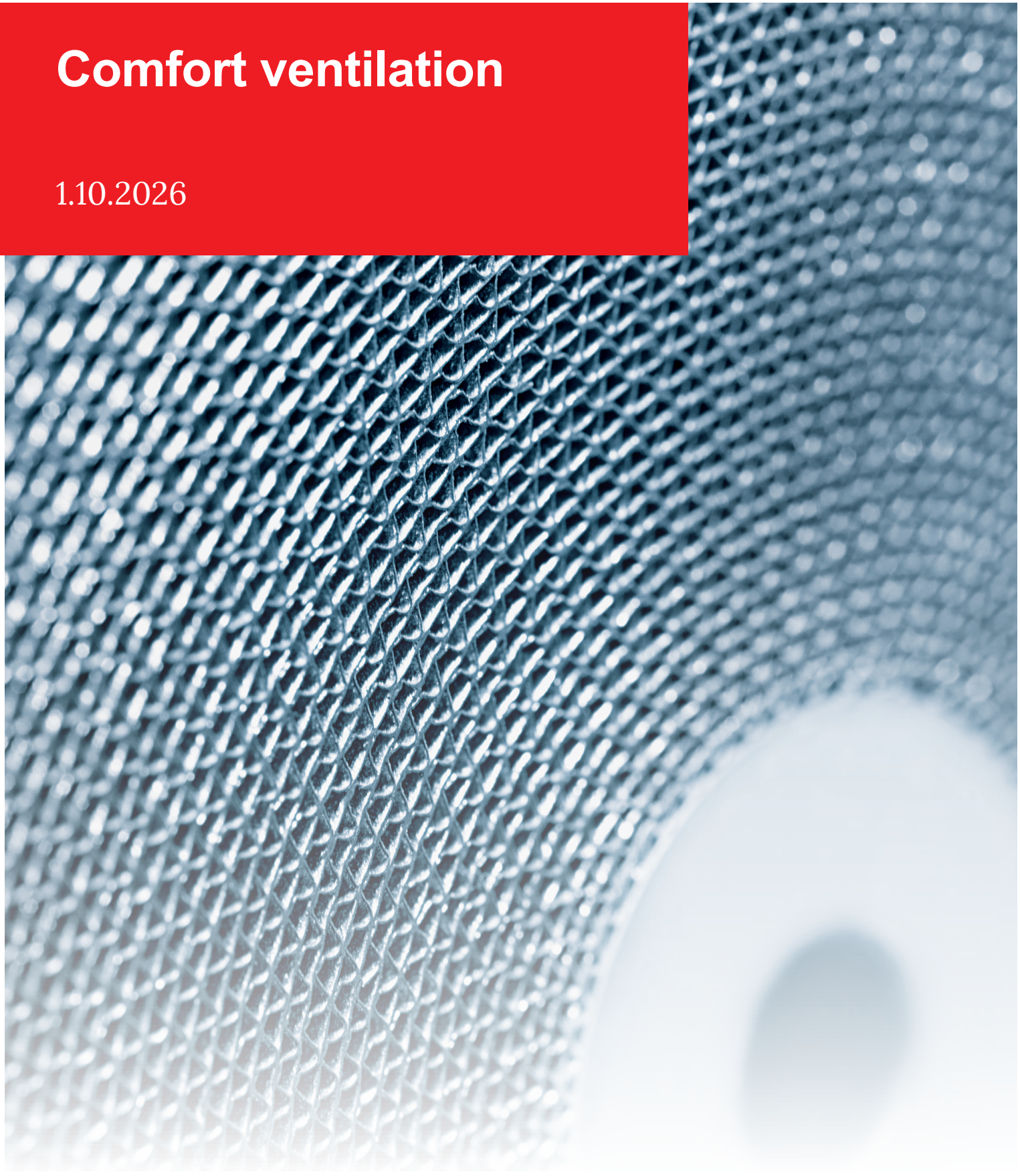
Hoval

CATALOGUE

Comfort ventilation

1.10.2026



Comfort ventilation



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



Hoval HomeVent® ERT (250-450)
Comfort ventilation unit



Hoval HomeVent® Components

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CATALOGUE

Hoval HomeVent®

Comfort ventilation unit HomeVent® ER (200-400)



Hoval | Responsibility for energy and environment

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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 exchanger with speed regulation
- Two backward-curved EC fans (continuously adjustable 15-100 %)
- High-quality large-area filters
  - 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, IP40

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
  - Mains cable 3 m
  - RJ45 cable 3 m

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

A+ → F

Energy recovery
The built-in enthalpy exchanger 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 exchanger 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 exchanger, 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 continuously monitors the extract air for volatile organic components and regulates the supplied or discharged air volume 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, 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 exchanger 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 can be activated during commissioning.

Function HomeVent® ER (200-400)

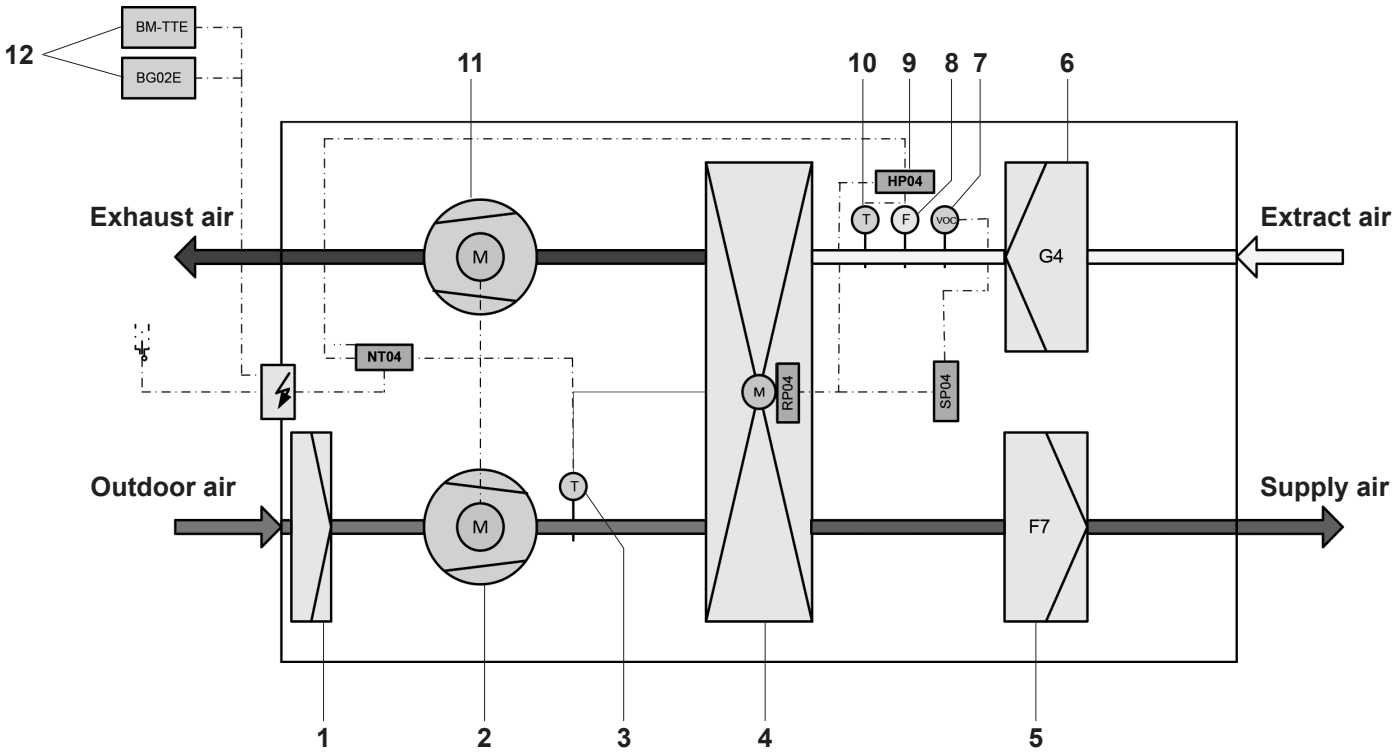
The outside air fan draws in outdoor air via the main line. In the first stage, this air is cleaned via a fine-meshed grate. In the enthalpy exchanger, the supply air is heated, depending on the temperature, and humidified. The extent to which heat and humidity are recovered is dependent on the temperature 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 exchanger 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 exchanger 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 exchanger
5 Supply air filter
6 Extract air filter
7 VOC or CO_2 extract air sensor
8 Moisture 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 m^3/h	Ext. pressure Pa	Part No.
(200)	200	100	7018 079
(300)	300	100	7018 081
(400)	400	100	7018 665

Energy efficiency class
see “Description”

Required accessories



Operator terminal BG02 E — 2066 444
for HomeVent® ER and ERT
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® ER and ERT
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® ER and ERT
Operation of all Hoval ventilation units, heating and hot water circuits connected to the bus system.
Customer-specific configurable start screen.

incl. fitting accessories



HovalConnect

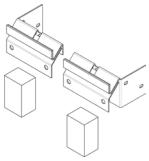
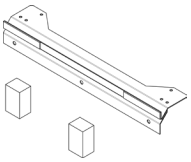
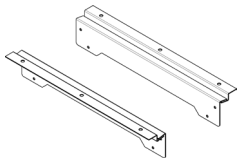
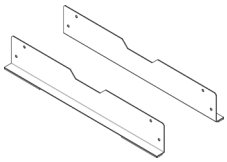
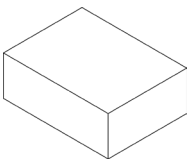
HovalConnect LAN — 6049 496
HovalConnect WLAN — 6049 498

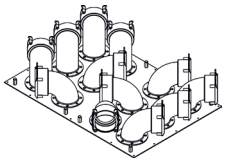
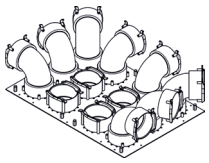
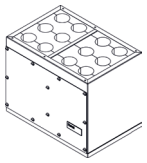
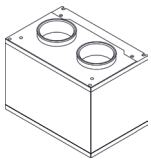
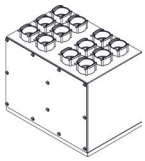
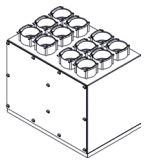
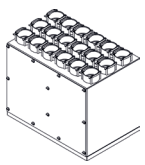
TopTronic® E interface modules

HovalConnect Modbus — 6049 501
HovalConnect KNX — 6049 593

Technical information
see separate chapter.

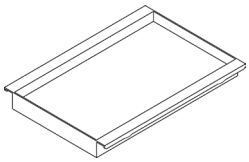
Recommended accessories

		Part No.
	**VOC air quality sensor** for HomeVent® ER and ERT 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® ER and ERT 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	
	**Unit base ER (200-400)** for HomeVent® ER Red painted steel (device colour) incl. 4 vibration dampers height-adjustable feet Height: 475-500 mm	6052 203
	**Horizontal wall mounting set** for HomeVent® ER Steel bracket red coated with vibration-damping support	6042 303
	**Vertical wall mounting set** for HomeVent® ER and ERT Steel bracket red coated with vibration-damping support	6046 215
	**Ceiling mounting set** for HomeVent® ER Steel bracket red coated with vibration-damping support	6042 305
	**Floor mounting set** for HomeVent® ER Steel bracket red coated with vibration-damping support	6042 306
	**Floor mounting set upright** for HomeVent® ER 4 vibration-damping supports 80 x 60 x 30 mm	6044 961

		Part No.
	**Plywood 12 x 75** consisting of: galvanised steel plate 12 90° elbows	6062 434
	**Plywood 12 x 90** consisting of: galvanised steel plate 8 90° elbows 4 straight nozzles	6050 554
	**Acoustic insulating box for plywood** for HomeVent® ER (200-400) Casing made from red foil-plated sheet steel Connection nozzles 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	6061 472
	**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** 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.
	**Pre-filter set G4 ER and FR** for HomeVent® ER and FR Filter class ISO 16890: ePM_{10} 60 % (G4) The set consists of 5 pieces.	6063 113
	**Supply air filter ER and FR** for HomeVent® ER and FR Filter class ISO 16890: $ePM_{1.0}$ 55% (F7)	5038 283
	**Activated carbon filter ER and FR** for HomeVent® ER and FR Protection against pollutants and odours Alternative to supply air filter Filter class ISO 16890: $ePM_{2.5}$ 50 %	5039 587
	**Extract air filter ER and FR** for HomeVent® ER and FR Filter class ISO 16890: ePM_{10} 60 % (G4)	5038 284

Services

Services and associated scope of services
see separate catalogue “Hoval Services”

Commissioning by Hoval customer service is a prerequisite for warranty/guarantee activation.

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			IP40	
• 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	%	0.1	0.1	0.1
• External	%	0.3	0.2	0.1
• 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: HomeVent® ER (200)

Casing

Flow rate	External pressure								Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	42	47	35	30	22	12	2	39
200	100	39	48	39	33	27	19	11	42

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	50	55	46	45	40	35	29	51
200	100	50	61	54	48	46	43	39	57

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	48	50	38	33	24	17	16	43
200	100	49	53	46	37	30	21	17	48

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	44	55	37	35	23	18	16	46
200	100	47	58	46	39	29	22	17	51

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	46	56	48	44	39	34	23	51
200	100	48	59	54	49	45	41	33	56

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	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	38	40	22	16	14	16	16	32
200	100	41	41	31	19	15	16	16	35

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	40	44	22	17	14	16	16	35
200	100	42	44	31	21	15	16	16	37

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	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	30	30	18	13	14	16	16	25
200	100	32	33	25	15	14	16	16	28

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	29	31	18	13	14	16	16	25
200	100	31	37	25	15	15	16	16	30

Sound power: HomeVent® ER (200) + IsiSound

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	48	52	34	35	29	23	20	45
200	100	49	53	42	37	35	31	28	48

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
140	50	46	51	38	34	27	20	17	44
200	100	49	52	44	39	32	27	20	47

Sound power: HomeVent® ER (300)

Casing

Flow rate	External pressure								Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	40	50	36	32	25	15	6	43
300	100	45	48	46	39	32	25	18	46

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	48	60	50	46	46	42	36	56
300	100	55	57	64	52	51	50	44	62

Supply air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	46	52	43	35	29	21	16	47
300	100	52	52	49	42	35	27	17	49

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	46	58	44	38	29	22	17	52
250	100	53	55	53	46	35	29	19	53

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	47	57	52	48	44	40	31	54
250	100	54	57	62	55	51	48	40	61

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	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	40	39	26	18	15	16	16	32
300	100	45	40	35	25	18	16	16	36

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	41	42	27	19	15	16	16	35
300	100	45	41	38	28	17	17	17	37

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	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	30	32	23	15	14	16	16	27
300	100	35	36	36	23	17	16	16	34

Extract air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	30	35	24	15	15	16	16	29
300	100	35	35	36	22	17	16	16	34

Sound power: HomeVent® ER (300) + IsiSound

Fresh air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	47	51	38	36	33	30	26	46
300	100	52	51	48	41	39	37	34	49

Exhaust air

Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
210	50	47	50	42	39	31	26	19	45
300	100	52	51	51	46	38	34	26	51

Sound power: HomeVent® ER (400)

Casing

Flow rate ZUL/ABL [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	42	47	44	37	30	22	15	44
400	100	46	50	52	41	37	30	24	50

Fresh air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	50	55	57	50	49	47	41	57
400	100	56	59	67	54	55	54	50	65

Supply air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	50	51	47	40	32	24	17	47
400	100	54	54	59	45	38	32	20	56

Extract air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	50	56	51	44	33	26	18	52
400	100	55	55	53	47	40	34	23	53

Exhaust air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	51	58	60	54	49	45	37	59
400	100	58	59	66	58	55	53	46	65

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

Supply air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	45	38	34	23	16	16	16	34
400	100	49	43	38	28	21	18	17	39

Extract air

Flow rate [m³/h]	External pressure [Pa]	125	250	500	1000	2000	4000	8000	Sound pressure level L_{WA} 125 Hz - 8 kHz [dB(A)]
280	50	43	40	39	25	16	17	17	37
400	100	48	44	37	28	21	20	19	39

