCE

Permissible pipes - Omega-application

Pipe collar	Material or fabricate	Standard or manufacturer	Permissible separating elements / outer pipe diameter										Pipe end configuration
			SW		MW	LW	HW		MD	HD			
EI90	EI60	150	130	200			152.5	120					
RORCOL AV60 mounted to the wall or floor	PVC-U	EN 1452-2, DIN 8062	32										U/U
	PP	EN 1451-1, DIN 8077/DIN 8078	32-78		50								
	POLO-KAL NG	POLOPLAST GMBH & CO KG	50-75		75								
	POLO-KAL XS	POLOPLAST GMBH & CO KG	50-75		75								
	RAUPIANO PLUS	REHAU Gesellschaft m.b.H.	50										
	"alplex Mehrschichtverbundrohr"	FRÄNKISCHE ROHRWERKE Gebr. Kirchner GmbH & Co. KG			26								U/C
	"CLEVERFIT Radial"	Rettig Heating Sp. z o.o	≤ 26										
	"EASYTEC Installationsrohr"	Rettig Austria GmbH	≤ 26										
	"Geberit-Mepla-Rohr"	Geberit Vertriebs GmbH	≤ 26		26								
	"HENCO Mehrschichtverbundrohr"	HENCO Industries NV	≤ 26		20								
	"JRG Sanipex MT"	Georg Fischer JRG AG	≤ 32										
	"KAN-therm Aluminium-Verbundrohr"	KAN-therm GmbH	≤ 20										
	"KELOX® Modulrohr"	KE KELIT Kunststoffwerk GmbH	≤ 25										
	"POLYSAN Mehrschichtverbundrohr"	Polysan HandelsgesmbH & Co KG	≤ 32		20								
	"PRINETO Stabil-Rohr"	IVT Installations- und Verbindungstechnik GmbH & CO. KG	≤ 26										
	"RAUTITAN stabil"	REHAU Gesellschaft m.b.H.	25										
	"Raxofix-Mehrschichtverbundrohr"	Viega GmbH	25										
	"Roth Systemrohr Alu-Laserplus®"	ROTH WERKE GMBH	26		26								
	"TECEflex Verbundrohr"	TECE GmbH	26		26								
	"TECElogo Verbundrohr"	TECE GmbH	25										
"Uponor Verbundrohr"	Uponor Vertriebs GmbH	25											
Metal pipes	Reaction to fire class A1 acc. to EN 13501-1, with a melting point ≥ copper and thermal conductivity ≤ copper	≤ 28		16									
Conduits	EN 61386-21	≤ 50		≤ 50			≤ 50						
	EN 61386-22	≤ 40		≤ 25									

DECLARATION OF PERFORMANCE

DECLARATION OF PERFORMANCE

Permissible pipes - U-application

Pipe collar	Material or fabricate	Standard or manufacturer	Permissible separating elements / outer pipe diameter								Pipe end configuration		
			SW		MW	LW	HW		MD	HD			
			Ei90	Ei60			150	130		200		152.5	120
RORCOL V60	PP	EN 1451-1, DIN 8077/DIN 8078	≤ 110		≤ 110				≤ 135				U/U
	CONEL Drain												
	Geberit Silent-PP												
	Geberit Silent-Pro												
	Ostendorf HT												
	PhonEX® AS												
	Pipelife Master 3 PLUS												
	RAUPIANO LIGHT												
	Rehau HT												
	Valsir PP												
	Valsir Silere												
	Wavin AS												
	HT PLUS												
	DYKASTil®	DYKA B.V.	≤ 75		≤ 75				≤ 110				
POLO-KAL 3S	POLOPLAST GMBH & CO KG	≤ 90		≤ 110									
POLO-KAL NG	POLOPLAST GMBH & CO KG	≤ 110		≤ 110				≤ 125					
POLO-KAL XS	POLOPLAST GMBH & CO KG	≤ 90											
RAUPIANO PLUS	REHAU Gesellschaft m.b.H	≤ 90		≤ 110									

DECLARATION OF PERFORMANCE

DECLARATION OF PERFORMANCE

Permissible insulations

Material	Product
Polyethylene (PE)	Classification E / E ₁ acc. to EN 13501-1, density 25-55 kg/m ³ ; e.g. "Astraflex PE", "steinoflex® 405 R", "Tubolit AR Fonoblok"
Elastomer foam	Classification B-s3,d0 / B ₁ -s3,d0 acc. to EN 13501-1; e.g. "AF/Armaflex, Armaflex XG", "K-FLEX ST", "Kaiflex-ST"
Polyester	Classification E acc. to EN 13501-1; e.g. "Austrovlies® Abfluss", "Austrovlies® Dünnwand"
Mineral wool	Classification A1 / A2-s1,d0 acc. to EN 13501-1, density ≥ 25 kg/m ³ ; e.g. "CLIMCOVER Lamella Mat", "AUSTROFLEX Glaswoll-Lamellenmatte"
Insulating wool	Classification A1 acc. to EN 13501-1, Melting point ≥ 1000 °C, minimum compacted apparent density 40 kg/m ³ ; e.g. "ISOVER Universal Stopfwole"
Composite material	Classification B-s3,d0 / E,d2 acc. to EN 13501-1; e.g. "Astrophon Schallschutzmatte Typ ST GK 070", "Geberit Isol"
PE protective pipes	Classification E acc. to EN 13501-1, outer diameter ≤ 35 mm; e.g. "PROTECTION HOSE", "TECE Welschutzrohr", "Uponor Schutzrohr"

DECLARATION OF PERFORMANCE

Manufacturer	Standard
e.g. Austroflex Rohr-Isoliersysteme GmbH, Steinbacher Dämmstoff GmbH, Armacell GmbH	EN 14313
e.g. Armacell GmbH, L'Isolante K-FLEX S.p.A., Kaimann GmbH	–
e.g. Austroflex Rohr-Isoliersysteme GmbH	–
e.g. Saint-Gobain ISOVER Austria GmbH, Austroflex Rohr-Isoliersysteme GmbH	EN 14303
e.g. Saint-Gobain ISOVER Austria GmbH	EN 14303
e.g. Austroflex Rohr-Isoliersysteme GmbH, Geberit Vertriebs GmbH & Co KG	–
e.g. HENCO Industries NV, TECE GmbH, Uponor Vertriebs GmbH	–

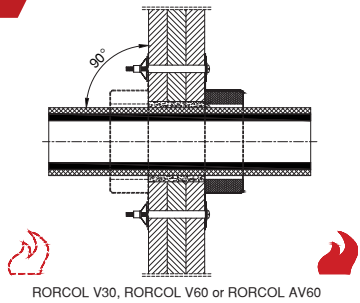
Type	Pipe type	
	Standard / product	Material
RORCOL V30 or RORCOL V60	EN 1519-1	PE
	EN 15874-2	PP
	EN 1451-1	
	PP pipes acc. to "Permissible pipes" table on page 16-25	
	EN 1401-1	PVC-U
EN 1452-2		
RORCOL AV60	Multi-layer composite pipes acc. to "Permissible pipes" table on page 16-25	Al-PE
		Copper / steel
	Metal pipes	Steel

Pipe diameter [mm]	Insulation [mm]				Insulation type
	without	PE	Elastomer	Mineral wool	
≤ 200	✓	≤ 5	see application areas on page 28-53		LS / CS
≤ 110		≤ 10			
≤ 160					
≤ 250		≤ 5			
≤ 250					
≤ 110					
≤ 26		9-10	9-13	≤ 30	CS
≤ 32		9-10	9-25	≤ 40	
≤ 40			9-32	≤ 50	
≤ 50			13-32		
≤ 63			13-43		
≤ 16		≥ 10	≥ 9	≥ 30	
≤ 28			≥ 13		
≤ 42			≥ 19		
≤ 54			≥ 32		
≤ 76					

DECLARATION OF PERFORMANCE

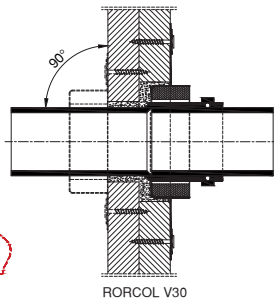
Installation details for shaft walls \geq EI90

1



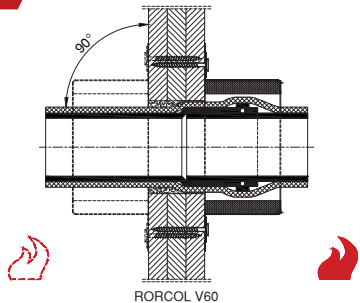
RORCOL V30, RORCOL V60 or RORCOL AV60

2



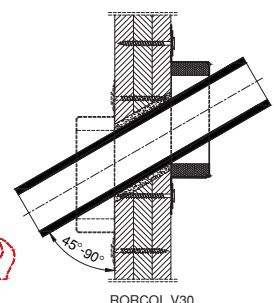
RORCOL V30
Important:
The pipe collar must not be positioned around the gasket!

