Comfort ventilation

Engineering

Hoval HomeVent® ER (200-400)
Comfort ventilation unit

- Comfort ventilation unit with self-regulating heat and humidity recovery for any installation position.
- For use within or outside the insulated building shell.
- High-quality, heat and sound insulated inner casing made from EPP.
- External casing made of film-coated sheet steel (red).
- The casing is suitable for installation on both sides (accessible on both sides)
- Rotary enthalpy recovery unit with speed regulation
- Two backward-curved EC fans (continuously adjustable 15-100 %)
- High-quality filter
  - supply air: ePM$_{1.0}$ 55 % (F7)
  - extract air: ePM$_{10}$ 60 % (G4)
- Integrated prefilter
- Filter monitoring (timer)
- Ready-to-connect electronics
- No need for preheating or a condensate drain

Data
- Colour: red
- Dimensions:
  L x W x H: 560 x 374 x 1000 mm
  Weight: 31 kg
- Electrical connection: 230 V/50 Hz, IP 40

Required accessories:
- Standard operator terminal BG02 E or
- TopTronic® E room control module comfort plus

Options
- Air quality sensor VOC or CO_2
- Active cool recovery (CoolVent® option)
- Mounting set, base, IsiCube
- Supply air activated carbon filter

Delivery
- Comfort ventilation unit pre-assembled and packed.

On site
- 8-pin CAT 5 patch cable (parallel, not crossed) between comfort ventilation unit and operator terminal
- 230 V socket

Use
The HomeVent® comfort ventilation unit provides centralised supply and extract air handling for residential spaces.
This can be a single family home or a residential unit in a multi-family house.
The comfort ventilation unit is part of the HomeVent® ventilation system for comfort ventilation, which performs the following tasks:
- Supplies residential and commercial space with outdoor air
- Extracts used air (CO_2, aerosols, excess dampness, odours, etc.)
- Saves energy through intelligent latent heat recovery
- Cleans supply air using a fine dust filter

Tests
- TÜV Süd according to EN 13141-7
- TÜV Süd according to EN 60335-1

Model range

HomeVent® ER type		Flow rate m³/h	Heat recovery efficiency %
(200)	A+	30-200	90-130
(300)	A+	45-300	90-130
(400)	A	60-400	90-130

Energy recovery
The built-in enthalpy recovery unit withdraws energy from the extract air and transfers it to the supply air. This enables the intelligent (temperature) and the latent (humidity) energy to be transferred. The transmission performance is regulated depending on the outdoor temperature.

The advantages of the enthalpy recovery unit are:
- Temperature efficiency up to 90 %
- Degree of humidity recovery up to 95 %
- Steplessly controlled transmission performance
- No preheating required (down to -20 °C)
- No condensation
- No bypass required

Air filtration
The outdoor air goes through two cleaning stages, reaches the highest standard. A fine-meshed grate (washable) at the entry of the unit prevents insects, leaves, etc. from reaching the unit. When the outdoor air leaves the unit, it flows through a high-capacity fine pollen filter ($ePM_{1.0}$ 55 % (F7)). The operator receives a message when it is time to change the filter. The activated carbon filter can be inserted in place of the standard supply air filter. This is a high-capacity filter ($ePM_{2.5}$ 50 %) with high efficiency against particles (pollen, fine dust, etc.) and against gaseous pollutants and odours (agriculture, traffic, etc.).

Air delivery
Two backward-curved centrifugal fans with EC direct current motors deliver the air. The rotating wheel made of high-tech composite material is produced in one piece with optimised fluid mechanics, and ensures quiet operation of the unit. The electronics built into the engine enable the air volumes to be finely regulated between 15 and 100 %. The fans are arranged in such a way that no extract air can find its way to the supply air.

Suitability for winter
Due to the built-in enthalpy recovery unit, no condensate is formed in the unit. No preheating (electric air heater) is necessary for outdoor temperatures down to -20 °C. The flow rate ratio between supply and extract air is not changed.

Summer operation
The energy recovery is automatically reduced to a minimum at high outdoor temperatures. This enables night cooling (free cooling) in the summer as well as when the seasons change. It is not necessary to arrange for a bypass via dampers and a drive. In addition, the CoolVent® option can recover cold in air-conditioned buildings. The hot outdoor air is cooled and dried with the air-conditioned extract air.

Installation
The HomeVent® comfort ventilation unit is characterised by a compact design. It is possible to access the unit from both sides for servicing. No condensate forms in the unit, meaning that it can be installed in any position imaginable. We recommend the corresponding mounting sets with vibration dampers for the different installation positions.

Standard operator terminal BG02 E
The operator terminal consists of a plastic casing for on-wall mounting. The target air volume and the target air humidity can be set with two rotary knobs. With the party button, the air volume can be increased for a limited period of time. The connection to the HomeVent® comfort ventilation unit is made via RJ45 plug connection. The unit can also be installed in a secondary room.

TopTronic® E
room control module comfort plus
The TopTronic® E room control module comfort plus is available either with a black or white design, operated by a colour touchscreen (4.3 inch). The connection to the HomeVent® comfort ventilation unit is made via RJ45 plug connection or plug terminals (max. 0.75 mm^2). The unit can be installed on the wall with an on-wall mounted frame or with a wall-mounting plate and flush-mounted boxes. The unit can be installed in a secondary room.

Functional possibilities:
- Operation of all Hoval units connected to the bus.
- Authorisation management for operation.
- Efficient control of the ventilation system by working with day programmes
- Selection between different start screens possible during commissioning.
- Customer-specific configuration of the screen for displaying the following elements:
  - Date and time
  - Moon phases
  - Current air volume in %
  - Maximum target humidity in %
  - Active day or week programme
  - Display of current room air quality (optional VOC or CO_2 air quality sensor must be installed for this purpose)
  - Display of the current weather or the weather forecast (only possible in combination with HovalConnect)

Air quality
Optionally, a VOC or CO_2 air quality sensor can be installed in the unit during commissioning. In addition, an activated carbon filter can be installed on the supply air side as an option. The VOC air quality sensor(s) continuously monitor(s) the air for volatile organic components and regulate the air volume that is supplied or extracted via the speed of the fans. This results in optimal air quality in the building with minimal energy input.

- VOC air quality sensor on the extract air side: The extract air is continuously monitored for odours, tobacco smoke, cleansing agents, etc. If the concentration of the extract air exceeds a certain value, the air volume is increased correspondingly. The sensitivity can be chosen. On the TopTronic® E room control module comfort plus, the air quality is displayed by a bar, which will either be green (good air), orange (slightly contaminated air) or red (bad air).

Cooling
The fresh air can be precooled using the CoolVent® option. However, this requires an air-conditioning system to be present in order to provide the necessary cooling in the room. The enthalpy recovery system extracts heat and humidity from the warm outdoor air and feeds it to the cold extract air. The energy consumption of the air-conditioning system is thereby reduced. The efficiency for this process is 85 %. The CoolVent® function is activated during commissioning.

Function HomeVent® ER (200-400)

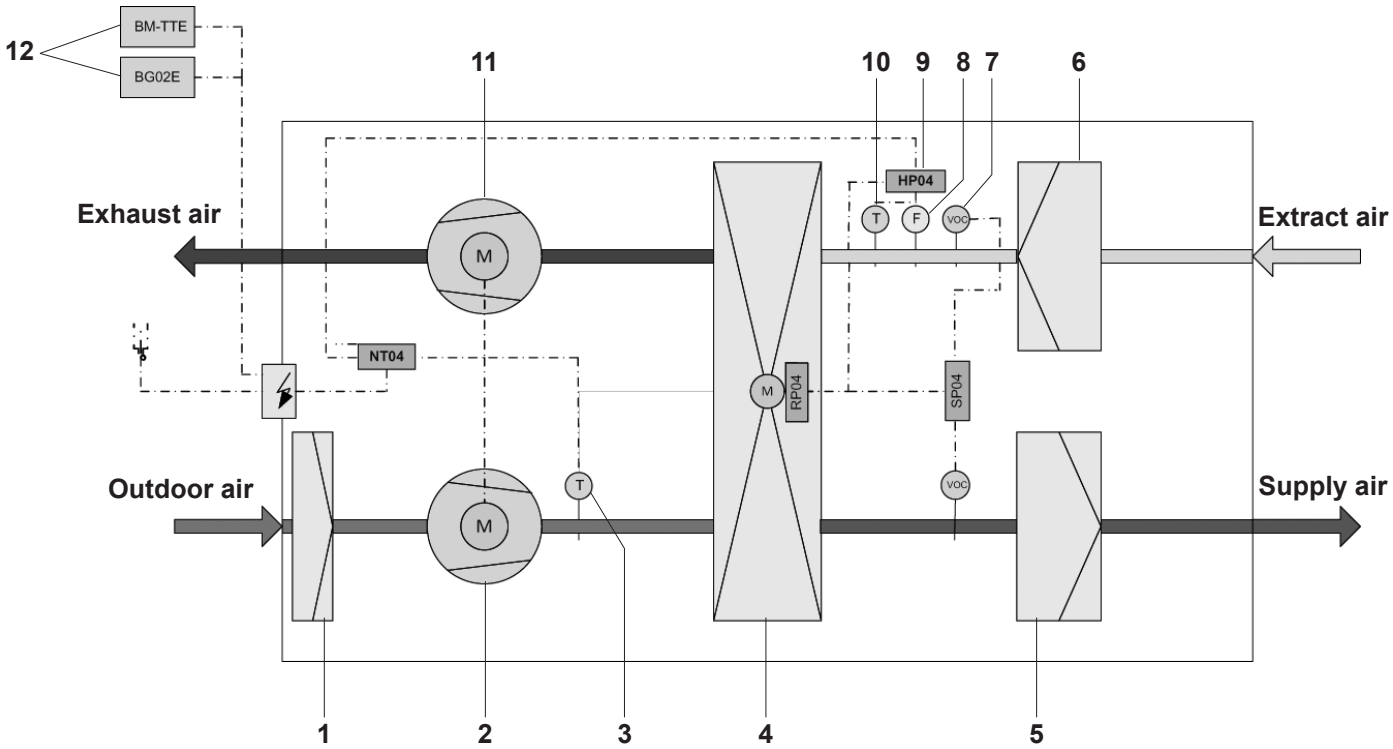
The outside air fan draws in outdoor air via the main line. In the first stage, this air is cleaned via a prefilter. In the enthalpy recovery system, the supply air is heated, depending on the temperature, and humidified. The extent to which heat and humidity are recovered is dependent on the temperature and humidity differences between the exhaust air and the outdoor air as well as on the rotor speed. Then the pre-treated outdoor air is cleaned by means of a pollen fine dust filter. The exhaust air fan sucks in the used air via the coarse dust filter.

The enthalpy recovery system extracts heat and humidity from the air and passes these to the supply air.
The way the fans are positioned – with overpressure on the supply air side and underpressure on the extract air side – means that no extract air can find its way to the supply air.

The electronic controls and the operator terminal feature the following additional functions:

- The speed of the enthalpy recovery system is regulated by the outdoor temperature. In this way, the heat and humidity recovery is adjusted automatically.
- The humidity regulation changes the flow rate. Thus, if the humidity indoors is too high, for instance, more dry air is introduced from the outside.
- The functions of the unit are continuously monitored. In case of a malfunction, the device is switched to “fault” mode. The malfunction is displayed on the operator terminal.

1 Prefilter
2 Outside air fan
3 Outdoor sensor
4 Enthalpy recovery unit
5 Supply air filter
6 Extract air filter
7 VOC or CO_2 extract air sensor
8 Humidity sensor
9 Electronics
10 Extract air sensor
11 Exhaust air fan
12 Operator terminal BG02 E or TopTronic® E room control module comfort plus



Comfort ventilation unit

HomeVent® ER (200-400)

Comfort ventilation unit for ventilating a residential unit with high-efficiency heat and humidity recovery for any installation positions.

HomeVent® ER type		Nominal flow rate m³/h	Ext. pressure Pa	Part No.
(200)	A+	200	100	7018 079
(300)	A+	300	100	7018 081
(400)	A	400	100	7018 665

Required accessories

Operator terminal BG02 E
for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400)
Plastic housing for on-wall mounting.
Knob for flow rate and room air humidity.
Service and fault display.

2066 444

TopTronic® E room control module comfort plus white
for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400)
Operation of all Hoval ventilation units, heating and hot water circuits connected to the bus system.
Customer-specific configurable start screen.

incl. fitting accessories

6037 072

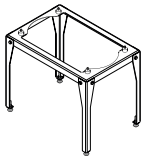
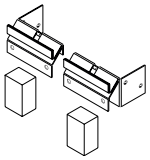
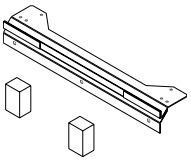
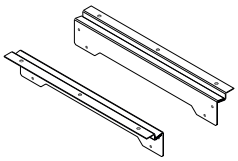
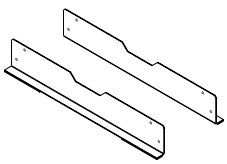
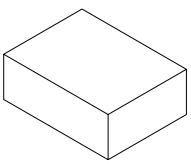
TopTronic® E room control module comfort plus black
for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400)
Operation of all Hoval ventilation units, heating and hot water circuits connected to the bus system.
Customer-specific configurable start screen.

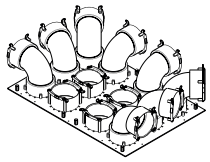
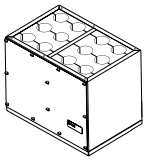
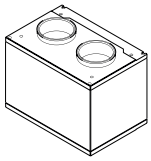
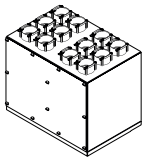
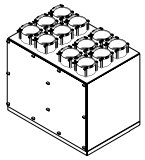
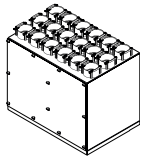
incl. fitting accessories

6042 543

Technical information
see separate chapter.

Recommended accessories

		Part No.
	**VOC air quality sensor** for HomeVent® comfort FRT (251-451) and ER (200-400) Can be installed on extract air side Only in connection with the TopTronic® E room control module comfort plus.	6058 206
	**CO_2 air quality sensor** for HomeVent® comfort FRT (251-451) and ER (200-400) Can be installed on extract air side Only in connection with the TopTronic® E room control module comfort plus.	6058 211
	Notice CO_2 sensor cannot be combined with VOC sensor	
	**Cool recovery unit CoolVent®** for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400) Active-controlled cool recovery for air-conditioned buildings. Activated by Hoval service technicians during commissioning.	6035 255
	**Unit base ER 200-400** for HomeVent® comfort FR (201-301), ER (200-400) Red painted steel (device colour) incl. 4 vibration dampers height-adjustable feet Height: 475-500 mm	6052 203
	**Horizontal wall mounting set** for HomeVent® comfort FR (201-301), ER (200-400) Steel bracket red coated with vibration-damping support	6042 303
	**Vertical wall mounting set** for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400) Steel bracket red coated with vibration-damping support	6046 215
	**Ceiling mounting set** for HomeVent® comfort FR (201-301), ER (200-400) Steel bracket red coated with vibration-damping support	6042 305
	**Floor mounting set** for HomeVent® comfort FR (201-301), ER (200-400) Steel bracket red coated with vibration-damping support	6042 306
	**Floor mounting set upright** for HomeVent® comfort FR (201-301), ER (200-400) 4 vibration-damping supports 80 x 60 x 30 mm	6044 961

		Part No.
	**Plywood 12 x 90** consisting of: galvanised steel plate 8 90° elbows 4 straight nozzles	6050 554
	**Acoustic insulating box for plywood 12 x 90** for HomeVent® ER (200-400) Casing made from red foil-plated sheet steel Connection nozzle 2 x DN 160/180 Can be screwed onto plywood Acoustic insulating body on supply and extract air sides, access panel, incl. throttle orifices Dimensions (L x W x H): 440 x 560 x 374 mm	6056 894
	**Acoustic insulating box SDB-160-400** for HomeVent® ER (200-400) Casing made from red foil-plated sheet steel Connection nozzle 4 x DN 160/180 Acoustic insulating body on supply and extract air sides Dimensions (L x W x H): 400 x 560 x 374 mm	6051 854
	**Distribution box VTB-160 12 x 75** for HomeVent® ER (200-400) Casing made from red foil-plated sheet steel Connection nozzle 2 x DN 160/180 Connection nozzle 12 x DN 75 Acoustic insulating body on supply and extract air sides, access panel, incl. throttle orifices Dimensions (L x W x H): 480 x 560 x 374 mm	6051 800
	**Distribution box VTB-160 12 x 90** for HomeVent® ER (200-400) Casing made from red foil-plated sheet steel Connection nozzle 2 x DN 160/180 Connection nozzle 12 x DN 90 Acoustic insulating body on supply and extract air sides, access panel, incl. throttle orifices Dimensions (L x W x H): 480 x 560 x 374 mm	6051 802
	**Distribution box VTB-160 18 x 75 3R** for HomeVent® ER (200-400) and acoustic insulating box SDB-160-400 Casing made from red foil-plated sheet steel Connection nozzle 2 x DN 160/180 Connection nozzle 18 x DN 75 Acoustic insulating body on supply and extract air sides, access panel, incl. throttle orifices Dimensions (L x W x H): 480 x 560 x 374 mm	6051 904

Notice
Use only in conjunction with additional silencers.

Filter HomeVent® ER (200-400)

		Part No.
	**Supply air filter FR (201-301), ER (200-400)** for HomeVent® comfort FR (201-301) and HomeVent® ER (200-400) Filter class ISO 16890: $ePM_{1.0}$ 55 % (F7)	5038 283
	**Activated carbon filter FR (201-301), ER (200-400)** for HomeVent® comfort FR (201-301) and HomeVent® ER (200-400) Protection against pollutants and odours Alternative to supply air filter FR (201-301), ER (200-400) Filter class ISO 16890: $ePM_{2.5}$ 50 %	5039 587
	**Extract air filter FR (201-301), ER (200-400)** for HomeVent® comfort FR (201-301) and HomeVent® ER (200-400) Filter class ISO 16890: ePM_{10} 60 % (G4)	5038 284

HomeVent® ER ventilation unit (200-400)

Type		(200)	(300)	(400)
• Max. flow rate (at 100 Pa external pressure)	m^3/h	200	300	400
• Air flow rate control range	m^3/h	30-200	45-300	60-400
• Humidity setpoint setting	%		30…65	
Electrical connection				
• Voltage (AC)	V		230	
• Frequency	Hz		50	
• Max. current consumption	A	0.7	1.1	1.6
• Type of protection			IP 40	
• Power consumption (at 70 % of the max. flow rate, 50 Pa external pressure)	W	34	54	81
• Degree of heat processing (as per DIN 4719)	%		90-130	
• Temperature ratio (at 70 % of the max. flow rate)	%	84	83	82
• Humidity ratio (at 70 % of the max. flow rate)	%	90	88	86
• Specific fan power SFP (at 70 % of the max. flow rate)	$W/m^3/h$	0.24	0.24	0.28
Filter class (as per ISO-16890)				
• Supply air filter			$ePM_{1.0}$ 55 %	
• Extract air filter			ePM_{10} 60 %	
• Sound power level			see table on following page	
Leakage (as per EN 13141-7)				
• Leakage class	%		C1	
• Internal leakage	%		0.0	
• Net weight	kg		31	
Application limits for device setup, weather-protected (EN 60721-3-3), 3K5 as per EN 50090-2-2				
• Ambient temperature	°C		-20...45	
• Ambient humidity	g/kg		max. 15	
• Dew point temp. in installation room	°C		< 15	
Air conditions (moderate outdoor climate EN 60721-2-1)				
• Outside air intake temperature	°C		-20...40	
• Outside air intake humidity	% r.h.		5…95	
• Extract air temperature	°C		18…35	
• Extract air humidity	% r.h.		5...80	
• Max. extract air humidity winter	g/kg		12	

Sound power levels for HomeVent® ER (200)

Casing

Flow rate	External pressure								Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	41.9	46.5	34.9	29.6	22.2	11.6	1.8	39.0
200	100	38.8	47.6	39.2	32.6	27.4	18.7	10.7	42.2

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	49.6	55.1	46.0	45.0	40.2	35.1	28.7	51.1
200	100	50.1	60.7	54.2	47.7	46.4	43.2	38.8	57.2

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	47.9	50.4	38.4	32.9	23.9	17.2	16.3	42.9
200	100	49.0	53.3	45.7	37.0	29.9	21.3	16.5	47.9

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	44.3	54.6	37.0	34.9	23.4	17.6	16.3	45.8
200	100	47.4	57.5	45.9	39.2	29.4	22.4	17.0	51.3

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	45.5	56.1	48.2	43.5	39.2	33.7	23.4	50.5
200	100	48.4	59.0	54.1	49.0	45.2	41.1	32.6	56.0

Sound power: HomeVent® ER (200) + acoustic insulating box SDB-160-400

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	38.2	39.7	22.3	15.8	14.1	15.7	16.2	31.5
200	100	41.2	40.8	31.1	19.1	15.3	15.8	16.2	34.7

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	39.8	44.0	21.8	16.5	13.8	15.5	16.2	34.7
200	100	42.2	43.8	30.8	20.5	15.1	15.9	16.3	36.8

Sound power: HomeVent® ER (200) + distribution box VTB-160 12 x 75
Sound power: HomeVent® ER (200) + distribution box VTB-160 12 x 90

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	29.5	30.4	17.8	12.6	13.6	15.5	16.1	24.9
200	100	31.5	33.2	25.0	14.7	14.4	15.7	16.2	27.7

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	29.4	31.2	17.7	13.1	14.1	15.7	16.2	25.4
200	100	30.9	36.6	25.2	14.9	14.6	15.8	16.2	30.4

Sound power: HomeVent® ER (200) + IsiSound

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	47.8	52.4	34.1	34.7	28.6	23.0	19.5	45.2
200	100	49.3	53	41.8	37.4	34.6	30.7	27.6	47.7

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
140	50	46.1	51.4	37.8	34.0	26.5	20.4	16.9	43.7
200	100	48.8	52.2	43.8	39.4	32.4	26.8	19.9	47.3

Sound power levels for HomeVent® ER (300)

Casing

Flow rate	External pressure								Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	39.9	49.9	36.0	31.6	24.6	14.5	6.4	42.8
300	100	44.6	47.5	46.2	38.5	32.4	25.2	18.0	45.5

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	47.9	59.6	49.7	46.3	46.2	41.9	36.3	55.5
300	100	54.6	56.8	64.2	52.0	50.7	49.7	44.1	61.8

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	46.4	52.2	42.5	35.4	29.1	20.5	16.4	46.5
300	100	51.5	51.9	48.7	42.2	34.6	27.1	17.4	49.0

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	46.2	58.0	43.6	38.0	29.0	22.1	16.9	51.6
250	100	53.1	54.6	53.3	46.1	35.2	28.8	19.4	52.5

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	47.0	57.0	51.6	47.8	44.2	40.3	31.1	54.2
250	100	54.0	56.9	61.7	54.9	50.7	48.3	40.2	60.7

Sound power: HomeVent® ER (300) + acoustic insulating box SDB-160-400

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	39.8	38.5	26.0	18.0	15.2	16.0	16.3	31.8
300	100	44.6	39.6	35.2	25.1	17.5	16.4	16.3	35.6

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	41.2	41.9	27.1	19.4	15.0	15.9	16.4	34.7
300	100	45.1	40.9	37.8	27.5	17.2	17.1	16.9	37.2

Sound power: HomeVent® ER (300) + distribution box VTB-160 12 x 75

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	30.1	32.0	23.0	14.6	14.3	15.6	16.2	27.3
300	100	35.0	36.0	36.2	22.9	16.6	16.4	16.3	34.3

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	29.6	35.2	23.8	14.8	15.0	15.7	16.1	29.2
300	100	34.8	35.2	36.3	21.6	16.8	16.4	16.3	34.1

Sound power: HomeVent® ER (300) + IsiSound

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	46.7	50.7	37.6	36	33.4	29.6	25.7	45.6
300	100	52.1	50.9	47.6	41.4	38.9	37.3	33.5	49.2

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
210	50	47.0	50.3	41.7	38.6	31.4	26.1	19.1	45.4
300	100	52.2	50.7	50.7	45.7	37.9	33.9	25.8	50.6

Sound power levels for HomeVent® ER (400)

Casing

Flow rate SUP/EXT [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	41.5	47.1	43.6	37.0	30.1	22.4	14.7	43.7
400	100	45.6	50.0	51.5	40.7	36.6	30.2	24.3	49.9

Fresh air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	50.4	55.1	56.9	49.9	48.8	46.7	40.9	57.1
400	100	55.7	58.5	66.7	54.0	54.8	54.3	49.8	65.3

Supply air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	50.1	50.5	46.9	39.5	32.2	24.4	16.7	47.0
400	100	54.2	54.2	58.6	44.8	38.0	31.7	20.0	56.2

Extract air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	49.9	55.8	51.1	43.6	33.0	26.1	17.9	51.5
400	100	55.1	55.0	53.3	46.8	39.7	33.7	23.2	53.1

Exhaust air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	50.5	58.2	60.3	53.7	48.5	45.3	36.7	59.2
400	100	57.7	59.4	66.4	58.4	54.9	53.3	46.0	65.3

Sound power: HomeVent® ER (400) + acoustic insulating box SDB-160-400

Supply air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	44.9	38.4	33.8	23.3	16.4	16.2	16.3	34.2
400	100	48.5	43.4	38.0	27.5	20.7	18.0	16.7	39.3

Extract air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1 k	2 k	4 k	8 k	Sound pressure level L_{WA} 125 Hz ... 8 kHz [dB(A)]
280	50	43.2	40.4	38.6	25.4	16.2	16.5	16.6	36.9
400	100	47.9	43.8	36.8	28.4	21.2	19.5	18.5	39.3

Sound power: HomeVent® ER (400) + IsiSound

Fresh air

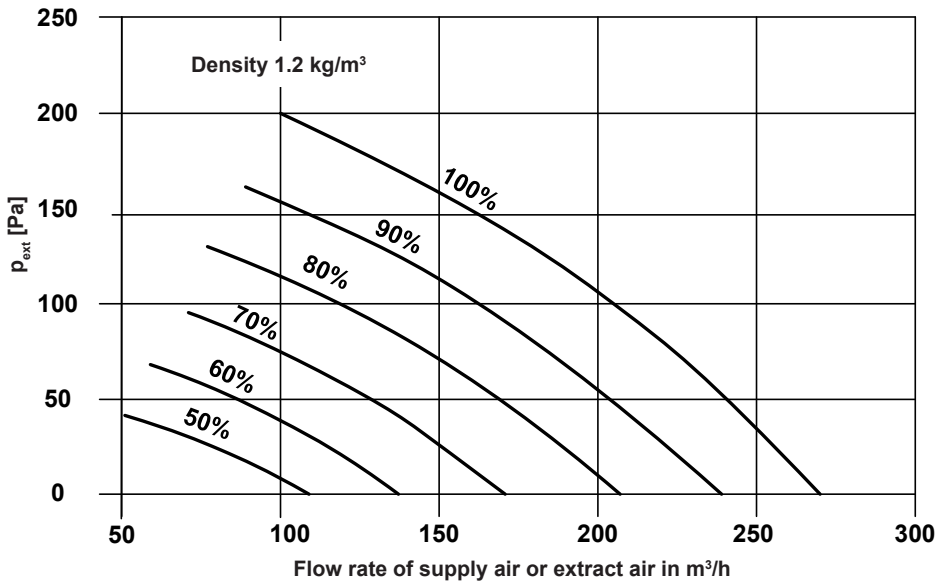
Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
280	50	49.2	49.7	44.7	39.8	37.2	34.7	30.2	47.3
400	100	54.5	54.5	53.1	43.9	43.2	42.3	39.5	53.5

Exhaust air

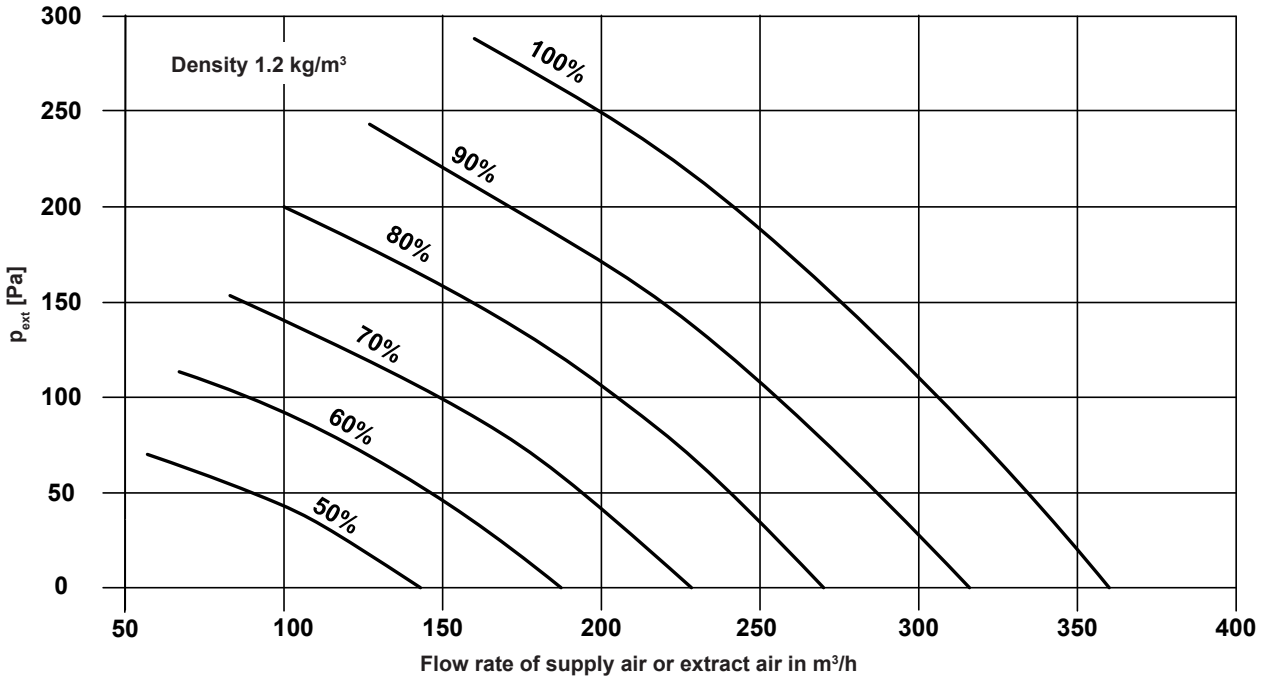
Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	125 Hz ... 8 kHz [dB(A)]
280	50	49.7	49.6	47.2	44.0	35.7	30.9	22.8	48.3
400	100	57.0	54.1	56.2	49.2	42.3	38.8	31.2	55.5

Performance chart for air flow rate, HomeVent® ER (200)

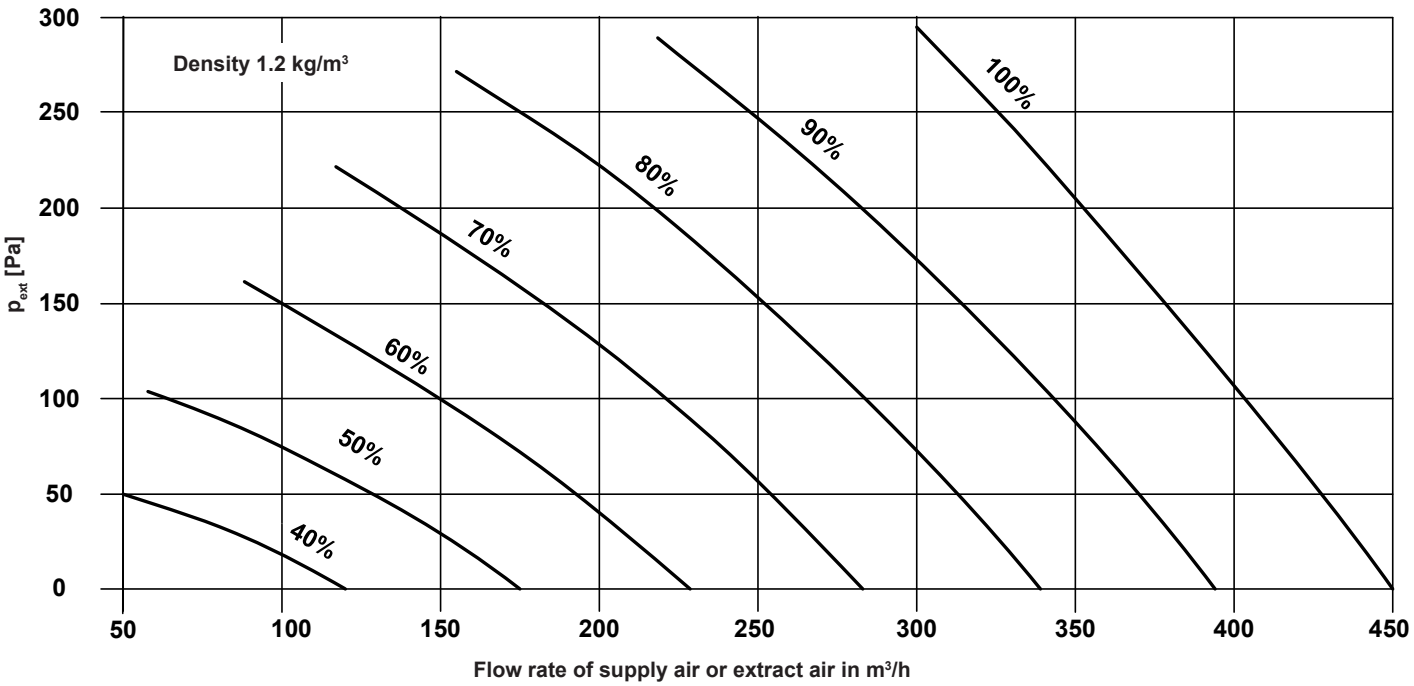
p_{ext} Sum of external pressure drops



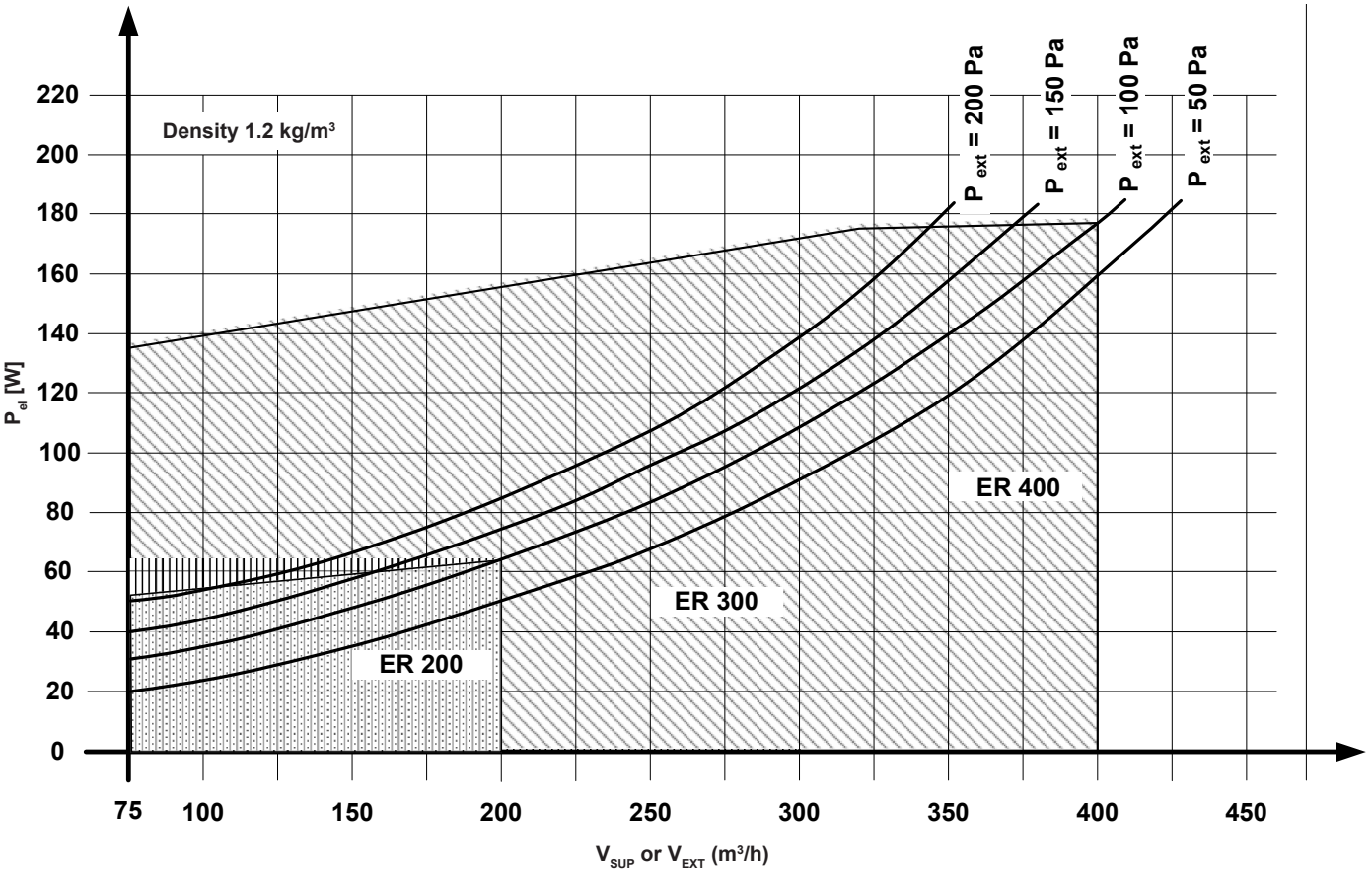
Performance chart for air flow rate, HomeVent® ER (300)



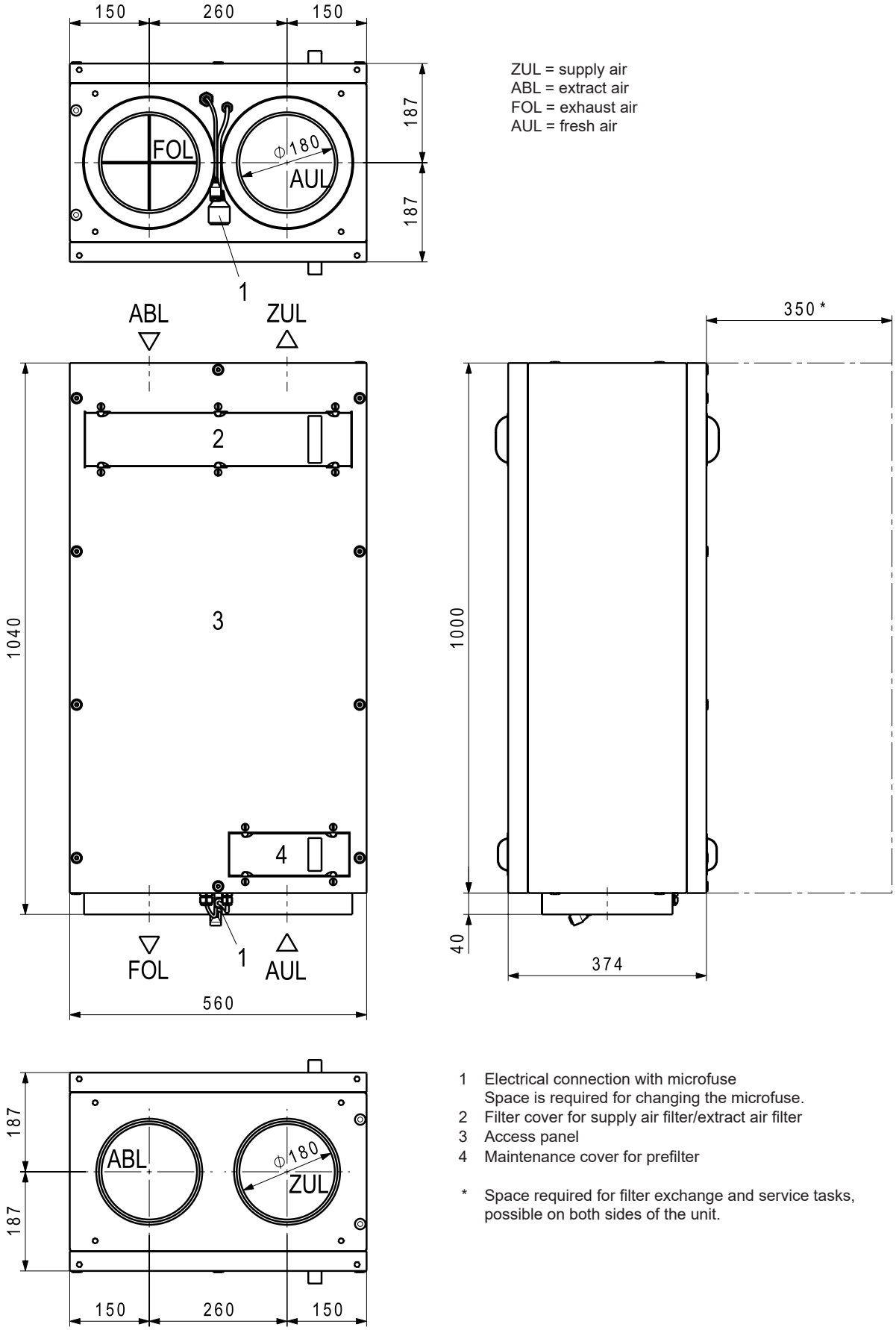
Performance chart for air flow rate, HomeVent® ER (400)



Electrical power consumption HomeVent® ER (200-400)



HomeVent® comfort ventilation unit

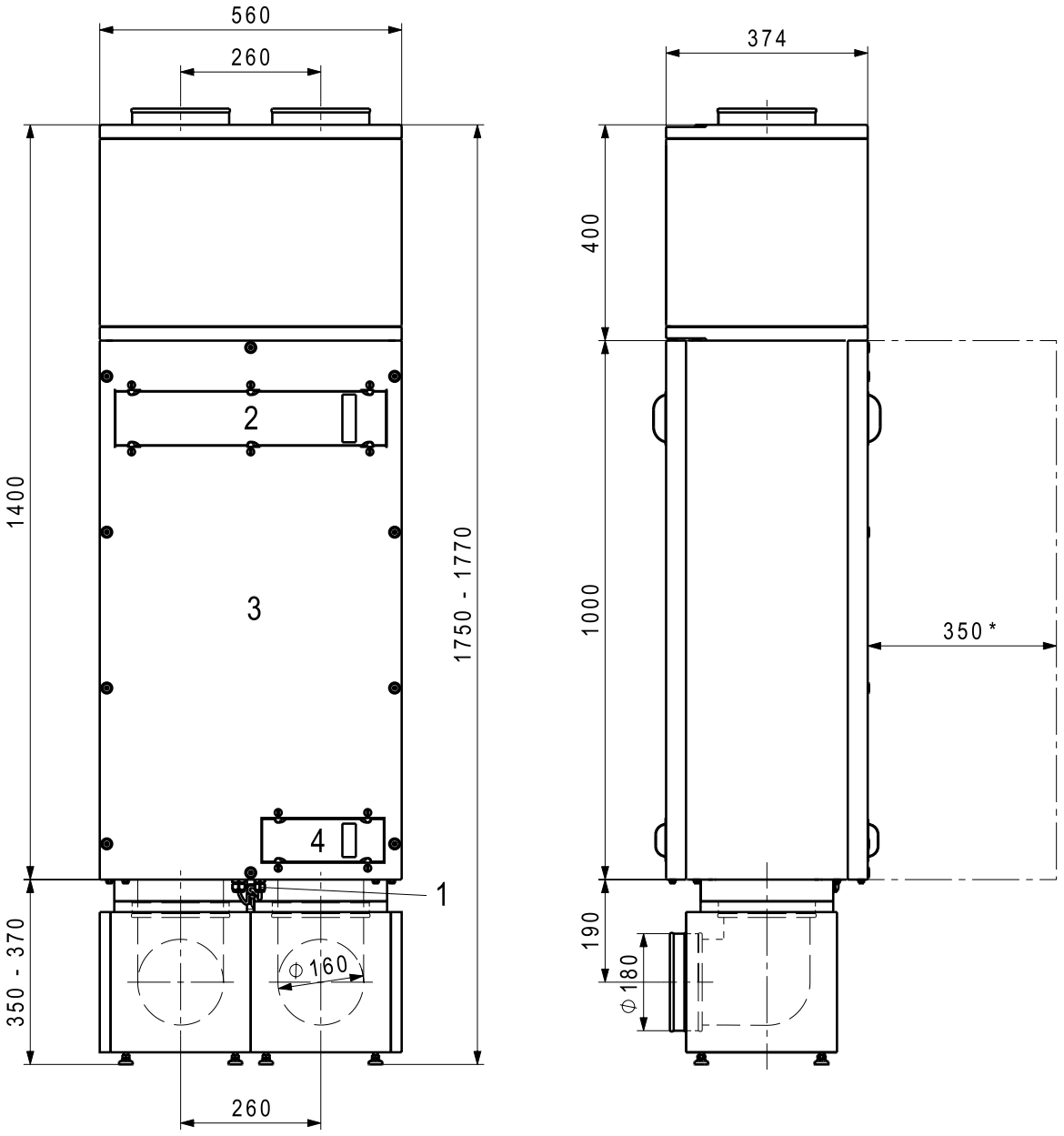


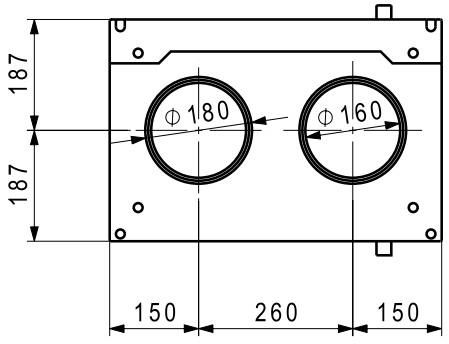
ZUL = supply air
ABL = extract air
FOL = exhaust air
AUL = fresh air

1 Electrical connection with microfuse
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space required for filter exchange and service tasks, possible on both sides of the unit.