Sound power: HomeVent® ER (400) + IsiSound

Fresh air

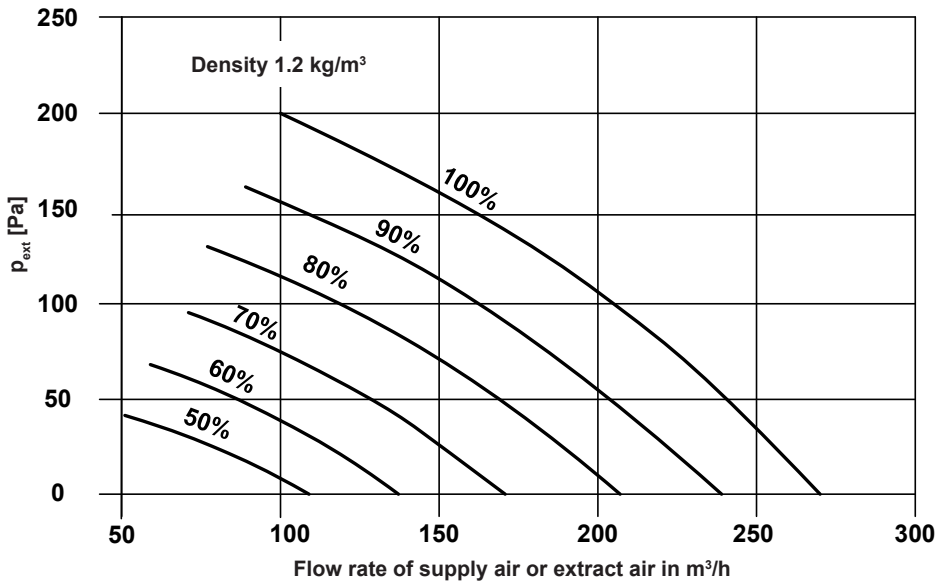
Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
280	50	49	50	45	40	37	35	30	47
400	100	55	55	53	44	43	42	40	54

Exhaust air

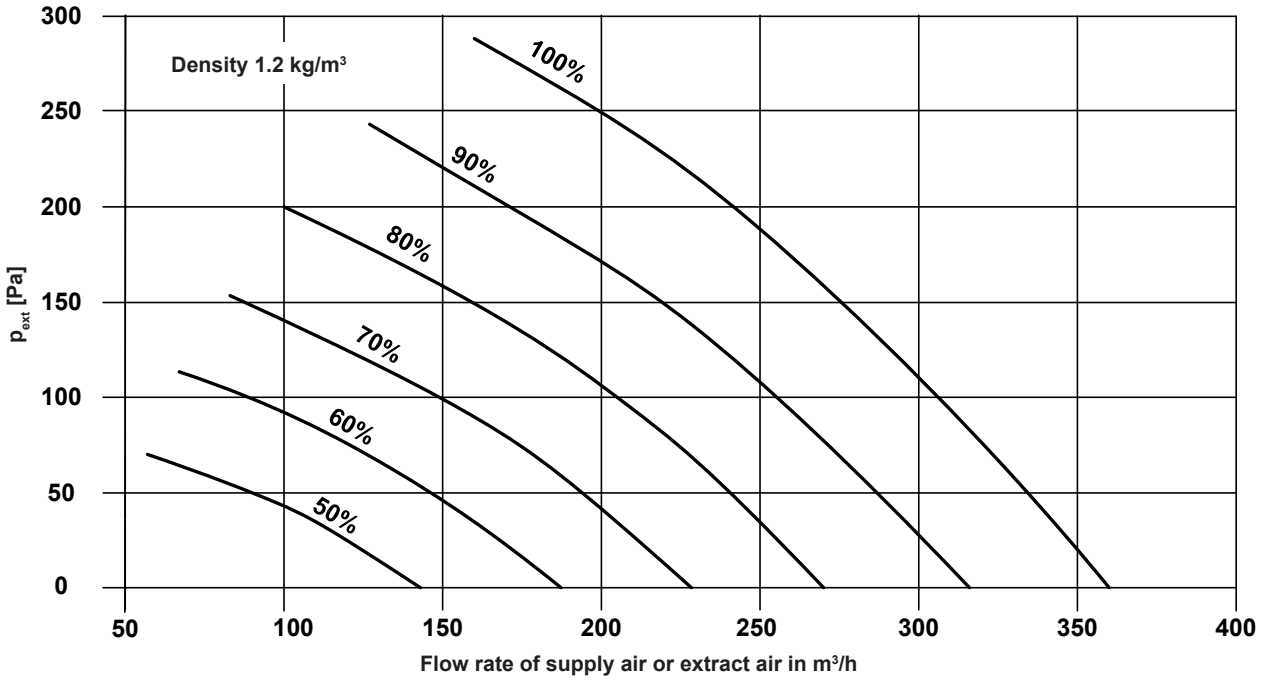
Flow rate	External pressure								Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
280	50	50	50	47	44	36	31	23	48
400	100	57	54	56	49	42	39	31	56

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

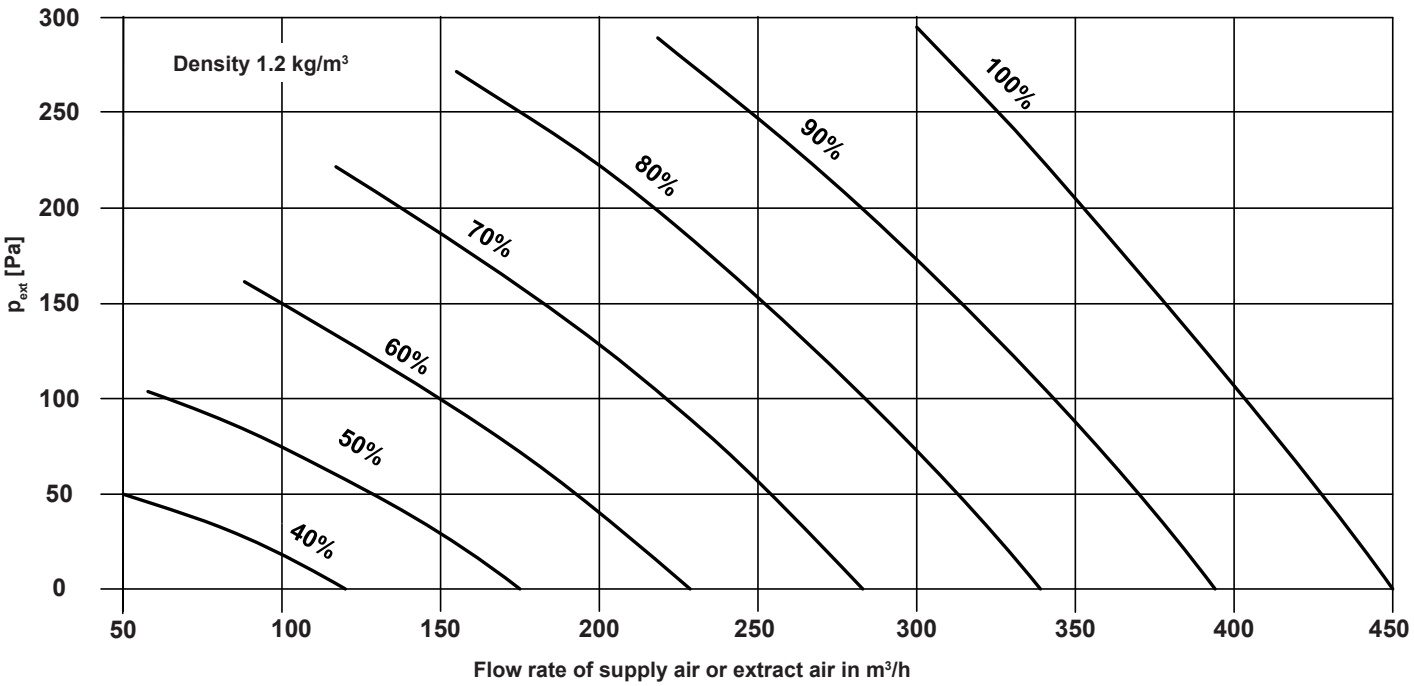
p_{ext} Sum of external pressure drops



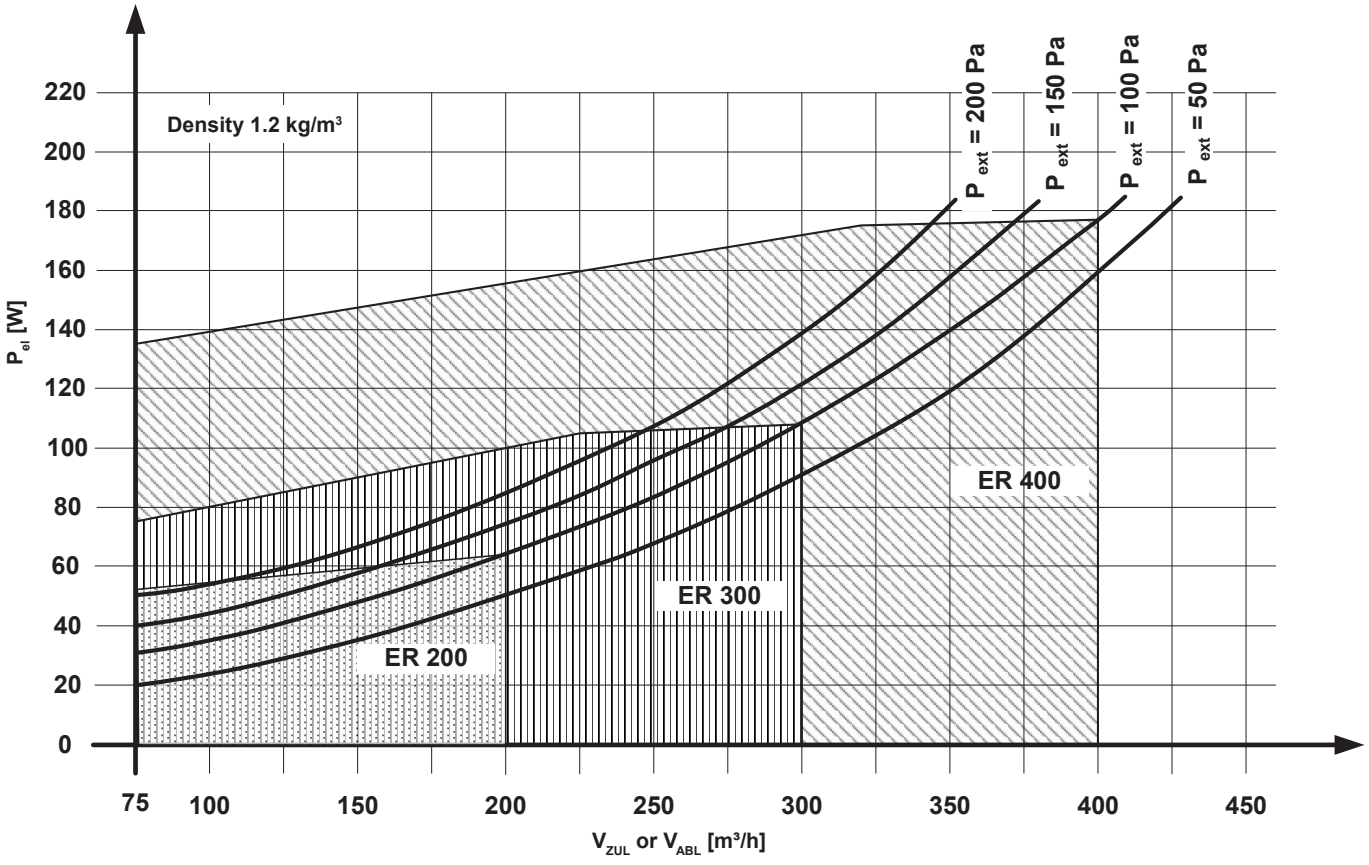
Performance chart for air flow rate, HomeVent® ER (300)



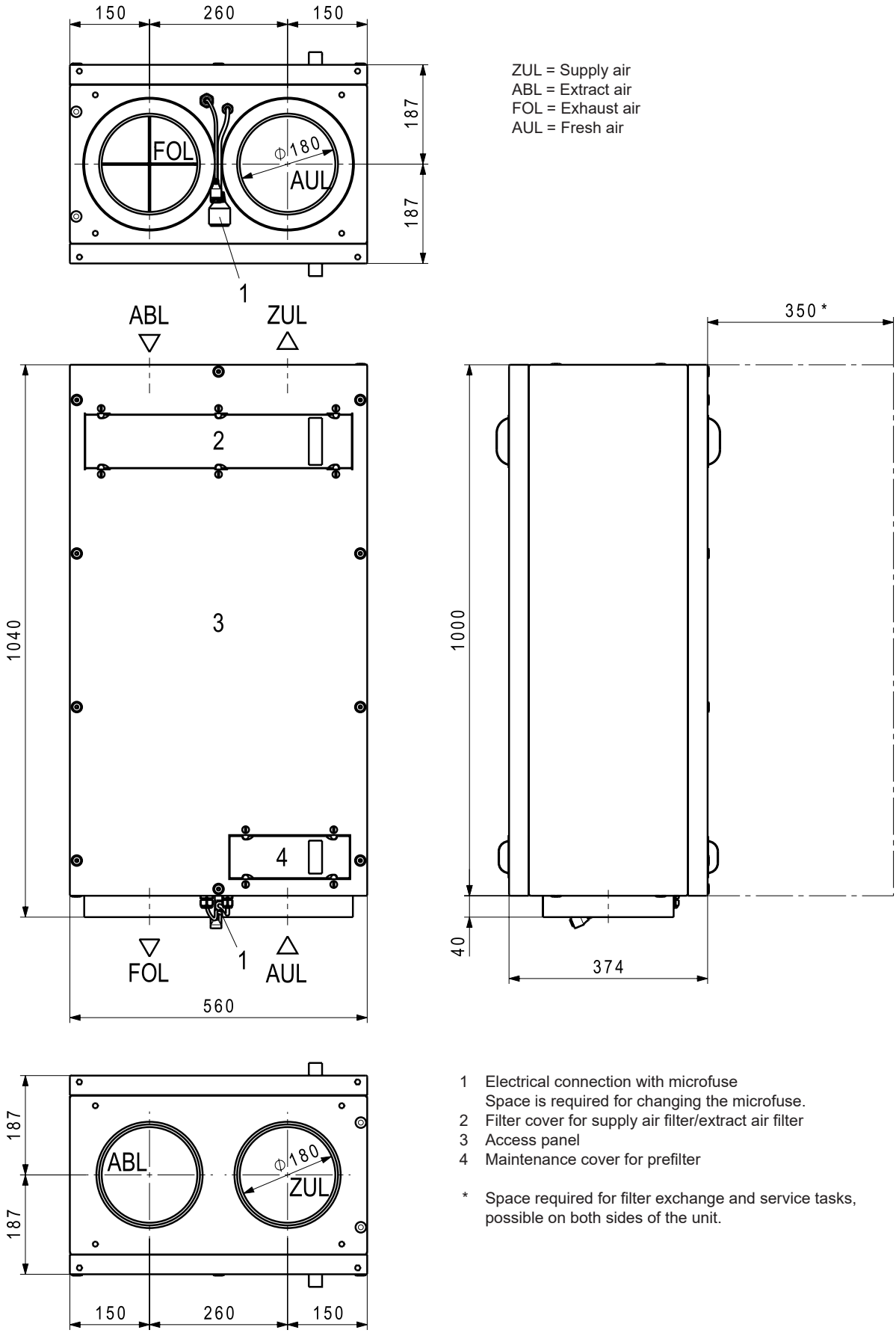
Performance chart for air flow rate, HomeVent® ER (400)



Electrical power consumption HomeVent® ER (200-400)