3



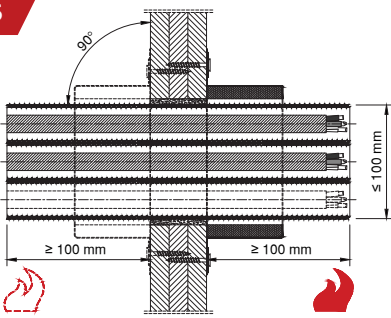
RORCOL V60

4



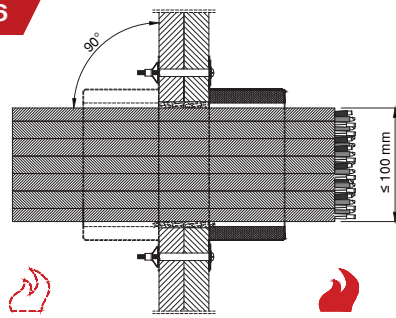
RORCOL V30

5



RORCOL AV60 \leq DN110
for bundles of plastic conduits with/without cable

6



RORCOL AV60 \leq DN110
for cable bundles

DECLARATION OF PERFORMANCE

Application areas for shaft walls \geq EI90

Pipe penetration seal

Shaft walls \geq EI90, lining 2x20, 3x15 or 2x25 mm

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				with-out	PE	Elastomer	Mineral wool	
RORCOL V30 or RORCOL V60	EN 1519-1	PP	≤ 110	✓	5			EI90
	EN 1451-1							
	CONEL Drain							
	Geberit Silent-PP							
	PhonEX® AS							
	Pipelife Master 3 PLUS							
	RAUPIANO LIGHT							
	Wavin AS							
	DYKASTil®							
	POLO-KAL 3S							
	POLO-KAL NG / XS							
RAUPIANO PLUS	PVC-U	110-125						
EN 1401-1		≤ 110						
EN 1452-2								
RORCOL V60	EN 15874-2	PP	≤ 50	✓	≤ 10			EI90
RORCOL AV60	Multi-layer composite pipes	AI-PE	≤ 33	see "Permissible insulations" on page 26-27				EI90
	Metal pipes	Copper / Steel	≤ 16 ≤ 28			≥ 9 ≥ 13	≥ 30	

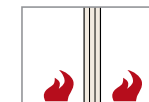
Cable penetration seal

Shaft walls \geq EI90, lining 2x20, 3x15 or 2x25 mm

Type	max. DN	Standard / Fabricate	Penetrating elements	Outer diameter of tied bundles [mm]	Outer diameter of plastic conduits [mm]	Cable dimensions [mm]	Fire resistance class
RORCOL AV60	110	EN 61386-21	Bundles of plastic conduits	≤ 100	≤ 40	≤ 18.5	EI90
		EN 61386-22			≤ 50	≤ 21	
		All types of sheathed cables	Cable bundles		-	≤ 21	
		EN 61386-21	Plastic conduits		-	≤ 40	
EN 61386-22	-	≤ 50		$5 \times 16.0 \text{ mm}^2$			



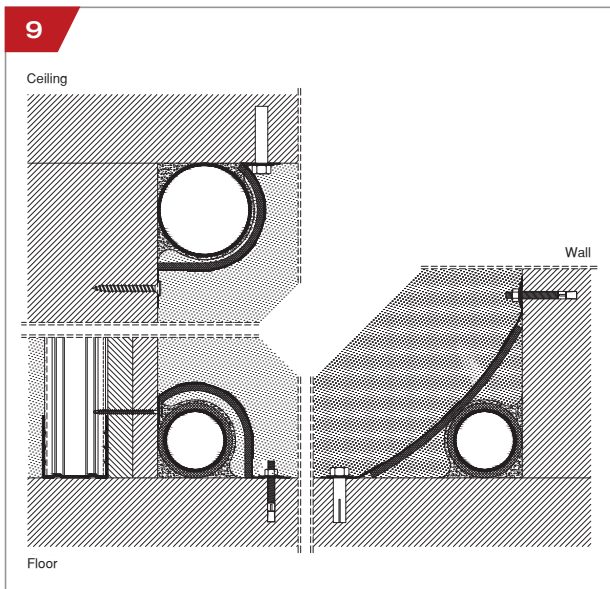
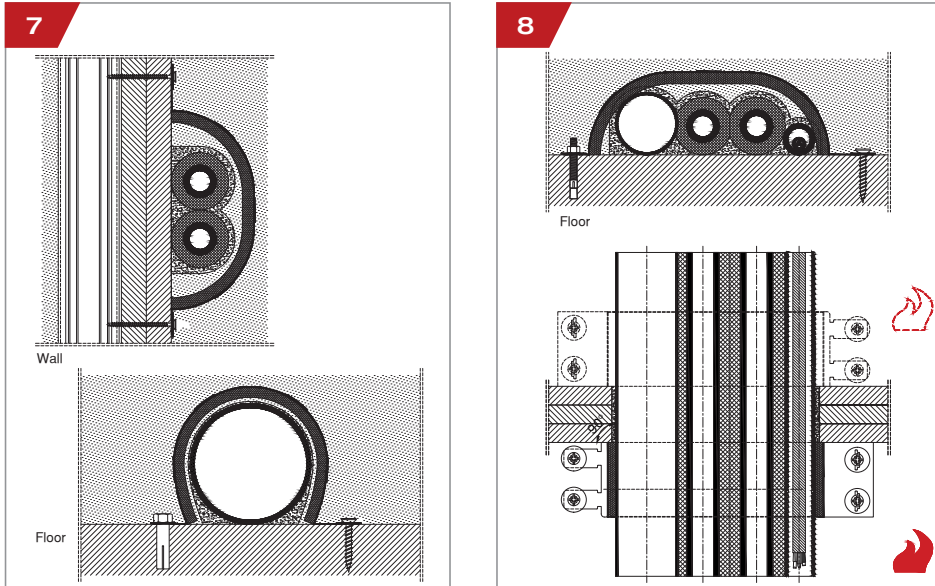
– fire exposure on one or both sides



– fire exposure on both sides

DECLARATION OF PERFORMANCE

Installation details for shaft walls \geq EI90



Working clearance see page 9

DECLARATION OF PERFORMANCE

Application areas for shaft walls \geq EI90

Omega-application

Shaft walls \geq EI90, lining 2x20, 3x15 or 2x25 mm

Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]			Fire resistance class	
					without	PE	Elastomer		
RORCOL V60	110	EN 1519-1	PE	≤ 110		5		EI90	
		EN 1451-1	PP						
		CONEL Drain							
		Geberit Silent-PP							
		PhonEX® AS							
		Pipelife Master 3 PLUS							
		RAUPIANO LIGHT							
		Wavin AS							
		DYKASTil®							
		POLO-KAL NG / XS							
RAUPIANO PLUS									
RORCOL AV60	80	Multi-layer composite pipes	max. 2x Al-PE	≤ 26		9-10	9-13	EI90	
		EN 1451-1	max. 1x PP	≤ 75	✓	5			
		Metal pipes	max. 2x Copper	≤ 22			≥ 13		
		EN 1452-2	max. 1x PVC-U	≤ 18					
		EN 61386-21 EN 61386-22	max. 1x Plastic conduit	≤ 32	✓	with 1 pc. cable max. 5x10.0 mm ²			
		Metal pipes	max. 2x Steel	≤ 32			≥ 13		EI90

Omega-application in a corner

Shaft walls \geq EI90, lining 2x20, 3x15 or 2x25 mm

Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]			Fire resistance class
					without	PE	Elastomer	
RORCOL V60	63	EN 1519-1	PE	90		5		EI90
		EN 1451-1	PP	≤ 78				
		POLO-KAL NG		75				
		RAUPIANO PLUS		75				

DECLARATION OF PERFORMANCE

Installation details for shaft walls ≥ EI90

10

Diameter of plastic pipe Dimension RORCOL V60

Ø50	- DN6
Ø75	- DN110
Ø90	- DN110
Ø110	- DN125

11

Perforated stainless steel tape or perforated steel tape with plastic coating
Width ≥ 17 mm
Thickness ≥ 1 mm
Hole diameter ≤ 7 mm

12

RORCOL V60

Seal the annular gap between pipe collar and pipe smoke-tight with commercially available silicone sealant

13

RORCOL V60

Seal the annular gap between pipe collar and pipe smoke-tight with commercially available silicone sealant

