

E41.en

The Firewin Systems

11/2015

E41.en Fire protection built-ins

E411a.en – Knauf Firecollar Rorcol V30

E411b.en - Knauf Firecollar Rorcol V60

E411c.en – Knauf Firecollar Rorcol AV60

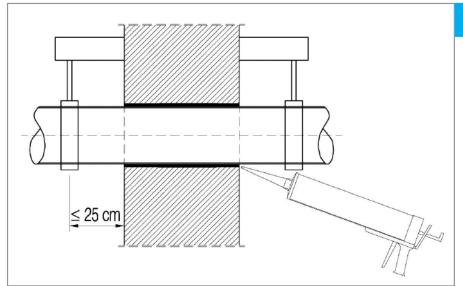
New



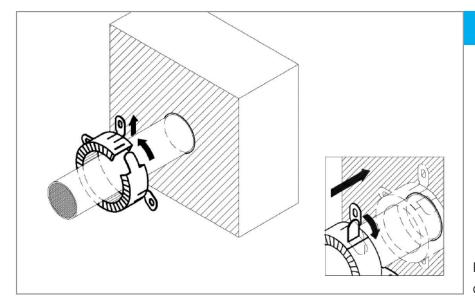


Installation steps

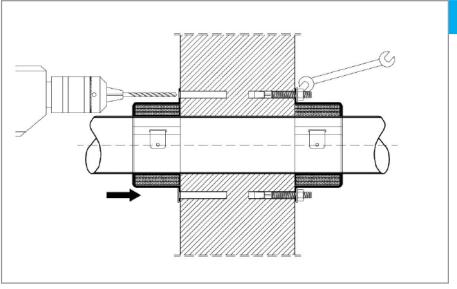




Fill gap acc. to installation details. First support (Non-combustible service support construction) in a distance of max. 25 cm on both sides of the wall or on the top side of the floor.



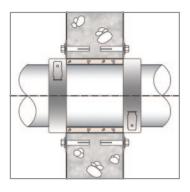
Put the firecollar on the pipe or if the pipe is insulated, on the insulation and close the closure flaps.



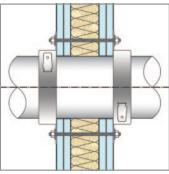
Mount the firecollars acc. to installation details.

Separating elements with classification standard EN 13501-2





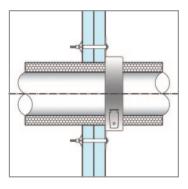
Rigid wall, Thickness ≥ 100 mm Density ≥ 500 kg/m³



Flexible wall El90 and El120,

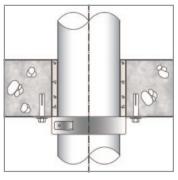
Thickness ≥ 100 mm

studs lined on both faces with minimum 2 layers of boards (minimum thickness 12,5 mm), distance between studs 62,5 cm, gypsum plasterboards type DF acc. to EN 520, GM-F acc. to EN 15283-1 or boards with ETA

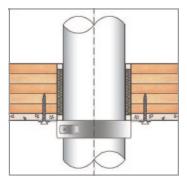


Shaft wall El90 and El120,

Steel studs lined on one face with 2x20, 3x15 or 2x25 mm gypsum plasterboards DF acc. to EN 520 or GM-F acc. to EN 15283-1. Minimum nominal width of profiles 50 mm (e.g. CW50), with or without mineral wool



Rigid floor, Thickness ≥ 150 mm Density ≥ 500 kg/m³



Cross laminated timber floor El90 and El120, 140 mm timber + 12,5 mm gypsum plasterboard