HomeVent® comfort ventilation unit

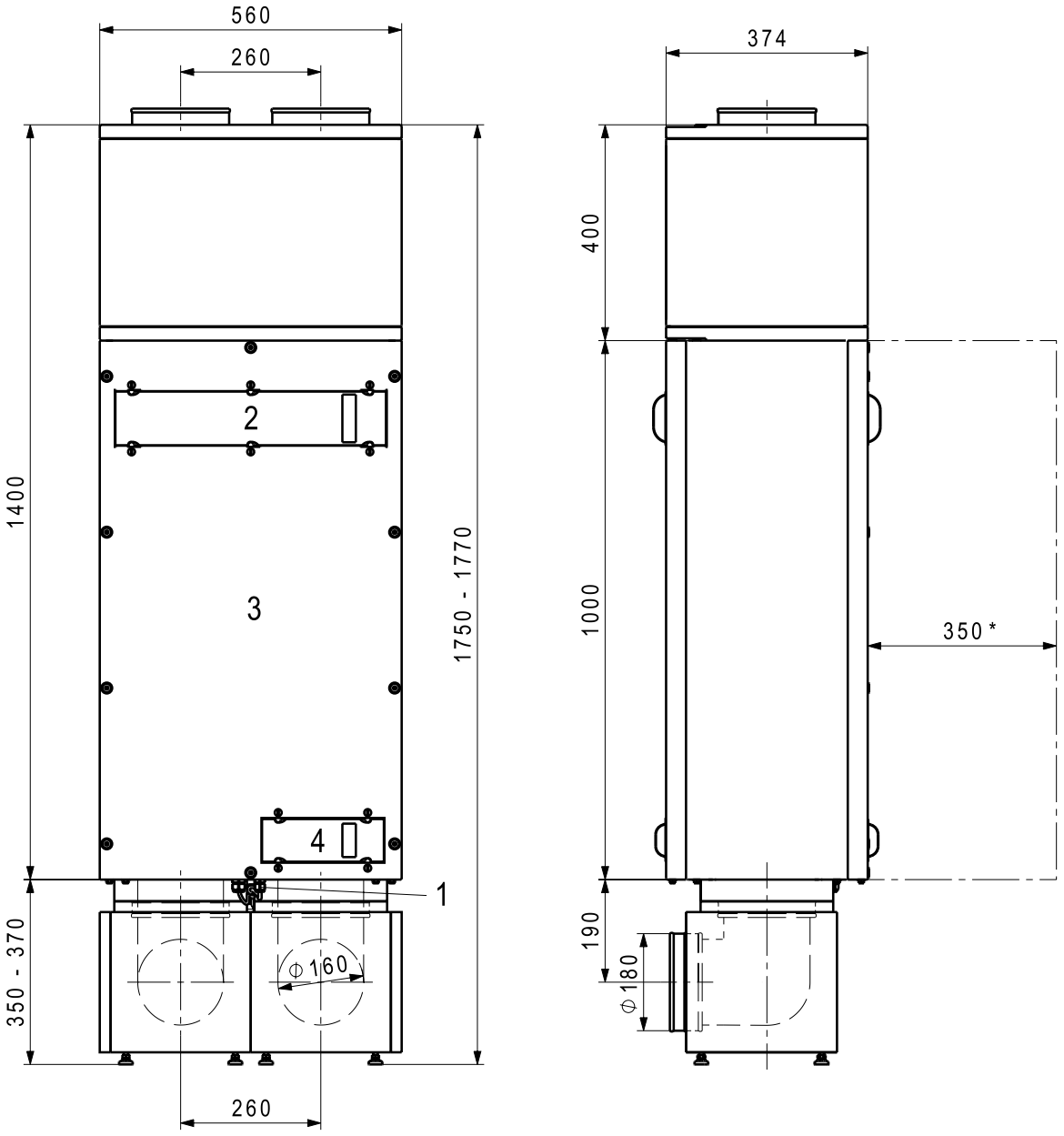


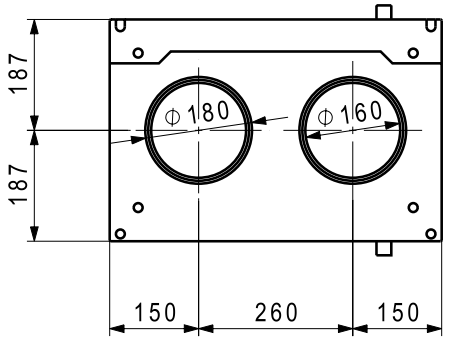
ZUL = Supply air
ABL = Extract air
FOL = Exhaust air
AUL = Fresh air

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

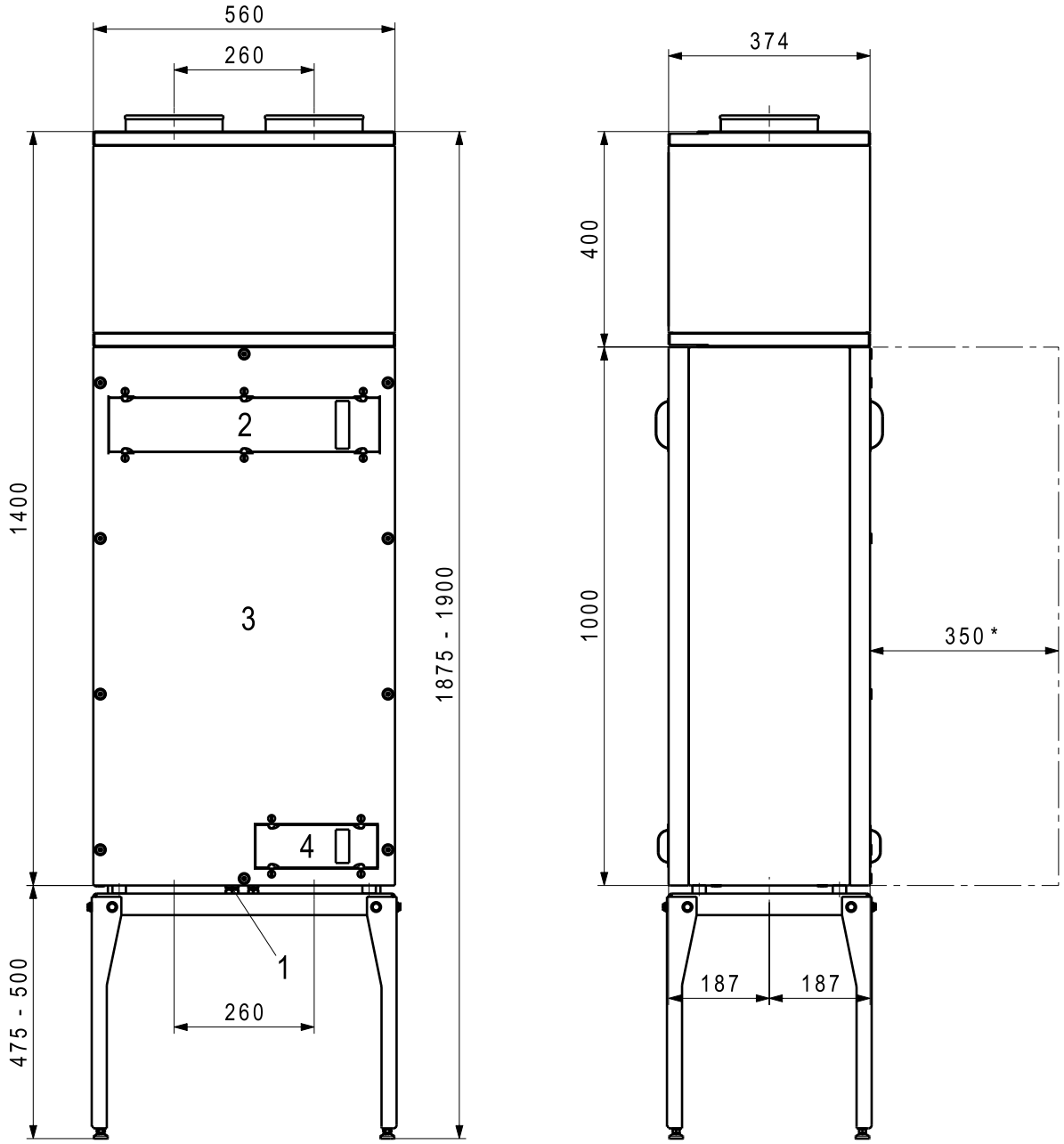


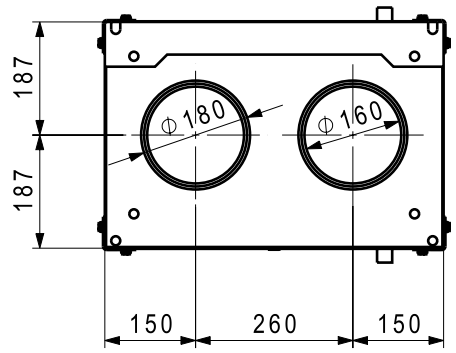


1 Electrical connection
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

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

HomeVent® comfort ventilation unit with acoustic insulating box



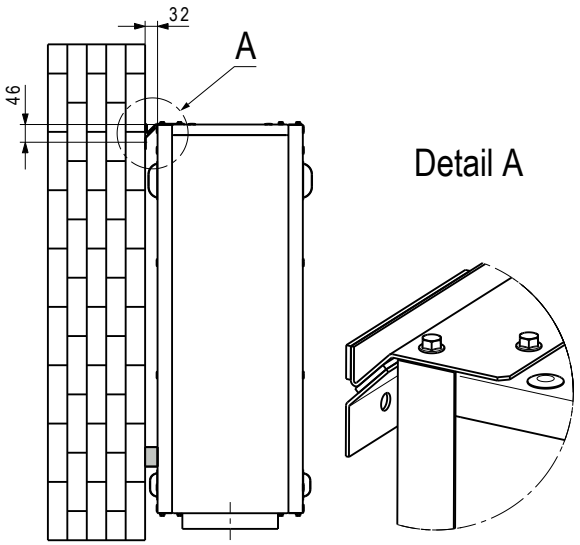


1 Electrical connection
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

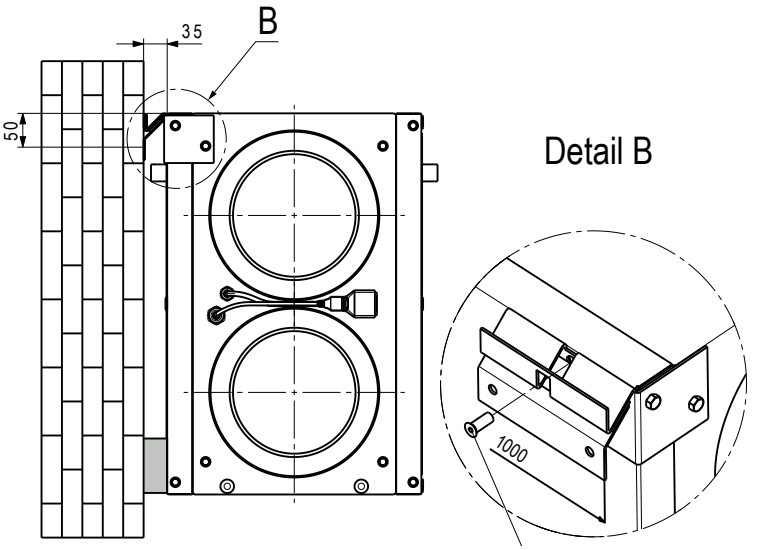
* Space required for filter exchange and service tasks, possible on both sides of the unit.

HomeVent® comfort ventilation unit
Installation with vibration dampers

Vertical wall installation: S-WV

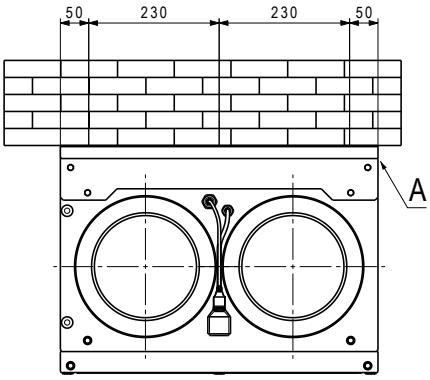


Horizontal wall installation: S-WH

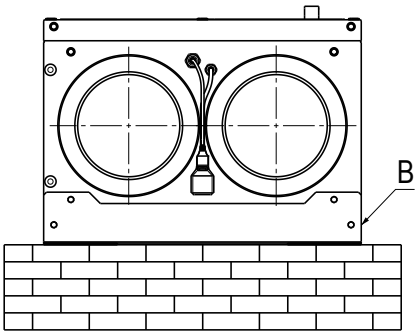


The sleeve nut is replaced by a supplied countersunk sleeve nut

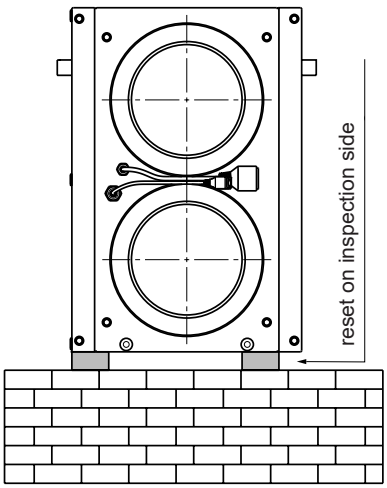
Ceiling installation: S-D



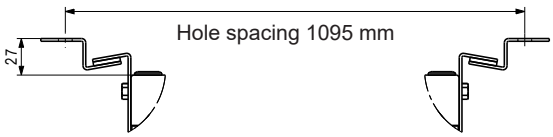
Floor installation: S-B



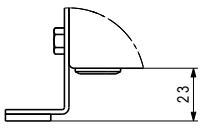
Floor installation: upright



Detail A



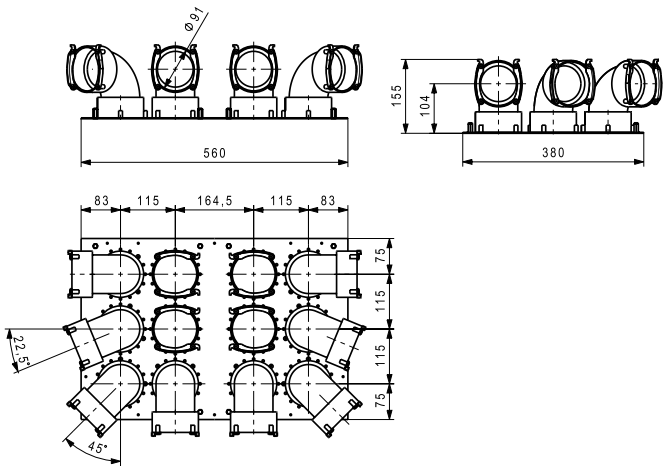
Detail B



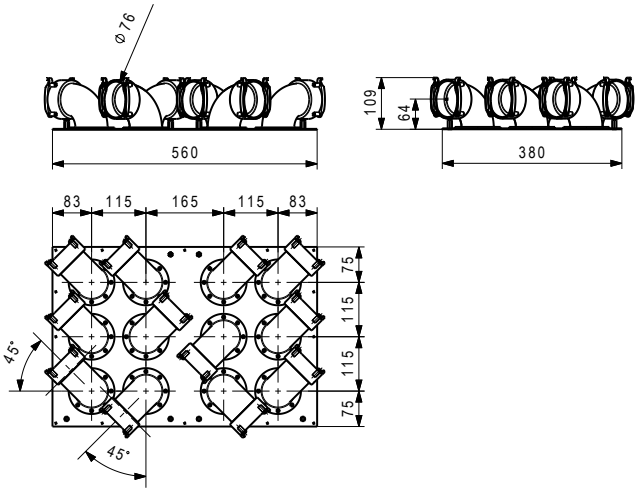
Can be installed in any position.

Acoustic insulating box for plywood 12 x 75 and 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
Connection nozzles:
2 x DN 160/180