HomeVent® comfort ventilation unit with acoustic insulating box and IsiCube

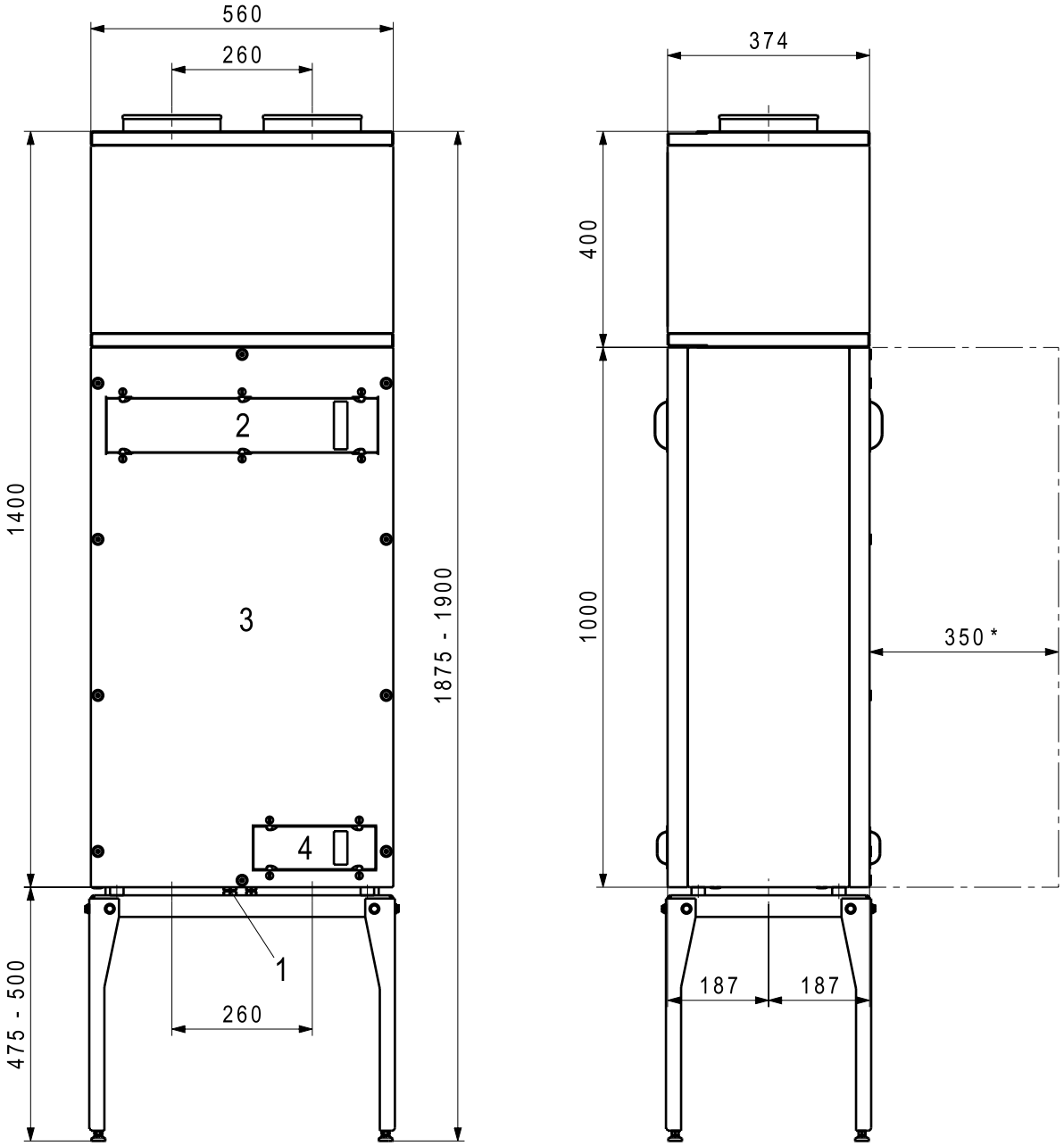


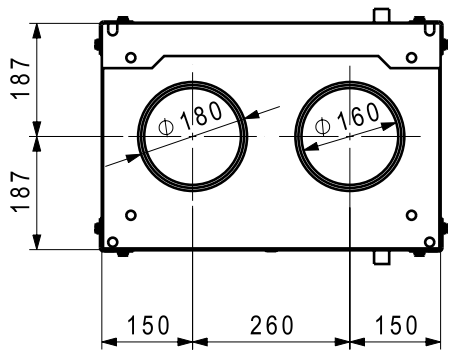


1 Electrical connection
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space required for filter exchange and service tasks, possible on both sides of the unit.

HomeVent® comfort ventilation unit with acoustic insulating box





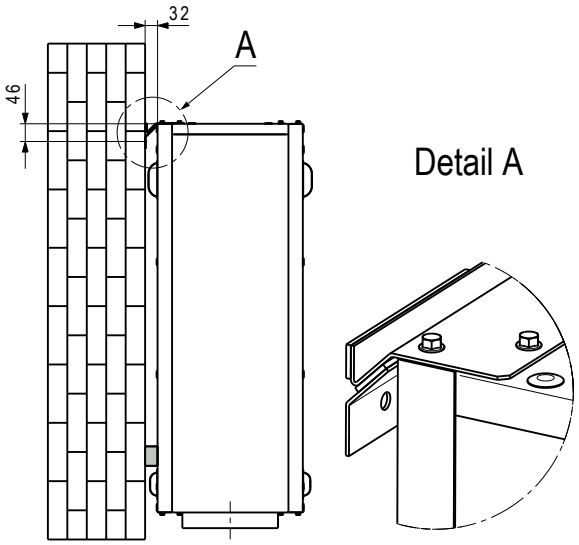
1 Electrical connection
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space required for filter exchange and service tasks, possible on both sides of the unit.

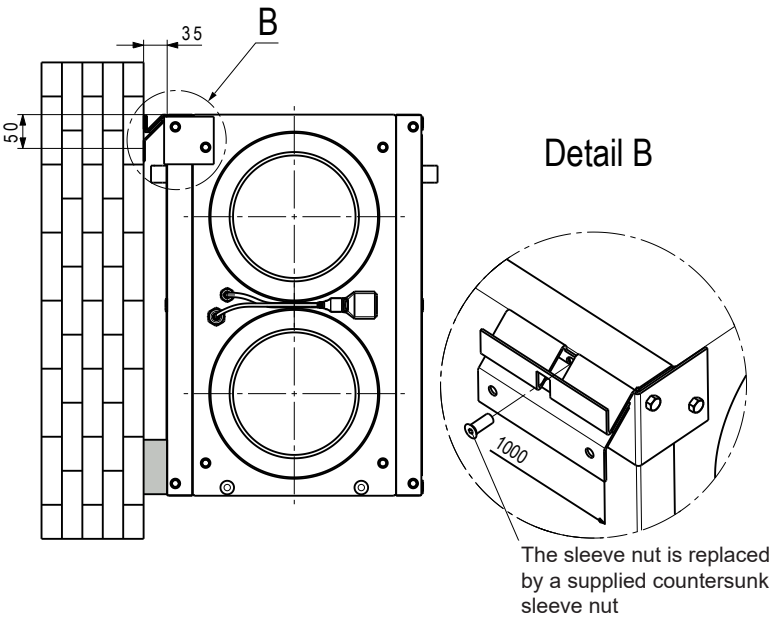
HomeVent® comfort ventilation unit

Installation with vibration dampers

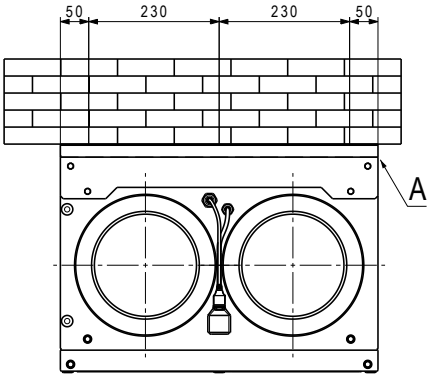
Vertical wall installation: S-WV



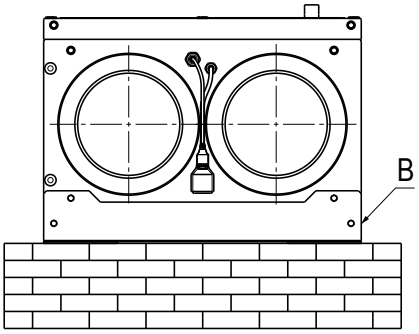
Horizontal wall installation: S-WH



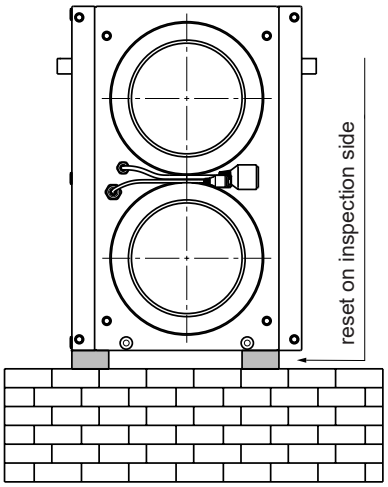
Ceiling installation: S-D



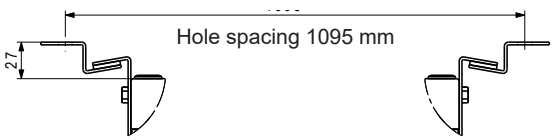
Floor installation: S-B



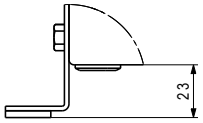
Floor installation: upright



Detail A

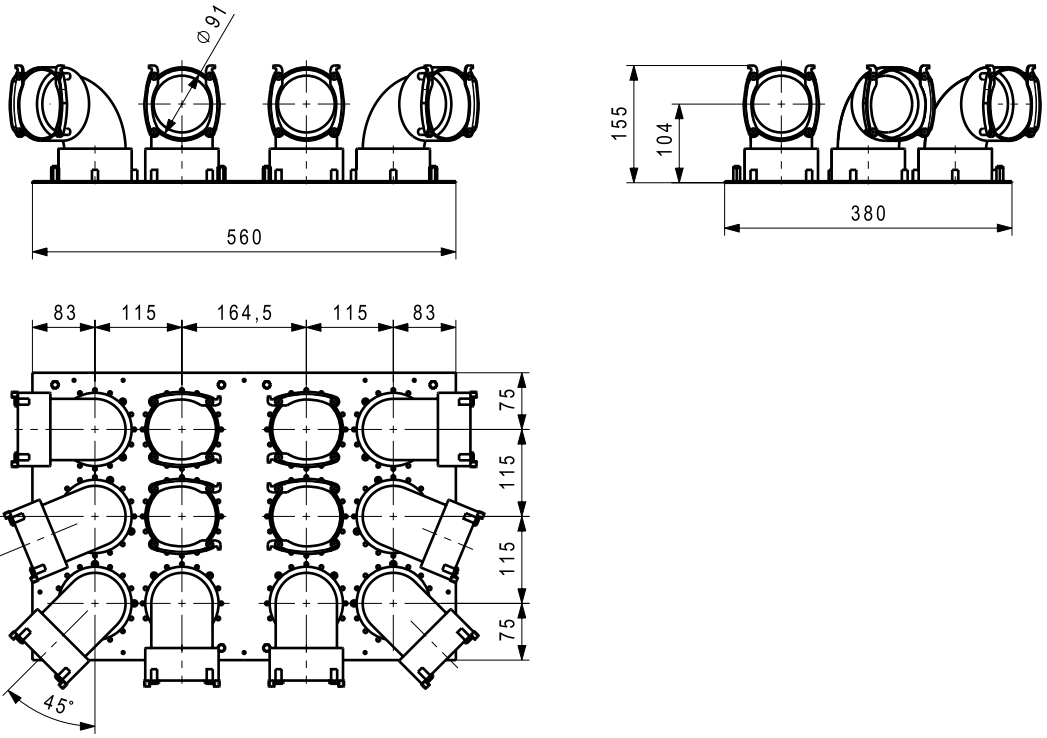


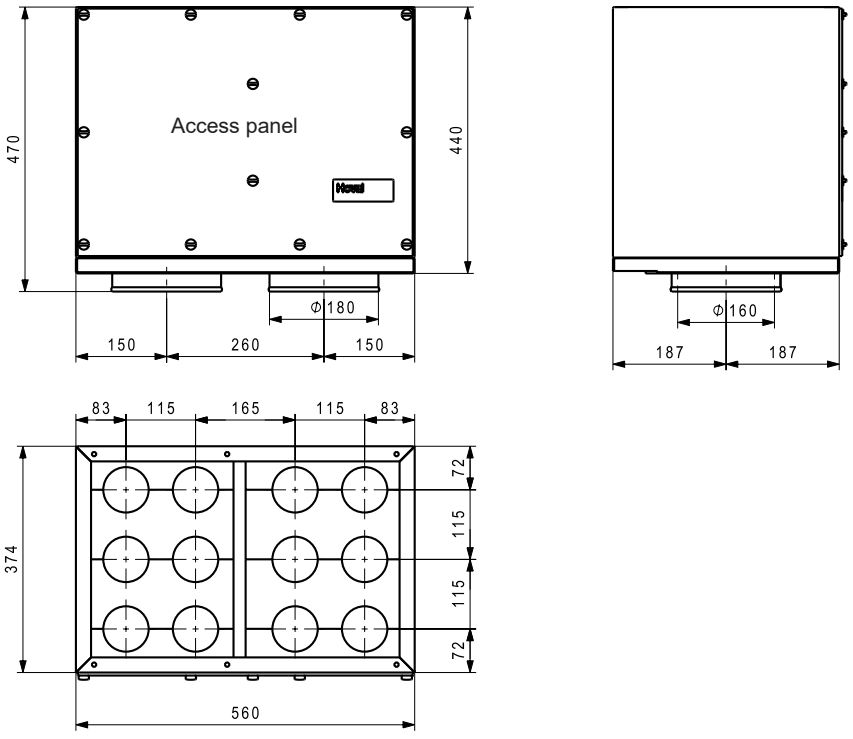
Detail B



Can be installed in any position.

Plywood and acoustic insulating box for plywood 12 x 90
Casing made of red foiled sheet steel with sound insulation elements on supply air and extract air sides, can be screwed onto plywood 12 x 90
Connection nozzles:
2 x DN 160/180

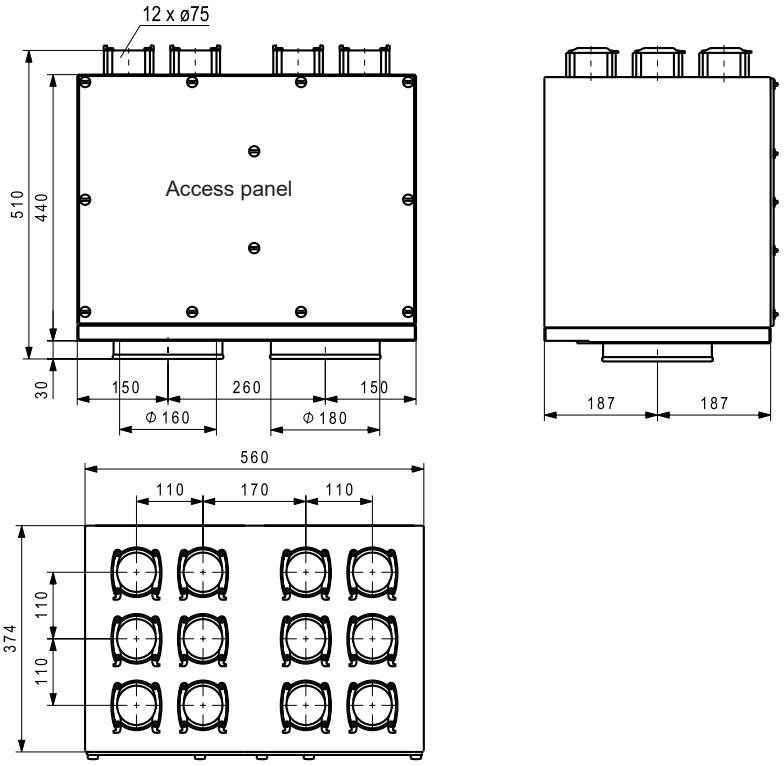




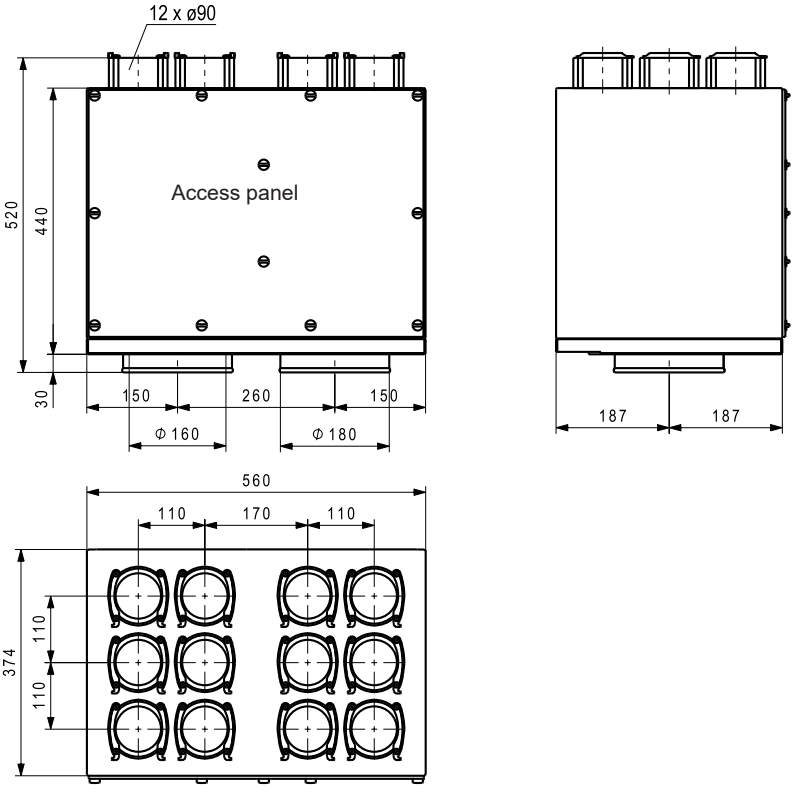
Distribution cases DN 160

Distribution box VTB-160 12 x 75 resp. 90
Casing made of red foiled sheet steel with access panel.
Sound insulation elements on supply air side and extract air side.
Connection nozzles:
2 x DN 160/180
SUP 6 x 75, EXT 6 x 75
SUP 6 x 90, EXT 6 x 90
Included accessories: end caps and throttle orifices

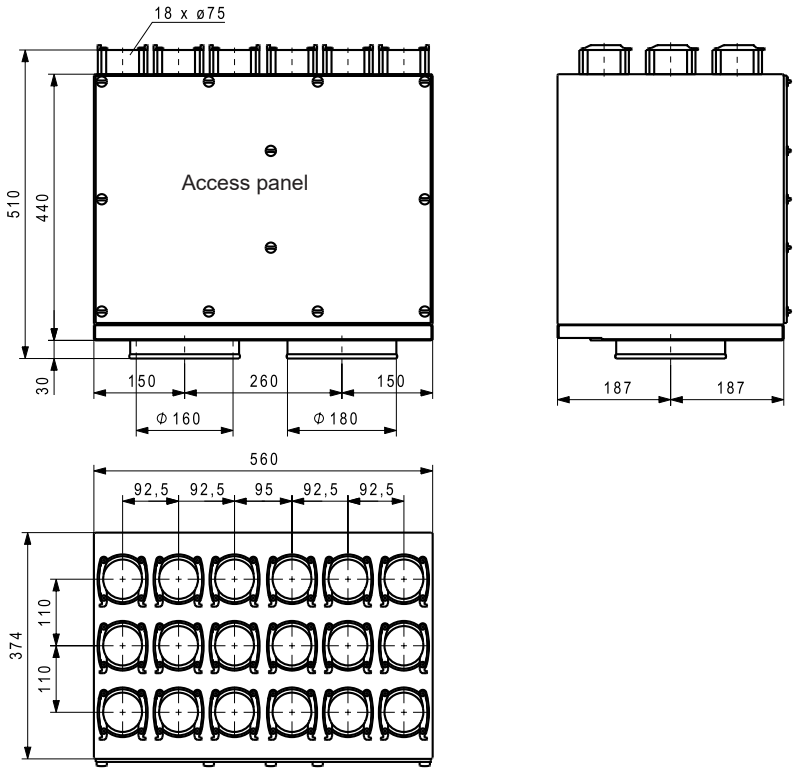
Distribution box VTB-160 12 x 75



Distribution box VTB-160 12 x 90



Distribution box VTB-160 18 x 75 3R
Casing made of red foiled sheet steel with access panel.
Sound insulation elements on supply air side and extract air side.
Additional silencer recommended
Connection nozzles:
2 x DN 160/180
SUP 9 x 75, EXT 9 x 75
Included accessories: end caps and throttle orifices



Hoval HomeVent® comfort FRT (251-451) Comfort ventilation unit

- Comfort ventilation unit with self-adjusting heat and humidity recovery.
- For use within or outside the insulated building shell.
- High-quality, heat and sound insulated inner casing made from EPP.
- External casing made of film-coated sheet steel (red).
- Unit can be installed upright using the mounting set or the base.
- Rotary enthalpy recovery unit with speed regulation
- Two backward-curved EC fans (continuously adjustable 15-100 %)
- High-quality filter
  - supply air: $ePM_{1.0}$ 55 % (F7)
  - extract air: ePM_{10} 60 % (G4)
- Integrated prefilter
- Filter monitoring (timer)
- Ready-to-connect electronics
- No need for preheating or a condensate drain

Data
- Colour: red
- Dimensions:
  L x W x H: 560 x 560 x 925 mm
  Weight: 39 kg
- Electrical connection: 230 V/50 Hz, IP 40

Required accessories:
- Standard operator terminal BG02 E or
- TopTronic® E room control module comfort plus

Options
- Air quality sensor VOC or CO_2
- Active cool recovery (Option CoolVent®)
- Mounting set, base, IsiCube
- Supply air activated carbon filter

Delivery
- Comfort ventilation unit pre-assembled and packed.

On site
- 8-pin CAT 5 patch cable (parallel, not crossed) between comfort ventilation unit and operator terminal
- RJ45 socket
- 230 V socket

Use
The HomeVent® comfort ventilation unit provides centralised supply and extract air handling for residential spaces.
This can be a single family home or a residential unit in a multi-family house.
Office rooms, conference rooms and cloakrooms are also ideal applications.
The comfort ventilation unit is part of the HomeVent® ventilation system for comfort ventilation, which performs the following tasks:
- Supplies residential and commercial space with outdoor air
- Extracts used air (CO_2, aerosols, excess dampness, odours, etc.)
- Saves energy through intelligent latent heat recovery
- Cleans supply air using a fine dust filter

Tests
- TÜV Munich in accordance with DIN EN 13141-7
- TÜV Munich in accordance with DIBt
- TÜV Munich in accordance with EN 60335-1
- Type approval (DIBT) Z-51.3-448

Model range

HomeVent® comfort FRT type		Flow rate m³/h	Heat recovery efficiency %
(251)	A+	50-250	90-130
(351)	A+	60-350	90-130
(451)	A	70-450	90-130

Energy recovery
The built-in enthalpy recovery unit withdraws energy from the extract air and transfers it to the supply air. This enables the intelligent (temperature) and the latent (humidity) energy to be transferred. The transmission performance is regulated between 0 and 100 % depending on the outdoor temperature.

The advantages of the enthalpy recovery unit are:
- Temperature efficiency up to 90 %
- Degree of humidity recovery up to 95 %
- Transmission performance can be adjusted continuously
- No preheating required (down to -20 °C)
- No condensation
- No bypass required

Air filtration
The outdoor air goes through two cleaning stages, ensuring the highest standard. A fine-meshed grate (washable) at the entry of the unit prevents insects, leaves, etc. from reaching the unit. When the outdoor air leaves the unit, it flows through a high-capacity fine pollen filter ($ePM_{1.0}$ 55 % (F7)). The operator receives a message when it is time to change the filter. In addition, an activated carbon filter can be installed on the supply air side as an option. The activated carbon filter can be inserted in place of the standard supply air filter. This is a high-capacity filter ($ePM_{2.5}$ 50 %) with high efficiency against particles (pollen, fine dust, etc.) and against gaseous pollutants and odours (agriculture, traffic, etc.).

Air delivery
Two backward-curved centrifugal fans with EC direct current motors deliver the air. The rotating wheel made of high-tech composite material is produced in one piece with optimised fluid mechanics, and ensures quiet operation of the unit. The electronics built into the engine enable the air volumes to be finely regulated between 15 and 100 %. The fans are arranged in such a way that no extract air can find its way to the supply air.

Suitability for winter
Due to the built-in enthalpy recovery unit, no condensate is formed in the unit. No preheating (electronic air heater) is necessary for outdoor temperatures down to -20 °C. The air volume ratio between the supply air and extract air is not changed.

Summer operation
The energy recovery is automatically reduced to a minimum at high outdoor temperatures. This enables night cooling (free cooling) in the summer as well as when the seasons change. It is not necessary to arrange for a bypass via dampers and a drive. In addition, the CoolVent® option can recover cold in air-conditioned buildings. The hot outdoor air is cooled and dried with the air-conditioned extract air.

Installation
The HomeVent® comfort ventilation unit is characterised by a compact design. It is possible to access the unit from the front for servicing. No condensate forms in the unit. We recommend the corresponding mounting sets with vibration dampers.

Standard operator terminal BG02 E
The operator terminal consists of a plastic casing for on-wall mounting. The target air volume and the target air humidity can be set with two rotary knobs. With the party button, the air volume can be increased for a limited period of time. The connection to the HomeVent® comfort ventilation unit is made via RJ45 plug connection. The unit can also be installed in a secondary room.

TopTronic® E
room control module comfort plus
The TopTronic® E room control module comfort plus is available either with a black or white design. Operated by a colour touchscreen (4.3 inch). The connection to the HomeVent® comfort ventilation unit is made via RJ45 plug connection or plug terminals (max. 0.75 mm^2). The unit can be installed on the wall with an on-wall mounted frame or with a wall-mounting plate and flush-mounted boxes. The unit can be installed in a secondary room.

Functional possibilities:
- Operation of all Hoval units connected to the bus.
- Authorisation management for operation.
- Efficient control of the ventilation system by working with day programmes
- Selection between different start screens possible during commissioning.
- Customer-specific configuration of the screen for displaying the following elements:
  - Date and time
  - Moon phases
  - Current air volume in %
  - Maximum target humidity in %
  - Active day or week programme
  - Display of current room air quality (optional VOC or CO_2 air quality sensor must be installed for this purpose)
  - Display of the current weather or weather forecast (only possible in combination with HovalConnect)

Air quality
Optionally, a VOC or CO_2 air quality sensor can be installed in the unit during commissioning. The VOC air quality sensor(s) continuously monitor(s) the air for volatile organic components and regulate the air volume that is supplied or extracted via the speed of the fans. This results in optimal air quality in the building with minimal energy input.

- VOC air quality sensor on the extract air side: The extract air is continuously monitored for odours, tobacco smoke, cleansing agents, etc. If the concentration of the extract air exceeds a certain value, the air volume is increased correspondingly. The sensitivity can be chosen. On the TopTronic® E room control module comfort plus, the air quality is displayed by a bar, which will either be green (good air), orange (slightly contaminated air) or red (bad air).

Cooling
The fresh air can be precooled using the CoolVent® option. However, this requires an air-conditioning system to be present in order to provide the necessary cooling in the room. The enthalpy recovery system extracts heat and humidity from the warm outdoor air and feeds it to the cold extract air. The energy consumption of the air-conditioning system is thereby reduced. The efficiency for this process is 85 %. The CoolVent® function is activated during commissioning.

Function HomeVent® comfort FRT (251-451)

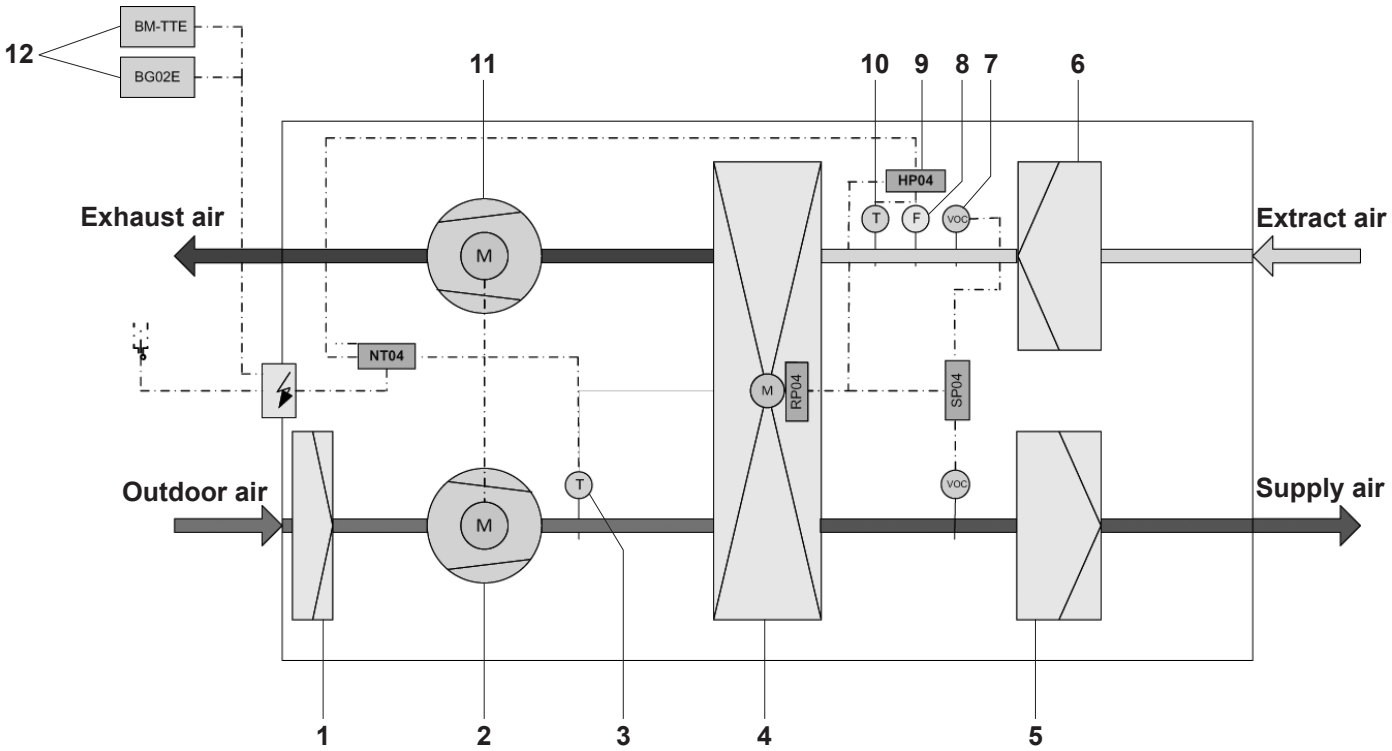
The outside air fan draws in outdoor air via the main line. In the first stage, this air is cleaned via a prefilter. In the enthalpy recovery system, the supply air is heated, depending on the temperature, and humidified. The extent to which heat and humidity are recovered is dependent on the temperature and humidity differences between the exhaust air and the outdoor air as well as on the rotor speed. Then the pre-treated outdoor air is cleaned by means of a pollen fine dust filter. The exhaust air fan sucks in the used air via the coarse dust filter.

The enthalpy recovery system extracts heat and humidity from the air and passes these to the supply air.
The way the fans are positioned – with overpressure on the supply air side and underpressure on the extract air side – means that no extract air can find its way to the supply air.

The electronic controls and the operator terminal feature the following additional functions:

- The speed of the enthalpy recovery system is regulated by the outdoor temperature. In this way, the heat and humidity recovery is adjusted automatically.
- The humidity regulation changes the flow rate. Thus, if the humidity indoors is too high, for instance, more dry air is introduced from the outside.
- The functions of the unit are continuously monitored. In case of a malfunction, the device is switched to “fault” mode. The malfunction is displayed on the operator terminal.

1 Prefilter
2 Outside air fan
3 Outdoor sensor
4 Enthalpy recovery unit
5 Supply air filter
6 Extract air filter
7 VOC or CO_2 extract air sensor
8 Humidity sensor
9 Electronics
10 Extract air sensor
11 Exhaust air fan
12 Operator terminal BG02 E or TopTronic® E room control module comfort plus



Comfort ventilation units

HomeVent® comfort FRT (251-451)

Comfort ventilation unit for ventilating a residential unit with high-efficiency heat and humidity recovery.

HomeVent® comfort FRT type		Nominal flow rate m^3/h	Ext. pressure Pa	Part No.
(251)	A+	250	100	7016 713
(351)	A+	350	100	7016 714
(451)	A	450	100	7016 715

Required accessories

Operator terminal BG02 E — 2066 444
for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400)
Plastic housing for on-wall mounting.
Knob for flow rate and room air humidity.
Service and fault display.

TopTronic® E room control module comfort plus white — 6037 072
for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400)
Operation of all Hoval ventilation units, heating and hot water circuits connected to the bus system.
Customer-specific configurable start screen.

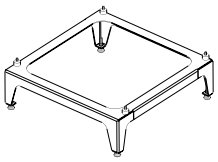
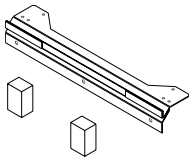
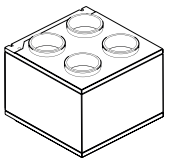
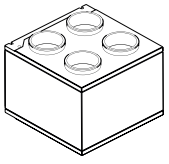
incl. fitting accessories

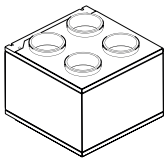
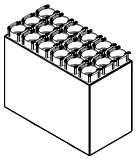
TopTronic® E room control module comfort plus black — 6042 543
for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400)
Operation of all Hoval ventilation units, heating and hot water circuits connected to the bus system.
Customer-specific configurable start screen.

incl. fitting accessories

Technical information
see separate chapter.

