

Flexit

EN

SYSTEM DESCRIPTION

Low profile semi-rigid duct system

NO *Våre produkter er i kontinuerlig utvikling og vi forbeholder oss derfor retten til endringer. Vi tar også forbehold om eventuelle trykkfeil som måtte oppstå.*

SV *Våra produkter utvecklas ständigt och vi förbehåller oss därför rätten till ändringar. Vi tar inte heller ansvar för eventuella feltryck.*

FI *Tuotteitamme kehitetään jatkuvasti. Sen vuoksi pidätämme oikeuden muutoksiin. Emme myöskään vastaa mahdollisista painovirheistä.*

EN *Our products are subject to continuous development and we therefore reserve the right to make changes. We also disclaim liability for any printing errors that may occur.*

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A flexible, space efficient, timesaving solution.

FLEXIT LOW PROFILE FLEXIBLE DUCT SYSTEM.

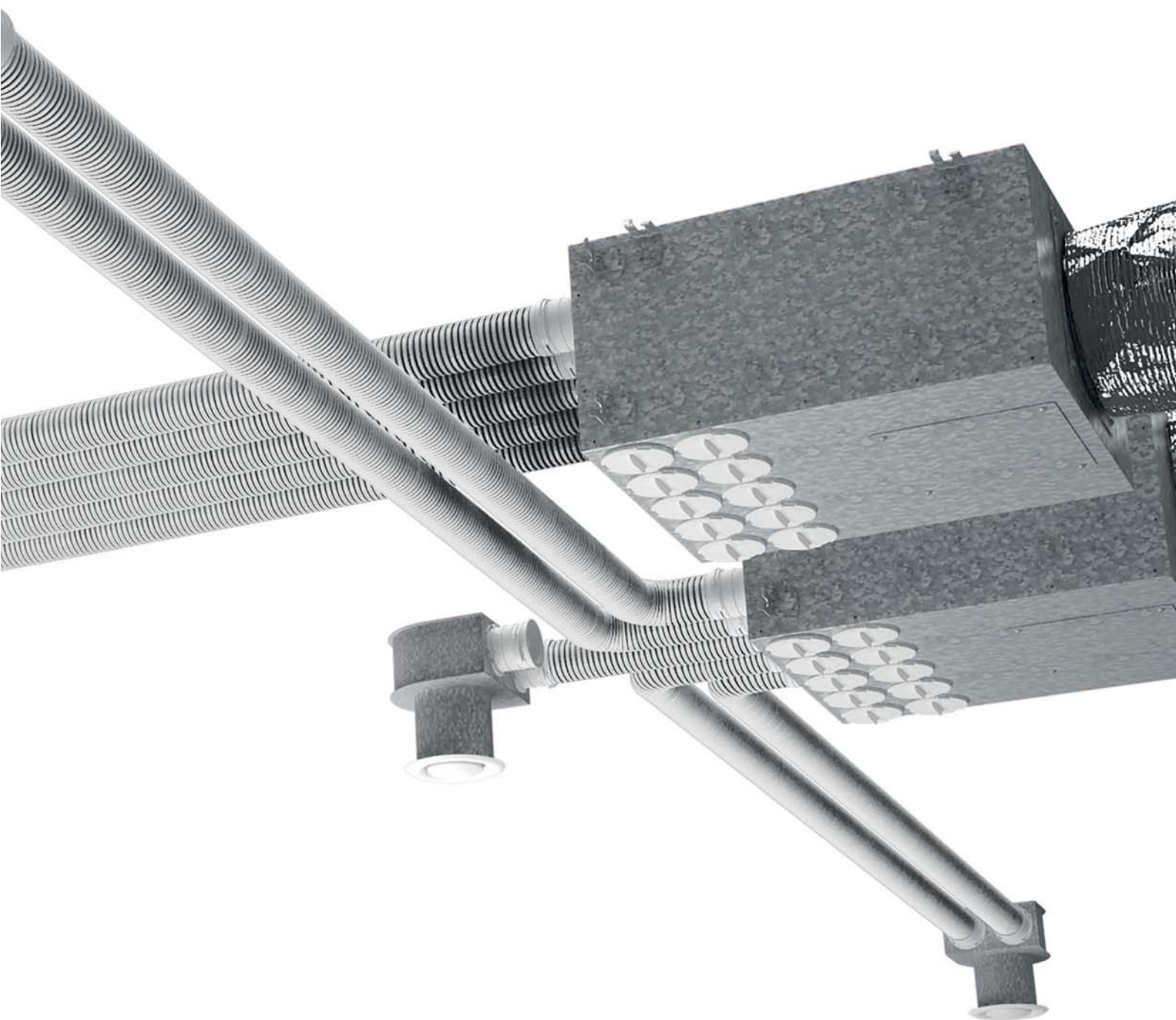
The system provides an easy and quick installation of a balanced ventilation system in new and existing homes. The system consists of flexible Ø75 mm plastic ducts and components for a complete ventilation system. The ducts are made of sturdy and impact resistant plastic and can be integrated into floors, walls or ceilings.

BALANCED VENTILATION WITH HEAT RECOVERY.

The system is designed for installation in connection with ventilation units with heat recovery. Heat is recovered from the extract air and fresh air is filtered and distributed. The components in the system ensures proper distribution of fresh air in the home.

Flexible ducts and smart connections makes the installation quick and easy.





1. Advantages with Flexit low profile semi-rigid duct system



- ▶ The ducts are compact and can be mounted in confined areas or where accessibility is limited.



- ▶ The material and shape of the semi-rigid ducts help them sustain high external loads such as the pressure produced by cement screed.



- ▶ Improved interior aesthetics: the ventilation lines are hidden under floors while the floor grilles, the only visible elements, provide air supply and extraction.



- ▶ Complete system for new and existing houses.



- ▶ No air leakages.



- ▶ Quick and simple assembly thanks to the flexible ducts and multifunctional fittings - no special tools and qualification required.

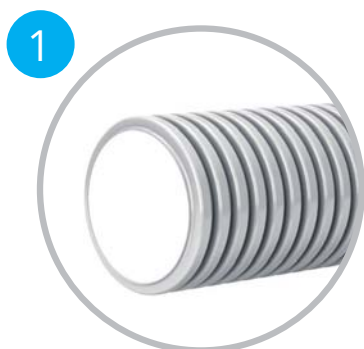


- ▶ The ducts are smooth inside so no dust and dirt are attached, which makes cleaning easier. The ducts are antistatically treated so that they do not attract dust.

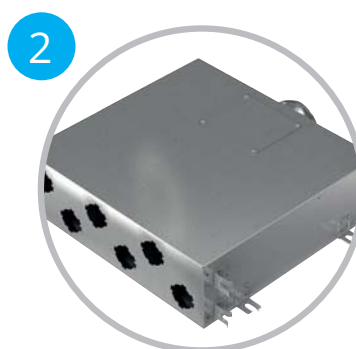
Unlike traditional duct systems which require more space and better accessibility, this system is easier to install. Ducts can be concealed in ceiling or laid in floor and/or wall. In addition, you save time and money due to that the system is faster to install.