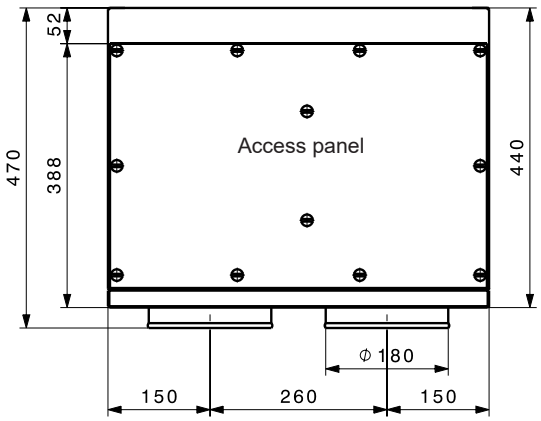
Plywood 12 x 90

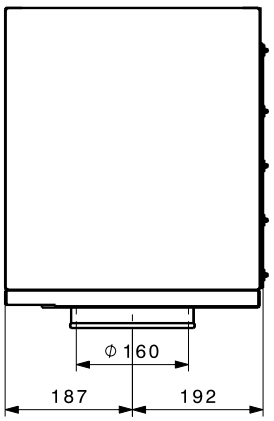


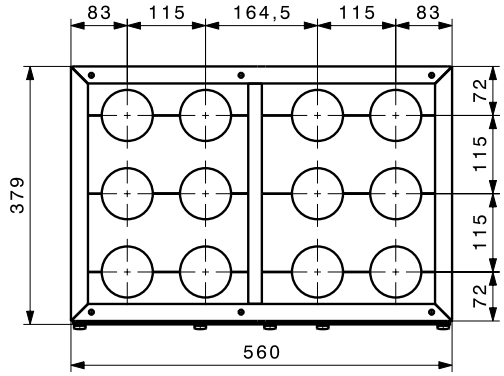
Plywood 12 x 75



Acoustic insulating box for plywood 12 x 75/90



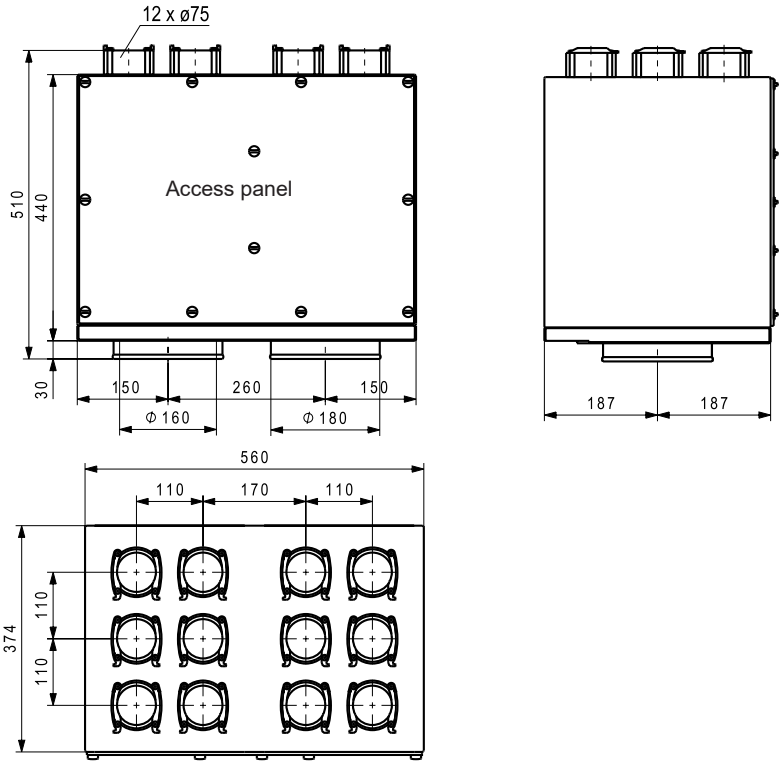




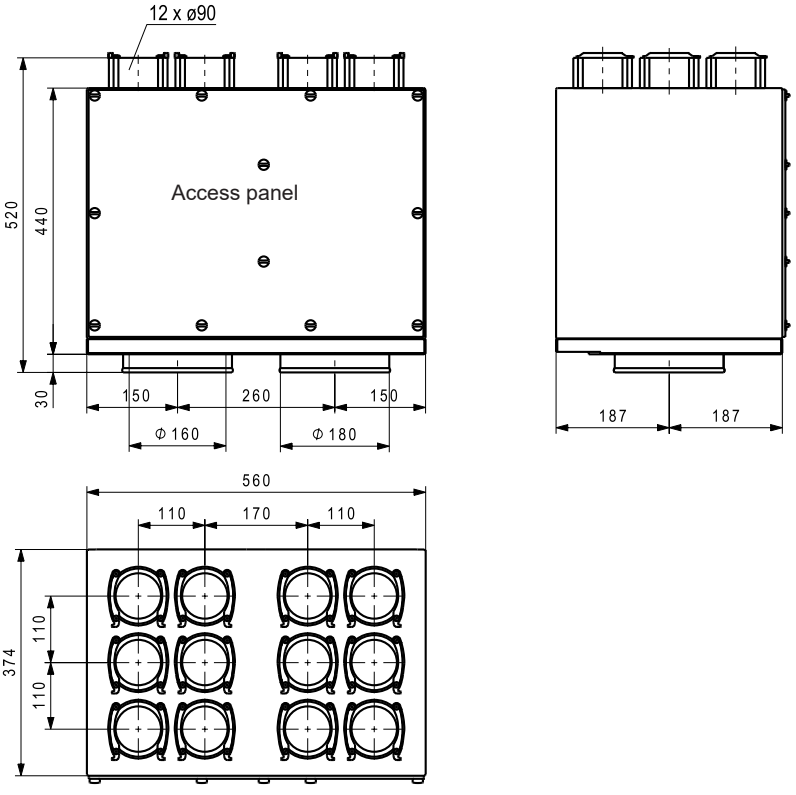
Distribution boxes DN 160

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
ZUL 6 x 75, ABL 6 x 75
ZUL 6 x 90, ABL 6 x 90
Included accessories: end caps and throttle orifices

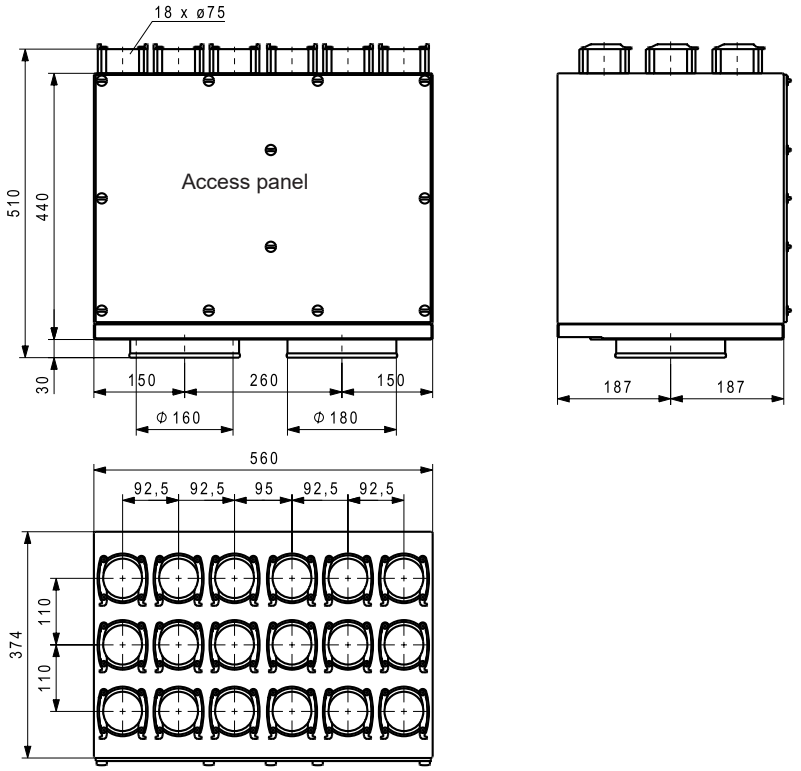
Distribution box VTB-160 12 x 75



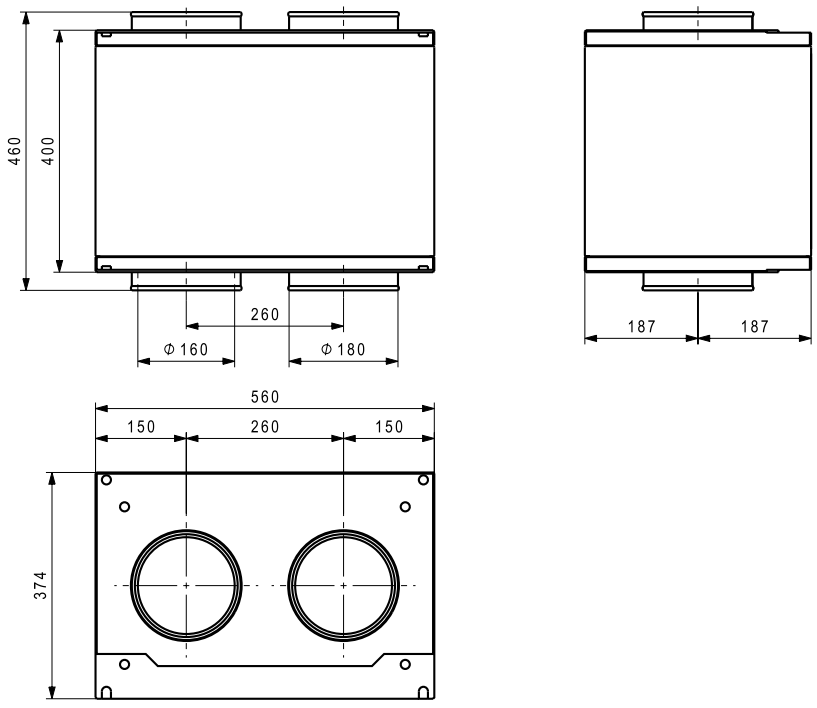
Distribution box VTB-160 12 x 90



Distribution box VTB-160 18 x 75
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
ZUL 9 x 75, ABL 9 x 75
Included accessories: end caps and throttle orifices

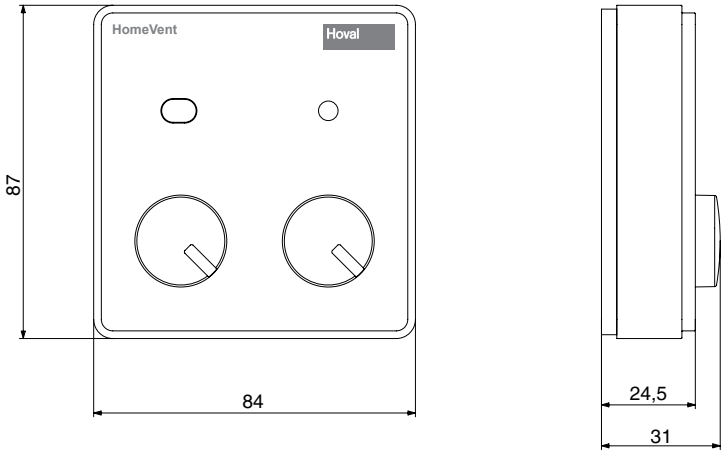


Acoustic insulating box SDB-160-400
Casing made from red foil-plated sheet steel
Sound insulation elements on supply air side and extract air side



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)

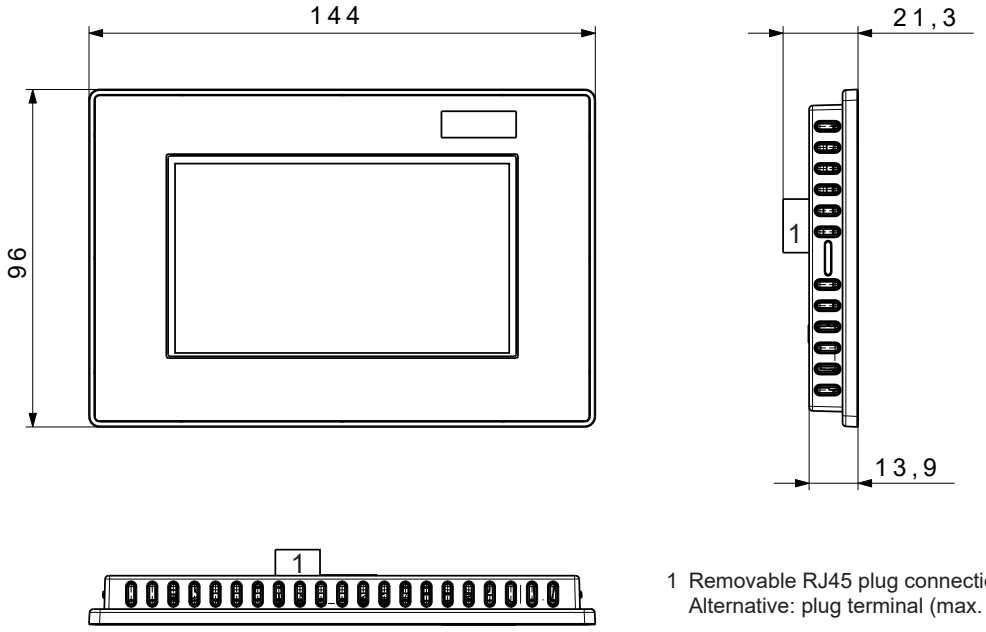
Electrical connection	
• Voltage (DC)	24 V
Type of protection	IP20
Application limits	
• No use of further peripheral components (bus connection, air quality sensors, HovalConnect)	
3K3 as per EN 50090-2-2 Residential rooms, office	
• Temperature range	15 … 40 °C
• Humidity range	5-85 % r. h.

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

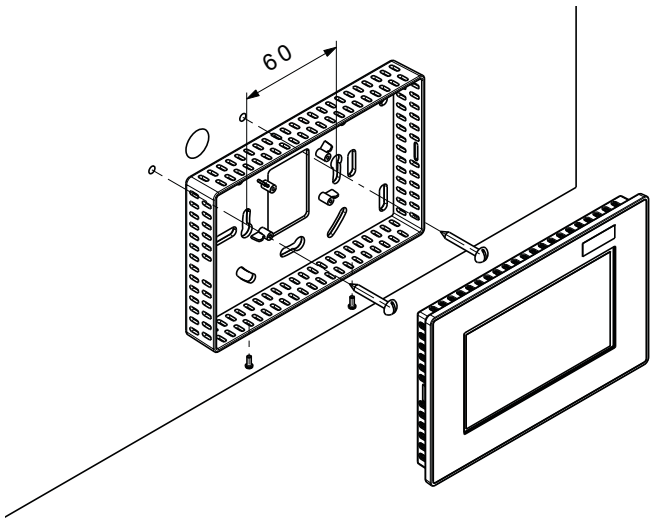
Dimensions

(Dimensions in mm)

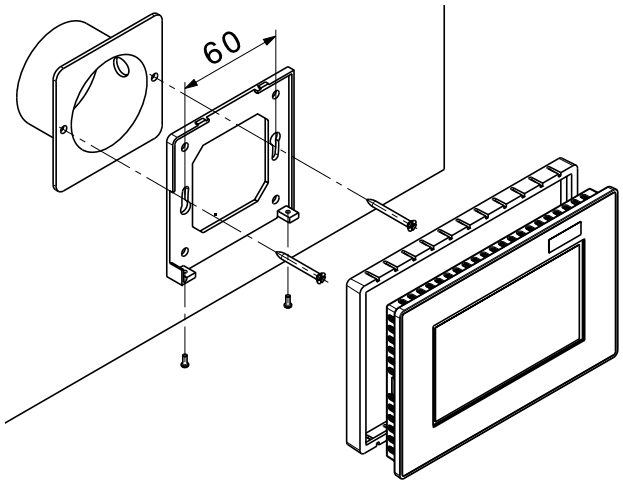


1 Removable RJ45 plug connection
Alternative: plug terminal (max. 0.75 mm²)

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)



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
- Building Energy Act GEG
- Ventilation System Guideline LüAR

General

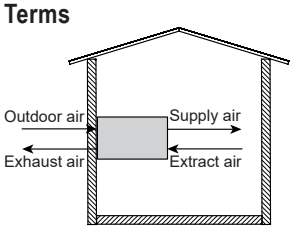
The following information is required for planning the comfort ventilation:

- 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 regulations), no special fire protection requirements are imposed on free-standing buildings with a height of 7 m and no more than two utilisation units with a total area of no more than 400 m². 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. In the first few winters, additional window ventilation may be necessary depending on the room humidity, e.g. after showering or cooking.

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.

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 volume flows 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 volume flows however max. 1.2 times the value from Table 2). 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 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

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). When laying in shafts, the conditions (temperature and humidity) must be calculated and taken into account. 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 ER 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 ERT 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-pin CAT 5 patch ribbon cable. For distances over 3 m, we recommend installing shielded cables 4 x 2 x 0.8 mm² to a network socket (RJ45) 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.

Hoval quality.
You can count on us.

Hoval

Hoval is one of the leading international companies for heating and indoor climate solutions. Drawing on more than 80 years of experience and benefiting from a close-knit team culture, the Hoval Group delivers exciting solutions and develops technically superior products. This leadership role requires a sense of responsibility for energy and the environment, which is expressed in an intelligent combination of different heating technologies and customised indoor climate solutions.

Hoval also provides personal consultations and comprehensive customer service. With around 2500 employees in 15 companies around the world, Hoval sees itself not as a conglomerate, but as a large family that thinks and acts globally.
Hoval heating and indoor climate solutions are currently exported to more than 50 countries.

Responsibility for energy and environment

Liechtenstein
Hoval Aktiengesellschaft
9490 Vaduz
+423 399 24 00
hoval.com

United Kingdom
Hoval Ltd.
Newark Notts. NG 24 1JN
+44 1636 672 711
hoval.co.uk

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Your Hoval partner

Hoval

CATALOGUE

Hoval HomeVent®

Comfort ventilation unit HomeVent® ER (250-450)



Hoval | Responsibility for energy and environment

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Hoval HomeVent® ERT (250-450) 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 equipped with adjustable feet or can be installed upright using the mounting set.
- Rotary enthalpy exchanger with speed regulation
- Two backward-curved EC fans (continuously adjustable 15-100 %)
- High-quality filters
  - 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 875 mm
  Weight: 35 kg
- Electrical connection: 230 V/50 Hz, IP40

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, IsiCube
- Supply air activated carbon filter

Delivery
- Comfort ventilation unit pre-assembled and packed
  - Mains cable 3 m
  - RJ45 cable 3 m

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



Tests
- TÜV SÜD according to DIN EN 13141-7
- TÜV SÜD according to DIBt
- TÜV SÜD according to EN 60335-1

Model range

HomeVent® ERT type		Flow rate m³/h	Heat recovery efficiency %
(250)	A⁺	50-250	90-130
(350)	A⁺	70-350	90-130
(450)	A	80-450	90-130

A⁺ → F

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

Energy recovery
The built-in enthalpy exchanger 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 exchanger 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 exchanger, no condensate is formed in the unit. No preheating (electronic 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 the front for servicing. No condensate forms in the unit. The unit is equipped with adjustable feet or can be installed upright on the wall using the mounting set.

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. In addition, an activated carbon filter can be installed on the supply air side as an option. The VOC air quality sensor continuously monitors the extract air for volatile organic components and regulates the supplied or discharged air volume 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, 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 exchanger 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 can be activated during commissioning.

