

flexpipe® plus round and oval ducting system. Arbitrarily combinable.


flexpipe® plus is the further development of the successful flexpipe air distribution system and it combines round and oval ducts in one smart system package with all conceivable round-oval combinations.

The oval duct has the identical hydraulic cross-section and pressure loss as the round duct as well as a point-symmetric design.

This results in unique advantages:

- No matter if it's planning and layout or installation and adjustment or maintenance, round and oval pipe behave completely identical.
- Depending on the structural circumstances, the optional change between round and oval ducts is possible using adapters, both in line and away from the distribution box. This offers a high degree of flexibility in planning and installation.

- For each application, an option can be selected that is both suitable from a construction perspective and economically attractive. The space-saving oval duct is mainly used if low installation heights are required.
- The round-oval compatibility results in low parts diversity. The stocking and consultation processes are greatly simplified. The installation is almost intuitive.
- The point-symmetric oval design allows installation from horizontal to vertical without the use of adapters for position correction.

Reference

flexpipe® round duct system with ext. Ø 63 mm, int. 52 mm for volume flows up to 20 m³/h
see page 172

flexpipe® plus is available in two designs which can be combined as required:

- FRS 75, round:
External Ø: 75 mm, internal: 63 mm for volume flows up to 30 m³/h. For installation in concrete ceilings. High ring strength (STIS ≥ 10 kN/m² according to DIN EN 9969). Bending radius horizontal and vertical 150 mm.
- FRS 51, oval:
51 x 114 mm, for volume flows up to 30 m³/h, ideal for space-saving installation e.g. on unfinished floors or in walls. Bending radius horizontal 300 mm, vertical 200 mm.

Installation, handling, commissioning

- Ultra-simple planning thanks to identical duct cross-sections and pressure losses.
- Quick installation due to radial, flexible endless installation from the roll.
- Construction site-compliant handling due to its low weight.
- Quick commissioning due to minimal adjustment effort.
- Uniform air distribution.
- To ensure high standards of hygiene and easy cleaning.

Duct properties and advantages

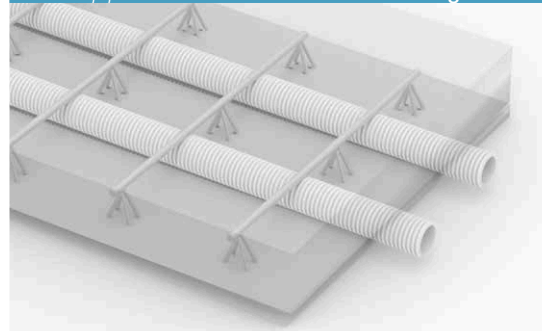
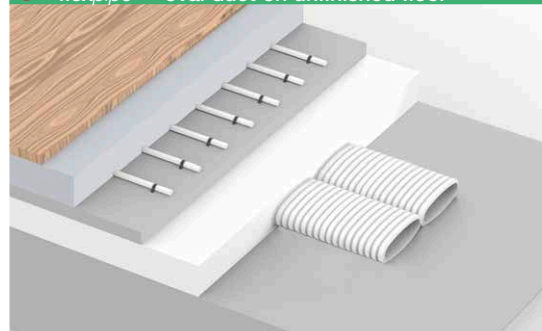
- Special round and oval ventilation duct made of hygienically safe PE-HD new material.
- Two-layer design – externally corrugated and internally

smooth and antistatic. This reduces pressure losses and minimises airflow noise and dirt deposits.

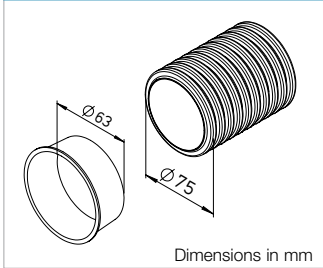
- The extreme horizontal and vertical bending elasticity of both duct geometries minimises the number of necessary moulded parts.
- The point-symmetric design allows the installation of the oval duct from horizontal to vertical, upwards or downwards, without the use of adapters.