Installation notes - Tested pipes



/ре	Penetrating element	Material or pipe name			
	Combustible pipes	PE-HD			
	Combustible pipes	PE-HD			
	Combustible pipes	"RAUTITAN flex"			
	Combustible pipes	PP			
Rorcol V30	Combustible pipes	PP			
and Rorcol V60	Combustible pipes	PP			
KOTOGOT V GO	Combustible pipes	"POLO-KAL NG"			
	Combustible pipes	"POLO-KAL 3S"			
	Combustible pipes	"Raupiano Plus"			
	Combustible pipes	"WC Anschlussstutzen"			
	Combustible pipes	"PP MASTER SN12"			
	Combustible pipes	"Aquatherm firestop"			
Rorcol V60	Combustible pipes	PVC-U			
	Conveying tubes	"Pelflex/AS"			
	Conveying tubes	"Pelflex PU/AS"			
	Combustible pipes	"Geberit Mepla-Rohr"			
	Combustible pipes	"FRIATHERM multi-press"			
	Combustible pipes	"HENCO Mehrschichtverbundrohr"			
	Combustible pipes	"JRG Sanipex MT"			
	Combustible pipes	"RAUTITAN stabil"			
Rorcol AV60	Combustible pipes	"TECEflex-Verbundrohr"			
ROICOI AVOU	Combustible pipes	"Uponor Verbundrohr"			
	Combustible pipes	"K06 KELIT ALU-Verbundrohr PN20"			
	Non-combustible pipes	Metal pipes			
	Conduits	PVC conduits for cables			
	Cable	NYM-J			
	Combustible pipes	"Geberit Mepla-Rohr"			
	Combustible pipes	"TECEflex-Verbundrohr"			
	Combustible pipes	"HENCO Mehrschichtverbundrohr"			
Porcel AVGO	Combustible pipes	"JRG Sanipex MT"			
Rorcol AV60, nultiple penetration	Combustible pipes	"RAUTITAN stabil"			
natiple periodiation	Combustible pipes	"FRIATHERM multi-press"			
	Conduits	PVC conduits for cables			
	Non-combustible pipes	Metal pipes			

Detailed pipe thickness and diameter are included in the following installation details or will be given by the manufacturer on request.



Standard or manufacturer	Pipe end configuration
EN 1519-1	U/U
EN 12201-2	U/U
REHAU Gesellschaft m.b.H.	U/U
EN 1451-1	U/U
EN ISO 15494-3	U/U
EN ISO 15874-2	U/U
POLOPLAST GMBH & CO KG	U/U
POLOPLAST GMBH & CO KG	U/U
REHAU Gesellschaft m.b.H.	U/U
Viega GmbH	U/U
Pipelife Austria GmbH & Co KG	U/U
aquatherm GmbH Kunststoffextrusions- und Spritzgießtechnik	U/C
EN 1401-1	U/U
HY-POWER Produktions und Handels GmbH	U/U
HY-POWER Produktions und Handels GmbH	U/U
Geberit Vertriebs GmbH	U/C
Friatec AG	U/C
HENCO Industries NV	U/C
Georg Fischer JRG AG	U/C
REHAU Gesellschaft m.b.H.	U/C
TECE GmbH	U/C
Uponor Vertriebs GmbH	U/C
KE KELIT Kunststoffwerk GesmbH	U/C
Reaction to fire class A1 acc. to EN 13501-1 with a melting or decomposition point greater than 1022°C and a thermal conductivity smaller or equal to copper	C/C
EN 61386-22	C/C
_	-
Geberit Vertriebs GmbH	U/C
TECE GmbH	U/C
HENCO Industries NV	U/C
Georg Fischer JRG AG	U/C
REHAU Gesellschaft m.b.H.	U/C
Friatec AG	U/C
EN 61386-22	C/C
Reaction to fire class A1 acc. to EN 13501-1 with a melting or decomposition point greater than 1022°C and a thermal conductivity smaller or equal to copper	C/C

Installation notes



Notes

The firecollars in vertical separating elements (walls) have to be installed on both sides of the wall. The fire stop collars in horizontal separating elements (ceilings) have to be installed at the bottom side of the floor. When applying and installing the product, make sure to meet the requirements of additional national laws and regulations that may exist. The manufacturers' product must not be modified or exposed to mechanical load. Additional information about penetration seals that is not included in this installation instruction will be given by the manufacturer on request. The applicability of the manufacturers' products for the given specific requirements has to be checked by the user.

Insulations

Plastic pipes are tested with or without insulation. The insulation can be installed continued-sustained (CS) or local-sustained (LS) (Sound insulation). The length of local insulations has to be minimum 100 mm on both sides of the separating element (measured from the surface of the separating element). Multi-layer composite pipes are tested without insulation up to pipe outside diameter Ø26 mm and with continued-sustained (CS) insulation up to pipe outside diameter Ø63 mm.

Metal pipes are always tested with continued-sustained (CS) insulation.

Detailed insulation type and thickness is included in the following installation details or will be given by the manufacturer on request.

Pipe end configuration

Plastic Pipes are tested U/U (uncapped/uncapped) for the use in a drain-waste-vent system.

Multi-layer composite pipes are tested U/C (uncapped/capped) for the use in a self-contained pipe system (e.g. pressurized water system, heating pipes).

Conduits are tested C/C (capped/capped) and have to be closed with commercially available silicone sealant on both sides of the penetration seal.

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

Service support construction

All types of pipes have to be supported by a service support construction (e.g. pipe hangers) made of metal with a decomposition point greater than 1050°C. The support must tightly enclose the pipe and maintain a rigid suspension for the required period of fire resistance.