DECLARATION OF PERFORMANCE

Application areas for shaft walls ≥ EI90

U-application
Shaft walls ≥ EI90, lining 2x20, 3x15 or 2x25 mm

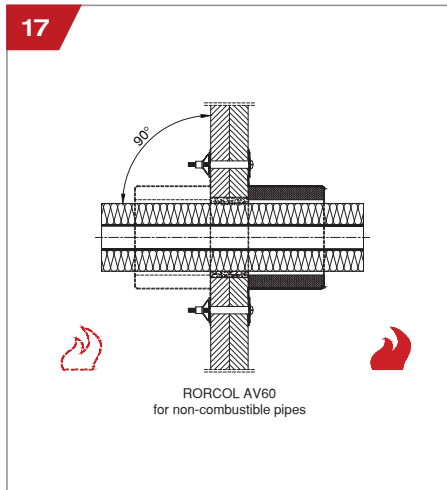
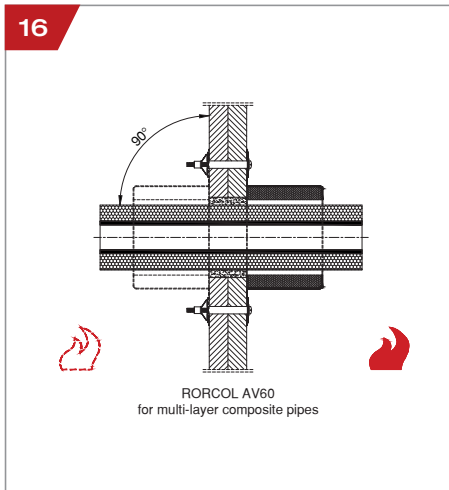
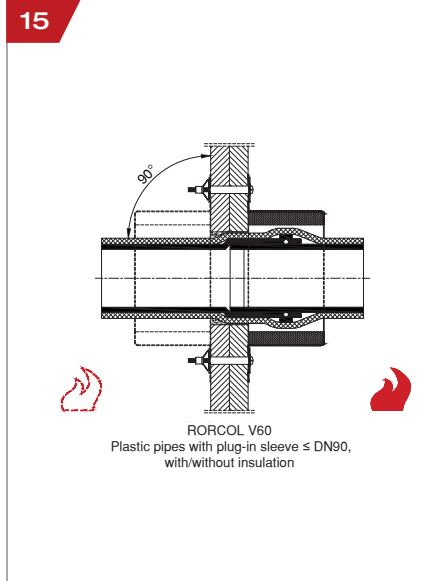
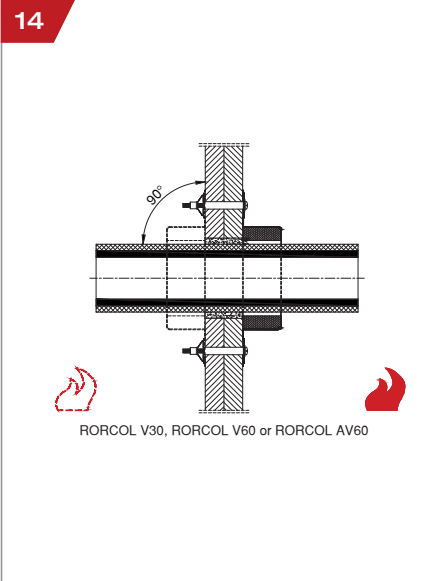
Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]		Fire resistance class
					without	PE	
RORCOL V60	125	EN 1451-1	PP	≤ 110		5	EI90
		CONEL Drain					
		Geberit Silent-PP					
		PhonEX® AS					
		Pipelife Master 3 PLUS					
		RAUPIANO LIGHT					
		Wavin AS					
		DYKASTil®					
POLO-KAL NG	≤ 90						
POLO-KAL XS	≤ 110						
RAUPIANO PLUS	≤ 90						

Symmetrically inserted
Shaft walls ≥ EI90, lining 2x20, 3x15 or 2x25 mm

Type	max. DN	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]		Fire resistance class
					without	PE	
RORCOL V60	125	EN 1451-1	PP	≤ 110		5	EI90
		CONEL Drain					
		Geberit Silent-PP					
		PhonEX® AS					
		Pipelife Master 3 PLUS					
		RAUPIANO LIGHT					
		Wavin AS					
		DYKASTil®					
POLO-KAL NG / XS							
RAUPIANO PLUS							

DECLARATION OF PERFORMANCE

Installation details for shaft walls \geq EI60



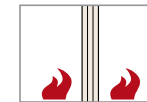
DECLARATION OF PERFORMANCE

Application areas for shaft walls \geq EI60

Pipe penetration seal							
Shaft walls \geq EI60, lining 2x15 mm							
Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]			Fire resistance class
				with-out	PE	Elastomer	
RORCOL V30 or RORCOL V60	EN 1519-1	PE	\leq 110	✓	5		EI60
	EN 1451-1						
	CONEL Drain						
	Geberit Silent-PP						
	PhonEX® AS						
	Pipelife Master 3 PLUS						
	RAUPIANO LIGHT						
	Wavin AS						
	DYKASTil®						
	POLO-KAL 3S						
POLO-KAL NG / XS							
RAUPIANO PLUS							
RORCOL AV60	Multi-layer composite pipes	Al-PE	\leq 26	see "Permissible insulations" on page 26-27			EI60
	Metal pipes	Copper / Steel	\leq 28			\geq 30	



– fire exposure on one or both sides



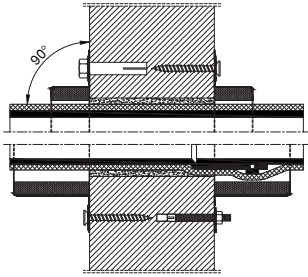
– fire exposure on both sides

DECLARATION OF PERFORMANCE

Installation details for rigid walls

18

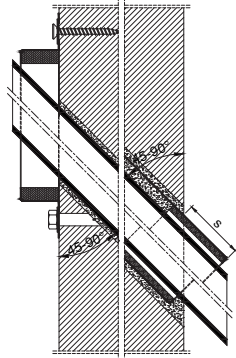
RORCOL V30, RORCOL V60 or RORCOL AV60



RORCOL V60
Plastic pipes with plug-in sleeve ≤ DN160,
with/without insulation

19

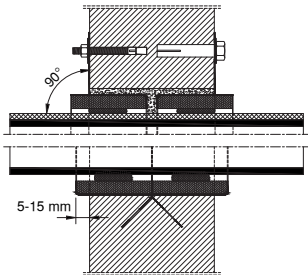
s = 47-61 mm at 45°
s = 21-61 mm at 67.5°
s = 5-61 mm at 90°



RORCOL V30 or RORCOL V60
Plastic pipes ≤ DN110,
uninsulated

RORCOL V60
Plastic pipes with
plug-in sleeve ≤ DN90,
uninsulated
Fill in annular gap 5-20 mm
with mortar

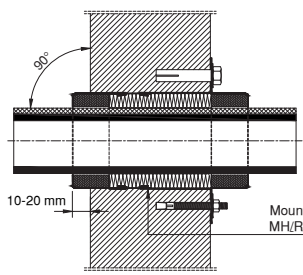
20



RORCOL V30, RORCOL V60 or RORCOL AV60
Plastic pipes ≤ DN160

Multi-layer composite pipes ≤ DN26
Fill annular gap between collar and pipe with 10-20 mm of commercially
available silicone sealant

21



RORCOL V30 or RORCOL V60
Plastic pipes ≤ DN160

Fill annular gap 5-20 mm with mineral wool
(melting point ≥ 1000 °C, A1 acc. to EN 13501-1,
minimum packing density 40 kg/m³)

DECLARATION OF PERFORMANCE

Application areas for rigid walls

Pipe penetration seal Rigid walls, thickness ≥ 100 mm

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				without	PE	Elastomer	Mineral wool	
RORCOL V30 or RORCOL V60	EN 1519-1	PE	≤ 200	✓	≤ 5	≤ 25 (V60 only)	≤ 9	E190
	EN 1451-1	PP	≤ 160					
	CONEL Drain							
	Geberit Silent-PP							
	PhonEX® AS							
	Pipelife Master 3 PLUS							
	RAUPIANO LIGHT							
	Wavin AS							
	DYKASTil®							
	POLO-KAL 3S							
	POLO-KAL NG / XS							
	PP MASTER SN12							
	RAUPIANO PLUS							
RORCOL V60	EN 1401-1			PVC-U	≤ 250	✓	≤ 20	≤ 43
	EN 1452-2	≤ 110						
RORCOL V60	EN 15874-2	PP	≤ 110	✓	≤ 20	≤ 43	≤ 50	E190
	Pellet pipes	PVC, PVC/PU	≤ 58	✓				
RORCOL AV60	Aluminium composite pipes	Al-PE	≤ 63	see "Permissible insulations" on page 26-27				E190
	Metal pipes	Copper / Steel	≤ 18	≥ 10	≥ 9	≥ 30		
			≤ 22		≥ 13			
		Steel	≤ 42		≥ 19			
		≤ 76	≥ 25					
RORCOL M	Metal pipes	Steel	≤ 54		≥ 19	≥ 30	E190	
			≤ 76		≥ 25			