2. Installation example

A air handling unit is installed in a ceiling above the 1st floor. One distribution box for supply air and one for extract air is installed in the ceiling near the air handling unit. Flexible ducts are installed in ceiling to all rooms. Valves are mounted in valve connectors. Valves for supply air are installed in bedrooms and living rooms, and valves for exhaust air in wet rooms. Wall hood is installed on the outer wall for intake and discharge.



Flexible duct



Distribution box



Ceiling connector with valve



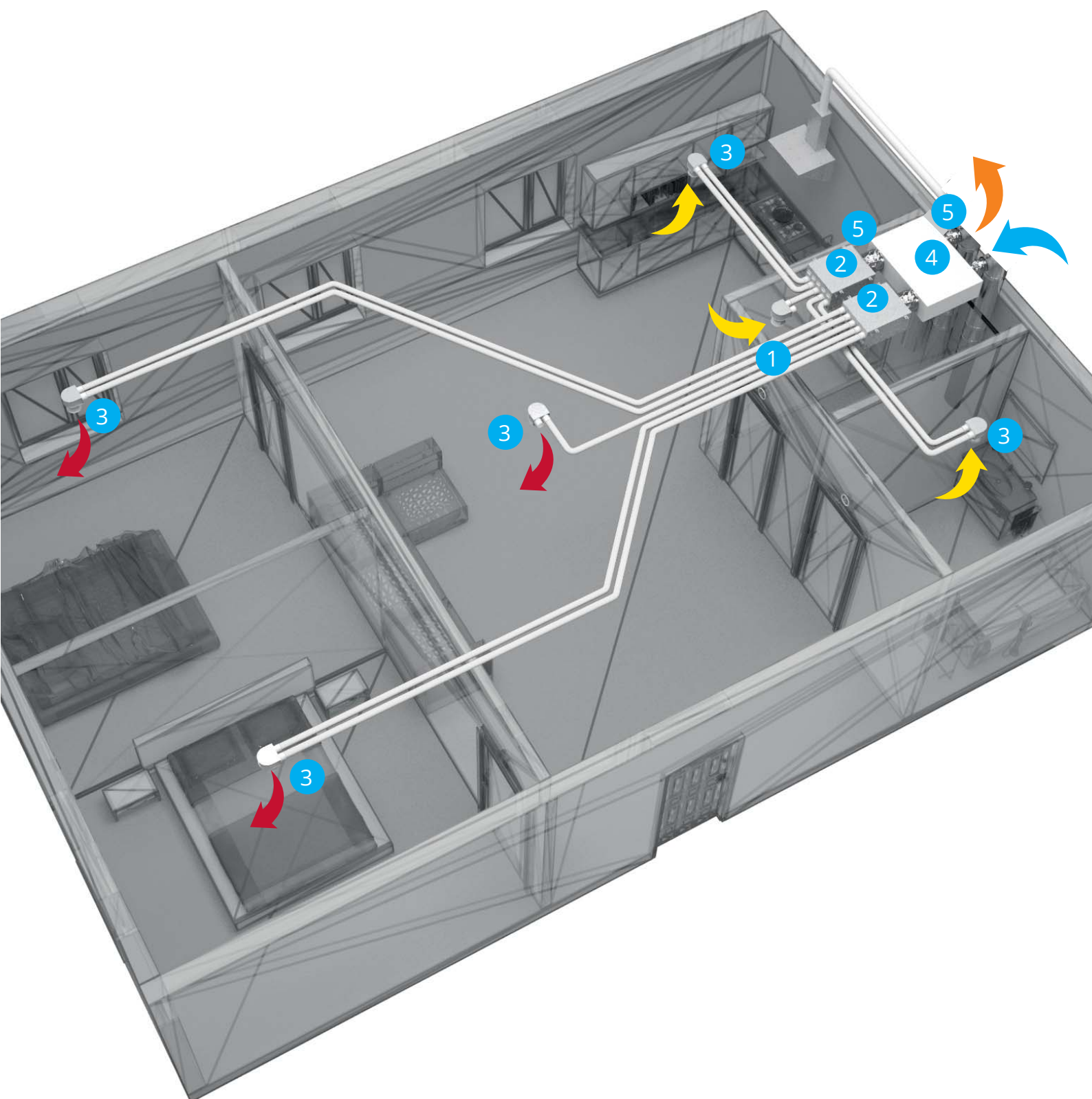
Air handling unit



Insulated duct

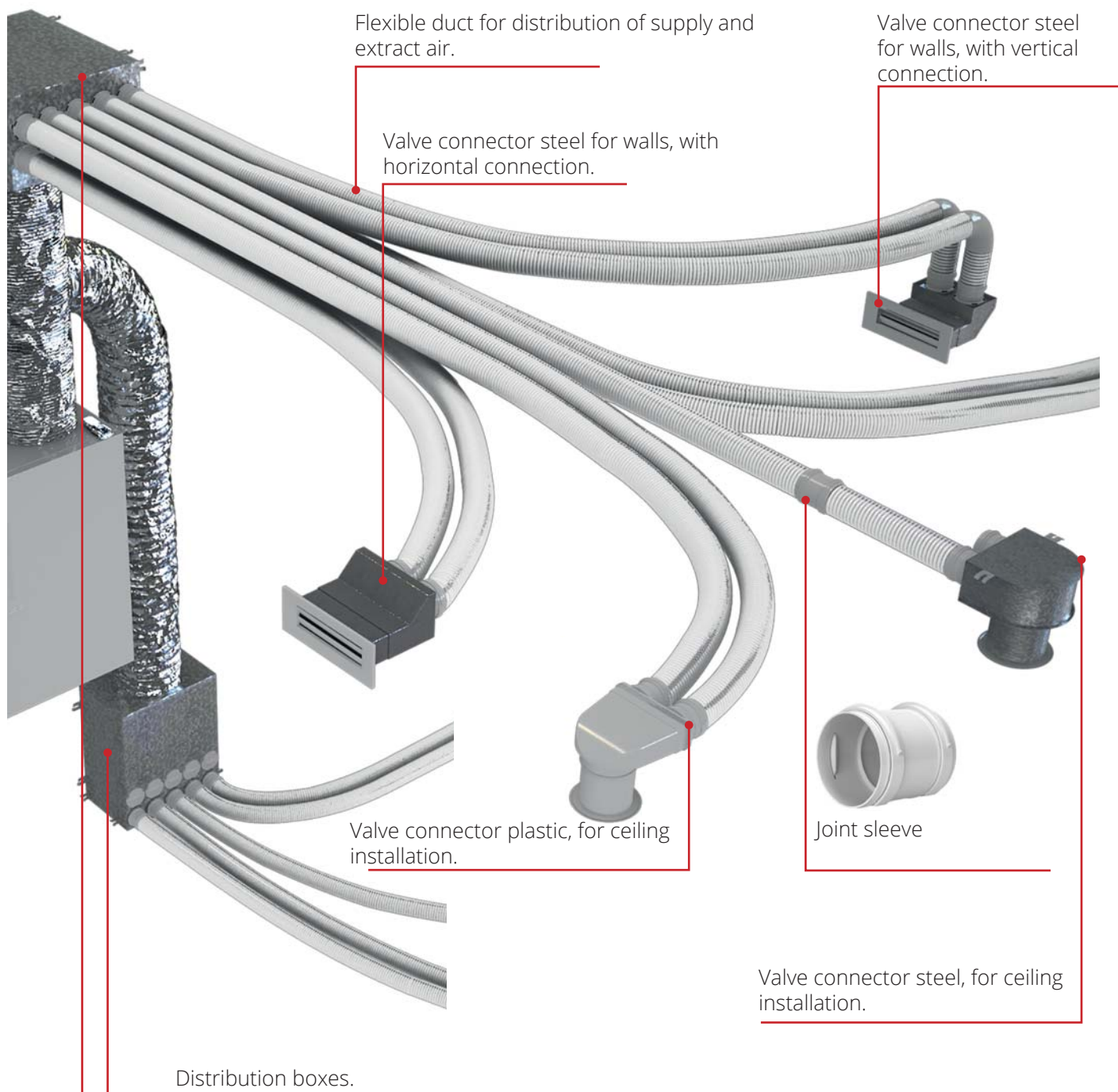


Wall hood (combination supply and exhaust)