Duct concept, installation

- Mounting clips on all moulded parts for secure fixation to floors, walls or ceilings.
- Detachable mounting brackets guarantee quick, tear-proof duct fixation to all connection points.
- No additional cross talk silencer due to sound-insulating distribution box.
- Precisely fitting sealing system on all fittings for reliable air transport.
- Aerodynamically optimised ceiling and floor boxes as well as wall outlets are available for the use of room-side inlet and outlet elements at the duct ends. These have two parallel duct connections for delivering the volume flows required according to DIN 1946-6 with low pressure loss.

flexpipe® plus round duct in concrete ceiling

flexpipe® plus oval duct on unfinished floor

flexpipe® plus allows any round-oval combination


flexpipe vent. duct round ○

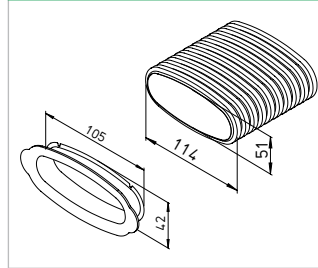


flexpipe vent. duct

Type	Ref. no.	Length lin. m	Dim. in mm Ext. Ø	Int. Ø
FRS-R 75 ○	02913	50	75	63
FRS-R 75/20 ○	40973	20	75	63
Hygiene duct shutter cover Unit				
FRS-VD 75 ○	02915			10 pcs.

Flexible round duct made of PE-HD, ideal for installation in concrete ceiling.
Includes two hygiene duct shutter covers, can also be ordered separately.

flexpipe vent. duct oval ○

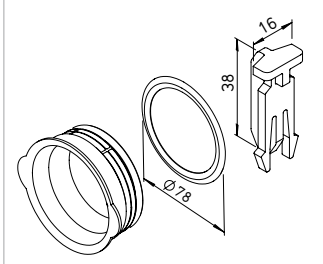


flexpipe vent. duct (bundle = 20 lin. m)

Type	Ref. no.	Dim. in mm Width	Height
FRS-R 51 ○	03850	114	51
Hygiene duct shutter cover Unit			
FRS-VD 51 ○	03866		10 pcs.

Flexible oval duct made of PE-HD, for space-saving installation on unfinished floors, installation in walls or suspended ceilings. Includes two hygiene duct shutter covers, can also be ordered separately.

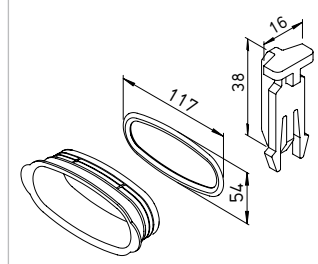
Cover, seal ring, bracket ○



Connector cover / seal ring / bracket

Type	Ref. no.	Unit
Ø 75 mm		
Connector shutter cover with seal ring		
FRS-VDS 75 ○	03855	1 pc.
Seal ring		
FRS-DR 75 ○	02916	10 pcs.
Bracket, detachable		
FRS-FK ○	03854	10 pcs.

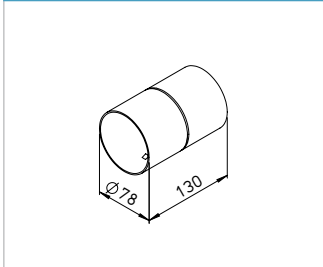
Cover, seal ring, bracket ○



Connector cover / seal ring / bracket

Type	Ref. no.	Unit
114 x 51 mm		
Connector shutter cover with seal ring		
FRS-VDS 51 ○	03856	1 pc.
Seal ring		
FRS-DR 51 ○	03864	10 pcs.
Bracket, detachable		
FRS-FK ○	03854	10 pcs.

Connecting sleeve ○

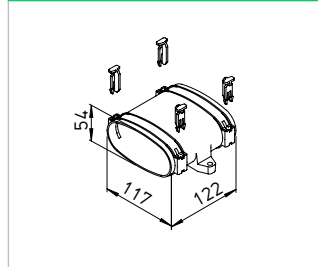


Connecting sleeve

Type	Ref. no.
Ø 75 mm	
FRS-VM 75 ○	02914

Connecting sleeve for round duct FRS-R 75 with tear-off protection on both sides, made of polyethylene.

Connecting sleeve ○

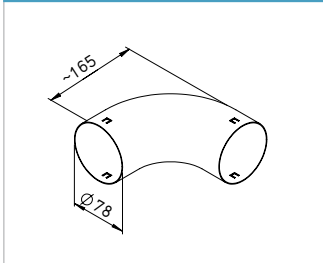


Connecting sleeve

Type	Ref. no.
114 x 51 mm	
FRS-VM 51 ○	03862

Connecting sleeve for oval duct FRS-R 51. With integrated fastening tabs, includes duct mounting brackets (4 pcs.). Made of impact-resistant polypropylene.