Safety

Keep out of the reach of children. Keep away from food, drink and animal foodstuffs.

Keep in a cool and dry place. Keep away from heat and frost.

Use category

The Pipe penetration seal "Knauf Firecollar Rorcol System" 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 ETAG 026-Part 2 clause 2.4.12.1.3.3 – be categorized as Type Y_1 . Since the requirements for Type Y_1 are met, also the requirement for Type Y_2 , Z_1 and Z_2 are fulfilled.

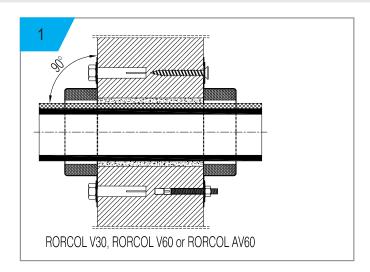
Although a penetration seal is intended for indoor applications only, the construction process may result in it being subjected to more exposed conditions for a period before the building envelope is closed. For this case provisions shall be made to protect temporarily exposed penetration seals according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

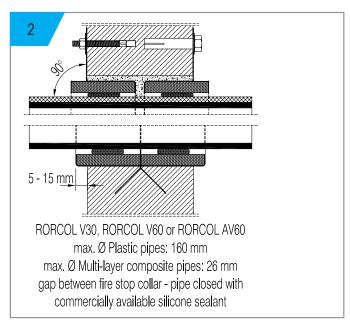
It is assumed that

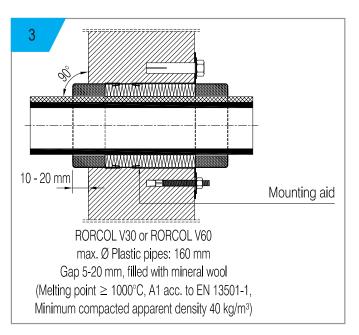
- damages to the penetration seal are repaired accordingly,
- the installation of the penetration seal does not effect the stability of the adjacent building element even in case of fire,
- the lintel or floor above the penetration seal is designed structurally and in terms of fire protection such that no additional mechanical load (other than its own weight) is imposed on 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 (not to the penetration seal) 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 (for sealing off plastic pipes and conveying tubes).