Recommended accessories

		Part No.
	**VOC air quality sensor** for HomeVent® comfort FRT (251-451) and ER (200-400) Can be installed on extract air side Only in connection with the TopTronic® E room control module comfort plus.	6058 206
	**CO_2 air quality sensor** for HomeVent® comfort FRT (251-451) and ER (200-400) Can be installed on extract air side Only in connection with the TopTronic® E room control module comfort plus.	6058 211
	Notice CO_2-sensor cannot be combined with VOC sensor	
	**Cool recovery unit CoolVent®** for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400) Active-controlled cool recovery for air-conditioned buildings. Activated by Hoval service technicians during commissioning.	6035 255
	**Unit base GS (251-451)** for HomeVent® comfort FRT (251-451) Red painted steel, 4 vibration dampers, height-adjustable feet. Height: 185-205 mm	6046 216
	**Vertical wall mounting set** for HomeVent® comfort FR (201-301), FRT (251-451) and ER (200-400) Steel bracket red coated with vibration-damping support	6046 215
	**Acoustic insulating box FRT extract-supply air front** for HomeVent® comfort FRT (251-451) Red housing made of aluzinc sheet with connection nozzles 4 x DN 160. Extract air front left, supply air front right Exhaust air back left, fresh air back right All 4 air ducts are sound-insulated. Dimensions (L x W x H): 400 x 560 x 560 mm	6046 018
	**Acoustic insulating box** FRT extract air-supply air right for HomeVent® comfort FRT (251-451) Red housing made of aluzinc sheet with connection nozzles 4 x DN 160. Extract air front right, supply air rear right Exhaust air front left, fresh air rear left All 4 air ducts are sound-insulated. Dimensions (L x W x H): 400 x 560 x 560 mm	6046 019

		Part No.
	**Acoustic insulating box FRT extract-supply air left** for HomeVent® comfort FRT (251-451) Red housing made of aluzinc sheet with connection nozzles 4 x DN 160. Extract air rear left, supply air front left Exhaust air back right, fresh air front right All 4 air ducts are sound-insulated. Dimensions (L x W x H): 400 x 560 x 560 mm	6046 020
	**Distribution box VTB-180 18 x 75** for HomeVent® comfort FRT (251) Housing made of aluzinc sheet with connection nozzles 2 x DN 180 Connection nozzles 18 x DN 75 Acoustic insulating unit supply and extract air side, access panel, incl. throttle orifices Dimensions (L x W x H): 400 x 560 x 280 mm	6045 932

Filter HomeVent® comfort FRT (251-451)

	**Supply air filter FRT (251-451)** for HomeVent® comfort FRT (251-451) Filter class ISO 16890: $ePM_{1.0}$ 55 % (F7)	5043 550
	**Activated carbon filter FRT (251-451)** for HomeVent® comfort FRT (251-451) Protection against pollutants and odours Alternative to supply air filter FRT (251-451) Filter class ISO 16890: $ePM_{2.5}$ 50 %	5043 778
	**Extract air filter FRT (251-451)** for HomeVent® comfort FRT (251-451), Filter class ISO 16890: ePM_{10} 60 % (G4)	5043 611

HomeVent® comfort FR ventilation unit (251-451)

Type		(251)	(351)	(451)
• Max. flow rate (at 100 Pa external pressure)	m^3/h	250	350	450
• Air flow rate control range	m^3/h	50-250	60-350	70-450
• Humidity setpoint setting	%		30…65	
Electrical connection				
• Voltage (AC)	V		230	
• Frequency	Hz		50	
• Max. current consumption	A	0.76	1.04	1.23
• Type of protection			IP 40	
• Power consumption (at 70 % of the max. flow rate, 50 Pa external pressure)	W	36	61	97
• Degree of heat processing (as per DIN 4719)	%		90-130	
• Temperature ratio (at 70 % of the max. flow rate)	%	85	84	82
• Humidity ratio (at 70 % of the max. flow rate)	%	90	84	81
• Specific fan power SFP (at 70 % of the max. flow rate)	$W/m^3/h$	0.21	0.25	0.31
Filter class (as per ISO-16890)				
• Supply air filter			$ePM_{1.0}$ 55 %	
• Extract air filter			ePM_{10} 60 %	
• Sound power level			see table on following page	
Leakage (as per EN 13141-7)				
• Internal	%		< 1	
• External	%	1.4	1.0	0.8
• Net weight	kg		39	
Application limits for device setup, weather-protected (EN 60721-3-3), 3K5 as per EN 50090-2-2				
• Ambient temperature	°C		-20...45	
• Ambient humidity	g/kg		max. 15	
• Dew point temp. in installation room Air conditions (moderate outdoor climate EN 60721-2-1)	°C		< 15	
• Outside air intake temperature	°C		-20...40	
• Outside air intake humidity	% r.h.		5…95	
• Extract air temperature	°C		18…35	
• Extract air humidity	% r.h.		5...80	
• Max. extract air humidity winter	g/kg		12	

Sound power levels for HomeVent® comfort FRT (251)

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	41	44	39	33	26	11	10	40
250	100	47	51	45	40	34	21	12	47

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	30	39	41	32	28	16	8	40
250	100	35	47	47	39	36	25	18	47

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	42	44	40	33	25	14	4	40
250	100	44	51	46	39	32	23	14	47

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	44	36	34	26	20	8	0	34
250	100	35	43	39	34	27	17	7	40

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	43	49	47	45	39	26	16	49
250	100	49	52	53	51	46	35	27	55

Sound power: HomeVent® comfort FRT (251) + acoustic insulating box FRT

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	42	43	36	27	23	17	15	37
250	100	46	47	41	35	30	16	9	43

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	30	31	26	17	15	14	15	27
250	100	34	36	32	23	20	6	0	33

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	30	29	22	10	4	0	0	24
250	100	31	34	27	16	11	0	0	26

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	28	30	21	11	4	0	0	24
250	100	31	36	26	17	10	0	0	30

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
175	50	44	33	26	21	21	19	20	30
250	100	41	36	33	29	29	22	21	36

For external pressure drop, the sound insulation box is not taken into account.

Sound power levels for HomeVent® comfort FRT (351)

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	42	49	44	35	31	16	10	44
350	100	49	56	54	45	40	28	17	54

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	31	45	46	37	34	23	15	45
350	100	40	53	55	44	42	32	25	53

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	42	56	44	37	31	21	11	49
350	100	55	56	57	44	39	30	23	55

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	35	46	37	32	25	15	6	40
350	100	45	48	45	39	33	24	15	46

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	44	50	51	49	44	33	24	53
350	100	56	64	60	56	52	43	35	62

Sound power: HomeVent® comfort FRT (351) + acoustic insulating box FRT

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	43	45	39	32	28	12	12	41
350	100	49	51	49	39	36	23	13	48

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	31	34	30	21	18	3	0	30
350	100	34	42	38	28	26	12	5	38

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	30	33	25	14	9	0	0	27
350	100	33	36	35	21	17	4	0	33 *

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	29	32	23	16	14	16	21	27
350	100	34	39	38	23	16	5	0	36 *

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
245	50	38	34	30	25	25	14	7	32
350	100	49	42	39	33	32	27	17	41

* Additional sound insulation measures are necessary for noise-sensitive rooms.

For external pressure drop, the sound insulation box is not taken into account.

Sound power levels for HomeVent® comfort FRT (451)

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	45	55	47	40	35	22	11	50
450	100	53	53	60	48	43	31	18	57

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	35	53	49	41	39	29	22	50
450	100	44	49	58	49	46	38	32	57

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	50	56	48	41	37	28	20	52 *
450	100	62	56	60	50	44	37	30	57 *

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	41	47	41	35	30	21	10	43 *
450	100	49	47	48	44	37	29	20	48 *

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	49	58	55	53	49	39	30	58
450	100	59	57	75	61	56	48	42	71

* Additional sound insulation measures are necessary for noise-sensitive rooms.

Sound power: HomeVent® comfortFRT (451) + acoustic insulating box FRT

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
SUP/EXT [m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	46	52	43	37	33	19	8	47
450	100	53	51	56	44	40	28	9	53

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	34	42	33	25	23	9	2	37
450	100	39	38	48	32	29	20	15	44

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	33	39	28	17	13	11	16	33 *
450	100	48	37	41	26	23	12	5	38 *

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	32	40	27	19	13	1	0	34 *
450	100	39	37	42	28	22	17	16	39 *

Exhaust air

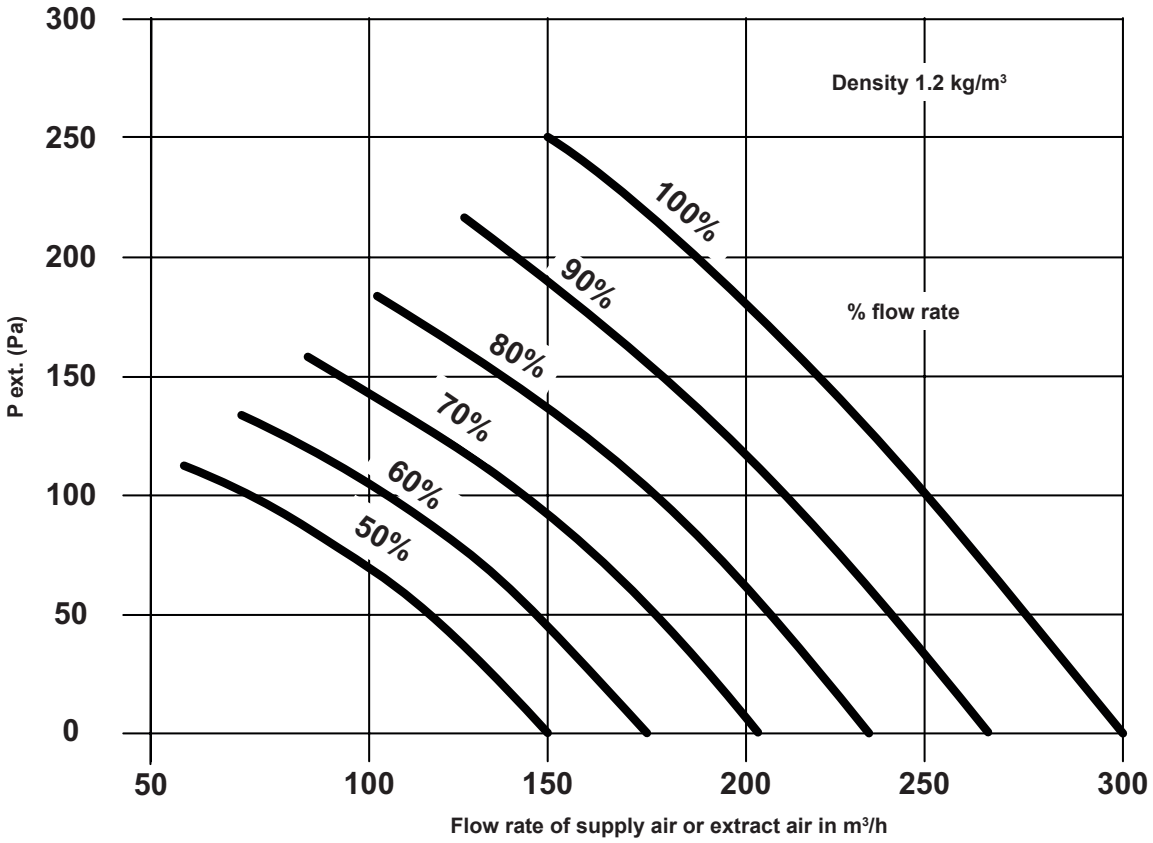
Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1 k	2 k	4 k	8 k	63 Hz ... 8 kHz [dB(A)]
315	50	51	43	35	51	30	21	17	40
450	100	58	46	49	38	38	29	25	48

* Additional sound insulation measures are necessary for noise-sensitive rooms.

For external pressure drop, the sound insulation box is not taken into account.

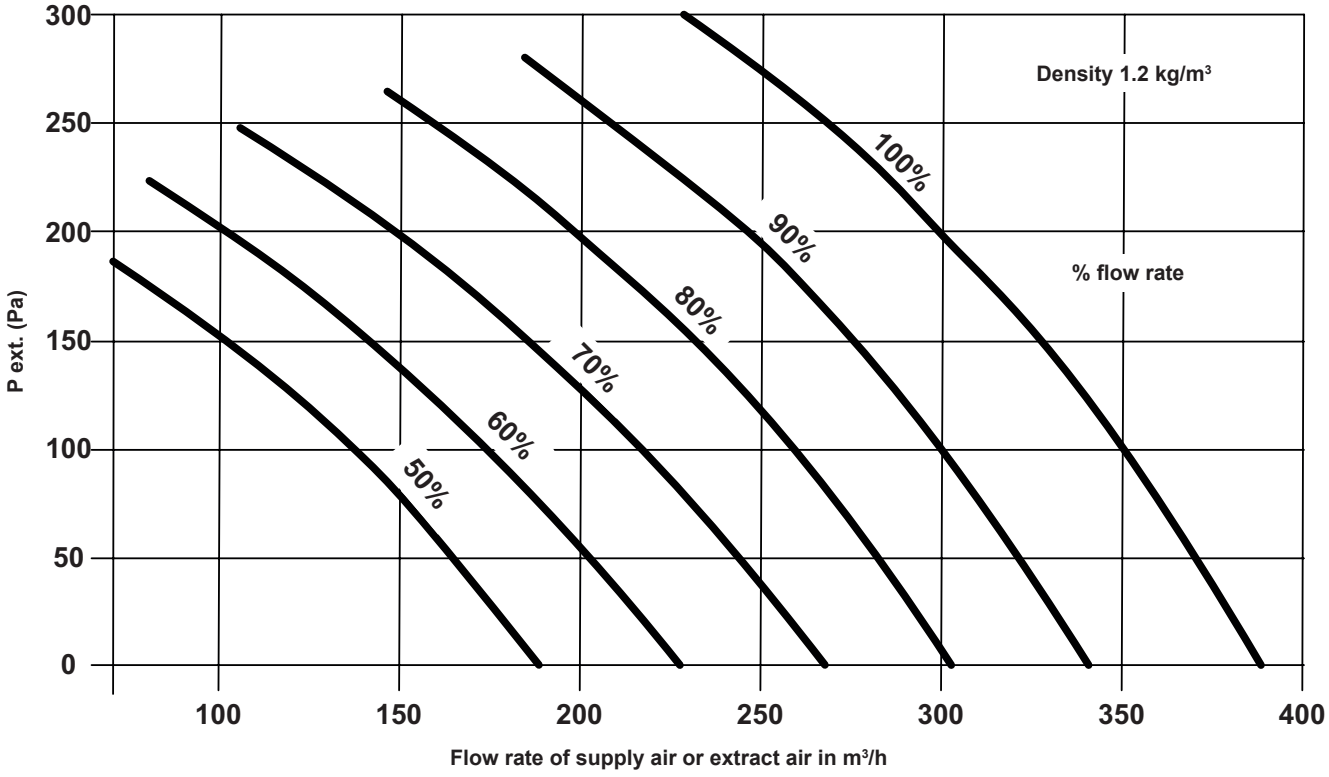
Performance chart for air flow rate, HomeVent® comfort FRT (251)

p_{ext} Sum of external pressure drops



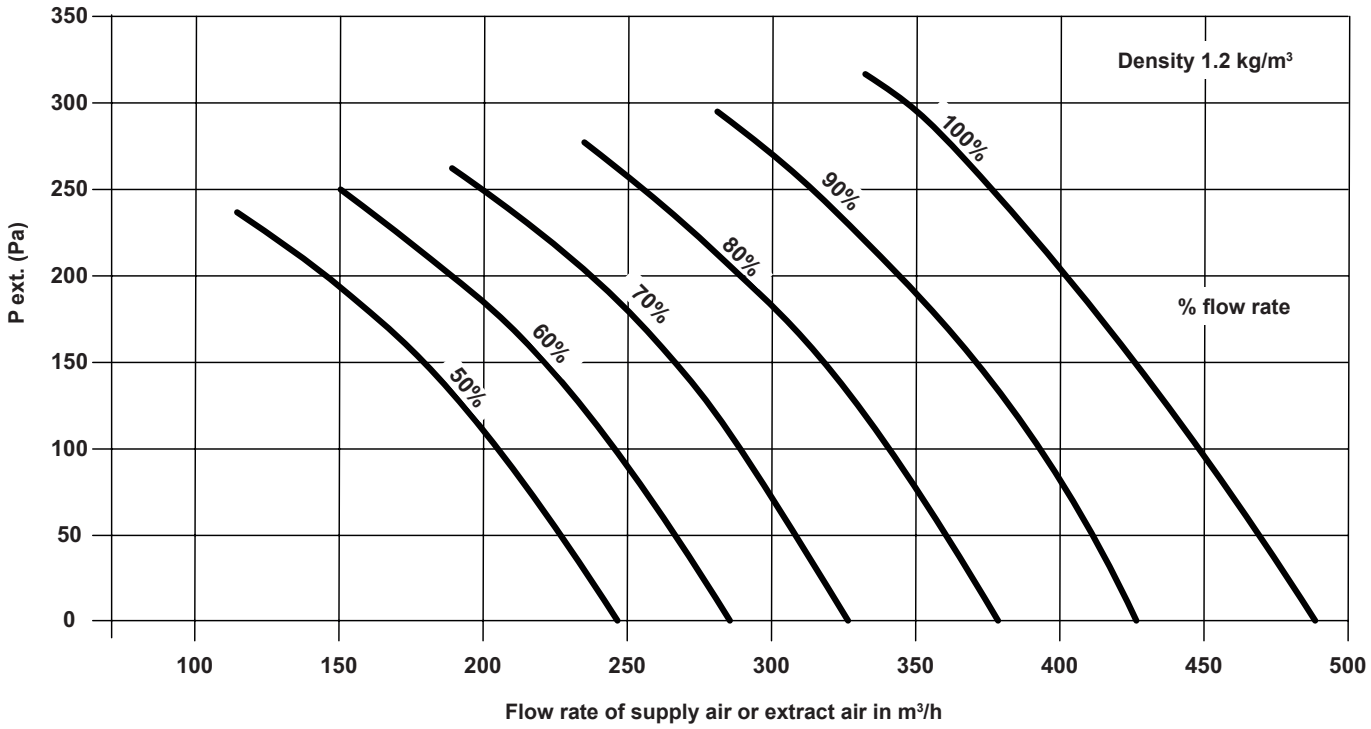
Performance chart for air flow rate, HomeVent® comfort FRT (351)

p_{ext} Sum of external pressure drops

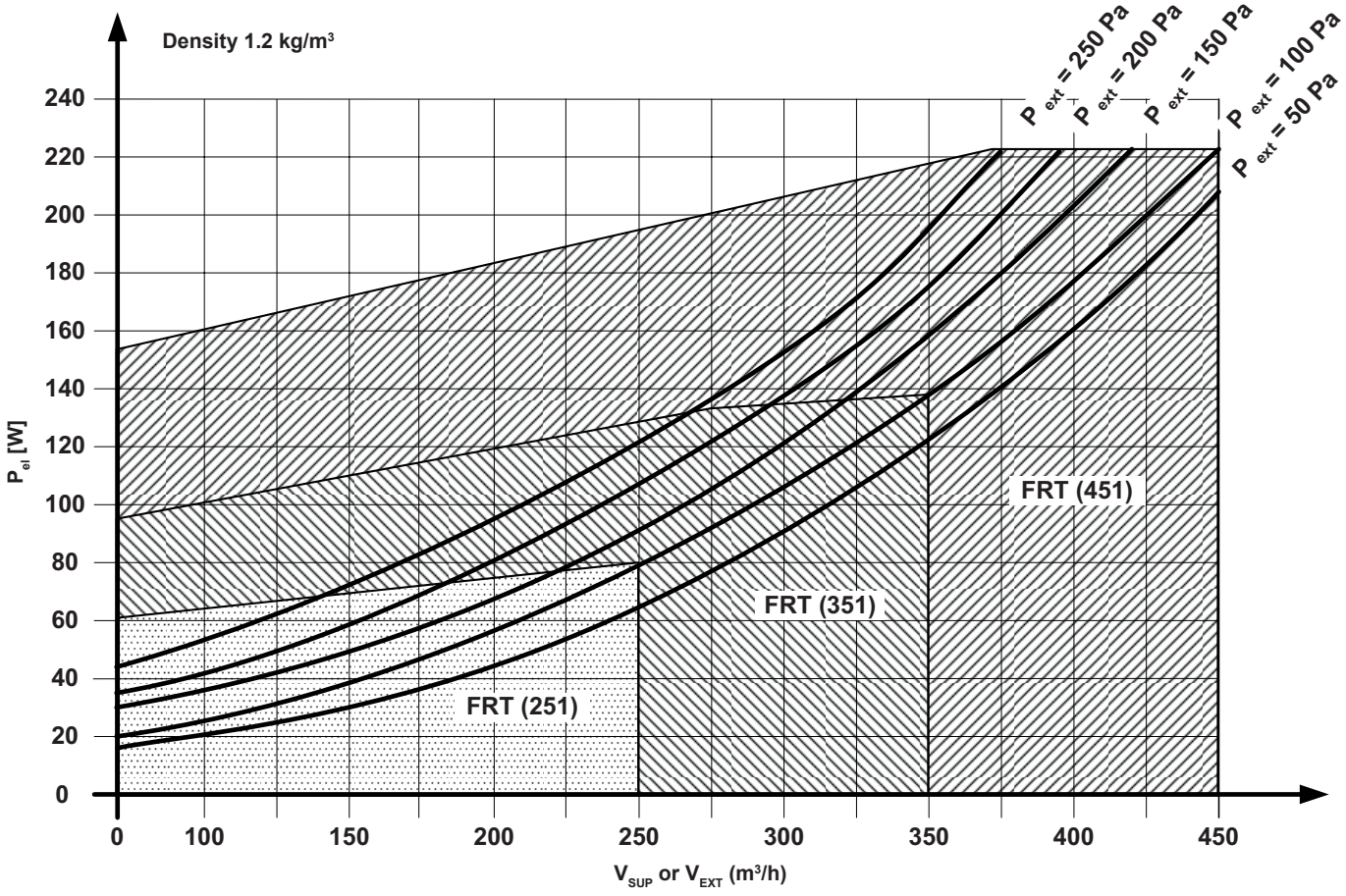


Performance chart for air flow rate, HomeVent® comfort FRT (451)

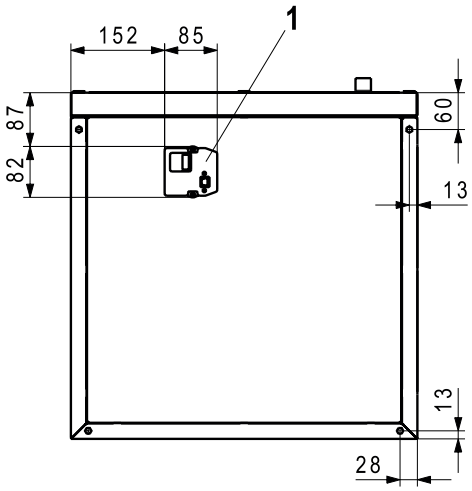
p_{ext} Sum of external pressure drops



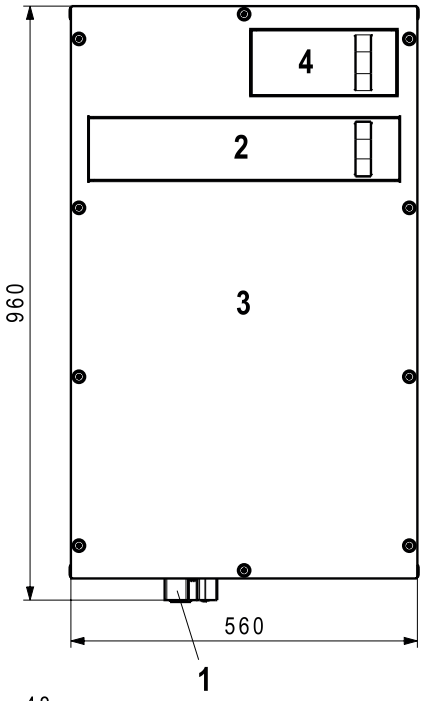
Electrical power consumption HomeVent® comfort FRT (251-451)

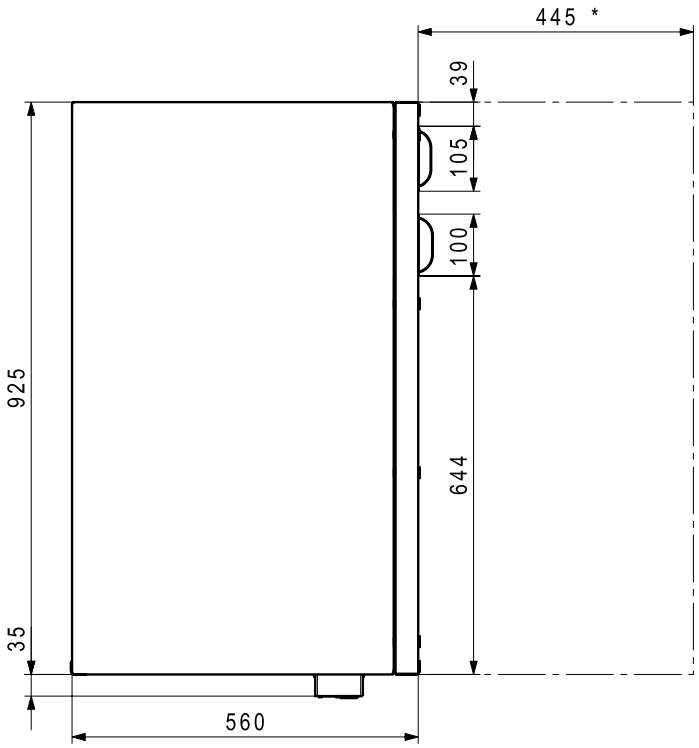


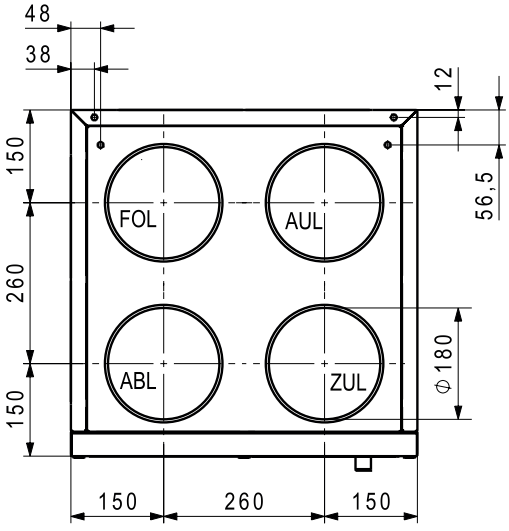
HomeVent® comfort ventilation unit



ZUL = supply air
ABL = extract air
FOL = exhaust air
AUL = fresh air



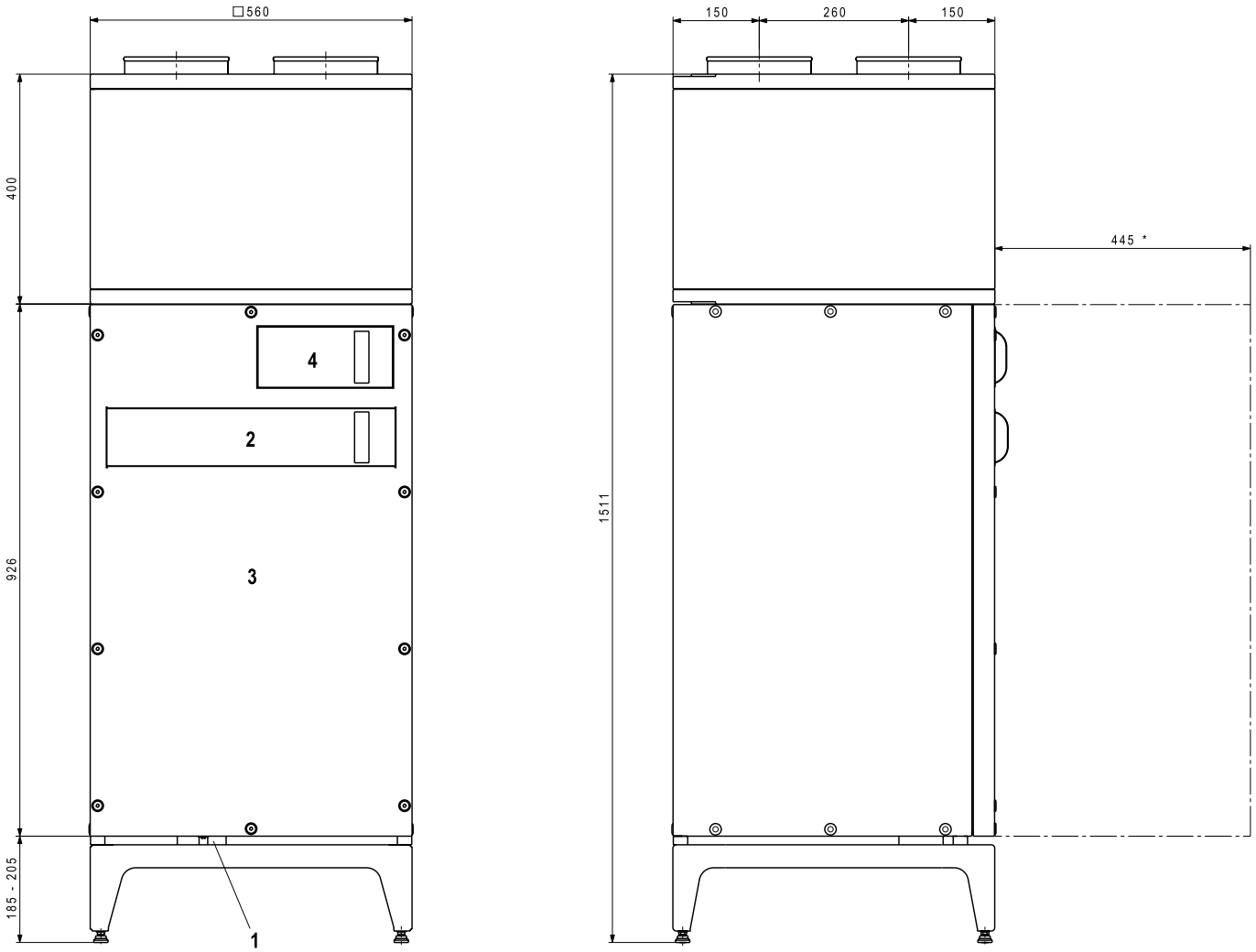


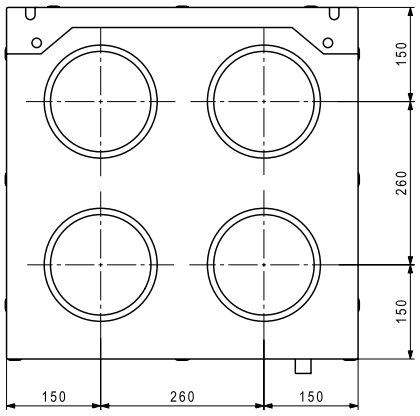


1 Electrical connection with microfuse
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space requirements for filter change and service tasks

HomeVent® comfort ventilation unit with acoustic insulating box and base





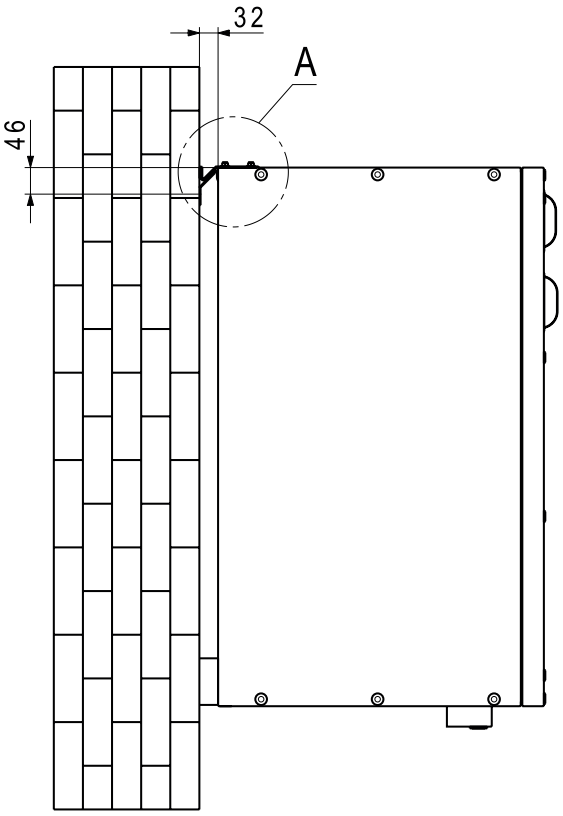
1 Electrical connection with microfuse
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space requirements for filter change and service tasks

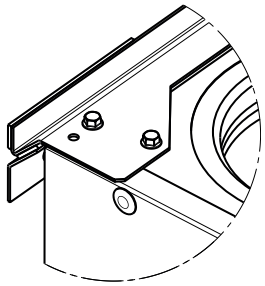
Space requirements

HomeVent® comfort ventilation unit

Installation with installation set



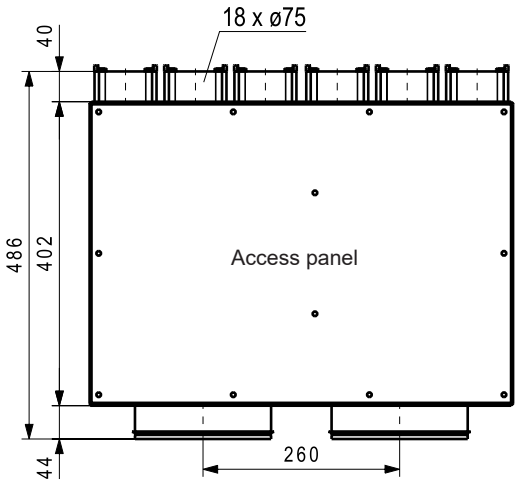
Detail A

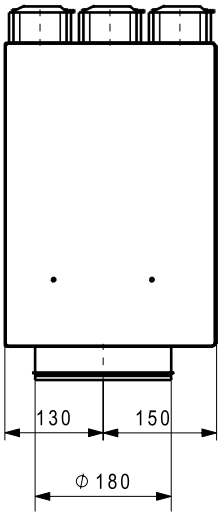


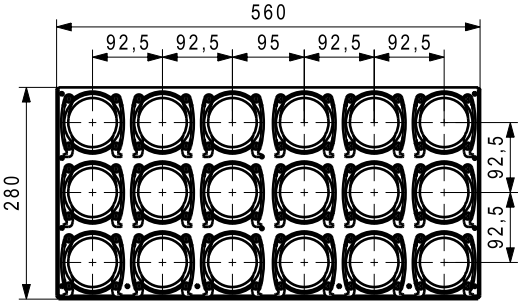
Distribution cases DN 180

Distribution box VTB-180 18 x 75

for HomeVent® comfort FRT (251).
Casing made from aluzinc sheet with sound insulation element supply air and extract air side, access panel incl. throttle orifices.
Additional silencer recommended.
Connection nozzles:
2 x DN 180
SUP 9 x 75, EXT 9 x 75
Included accessories:
end covers and throttle orifices

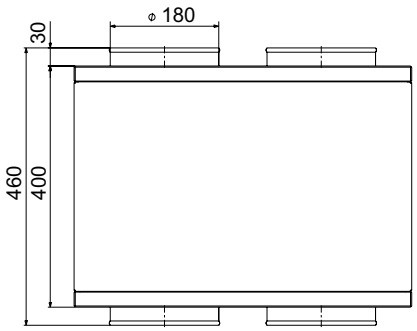


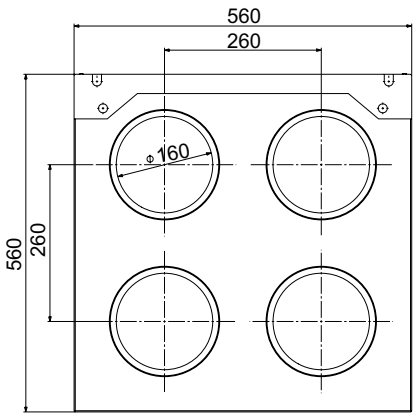




Acoustic insulating box FRT

Red casing made of film-coated sheet steel.
All 4 air ducts are sound-insulated.
Connection nozzles:
4 x DN 160





Pressure drop at 100 % air flow rate: FRT (251) 100 %	
Silencer, straight	
ZUL [Δp Pa]	1
AUL [Δp Pa]	0
FOL [Δp Pa]	0
ABL [Δp Pa]	1

FRT (251) 100 %	
Silencer, on the left/right	
ZUL [Δp Pa]	14
AUL [Δp Pa]	8
FOL [Δp Pa]	11
ABL [Δp Pa]	10

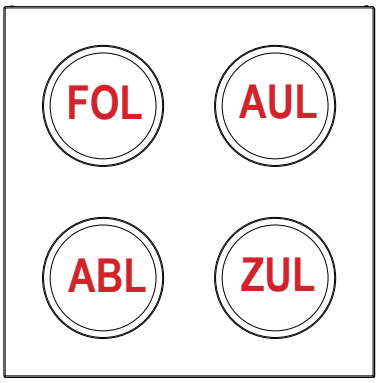
FRT (351) 100 %	
Silencer, straight	
ZUL [Δp Pa]	7
AUL [Δp Pa]	1
FOL [Δp Pa]	2
ABL [Δp Pa]	6

FRT (351) 100 %	
Silencer, on the left/right	
ZUL [Δp Pa]	27
AUL [Δp Pa]	26
FOL [Δp Pa]	21
ABL [Δp Pa]	23

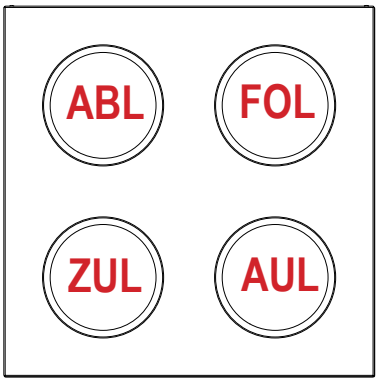
FRT (451) 100 %	
Silencer, straight	
ZUL [Δp Pa]	19
AUL [Δp Pa]	4
FOL [Δp Pa]	10
ABL [Δp Pa]	19

FRT (451) 100 %	
Silencer, on the left/right	
ZUL [Δp Pa]	41
AUL [Δp Pa]	35
FOL [Δp Pa]	31
ABL [Δp Pa]	37

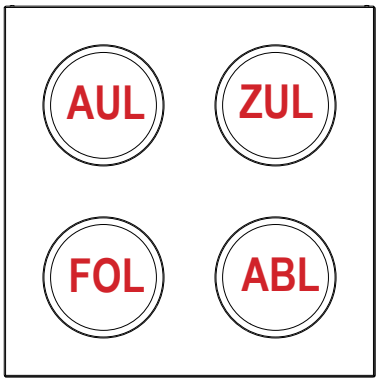
Acoustic insulating box FRT straight



Acoustic insulating box FRT left



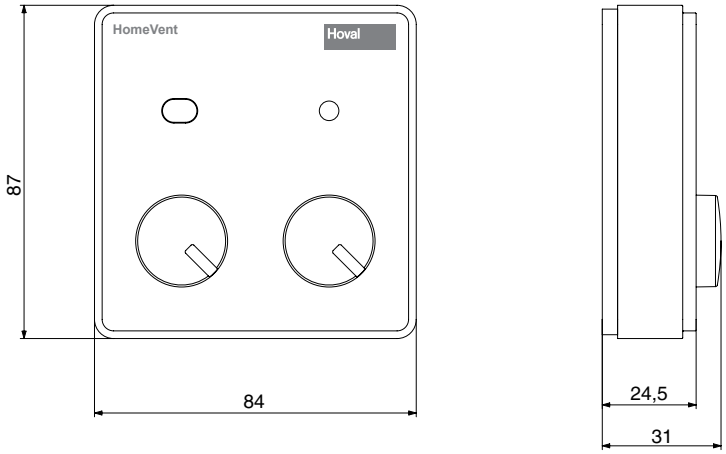
Acoustic insulating box FRT right



FOL = Exhaust air
AUL = Fresh air
ABL = Extract air
ZUL = Supply air

Dimensions

HomeVent® standard operator terminal BG02 E on-wall



Operator terminals BG02 E

Connection for RJ 45 plug
CAT5 patch (8-pin) connection cable
(parallel, not crossed)

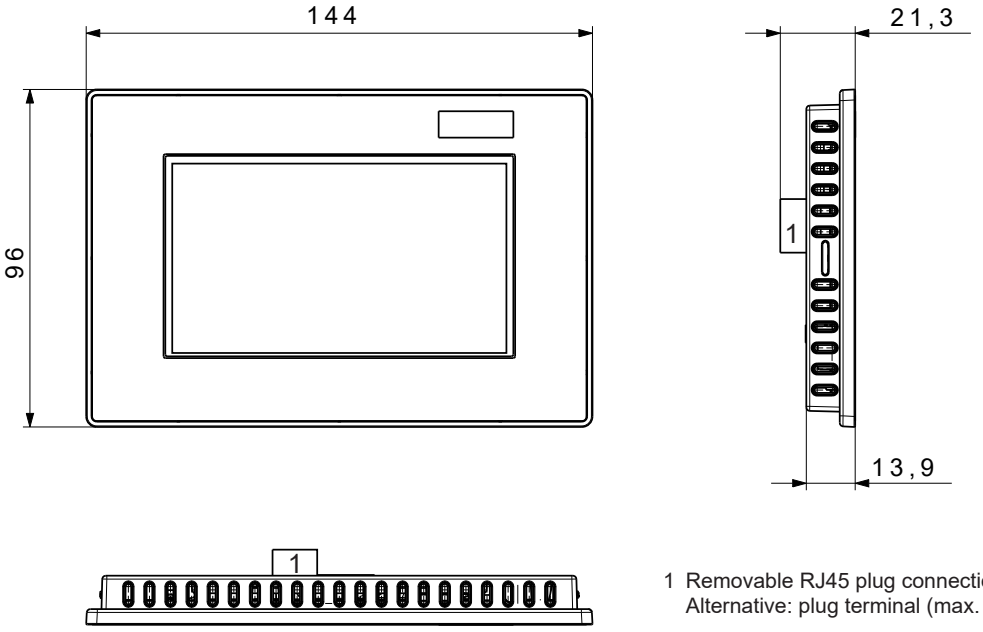
Electrical connection	
• Voltage (DC)	24 V
Type of protection	IP 20
Application limits	
3K3 as per EN 50090-2-2, residential rooms, office	
• Temperature range	15…40 °C
• Humidity range	5…85 % r.h.