Short bend 90° ○

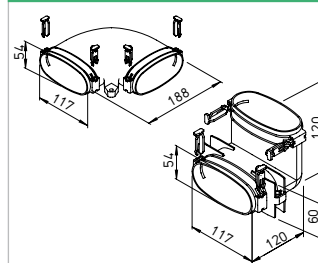


Short bend 90°

Type	Ref. no.
Ø 75 mm	
FRS-B 75 ○	02994

Short bend 90° for bending radii < 2 x round duct external diameter. Horizontal and vertical application with tear-off protection on both sides. Made of galvanised steel sheet.

Bend horizontal / vertical ○



Bend horizontal / vertical

Type	Ref. no.
114 x 51 mm	
FRS-BH 51 ○	03863
FRS-BV 51 ○	03859

Horizontal or vertical bend 90°. With integrated fastening tabs, includes duct mounting brackets (4 pcs.). Made of impact-resistant polypropylene.

Optional possibility to combine round and oval ducts

- With flexpipe® plus from Helios, you rely on one system and you have the ideal solution at your fingertips at all times, depending on building requirements.
- The ultra-flat (only 51 mm) oval duct is used if low installation heights are required. The proven duct lends itself for direct embedding in concrete ceilings.
- Thanks to the identical hydraulic cross-sections and pressure losses of the two ducts and due to well-conceived system components, round and oval ducts can be combined in any way – both in line and away from the distribution box.

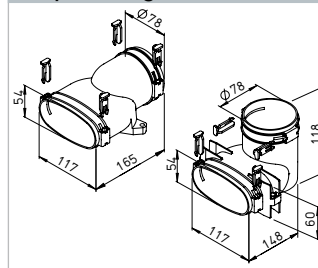


Vertical and horizontal adapters allow any round/oval, oval/oval and round/round combination.



The distribution boxes can be equipped with round and oval single connectors and mixed connectors.

Adapter straight / vertical ○

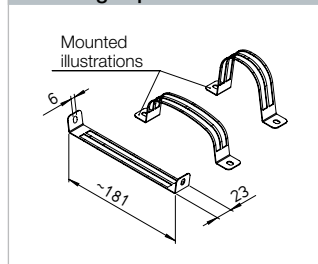


Adapter straight / vertical

Type	Ref. no.
Ø 75 mm / 114 x 51 mm	
Adapter straight	
FRS-ÜG 51-75 ○	03861
Adapter vertical	
FRS-ÜV 51-75 ○	03860

Horizontal and vertical adapter from round duct FRS-R 75 to oval duct FRS-R 51. With integrated fastening tabs, includes duct mounting brackets (4 pcs.). Made of impact-resistant polypropylene.

Mounting clip ○

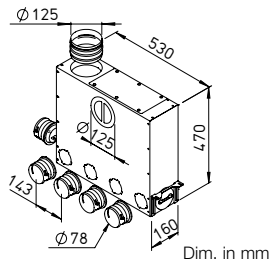


Mounting clip

Type	Ref. no.	Unit
Ø 75 mm / 114 x 51 mm		
FRS-BS ○	03869	10 pcs.

Mounting clip for round duct FRS-R 75 and oval duct FRS-R 51. For non-slip duct fixation. Made of galvanised steel sheet.

Multi-distribution box 4+1x ○



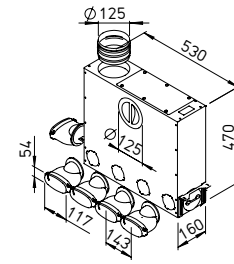
Dim. in mm

Multi-distribution box 1)

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-MVK 4+1-75/125 ○	03843	125

For universal installation in/on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 125 optionally horizontal or vertical. 10 connection options for up to 5 ventilation ducts FRS-R 75. With sound-absorbing cladding and large inspection opening.

Multi-distribution box 4+1x ○



Multi-distribution box 4+1x 1)

Type	Ref. no.	Ø NW mm
Type 114 x 51 mm		
FRS-MVK 4+1-51/125 ○	03841	125

For universal installation on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 125 optionally horizontal or vertical. 10 connection options for up to 5 oval ventilation ducts FRS-R 51. With sound-absorbing cladding and large inspection opening.