Function HomeVent® ERT (250-450)

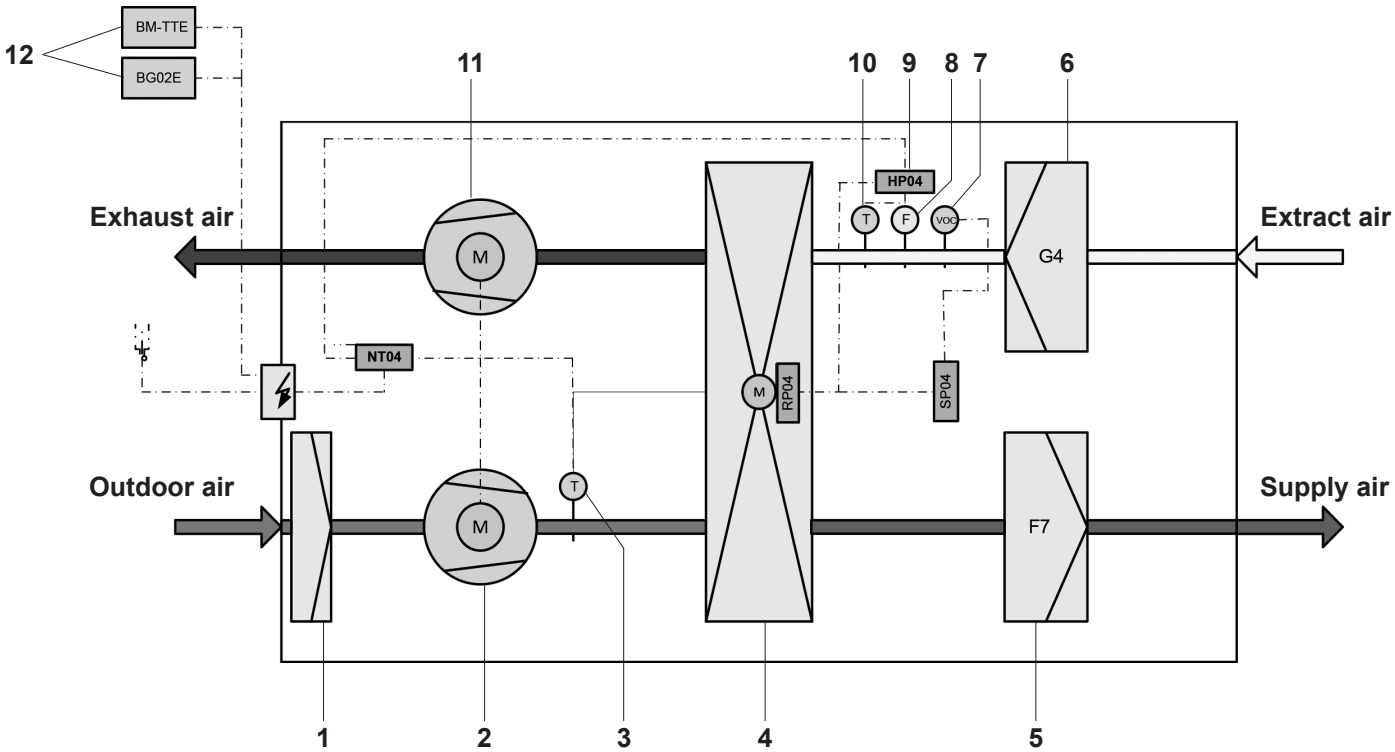
The outside air fan draws in outdoor air via the main line. In the first stage, this air is cleaned via a fine-meshed grate. In the enthalpy exchanger, the supply air is heated, depending on the temperature, and humidified. The extent to which heat and humidity are recovered is dependent on the temperature 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 exchanger 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 exchanger 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 exchanger
5 Supply air filter
6 Extract air filter
7 VOC or CO_2 extract air sensor
8 Moisture 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® ERT (250-450)

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

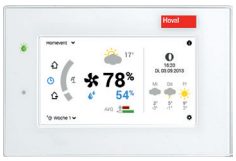
HomeVent® ERT type	Nominal flow rate m^3/h	Ext. pressure Pa	Part No.
(250)	250	100	7019 029
(350)	350	100	7019 030
(450)	450	100	7019 031

Energy efficiency class
see “Description”

Required accessories



Operator terminal BG02 E — 2066 444
for HomeVent® ER and ERT
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® ER and ERT
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® ER and ERT
Operation of all Hoval ventilation units, heating and hot water circuits connected to the bus system.
Customer-specific configurable start screen.

incl. fitting accessories



HovalConnect

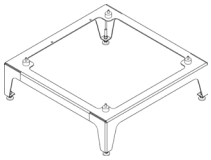
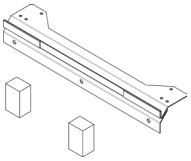
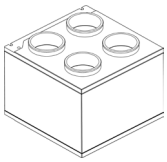
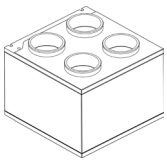
HovalConnect LAN	6049 496
HovalConnect WLAN	6049 498

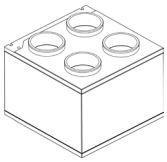
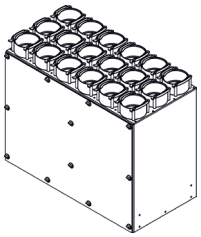
TopTronic® E interface modules

HovalConnect Modbus	6049 501
HovalConnect KNX	6049 593

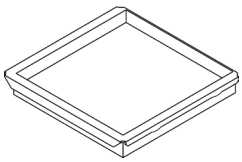
Technical information
see separate chapter.

Recommended accessories

	Part No.
 **VOC air quality sensor** for HomeVent® ER and ERT 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® ER and ERT 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	
 **Unit base ERT (250-450)** for HomeVent® ERT Red painted steel (device colour) incl. 4 vibration dampers height-adjustable feet Height: 185-210 mm	6062 875
 **Vertical wall mounting set** for HomeVent® ER and ERT Steel bracket red coated with vibration-damping support	6046 215
 **Acoustic insulating box ERT ABL-ZUL front** for HomeVent® ERT Casing made from red foil-plated sheet steel connection nozzles 4 x DN 160. ABL front left, ZUL front right FOL back left, AUL 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 ERT ABL-ZUL right** for HomeVent® ERT Casing made from red foil-plated sheet steel Connection nozzles 4 x DN 160. ABL front right, ZUL rear right FOL front left, AUL 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 ERT ABL-ZUL left** for HomeVent® ERT Casing made from red foil-plated sheet steel connection nozzles 4 x DN 160. ABL rear left, ZUL front left FOL back right, AUL 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 ERT 18 x 75** for HomeVent® ERT Casing made from red foil-plated sheet steel Connections 2 x DN 180 (IsiFit) Connection nozzles 18 x DIN 75 Acoustic insulating body on supply and extract air sides, access panel, incl. throttle orifices Dimensions (L x W x H): 454 x 560 x 280 mm	6061 463

Filter HomeVent® ERT

	**Pre-filter set G4 ERT and FRT** for HomeVent® ERT and FRT Filter class ISO 16890: ePM_{10} 60 % (G4) The set consists of 5 pieces.	6063 365
	**Supply air filter ERT and FRT** for HomeVent® ERT and FRT Filter class ISO 16890: $ePM_{1.0}$ 55% (F7)	5043 550
	**Activated carbon filter ERT and FRT** for HomeVent® ERT and FRT Protection against pollutants and odours Alternative to supply air filter Filter class ISO 16890: $ePM_{2.5}$ 50 %	5043 778
	**Extract air filter ERT and FRT** for HomeVent® ERT and FRT Filter class ISO 16890: ePM_{10} 60 % (G4)	5043 611

Services



	Part No.
Services and associated scope of services see separate catalogue “Hoval Services”	
Commissioning by Hoval customer service is a prerequisite for warranty/guarantee activation.	

HomeVent® comfort ERT (250-450)

Type		(250)	(350)	(450)
• Max. flow rate (at 100 Pa external pressure)	m^3/h	250	350	450
• Air flow rate control range	m^3/h	50-250	70-350	80-450
• Humidity setpoint setting	%		30-65	
Electrical connection				
• Voltage (AC)	V		230	
• Frequency	Hz		50	
• Max. current consumption	A	0.82	1.26	2.34
• Type of protection			IP40	
• Power consumption (at 70 % of the max. flow rate, 50 Pa external pressure)	W	42	63	94
• 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)	%	86	86	81
• Specific fan power SFP (at 70 % of the max. flow rate)	$W/m^3/h$	0.25	0.27	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	%	0.1	0.1	0.1
• External	%	0.2	0.1	0.1
• Net weight	kg		35	
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: HomeVent® ERT (250)

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	40	49	34	22	14	10	10	40
250	100	45	51	45	28	20	11	11	45

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	48	54	49	40	37	31	23	49
250	100	55	56	56	47	44	39	33	55

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	44	52	48	39	34	27	18	48
250	100	49	52	55	46	41	35	26	53

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	47	54	42	33	32	23	18	46
250	100	51	54	50	34	38	32	26	50

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	45	51	43	43	39	34	17	48
250	100	51	55	57	48	46	43	29	56

Sound power: HomeVent® ERT (250) + acoustic insulating box ERT

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	40	49	34	22	14	10	10	40
250	100	44	51	44	28	19	10	11	45

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	34	38	29	15	14	15	16	31
250	100	38	39	31	20	18	17	17	63

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	33	39	28	15	14	15	16	32
250	100	38	40	37	21	17	16	16	36

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	33	37	26	15	15	15	16	30
250	100	39	41	36	22	19	16	16	36

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
175	50	34	38	28	17	15	15	11	31
250	100	40	41	36	23	21	18	12	36

Sound power: HomeVent® ERT (350)

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	42	52	38	24	17	10	12	44
350	100	48	48	46	31	24	13	8	45

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	50	54	52	43	41	37	29	52
350	100	58	55	62	50	49	45	39	60

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	48	56	51	43	39	33	23	52
350	100	53	54	61	50	46	41	33	59

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	48	53	46	38	36	30	22	48
350	100	53	53	52	43	42	37	31	52

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	48	54	48	47	44	41	24	53
350	100	54	53	61	53	51	48	36	60

Sound power: HomeVent® ERT (350) + acoustic insulating box ERT

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	42	52	38	24	17	10	12	44
350	100	48	48	46	31	24	13	8	45

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	36	39	32	17	16	16	16	33
350	100	41	38	41	24	21	20	20	38

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	36	39	32	18	15	15	16	33
350	100	43	39	41	25	20	17	16	39

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	35	39	29	19	17	16	16	33
350	100	42	40	38	26	24	17	16	37

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
245	50	38	40	32	20	18	17	11	34
350	100	45	41	42	28	25	22	14	40

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

Sound power: HomeVent® ERT (450)

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	46	48	44	29	21	10	11	44
450	100	49	51	49	33	28	16	8	49

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	52	53	58	50	45	42	35	56
450	100	59	57	62	53	52	50	44	61

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	50	52	58	47	43	38	29	56
450	100	56	56	62	53	50	46	38	61

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	50	52	50	41	39	34	27	50
450	100	55	55	53	45	45	41	36	54

Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	50	52	56	50	48	45	30	56
450	100	57	56	61	54	54	53	42	62

Sound power: HomeVent® ERT (450) + acoustic insulating box ERT

Casing

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
ZUL/ABL [m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	46	48	44	29	21	10	11	44
450	100	41	51	49	33	28	16	8	49

Fresh air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	39	36	39	22	18	18	18	36
450	100	46	41	43	27	25	24	25	41

Supply air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	40	37	39	22	17	16	16	36
450	100	47	42	43	28	24	20	18	41

Extract air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	38	38	35	22	19	16	16	34
450	100	45	42	39	29	27	19	17	39

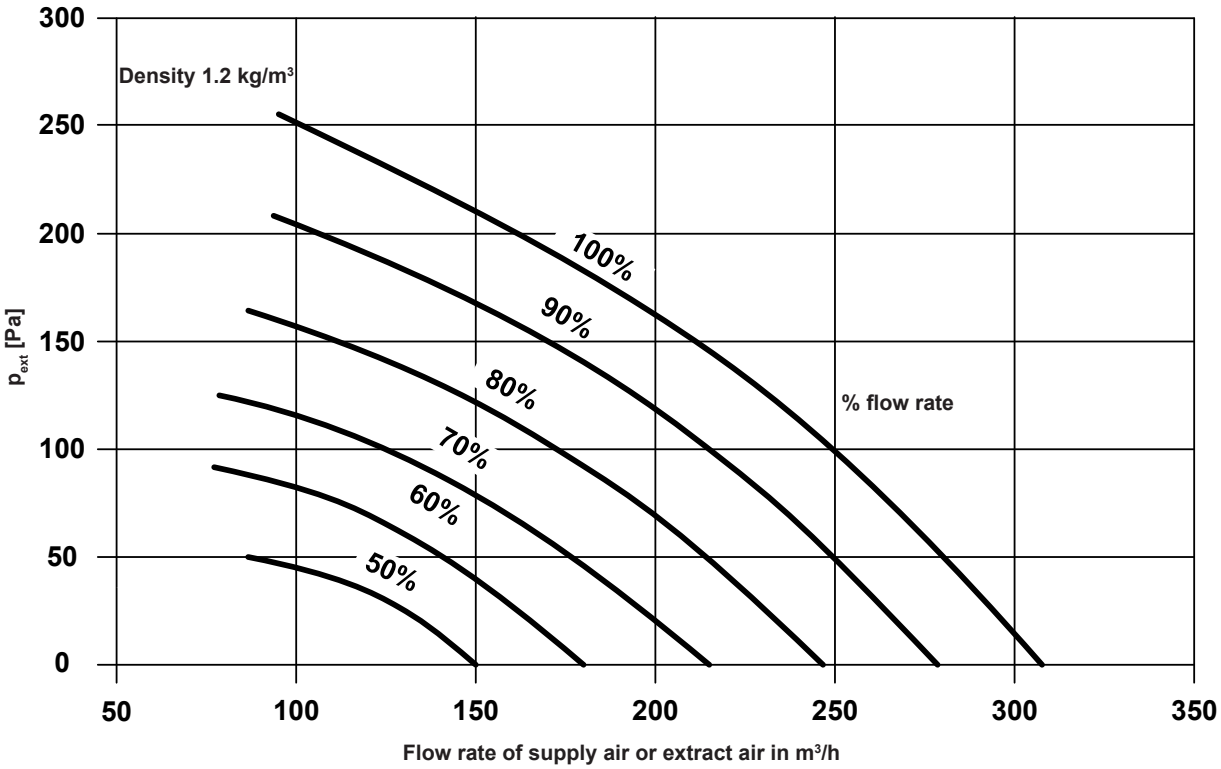
Exhaust air

Flow rate	External pressure	L_W [dB]							Sound pressure level L_{WA}
[m³/h]	[Pa]	125	250	500	1000	2000	4000	8000	125 Hz - 8 kHz [dB(A)]
315	50	42	39	38	25	21	19	12	37
450	100	49	45	43	32	29	26	18	43