TopTronic® E
Room control module comfort plus

- Colour touchscreen 4.3 inch
- Resolution: 480 x 320
- Connection to the Hoval bus system via RJ45 plug connection or plug terminals (max. 0.75 mm²)
- Voltage: 12 V DC 100 mA
- Humidity (in operation): 20...80 %, non-condensing

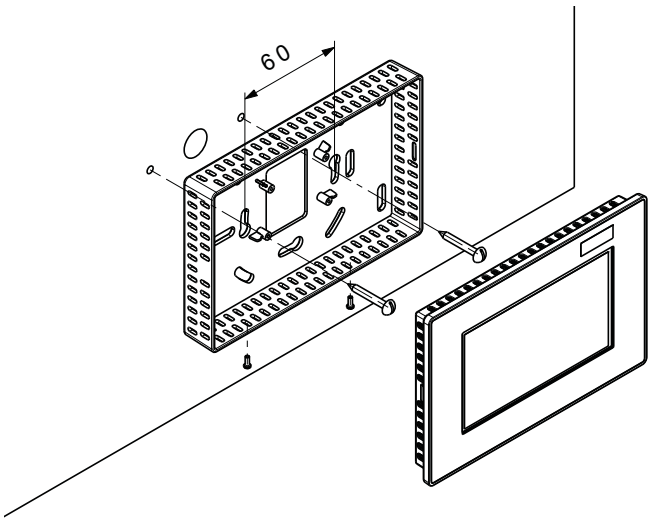
Dimensions

(Dimensions in mm)

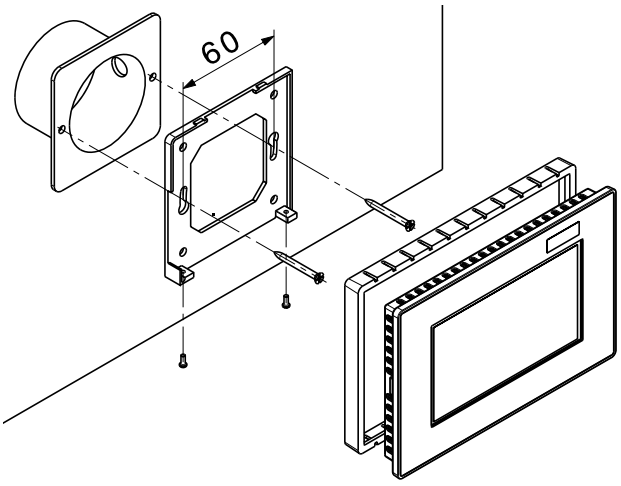


1 Removable RJ45 plug connection
Alternative: plug terminal (max. 0.75 mm²)

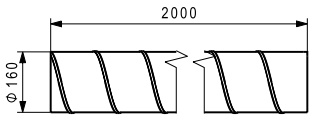
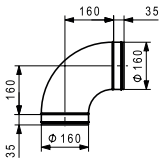
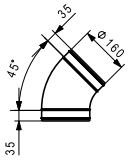
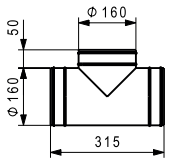
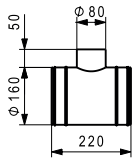
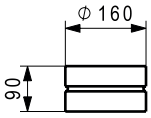
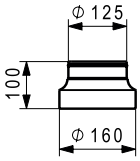
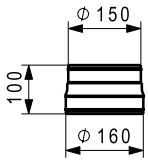
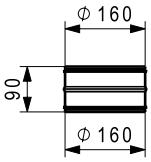
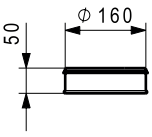
Wall mounting with surface-mounting frame
(On-wall mounted frame is included in the scope of delivery)

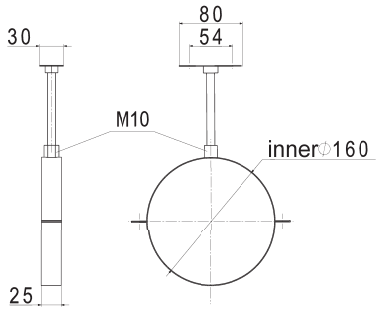


Wall mounting with wall mounting plate
with concealed sockets
(Wall-mounting plate is included in the scope of delivery)



Pipe system DN 160 of sheet steel

		Part No.
	**Spiral-seam tube WFR-160** of galvanised sheet steel DN 160, length: 2 m	2074 487
	**Pipe bend BU-160-90** 90° bend of galvanised sheet steel with double lip seal DN 160	2074 488
	**Pipe bend BU-160-45** 45° bend of galvanised sheet steel with double lip seal DN 160	2074 489
	**T-piece TCPU-160-160** of galvanised sheet steel with double lip seal DN 160/DN 160/DN 160	2074 490
	**T-piece TCPU-160-80** of galvanised sheet steel with double lip seal DN 160/DN 80/DN 160	2074 491
	**Sleeve MF-160** of galvanised sheet steel DN 160	2074 492
	**Reduction/extension RCFU-160-125** of galvanised sheet steel with double lip seal DN 160 sleeve/DN 125 nipple	2074 493
	**Reduction/extension RCU-160-150** of galvanised sheet steel with double lip seal DN 160 nipple/DN 150 nipple	2024 260
	**Nipple NPU-160** of galvanised sheet steel with double lip seal DN 160	2074 504
	**End cover ED-160** of galvanised sheet steel with double lip seal DN 160	2074 505

		Part No.
	**Pipe clamp ROS-160** of galvanised steel 2-section pipe clamp with insulation insert, threaded rod 0.2 m and ground plate. DN 160	6050 007

Thermal insulation DN 160

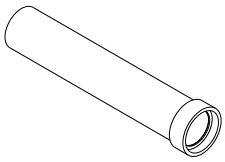
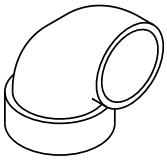
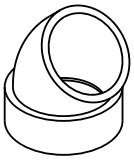
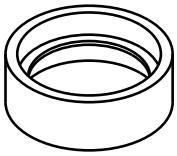
	**Thermal insulation tube IS 160-25** for spiral-seam tube WFR 160 made of steam-tight EPDM 3 tubes of 2 m each Insulation thickness: 25 mm	2074 507
	**Thermal insulation IB 160-45** for pipe bend BU 160-45 made of steam-tight EPDM Insulation thickness: 25 mm	2023 561
	**Thermal insulation IB 160-90** for pipe bend BU 160-90 made of steam-tight EPDM Insulation thickness: 25 mm	2023 560

Caution
Comply with the regional regulations with regard to thermal insulation.

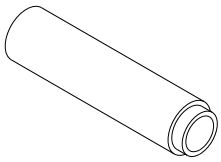
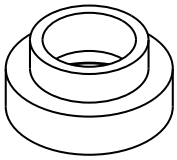
Accessories DN 160

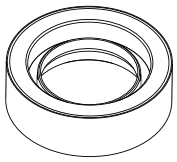
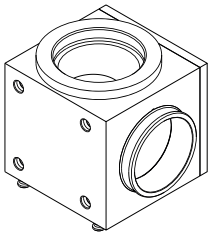
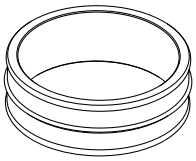
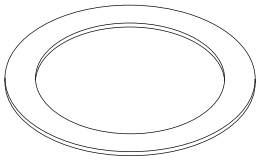
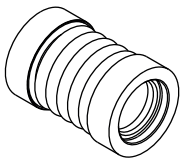
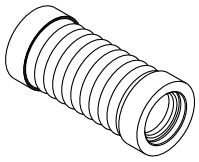
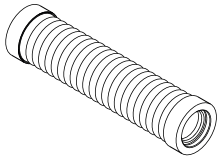
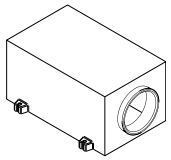
	**Adhesive IK** for thermal insulation ready-to-use adhesive with brush 0.25 litre can	2023 562
	**Adhesive tape IKB** for thermal insulation made of EPDM Thickness: 3 mm, width: 50 mm, roll: 15 m	2023 563

Pipe system DN 160 IsiPipe made of EPP

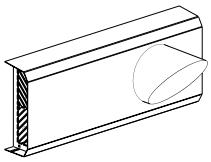
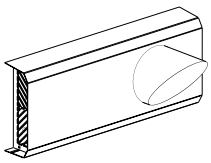
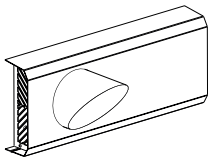
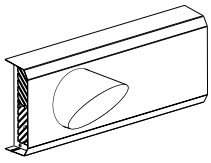
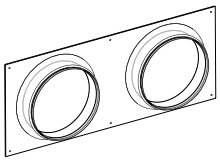
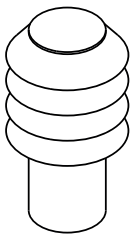
		Part No.
	**IsiPipe piping EPP-160-1000** Thermally insulated pipe Material: EPP, wall thickness 15 mm Inner Ø 160 mm, length: 1000 mm	2075 571
	**IsiPipe pipe bend EPP-160-90°** Thermally insulated pipe bend 90° Material: EPP, wall thickness 15 mm Inner Ø 160 mm	2075 572
	**IsiPipe pipe bend EPP-160-45°** Thermally insulated pipe bend 45° Material: EPP, wall thickness 15 mm Inner Ø 160 mm	2075 573
	**IsiPipe sleeve EPP-160** Thermally insulated sleeve Material: EPP, wall thickness 15 mm length: 80 mm Inner Ø 160 mm	2075 594
	**IsiPipe Pipe clamp ROS-X** of galvanised steel semicircular pipe clamp, cable tie and hanger bolt M8 60 mm including anchor	2045 744

Pipe system DN 160 IsiPipe made of EPP

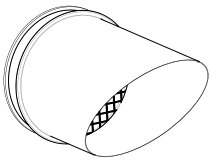
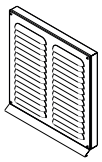
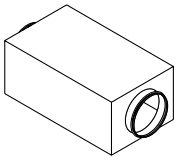
		Part No.
	**IsiPipe Plus pipeline EPP-160-1000** Thermally insulated pipe Material: EPP, wall thickness 43 mm Inner Ø 160 mm, outer Ø 246 mm Length: 1000 mm incl. sleeve (60 mm)	2065 110
	**IsiPipe Plus pipe bend EPP-160-45°** Thermally insulated pipe bend 45° Material: EPP, wall thickness 43 mm Inner Ø 160 mm, outer Ø 246 mm	2065 112
	**IsiPipe Plus sleeve EPP-160** Thermally insulated sleeve Material: EPP, wall thickness 43 mm length: 80 mm Inner Ø 160 mm, outer Ø 286 mm	2065 124
	**IsiPipe Plus ecc. adapter EPP-160-160** Thermally insulated ecc. adapter Material: EPP, eccentrical 38 mm length: 250 mm Inner Ø 160 mm on IsiPipe Plus 160	2065 127
	**IsiPipe plus Pipe clamp ROS 160-200** Semi-circular pipe clip from galvanized steel including cable tie. Hanger bolt 60 mm including anchor	2069 624

		Part No.
	**IsiPipe plus device adapter 160** Thermally insulated connection of the pipes - IsiPipe 160 - IsiPipe Plus 160 to sound insulation boxes FRT 2 pieces	6052 925
	**IsiCube** Thermally insulated air guide DN 160 + base Material EPP, for outdoor applications Air guide either 90° or straight Including IsiFit and 4 feet Including 4 pins and compensating plate suitable for IsiPipe device adapter 160 Can be combined with themselves 2 pieces are required as base	6054 685
	**IsiFit** Nipple/nipple made of EPP Inner Ø 160 mm, outer Ø 180 mm Suitable for ER (200-400) and FRT (251-451), IsiCube, IsiPipe device adapter 160, IsiFlex	6054 723
	**IsiSeal** for a secure and tight connection when using IsiPipe Plus device adapter 160 (2 pieces in package)	6057 485
	**IsiFlex 0.3 m** Suitable for IsiSystem 160 Acoustically and thermally insulated, flexible connector, material EPP, rockwool, PVC film Length: 0.2-0.3 m	6055 896
	**IsiFlex 0.5 m** suitable for IsiSystem 160 Acoustically and thermally insulated, flexible connector, material EPP and rockwool Length: 0.25-0.5 m	6055 894
	**IsiFlex 1.0 m** suitable for IsiSystem 160 Acoustically and thermally insulated, flexible connector, material EPP and rockwool Length: 0.4-1.0 m	6055 877
	**IsiSound** Suitable for IsiSystem 160 Thermally insulated silencer insensitive to moisture, material EPP	6056 360

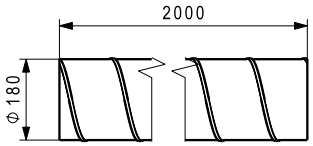
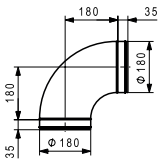
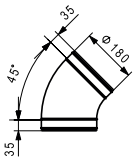
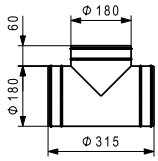
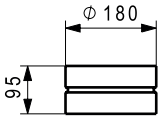
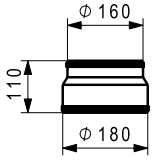
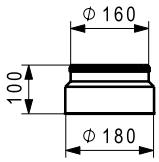
Accessories DN 160

		Part No.
	**Wall outlet Ø 160 exhaust air on right** made of galvanised sheet metal	6052 505
	**Wall outlet white Ø 160 exhaust air on right** made of galvanised sheet metal white coated (RAL 9016)	6052 504
	**Wall outlet Ø 160 exhaust air on left** made of galvanised sheet metal	6052 507
	**Wall outlet white Ø 160 exhaust air on left** made of galvanised sheet metal white coated (RAL 9016)	6052 506
	**Plywood for wall outlet Ø 160** suitable for wall passage, for Ø 160	6052 517
	**Stainless steel cowl AAS-150** for spiral-seam tube DN 150, galvanic isolation of the connection for outside and exhaust air of stainless steel, lamella cowl, 1 pipe DN 150, length = 0.5 m, 2 pipes DN 150, length = 1 m and 2 wall mountings	6010 185
	**Stainless steel segment pipe bend CRB-150-90** for spiral-seam tube DN 150, galvanic isolation of the connection 90° bend of stainless steel DN 150	2040 722
	**Cold-shrink tape** for sealing air ducts, heat and cold resistant width: 50 mm, roll: 15 m	2021 796
	**Ventilation silicone** for sealing air ducts, heat and cold resistant odourless	3000 009

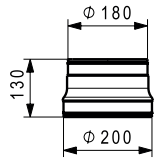
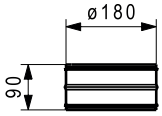
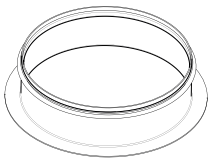
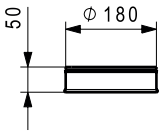
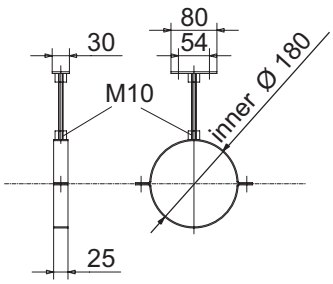
Accessories DN 160

		Part No.
	**Exhaust air nozzle FST-160** for spiral-seam tube DN 160 of galvanised sheet steel with bird protection grille and double lip seal for horizontal installation	2070 412
	**Weatherproof grille WG-160** for spiral-seam tube DN 160 for outside and exhaust air of aluminium with rain lug, can be painted with double lip seal, pipe nozzle DN 160	2074 510
	**Sound absorber SD-160-500** for spiral-seam tube DN 160 rectangular casing of galvanised sheet steel, with double lip seal DN 160, dimensions: 290 x 215 mm, Length: 0.5 m	2074 514
	**Shut-off damper DTU-160** for spiral-seam tube DN 160 sealed shut-off damper for manual operation of galvanised steel sheet DN 160	2074 513

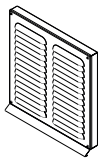
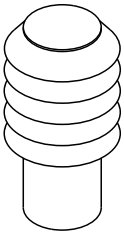
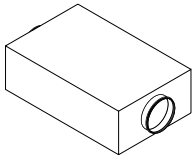
Pipe system DN 180

		Part No.
	**Spiral-seam tube WFR-180** of galvanised sheet steel DN 180, length: 2 m	2057 030
	**Pipe bend BU-180-90** 90° bend of galvanised sheet steel with double lip seal DN 180	2057 047
	**Pipe bend BU-180-45** 45° bend of galvanised sheet steel with double lip seal DN 180	2057 048
	**T-piece TCPU-180-180-180** of galvanised sheet steel with double lip seal DN 180/DN 180/DN 180	2057 049
	**Sleeve MF-180** of galvanised sheet steel DN 180	2057 051
	**Reduction/extension RCU-180-160** made of galvanised sheet steel with double lip seal DN 180 nipple/DN 160 nipple	2070 976
	**Reduction/extension RCFU-180-160** made of galvanised sheet steel with double lip seal DN 180 sleeve/DN 160 nipple	2070 975

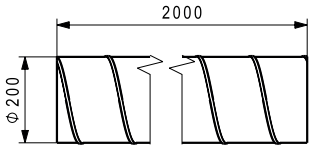
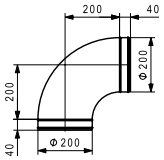
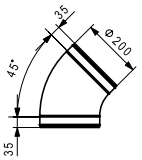
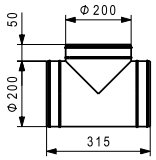
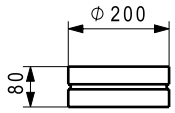
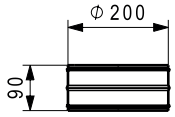
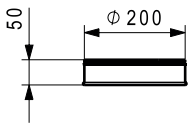
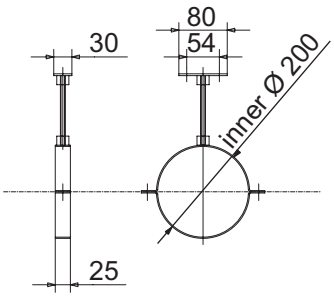
Pipe system DN 180

		Part No.
	**Reduction/extension RCU-200-180** of galvanised sheet steel with double lip seal DN 200 nipple/DN 180 nipple	2057 053
	**Nipple NPU-180** of galvanised sheet steel with double lip seal DN 180	2057 064
	**Spigot ILX Ø 180 x 40 mm** with double lip seal	2070 895
	**End cover ED-180** of galvanised sheet steel with double lip seal DN 180	2057 065
	**Pipe clamp ROS-180** of galvanised sheet steel 2-section pipe clamp with insulation insert, threaded rod 0.2 m and ground plate. DN 180	6034 767

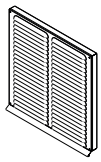
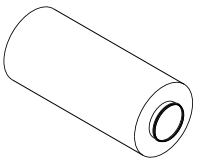
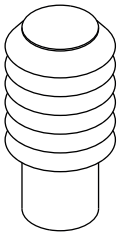
Accessories DN 180

		Part No.
	**Weatherproof grille WG-180** for spiral-seam tube DN 180 for outside and exhaust air of aluminium with rain lug, can be painted, with double lip seal	2057 068
	**Fresh air suction set AAS-180** for spiral-seam tube DN 180 galvanic isolation of the connection for outside and exhaust air of stainless steel, lamella cowl, 1 tube DN 180, length: 0.5 m, 2 tubes DN 180, length: 1 m and 2 wall fastenings	6034 766
	**Stainless steel pipe bend CRB-180-90** for spiral-seam tube DN 180, galvanic isolation of the connection 90° bend of stainless steel	2057 066
	**Exhaust air nozzle FST-180** for spiral-seam tube DN 180 of galvanised sheet steel with bird protection grille for horizontal installation	2057 069
	**Silencer FSR-180-750** **for spiral-seam tube DN 180** rectangular casing made of galvanised sheet steel, with double lip seal, DN 180, Dimensions: 480 x 250 mm, length: 0.75 m	2057 874
	**Silencer FLSDA-180-1000** **for spiral-seam tube DN 180** Silencer outside manufactured from flexible aluminium envelope tube, inside from perforated aluminium tube, with double lip seal, DN 180, packing thickness 50 mm, length: 1 m	2057 875

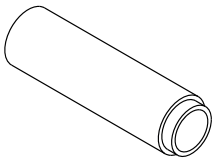
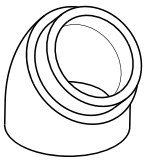
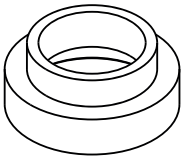
Pipe system DN 200

		Part No.
	**Spiral-seam tube WFR-200** of galvanised sheet steel DN 200, length: 2 m	2045 707
	**Pipe bend BU-200-90** 90° bend of galvanised sheet steel with double lip seal DN 200	2040 734
	**Pipe bend BU-200-45** 45° bend of galvanised sheet steel with double lip seal DN 200	2040 735
	**T-piece TCPU-200-200** of galvanised sheet steel with double lip seal DN 200/DN 200/DN 200	2040 736
	**Sleeve MF-200** of galvanised sheet steel DN 200	2040 737
	**Nipple NPU-200** of galvanised sheet steel with double lip seal DN 200	2040 739
	**End cover ED-200** of galvanised sheet steel with double lip seal DN 200	2040 740
	**Pipe clamp ROS-200** of galvanised steel 2-section pipe clamp with insulation insert, threaded rod 0.2 m and ground plate. DN 200	6025 970

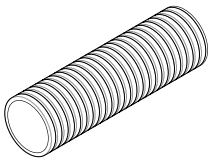
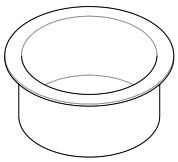
Accessories DN 200

		Part No.
	**Weatherproof grille WG-200** for spiral-seam tube DN 200 for outside and exhaust air of aluminium with rain lug, can be painted with double lip seal	2040 742
	**Silencer SD-200-1000** for spiral-seam tube DN 200 round casing of galvanised sheet steel, with double lip seal, DN 200, outer diameter: 400 mm, length: 0.9 m	2040 743
	**Stainless steel cowl AAS-200** for spiral-seam tube DN 200, galvanic isolation of the connection for outside and exhaust air of stainless steel, lamella cowl, 1 pipe DN 200, length: 0.5 m, 2 pipes DN 200, length: 1 m and 2 wall mountings	6031 914
	**Stainless steel segment pipe bend CRB-200-90** for spiral-seam tube DN 200, galvanic isolation of the connection 90° bend of stainless steel	2054 221
	**Exhaust air nozzle FST-200** for spiral-seam tube DN 200 of galvanised sheet steel with bird protection grille for horizontal installation	2054 220

IsiPipe Plus Pipe system EPP DN 200

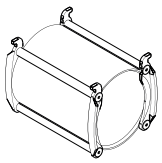
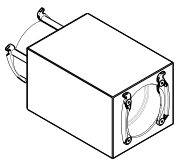
		Part No.
	**IsiPipe Plus pipeline EPP-200-1000** Thermally insulated pipe Material: EPP, wall thickness 43 mm Inner Ø 200 mm, outer Ø 286 mm Length: 1000 mm incl. sleeve (60 mm)	2065 111
	**IsiPipe Plus pipe bend EPP-200-45°** Thermally insulated pipe bend 45° Material: EPP, wall thickness 43 mm Inner Ø 200 mm, outer Ø 286 mm	2065 113
	**IsiPipe Plus sleeve EPP-200** Thermally insulated sleeve Material: EPP, wall thickness 43 mm length: 80 mm Inner Ø 200 mm, outer Ø 326 mm	2065 125
	**IsiPipe Plus ecc. adapter EPP-180-200** Thermally insulated ecc. adapter Material: EPP, eccentrical 48 mm, length: 250 mm Inner Ø 180 mm on IsiPipe Plus 200	2065 128
	**IsiPipe plus Pipe clamp ROS 160-200** Semi-circular pipe clip from galvanized steel including cable tie. Hanger bolt 60 mm including anchor	2069 624

Flex pipe system DN 75

		Part No.
	**Flexible pipe 75** of polyethylene PE-HD DN 75, inner Ø 62 mm, roller: 50 m smooth inner/ribbed outer surface, antistatic coating	2072 166
	Flexible pipe package 75 of polyethylene PE-HD DN 75, inner Ø 62 mm, 6 rolls of 50 m, smooth inner/ribbed outer surface, antistatic coating Flexible pipe packages are excluded from return.	6050 103
	**Sealing ring DI-75 black** for flexible pipe DN 75	2016 227
	**Stopper 75** For flexible pipe flex 75 Sealing plug	2072 168

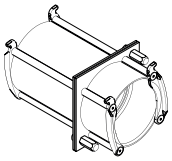
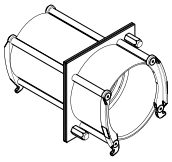
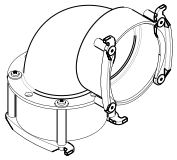
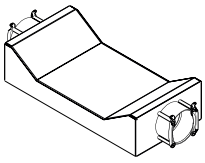
Accessories DN 75

Order the sealing rings for the accessories separately. For quick and simple installation, all accessories are equipped with snap-on clip for attachment of the flexible pipe.

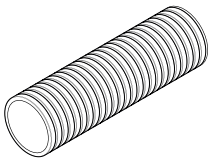
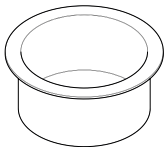
	**Double sleeve DM-75** for flexible pipe DN 75 for connecting flexible pipes DN 75	6022 896
	**Helmholtz silencer HSD-75** for flexible pipe DN 75 for acoustically sensitive rooms attenuates low frequencies (500 Hz) DN 75	6020 756

Accessories DN 75

Order the sealing rings for the accessories separately. For quick and simple installation, all accessories are equipped with snap-on clip for attachment of the flexible pipe.

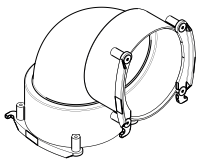
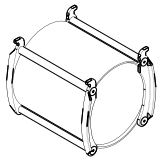
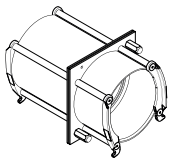
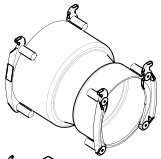
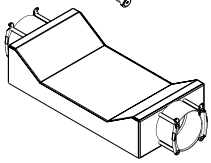
		Part No.
	**Formwork coupling SK-75** for flexible pipe DN 75 for extending a flexible pipe through the ceiling or the floor without damaging the boarding	6013 047
	**Formwork coupling SK-75/90** for flexible pipe DN 75 and 90 for extending a flexible pipe through the ceiling or the floor and extension from DN 75 to DN 90 without damaging the boarding.	6030 820
	**Pipe bend RB-75** for flexible pipe DN 75 for connecting flexible pipes at an angle of 90°	6022 967
	**Flexible pipe crossing FRK-75** for flexible pipe DN 75 for crossing two flexible pipes DN 75 with reduced construction height (100 mm). For one crossing 2 pieces are necessary.	6031 011
	**Cable tie: 4.8 x 302 mm** As additional protection of the snap clip of the accessories for flex pipe with increased load. 100 pcs./package Colour: natural	2057 027
	**Cable tie: 7.6 x 370 mm** For attaching flex pipes to the reinforcement. 100 pcs./package Colour: natural	2057 028
	**Cable tie: 9.0 x 610 mm** For attaching flex pipes to the reinforcement. 50 pcs./package Colour: natural	2057 029

Flex pipe system DN 90

		Part No.
	**Flexible pipe 90** of polyethylene PE-HD DN 90, inner Ø: 75 mm, roller: 50 m smooth inner/ribbed outer surface, antistatic coating	2072 167
	Flexible pipe package 90 of polyethylene PE-HD DN 90, inner Ø: 75 mm, 4 rolls of 50 m, smooth inner/ribbed outer surface, antistatic coating Flexible pipe packages are excluded from return.	6050 104
	**Sealing ring DI-90 black** for flexible pipe DN 90	5031 311
	**Stopper 90** For flexible pipe flex 90 Sealing plug	2072 169

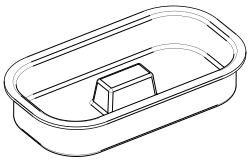
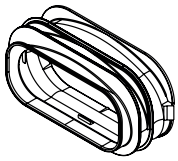
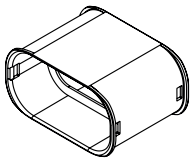
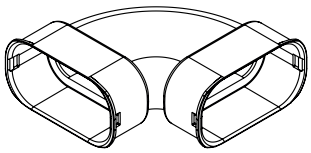
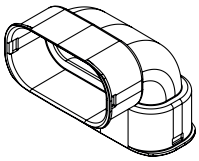
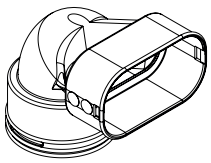
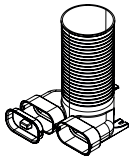
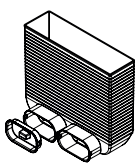
Accessories DN 90

Order the sealing rings for the accessories separately. For quick and simple installation, all accessories are equipped with snap-on clip for attachment of the flexible pipe.

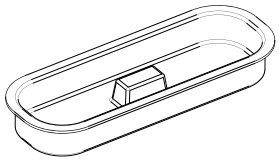
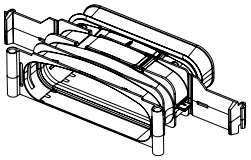
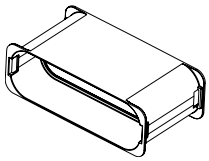
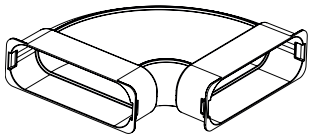
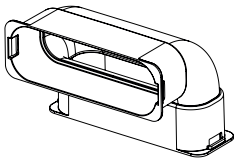
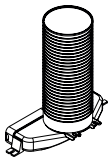
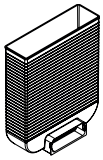
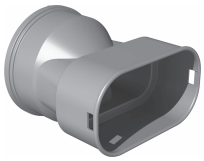
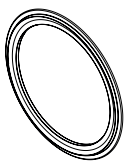
	**Pipe elbow RB-90/90°** for flexible pipe DN 90 for connecting flexible pipes at an angle of 90°	6043 275
	**Double sleeve DM-90** for flexible pipe DN 90 for connecting flexible pipes	6022 494
	**Formwork coupling SK-90** for flexible pipe DN 90 for extending a flexible pipe through the ceiling or the floor without damaging the boarding	6022 495
	**Reduction/extension RCFU-90-75** for connecting flexible pipe DN 90 with flexible pipe DN 75 of plastic	6022 514
	**Flexible pipe crossing FRK-90** for flexible pipe DN 90 for crossing two flexible pipes DN 90 with reduced construction height (100 mm). For one crossing 2 pieces are necessary.	6031 012

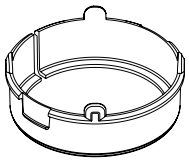
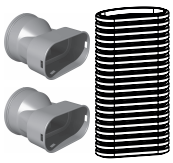
Cable ties can be found under “Flexible pipe DN 75”.

Flat channel system DN 100

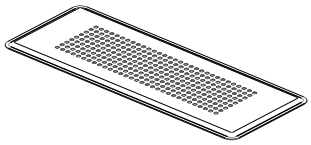
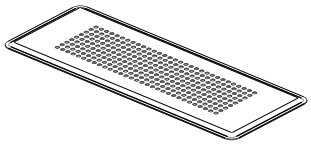
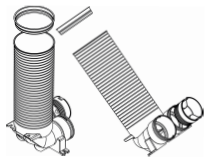
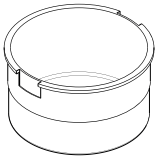
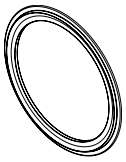
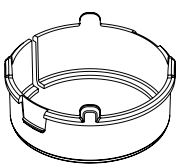
		Part No.
	**Flat channel 100** Flexible ventilation pipe 102 x 49 mm Roll length 50 m	2071 003
	**Stopper flat channel 100** for flat channel 100 Sealing plug for building protection	2072 404
	**Stopper flat 100** for flat channel system 100 for sealing unnecessary connections for outlet round side 90° 125-2 x 100, outlet round front 125-2 x 100 and floor exhaust flat 2 x 100	2071 004
	**Seal flat 100** for flat channel 100	2071 005
	**Sleeve 100** for flat channel 100	2071 006
	**Arch horizontal flat 100** for flat channel 100	2071 007
	**Arch vertical flat 100** for flat channel 100	2071 008
	**Arch vertical flat to round 100-75** Transition 90° round to flat	2071 009
	**Outlet round, lateral 90° 125-2 x 100** for flat channel 100 incl. mounting bracket, 1 stopper 100 for poppet valve DN 125 supply air 40 m³/h extract air 50 m³/h	2071 010
	**Outlet round, front 125-2 x 100** for flat channel 100 incl. mounting bracket, 1 stopper 100 for poppet valve DN 125 supply air 40 m³/h extract air 50 m³/h	2071 011
	**Floor exhaust flat 2 x 100** for floor grille inox and white 309 x 86.5 mm interior incl. 1 stopper 100 2 flat channel 100 connections	2071 012

Flat channel system DN 140

		Part No.
	**Flat channel 140** Flexible ventilation pipe 142 x 49 mm Roll length 20 m	2071 013
	**Stopper flat channel 140** for flat channel 140 Sealing plug for building protection	2072 406
	**Stopper flat 140** for flat channel system 140	2071 014
	**Seal flat 140** for flat channel 140	2071 015
	**Sleeve 140** for flat channel 140	2071 016
	**Arch horizontal flat 140** for flat channel 140	2071 017
	**Arch vertical flat 140** for flat channel 140	2071 018
	**Outlet round, lateral 90° 125-2 x 140** for flat channel 140 incl. mounting bracket, 1 stopper 140 for poppet valve DN 125 supply air 40 m³/h extract air 50 m³/h	2071 019
	**Floor exhaust flat 1 x 140** for floor grille inox and white 309 x 85 mm inside 1 connection flat channel 140	2071 020
	**Adapter flat to round 140-90,** made of plastic	2071 001
	**Sealing ring for flexible pipe DN 90** in connection with click ring 90, for connection of flexible pipe FR-90 to adapter flat to round 140-90	2070 998

		Part No.
	**Click ring DN 90** for adapter flat to round 140-90 and flexible pipe FR-90	2071 000
	**Flat channel intersection 140-90** Consisting of: 1 metre flat channel 140 2 adapters flat to round 140-90 2 seals 140 2 click rings DN 90 2 seals 90	2071 002

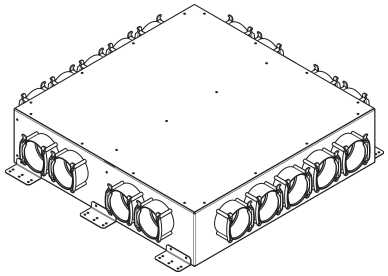
System accessories

	**Floor grille Inox** for floor exhaust flat 2 x 100 and 1 x 140 Dimensions: 350 x 130 mm	2070 930
	**Floor grill, white** for floor exhaust flat 2 x 100 and 1 x 140 Dimensions: 350 x 130 mm	2070 931
	**Outlet round 90° lateral 125-2 x 75** made of plastic 2 x 75/125 mm Usable length 325 mm incl. 1 stopper 75	2070 997
	**Stopper 75** Sealing plug for sealing unnecessary connections to round outlet 90° side 125-2 x 75	2070 932
	**Sealing ring for flexible pipe DN 75** in connection with click ring 75, for connection of flexible pipe FR-75 to outlet round 90° side 125-2 x 75 and bend vertical flat to round 100-75	2070 994
	**Click ring DN 75** for outlet round 90° side 125-2 x 75 and vertical bend flat to round 100-75 Flexible pipe FR-75 Positive locking, detachable connection between flexible pipe and round connection	2070 996

Distribution cases DN 160

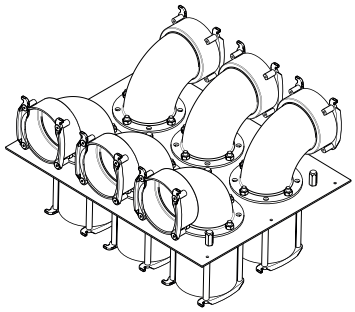
Part No.

Application
Preferably concrete installation (mass concrete)



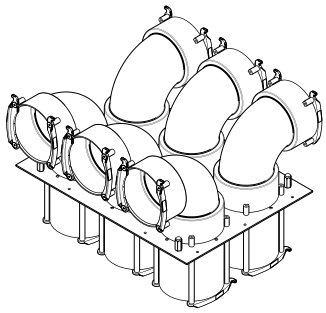
Distribution box VTB-160 9 x 75
Air distribution box from aluzinc sheet with access panel (can be painted on site). Interior lined with sound insulation material.
Connection nozzle:
2 x DN 160 (downward)
ZUL 9 x 75 resp. ABL 9 x 75
Consisting of:
Box, 6 connection brackets, 4 resp. 2 end caps, orifices for setting the air quantity per flex pipe DN 75.

6054 083



Section distributor SV-6 x 75
for flexible pipe DN 75
for space-saving laying of 6 flexible pipes in the ceiling.
Option of 6 x 90° bends or 3 straight connecting pieces. Each 90° elbow can be turned at 45° increments.
6 x DN 75
One section distributor required for each supply and exhaust air source.

6042 706

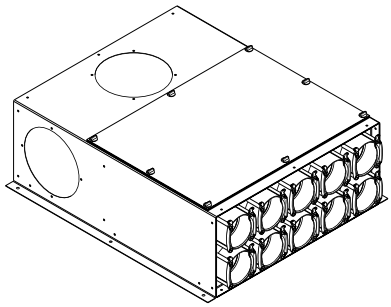


Section distributor SV-6 x 90
for flexible pipes DN 90
for space-saving laying of 6 flexible pipes in the ceiling.
Option of 6 x 90° bends or 3 straight connecting pieces. Each 90° elbow can be turned at 45° increments. 6 x DN 90
One section distributor required for each supply and exhaust air source

6044 775

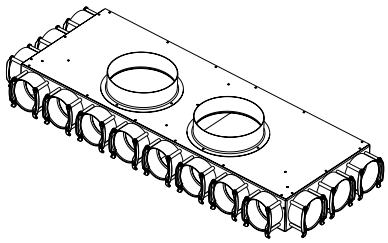
Distribution cases DN 160

Application
On-wall installation

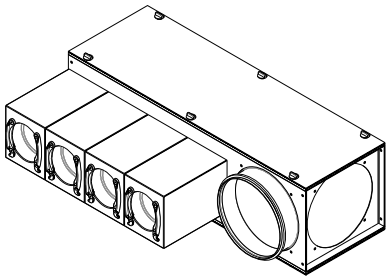


Distribution case VK
Casing of aluzinc sheet with 1 connection nozzle Ø 160 mm (included separately), can be mounted on the front, at the top or laterally on the left or on the right (on site) and x connection nozzles for flexible pipe Ø 75 mm. PU sound absorption block inside with washable outer skin and an access panel.
Incl. throttle orifices

Type	Connections	Part No.
VK-160 75 x 6	6	6054 084
VK-160 75 x 8	8	6054 085
VK-160 75 x 10	10	6054 086

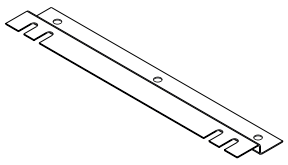


Distribution box VTB-160 14 x 75 — 6052 044
for concrete installation height 91 mm
Distribution box of aluzinc sheet
without access panel.
Connection nozzles:
2 x DN 160 supply and extract air
SUP 7 x DN 75
(4 x front and 3 x side)
EXT 7 x DN 75
(4 x front and 3 x side)



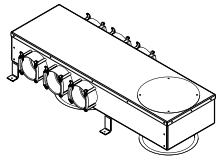
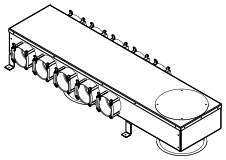
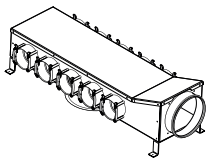
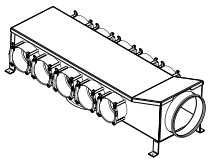
Storey distributor GVT-X
for connecting X flexible tubes Ø 75 mm.
Casing of galvanised sheet steel with sound absorbing mat, connection possibilities Ø 160 mm, incl. 2 nozzles Ø 160 mm with double lip seal. Flexible installation possible due to access panel on both sides.
Incl. throttle orifices

Type	Connections	Part No.
GVT-3	3	6054 087
GVT-4	4	6054 088
GVT-5	5	6054 089
GVT-6	6	6054 090

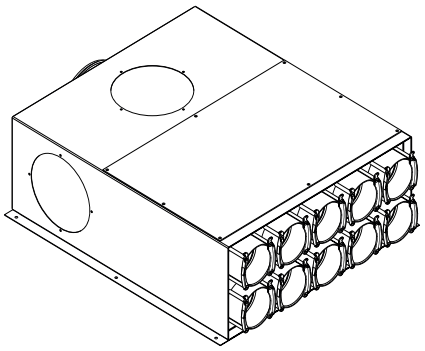


Mounting holder MH — 5032 853
for storey distributor GVT-X
from galvanised steel sheet
Length: 0.3 m
Two angle rails recommended per storey distributor.