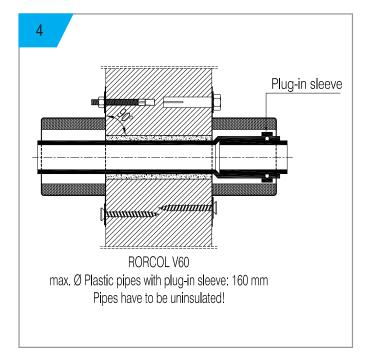
Installation notes - Rigid wall

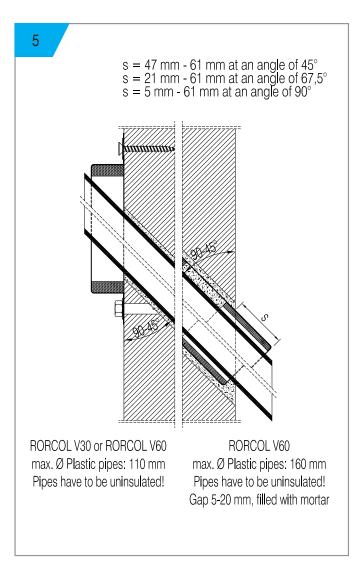












Installation notes - Rigid wall

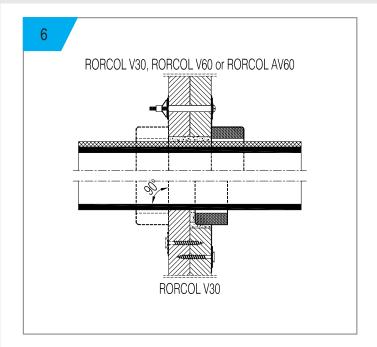


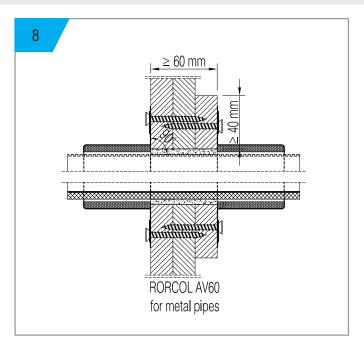
		Ri	gid wall, thickne	ss ≥ 100 mm						
				Dino outoido		Insulatio	ons [mm]			
Туре	Gap (Pipe–Wall)	Mounting	Material	Pipe outside diameter [mm]	without	PE ≤ 4	Elastomer ≤ 32	Mineral wool ≤ 50		
Rorcol			PE	≤ 135	•	•	•			
V30		Metallic anchors or metallic plugs with	PP	≤ 125	•	•	•			
					PE	≤ 200	•	•		
Rorcol	≤ 10 mm,			PP	≤ 250	•	•			
V60	filled with	screws	PVC-U	≤ 200	•	•				
	AIR FIRE TECH	≥ M6 or chipboard	Conveying tubes	≤ 58	•					
	fire protective gap filler or mortar	screws \geq 6x55 mm (only for	Multi-layer com-	≤ 26	•	•	≤9			
Rorcol AV60		aerated concrete)	posite pipes	≤ 63			•	•		
AVUU		33310.0)	Conduits	≤ 50	•					
			Metal pipes	≤ 18		•	•			

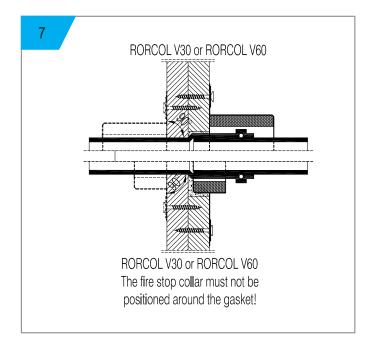
		Mu	ıltiple penetration ı	rigid wall, thickne	ess ≥ 100 mm			
	max.	Gap		Material / Pene-	Pipe	Insulations [mm]		
Туре	DN	(Pipe-Wall)	Mounting	trating element	dimensions [mm]	without	PE ≤ 10	Elastomer ≤ 9
	110		Metallic	max. 2x multi- layer composite pipes	≤ 26			•
	≤ 10 mm, filled	anchors or metallic plugs with	max. 13x PVC conduits	≤ 50				
Rorcol AV60	110	with AIR FIRE TECH fire protective	screws ≥ M6 or chipboard	max. 13x NYM-J	max. 5x6,0 mm²			
AVOU		gap filler or mortar	screws \geq 6x55 mm (only for	max. 2x metal pipes	≤ 18		•	•
	63		aerated concrete)	max. 1x PVC conduits	≤ 25			
				max. 1x NYM-J	max. 5x2,5 mm²			

Installation notes - Shaft wall









Installation notes - Shaft wall



		Shaft wall El90	and El120, lining	2x20, 3x15 or 2	x25 mm		
	Gap			Pipe outside		Insulations [mm]
type	(Pipe-Wall)	Mounting	Mounting Material		without	PE ≤ 4	Elastomer ≤ 9
Rorcol			PE	≤ 110		•	
V30	≤ 10 mm,	Cavity dowels ≥ M6 or chipboard screws ≥ 3,5x35 mm with Ø 20 mm washers (only for lining 2x25 mm)	PP	≤ 110	•	•	
Rorcol	filled with		PE	≤ 110		•	
V60	AIR FIRE TECH fire protective		PP	≤ 110	•	•	
Rorcol	gap filler or gypsum		Multi-layer com- posite pipes	≤ 26	•	≤ 10	•
AV60	joint filler		Conduits	≤ 50			
			Metal pipes	≤ 12			•

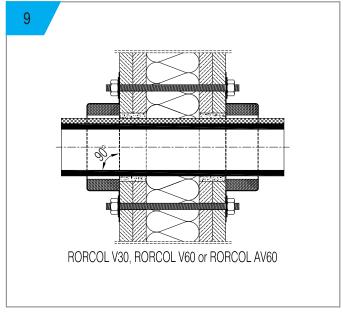
	Multiple penetration shaft wall El90 and El120, lining 2x20, 3x15 or 2x25 mm											
	max.	Gan		Material / Pene-	Pipe	Insulatio	ns [mm]					
Туре	DN	Gap (Pipe-Wall)	Mounting		dimensions [mm]	without	Elastomer ≤ 9					
	110		Metallic	13x PVC con- duits	≤ 50							
	110	≤ 10 mm, filled with	anchors or metallic plugs with screws	max. 13x NYM-J	max. 5x6,0 mm²							
Rorcol AV60		AIR FIRE TECH fire protective	≥ M6 or chipboard screws ≥ 6x55 mm with ø 20 mm	max.2x metal pipes	≤ 12		•					
	gap filler 63 or mortar		washers (only for lining 2x25	max. 1x PVC conduits	≤ 25							
			mm)	max. 1x NYM-J	max. 5x1,5 mm²							