3. System overview, components.

Distribution boxes are connected to the air handling unit with steel ducts / flexible aluminum ducts (depending on distance) and sound trap. One distribution box is connected for supply air, and one for extract air. Flexible ducts are installed to valves that are connected with valve connectors for wall or ceiling.

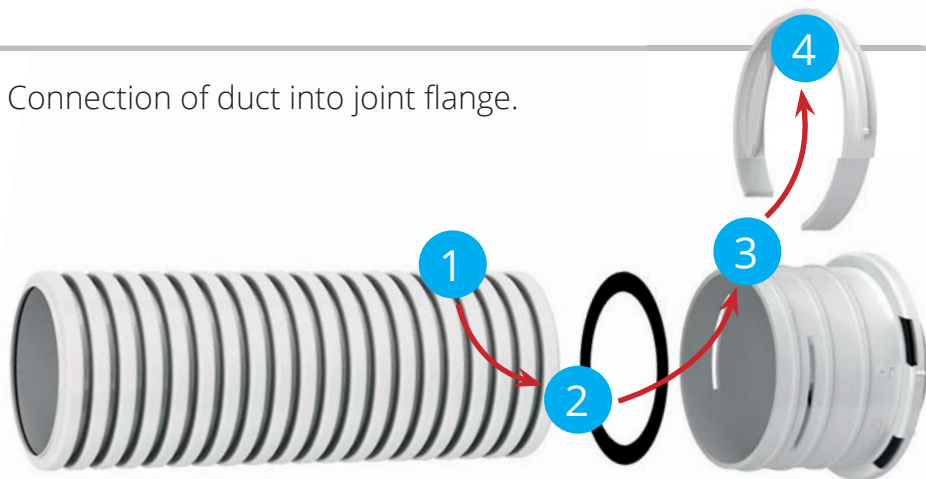


3.1. Distribution boxes

Distribution boxes are used for air distribution of supply- and exhaust air. One box for supply air and one for exhaust air. Several models with different number of duct connections are available. The duct (1) is fitted with

a slip-on seal (2) to retain air-tightness class C (available as an accessory). The duct is fitted inside the joint flange (3). The lock ring (4) (included) secures the air duct in place.

Connection of duct into joint flange.

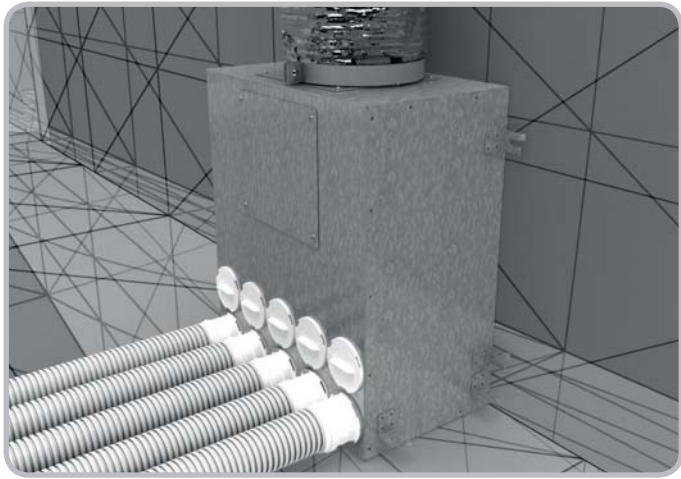


The supply and exhaust air distribution boxes are connected to the respective spigots of the air handling unit. Depending on the required air capacity one, two or three air ducts are routed into each room.



The air distribution boxes have a 20 mm thick layer of internal sound insulation.

Depending on the number of rooms and the air handling unit capacity the air distribution box can be configured with a different number of air ducts. The air distribution ports to be used are fitted with plastic flanges. Any unused ports are plugged. The ducts are secured with lock rings on the flanges for a reliable fit. To avoid potential air leakages all the elements are provided with rubber seals.

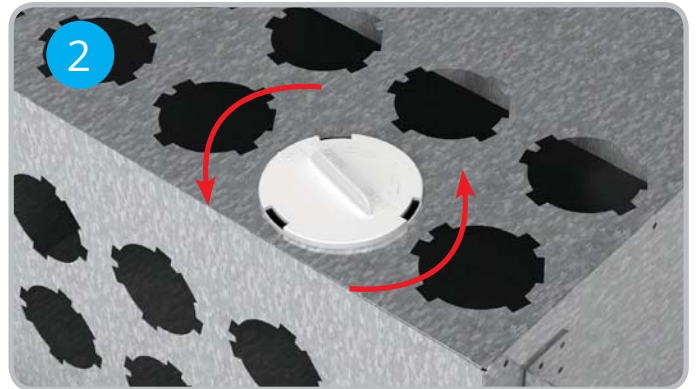


The air distribution boxes can be mounted in the horizontal position or in the vertical position.

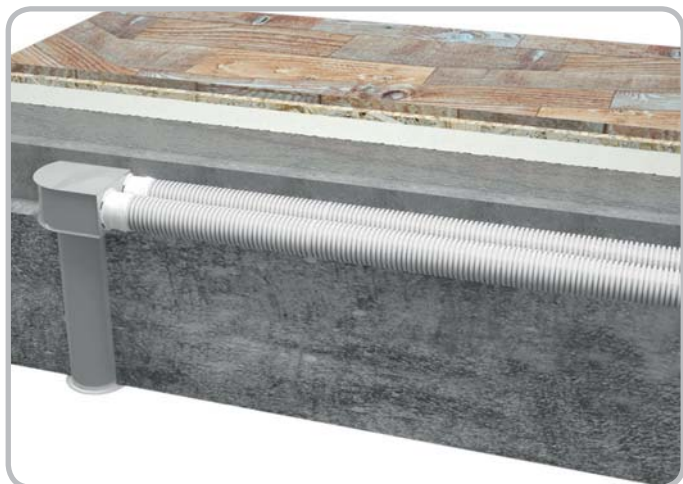


Plug for air distribution box

Any unused ports of the air distribution box must be sealed off with plugs.



3.2. Valve connectors



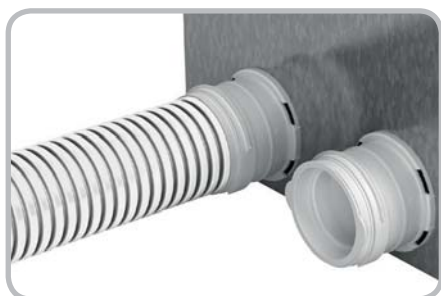
Example: Ceiling connector coverage with cement screed.