Distribution cases DN 160

		Part No.
	Application **Preferably concrete installation** **(mass concrete)**	
	**In-wall distribution case UPVK-160 75 x 6** Distribution case made of aluzinc sheet metal for cementing in. With a sliding connection piece DN 160 and 2 x 3 connections DN 75 (side), incl. 2 end covers, inner lining of sound insulating material, inspection sliding connection piece DN 180 Incl. throttle orifices	6051 581
	**In-wall distribution case UPVK-160 75 x 10** Distribution case made of aluzinc sheet metal for cementing in. With a sliding connection piece DN 160 and 2 x 5 connections DN 75 (side), incl. 4 end covers, inner lining of sound insulating material, inspection sliding connection piece DN 180 Incl. throttle orifices	6051 589
	**In-wall distribution case UPVKS-160 75 x 10** Distribution case made of aluzinc sheet metal for cementing in. With a connection nozzle DN 160 (end face) and 2 x 5 connections DN 75 (side) incl. 5 end covers, inner lining of sound insulating material, inspection sliding connection piece DN 180 Incl. throttle orifices	6051 671
	**In-wall distribution case UPVKS-160 90 x 10** Distribution case made of aluzinc sheet metal for cementing in. With a connection nozzle DN 160 (end face) and 2 x 5 connections DN 90 (side) incl. 4 end covers, inner lining of sound insulating material, inspection sliding connection piece DN 180 Incl. throttle orifices	6051 626

Distribution cases DN 180



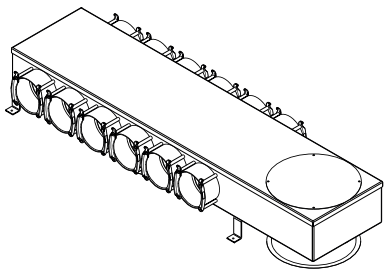
Application
On-wall installation

Distribution case VK
Casing of aluzinc sheet with 1 connection nozzle Ø 180 mm (supplied loose), on end, top or left-side mounting (on site) and x connection nozzles for flex pipes Ø 75 resp. 90 mm. PU sound absorption block inside with washable outer skin and an access panel.
Incl. throttle orifices

Type	Connections	Part No.
VK-180 75 x 8	8	6031 881
VK-180 75 x 10	10	6035 673
VK-180 75 x 12	12	6035 674
VK-180 90 x 8	8	6031 880
VK-180 90 x 10	10	6035 675
VK-180 90 x 12	12	6035 711

Distribution cases DN 200

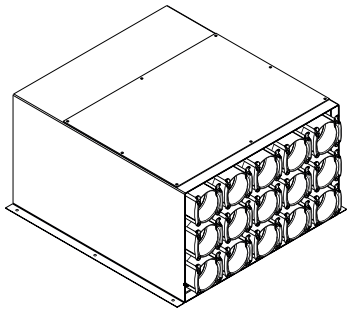
Application
Preferably concrete installation
(mass concrete)



Access panel on bottom

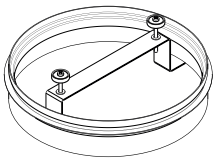
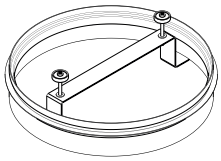
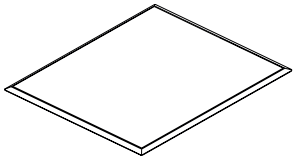
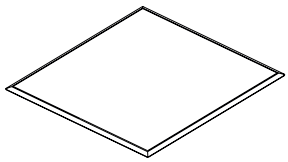
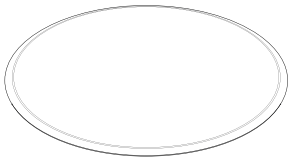
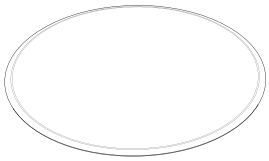
In-wall distribution case UPVK-200 90 x 12 — 6051 623
Distribution case made of aluzinc sheet metal for cementing in. With a sliding connection piece DN 200 and
2 x 6 connections DN 90 (side),
incl. 6 end covers, inner lining of sound insulating material, inspection sliding connection piece DN 180
Incl. throttle orifices

Application
On-wall installation

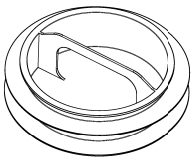
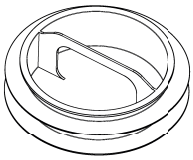


Distribution case VK-200 75 x 15 — 6030 966
Air distribution case of aluzinc sheet with access panel.
Inside with sound insulation element.
Connection nozzles:
1 x DN 200 (on the back)
15 x (3 x 5) DN 75 (on the front)
Incl. throttle orifices

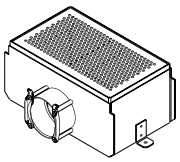
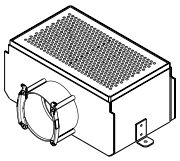
Distribution case accessories

		Part No.
	**Access panel Ø 180 for UPV** from galvanised sheet incl. 2 magnets	5041 681
	**Access panel Ø 200 for UPV** made from galvanised sheet metal incl. 2 magnets	5041 682
	**Design cover 220 x 220** suitable for access panel Ø 180 white RAL 9016	5041 683
	**Design cover 240 x 240** suitable for access panel Ø 200 white RAL 9016	5041 684
	**Design cover Ø 220** suitable for access panel Ø 180 white RAL 9016	5041 685
	**Design cover Ø 240** suitable for access panel Ø 200 white RAL 9016	5041 686

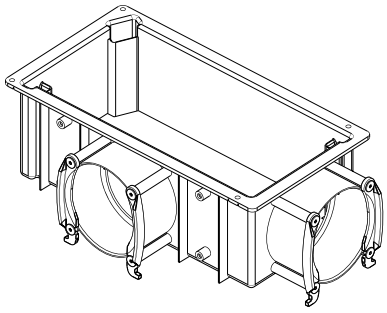
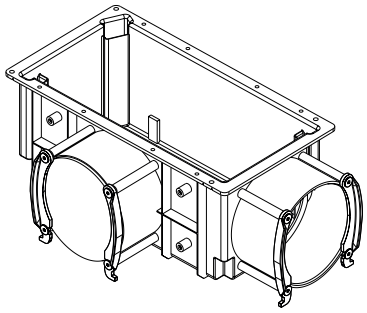
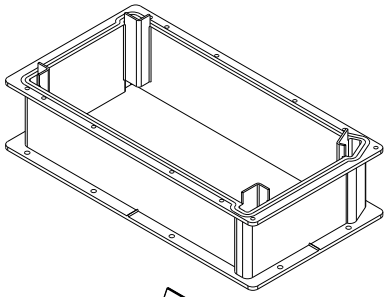
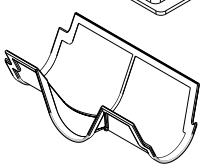
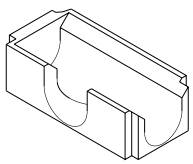
Distribution case accessories

		Part No.
	**Control damper RK-80** for flexible pipe DN 75 sealing control damper for adjustment of the air flow. Of galvanised sheet steel DN 80	6013 654
	**Air flow rate control valve DN 90** for connection housing AG-90, quick 90, floor passage BD-30-90	2070 534
	**End cover quick 75** Cover for unused connections DN 75	5043 525
	**End cover quick 90** Cover for unused connections DN 90	5043 522

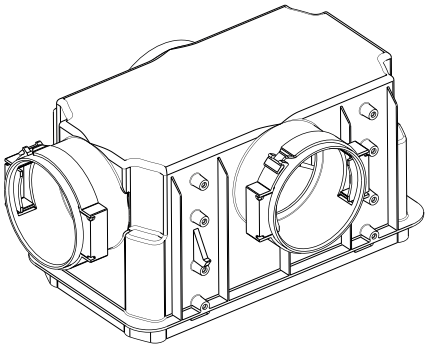
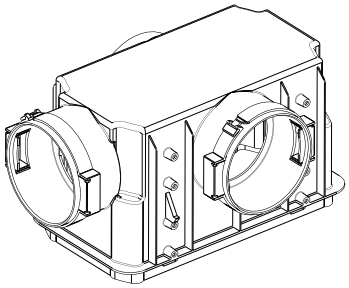
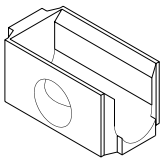
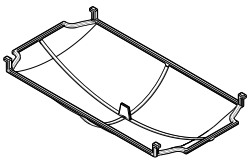
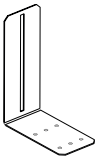
Air grilles - floor

	Application **In the floor structure** **(finished floor, only supply air)**	
	**Floor grille BD-30-75** perforated grille made from stainless steel in an adjustable casing Inner component of stainless steel Outer component of aluzinc sheet with 2 fastening catches and one connection nozzle for flexible pipe DN 75 Supply air up to 30 m^3/h Height: 130 to 180 mm	6015 304
	**Floor grille BD-30-90** perforated grille made from stainless steel in an adjustable casing. Inner component of stainless steel, outer component of Al/Zn sheet with 2 fastening catches and one connection nozzle for flexible pipe DN 90. Supply air up to 40 m^3/h Height: 130 to 180 mm	6022 513

Air grilles - wall/ceiling

		Part No.
	Application **Mass concrete, masonry walls and lightweight walls**	
	**Connection housing AG-60** for supply and extract air in combination with design grilles. Casing allows precise grille alignment (swivelling) after mounting. Plastic casing with 2 connection nozzles DN 75, fastening bracket, end cover, sound insulating mat and insert block as building protection cover and plastering aid. Supply air: 1 x DN 75 up to 30 m³/h 2 x DN 75 for 40 m³/h Exhaust air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 60 m³/h For installation in solid concrete, masonry and plasterboard walls.	6034 355
	**Connection housing AG-90** for supply and extract air in combination with design grilles. Casing allows precise grille alignment (swivelling) after mounting. Plastic casing with 2 connection nozzles DN 90, fastening bracket, end cover, sound insulating mat and insert block as building protection cover and plastering aid. Supply air: 1 x DN 90 up to 40 m³/h Exhaust air: 1 x DN 90 up to 60 m³/h For installation in solid concrete, masonry and plasterboard walls.	6034 357
	Application **Mass concrete**	
	**Extension VAG-60/90** for connection housing AG-60 and AG-90 for raising above the lower reinforcement for solid concrete ceilings. Raising height: 60 mm Extension permits precise grille alignment after installation.	6034 360
	**Extract air filter AGF-60/90** for connection housing AG-60 and AG-90 of cleanable, fine-mesh polyamide net with plastic frame. Cannot be combined with sound insulation insert.	5033 121
	**Sound insulation insert 60/90** for connection housing AG-60 and AG-90 retrofittable sound insulation insert for acoustically sensitive rooms. Cannot be combined with extract air filter AGF-60/90.	6034 398

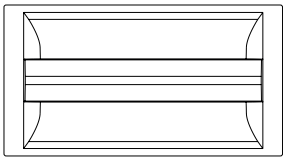
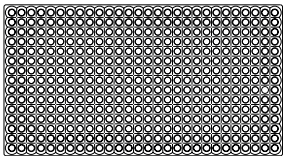
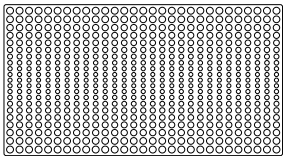
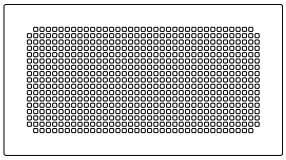
Air grilles - wall/ceiling

		Part No.
	Application **Mass concrete, filigree blankets**	
	**Connection housing quick 75** for supply and extract air in combination with design grilles. Housing allows precise alignment of grilles after mounting. Plastic housing with 2 connection nozzles DN 75. Very easy to mount, no nails in concrete after stripping. Supply air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 40 m³/h Extract air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 60 m³/h Suitable for installation in solid concrete	6046 302
	**Connection housing quick 90** for supply and extract air in combination with design grilles. Housing allows precise alignment of grilles after mounting. Plastic housing with 2 connection nozzles DN 90. Very easy to mount, no nails in concrete after stripping. Supply air: 1 x DN 90 up to 40 m³/h Extract air: 1 x DN 90 up to 60 m³/h Suitable for installation in solid concrete	6046 296
	**Sound insulation insert quick** for connection housing quick retrofittable sound insulation insert for acoustically sensitive rooms. Not combinable with extract airfilter quick	6047 831
	**Extract air filter quick** for connection housing quick of cleanable, fine-mesh polyamide net with plastic frame. Cannot combine w/sound insulation insert	5045 011
	**Mounting set quick** Mounting help for connection housing quick with 4 mounting brackets and 8 screws	6048 808

Air grilles - wall/ceiling

Plastic supply air/extract air grille

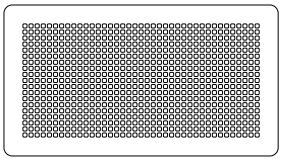
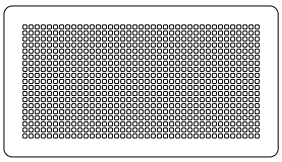
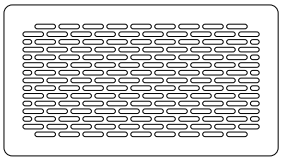
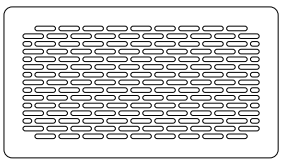
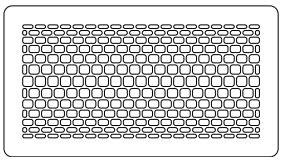
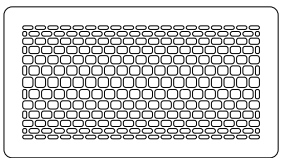
The alignment of the grilles can be slightly corrected after installation.

		Part No.
	**Design grille Pazifik** for connection housing AG-60, AG-90 and quick 75/90 made of plastic, with plug connection, white (RAL 9016) stove-enamelled, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 743
	**Design grille Adria** for connection housing AG-60, AG-90 and quick 75/90 made of plastic, with plug connection, white (RAL 9016) stove-enamelled, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 744
	**Design grille Atlantik** for connection housing AG-60, AG-90 and quick 75/90 made of plastic, with plug connection, white (RAL 9016) stove-enamelled, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 745
	**Design grille Karibik** for connection housing AG-60, AG-90 and quick 75/90 made of plastic, with plug connection, white (RAL 9016), painting on site, Suitable for: supply air up to 40 m³/h extract air up to 60 m³/h	6047 228

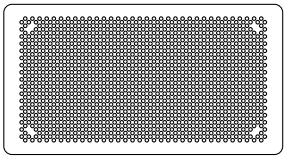
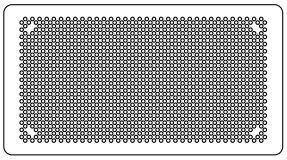
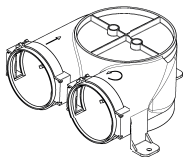
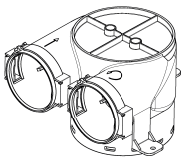
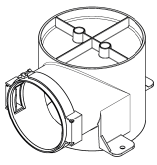
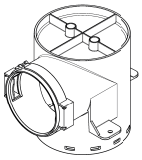
Air grilles - wall/ceiling

Metal supply air/extract air grille

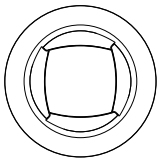
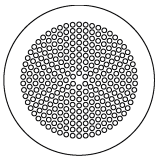
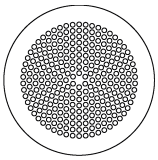
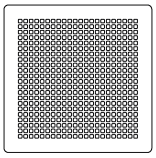
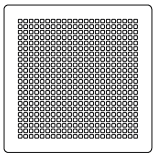
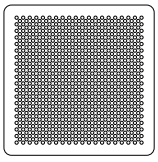
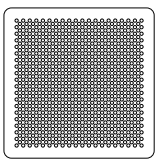
The alignment of the grilles can be slightly corrected after installation.

		Part No.
	**Design grille Pizol** for connection housing AG-60, AG-90 and quick 75/90 of brushed stainless steel, with plug connection, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 696
	**Design grille Pizol** for connection housing AG-60, AG-90 and quick 75/90 of sheet steel, with plug connection, white (RAL 9016) stove-enamelled, Suited for: supply air up to 40 m³/h extract air up 60 m³/h	6046 698
	**Design grille Alvier** for connection housing AG-60, AG-90 and quick 75/90 of brushed stainless steel, with plug connection, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 700
	**Design grille Alvier** for connection housing AG-60, AG-90 and quick 75/90 of sheet steel, with plug connection, white (RAL 9016) stove-enamelled, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 702
	**Design grille Säntis** for connection housing AG-60, AG-90 and quick 75/90 of brushed stainless steel, with plug connection, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 724
	**Design grille Säntis** for connection housing AG-60, AG-90 and quick 75/90 of sheet steel, with plug connection, white (RAL 9016) stove-enamelled, Suited for: supply air up to 40 m³/h extract air up to 60 m³/h	6046 726

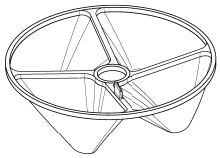
Air grilles - wall/ceiling

		Part No.
	**Design grille Pilatus white** For connection housing AG-60, AG-90, quick 75 and 90 Aluminium sheet with flanged edges Painted white (RAL 9016) With holding fixture for connection housing AG-60, AG-90, quick 75 and 90 - Supply air up to 40 m³/h - Extract air up to 60 m³/h	6054 365
	**Design grille Pilatus Alu** For connection housing AG-60, AG-90, quick 75 and 90 Aluminium sheet with flanged edges Surface: anodized brushed aluminium With holding fixture for connection housing AG-60, AG-90, quick 75 and 90 - Supply air up to 40 m³/h - Extract air up to 60 m³/h	6054 366
	**Connection cylinder quick 75 short** for masonry, lightweight and wood construction Plastic casing, two connections DN 75 incl. 1 stopper DN 75 Supply air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 40 m³/h With design grille Tangential 125 only 1 x DN 75 Extract air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 60 m³/h	6050 374
	**Connection cylinder quick 75 medium** for element ceiling up to 60 mm, solid concrete Plastic casing, two connections DN 75 incl. 1 stopper DN 75 Supply air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 40 m³/h With design grille Tangential 125 only 1 x DN 75 Extract air: 1 x DN 75 up to 30 m³/h 2 x DN 75 up to 60 m³/h	6050 375
	**Connection cylinder quick 90 short** for masonry, lightweight and wood construction Plastic casing, with connection DN 90 Supply air: 1 x DN 90 up to 40 m³/h Extract air: 1 x DN 90 up to 60 m³/h	6050 377
	**Connection cylinder quick 90 medium** for element ceiling up to 60 mm, solid concrete Plastic casing, with connection DN 90 Supply air: 1 x DN 90 up to 40 m³/h Extract air: 1 x DN 90 up to 60 m³/h	6050 378

Air grilles - wall/ceiling

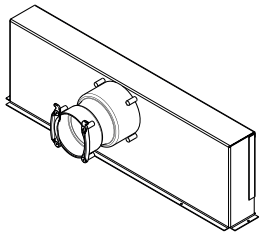
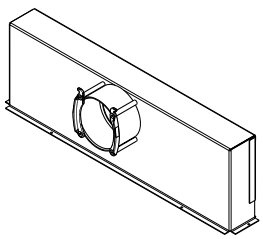
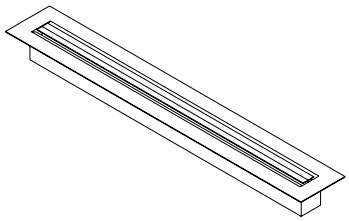
		Part No.
	**Design grille Tangential 125** suitable for connection cylinders quick 75 and 90 made of plastic, with plug-in connection Colour: white RAL 9016, can be painted on site Supply air up to 40 m³/h Extract air up to 50 m³/h	6052 158
	**Design grille Falknis painted white** suitable for connection cylinders quick 75 and 90 Steel, painted white (RAL 9016) With plug-in connection Supply air up to 40 m³/h Extract air up to 50 m³/h	6052 162
	**Stainless steel design grille Falknis** suitable for connection cylinders quick 75 and 90 Brushed stainless steel With plug-in connection Supply air up to 40 m³/h Extract air up to 50 m³/h	6051 847
	**Design grille Calanda painted white** suitable for connection cylinders quick 75 and 90 Steel, painted white (RAL 9016) With plug-in connection Supply air up to 40 m³/h Extract air up to 50 m³/h	6052 161
	**Stainless steel design grille Calanda** suitable for connection cylinders quick 75 and 90 Brushed stainless steel With plug-in connection Supply air up to 40 m³/h Extract air up to 50 m³/h	6051 849
	**Design grille Rigi white** suitable for connection cylinder quick 75 and 90 Aluminium sheet with flanged edges Painted white (RAL 9016) With holding fixture for connection cylinder quick 75 and 90 - Supply air up to 40 m³/h - Extract air up to 60 m³/h	6054 363
	**Design grille Rigi aluminium** suitable for connection cylinder quick 75 and 90 Aluminium sheet with flanged edges Surface: anodized brushed aluminium With holding fixture for connection cylinder quick 75 and 90 - Supply air up to 40 m³/h - Extract air up to 60 m³/h	6054 364

Air grilles - wall/ceiling

		Part No.
	**Extract air filter 125** for connection cylinder quick 75 and 90 of cleanable, fine-mesh polyamide net with plastic frame.	5049 629
	**Disc valve supply air TVZ-125** for connection cylinder quick 75 and 90 of sheet steel (white RAL 9016) with installation frame DN 125, height: 45 mm supply air up to 40 m³/h	2056 417
	**Disc valve extract air TVA-125** for connection cylinder quick 75 and 90 of sheet steel (white RAL 9016) with installation frame DN 125, height: 45 mm extract air up to 60 m³/h	2056 416

Grilles - supply air/extract air

Application
Concrete installation (in-situ concrete)

	**Connection box SD-75** for encasing in concrete, made of galvanised sheet steel with 1 nozzle 75 mm Air quantity up to 30 m³/h	6022 617
	**Connection box SD-90** for encasing in concrete, made of galvanised sheet steel with 1 nozzle 90 mm Air quantity up to 40 m³/h	6022 543
	**Design slit grille 500 mm** matching connection box SD-75 and SD-90 Colour: anodized aluminium Supply air: up to 40 m³/h	2037 000

Pipe system DN 160
The pipe system consists of galvanised steel with double lip seal.
Pipe as per DIN 24145; 0.6 mm thick.

Flow rate [m³/h]	[Pa/m] Pipe	Pressure drop [Pa] 90° elbow	[Pa] 45° elbow
150	0.5	1.3	0.8
200	0.8	2.0	1.2
250	1.2	2.5	1.5
350	1.8	5.0	1.8

Pipe system DN 180
The pipe system consists of galvanised steel with double lip seal.
Pipe as per DIN 24145; 0.6 mm thick.

Flow rate [m³/h]	[Pa/m] Pipe	Pressure drop [Pa] 90° elbow	[Pa] 45° elbow
150	0.4	0.8	0.5
250	0.6	2.0	1.0
350	1.0	4.0	2.0

Pipe system DN 200
The pipe system consists of galvanised steel with double lip seal.
Pipe as per DIN 24145; 0.6 mm thick.

Flow rate [m³/h]	[Pa/m] Pipe	Pressure drop [Pa] 90° elbow	[Pa] 45° elbow
150	0.3	0.7	0.5
350	0.7	1.6	1.0
500	1.5	4.0	2.0

Thermal insulation for main duct DN 160
The insulation consists of synthetic rubber (closed-cell EPDM with resistant outside skin), insulation thickness 25 mm, black.
Thermal conductance λ at 0 °C is 0.032 W/mK
Steam diffusion resistance ≥ 7000
Fire class 5.3 or B1

Thermal insulation tube: for spiral-seam tube DN 160 mm, case contains 3 tubes, each with a length of 2 m

Thermal insulation for pipe elbow: Thermal insulation mat cut to length for pipe elbow (2-part) suitable for DN 160

Pipe clamp with thermal insulation sleeve: For installation of pipes without thermal bridges

Adhesive: ready-to-use adhesive with brush 0.25 l

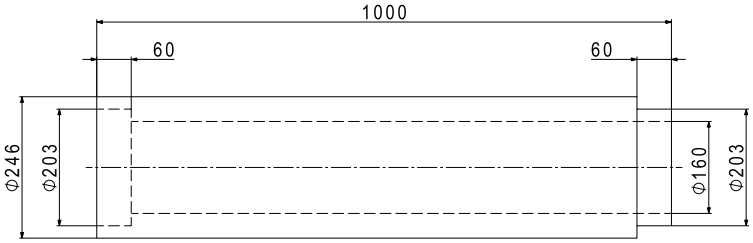
Adhesive tape: of synthetic rubber, 50 mm wide, 15-meter roll

Attention:
Comply with regional regulations on thermal insulation.

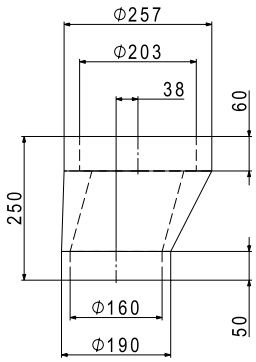
IsiPipe Plus pipe system EPP
Pipeline consists of diffusion-tight EPP
Wall thickness: 43 mm, black
Thermal conductance: λ = 0.035 W/mK

IsiPipe Plus pipe system EPP-160
(Dimensions in mm)

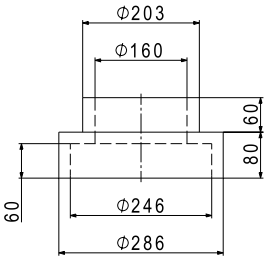
IsiPipe Plus pipeline EPP-160/1000



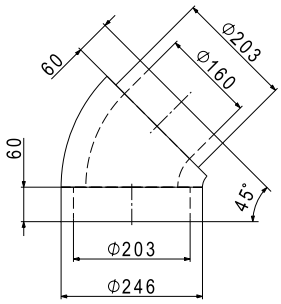
IsiPipe Plus eccentric adapter EPP-160-160



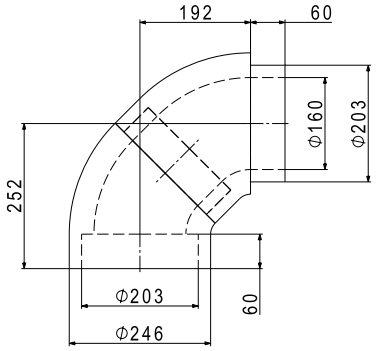
IsiPipe Plus sleeve EPP-160



IsiPipe Plus pipe bend EPP-160

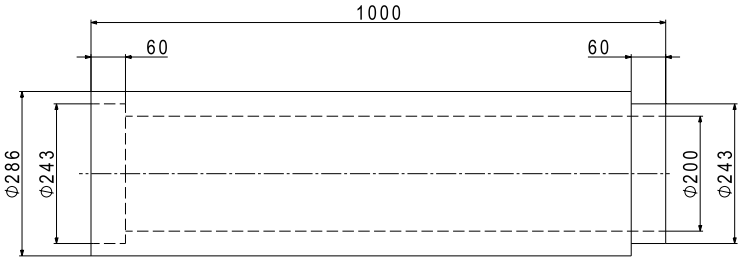


2x IsiPipe Plus pipe bend EPP-160/45

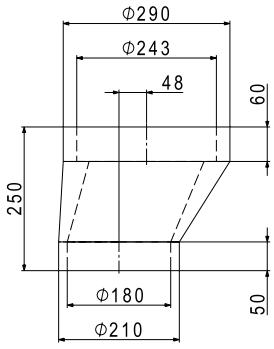


IsiPipe Plus pipe system EPP-200
(Dimensions in mm)

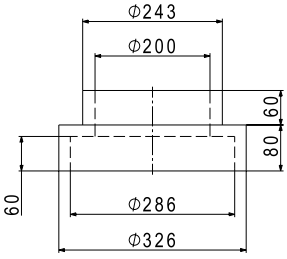
IsiPipe Plus pipeline EPP-200/1000



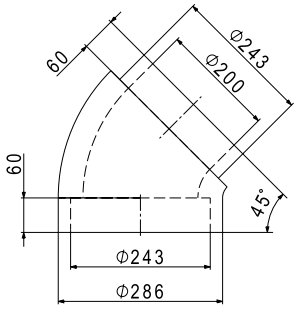
IsiPipe Plus eccentric adapter EPP-180-200



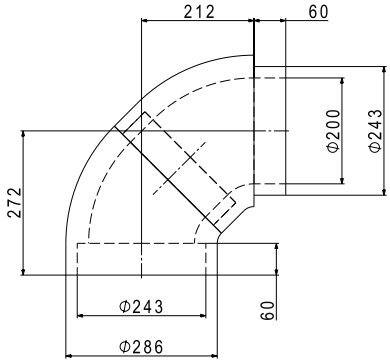
IsiPipe Plus device adapter EPP-200



IsiPipe Plus pipe bend EPP-200/45



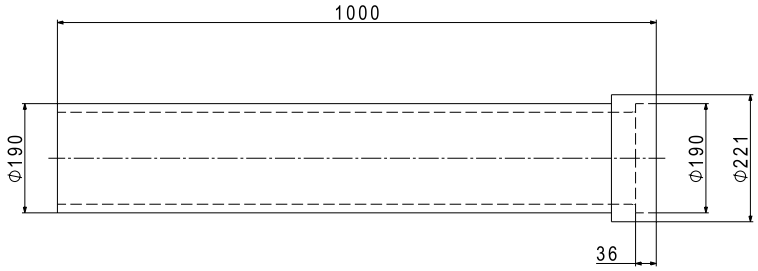
2x IsiPipe Plus pipe bend EPP-200/45



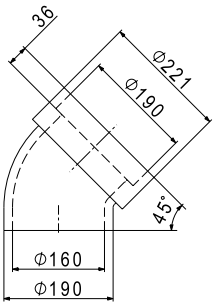
IsiPipe pipe system EPP
Pipeline consists of diffusion-tight EPP
Wall thickness: 43 mm, black
Thermal conductance: λ = 0.035 W/mK

IsiPipe pipe system EPP-160
(Dimensions in mm)

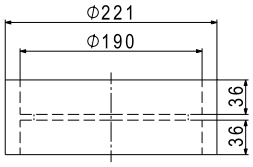
IsiPipe pipeline EPP-160/1000



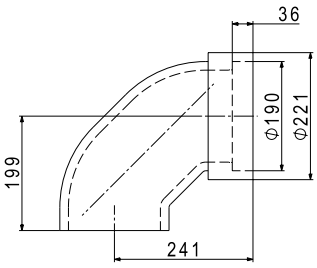
IsiPipe pipe bend EPP-160/45



IsiPipe sleeve EPP-160

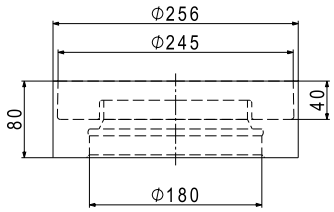


IsiPipe pipe bend EPP-160/90

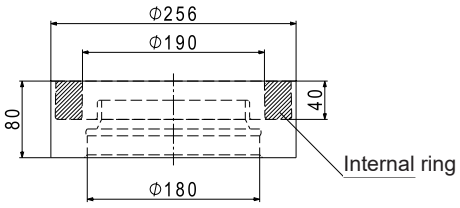


IsiPipe device adapter EPP-160
(Dimensions in mm)

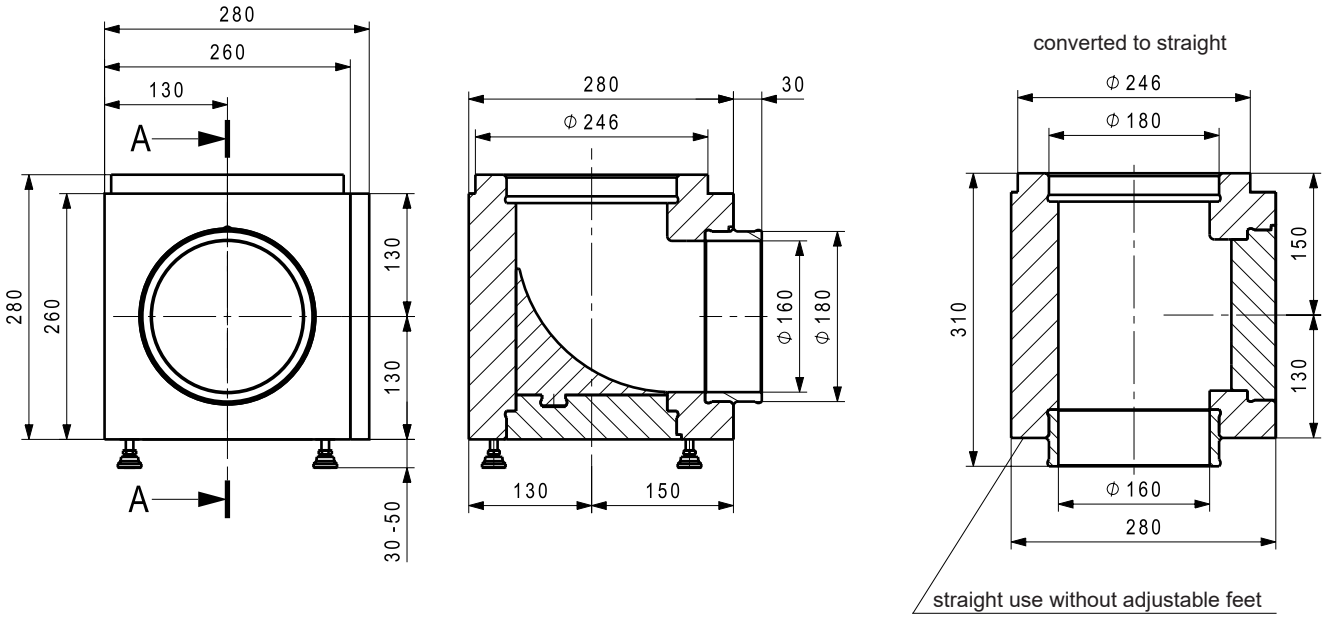
IsiPipe-Plus without internal ring



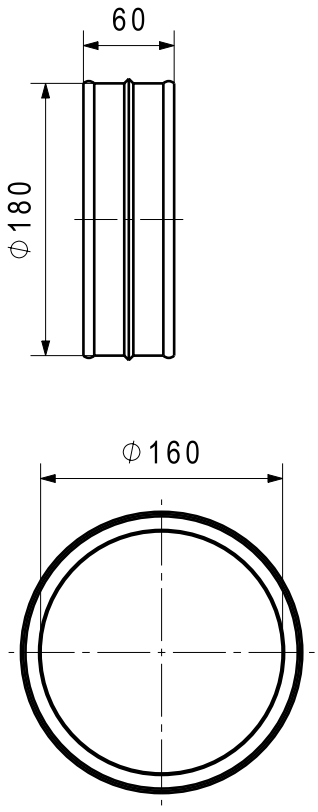
IsiPipe-Plus with internal ring



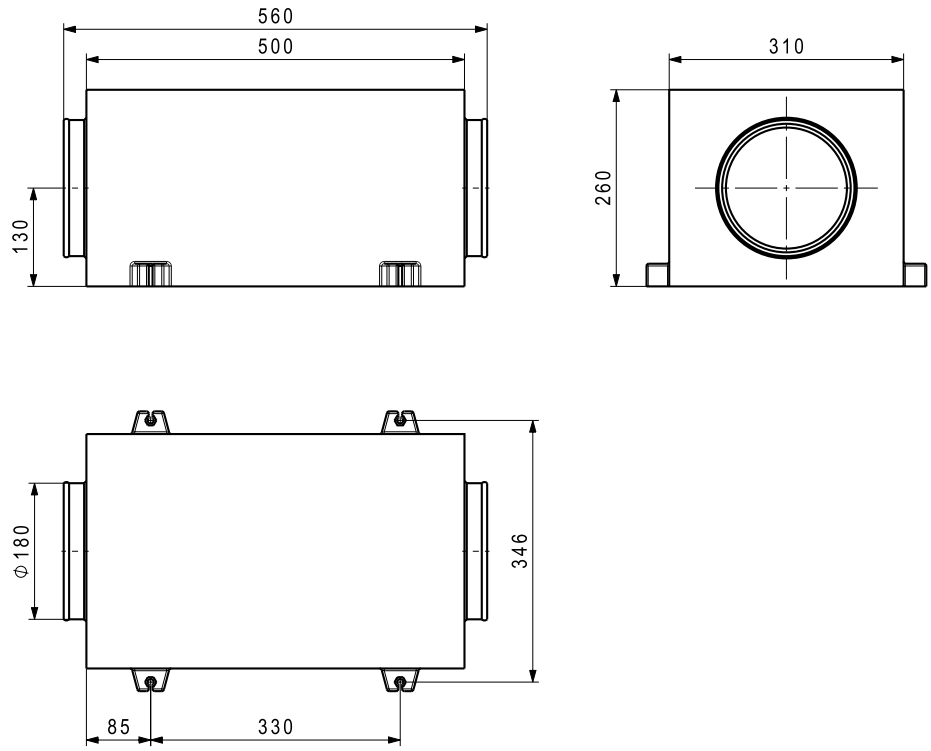
IsiCube
(Dimensions in mm)

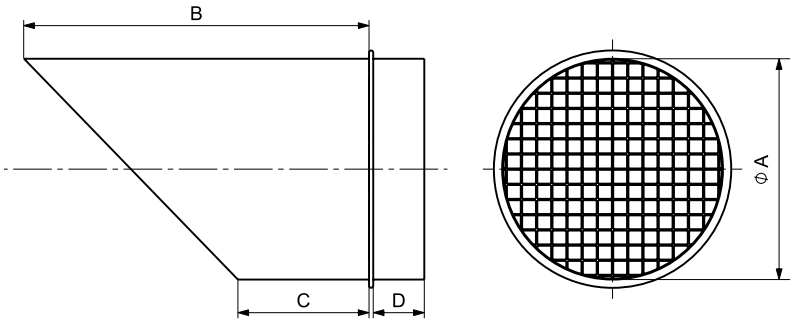


IsiFit



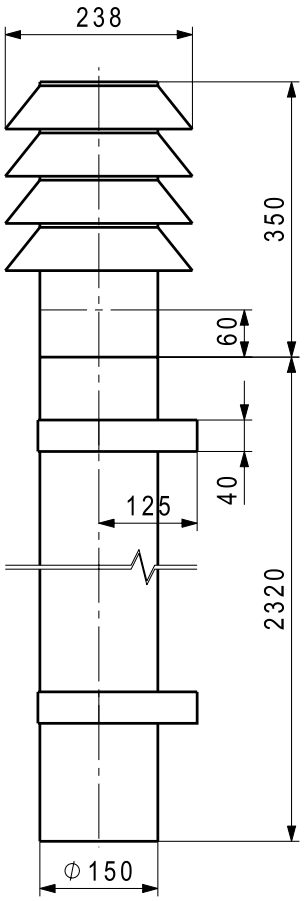
IsiSound





Exhaust air nozzle FST
for spiral-seam tube DN
of galvanised sheet steel
with bird protection grille DN
for horizontal installation

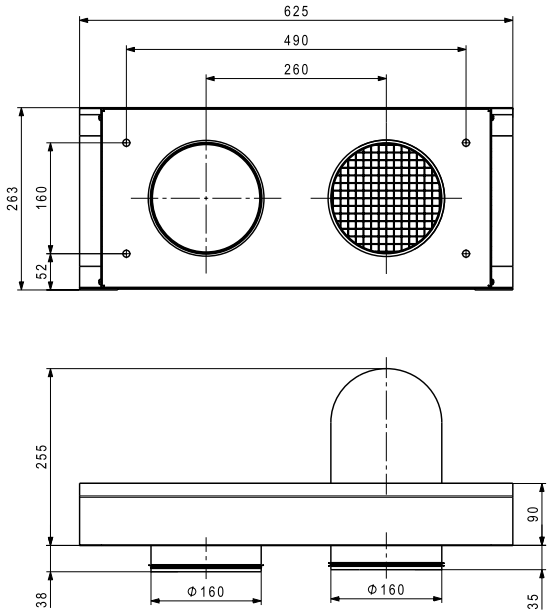
	A	B	C	D
FST-160	160	250	95	37
FST-180	180	270	90	45
FST-200	200	245	45	45



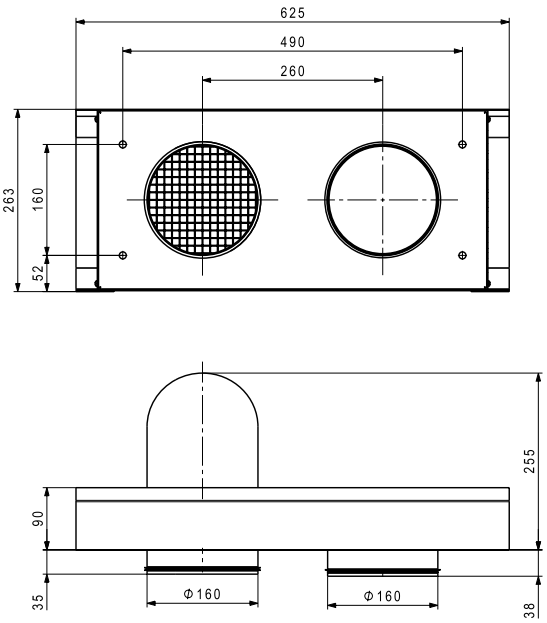
Outside air intake set AAS-150
for spiral-seam tube DN 150,
galvanic isolation of the connection
for outside and exhaust air
of stainless steel, lamella cowl,
consisting of:
1 cowl DN 150,
1 pipe DN 150, length: 0.5 m,
2 pipes DN 150, length: 1 m and
2 wall mountings

Volume flow [m³/h]	Pressure drop of cowl [Pa]
100	3
150	5
200	8
250	12

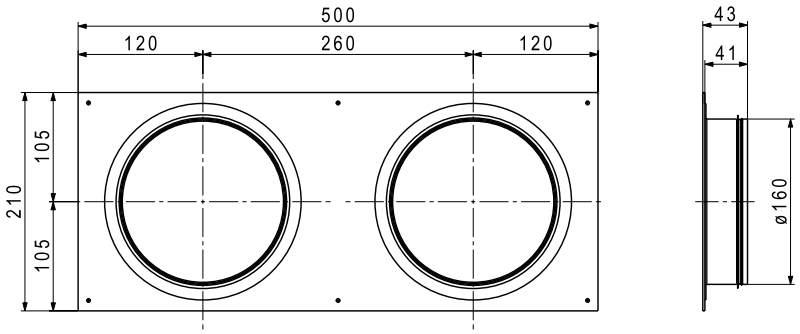
Wall outlet Ø 160 left

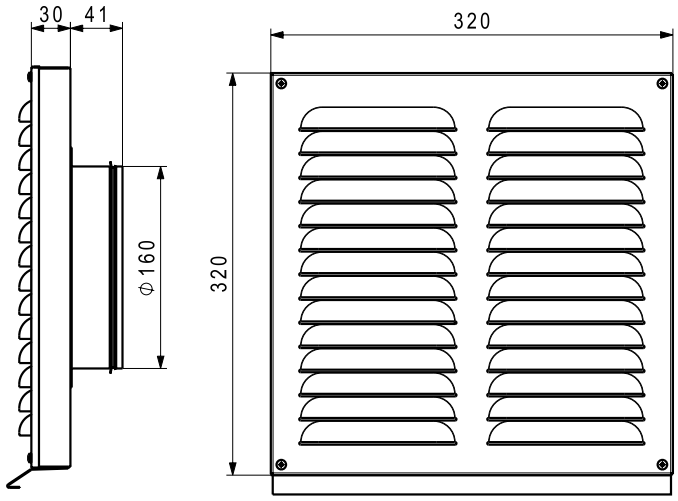


Wall outlet Ø 160 right



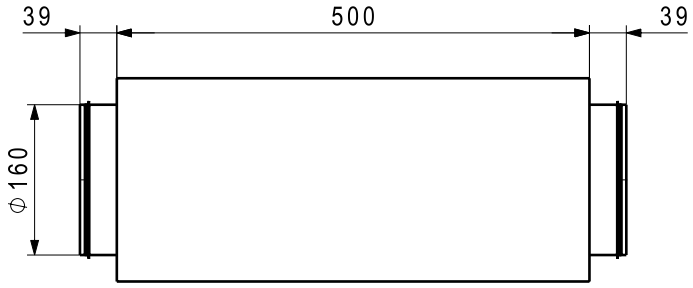
Plywood
for wall outlet, Ø 160

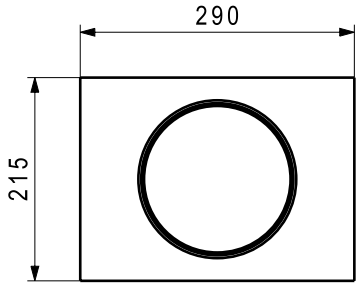




Weatherproof grille WG-160
for spiral-seam tube DN 160
for outside and exhaust air
of aluminium with rain lug,
can be painted with double lip seal,
pipe nozzle DN 160

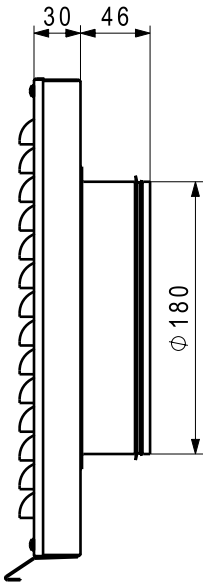
Flow rate [m³/h]	Pressure drop Outside air [Pa]	Pressure drop Exhaust air [Pa]
150	7	7
200	12	15
250	18	24

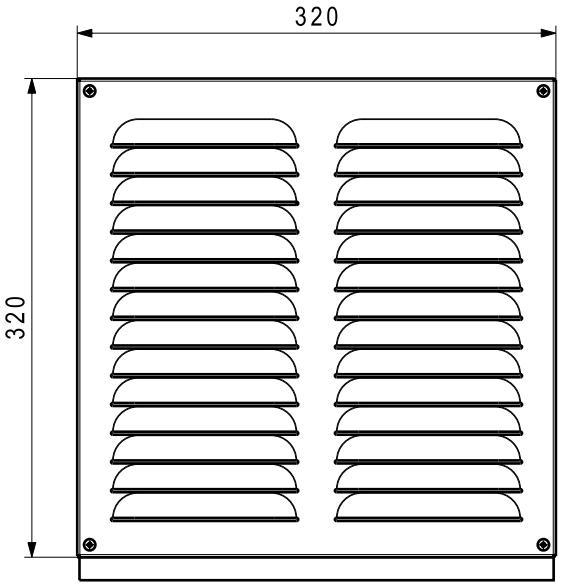




Silencer SD-160-500
The silencer consists of a rectangular casing of galvanised steel with connection nozzles on both sides. The housing is lined on the inside with highly effective sound absorbing material. The unit can be cleaned through the pipe nozzle. When used in fresh air and exhaust air, the silencers must be thermally insulated on site.