Installation notes - Flexible wall

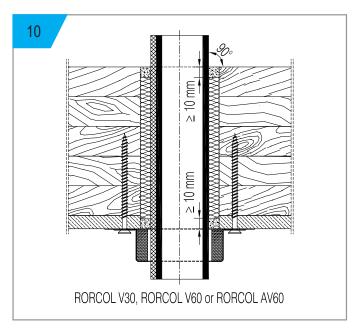


		Flexible	wall El90 and El1	20, thickness ≥	100 mm					
				Pipe outside		Insulations [mm]				
Туре	Gap (Pipe-Wall)	' Mounting Material		diameter [mm]	without	PE ≤ 4	Elastomer ≤ 32	Mineral wool ≤ 50		
Rorcol	≤ 10 mm,	Threaded bars	PE	≤ 135	•	•				
V30	filled with		PP	≤ 125	•	•				
Rorcol	AIR FIRE TECH		PE	≤ 200	•	•				
V60	fire protective	≥ M6 with ø 20 mm washers	PP	≤ 200	•	•				
Rorcol AV60	gap filler or gypsum	and nuts	Multi-layer com- posite pipes	≤ 63		•	•	•		
AVOU	joint filler		Conduits	≤ 50						

		Multiple pe	netration flexible	wall El90 and El	120, thickness ≥	: 100 mm
Tuno	max. Gap Mounting Material / Pene-		Pipe	Insulations [mm]		
Туре	DN	(Pipe-Wall)	e–Wall) Iviounting t		[mm]	without
Rorcol	110	≤ 10 mm, filled with AIR FIRE TECH fire protective	Threaded bars ≥ M6 with ø 20	max. 13x PVC conduits	≤ 50	
AV60	110	gap filler or gypsum joint filler	mm washers and nuts	max. 13x NYM-J	max. 5x6,0 mm²	







Cross laminated timber floor

Installation notes - Cross laminated timber floor

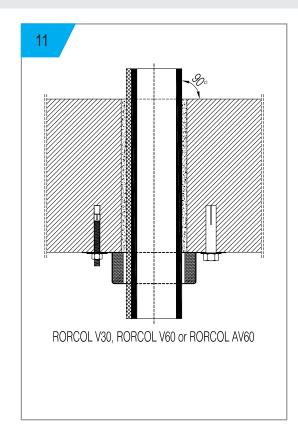


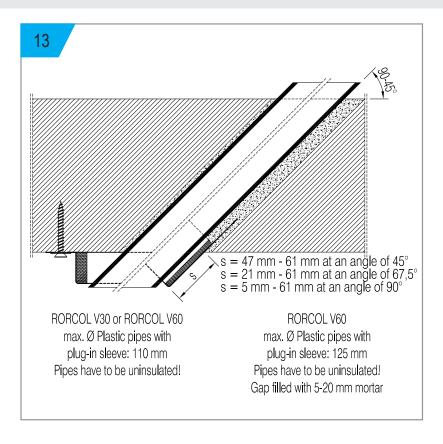
Cross laminated timber floor El90 and El120, thickness ≥ 152,5 mm (140 mm timber + 12,5 mm gypsum plasterboard) Insulations [mm] Pipe outside Gap Mineral Polyester Elasto-Mounting Material diameter Type with-PΕ (Pipe-Floor) wool fleece mer [mm] ≤ 4 out ≤ 13 ≤ 20 ≤ 4 PΕ ≤ 125 Rorcol Mineral wool (Mel-V30 ting point ≥ 1000°C, PP ≤ 125 A1 acc. to Chipboard EN 13501-1, screws Minimum compacted ≥ 6x90 mm PΕ ≤ 125 apparent density with Rorcol 40 kg/m³) ø 20 mm V60 and additional washers PP ≤ 125 ≥ 10 mm AIR FIRE TECH fire protective gap filler Rorcol Multi-layer com-≤ 63 AV60 posite pipes

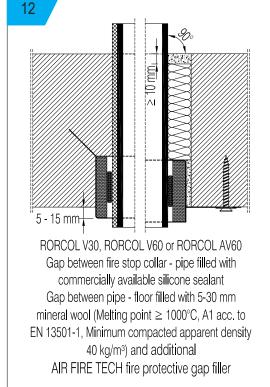
	Multiple penetration cross laminated timber floor El90 and El120, thickness ≥ 152,5 mm (140 mm timber + 12,5 mm gypsum plasterboard)										
Туре	max. DN	Gap (Pipe-Floor)	Mounting	Material / Pene- trating element	Pipe dimensions [mm]	In without	sulations [m PE ≤ 10	m] Elastomer ≤ 9			
Rorocol AV60	110	Mineral wool (Melting point ≥ 1000°C, A1 acc. to EN 13501-1, Minimum compacted apparent density 40 kg/m³) and additional ≥ 10 mm AIR FIRE TECH fire protective gap filler	Chipboard screws ≥ 6x90 mm with ø 20 mm washers	max. 4x multi- layer composite pipes	≤ 26		•	•			