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

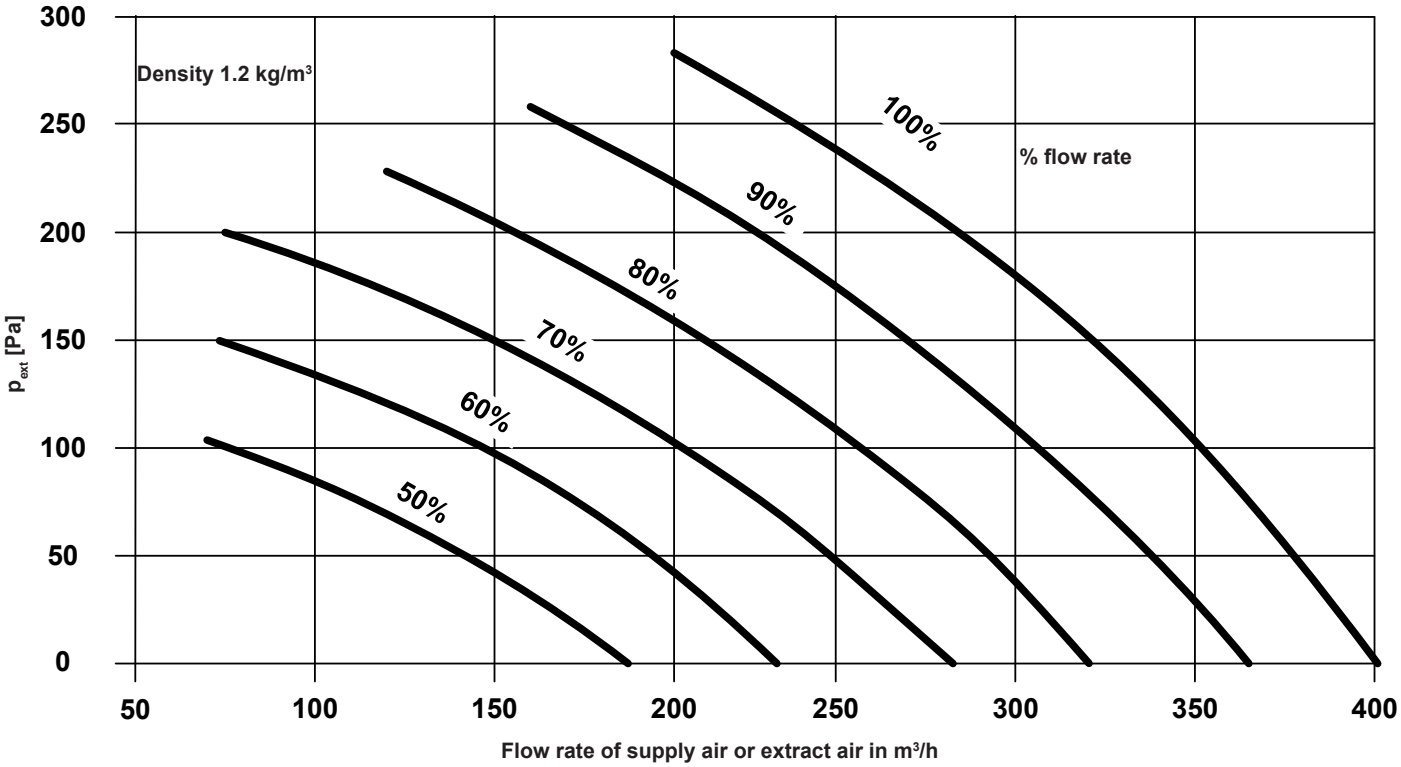
Performance chart for air flow rate, HomeVent® ERT (250)

p_{ext} Sum of external pressure drops



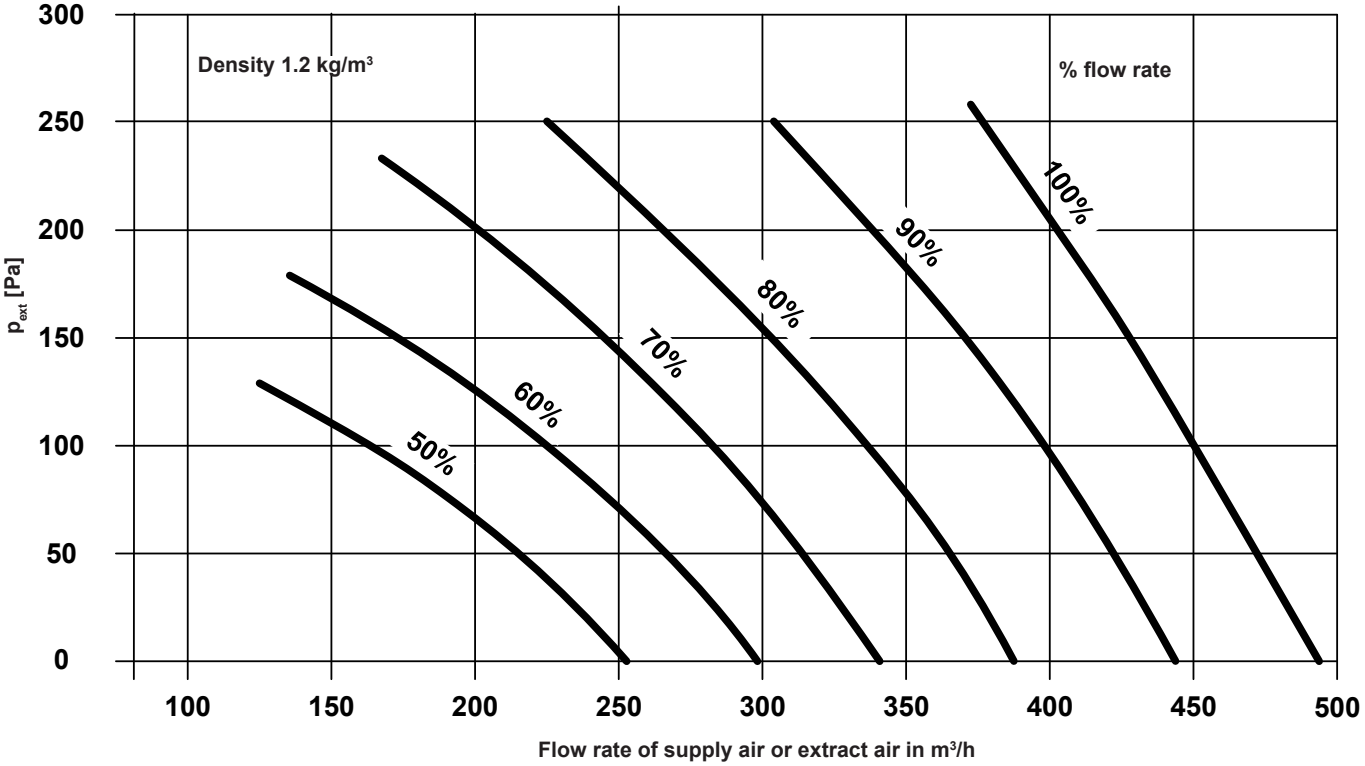
Performance chart for air flow rate, HomeVent® ERT (350)

p_{ext} Sum of external pressure drops

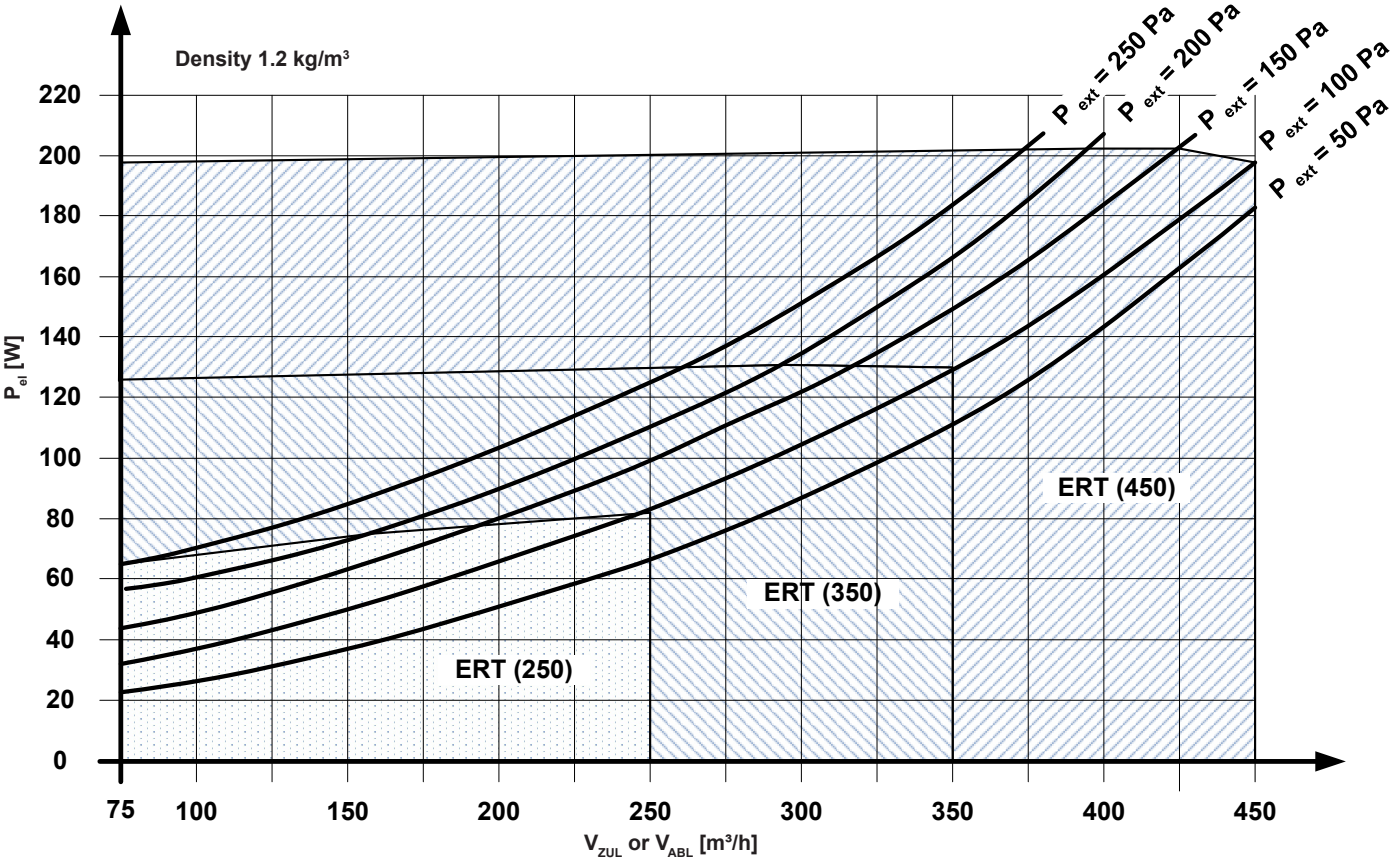


Performance chart for air flow rate HomeVent® ERT (450)

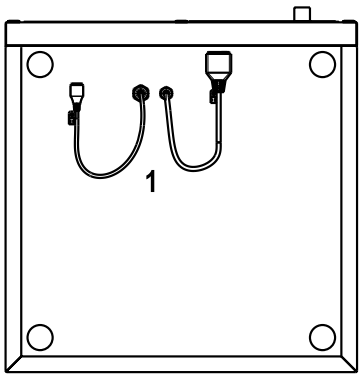
p_{ext} Sum of external pressure drops

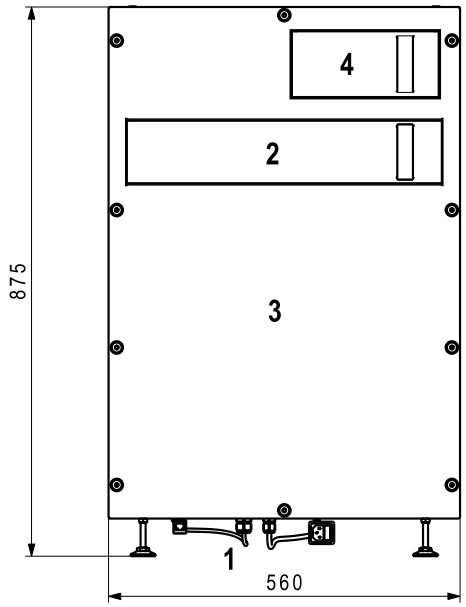


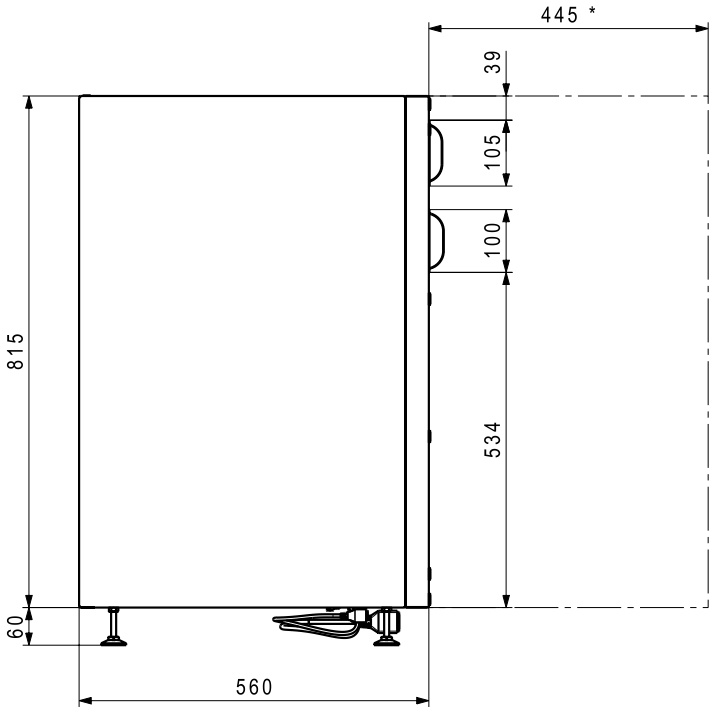
Electrical power consumption HomeVent® ERT (250-450)

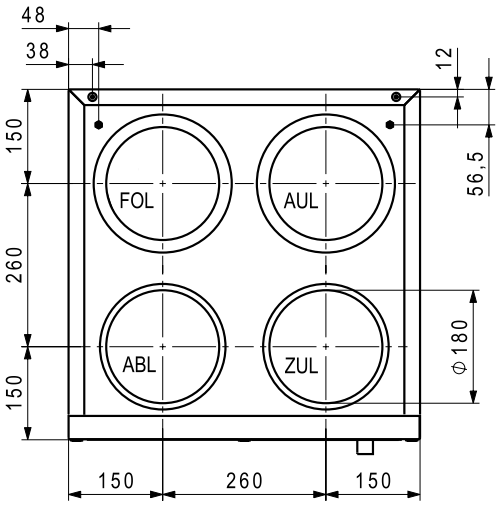


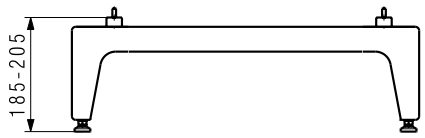
HomeVent® comfort ventilation unit







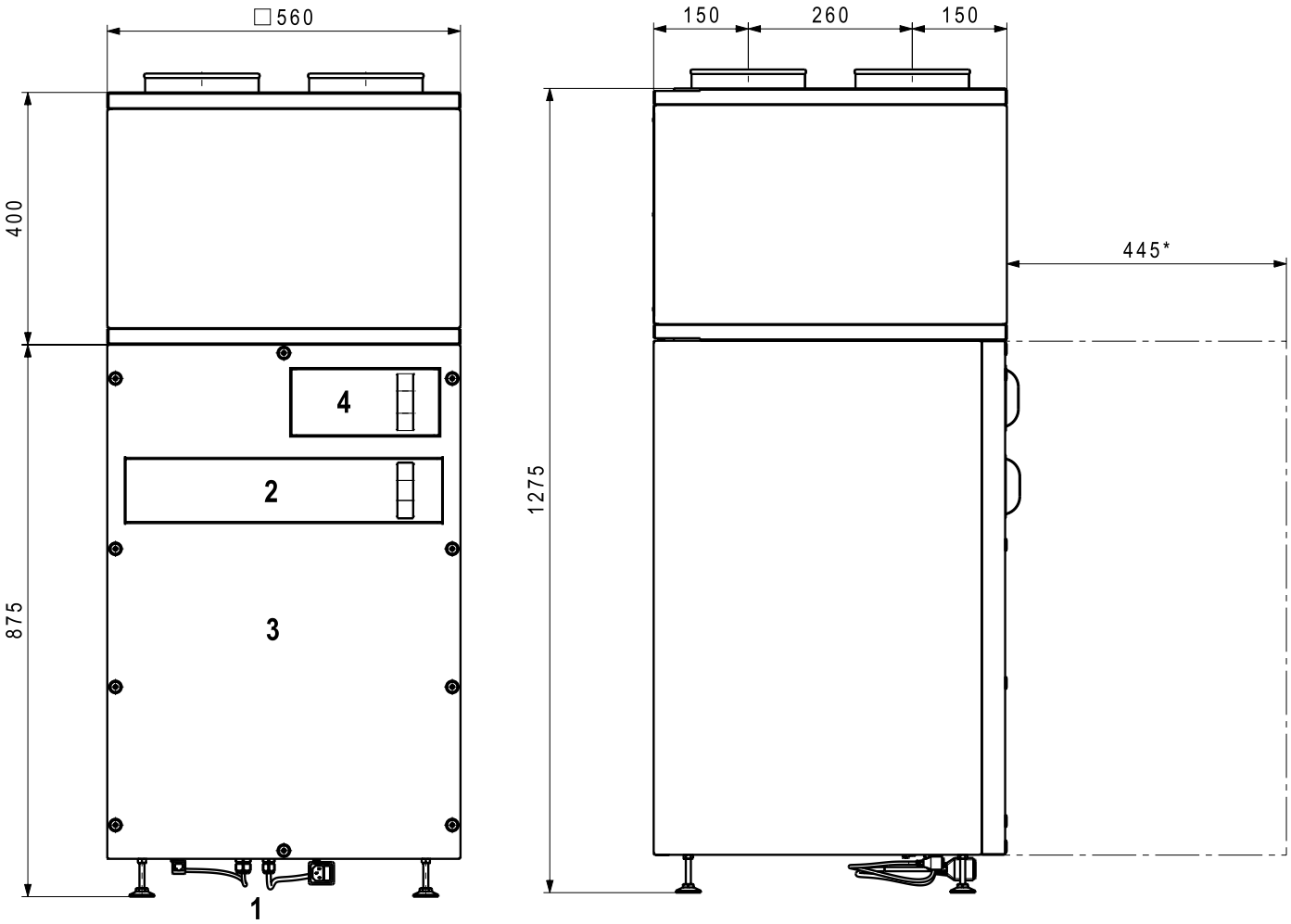


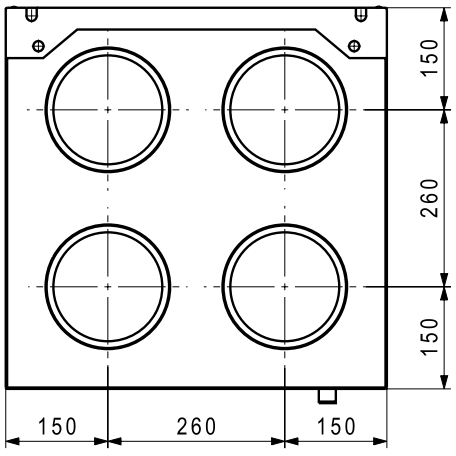


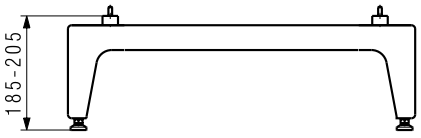
1 Electrical connection with microfuse
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space requirements for filter change and service tasks