Multi-distribution box 5+2x ○

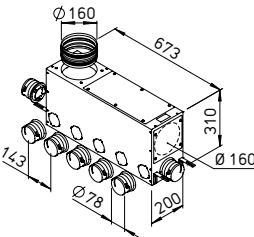


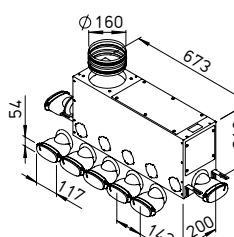
Fig.: FRS-MVK 5+2-75/160

Multi-distribution box 5+2x 1)

Type	No.	Ø NW mm
Type Ø 75 mm		
FRS-MVK 5+2-75/160 ○	03836	160
FRS-MVK 5+2-75/160 H ○	03835	160

For universal installation in/on unfinished concrete flooring. With height-adjustable mounting brackets. Duct connection DN 160 optionally horizontal or vertical. Type FRS-MVK 5+2-75/160 H with 380 mm casing height and 3 x duct connection DN 160. 12 connection options for up to 7 ventilation ducts FRS-R 75.

Multi-distribution box 5+2x ○

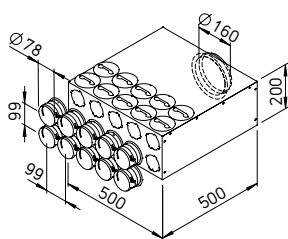


Multi-distribution box 5+2x 1)

Type	Ref. no.	Ø NW mm
Type 114 x 51 mm		
FRS-MVK 5+2-51/160 ○	03838	160

For universal installation on unfinished concrete flooring or as floor distributor. With height-adjustable mounting brackets. Duct connection DN 160 optionally horizontal or vertical. 12 connection options for up to 7 oval ventilation ducts FRS-R 51. With sound-absorbing cladding and large inspection opening.

Distribution box 10x ○

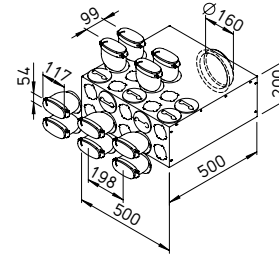


Distribution box 10-75 2)

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-VK 10-75/160 ○	03847	160

20 connection options for up to 10 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 10x ○

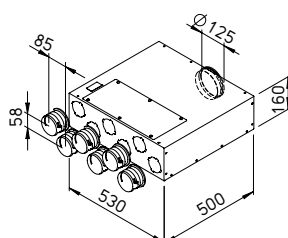


Distribution box 10-51 2)

Type	Ref. no.	Ø NW mm
Type 114 x 51 mm		
FRS-VK 10-51/160 ○	03849	160

20 connection options for up to 10 oval ventilation ducts FRS-R 51. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with round connectors possible (Type FRS-ES 75, Ref. no. 03852). With sound-absorbing cladding and large inspection opening.

Flat distribution box 6x ○

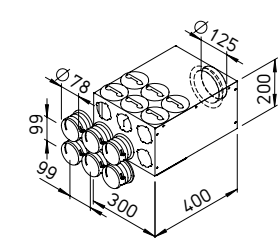


Distribution box 6-75, flat design 1)

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-FVK 6-75/125 ○	03845	125

For connection of up to 6 ventilation ducts FRS-R 75. Installation as straight distributor. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 6x ○

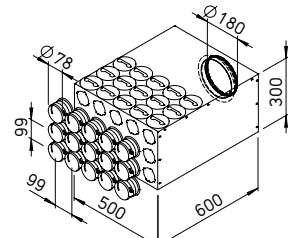


Distribution box 6-75 1)

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-VK 6-75/125 ○	03846	125

12 connection options for up to 6 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Distribution box 15x ○

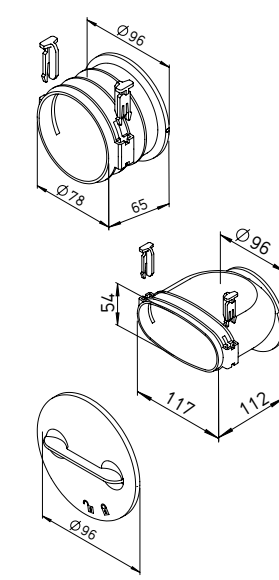


Distribution box 15-75 2)

Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-VK 15-75/180 ○	03848	180

30 connection options for up to 15 ventilation ducts FRS-R 75. Can be installed as straight distributor, 90° distributor or combined. Mixed setup with oval connectors possible (Type FRS-ES 51, Ref. no. 03851). With sound-absorbing cladding and large inspection opening.