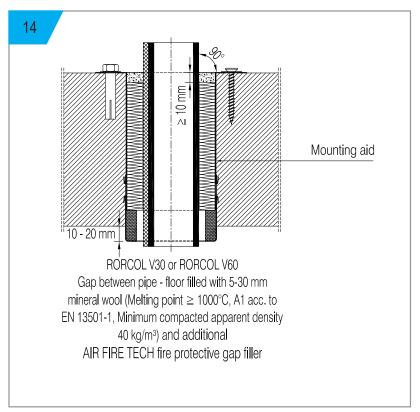
Installation notes - Rigid floor









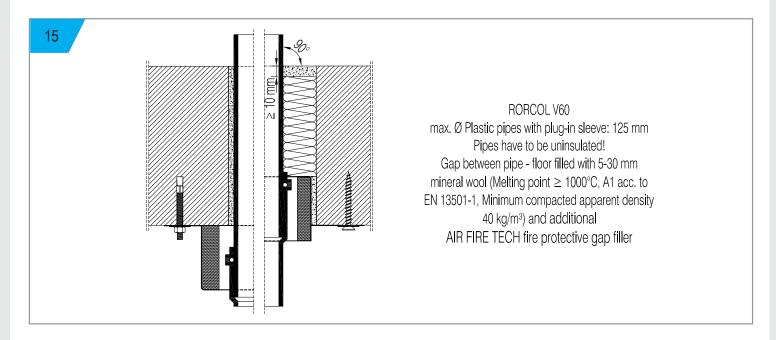


Installation notes - Rigid floor



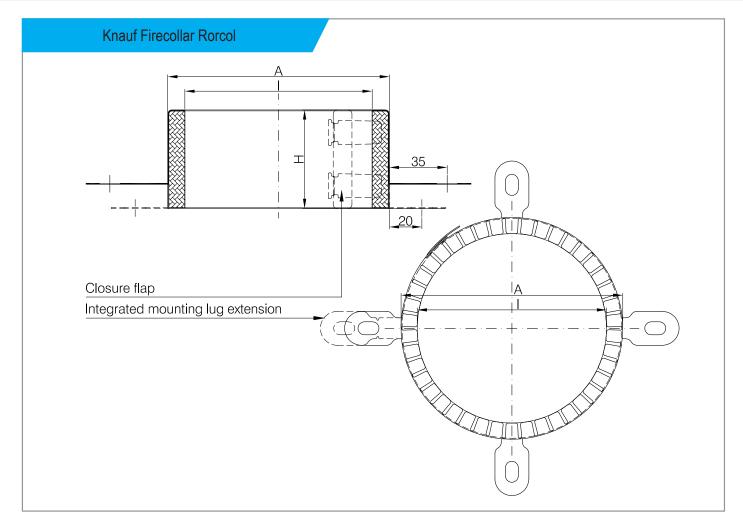
	Rigid floor, thickness ≥ 150 mm											
				Pipe outside			Insulation	s [mm]				
Туре	Gap (Pipe-Floor)	Mounting	Material	diameter [mm]	with- out	PE ≤ 4	Elasto- mer ≤ 25	Mineral wool ≤ 50	Polyester fleece ≤ 4			
Rorcol			PE	≤ 135	•	•			•			
V30	≤ 10 mm,	Metallic anchors or	PP	≤ 125	•	≤8			•			
Rorcol	s it initi,	metallic plugs with	. •		screws	PE	≤ 135	•	•			•
V60	AIR FIRE TECH fire		PP	≤ 125	•	≤8			•			
Rorcol	• .	screws ≥ 6x55 mm (only for	Multi-layer composite	≤ 26	•	•	•	•				
AV60	or mortar	aerated concrete)	pipes	≤ 63			•	•				