Example: Installation of a ceiling connector with a round grille into a suspended ceiling space.



Example: Installation of a wall connector with a rectangular grille.



Depending on the required capacity the connector is fitted with one or two ducts. The unused port are sealed off with a flange plug.



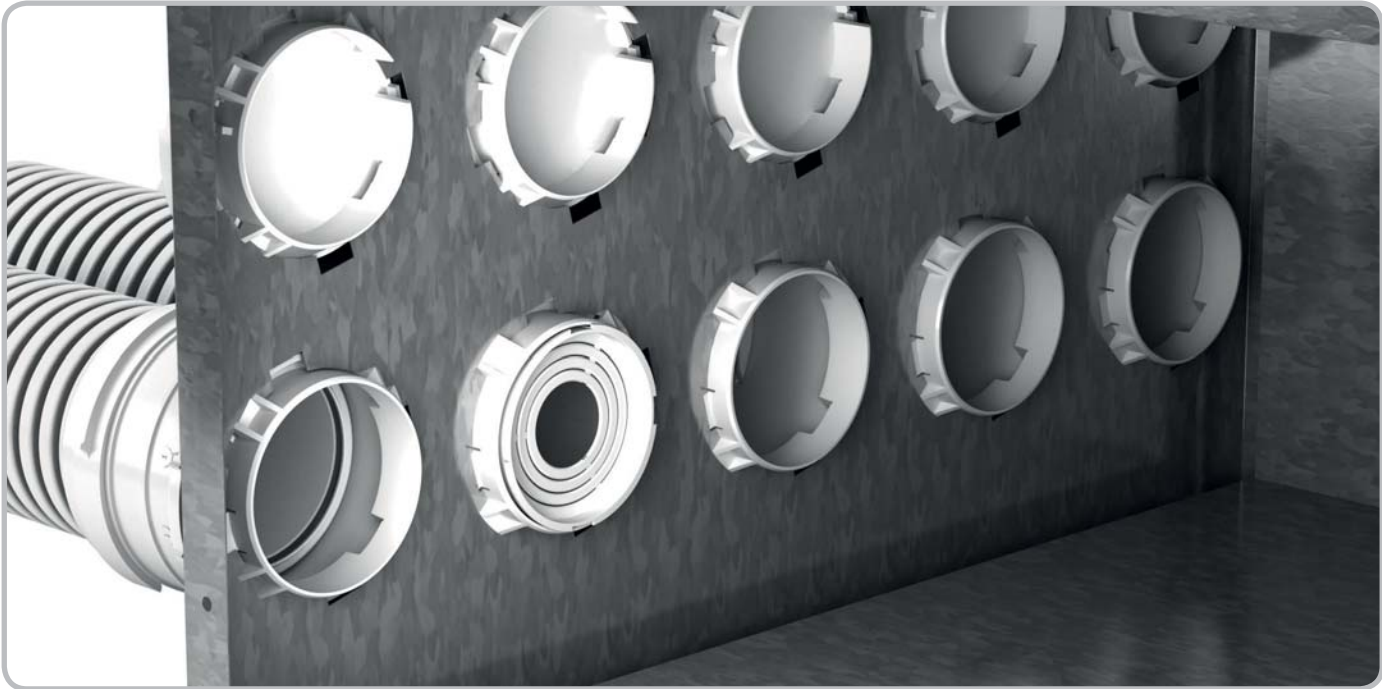
The duct is fitted with a gasket (accessories) to prevent air leakages. The flange plug is supplied with gasket.



Valves are the only visible components. Round ceiling valves are adjusted on the valves. Rectangular valves are adjusted from the air distribution box with air throttling dampers.

3.3. Air throttling dampers

Air throttling dampers are used to regulate the air flow rate.
To change the air resistance (cross-sectional area) cut the links and remove the unnecessary rings from the casting with a pair of scissors or a knife. .



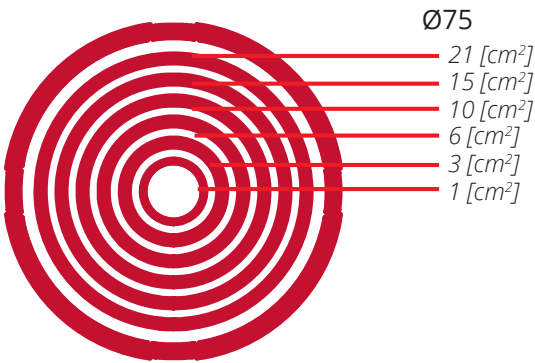
The air throttling dampers are inserted into spigots from the inside of the air distribution box.

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AIR RESISTANCE LEVELS



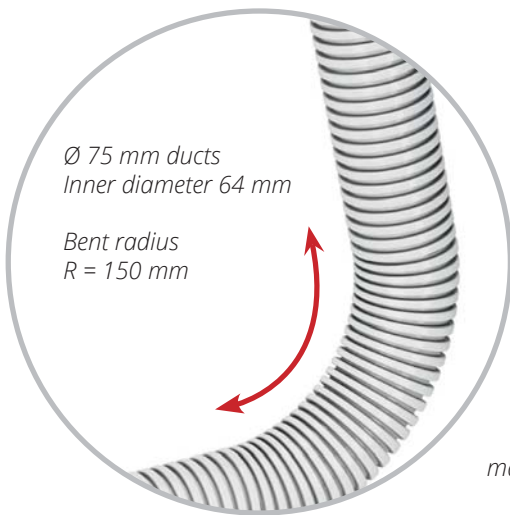
CROSS-SECTIONAL AREA



3.4. Duct

Flexible and sturdy

Air ducts are made of high-quality plastic using the co-extrusion technology which involves pressing two materials through the same die to produce a single piece.
Co-extruded plastic profiles have a number of advantages such as resistance to temperature changes, impact resistance and ease of care.
The corrugations make semi-rigid air ducts highly flexible.
This feature allows for easy bending at any point without any special tools or equipment.



The air ducts are rated for the maximum pressure of 8 kN/m²m²

Antistatic treatment

The duct is antistatic treated which prevents that dust and dirt sticks to the duct.
The material is virgin HDPE. No recycled material is used as this can release phthalates.



Installation in cold areas:
Duct and components which are installed in cold areas, i.e. un-insulated lofts, shall be insulated.

Easy installation and maintenance.



Easy to cut without needs of special tooling.

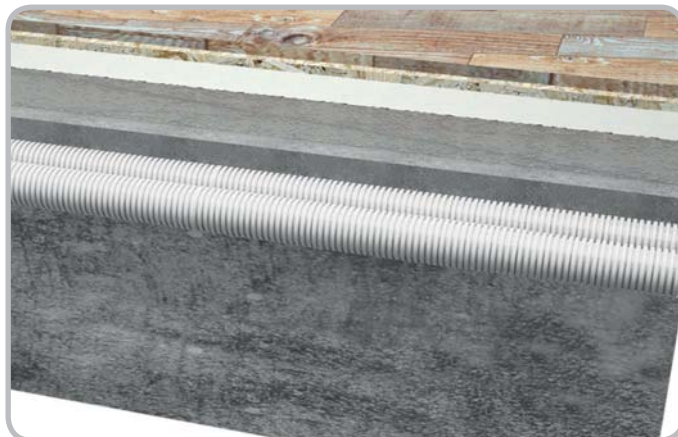


A smooth inner surface of the air ducts makes cleaning easy.