HomeVent® comfort ventilation unit with acoustic insulating box







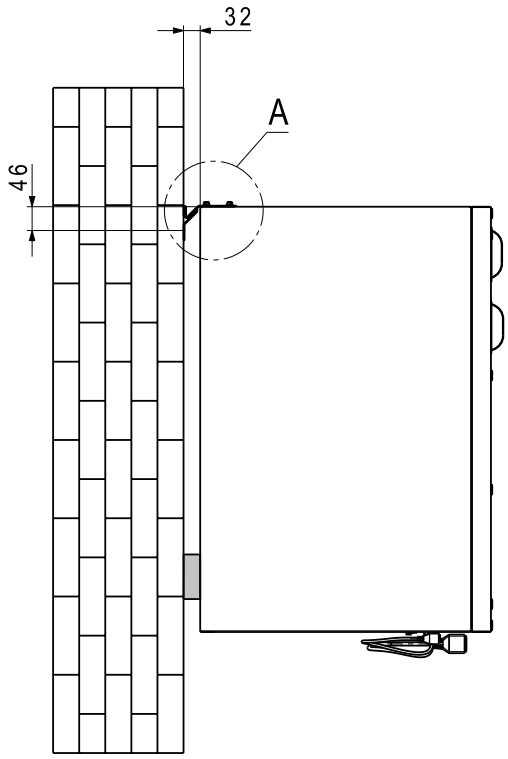
1 Electrical connection with microfuse
Space is required for changing the microfuse.
2 Filter cover for supply air filter/extract air filter
3 Access panel
4 Maintenance cover for prefilter

* Space requirements for filter change and service tasks

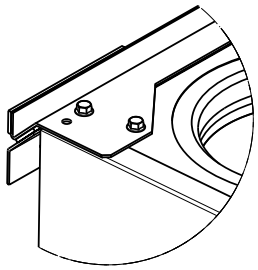
Space requirements

HomeVent® comfort ventilation unit

Installation with installation set



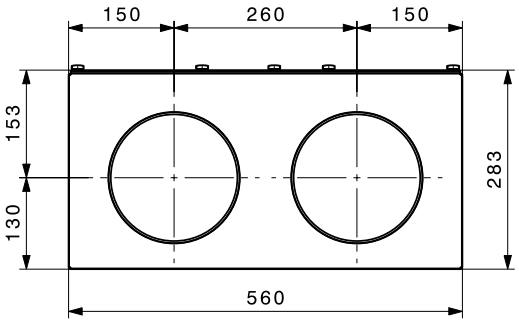
Detail A

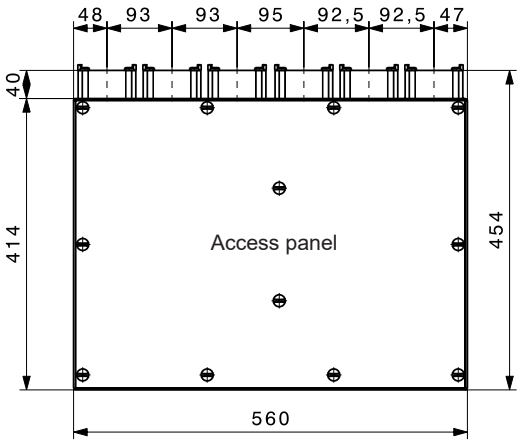


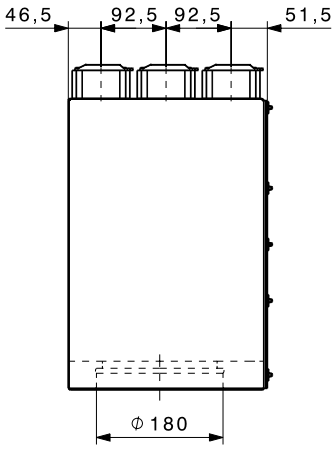
Distribution box DN 180

Distribution box VTB-180 18 x 75

for HomeVent® ERT (250)
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
ZUL 9 x 75, ABL 9 x 75
Included accessories:
6 end caps and throttle orifices

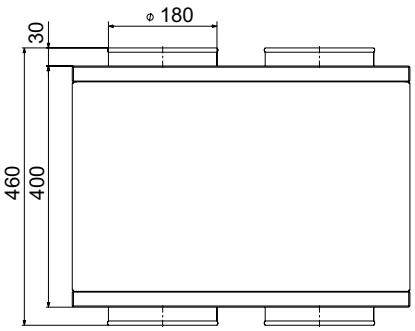


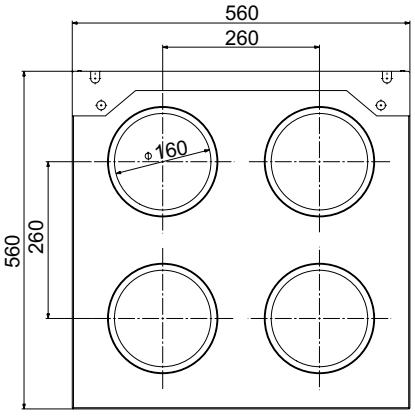




Acoustic insulating box ERT

Casing made of sheet steel painted in red.
All 4 air ducts are sound-insulated.
Connection nozzles:
4 x DN 160





Pressure drop at 100 % air flow rate: ERT (250) 100 %	
Silencer, straight	
ZUL [Δp Pa]	1
AUL [Δp Pa]	0
FOL [Δp Pa]	0
ABL [Δp Pa]	1

ERT (250) 100 %	
Silencer, on the left/right	
ZUL [Δp Pa]	14
AUL [Δp Pa]	8
FOL [Δp Pa]	11
ABL [Δp Pa]	10

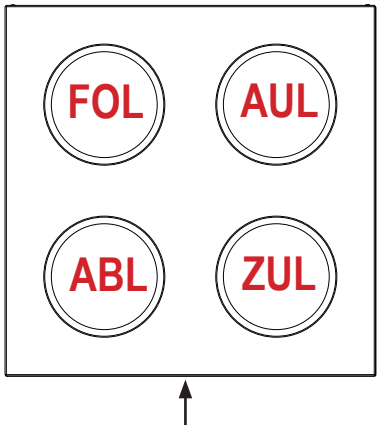
ERT (350) 100 %	
Silencer, straight	
ZUL [Δp Pa]	7
AUL [Δp Pa]	1
FOL [Δp Pa]	2
ABL [Δp Pa]	6

ERT (350) 100 %	
Silencer, on the left/right	
ZUL [Δp Pa]	27
AUL [Δp Pa]	26
FOL [Δp Pa]	21
ABL [Δp Pa]	23

ERT (450) 100 %	
Silencer, straight	
ZUL [Δp Pa]	19
AUL [Δp Pa]	4
FOL [Δp Pa]	10
ABL [Δp Pa]	19

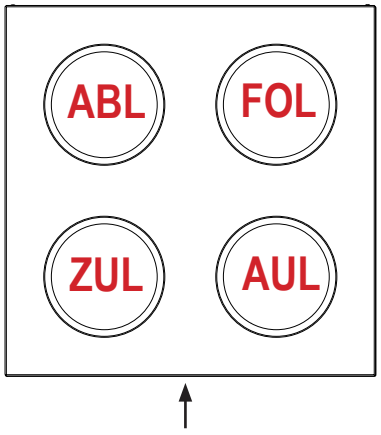
ERT (450) 100 %	
Silencer, on the left/right	
ZUL [Δp Pa]	41
AUL [Δp Pa]	35
FOL [Δp Pa]	31
ABL [Δp Pa]	37

Acoustic insulating box ERT straight

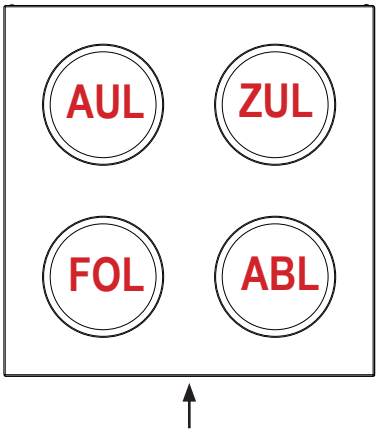


Service side;
wall mounting opposite if necessary

Acoustic insulating box ERT left



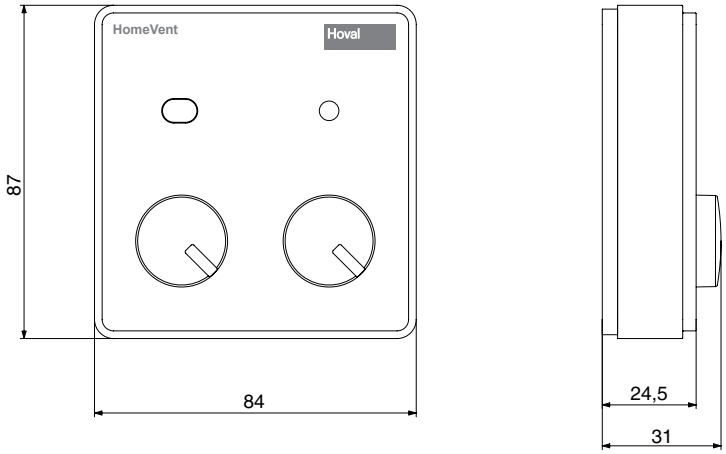
Acoustic insulating box ERT right



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)

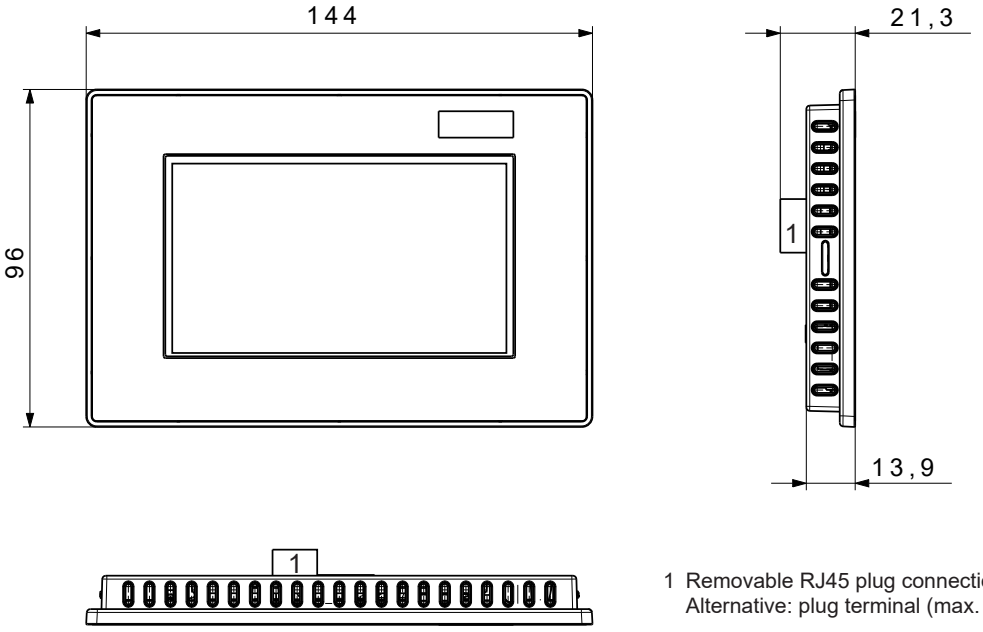
Electrical connection	
• Voltage (DC)	24 V
Type of protection	IP20
Application limits	
• No use of further peripheral components (bus connection, air quality sensors, HovalConnect)	
3K3 as per EN 50090-2-2 Residential rooms, office	
• Temperature range	15 … 40 °C
• Humidity range	5-85 % r. h.

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

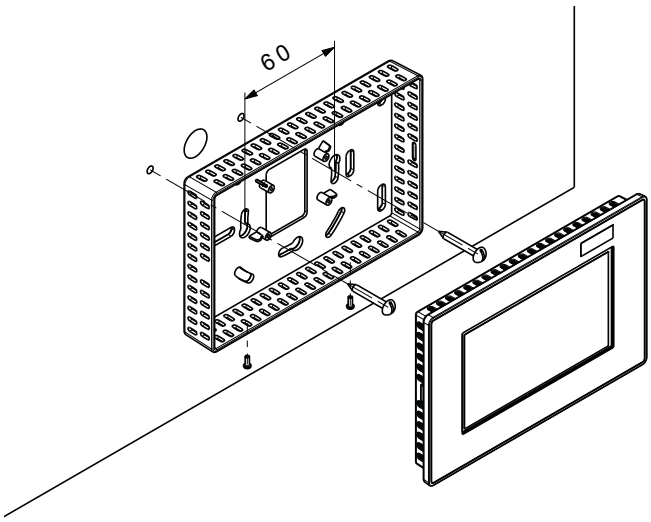
Dimensions

(Dimensions in mm)

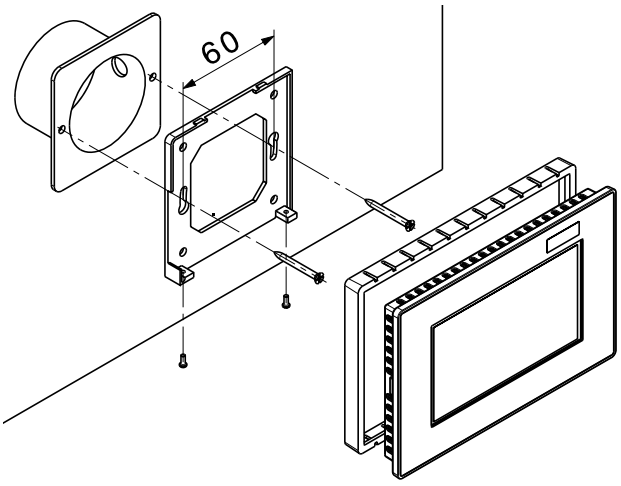


1 Removable RJ45 plug connection
Alternative: plug terminal (max. 0.75 mm²)

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)



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
- Building Energy Act GEG
- Ventilation System Guideline LüAR

General

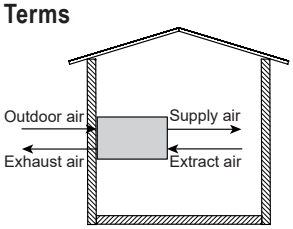
The following information is required for planning the comfort ventilation:

- 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 regulations), no special fire protection requirements are imposed on free-standing buildings with a height of 7 m and no more than two utilisation units with a total area of no more than 400 m². 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. In the first few winters, additional window ventilation may be necessary depending on the room humidity, e.g. after showering or cooking.

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.

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 volume flows 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 volume flows however max. 1.2 times the value from Table 2). 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 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

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). When laying in shafts, the conditions (temperature and humidity) must be calculated and taken into account. 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 ER 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 ERT 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-pin CAT 5 patch ribbon cable. For distances over 3 m, we recommend installing shielded cables 4 x 2 x 0.8 mm² to a network socket (RJ45) 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.

Hoval quality.
You can count on us.

Hoval

Hoval is one of the leading international companies for heating and indoor climate solutions. Drawing on more than 80 years of experience and benefiting from a close-knit team culture, the Hoval Group delivers exciting solutions and develops technically superior products. This leadership role requires a sense of responsibility for energy and the environment, which is expressed in an intelligent combination of different heating technologies and customised indoor climate solutions.

Hoval also provides personal consultations and comprehensive customer service. With around 2500 employees in 15 companies around the world, Hoval sees itself not as a conglomerate, but as a large family that thinks and acts globally.
Hoval heating and indoor climate solutions are currently exported to more than 50 countries.