Connector, cover ○○



Connector, bayonet cap

Type	Ref. no.	Unit
Connector, Ø 75 mm		
FRS-ES 75 ○	03852	1 pc.
Connector, 114 x 51 mm		
FRS-ES 51 ○	03851	1 pc.
Bayonet cap		
FRS-VDB ○○	03853	1 pc.

Additional connectors for connection of round ventilation duct FRS-R 75 or oval ventilation duct FRS-R 51 to distribution box. Easy and variable positioning using bayonet closure. Tight-closing, includes duct mounting brackets (2 pcs.), made of impact-resistant polypropylene. Bayonet cap for the connector openings on the distribution box.

Combination distribution box ○

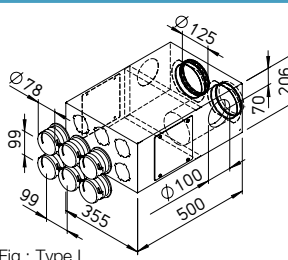


Fig.: Type L

Combination distribution box 1)

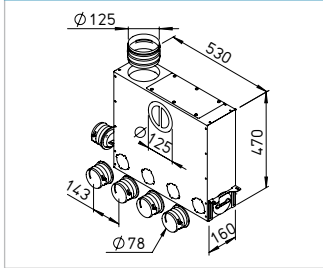
Type	Ref. no.	Ø NW mm
Type Ø 75 mm		
FRS-KVK 6-75/125 L* ○	03873	125
FRS-KVK 6-75/125 R* ○	03874	125

* Supply air connection on left or right. Compact distribution box, ideal for adjoining extract air rooms. 2 x DN 100 for direct insertion of extract air valves DLV (see accessories). Supply air distribution via connection of up to 6 ventilation ducts FRS-R 75.

1) incl. 2 pcs. connector cover.

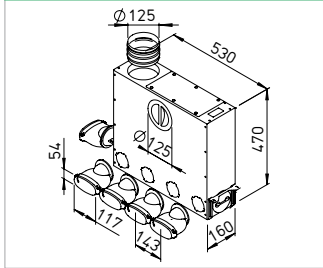
2) incl. 4 pcs. connector cover.

Multi-distribution box 4+1x 



Type Ø 75 mm	No.	Ø NW mm
FRS-MVK 4+1-75/125 	03843	125

Multi-distribution box 4+1x 



Type 114 x 51 mm	No.	Ø NW mm
FRS-MVK 4+1-51/125 	03841	125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	23.5	30.6
250	24.2	25.3
500	19.3	18.3
1000	28.7	25.3
2000	30.8	39.0
4000	36.6	42.9
8000	38.3	40.8

Multi-distribution box 5+2x 

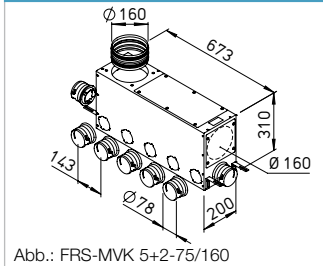
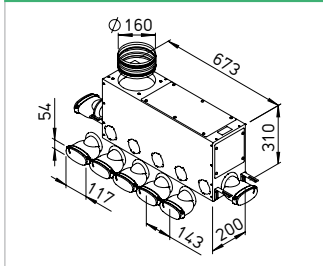


Abb.: FRS-MVK 5+2-75/160

Type Ø 75 mm	No.	Ø NW mm
FRS-MVK 5+2-75/160 	03836	160
FRS-MVK 5+2-75/160 H 	03835	160

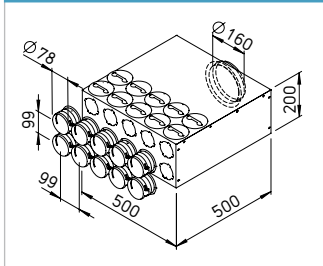
Multi-distribution box 5+2x 



Type 114 x 51 mm	No.	Ø NW mm
FRS-MVK 5+2-51/160 	03838	160

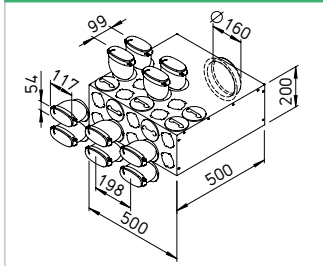
Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	21.0	28.8
250	16.5	24.7
500	24.6	28.0
1000	36.3	34.4
2000	35.2	40.2
4000	43.8	45.0
8000	46.1	41.1