4. Installation example, ducts.



Inside wooden floor structures through the beams.



Embedded into the cement screed of the floor.



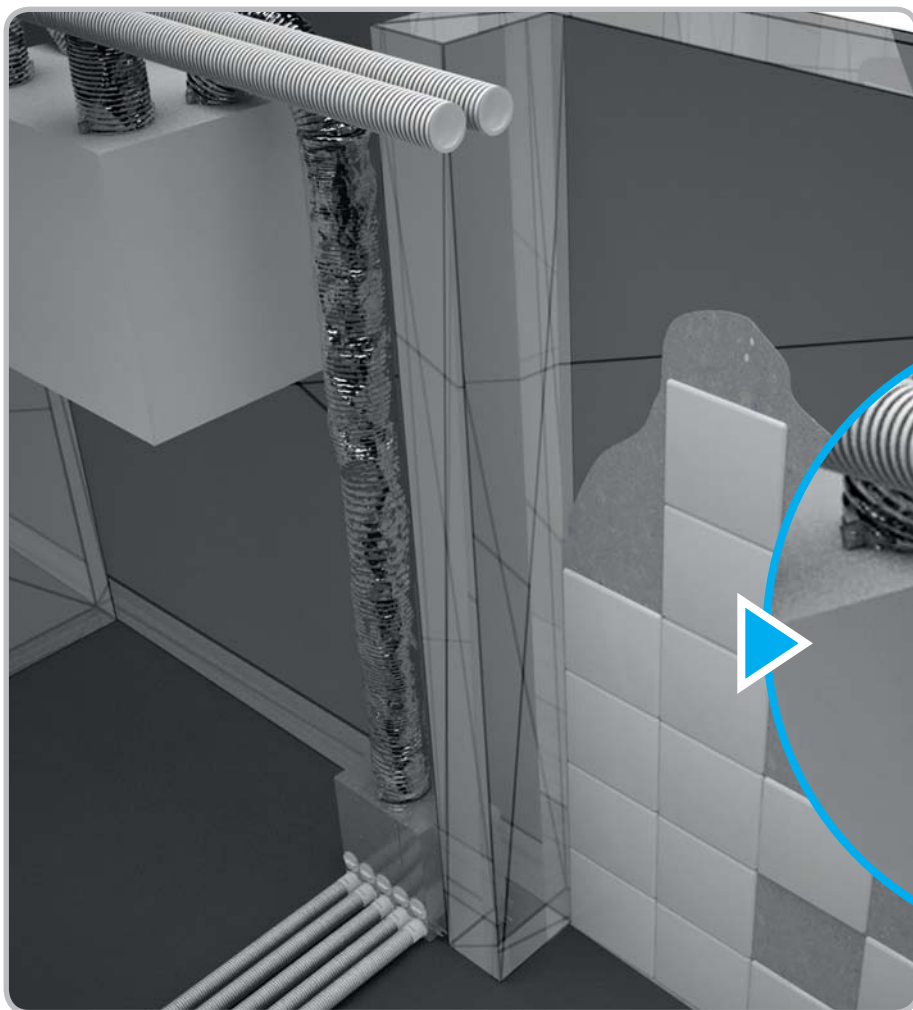
Inside the suspended ceiling space.



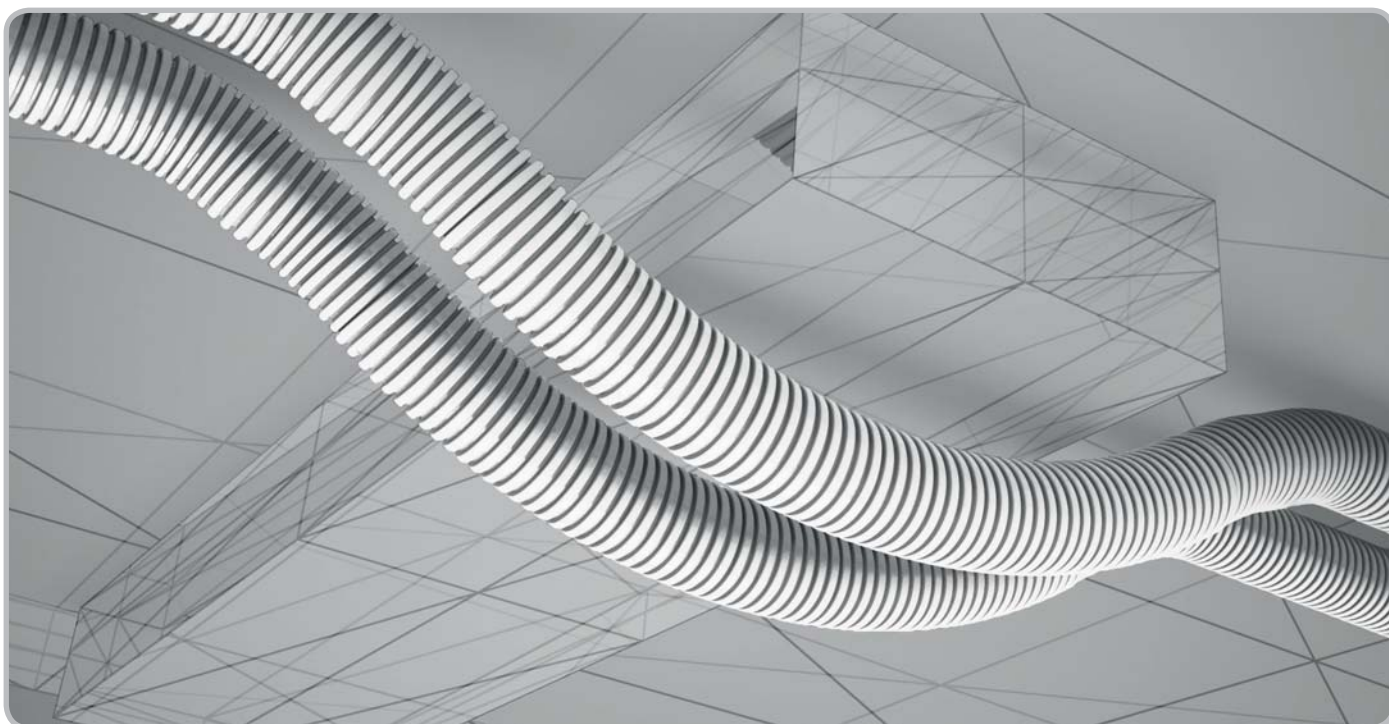
Floor connector coverage with cement screed (combined with a heated floor system).



The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory). The lock ring (supplied) ensures reliable fixation of the air duct.



To prevent penetration of construction waste into the ducts during installation use a special duct plug.



It is easy to pass obstacles.