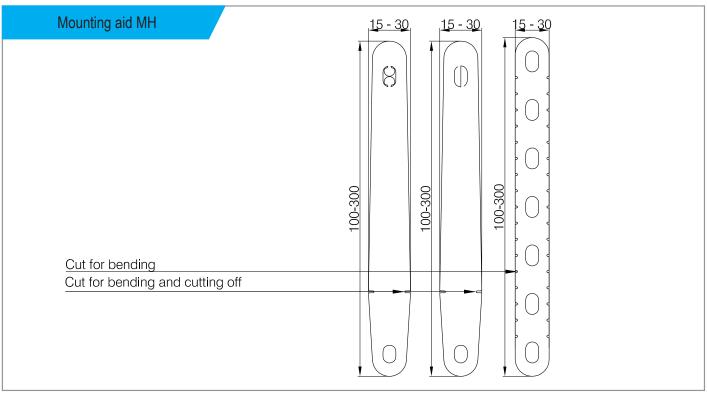
	Multiple penetration rigid floor, thickness ≥ 150 mm										
	max.	Gap		Material / pene-	Pipe dimensi-	Insulations [mm]					
Туре	DN	(Pipe-Floor)	Mounting	trating element	on [mm]	with- out	PE ≤ 10	Elastomer ≤ 9			
Rorcol AV60	110	≤ 10 mm, filled with AIR FIRE TECH fire protective gap filler or mortar	Metallic anchors or metallic plugs with screws ≥ M6 or chipboard screws ≥ 6x55 mm (only for aerated concrete)	max. 7x multi- layer composite pipes	≤ 26						



Construction drawing







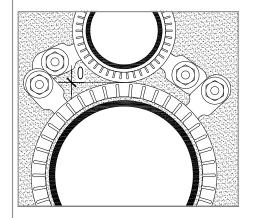


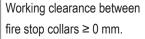
		Fireco	llar				
Туре	Field of application	Туре	Outer diameter [A] [mm]	Inner diameter [I] [mm]	Number of mounting lugs	Article number	EAN Knauf AT
V30 EI90/EI120 U/U DN16-40		BRM/V30/DN40	55	44	3	527407	9002943077669
V30 EI90/EI120 U/U DN50-56		BRM/V30/DN56	73	62	3	527408	9002943077676
V30 EI90/EI120 U/U DN59-63	for plastic	BRM/V30/DN63	85	68	3	527409	9002943077683
V30 EI90/EI120 U/U DN75-80	sewage	BRM/V30/DN80	106	89	4	527410	9002943077690
V30 EI90/EI120 U/U DN110	pipes	BRM/V30/DN110	137	116	4	527411	9002943077706
V30 EI90/EI120 U/U DN125		BRM/V30/DN125	157	131	4	527412	9002943077713
V30 EI90/EI120 U/U DN140		BRM/V30/DN140	178	146	4	527413	9002943077720
V60 EI90/EI120 U/U, U/C DN50-56		BRM/V60/DN56	73	62	3	527414	9002943077737
V60 EI90/EI120 U/U, U/C DN59-63		BRM/V60/DN63	85	68	3	527417	9002943077744
V60 EI90/EI120 U/U, U/C DN75-80		BRM/V60/DN80	106	89	4	527418	9002943077751
V60 EI90/EI120 U/U, U/C DN110	for plastic sewage	BRM/V60/DN110	137	116	4	527419	9002943077768
V60 EI90/EI120 U/U, U/C DN125	pipes,	BRM/V60/DN125	157	131	4	527420	9002943077775
V60 EI90/EI120 U/U, U/C DN135-140	extended	BRM/V60/DN140	178	146	4	527422	9002943077782
V60 EI90/EI120 U/U, U/C DN160	and special applications	BRM/V60/DN160	198	167	5	527423	9002943077799
V60 EI90/EI120 U/U, U/C DN180	applications	BRM/V60/DN180	-	-	-	527424	9002943077805
V60 EI90/EI120 U/U, U/C DN200		BRM/V60/DN200	243	207	6	527425	9002943077812
V60 EI90/EI120 U/U, U/C DN250		BRM/V60/DN250	299	257	6	527426	9002943077829
AV60 EI90/EI120 U/C DN16-40		BRM/AV60/DN40	55	42	3	527427	9002943077836
AV60 EI90/EI120 U/C DN50-56		BRM/AV60/DN56	75	61	3	527428	9002943077843
AV60 EI90/EI120 U/C DN59-63	for multi-	BRM/AV60/DN63	85	71	3	527429	9002943077850
AV60 EI90/EI120 U/C DN75-80	layer com-	BRM/AV60/DN80	106	89	4	527433	9002943077867
AV60 EI90/EI120 U/C DN110	posite pipes, cables and	BRM/AV60/DN110	137	116	4	527435	9002943077874
AV60 EI90/EI120 U/C DN125	metal pipes	BRM/AV60/DN125	157	132	4	527436	9002943077881
AV60 EI90/EI120 U/C DN140		BRM/AV60/DN140	178	147	4	527439	9002943077898
AV60 EI90/EI120 U/C DN160		BRM/AV60/DN160	198	168	5	527440	9002943077904