Distribution box 10x 



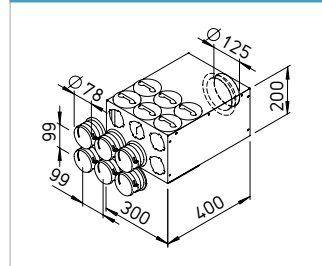
Type Ø 75 mm	No.	Ø NW mm
FRS-VK 10-75/160 	03847	160

Distribution box 10x 



Type 114 x 51 mm	No.	Ø NW mm
FRS-VK 10-51/160 	03849	160

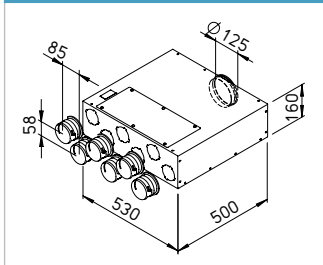
Distribution box 6x 



Type Ø 75 mm	No.	Ø NW mm
FRS-VK 6-75/125 	03846	125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	23.0	34.4
250	21.8	33.1
500	36.2	27.4
1000	29.4	26.9
2000	28.9	38.7
4000	34.4	44.2
8000	36.1	44.0

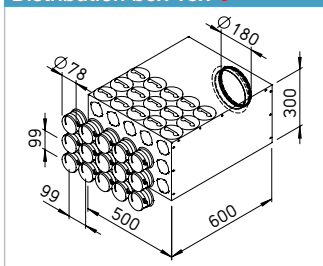
Flat distribution box 6x 



Type Ø 75 mm	No.	Ø NW mm
FRS-FVK 6-75/125 	03845	125

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	22.6	27.4
250	21.3	21.4
500	27.7	20.4
1000	28.8	20.2
2000	30.6	33.6
4000	42.6	40.1
8000	43.2	40.2

Distribution box 15x 

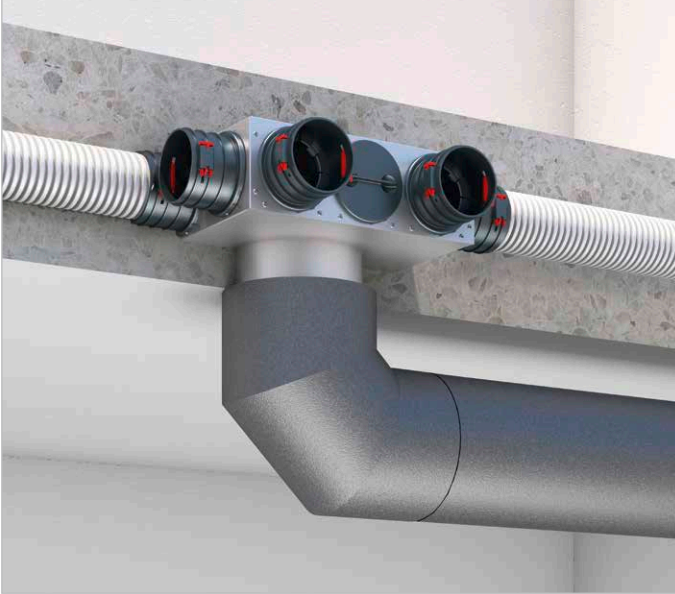


Type Ø 75 mm	No.	Ø NW mm
FRS-VK 15-75/180 	03848	180

Frequency	Insertion loss	Cross-talk loss
Hz	dB	dB
125	26.8	30.9
250	19.4	30.2
500	28.4	25.3
1000	25.4	29.0
2000	30.8	39.8
4000	34.7	49.1
8000	34.9	53.0

Measured in accordance with DIN EN ISO 7235
and DIN EN ISO 11820.