5. Technical data

5.1. Duct

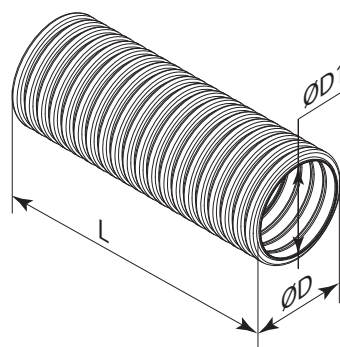


Application

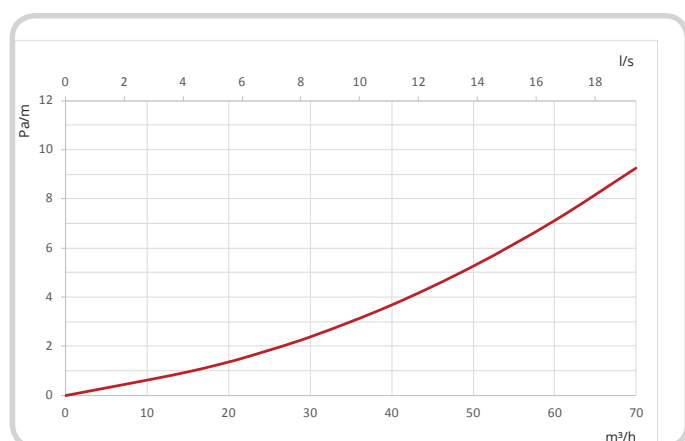
Supply and extract air in ventilation systems.

Made of high-density polyethylene (HDPE).
The bend radius 150 mm. Circular density 8 kN/m² as per EN ISO 9969. Operating temperature: from -20 to +60 °C.
Smooth inner surface for low air resistance and easy cleaning.

	Art.no.	ØD [mm]	ØD1 [mm]	L [m]
25 m	117482	75	64	25
50 m	117483			50



Outer diameter		75 mm		
Air speed through the cross-section [m/s]		2	2.5	3
1 duct - air flow [m ³ /h]		22	28	34
2 ducts - air flow [m ³ /h]		45	56	67
3 ducts - air flow [m ³ /h]		-	-	-
		Duct resistance [Pa]		
Duct length [m]	2	2.5	3,4	4,8
	4	5.0	6.8	9.6
	6	7.5	10.2	14.4
	8	10.0	13.6	19.2
	10	12.5	17.0	24.0
	12	15.0	20.4	28.8
	14	17.5	23.8	33.6
	16	20.0	27.2	38.4
	18	22.5	30.6	43.2



5.2. Fastening and sealing components

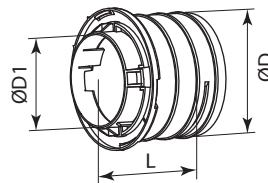


Joint flange Ø75

Joint flange with locking ring for Ø75 mm duct. Used to connect air ducts to connectors and air distribution boxes. The duct is secured with a lock ring (included). A duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory).

Made of polypropylene (PP) with thermoplastic elastomer (SEBS). Operating temperature: from -20 to +60 °C.

	Art.no.	ØD [mm]	ØD1 [mm]	L [mm]
Ø75	117411	86	66	77



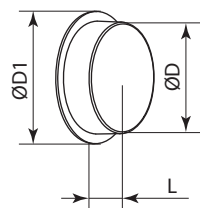
Pipe plug Ø75

Pipe plug for Ø75 mm duct. Used for sealing off duct ends.

Made of polypropylene (PP) with thermoplastic elastomer (SEBS).

Operating temperature: from -20 to +60 °C.

	Art.no.	ØD [mm]	ØD1 [mm]	L [mm]
Ø75	117415	63.2	75	20



Plug with gasket Ø75

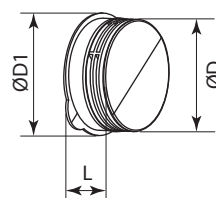
Flange plug with gasket for joint flange Ø75 mm. Used to sealing off unused flanges in valve connectors.

Made of polypropylene (PP) with thermoplastic elastomer (SEBS).

The plug is supplied with a seal (available as an accessory) to retain airtightness class C.

Operating temperature: from -20 to +60 °C.

	Art.no.	ØD [mm]	ØD1 [mm]	L [mm]
Ø75	117507	86	95	32

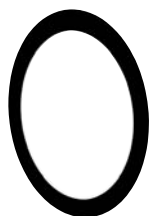
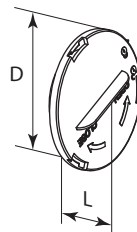




Box plug with gasket Ø75

Box plug with gasket Ø75 mm. Used to seal off unused ports in air distribution boxes. Made of polypropylene (PP) with thermoplastic elastomer (SEBS). The plug is supplied with a seal (available as an accessory) to retain airtightness class C. Operating temperature: from -20 to +60 °C.

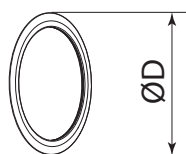
	Art.no.	ØD [mm]	L [mm]
Ø75	117413	96	29



Gasket Ø75

Gasket Ø75 mm. Used for sealing off 75 mm ducts and flange plugs. Made of synthetic rubber. Operating temperature: from -20 to +60 °C.

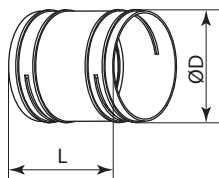
	Art.no.	ØD [mm]
Ø75	117417	79



Coupling sleeve Ø75

Coupling sleeve Ø75 mm. Used for joining Ø75 mm ducts. Lock rings help secure the ducts to the flanges. The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory), art.no 117417. Made of polypropylene (PP) with thermoplastic elastomer (SEBS). Operating temperature: from -20 to +60 °C.

	Art.no.	ØD [mm]	L [mm]
Ø75	117412	79	95





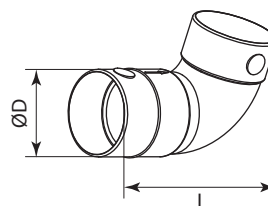
Bend Ø75

Bend 90 degrees for Ø75 duct. To be used instead of duct. The duct is fastened inside the bend without the need of fastening materials. The connection dimension is Ø 75 mm. Made of PVC plastic.

Operating temperature: from -20 to +60 °C.

Recommended to use for angle connections to valve connectors as this stabilizes the duct which helps to keep the connector in position.

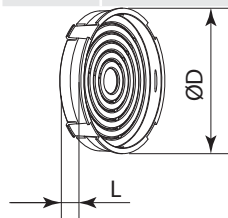
	Art.no.	ØD [mm]	L [mm]
Ø75	117416	78	165