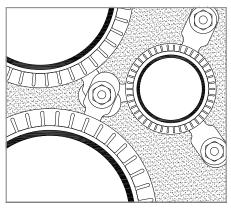
Working clearance



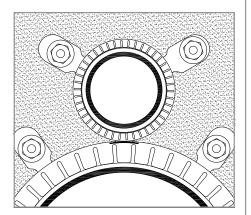
Knauf Firecollar Rorcol



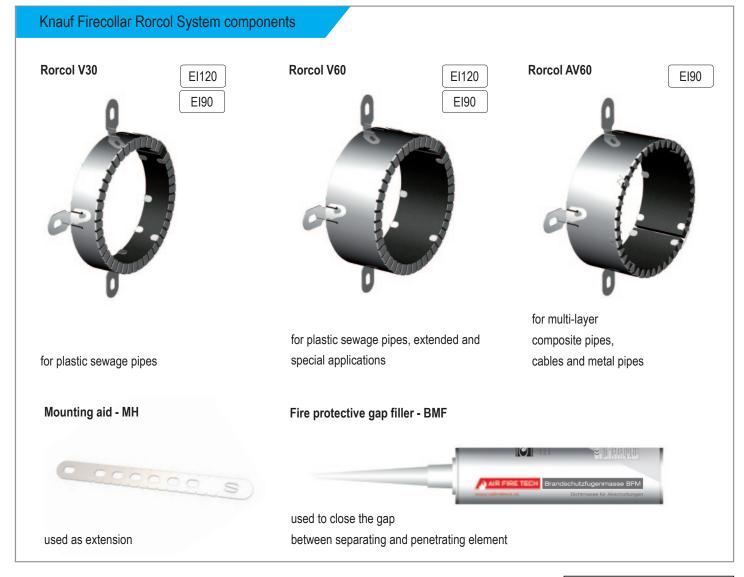


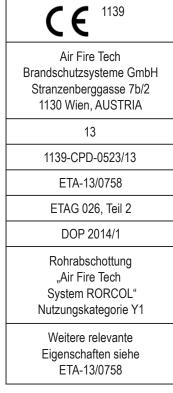


It is permitted to fix maximum three mounting lugs by one concerted screw fastening.











DECLARATION OF PERFORMANCE

No. 2014/1 in accordance with Regulation (EU) No. 305/2011 (Construction Products Regulation CPR) Annex III

Fire stop collar RORCOL

1. Unique identification code of the product-type: Fire stop collar RORCOL V30, RORCOL V60, RORCOL AV60, fire protective gap filler BFM/K310

2. Type, batch or serial number or any other element allowing identification of the construction product as required pursuant to Article 11(4): Type designation: to be found on the label of the product

3. Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:

Penetration seals for burnable pipes,

not burnable pipes and

cables through walls and ceilings, according to ETA-13/0758

4. Name, registered trade name or registered trade mark and contact address of the manufacturer as required pursuant to Article 11(5):

Air Fire Tech Brandschutzsysteme GmbH, Stranzenberggasse 7b/2, 1130 Wien, AUSTRIA

- 5. Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified in Article 12(2): n.a.
- 6. System or systems of assessment and verification of constancy of performance of the construction product as set out in Annex V: System 1
- 7. In case of the declaration of performance concerning a construction product covered by a harmonised standard: n.a.
- 8. In case of the declaration of performance concerning a construction product for which
- a European Technical Assessment has been issued: The Österreichisches Institut für Bautechnik has issued the European technical approval ETA-13/0758 according to the ETAG No. 026-part 2.

The notified body MA39 – certification body – WIEN-ZERT performs the inspection according to Annex V System 1 and has issued the EC certificate of conformity 1139-CPD-0523/13.

9. Declared performance:

Essential performance	Performance	Harmonised technical specification
Reaction to fire	Class E	EN 13501-1
Fire resistance	According to ETA-13/0758	EN 13501-2
Durability and utilizability	Use category Y ₁	EOTA technical report TR 024
Dangerous substances	None	Council Directive 67/548/EEC and Regulation (EC) no 1272/2008

10. The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point

9. This declaration of performance is issued under the sole responsibility of the manufacturer identified in point 4.

Signed for and on behalf of the manufacturer by:



Wien, April 2014

CEO Air Fire Tech Brandschutzsysteme GmbH)



Notes	

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www.knauf.pl	Attaining the construction and physical characteristics of the Knauf systems will be possible if we ensure that only Knauf	
e serwis.techniczny@knauf.pl	system elements are used or those recommended by Knauf.	
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