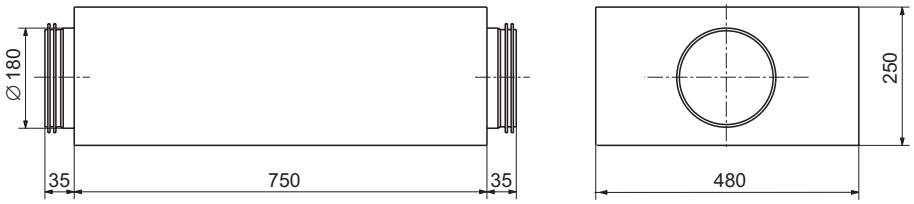
Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	6	10	19	23	32	25	16





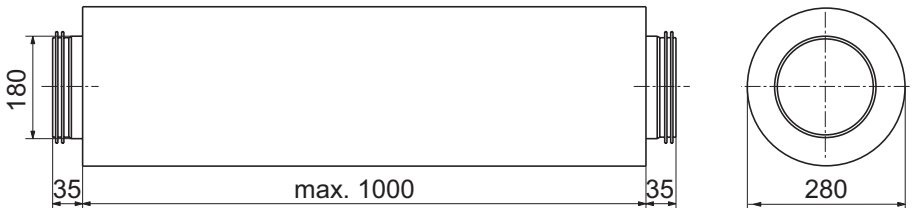
Weatherproof grille WG-180
for spiral-seam tube DN 180
for outside and exhaust air
of aluminium with rain lug,
can be painted with double lip seal,
pipe nozzle DN 180

Flow rate [m³/h]	**Pressure drop [Pa]**
150	6
250	9
350	13



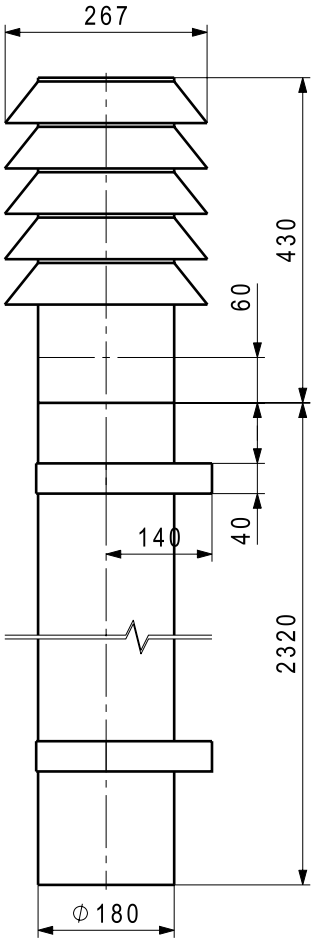
Silencer FSR-180-750
The silencer consists of a rectangular casing of galvanised steel with connection nozzles on both sides. The housing is lined on the inside with highly effective sound absorbing material. The unit can be cleaned through the pipe nozzle. When used in fresh air and exhaust air, the silencers must be thermally insulated on site.

Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	4	11	12	12	12	7	3

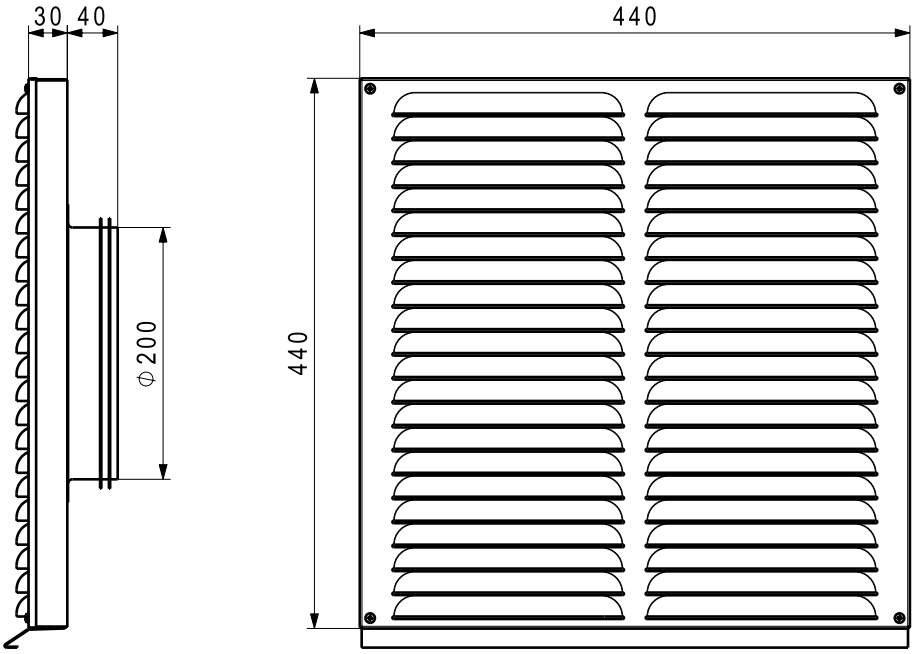


Silencer FLSDA-180-1000
The silencer consists of a flexible aluminium envelope tube, inside from perforated aluminium tube with connection nozzles on both sides with double lip seal.

Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	5	13	30	42	34	24	13

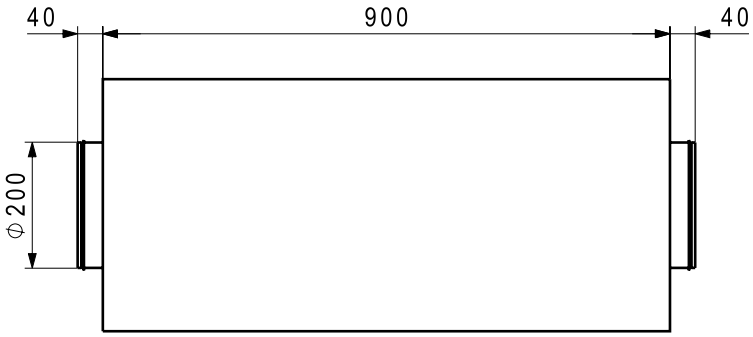


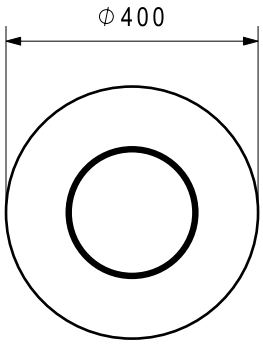
Stainless steel cowl AAS-180
for spiral-seam tube DN 180
galvanic isolation of the connection for outside and exhaust air of stainless steel, lamella cowl, consisting of:
1 cowl DN 180,
1 pipe DN 180, length: 0.5 m,
2 pipes DN 180, length: 1 m and
2 wall mountings



Weatherproof grille WG-200
for spiral-seam tube DN 200
for outside and exhaust air
of aluminium with rain lug,
can be painted with double lip seal,
pipe nozzle DN 200

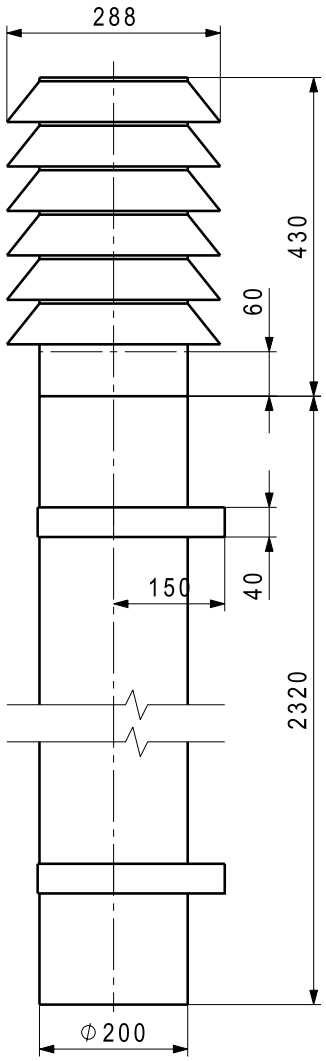
Flow rate [m³/h]	Pressure drop [Pa]
150	4
350	8
500	12





Silencer SD-200-1000
The silencer consists of a round casing of galvanised steel with connection nozzles on both sides. The housing is lined on the inside with highly effective sound absorbing material.
The unit can be cleaned through the pipe nozzle.

Frequency [Hz]	125	250	500	1000	2000	4000	8000
Damping [dB]	5	15	26	26	19	10	5



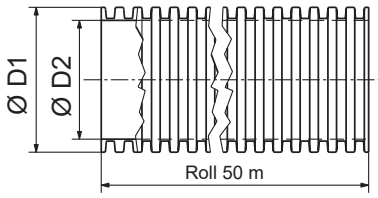
Stainless steel cowl AAS-200
for spiral-seam tube DN 200
galvanic isolation of the connection for outside and exhaust air of stainless steel, lamella cowl, consisting of:
1 cowl DN 200,
1 pipe DN 200, length: 0.5 m,
2 pipes DN 200, length: 1 m and
2 wall mountings

Pipe system distribution duct DN 75 and DN 90
The distribution duct is a flexible pipe of polyethylene PE-HD with a smooth inside wall, ribbed on the outside.

Antistatic coating
Weight 0.33 kg/m
Application limit: Air and ambient temperature -25…60 °C

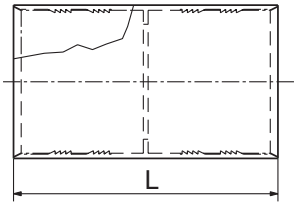
Pipe system	Flow rate [m³/h]	Pressure drop straight pipe [Pa/m]	Press loss pipe elbow 90° (r = 2D) [Pa]
DN 75	10	0.3	0.1
DN 75	20	1.1	0.4
DN 75	30	2.5	1.0
DN 90	20	0.6	0.2
DN 90	30	1.2	0.4
DN 90	40	2.2	0.8

Flexible pipe FR

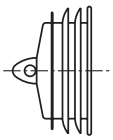


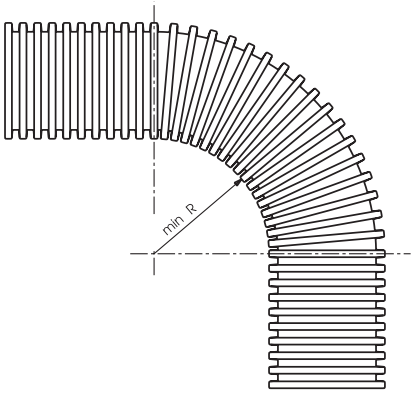
Sealing ring DI

Double sleeve DM

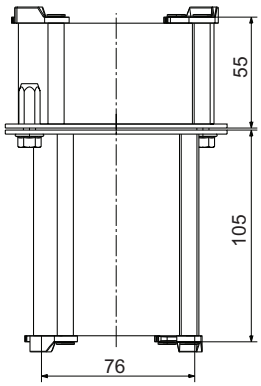


Stopper ST

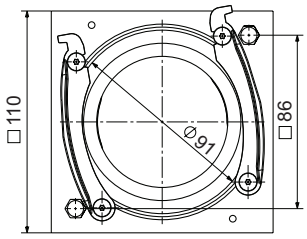




Pipe system	D1 [mm]	D2 [mm]	L [mm]	R
DN 75	75	62	100	150
DN 90	90	76	100	150

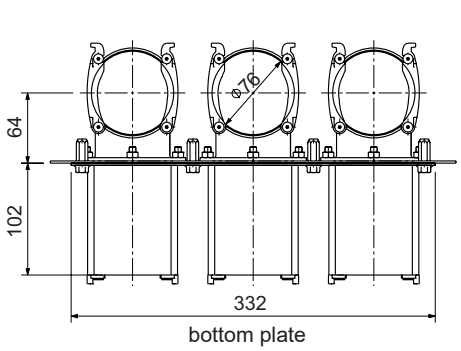


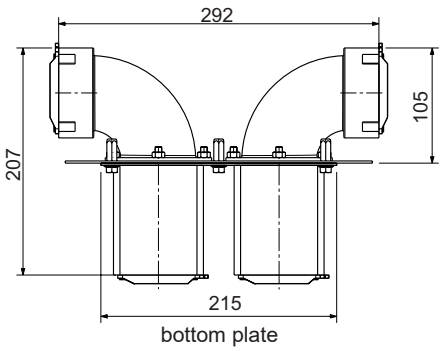
Formwork coupling SK-75/90
for flexible pipe DN 75 and 90 for extending a flexible pipe through the ceiling or the floor and extension from DN 75 to DN 90 without damaging the boarding.

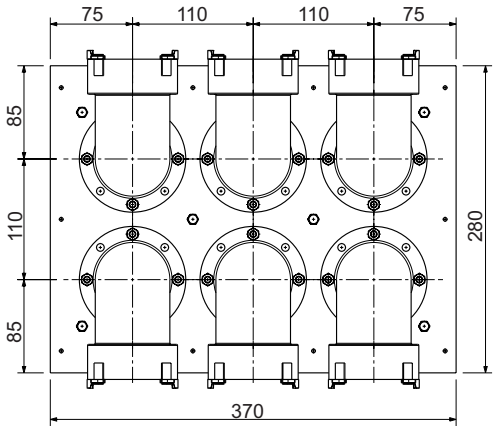


Section distributor SV-6 x 75
For quick, space-saving installation of flexible pipes FR-75 in ceilings/floors and walls. Each 90° connection can be rotated in increments of 45°.

After completion of the building shell, the lower distributor plate is fitted and the flexible pipes FR-75 are simply connected up. The inside of the 90° nozzles is rounded to allow easy cleaning of the ducts.

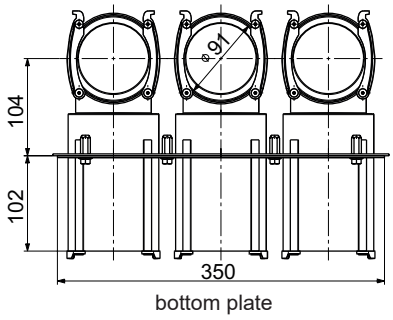


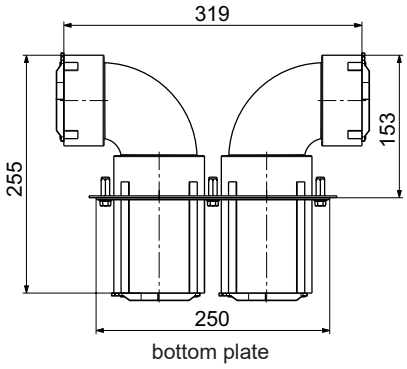


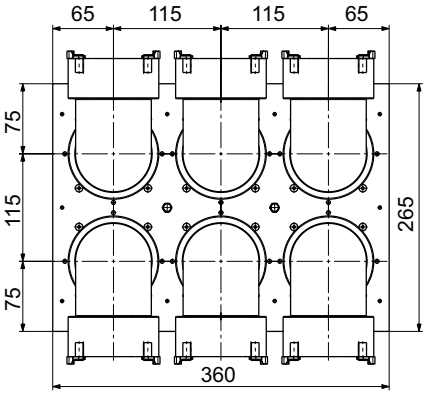


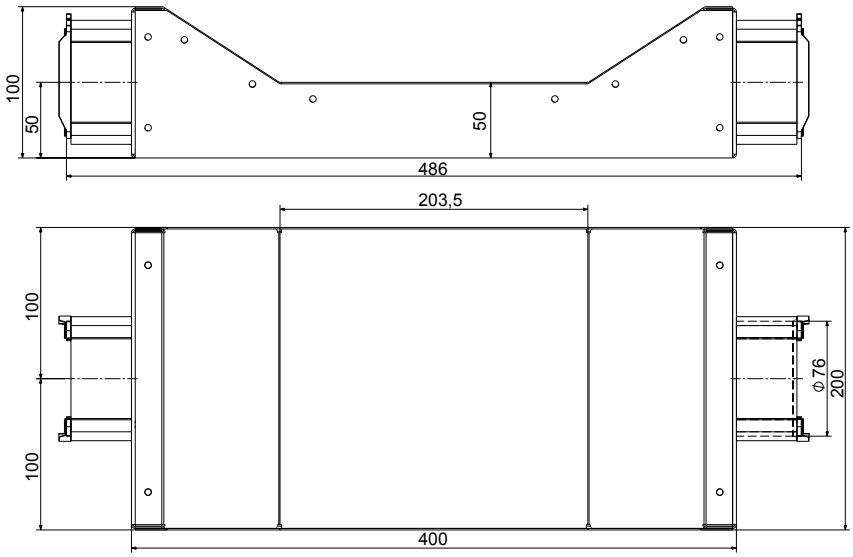
Section distributor SV-6 x 90
For quick, space-saving installation of flexible pipes FR-75 in ceilings/floors and walls. Each 90° connection can be rotated in increments of 45°.

After completion of the building shell, the lower distributor plate is fitted and the flexible pipes FR-75 are simply connected up. The inside of the 90° nozzles is rounded to allow easy cleaning of the ducts.

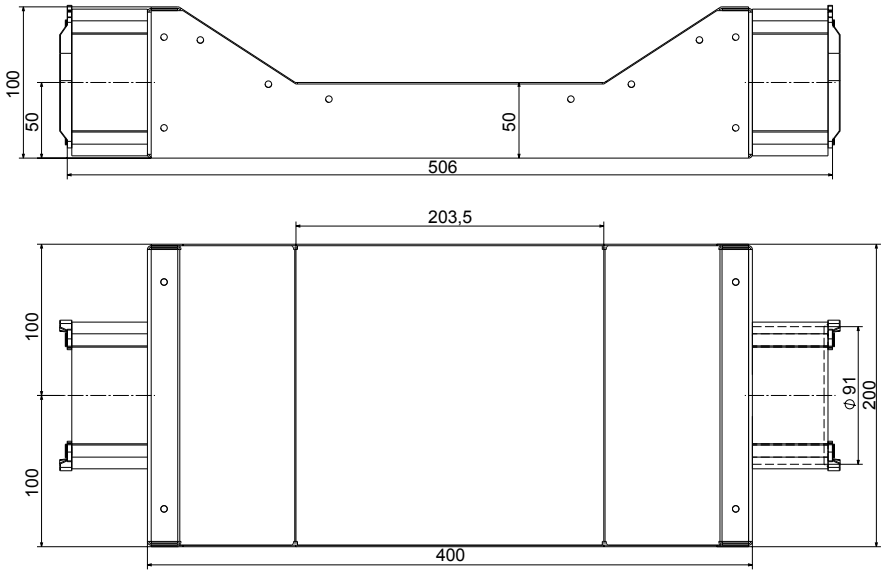






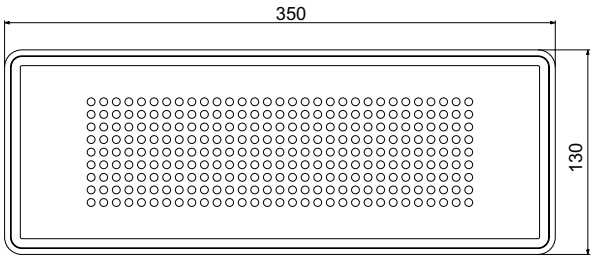


Flexible pipe crossing FRK-75
for flexible pipe DN 75
for crossing two flexible pipes DN 75
with reduced construction height (100 mm).
For one crossing 2 pieces are necessary.

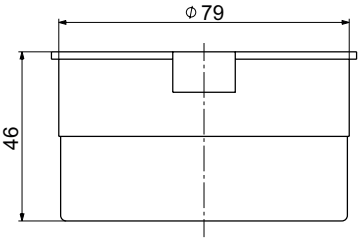


Flexible pipe crossing FRK-90
for flexible pipe DN 90
for crossing two flexible pipes DN 90
with reduced construction height (100 mm).
For one crossing 2 pieces are necessary.

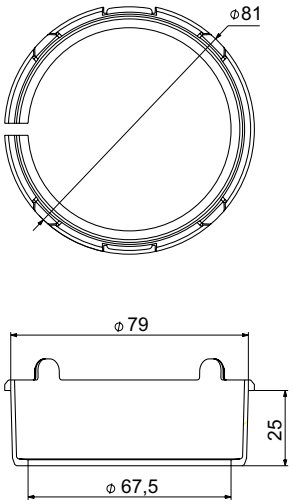
Floor grille 100, 140
inox or white colour
for flat channel system 100 and 140
Dimensions: 350 x 130 mm



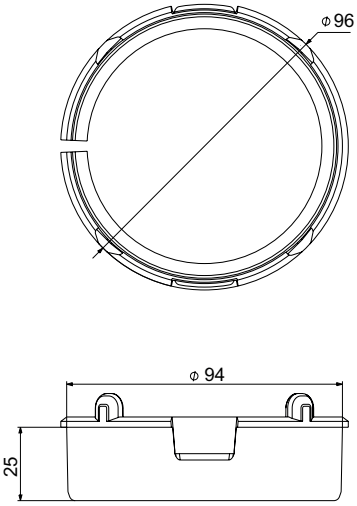
Stopper flat 75
sealing plug for outlet 90°
lateral 125-2 x 75



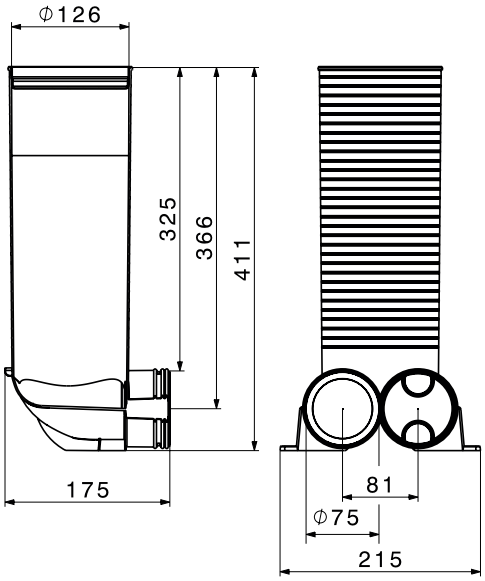
Click ring 75
for outlet 90° lateral 125-2 x 75



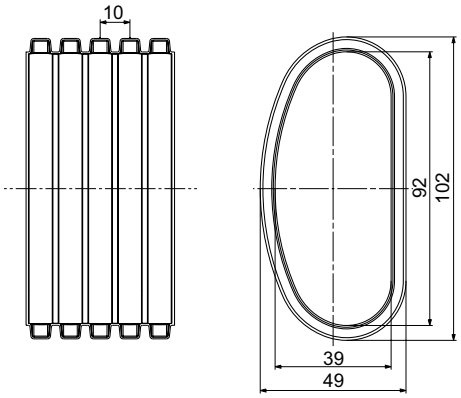
Click ring 90
for outlet 90° lateral 125-2 x 90



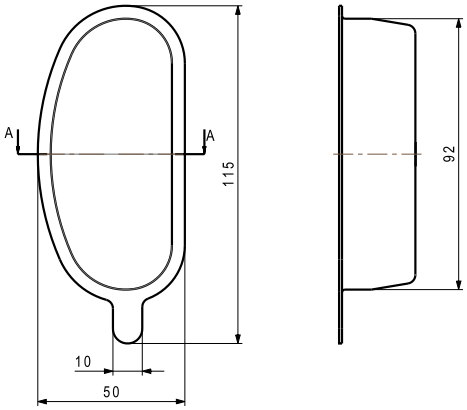
Outlet flat 90 125-75
Outlet round 90° lateral 125-2 x 75
made of plastic 2 x 75/125 mm
Usable length 325 mm

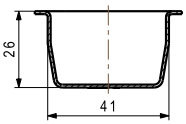


Flat channel 100
Flexible ventilation pipe 102 x 49 mm
Roll length 50 m
minimum bending radius 200 mm

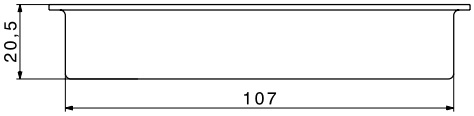


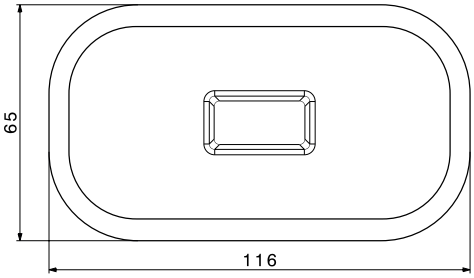
Plug flat channel 100



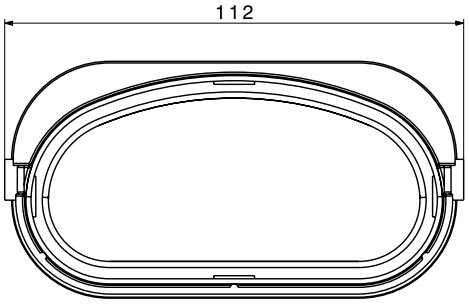


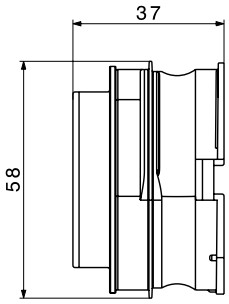
Stopper flat 100
for flat channel system 100 connections



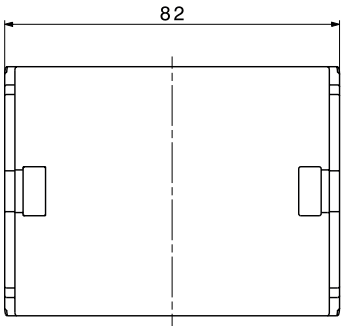


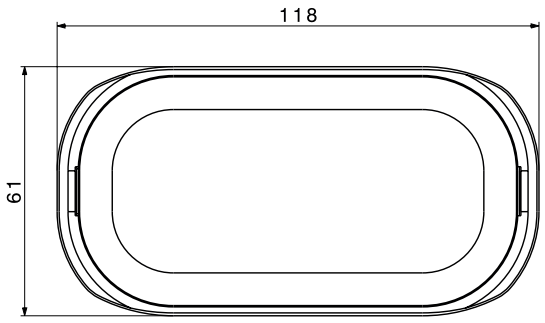
Seal flat 100
for flat channel 100



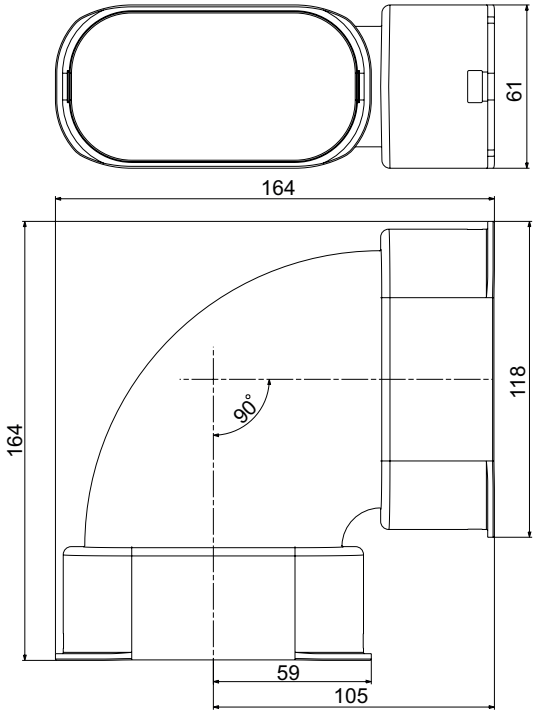


Sleeve 100
for flat channel 100

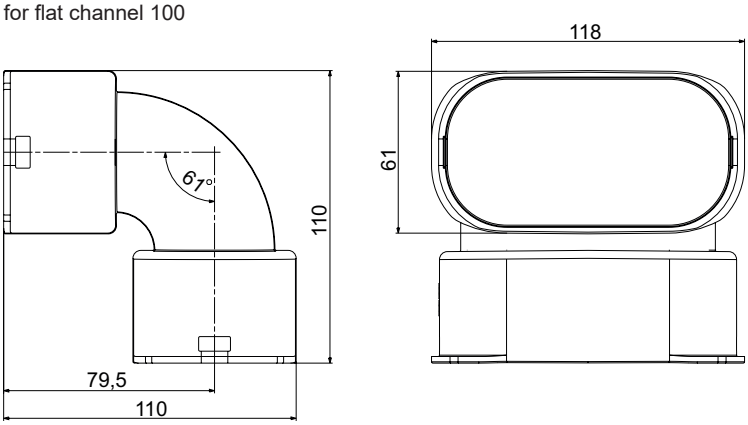




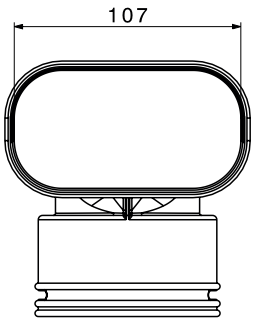
Arch horizontal flat 100
for flat channel 100

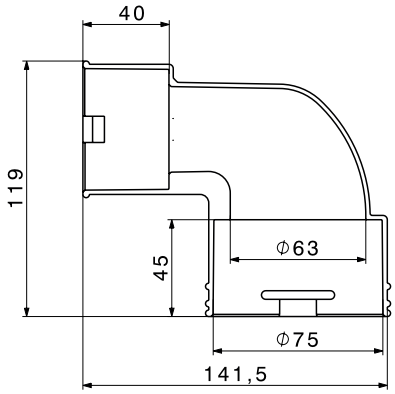


Arch vertical flat 100
for flat channel 100

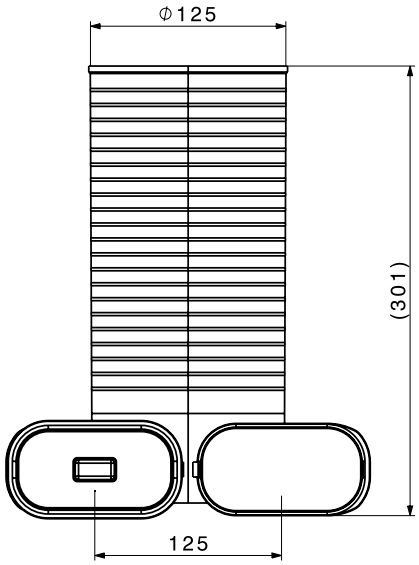


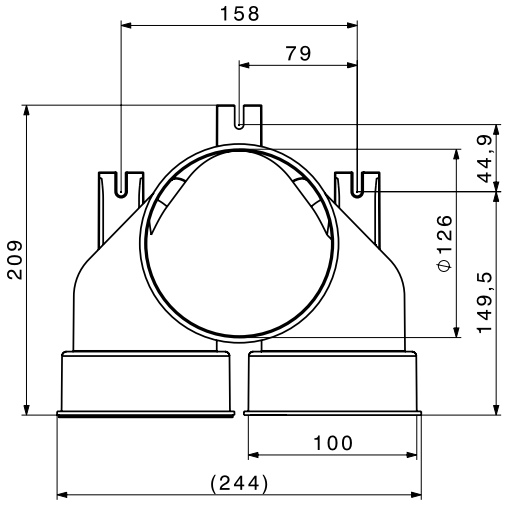
Arch vertical flat to round 100-75
Transition 90° round to flat



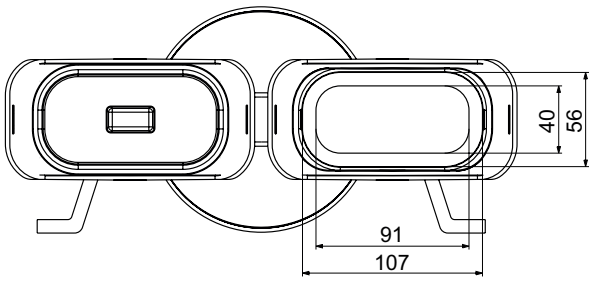


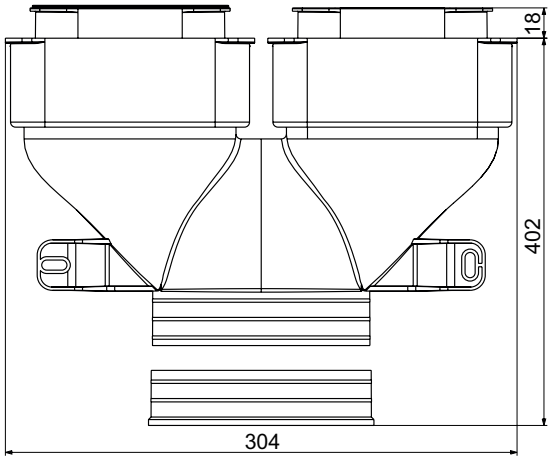
Outlet round, lateral 90° 125-2 x 100
for flat channel 100
incl. mounting bracket



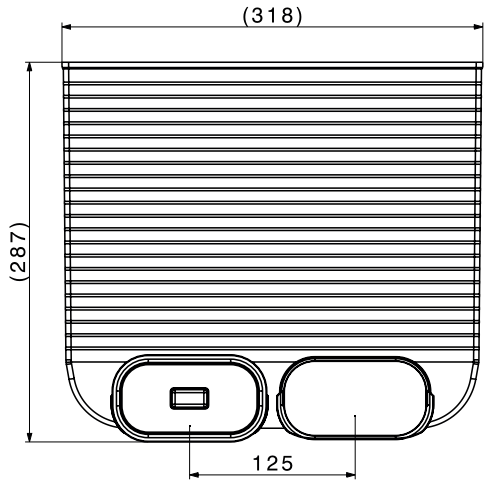


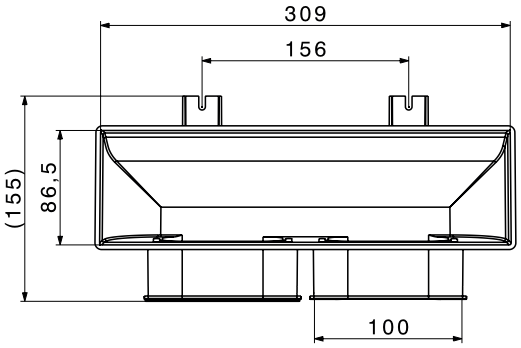
Outlet round, front 125-2 x 100
for flat channel 100
incl. mounting bracket



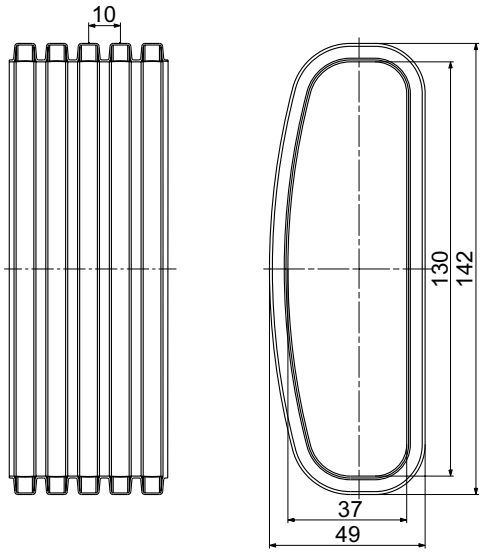


Floor exhaust flat 2 x 100
309 x 86.5 mm interior
2 flat channel 100 connections

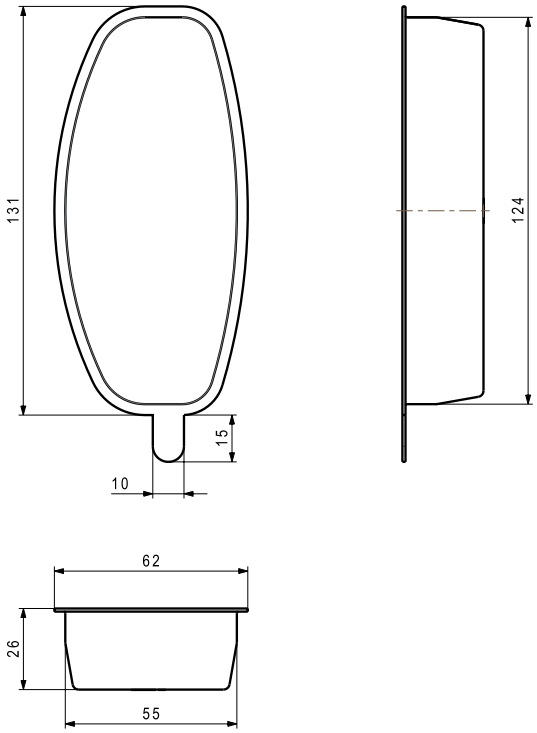




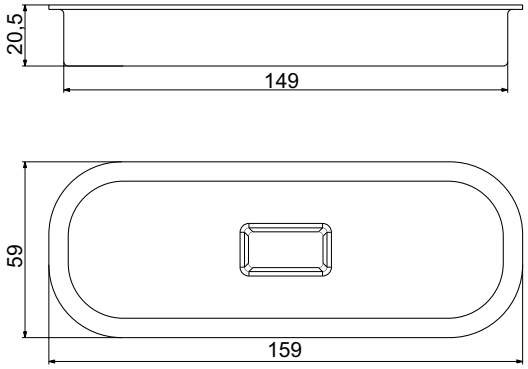
Flat channel 140
Flexible ventilation pipe 142 x 49 mm
Roll length 20 m
minimum bending radius 200 mm