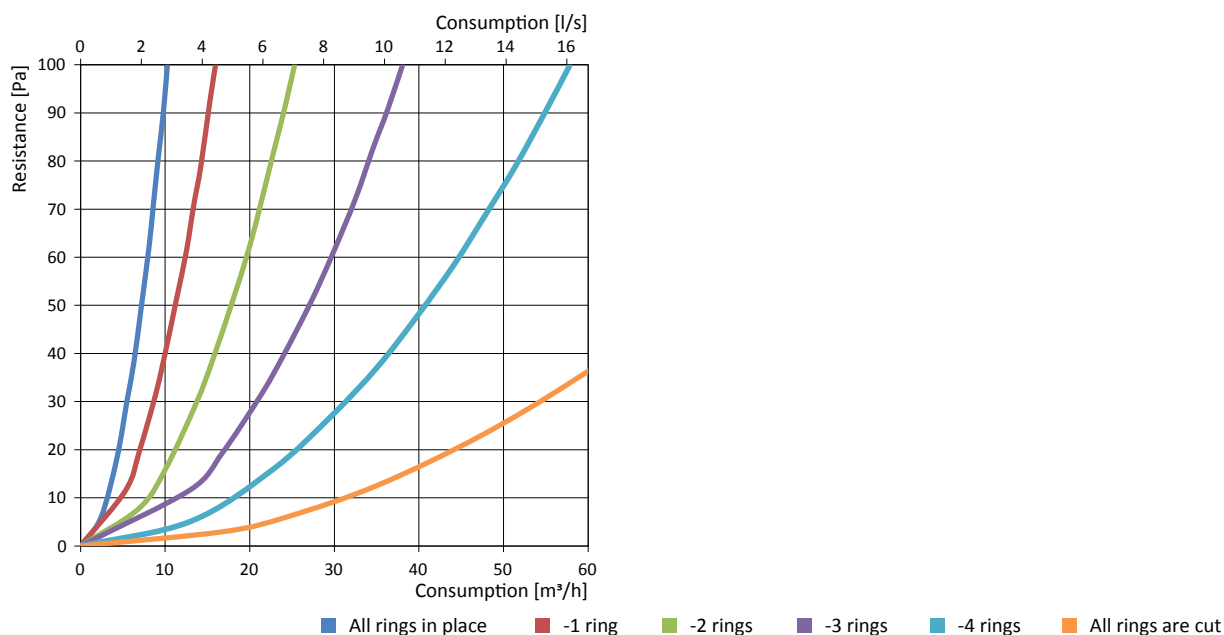
Damper distribution box

Damper for distribution box Ø75 mm. To be used to adjust the airflow through the air distribution box. Inserted into joint flanges on the inside of the air distribution box. To adjust the air flow cut the unnecessary rings off the casting. Made of polypropylene (PP) with thermoplastic elastomer (SEBS). Operating temperature: from -20 to +60 °C.

	Art.no.	ØD [mm]	L [mm]
Ø75	117414	62	14



Adjustment



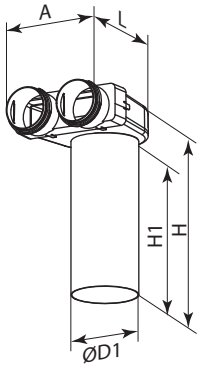
5.3. Valve connectors



Valve connector Ø75x2 plastic

Valve connector Ø75x2 plastic. For connection of max two ducts. Valve dimension Ø125.
The duct is secured with a lock ring (included). The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory), art.no. 117417.
Made of polypropylene (PP) with thermoplastic elastomer (SEBS).
Operating temperature: from -20 to +60 °C.

	Art.no.	ØD1 [mm]	L [mm]	A [mm]	H [mm]	H1 [mm]
Ø75	117407	128	282	218	367	300



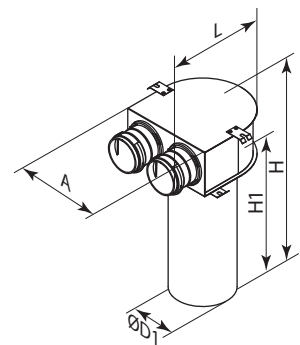
Valve connector Ø75x2 plastic 117407		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	9.1	7.9
60	2	6.4	4.8



Valve connector Ø75x2 steel

Valve connector Ø75x2 steel. For connection of max two ducts. Valve dimension Ø125.
The duct is secured with a lock ring (included). The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory), art.no. 117417.
Length of tube is cut to the desired needs.
With brackets for fixation.

	Art.no.	ØD1 [mm]	L [mm]	A [mm]	H [mm]	H1 [mm]
Ø75	117405	127	195.5	200	401.3	300



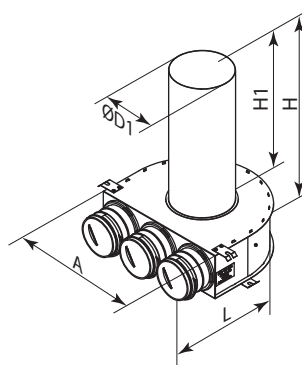
Valve connector Ø75x2 steel 117405		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	4.6	3.4
60	2	3.5	1.9



Valve connector Ø75x3 steel

Valve connector Ø75x3 steel. For connection of max three ducts. Valve dimension Ø125.
The duct is secured with a lock ring (included). The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory), art.no. 117417.
Length of tube is cut to the desired needs.
With brackets for fixation.

	Art.no.	ØD1 [mm]	L [mm]	A [mm]	H [mm]	H1 [mm]
Ø75	117406	127	309.5	300	401.3	300



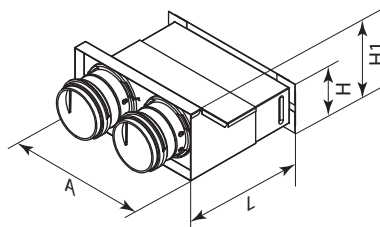
Valve connector Ø75x3 steel 117406		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	4.6	3.4
60	2	3.5	1.9
90	3	2.4	0.2



Valve connector horizontal Ø75x2

Valve connector horizontal Ø75x2. For horizontal connection of max two ducts. Valve dimension Ø125.
The duct is secured with a lock ring (included). The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory), art.no. 117417.

	Art.no.	L [mm]	A [mm]	H [mm]	H1[mm]
Ø75	117409	203.5	176.5	75	112



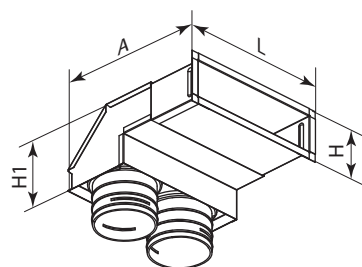
Valve connector horizontal Ø75x2 117409		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	6.9	5.7
60	2	5.5	3.9



Valve connector vertical Ø75x2

Valve connector vertical Ø75x2. For vertical connection of max two ducts. Valve dimension Ø125. The duct is secured with a lock ring (included). The duct is fitted with a slip-on seal to retain air-tightness class C (available as an accessory), art.no. 117417.

	Art.no.	L [mm]	A [mm]	H [mm]	H1[mm]
Ø75	117408	225	237	75	110



Valve connector vertical Ø75x2 117408		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	7.2	6.0
60	2	6.3	4.7

5.4. Valves

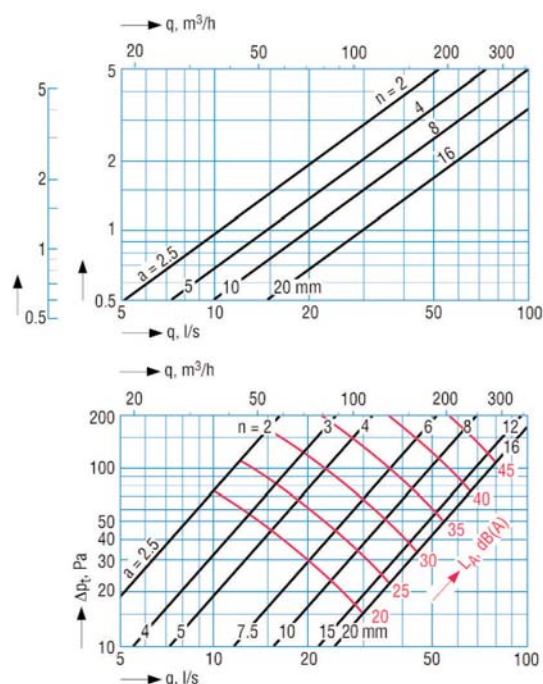
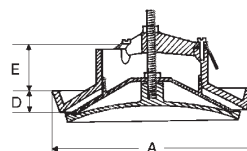


Supply air valve Ø125

Supply air valve Ø125. For ceiling installation. With spring for fastening in valve connectors. Air flow is adjusted by turning the plate.