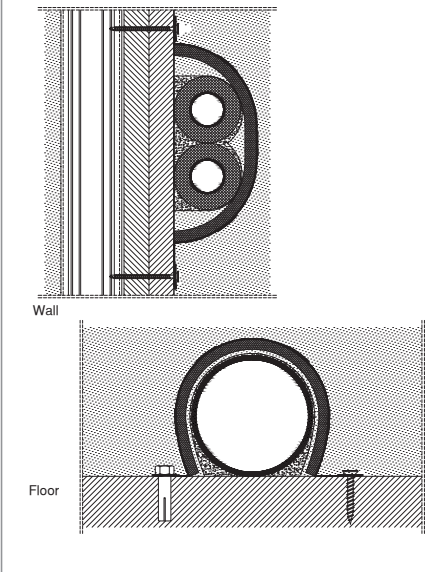
Multiple penetration Rigid walls, thickness ≥ 100 mm

Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]			Fire resistance class
					without	PE	Elastomer	
RORCOL AV60	110	Multi-layer composite pipes	max. 4x Al-PE	≤ 26		9-10	9	E190
	110	Metal pipes	max. 2x Copper	≤ 16		≥ 10	≥ 9	E190
		EN 1451-1	max. 1x PP	≤ 32	✓			
		EN 61386-21 EN 61386-22	max. 1x Plastic conduit	≤ 25		with 1 pc. cable max. 5x2.5 mm²		

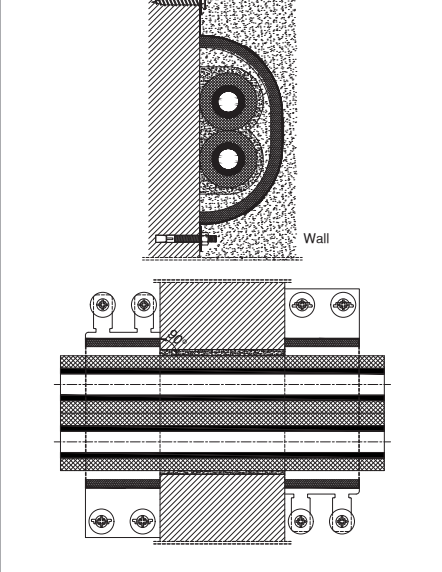
DECLARATION OF PERFORMANCE

Installation details for rigid walls

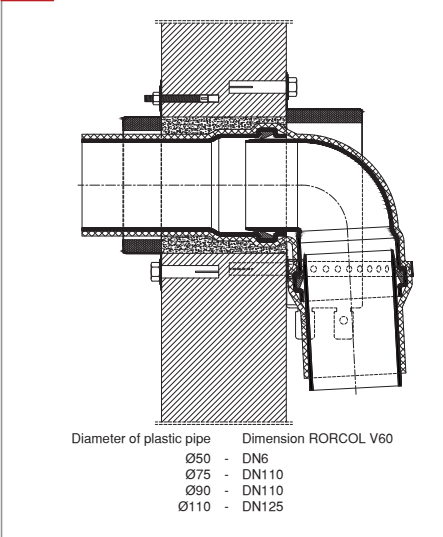
22



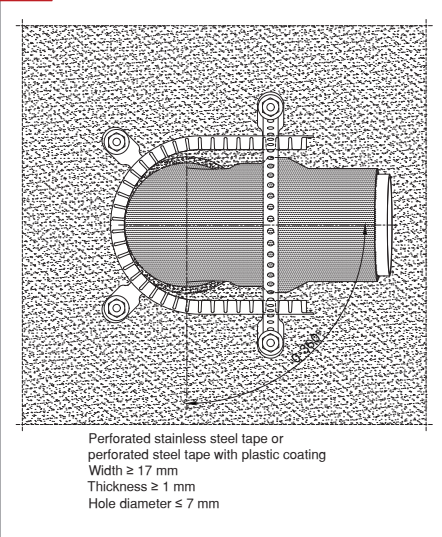
23



24



25



DECLARATION OF PERFORMANCE

Application areas for rigid walls

Omega-application Rigid walls, thickness ≥ 100 mm

Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]			Fire resistance class
					without	PE	Elastomer	
RORCOL AV60	63	Multi-layer composite pipes	max. 2x Al-PE	≤ 26		9-10	9	EI90
		EN 1451-1	max. 1x PP	≤ 75	✓	5		
		Metal pipes	max. 2x Copper	≤ 16			≥ 13	EI90
		EN 1451-1	max. 1x PP	32	✓			
		EN 61386-21 EN 61386-22	max. 1x Plastic conduit	≤ 25	with 1 pc. cable max. 5x2.5 mm ²			
		Multi-layer composite pipes	max. 2x Al-PE	≤ 26		9-10	9	EI90
	max. 1x Al-PE	≤ 20						

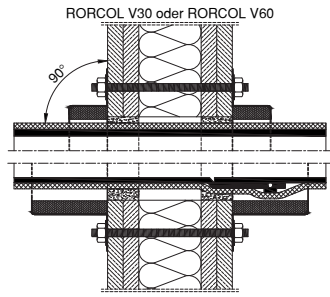
U-application Rigid walls, thickness ≥ 100 mm

Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]		Fire resistance class
					without	PE	
RORCOL V60	125	EN 1451-1	PP	≤ 110		5	EI90
		CONEL Drain					
		Geberit Silent-PP					
		PhonEX® AS					
		Pipelife Master 3 PLUS					
		RAUPIANO LIGHT					
		Wavin AS					
		DYKASTil®					
		POLO-KAL NG					
RAUPIANO PLUS							

DECLARATION OF PERFORMANCE

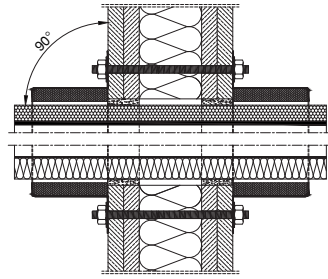
Installation details for flexible walls

26



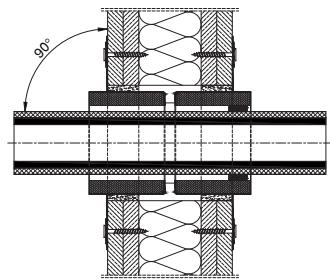
RORCOL V60
Plastic pipes with plug-in sleeve ≤ DN160,
with/without insulation

27



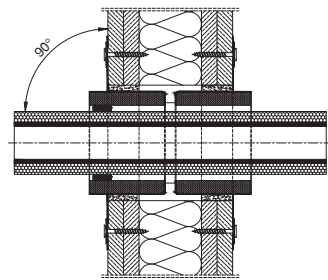
RORCOL AV60
Multi-layer composite pipes and
non-combustible pipes

28



RORCOL V60
Plastic pipes ≤ DN160

29



RORCOL AV60
Multi-layer composite pipes

DECLARATION OF PERFORMANCE

Application areas for flexible walls

Pipe penetration seal Flexible walls, thickness ≥ 100 mm

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				with-out	PE	Elastomer	Mineral wool	
RORCOL V30 or RORCOL V60	EN 1519-1	PE	≤ 200	✓	≤ 5	≤ 6		EI90
	EN 1451-1	PP	≤ 160					
	CONEL Drain							
	Geberit Silent-PP							
	PhonEX® AS							
	Pipelife Master 3 PLUS							
	RAUPIANO LIGHT							
	Wavin AS							
	DYKASTil®							
	POLO-KAL 3S							
	POLO-KAL NG							
	POLO-KAL XS							
RAUPIANO PLUS	≤ 200							
EN 1401-1	PVC-U	≤ 200						
EN 1452-2	≤ 110							
RORCOL V60	EN 15874-2	PP	≤ 110	✓	≤ 5	≤ 43	≤ 50	EI90
RORCOL AV60	Multi-layer composite pipes	Al-PE	≤ 63	see "Permissible insulations" on page 26-27				EI90
	Metal pipes	Copper / Steel	≤ 16	≥ 10	≥ 9	≥ 30		
			≤ 22		≥ 13			
		Steel	≤ 42		≥ 19			
		≤ 76		≥ 32				

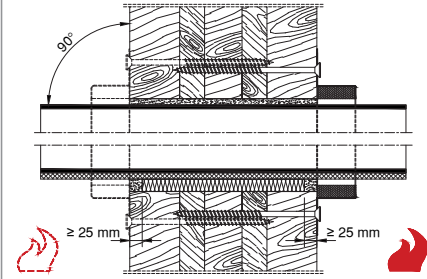
Multiple penetration Flexible walls, thickness ≥ 100 mm

Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]		Fire resistance class
					PE	Elastomer	
RORCOL AV60	110	Multi-layer composite pipes	max. 4x Al-PE	≤ 26	≤ 5	9	EI90
	110	Metal pipes	max. 2x Copper	≤ 18	≥ 10	≥ 9	EI90
		EN 61386-21 EN 61386-22	max. 1x Plastic conduit	≤ 25	with 1 pc. cable max. 5x2.5 mm²		

DECLARATION OF PERFORMANCE

Installation details for cross-laminated timber walls

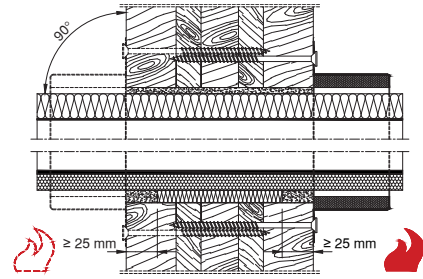
30



RORCOL V30 or RORCOL V60

Fill the annular gap between pipe and wall with 5-20 mm mineral wool (melting point ≥ 1000 °C, A1 acc. to EN 13501-1, minimum packing density 40 kg/m³) and additionally fire protective gap filler BFM/K310 at least 25 mm deep

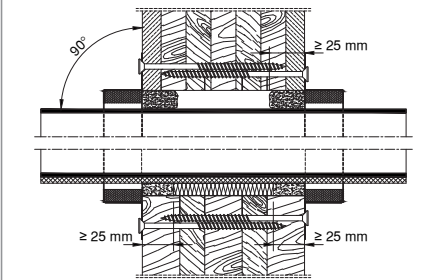
31



RORCOL AV60

Fill the annular gap between pipe and wall with 5-20 mm mineral wool (melting point ≥ 1000 °C, A1 acc. to EN 13501-1, minimum packing density 40 kg/m³) and additionally fire protective gap filler BFM/K310 at least 25 mm deep

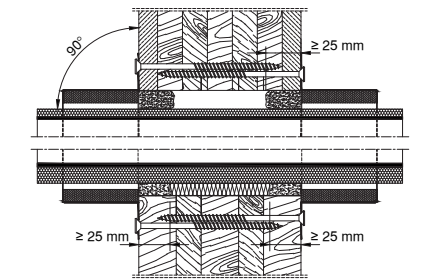
32



RORCOL V30 or RORCOL V60

Fill the annular gap between pipe and wall with 5-20 mm mineral wool (melting point ≥ 1000 °C, A1 acc. to EN 13501-1, minimum packing density 40 kg/m³) and additionally fire protective gap filler BFM/K310 at least 25 mm deep

33



RORCOL AV60

Fill the annular gap between pipe and wall with 5-20 mm mineral wool (melting point ≥ 1000 °C, A1 acc. to EN 13501-1, minimum packing density 40 kg/m³) and additionally fire protective gap filler BFM/K310 at least 25 mm deep

DECLARATION OF PERFORMANCE

Application areas for cross-laminated timber walls

Pipe penetration seal

ETA-06/0138 - Cross-laminated timber walls
Thickness ≥ 150 mm timber

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				without	PE	Elastomer	Mineral wool	
RORCOL V30 or RORCOL V60	EN 1519-1	PE	≤ 135	✓				E190
	EN 1451-1		≤ 160					
	CONEL Drain		≤ 110					
	Geberit Silent-PP	PP	≤ 125		4-5			
	PhonEX® AS		≤ 135					
	Pipelife Master 3 PLUS		≤ 110					
	RAUPIANO LIGHT		≤ 110					
	Wavin AS		≤ 135					
RORCOL AV60	Geberit-Mepla-Rohr	Al-PE	26, 63	see "Permissible insulations" on page 26-27				E190
	TECEflex Verbundrohr							
	Metal pipes	Copper / Steel	≤ 18					
		Steel	≤ 42				≥ 30	
			≤ 54					

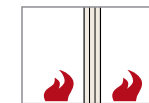
Pipe penetration seal

ETA-06/0138 - Cross-laminated timber walls
Thickness ≥ 100 mm timber + 15 mm gypsum plasterboards on both sides

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]			Fire resistance class
				without	PE	Elastomer	
RORCOL V30 or RORCOL V60	EN 1451-1	PP	≤ 110	✓			E190
	Geberit Silent-PP						
	Pipelife Master 3 PLUS		50				
RORCOL AV60	Geberit-Mepla-Rohr	Al-PE	≤ 32	see "Permissible insulations" on page 26-27			E190



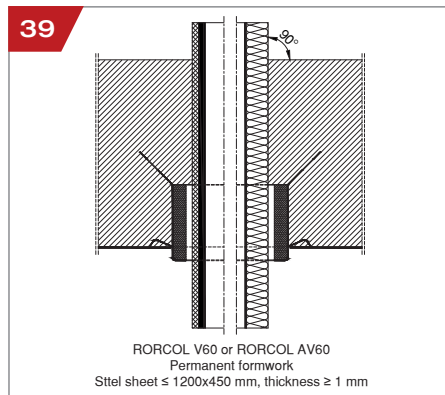
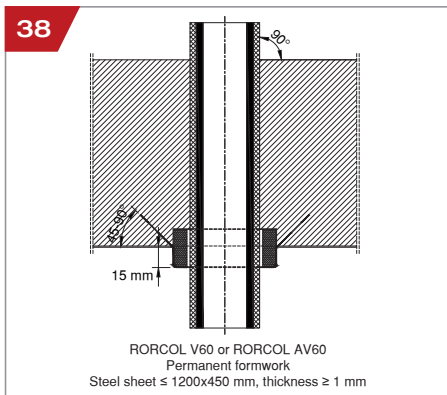
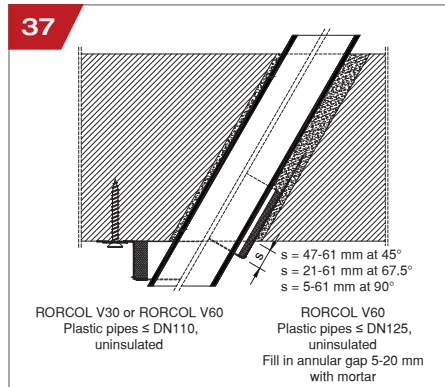
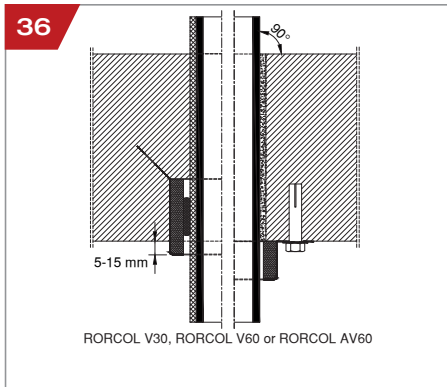
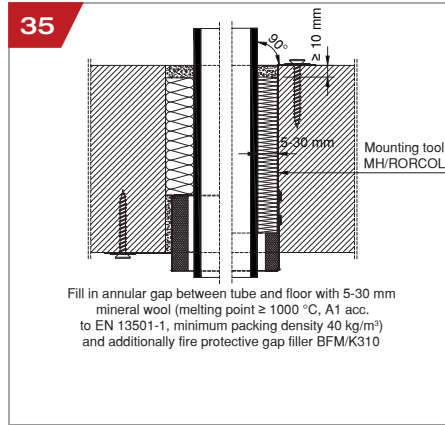
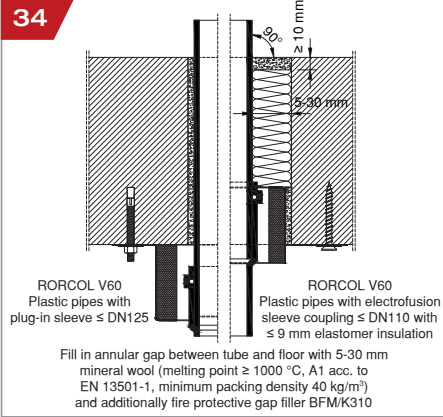
– fire exposure on one or both sides