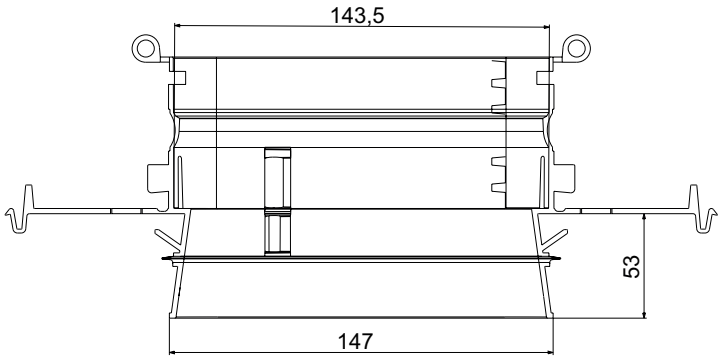
Plug flat channel 140

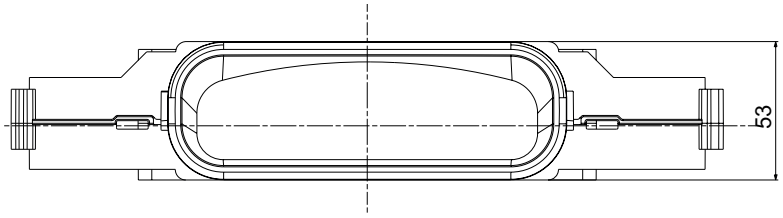


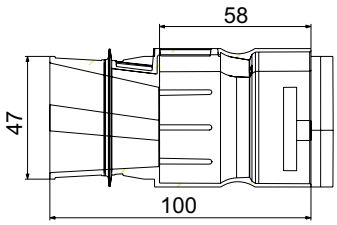
Stopper flat 140
for flat channel system 140 connections



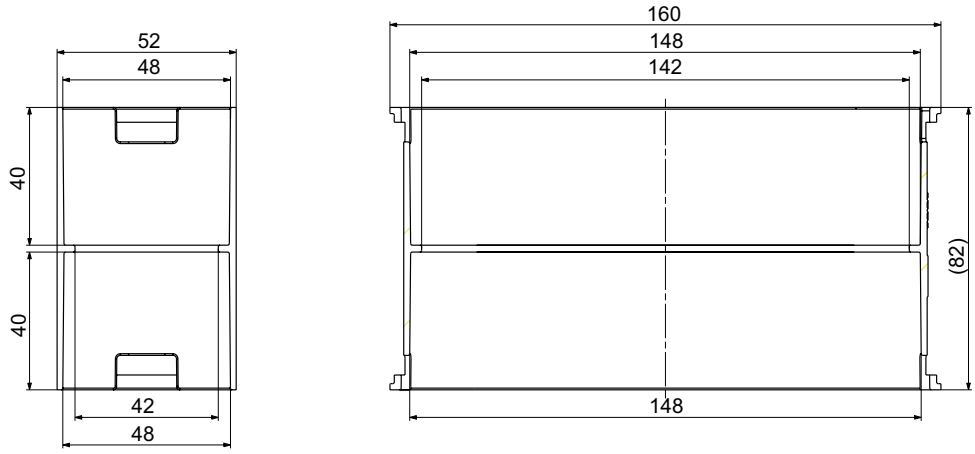
Seal flat 140
for flat channel 140



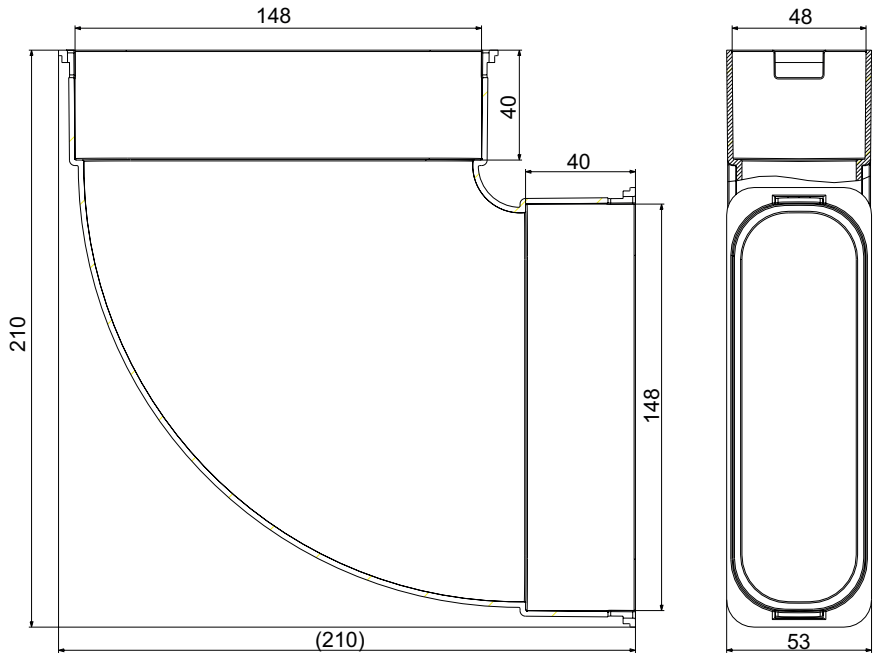




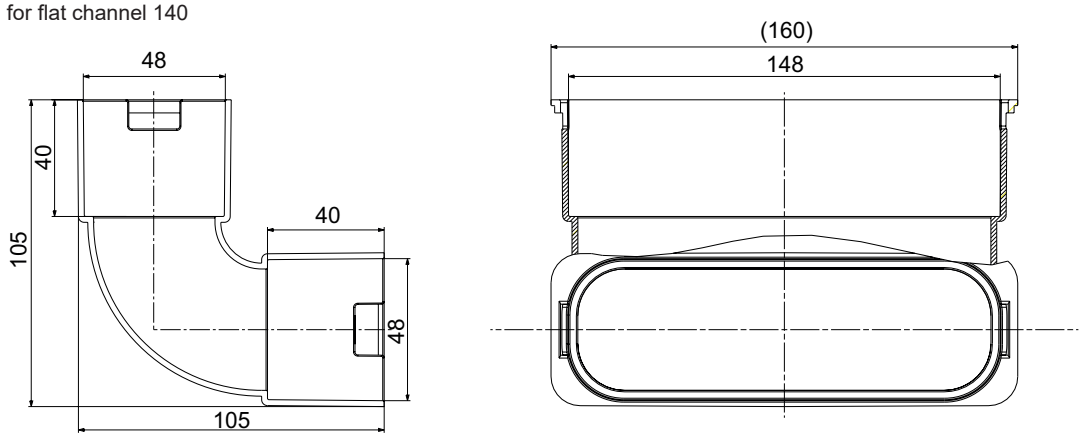
Sleeve 140
for flat channel 140



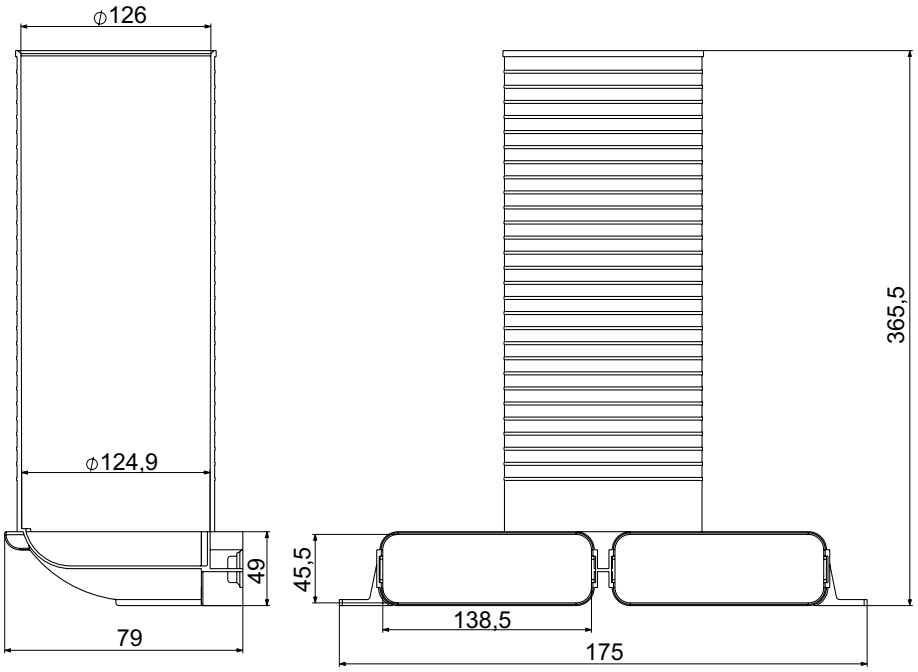
Arch horizontal flat 140
for flat channel 140



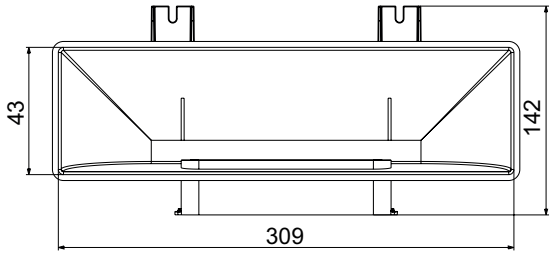
Arch vertical flat 140
for flat channel 140

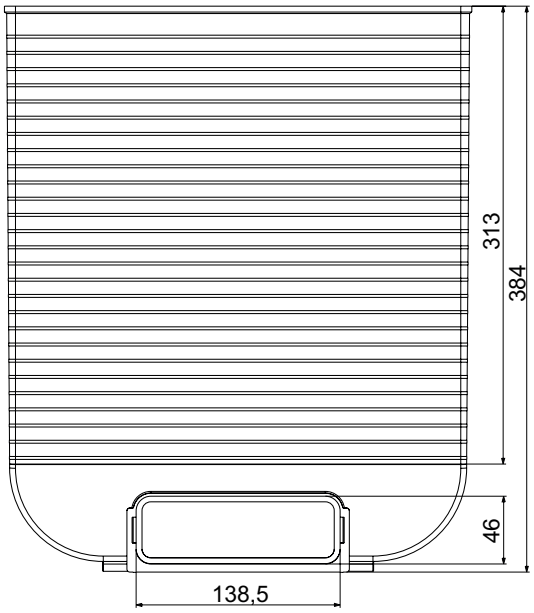


Outlet round, lateral 90° 125-2 x 140
for flat channel 140
incl. mounting bracket

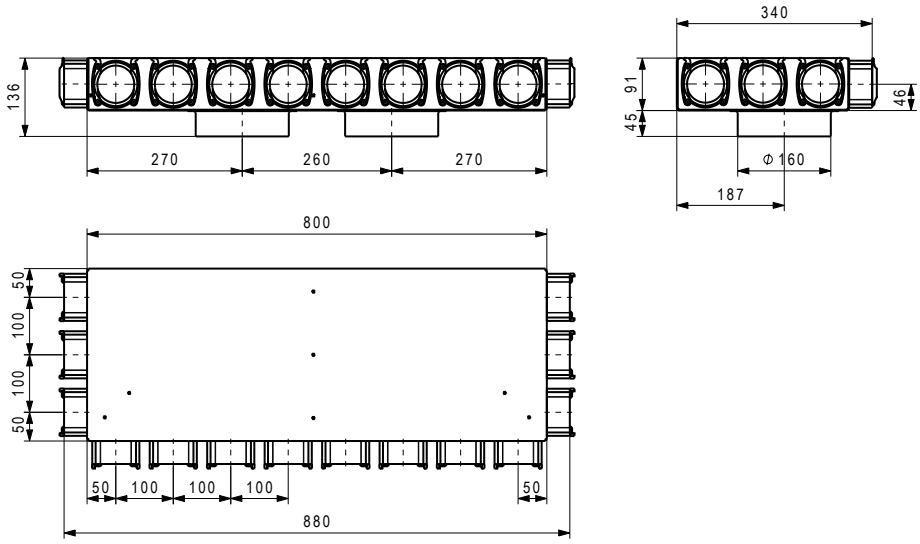


Floor exhaust flat 1 x 140
309 x 85 mm interior
1 flat channel 140 connection



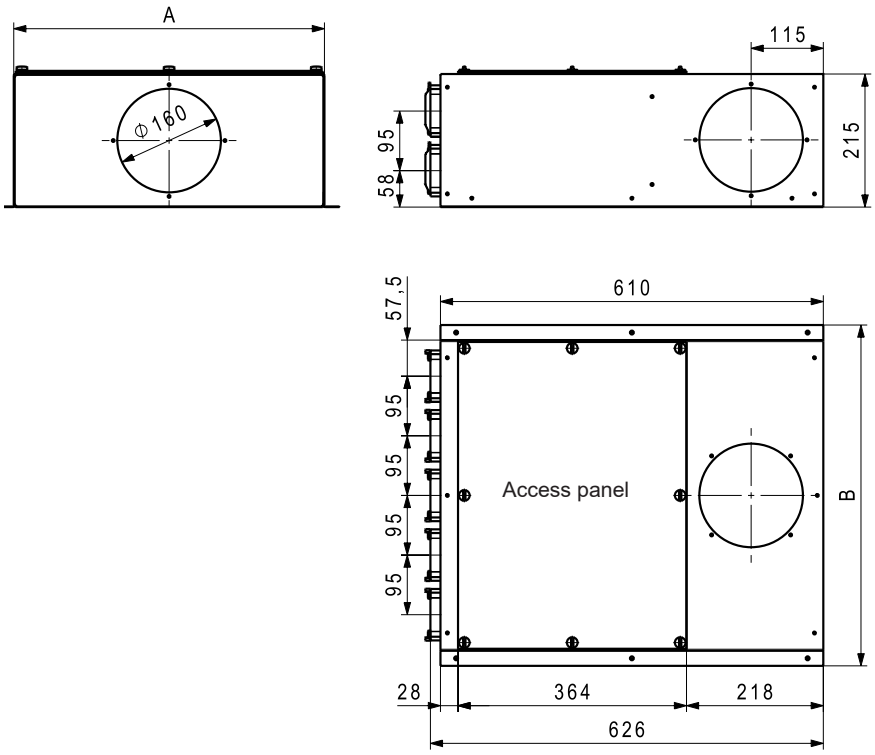


Distribution cases DN 160



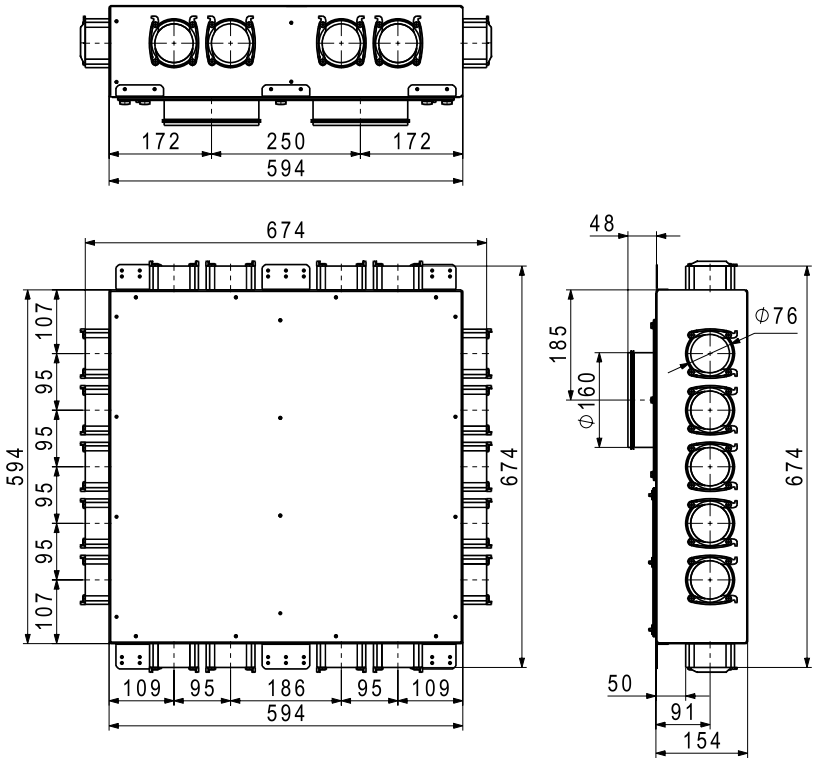
Distribution box VTB-160 14 x 75
Air distribution box of aluzinc sheet without access panel.
Connection nozzles:
2 x DN 160 supply and extract air
supply air 7 x DN 75 (4 x front and 3 x side)
extract air 7 x DN 75 (4 x front and 3 x side)

Distribution cases DN 160



Distribution case for 6, 8 or 10 connections VK-160-75
This distribution case with an integrated silencer is used if the pipes can be arranged and laid centrally. Orifices for setting the air quantity per flexible pipe DN 75 (included in the scope of delivery).
In type VK, the DN 75 connections are on the end; the connection nozzle DN 160 is supplied and can be installed on the end, top or on the left or right side. The distribution case is suitable for on-wall installation.

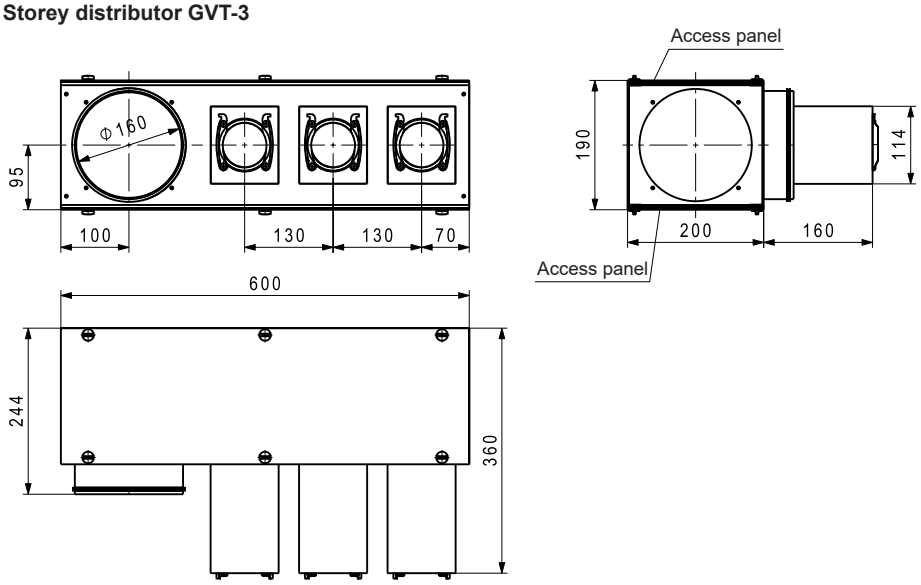
Type	A	B	n
VK-160-75 x 6	305	355	6
VK-160-75 x 8	400	450	8
VK-160-75 x 10	495	545	10



Distribution box VTB-160 9 x 75
for concrete installation
Distribution box of aluzinc sheet with access panel (can be painted on site). Lined on the inside with sound absorbing material.
Connection nozzle:
2 x DN 160 (downward)
Supply air 9 x DN 75
(5 x side / 2 x front and rear each)
Extract air 9 x DN 75
(5 x side / 2 x front and rear each)
Consisting of: box, 6 connection brackets, 4 end caps, incl. throttle orifices.

Distribution cases DN 160

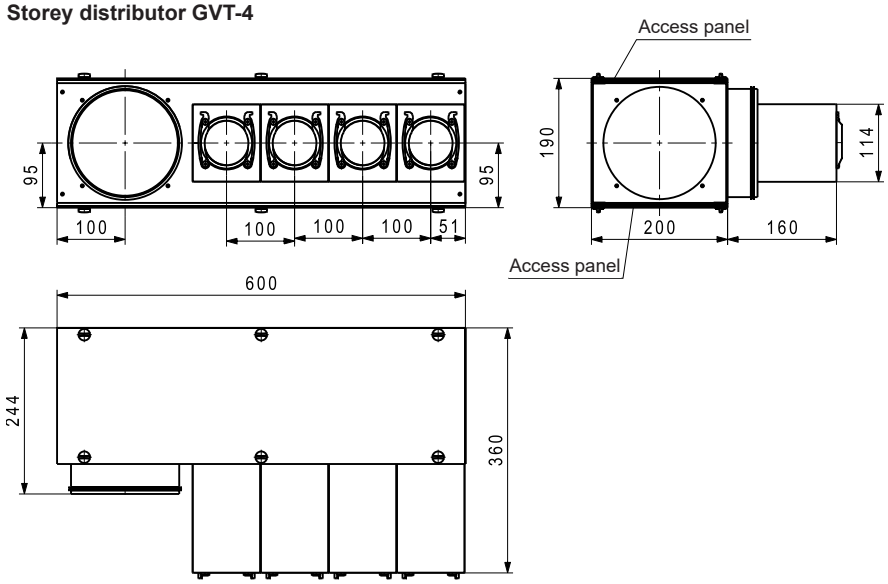
Storey distributor GVT-3



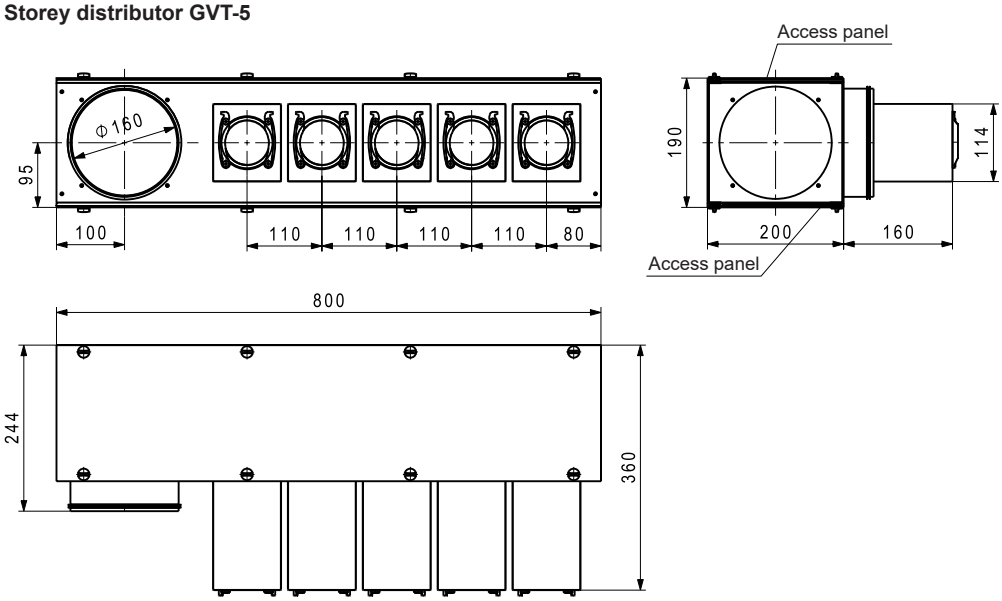
Storey distributor GVT-3 ... GVT-6
Storey distributor with 4 connection options for the main duct,
incl. 2 connection nozzles DN 160,
incl. 3 sealing caps DN 160.
Flexible installation and easy cleaning of the pipes via the access panels on both sides.
Orifices for setting the air quantity per flexible pipe DN 75 or DN 90 (included in the scope of delivery). Resonators for sound insulation.
Material: Galvanised steel
Inside lining: Sound absorbing mat

The mounting holder MH
for floor distributor GVT-3 ... GVT-6
must be ordered separately.

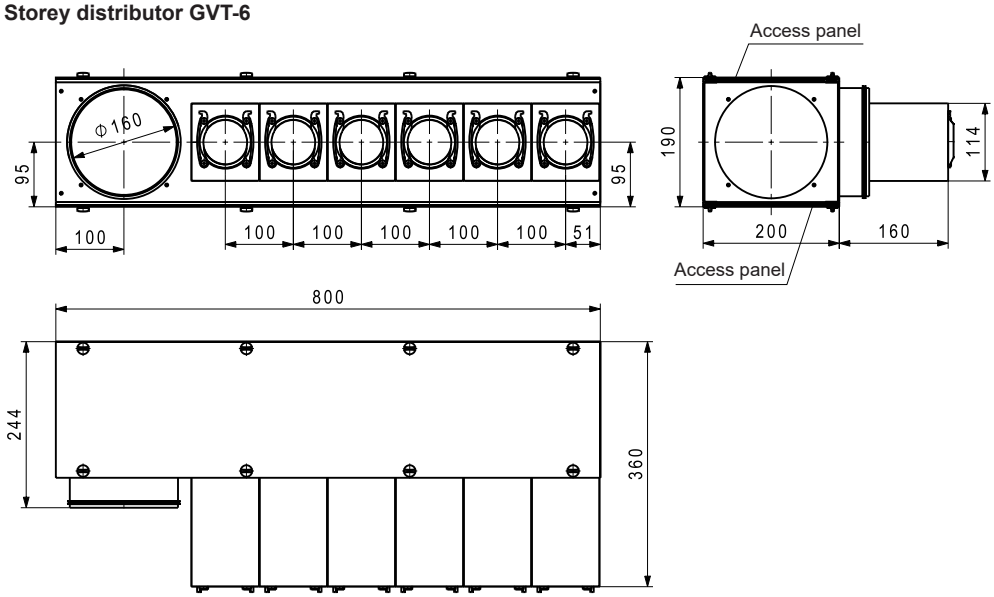
Storey distributor GVT-4



Storey distributor GVT-5

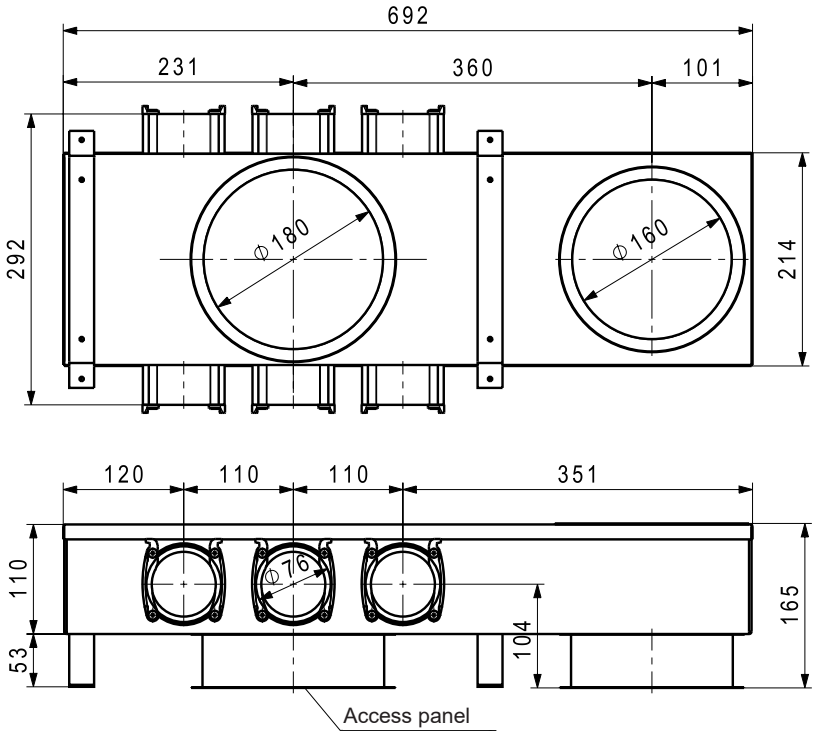


Storey distributor GVT-6



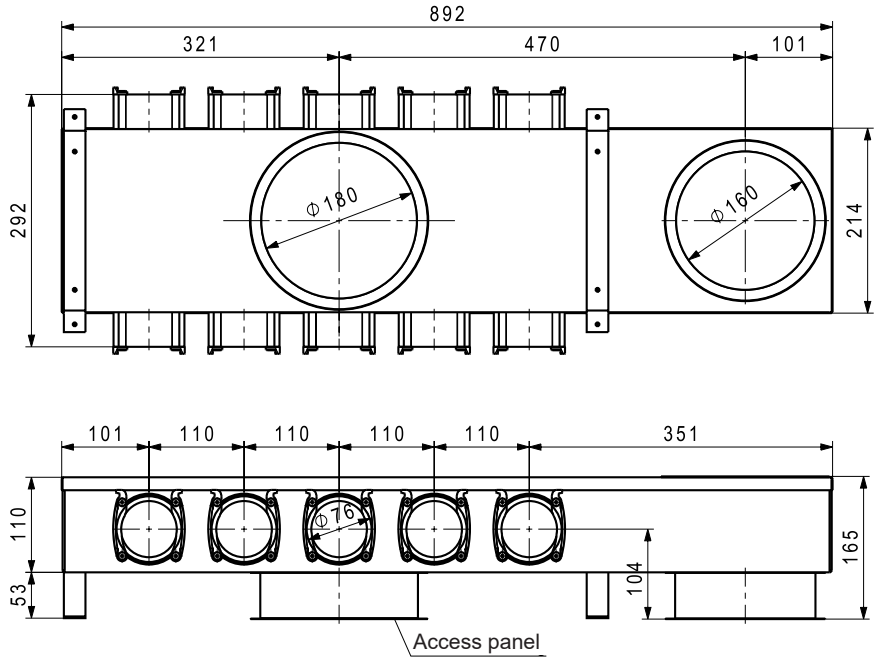
Distribution cases DN 160

UPVK 6 x 75



In-wall distribution case 6 x 75
for concrete installation
Distribution case of aluzinc sheet. With one connection nozzle DN 160 (upwards and downwards) and 2 x 3 nozzles DN 75 (lateral), incl. 2 end covers, 1 spigot DN 160, inside lining of sound insulation material, orifices for setting the air quantity per flexible pipe.

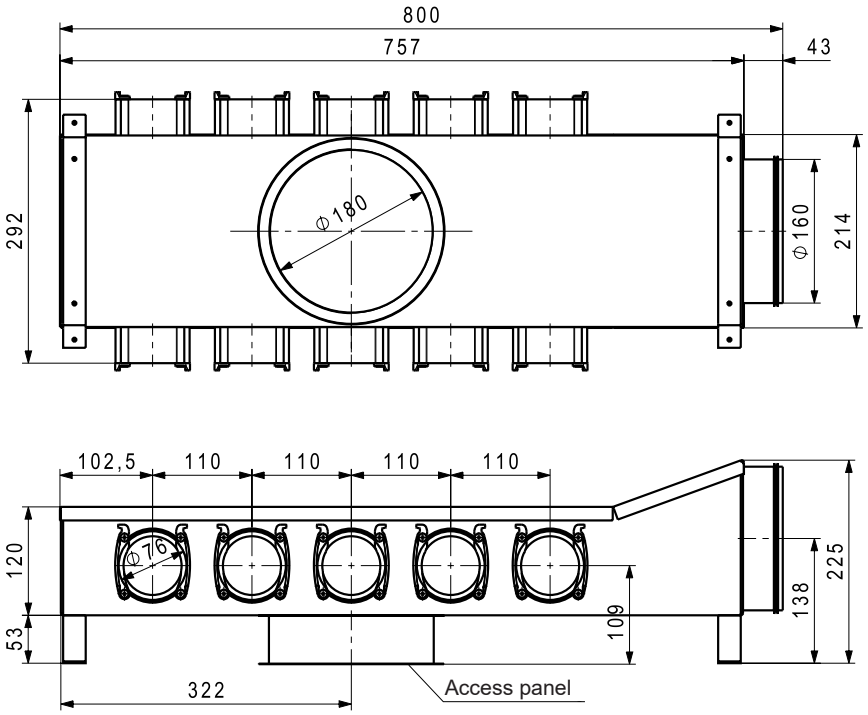
UPVK 10 x 75



In-wall distribution case 10 x 75
for concrete installation
Distribution case of aluzinc sheet for encasing in concrete. With one connection nozzle DN 160 (upwards and downwards) and 2 x 5 nozzles DN 75 (lateral), incl. 4 end covers, 1 spigot DN 160, inside lining of sound insulation material. Orifices for setting the air quantity per flexible pipe.

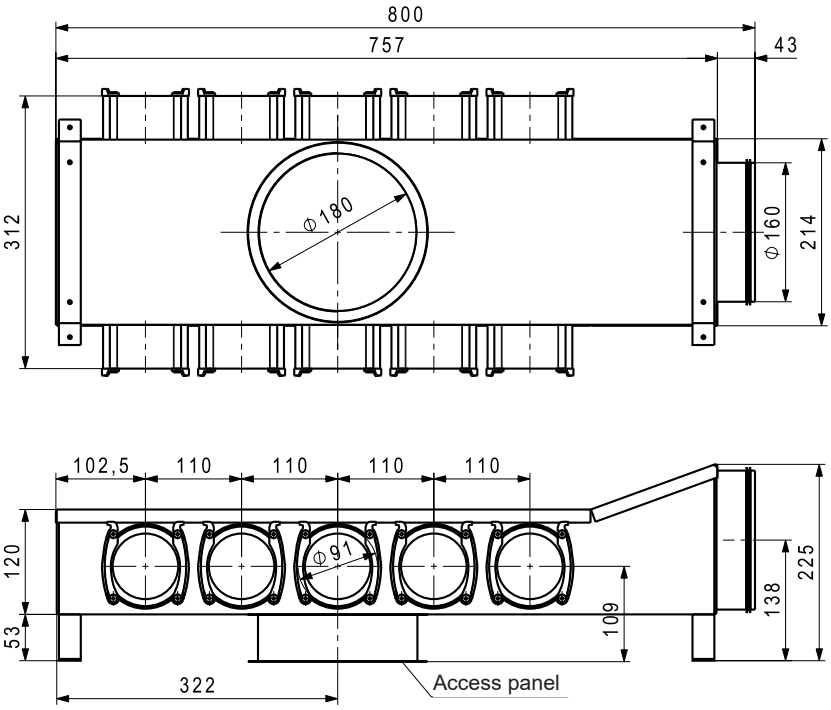
Distribution cases DN 160

In-wall distribution case UPVKS 10 x 75



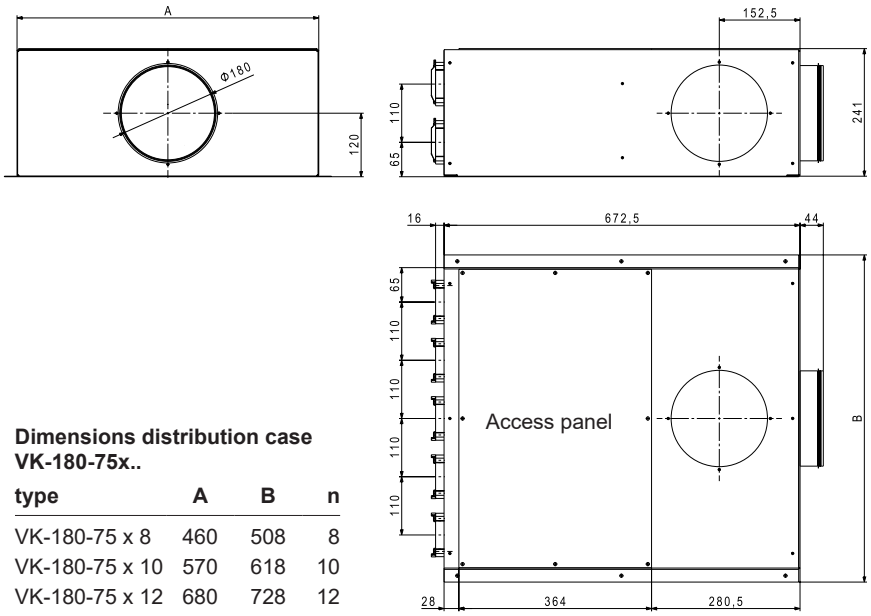
In-wall distribution case UPVKS 10 x DN X
for concrete installation
Distribution case made from aluzinc sheet. With one connection nozzle DN 160 (on face) and 2 x 5 nozzles DN 75 and DN 90 (lateral), incl. 4 end covers, inside lining of sound insulation material, incl. throttle orifices.

In-wall distribution case UPVKS 10 x 90



Distribution cases DN 180

Distribution case VK-180-75

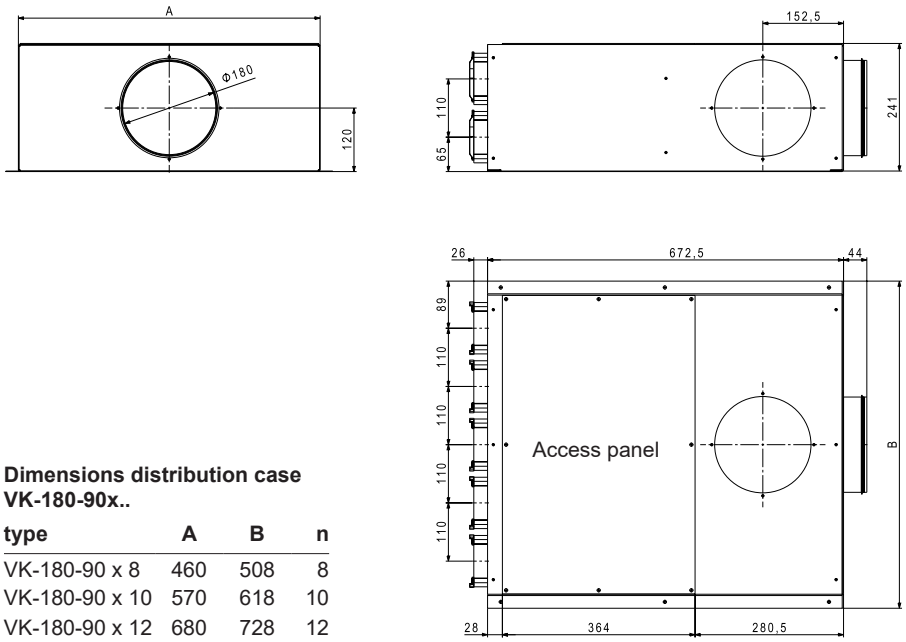


Distribution case for 8, 10 or 12 connections VK-180-75 resp. VK-180-90
This distribution case with an integrated silencer is used if the pipes can be arranged and laid centrally.
Incl. throttle orifices
In type VK, the DN 75 resp. DN 90 connections are on the end; the connection nozzle DN 180 is supplied and can be installed on the end, top or on the left or right side. The distribution case is suitable for on-wall installation.

Dimensions distribution case VK-180-75x..

type	A	B	n
VK-180-75 x 8	460	508	8
VK-180-75 x 10	570	618	10
VK-180-75 x 12	680	728	12

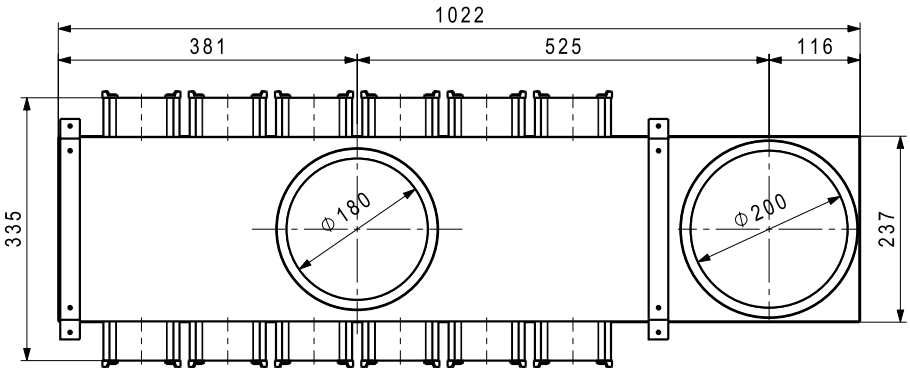
Distribution case VK-180-90

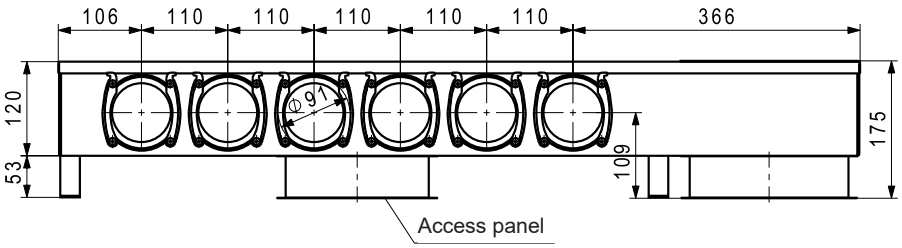


Dimensions distribution case VK-180-90x..