Material polypropylen (PP).

	Art.no.	A [mm]	D [mm]	E [mm]
Ø125	09805	180	20	30



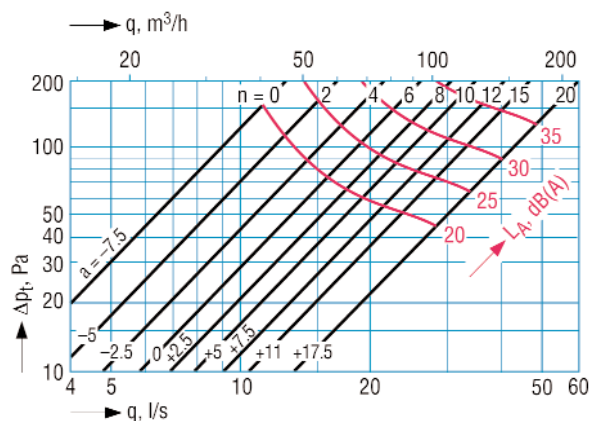
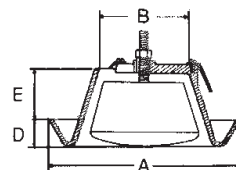


Extract air valve Ø125

Extract air valve Ø125. For ceiling installation. With spring for fastening in valve connectors. Air flow is adjusted by turning the plate.

Material polypropylen (PP).

	Art.no.	A [mm]	B [mm]	D [mm]	E [mm]
Ø125	09705	160	95	20	37



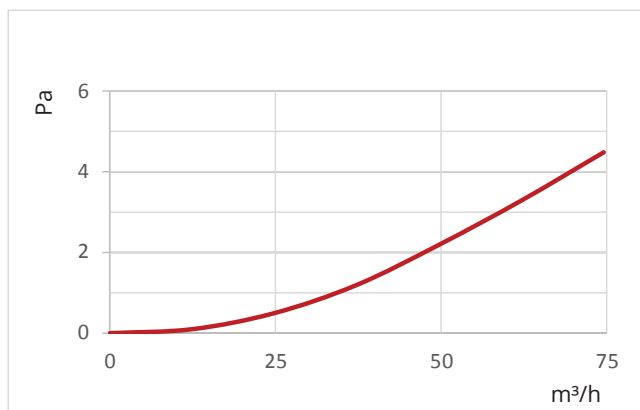
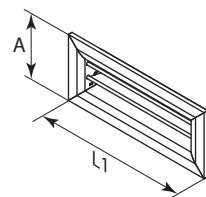
Wall vent 200x55 white

Veggventil 200x55 mm hvit. For wall valve connectors. The connection dimension is 200x55 mm.

The grille is made of aluminium with a polymer coating. The cross-sectional area is $0.0069 m^2$.

Secured with springs.

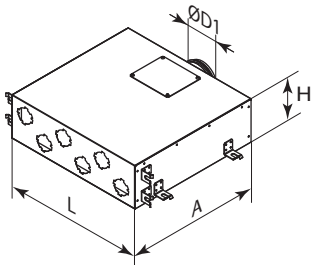
	Art.no.	A [mm]	L1 [mm]
Ø75	117410	97	230



5.5. Air distribution boxes



	Art.no.	ØD1 [mm]	L [mm]	A [mm]	H[mm]
Ø75	117402	124	530	500	162



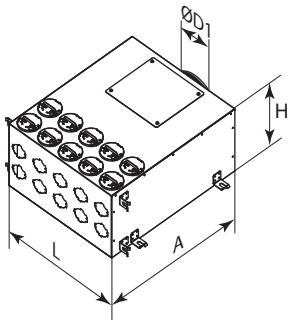
Distribution box Ø75x6

Distribution box Ø75x6. For connection of max six Ø75 ducts.
For supply and exhaust air.
Connection towards air handling unit Ø125 mm.
The ducts are connected using joint flanges, art.no 117411.
Any unused ports are sealed off with air distribution box plugs, art.no 117413.
Made of steel with aluzinc coating.
Internal sound insulation layer.
With fixation brackets.

Distribution box Ø75x6 117402		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	5.8	4.8
60	2	5.0	3.9
90	3	4.6	3.4
120	4	3.8	2.6
150	5	2.4	1.0
180	6	1.2	0.3



	Art.no.	ØD1 [mm]	L [mm]	A [mm]	H[mm]
Ø75	117403	159	500	500	202



Distribution box Ø75x10

Distribution box Ø75x10. For connection of max ten Ø75 ducts.
For supply and exhaust air.
Connection towards air handling unit Ø160 mm.
The ducts are connected using joint flanges, art.no 117411.
Any unused ports are sealed off with air distribution box plugs, art.no 117413.
Made of steel with aluzinc coating.
Internal sound insulation layer.
With fixation brackets.

Distribution box Ø75x10 117403		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	4.4	4.0
60	2	4.2	3.9
90	3	4.0	3.7
120	4	3.8	3.5
150	5	3.6	3.3
180	6	3.4	3.0
210	7	3.1	2.7
240	8	2.5	2.2
270	9	1.9	1.5
300	10	1.3	1.0



Distribution box Ø75x15

Distribution box Ø75x15. For connection of max fifteen Ø75 ducts. For supply and exhaust air.

Connection towards air handling unit Ø200 mm.

The ducts are connected using joint flanges, art.no 117411.

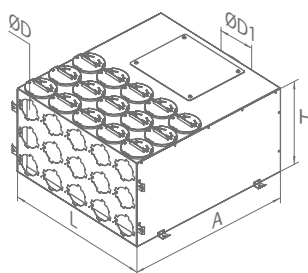
Any unused ports are sealed off with air distribution box plugs, art.no 117413.

Made of steel with aluzinc coating.

Internal sound insulation layer.

With fixation brackets.

	Art.no.	ØD1 [mm]	L [mm]	A [mm]	H[mm]
Ø75	117404	199	500	600	302



Distribution box Ø75x15 117404		Supply air	Extract air
Airflow capacity [m³/h]	Duct connections	Resistance [Pa]	Resistance[Pa]
30	1	6.5	5.6
60	2	6.3	5.4
90	3	6.1	5.2
120	4	5.7	4.9
150	5	5.3	4.5
180	6	4.7	4.0
210	7	4.1	3.5
240	8	3.5	3.0
270	9	2.9	2.5
300	10	2.5	2.1
330	11	2.1	1.8
360	12	1.6	1.4
390	13	1.1	0.9
420	14	0.7	0.6
450	15	0.3	0.2



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