– fire exposure on both sides

DECLARATION OF PERFORMANCE

Installation details for rigid floors



DECLARATION OF PERFORMANCE

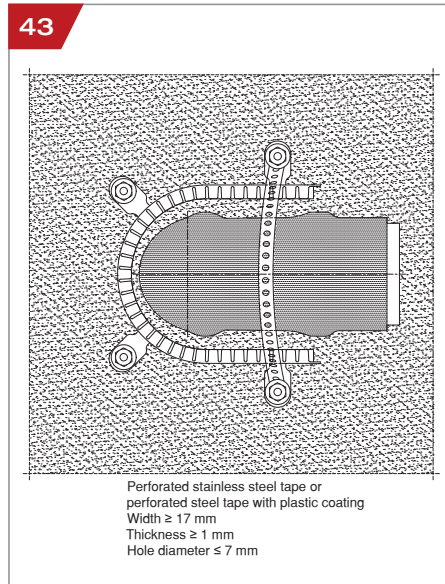
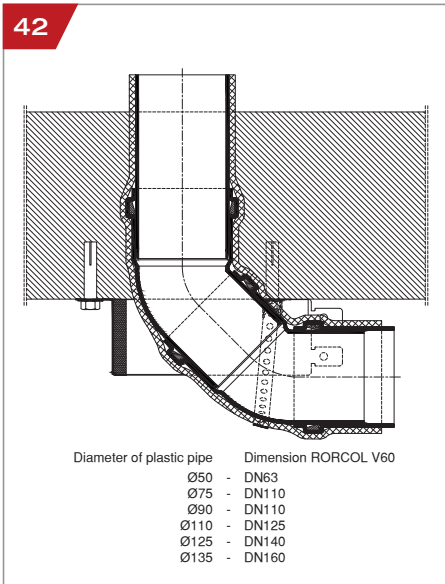
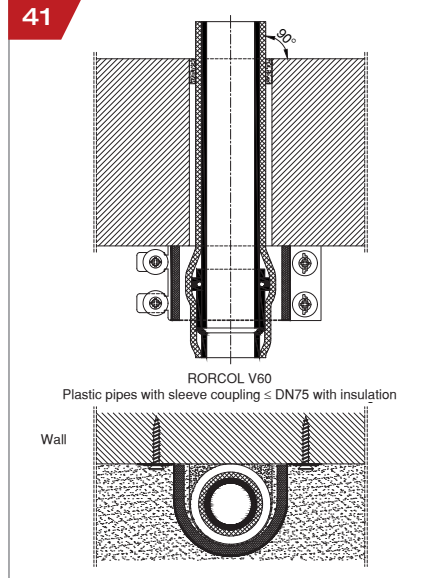
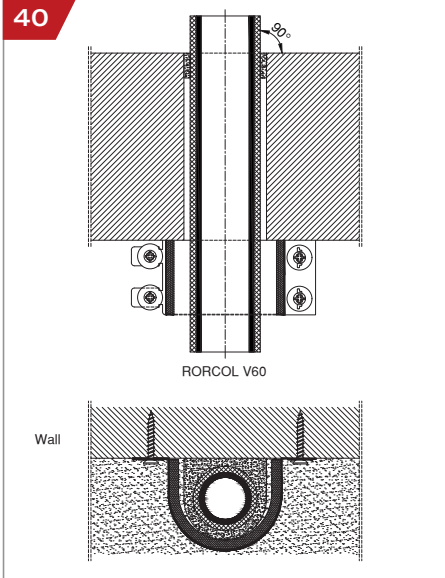
Application areas for rigid floors

Pipe penetration seal Rigid floors, thickness ≥ 150 mm								
Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				without	PE	Elastomer	Mineral wool	
RORCOL V30 or RORCOL V60	EN 1519-1	PE	≤ 135					Ei90
	EN 1451-1							
	CONEL Drain							
	Geberit Silent-PP							
	PhonEX® AS							
	Pipelife Master 3 PLUS						≤ 25 (V60 only)	
	RAUPIANO LIGHT							
	Wavin AS	PP	✓	≤ 5				
	DYKASTil®						≤ 19	
	POLO-KAL 3S							
	POLO-KAL NG / XS			≤ 200			≤ 19	
	RAUPIANO PLUS			≤ 160				
	EN 1401-1			110-125				
EN 1452-2	PVC-U		≤ 110					
RORCOL V60	RAUTITAN flex	PE	≤ 63		≤ 10	9-43	≤ 60	Ei90
	EN 15874-2	PP	≤ 110	✓		≤ 25	≤ 50	
RORCOL AV60	Multi-layer composite pipes	Al-PE	≤ 63	see "Permissible insulations" on page 26-27				Ei90
	Metal pipes	Copper / Steel	≤ 16		≥ 9	≥ 6		
		Steel	≤ 28			≥ 13		
			≤ 42			≥ 19	≥ 30	
			≤ 76			≥ 25		
RORCOL M	Metal pipes	Steel	≤ 54			≥ 19	≥ 30	Ei90
			≤ 76			≥ 25		

Multiple penetration Rigid floors, thickness ≥ 150 mm								
Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]			Fire resistance class
					without	PE	Elastomer	
RORCOL AV60	110	Multi-layer composite pipes	max. 4x Al-PE	≤ 26		≤ 10	≤ 9	Ei90
	80	Metal pipes	max. 2x Copper	≤ 16		≤ 10		Ei90
			max. 2x Copper	≤ 10		≤ 10		
		EN 1451-1	max. 1x Plastic conduit	≤ 20	with 1 pc. cable max. 5x2.5 mm ²			

DECLARATION OF PERFORMANCE

Installation details for rigid floors



DECLARATION OF PERFORMANCE

Application areas for rigid floors

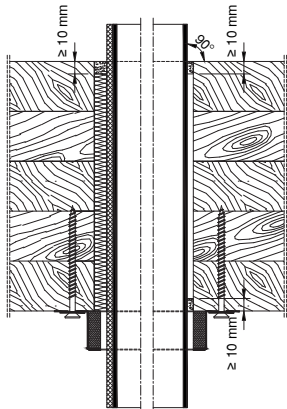
Omega-application							
Rigid floors, thickness ≥ 150 mm							
Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]		Fire resistance class
					without	PE	
RORCOL V60	110	EN 1451-1	PP	≤ 110		5	EI90
		CONEL Drain					
		Geberit Silent-PP					
		PhonEX® AS					
		Pipelife Master 3 PLUS					
		RAUPIANO LIGHT					
		Wavin AS					
		DYKASTil®					
POLO-KAL NG / XS							
RAUPIANO PLUS							

U-application							
Rigid floors, thickness ≥ 150 mm							
Type	max. DN	Standard / Fabricate	Material/ penetrating element	Pipe diameter [mm]	Insulation [mm]		Fire resistance class
					without	PE	
RORCOL V60	160	EN 1451-1	PP	≤ 135		5	EI90
		CONEL Drain		≤ 110			
		Geberit Silent-PP		≤ 125			
		PhonEX® AS		≤ 110			
		Pipelife Master 3 PLUS		≤ 110			
		POLO-KAL NG					
		RAUPIANO LIGHT					
Wavin AS							

DECLARATION OF PERFORMANCE

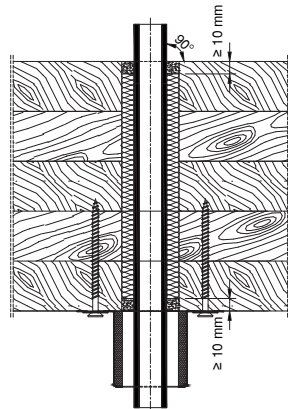
Installation details for cross-laminated timber floors

44



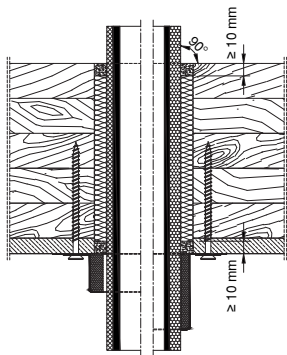
RORCOL V30 or RORCOL V60

45



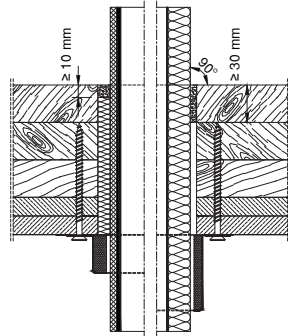
RORCOL AV60
for multi-layer composite pipes

46



RORCOL V30, RORCOL V60 or RORCOL AV60

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RORCOL V30, RORCOL V60 or RORCOL AV60

DECLARATION OF PERFORMANCE

Application areas for cross-laminated timber floors

Pipe penetration seal

ETA-06/0009 - Cross-laminated timber floors
Thickness ≥ 200 mm timber

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				with-out	PE	Elastomer	Mineral wool	
RORCOL V30 and RORCOL V60	EN 1519-1	PE	≤ 110		5			Ei90
	EN 1451-1	PP	110	✓				
	Geberit Silent-PP				5			
	POLO-KAL 3S			✓				
RORCOL AV60	MT-Verbundrohr	Al-PE	20					Ei90
	PRINETO Nanoflex-Rohr		21	✓				
	PRINETO Stabil-Rohr							

Pipe penetration seal

ETA-06/0138 - Cross-laminated timber floors
Thickness ≥ 140 mm timber + 12.5 mm gypsum plasterboard