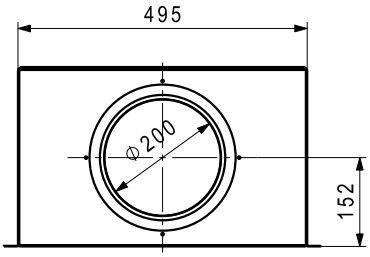
type	A	B	n
VK-180-90 x 8	460	508	8
VK-180-90 x 10	570	618	10
VK-180-90 x 12	680	728	12

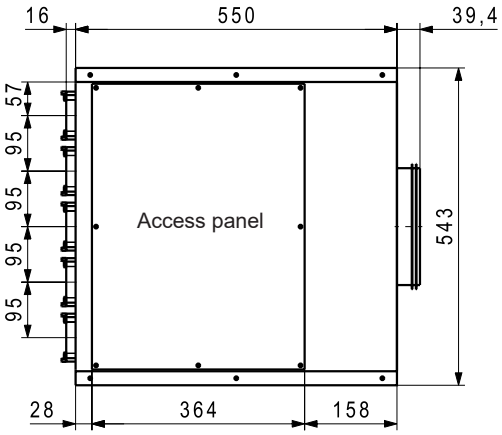
Distribution cases DN 200



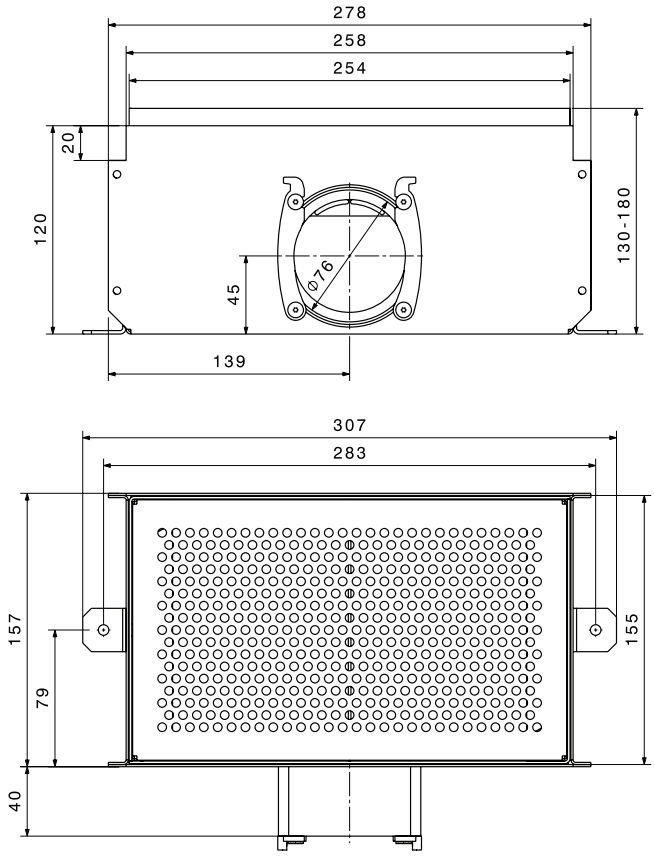


In-wall distribution cases UPVK 200-90x12
for concrete installation
Distribution case made from aluzinc sheet.
Lined on the inside with
sound absorbing material.
Connection nozzles:
2 x DN 200, 2 x 6 DN 90 (sideways).
Incl. end covers, 1 connection nozzle DN 200,
incl. throttle orifices

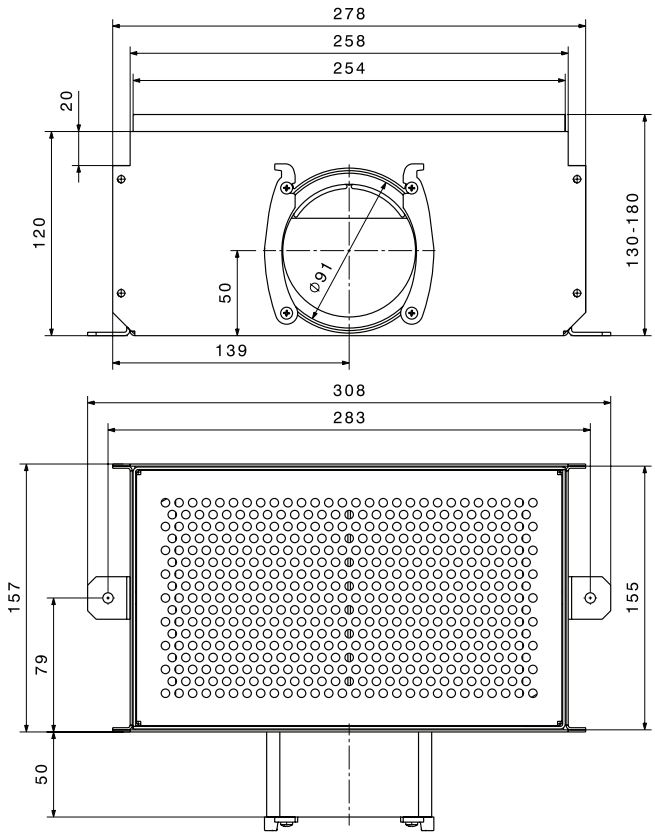




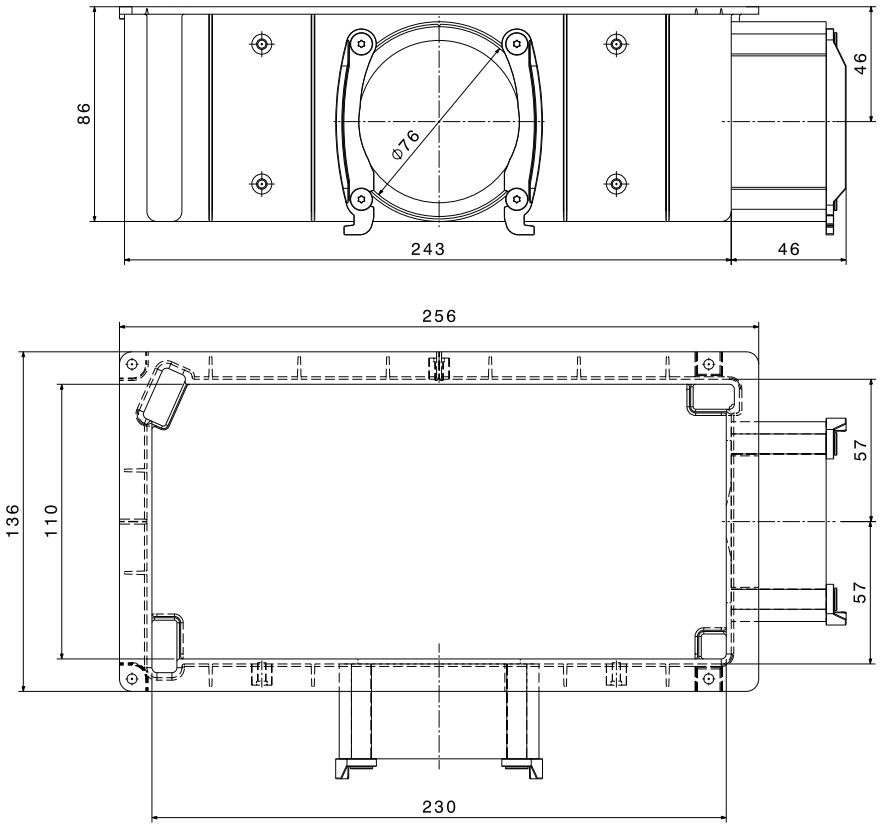
Distribution case VK200-75x15
Distribution case of aluzinc sheet
with access panel.
Inside with sound absorption block.
Connection nozzles:
1 x DN 200 (on the back)
15 x DN 75 (on the front)
Incl. throttle orifices



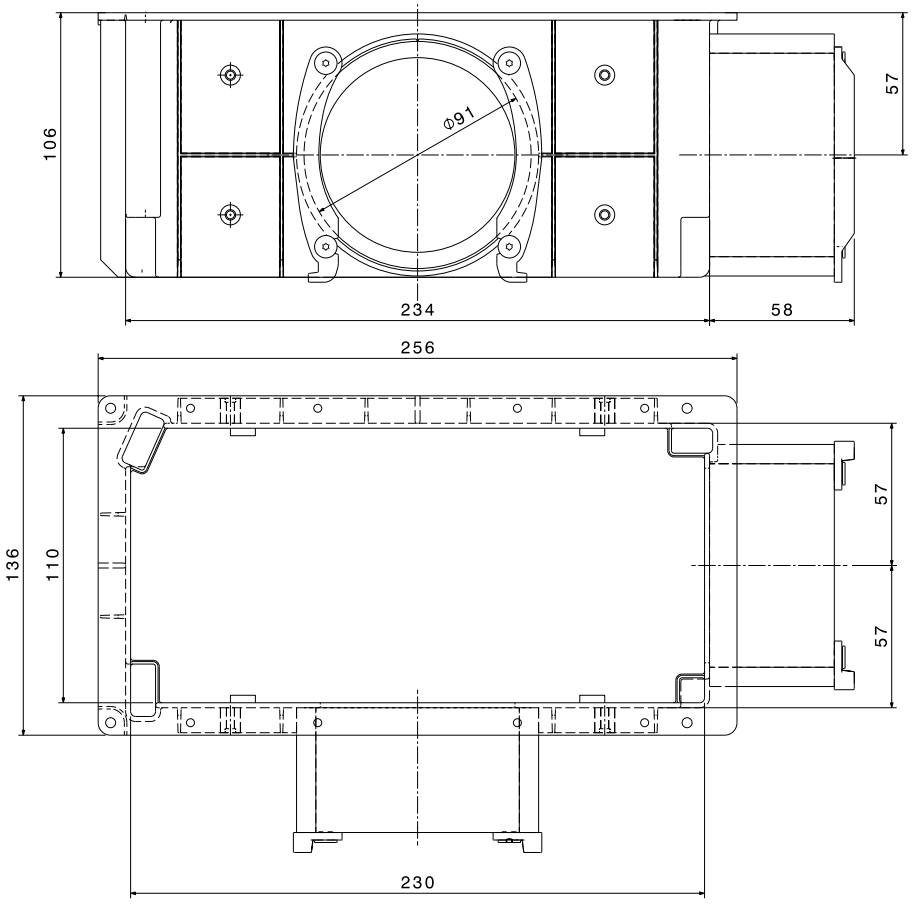
Floor grille BD-30-75
For installation in the floor structure, supply air flow rate 30 m³/h. Perforated stainless steel grille in an adjustable casing, height 130-180 mm, inner component of stainless steel with 3 contact points, outer component of aluzinc sheet with 2 fastening catches and one connection nozzle for flexible pipe FR-75. Only suitable for supply air.



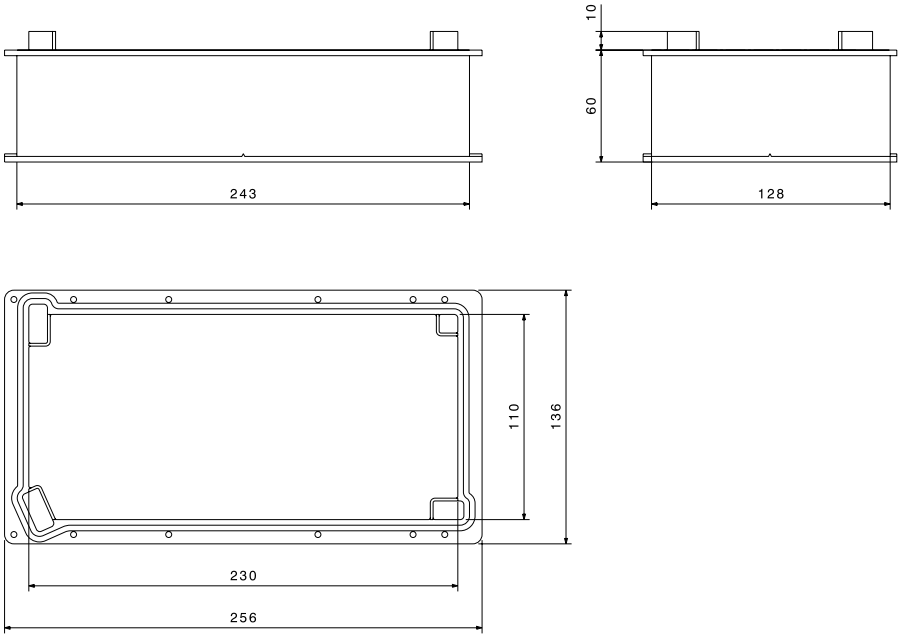
Floor grille BD-30-90
For installation in the floor structure, supply air flow rate 40 m³/h. Perforated stainless steel grille in an adjustable casing, height 130-180 mm, inner component of stainless steel with 3 contact points, outer component of aluzinc sheet with 2 fastening catches and one connection nozzle for flexible pipe FR-90. Only suitable for supply air.



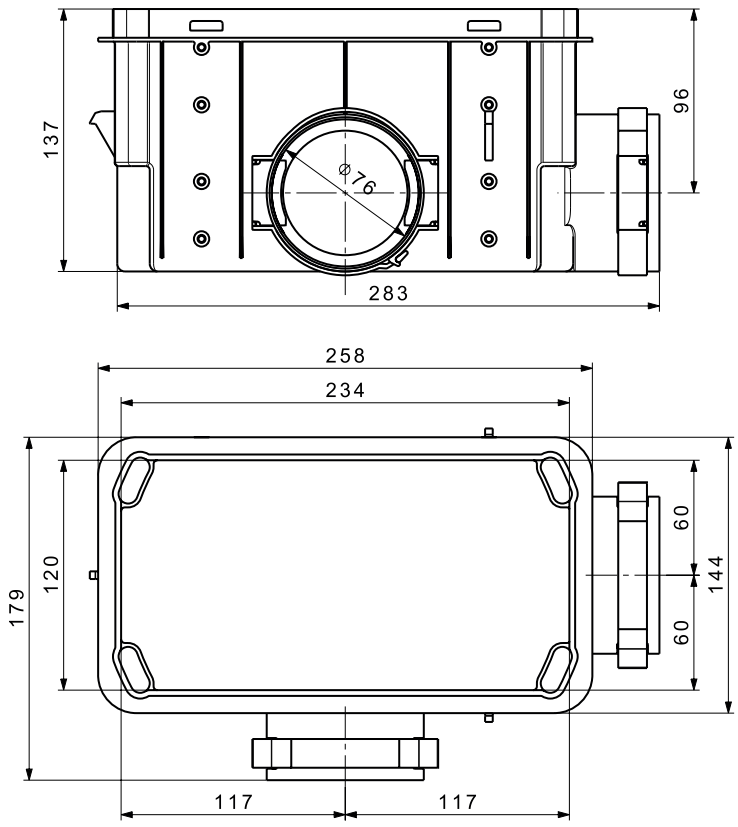
Connection housing AG-60
In combination with the design grilles.
The extension allows fine adjustment of the grille (rotating) after installation.
Suitable for installation in mass concrete, masonry walls or lightweight construction.
Of plastic with 2 connection nozzles DN 75.
Incl. fixing angles, sound absorbing mat and insert block as building protection cover and plastering aid.



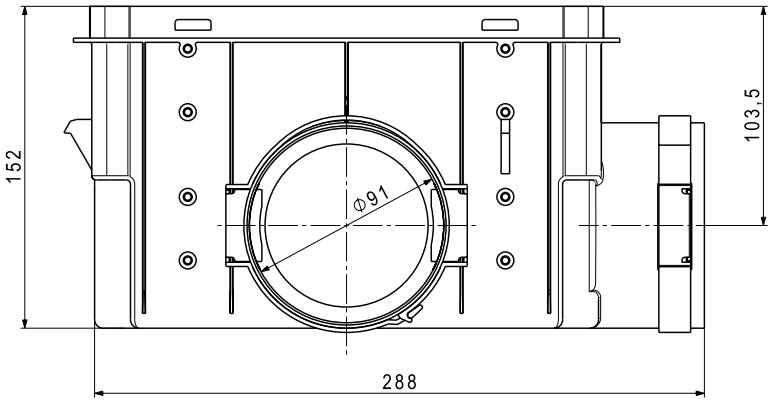
Connection housing AG-90
In combination with the design grilles.
The housing allows fine adjustment of the grille (rotating) after installation.
Suitable for installation in mass concrete, masonry walls or lightweight construction.
Of plastic with 2 connection nozzles DN 90.
Incl. fixing angles, sound insulation mat and insert block as building protection cover and plastering aid.

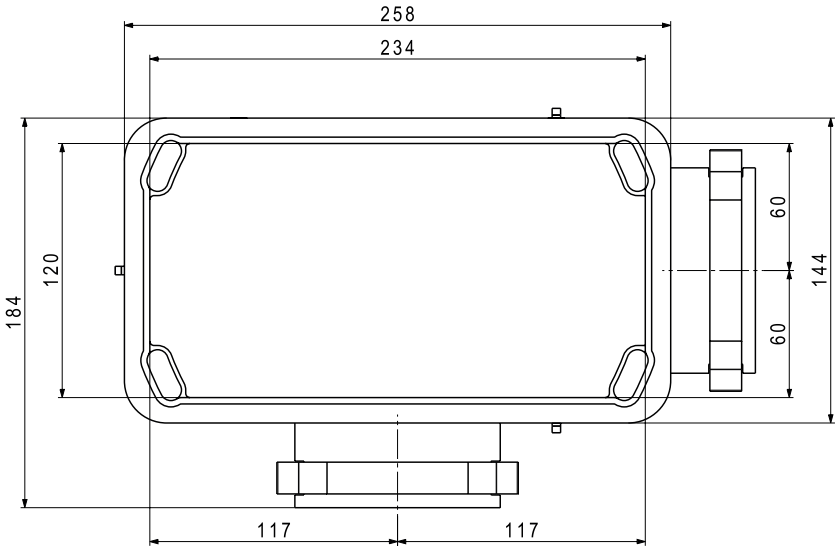


Extension VAG-60/VAG-90
For installation of AG-60 and AG-90 on the formwork panel. Extension permits precise grille alignment after installation.



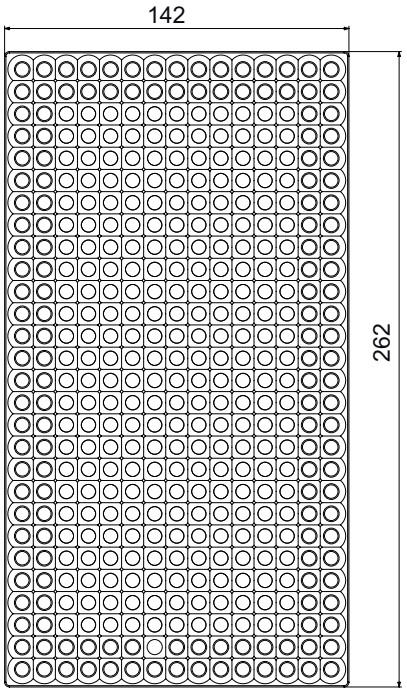
Connection housing quick 75
for supply and extract air incombination with the design grilles. The housing allows fine adjustment of the grilles after installation. Plastic housing with 2 connection nozzles DN 75. Very easy to mount, no nails in concrete after stripping.
Supply air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 40 m³/h
Extract air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 60 m³/h



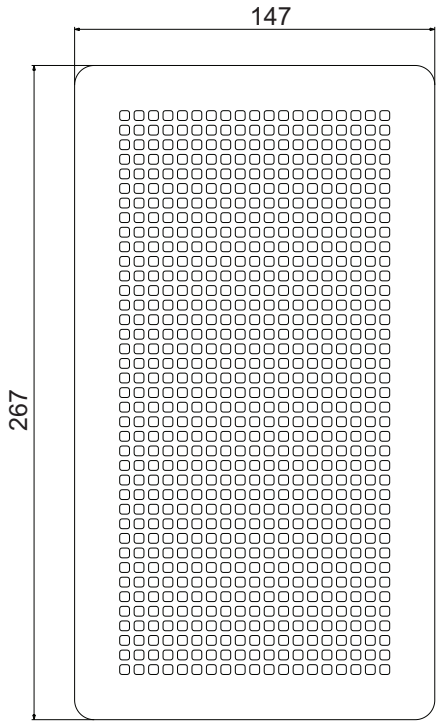


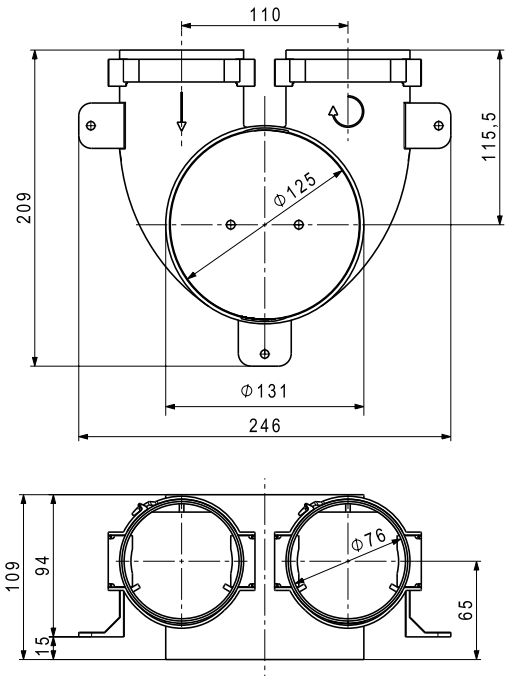
Connection housing quick 90
for supply and extract air in combination with the design grilles. The housing allows fine adjustment of the grilles after installation. Plastic housing with 2 connection nozzles DN 90. Very easy to mount, no nails in concrete after stripping.
Supply air:
1 x DN 90 up to 40 m³/h
Extract air:
1 x DN 90 up to 60 m³/h
Suitable for installation in mass concrete

Design grille made of plastic
The grille is mounted on the connection housing AG-60 or the connection housing quick 75/90. There are four grille designs (Pazifik, Adria, Atlantik, Karibik). The outside dimensions are identical for all grilles. The wall/ceiling plaster must not exceed 30 mm.



Design grille made of metal
The grille is mounted on the connection housing AG-60 or the connection housing quick 75/90. There are three grille designs (Alvier, Säntis, Pizol, Pilatus). The outside dimensions are identical for all grilles. The wall/ceiling plaster must not exceed 30 mm.

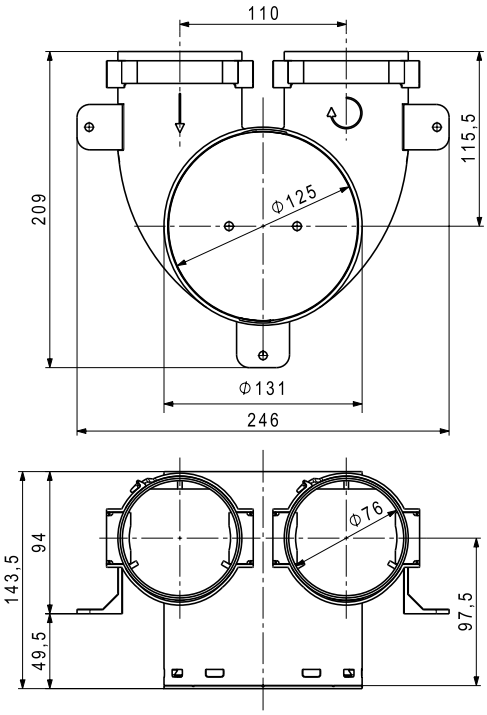




Connection cylinder quick 75 short
For masonry, lightweight
and wood construction
Plastic casing, two connections DN 75
incl. 1 stopper DN 75

Supply air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 40 m³/h
With tangential outlet only 1 x DN 75

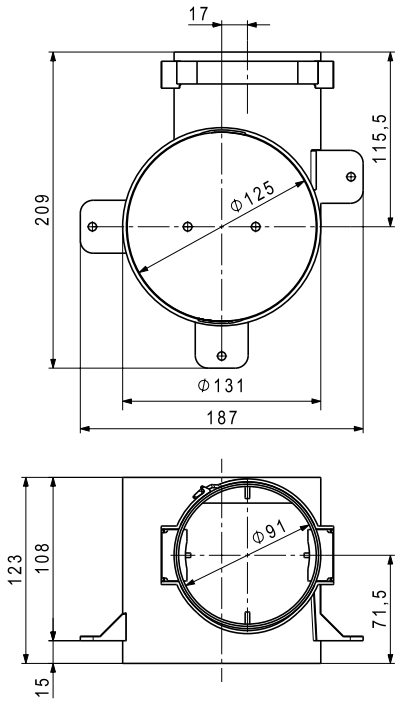
Extract air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 60 m³/h



Connection cylinder quick 75 medium
For element ceiling 60 mm, solid concrete
Plastic casing, two connections DN 75
incl. 1 stopper DN 75
and building protection cover

Supply air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 40 m³/h
With tangential outlet only 1 x DN 75

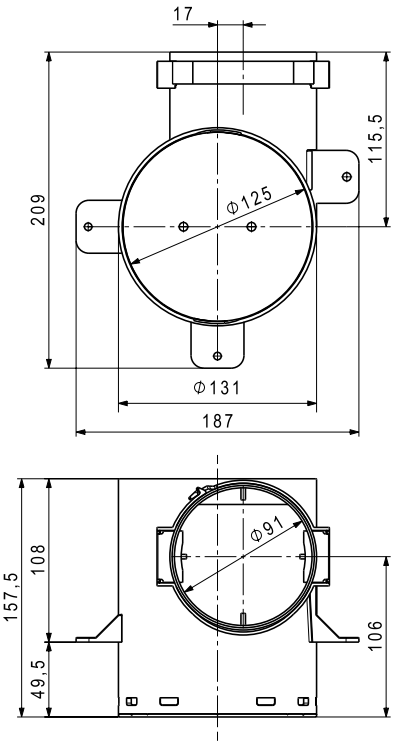
Extract air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 60 m³/h



Connection cylinder quick 90 short
for masonry, lightweight
and wood construction
Plastic casing, with connection DN 90

Supply air:
1 x DN 90 up to 40 m³/h

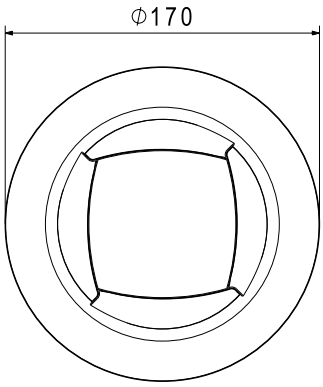
Extract air:
1 x DN 90 up to 60 m³/h



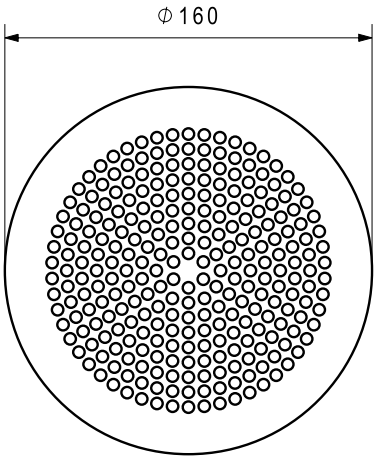
Connection cylinder quick 90 medium
for element ceiling up to 60 mm,
solid concrete
Plastic casing, with connection DN 90
incl. building protection cover

Supply air:
1 x DN 90 up to 40 m³/h

Extract air:
1 x DN 90 up to 60 m³/h

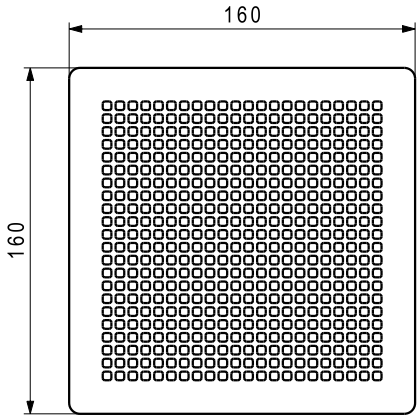


Design grille Tangential 125
suitable for:
Connection cylinder quick 75 and 90
made of plastic, with plug-in connection
Colour: white RAL 9016, can be painted on site
Supply air up to 40 m³/h
Extract air up to 50 m³/h



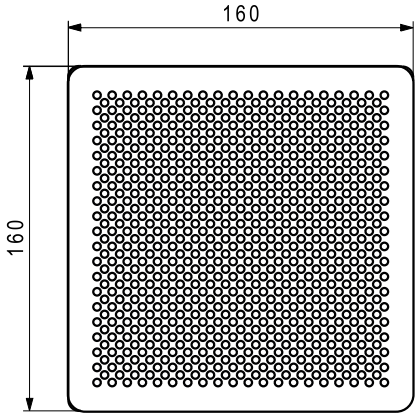
Stainless steel design grille Falknis
suitable for:
Connection cylinder quick 75 and 90
Brushed stainless steel
With plug-in connection
Supply air up to 40 m³/h
Extract air up to 50 m³/h

Design grille Falknis painted white
suitable for:
Connection cylinder quick 75 and 90
Steel, painted white (RAL 9016)
With plug-in connection
Supply air up to 40 m³/h
Extract air up to 50 m³/h



Stainless steel design grille Calanda
suitable for:
Connection cylinder quick 75 and 90
Brushed stainless steel
With support for
connection cylinder quick 75 and 90
Supply air up to 40 m³/h
Extract air up to 50 m³/h

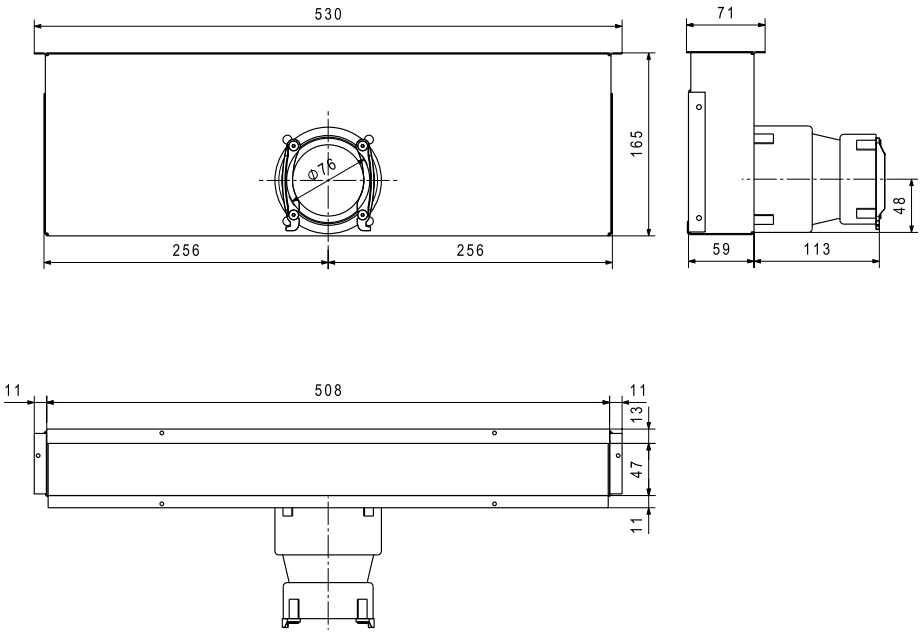
Design grille Calanda painted white
suitable for:
Connection cylinder quick 75 and 90
Steel, painted white (RAL 9016)
With plug-in connection
Supply air up to 40 m³/h
Extract air up to 50 m³/h



Design grille Rigi aluminium
Suitable for connection cylinder
quick 75 and 90
Aluminium sheet with flanged edges
Surface: anodized brushed aluminium
With holding fixture for
connection cylinder quick 75 and 90
Supply air up to 40 m³/h
Extract air up to 60 m³/h

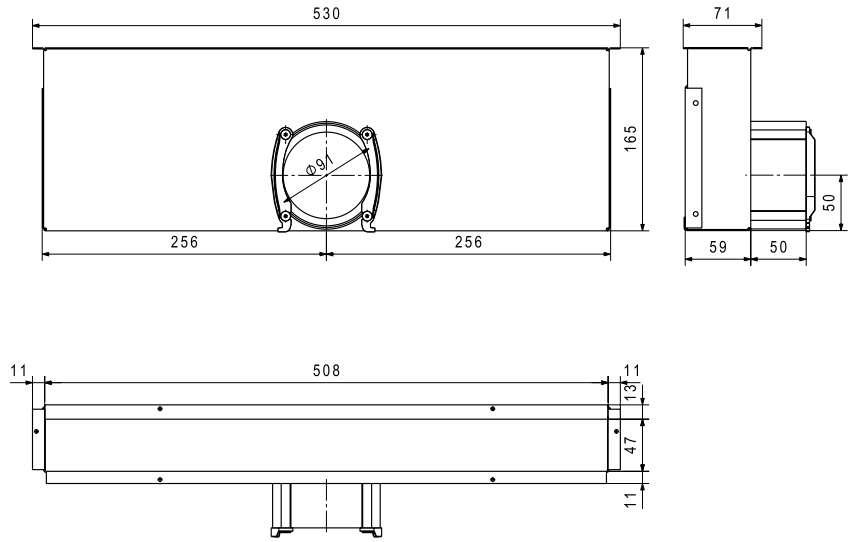
Design grille Rigi white
Suitable for connection cylinder
quick 75 and 90
Aluminium sheet with flanged edges
Painted white (RAL 9016)
With holding fixture for
connection cylinder quick 75 and 90
Supply air up to 40 m³/h
Extract air up to 60 m³/h

Slit grille SD-75



Slit grille SD-75 and SD-90
The slit grille is used for linear supply air distribution. It can be set to one or two outlet sides when taken into service, as required (preset to two sides).
The flow rate is set in the distribution case.

Slit grille SD-90



Relevant standards and regulations (incomplete)

- DIN 1946-T6: Controlled mechanical supply and extract air handling for apartments with heat recovery
- DIN 4109: Sound insulation in structural engineering
- DIN EN 779: 2012 Particulate air filters for general ventilation – determination of the filtration performance
- DIN 18017-T3: Ventilation of bathrooms and WCs without outside windows
- Energy Conservation Ordinance EnEV
- Ventilation System Guideline LüAR

General

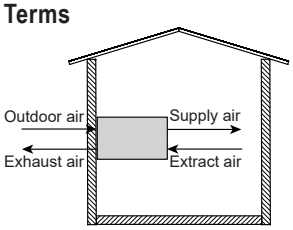
The following information is required for planning the comfort ventilation:

- Type, number, surface area and utilisation of the rooms included in the ventilation
- Floor plans and clear room heights
- Possible locations for routing distribution lines and outlets (ceiling, floor structure, outside wall, etc.)

One comfort ventilation device is only allowed to be used for one utilisation unit. The application limits must be complied with.

Fire protection requirements must be clarified with the responsible specialist. Normally (model building code), there are no special fire protection requirements within usage units with max. 2 dwelling units comprising in total less than 400 m² surface area and less than 7 m height. Living area ventilation units do not replace the drying out of the building. This should be completed by the time the living area ventilation is taken into operation.

Terms



Depending on the use to which they are put, rooms are divided into supply air, overflow and extract air areas (table 1). Rooms are only equipped with both supply and extract air ports in exceptional cases. Rooms equipped with comfort ventilation must be located within the thermal (insulated) building shell.

Table 1

Zone	Room use (examples)
Supply air zone	Bedroom, living room, nursery, dining room
Overflow zone	Corridor, hallway, stairway
Extract air zone	Bathroom, toilet, storage room, kitchen, hall

Flow rates

Necessary flow rates must be defined for a specific project on the basis of the current status of the relevant standards. Special requirements, e.g. concerning noise, moisture loads and temperatures must be taken into account. The following design recommendations are based on DIN 1946 part 6, although compliance with this standard must be examined on a case-by-case basis.
The largest of the flow rates described in the following 4 points is used as the basis for the nominal ventilation of the ventilation unit (e.g. total of all extract air flow rates).
The maximum air flow rate of the ventilation unit should be sufficient for intensive ventilation (1.3 x nominal ventilation at 170 Pa, for example).

1. A flow rate of 30 m³/h must be provided per person for the residential unit.
2. The area-related minimum flow rates in Table 2 must be complied with.
3. The flow rates in Table 3 must be guaranteed for extract air rooms.
4. The flow rates in Table 4 are recommended for supply air rooms.

Table 2

Relevant surface A_{NE} [m²]	**20**	**30**	**50**	**70**	**90**	**110**	**130**	**150**	**170**	**190**	**210**
Nominal ventilation $V_{R,NL}$ [m³/h]	35	45	65	80	100	115	125	140	150	155	165

Table 3: extract air

Room type	Extract air [m³/h]	n *
Kitchen, kitchenette	40	2
Bathroom, toilet with shower	40	2
Toilet	20	1
Utility room, hobby room	20	1

* n = usual number of flexible pipes

Table 4: supply air

Room type	Extract air [m³/h]	n *
Living room	40-50	2
Master bedroom (2 persons)	40	2
Nursery (1 person)	24	1
Office (private), dining room, guestroom	20	1

* n = usual number of flexible pipes

Supply/extract air

Only directly or indirectly heated rooms are included in the ventilation. All supply and extract lines should be routed within the insulated building envelope.
The position of the supply air, overflow air and extract air openings must be selected such that cross-ventilation occurs. Supply air openings must be positioned outside the occupied area, and in particular not above the head ends of beds, writing desks or couches.

Hoval normally uses round flexible pipes DN 75 or flat channels 100 as distribution lines. For noise and efficiency reasons, they should be 6 and 15 m long. The external pressure drops (outside + supply air or extract + exhaust air incl. distributor and silencer) should not be more than approx. 100 Pa for nominal ventilation. Hoval recommends complying with a maximum pressure drop of 40 Pa for the lines after the distributor (room-side). Flow rates in excess of 27 m³/h rated ventilation must therefore be distributed between 2 lines. In long line runs, it is necessary to carry out a corresponding calculation.
Distributors must be accessible for inserting the throttle orifices and for cleaning.
Lines between the ventilation unit and the supply air distributor or extract air manifold are normally routed with the diameter of the unit coupling. In cool rooms, they must be insulated.

Fresh/exhaust air

The fresh air inlet should be planned in such a way as to avoid the intake of pollutants and smells. It should be at least 2 m above ground and not close to garages or roads with heavy traffic.

The exhaust air outlet should be positioned in such a way that it cannot be drawn in by the outside air inlet. The horizontal distance should be at least 2 m (note the predominant wind direction).
The fresh and exhaust air lines must be insulated over their complete surface and be impervious to vapour diffusion so as to avoid condensation forming on surfaces (e.g. 25 mm EPDM). The insulation must be continued through the outer wall at least until shortly below the outside surface.

Silencers

Silencers suitable for the noise emissions of the ventilation units must always be positioned in the supply and extract air lines.
To avoid disturbance of neighbours or on your own patio, for example, it is recommended that silencers should be installed in the exhaust air and possibly also outside air lines.

Unit installation

The FR comfort ventilation units can be mounted in various different installation positions. (mounting on a wall/ceiling/floor, outside air top/bottom). The access panel is present on both sides for installation in opposite direction. The FRT comfort ventilation units are always installed with the nozzles directed upwards. Vibration dampers (accessories) must be used for mounting in order to avoid noise transmission and to prevent distortion of the unit. The entire comfort ventilation unit as well as its integrated and add-on parts must be accessible for maintenance and servicing work.

The installation conditions in the technical data (temperature, humidity) must be complied with.

Operator terminal/wiring

The comfort air ventilation unit is configured ready-to-connect. For connection with the mains supply a 3 m long cable with plug is supplied. A 230 V mains socket should be provided close to the comfort ventilation unit in the electrical planning. The operator terminal should be installed so that it is visible (fault display, operation).

The comfort ventilation unit and operator terminal are connected by an 8-pol CAT 5 patch ribbon cable. A socket (RJ45) must be installed in the building close to the comfort ventilation unit and connected to the position of the operator terminal (RJ45 plug). The HomeVent® comfort ventilation unit is supplied with a 3 m long cable with an RJ45 plug for connecting the unit to the socket.

Combination with heating sources

When using ventilation systems together with heating sources, the chimney sweep must be consulted in advance.

Systems extracting air (e.g. cooker hood, ventilation system, central vacuum cleaner, extract air dryer) can give rise to negative pressures and cause hazardous flue gases to be drawn out of the heat source; as a result, a pressure monitor with design certification is generally required as a safety device. This interrupts the electrical power supply to the air extraction system if dangerous pressure conditions arise. The use of approved fire sources independent from the room air can prevent the flue gas being sucked out.

Services

Hoval will be happy to assist you in planning and taking the systems into operation.

IsiPipe and IsiPipe Plus air ducts made of EPP

- The IsiPipe EPP air ducts are joined via a connecting sleeve.
- To ensure tight sealing, the individual sections must be inserted into the sleeve as far as the stop. Tight sealing must be ensured even when individual sections expand or contract as a result of temperature fluctuations.
- The individual sections can be shortened (e.g. using a knife or a saw). When shortening sections, always cut at right angles and remove any residue from the pipe. Use an assembly device, e.g. pipe clamp.
- IsiPipe air ducts made of EPP must be accessible (must not be routed in the cable duct).
- IsiPipe air ducts made of EPP must be supported at regular intervals (approx. every 1.5 m) with pipe clamps.
- When installing accessory parts with a high dead weight, the weight must be supported so that there is no load on the IsiPipe air duct.
- Thermal bridges must be prevented at the junctions between IsiPipe air ducts and pipes or components made of another material, e.g. metal.