flexpipe® plus ceiling-integrated distribution element

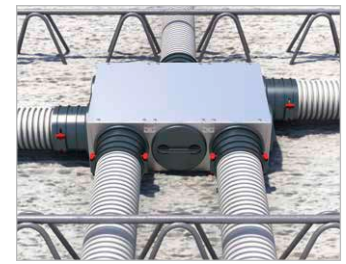


With the ceiling-integrated distribution element, we are making it even easier for you to realise the perfect KWL ventilation system quickly and easily in the future. The distribution element is not only flexible in application due to its compact dimensions, but it also saves you the complicated duct insertion and removal from the concrete ceiling

Highlights:

- Intelligent, almost invisible solution for air distribution of flexpipe® plus ducts in concrete ceilings for single-family houses and apartment buildings.
- Integrated height adjustment for different ceiling types.
- Installation without formwork damage and tool-free duct connection using a click system save time and money.

Installation in filigree ceiling:

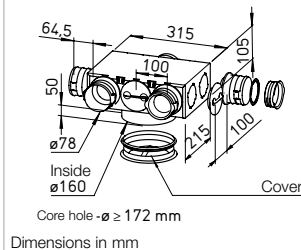


Installation in raw concrete ceiling:



KWL® with heat recovery

Distribution element 5x

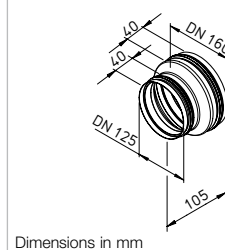


flexpipe distribution element 5x

Type	Ref. no.	Ø NW mm
FRS-VE 5-75/160	40161	160

For universal installation in the unfinished concrete flooring. Duct connection DN 160 or DN 125 possible (duct connector RVBD 160 L or RVBD 160/125 required for this). 10 connection options for up to 5 FRS-R 75 ventilation ducts. Large inspection opening for easy cleaning incl. cover.

Fitting for duct connection

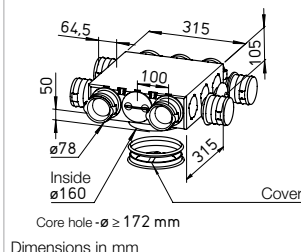


Duct connector

Type	Ref. no.
RVBD 160/125	40165

Duct connector for the connection of ventilation ducts/IsoPipe ducts DN 125.

Distribution element 9x

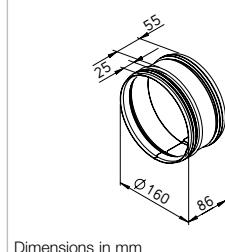


flexpipe distribution element 9x

Type	Ref. no.	Ø NW mm
FRS-VE 9-75/160	40162	160

For universal installation in the unfinished concrete flooring. Duct connection DN 160 or DN 125 possible (duct connector RVBD 160 L or RVBD 160/125 required for this). 12 connection options for up to 9 FRS-R 75 ventilation ducts. Large inspection opening for easy cleaning incl. cover.

Fitting for duct connection



Duct connector long

Type	Ref. no.
RVBD 160 L	40164

Duct connector for the connection of ventilation ducts/IsoPipe ducts DN 160.

flexpipe® plus Silencer box

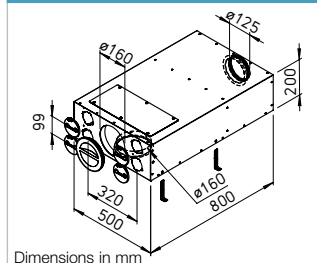


The ideal companion for the FRS-VE ceiling-integrated distribution element: The innovative FRS silencer box.

Highlights:

- Direct mounting on the ceiling-integrated distribution element for minimal space requirements, e.g. directly under the ceiling.
- Effective sound insulation properties. In combination with FRS-VE, values of up to 30 dB are achieved.
- Very good accessibility for easy cleaning thanks to extra-large inspection opening.
- Simple and flexible installation vertically on the wall or horizontally on the ceiling.

Silencer box



Insertion losses

Type	Ref. no.	Insertion loss D _e dB at Hz						Average insertion loss
		125	250	500	1000	2000	4000	
FRS-SDB 75/160	40163	16	23	23	17	21	18	23

flexpipe silencer box

Type	Ref. no.	Ø NW mm
FRS-SDB 75/160	40163	75

Silencer and distribution box for combination with the FRS-VE. RVBD 160 L required for connection. Horizontal and vertical installation possible. 4 optional connections 75 mm at the front. Optional accessories: Single connector ref. no. 03852. Including: Mounting bracket, 75 mm cover and 160 mm cover.