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				with-out	Poly-ester	PE	Elastomer	
RORCOL V30 and RORCOL V60	EN 1519-1	PE	≤ 125	✓		≤ 5		Ei90
	EN 1451-1	PP	≤ 50		≤ 4			
	CONEL Drain		≤ 40					
	Pipelife Master 3 PLUS		110-125	✓				
	RORCOL AV60	DYKASTil®	Al-PE	26, 63			≤ 5	
RAUPIANO PLUS								
Geberit-Mepla-Rohr		20						
HENCO		26, 63				10	9-13	
	POLYSAN							
	TECEflex Verbundrohr							

Pipe penetration seal

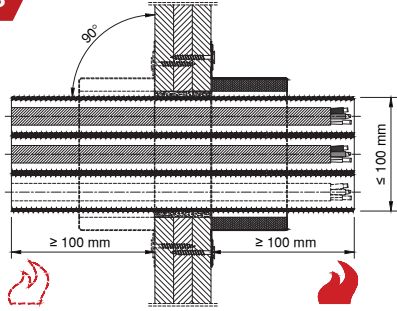
ETA-06/0138 - Cross-laminated timber ceilings
Thickness ≥ 90 mm timber + 2x15 mm gypsum plasterboards

Type	Standard / Fabricate	Material	Pipe diameter [mm]	Insulation [mm]				Fire resistance class
				with-out	PE	Elastomer	Mineral wool	
RORCOL V30 and RORCOL V60	EN 1519-1	PE	≤ 110	✓				Ei90
RORCOL AV60	Metal pipes	Steel	≤ 35			≥ 13	≥ 30	Ei90

DECLARATION OF PERFORMANCE

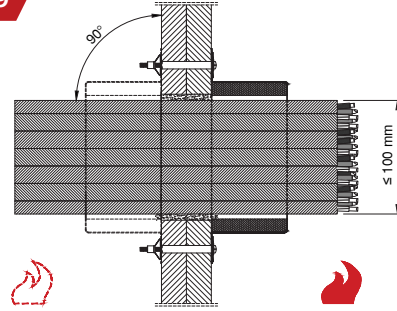
Installation details for cable penetration seals

48



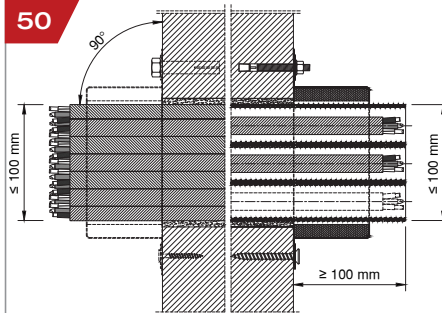
RORCOL AV60 ≤ DN110
for bundles of plastic conduits with/without cable

49



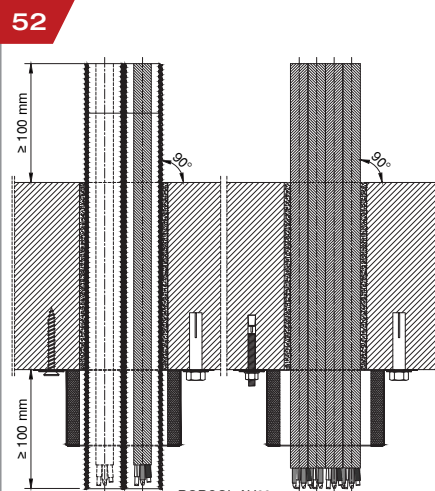
RORCOL AV60 ≤ DN110
for cable bundles

50



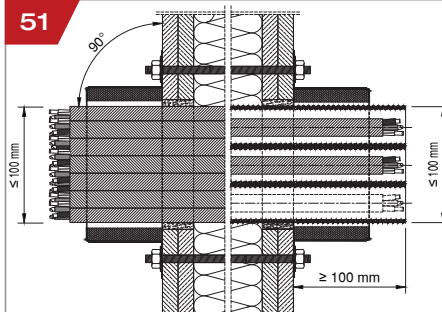
RORCOL AV60 ≤ DN110
for cable bundles and bundles
of plastic conduits with/without cable

52



RORCOL AV60
for cable bundles and bundles
of electrical conduits with/without cable

51



RORCOL AV60 ≤ DN110
for cable bundles and bundles of plastic conduits with/without cable

DECLARATION OF PERFORMANCE

Application areas for cable penetration seals

Cable penetration seal

Shaft walls ≥ EI90, lining 2x20, 3x15 or 2x25 mm

Type	max. DN	Standard / Fabricate	Penetrating elements	Outer diameter of tied bundles [mm]	Outer diameter of plastic conduits [mm]	Cable dimensions [mm]	Fire resistance class
RORCOL AV60	110	EN 61386-21	Bundles of plastic conduits	≤ 100	≤ 40	≤ 18.5	EI90
		EN 61386-22			≤ 50	≤ 21	
		All types of sheathed cables	Cable bundles		-	≤ 21	
		EN 61386-21	Plastic conduits		-	≤ 5x10.0 mm ²	
EN 61386-22	-	≤ 5x16.0 mm ²					

Cable penetration seal

Rigid walls or flexible walls, thickness ≥ 100 mm

Type	max. DN	Standard / Fabricate	Penetrating elements	Outer diameter of tied bundles [mm]	Outer diameter of plastic conduits [mm]	Cable dimensions [mm]	Fire resistance class
RORCOL AV60	110	EN 61386-21	Bundles of plastic conduits	≤ 100	≤ 25	≤ 15	EI90
		EN 61386-22			≤ 50	≤ 21	
		All types of sheathed cables	Cable bundles		-	≤ 21	

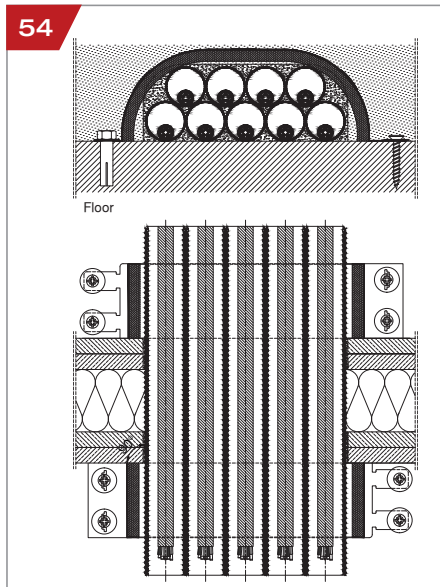
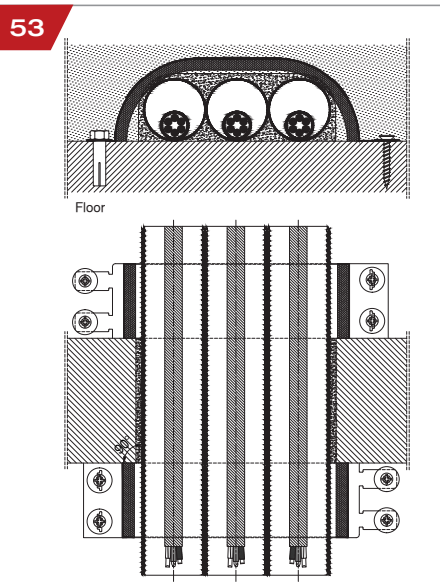
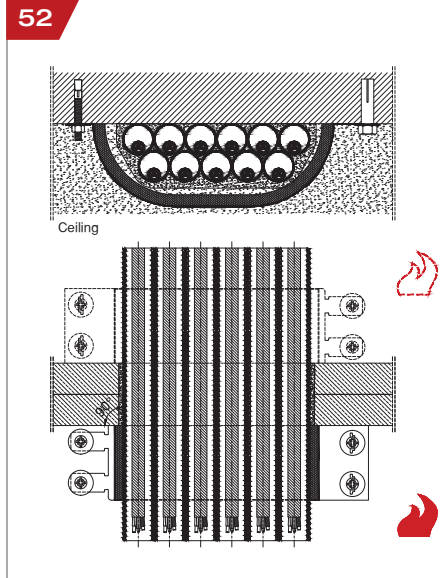
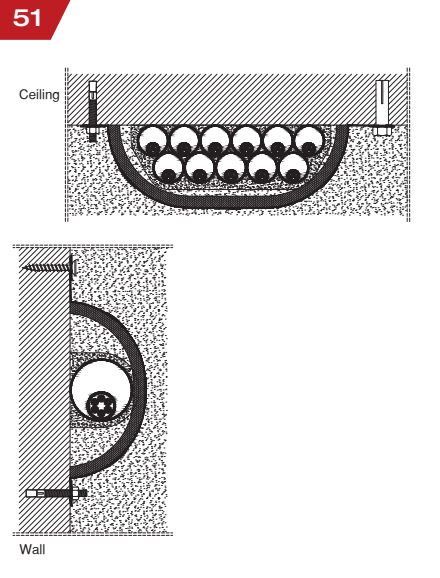
Cable penetration seal

Rigid floors, thickness ≥ 150 mm

Type	max. DN	Standard / Fabricate	Penetrating elements	Outer diameter of tied bundles [mm]	Outer diameter of plastic conduits [mm]	Cable dimensions [mm]	Fire resistance class
RORCOL AV60	110	EN 61386-21	Bundles of plastic conduits	≤ 100	≤ 25	≤ 15	EI90
		EN 61386-22			≤ 50	≤ 21	
		All types of sheathed cables	Cable bundles		-	≤ 21	
		EN 61386-22	Plastic conduits		-	≤ 5x16.0 mm ²	

DECLARATION OF PERFORMANCE

Installation details for cable penetration seals, Omega-application



DECLARATION OF PERFORMANCE

Application areas for cable penetration seals, Omega-application

Omega-application for cable penetration seals Shaft walls \geq E190, lining 2x20, 3x15 or 2x25 mm

Type	max. DN	Standard / Fabricate	Penetrating elements	Outer diameter of tied bundles [mm]	Outer diameter of plastic conduits [mm]	Cable dimensions [mm]	Fire resistance class
RORCOL AV60	80	EN 61386-21	Bundles of plastic conduits	1	≤ 40	$\leq 5 \times 10.0 \text{ mm}^2$	E190
		EN 61386-22		12	≤ 32	$\leq 5 \times 2.5 \text{ mm}^2$	
				11	≤ 25	$\leq 5 \times 6.0 \text{ mm}^2$	
		1		≤ 50	$\leq 5 \times 16.0 \text{ mm}^2$		

Omega-application for cable penetration seals Rigid walls or flexible walls, thickness ≥ 100 mm

Type	max. DN	Standard / Fabricate	Penetrating elements	Outer diameter of tied bundles [mm]	Outer diameter of plastic conduits [mm]	Cable dimensions [mm]	Fire resistance class
RORCOL AV60	80	EN 61386-21	Bundles of plastic conduits	2	≤ 25	$\leq 5 \times 2.5 \text{ mm}^2$	E190
		EN 61386-22		12	≤ 32	$\leq 5 \times 2.5 \text{ mm}^2$	
				11	≤ 25	$\leq 5 \times 6.0 \text{ mm}^2$	
		3		≤ 50	$\leq 5 \times 16.0 \text{ mm}^2$		
					$\leq 1 \times 95.0 \text{ mm}^2$		

The performance of the aforementioned product corresponds to the declared performance(s). The manufacturer named above is solely responsible for producing the declaration of performance in accordance with EU Regulation no. 305/2011.

Signed for the manufacturer
and in the name of the manufacturer by:

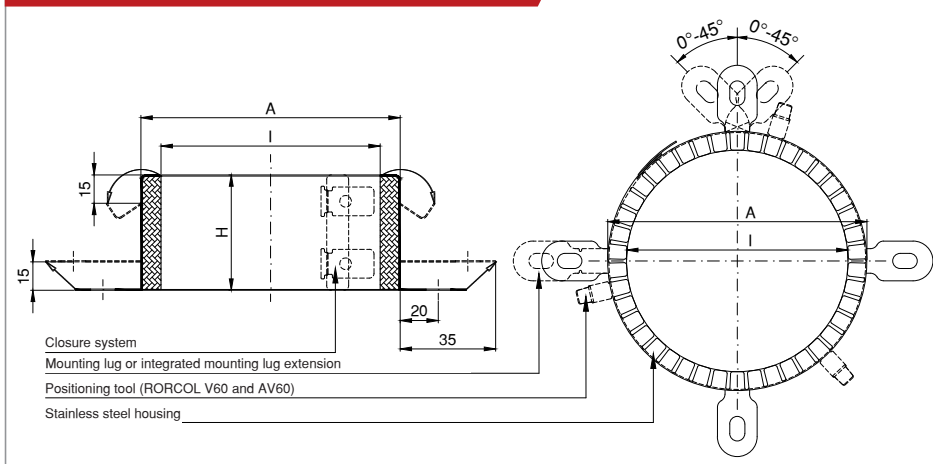
AIR FIRE TECH

Air Fire Tech Brandschutzsysteme GmbH
Stranzenberggasse 7b/1/2, A-1130 Wien
T: 01 982 01 74-0, E: office@airfiretech.at

Uwe Stefani, Managing Director/CEO,
AIR FIRE TECH Brandschutzsysteme GmbH

Vienna, July 2020

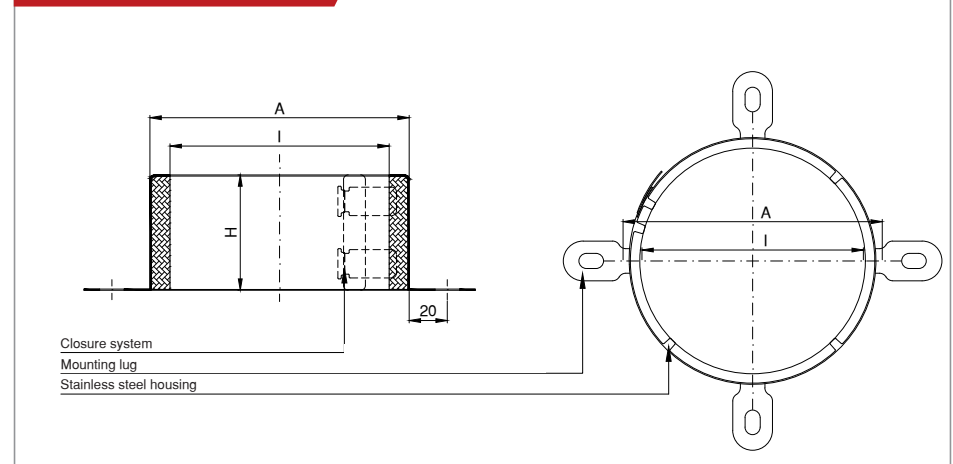
Pipe collar RORCOL V30 - V60 - AV60



Type	Field of application	Dimension	Depth [H] [mm]	Outer diameter [A] [mm]	Inner diameter [I] [mm]	Number of mounting lugs
V30	for plastic pipes	DN40	31	57	46	3
		DN56		74	62	
		DN63		86	70	
		DN80		103	86	
		DN100		127	105	4
		DN110		142	119	
		DN125		161	133	
		DN140		178	146	
V60	for plastic pipes, extended field of application	DN56	61	74	62	3
		DN63		86	70	
		DN80		103	86	
		DN100		127	105	4
		DN110		142	119	
		DN125		161	133	
		DN140		178	146	
		DN160		201	168	5
		DN180		219	187	6
		DN200		246	209	
DN250	303	261				
AV60	for multi-layer composite pipes, cables and metal pipes	DN40	61	58	45	3
		DN56		74	60	
		DN63		86	73	
		DN80		103	85	4
		DN100		126	107	
		DN110		138	120	
		DN125		158	135	
		DN140		177	150	5
DN160	197	171				

Metal housing material: stainless steel

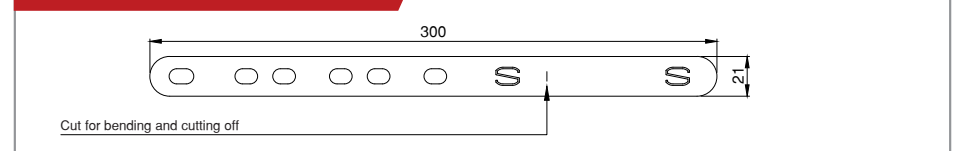
Pipe collar RORCOL M



Type	Field of application	Dimension	Depth [H] [mm]	Outer diameter [A] [mm]	Inner diameter [I] [mm]	Number of mounting lugs
M	for metal pipes	DN110	61	131	119	4
		DN125		145	134	
		DN140		161	150	
		DN160		186	170	
		DN200		231	209	6
		DN250		280	258	8

Metal housing material: stainless steel

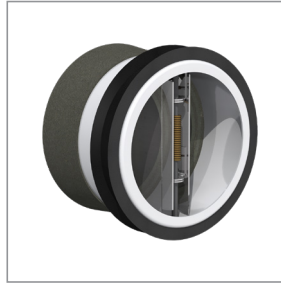
Mounting tool MH/RORCOL



Fire protection



Fire dampers*
INLAP
EI120(ho, ve, i↔o)S



Fire dampers**
FSA
FLI-VE(ho+ve)90



Access panels*
FIREREV
EI120 / EI90 / EI60 / EI30

* Listed products are not subject to ETA regulation.

** Classification and use according to national guidelines



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1139-CPR-0523/13

ETA-13/0758

EAD 350454-00-1104

DOP 2020/RORCOL

Pipe penetration seal
"Air Fire Tech
System RORCOL"
Use category Y₁

For other relevant
characteristics, see
ETA-13/0758