Responsibility for energy and environment

Liechtenstein
Hoval Aktiengesellschaft
9490 Vaduz
+423 399 24 00
hoval.com

United Kingdom
Hoval Ltd.
Newark Notts. NG 24 1JN
+44 1636 672 711
hoval.co.uk

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Your Hoval partner

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CATALOGUE

Hoval HomeVent® Components

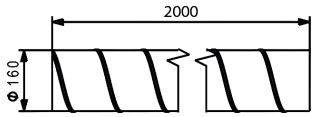
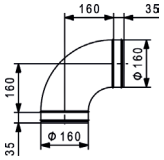
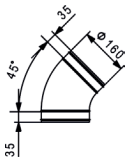
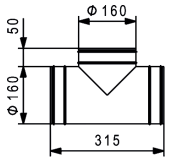
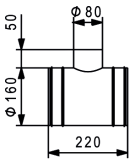
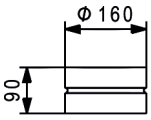
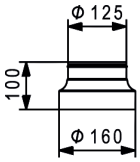
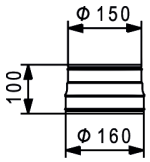
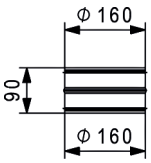
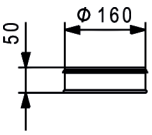


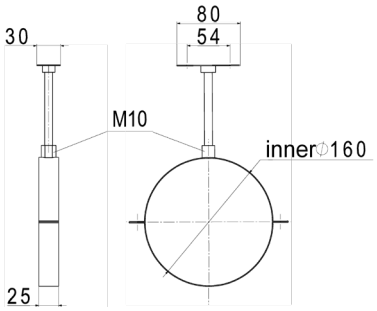


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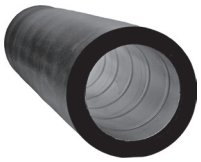
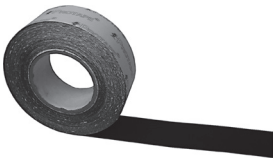
- Part numbers 5
- Technical data 36
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Pipe system DN 160 of sheet steel

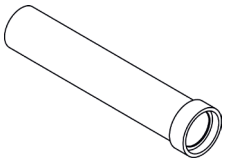
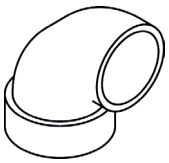
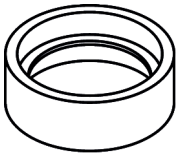
		Part No.
	**Spiral-seam tube WFR-160** of galvanised sheet steel DN 160, length: 2 m	2074 487
	**Pipe bend BU-160-90** 90° bend of galvanised sheet steel with double lip seal DN 160	2074 488
	**Pipe bend BU-160-45** 45° bend of galvanised sheet steel with double lip seal DN 160	2074 489
	**T-piece TCPU-160-160** 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

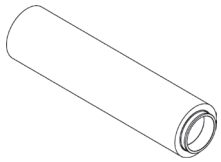
Thermal insulation DN 160

	**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
	Notice Comply with the regional regulations with regard to thermal insulation.	
	**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

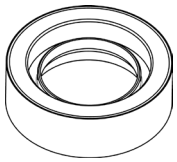
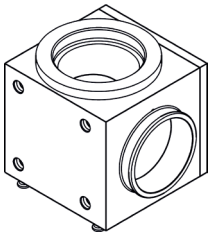
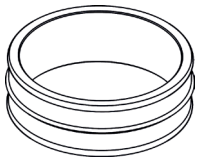
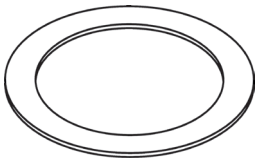
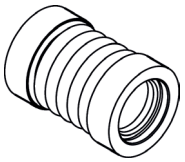
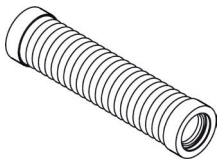
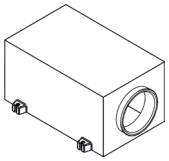
Pipe system DN 160 IsiPipe made of EPP

		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 x 60 including anchor	2045 744

Pipe system DN 160 IsiPipe made of EPP

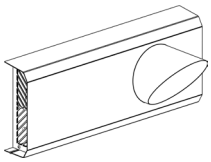
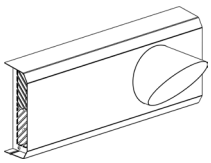
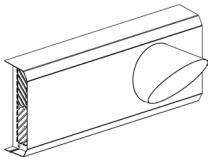
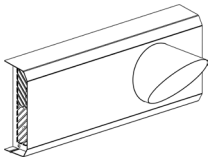
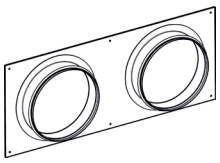
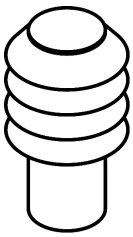
		Part No.
	**IsiPipe Plus pipeline EPP-160-1000** Thermally insulated pipe with sleeve Material: EPP Wall thickness: 43 mm Internal Ø: 160 mm Outer Ø: 246 mm Length: 1000 mm Sleeve: 30 mm	6059 864
	**IsiPipe Plus pipe bend EPP-160-45°** Thermally insulated pipe bend 45° with sleeve Material: EPP Wall thickness: 43 mm Internal Ø: 160 mm Outer Ø: 246 mm	6059 865
	**IsiPipe plus pipe clamp ROS 160-200** Semi-circular pipe clip from galvanized steel including cable tie. Hanger bolt M8 x 60 including anchor	2069 624

Notice
Exact use of the IsiPipe articles, see Engineering.

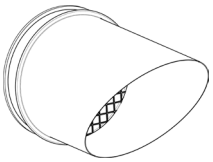
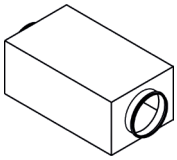
		Part No.
	**IsiPipe plus device adapter 160** Thermally insulated sleeve Material: EPP Scope of delivery 2 pcs.	6052 925
	**IsiCube** Thermally insulated air guide DN 160 + base Material EPP, for outdoor applications Air guide either 90° or straight Including IsiFit and 4 feet Including 4 pins and cover 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 and ERT, IsiCube, IsiPipe device adapter 160, IsiFlex	6054 723
	**IsiSeal** for a secure and tight connection when using IsiPipe Plus Device adapter 160 (scope of delivery 2 pcs.)	6057 485
	**IsiFlex 0.3 m** suitable for IsiSystem 160 Acoustically and thermally insulated, flexible connector Material: EPP and rockwool 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

Notice
Exact use of the IsiPipe articles,
see Engineering.

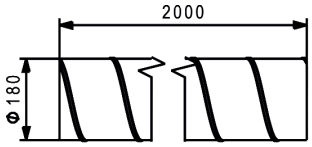
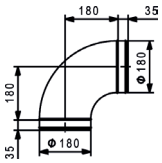
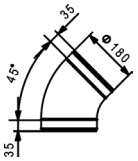
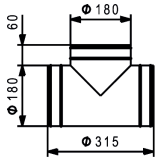
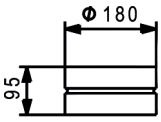
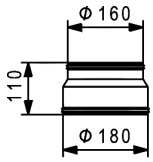
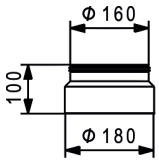
Accessories DN 160

		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 outlet, 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

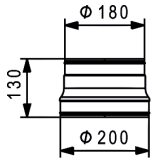
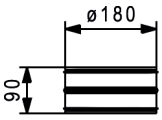
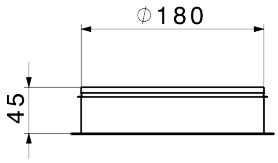
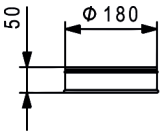
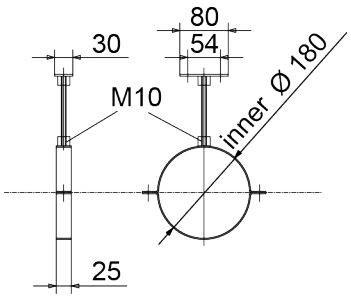
Accessories DN 160

		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 outdoor and exhaust air Anthracite grey painted (RAL 7016) with double lip seal, pipe nozzle DN 160	6062 253
	**Silencer 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

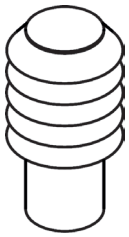
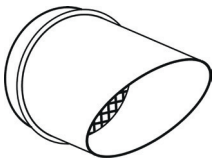
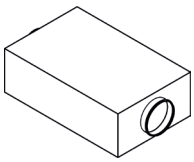
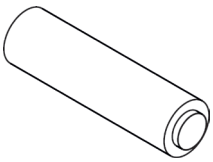
Pipe system DN 180

		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

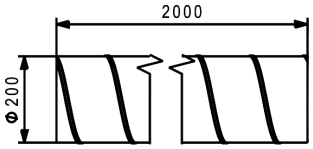
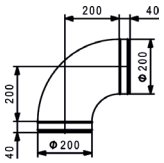
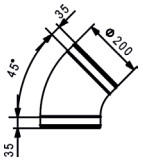
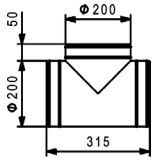
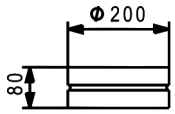
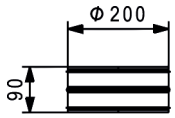
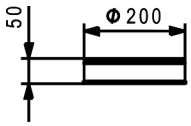
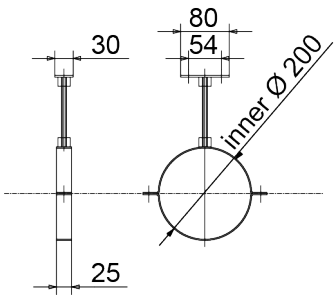
Pipe system DN 180

		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

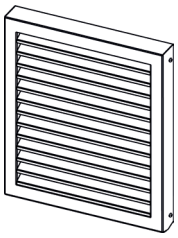
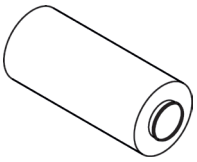
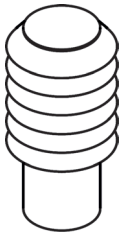
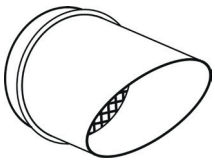
Accessories DN 180

		Part No.
	**Weatherproof grille WG-180** for outdoor and exhaust air Anthracite grey painted (RAL 7016) with double lip seal, pipe nozzle DN 180	6062 254
	**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

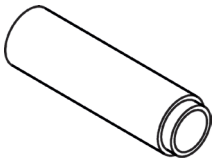
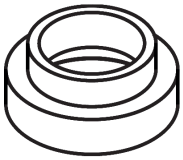
Pipe system DN 200

		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

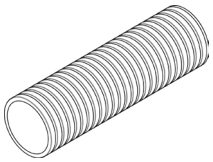
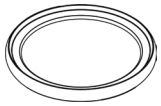
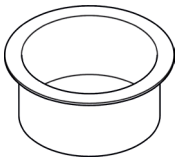
Accessories DN 200

		Part No.
	**Weatherproof grille WG-200** for outdoor and exhaust air Anthracite grey painted (RAL 7016) with double lip seal, pipe nozzle DN 200	6062 255
	**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

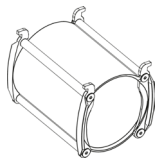
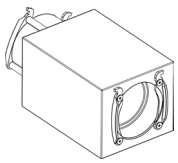
		Part No.
	**IsiPipe Plus pipeline EPP-200-1000** Thermally insulated pipe Material: EPP, wall thickness 43 mm Inner Ø 200 mm, outer Ø 286 mm Length: 1000 mm incl. sleeve (60 mm)	2065 111
	**IsiPipe Plus pipe bend EPP-200-45°** Thermally insulated pipe bend 45° Material: EPP, wall thickness 43 mm Inner 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 eccentric adapter EPP-180-200** Thermally insulated eccentric 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 M8 x 60 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

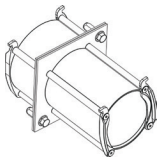
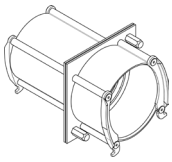
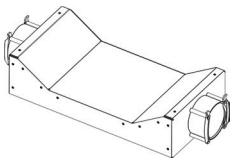
Accessories DN 75

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.

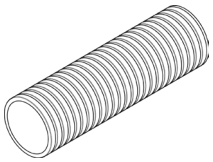
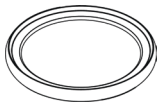
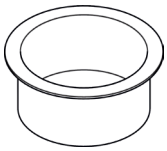
	**Double sleeve DM-75** for flexible pipe DN 75 for connecting flexible pipes	6022 896
	**Helmholtz silencer HSD-75** for flexible pipe DN 75 for highly acoustically sensitive rooms dampens low frequencies (500 Hz)	6020 756

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.

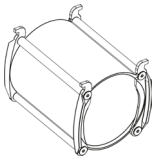
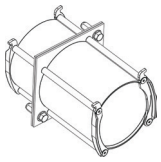
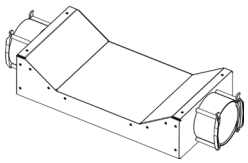
		Part No.
	**Formwork coupling SK-75** for flexible pipe DN 75 for extending a flexible pipe through the ceiling or the floor without damaging the boarding	6013 047
	**Formwork coupling SK-75/90** for flexible pipe DN 75 and 90 for extending a flexible pipe through the ceiling or the floor and extension 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** For fastening flexible pipes Colour: natural	
	4.8 x 302 mm — 100 units/package	2057 027
	7.6 x 370 mm — 100 units/package	2057 028
	9.0 x 610 mm — 50 units/package	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

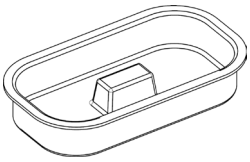
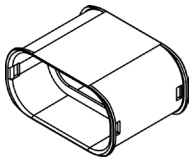
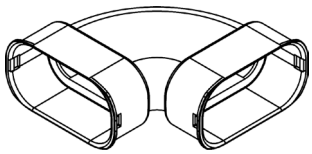
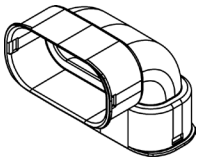
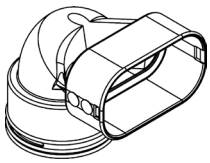
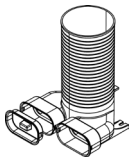
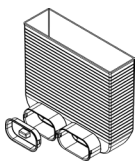
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Accessories DN 90

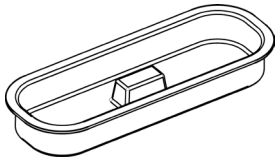
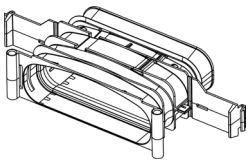
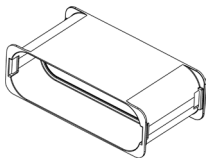
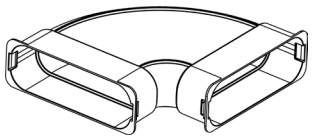
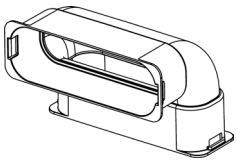
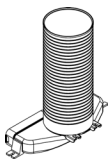
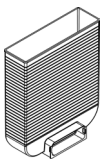
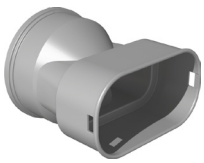
	**Pipe elbow RB-90** for flexible pipe DN 90 for connecting flexible pipes at an angle of 90°	6043 275
	**Double sleeve DM-90** for flexible pipe DN 90 for connecting flexible pipes	6022 494
	**Formwork coupling SK-90** for flexible pipe DN 90 for extending a flexible pipe through the ceiling or the 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

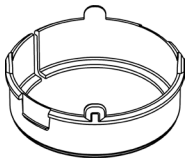
Cable ties can be found under “Flexible pipe DN 75”.

Flat channel system DN 100

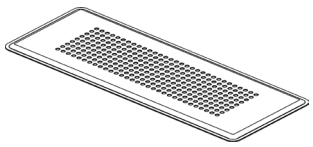
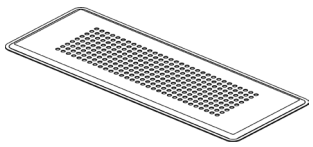
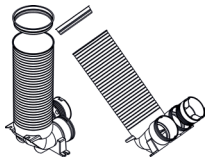
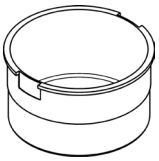
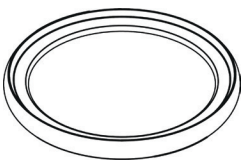
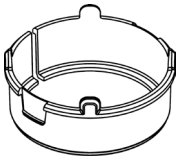
		Part No.
	**Flat channel 100** Flexible ventilation pipe 102 x 49 mm Roll length 50 m	2071 003
	**Stopper flat channel 100** for flat channel 100 Sealing plug for building protection	2072 404
	**Stopper flat 100** for flat channel system 100	2071 004
	**Seal flat 100** for flat channel 100	2071 005
	**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

		Part No.
	**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
	**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

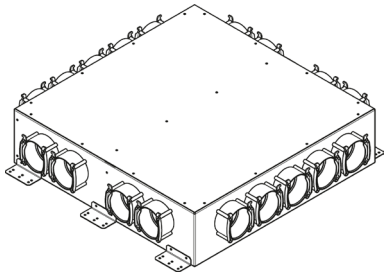
System accessories

	**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, lateral 90° 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 DI-75 black** for flexible pipe DN 75	2016 227
	**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	2070 996

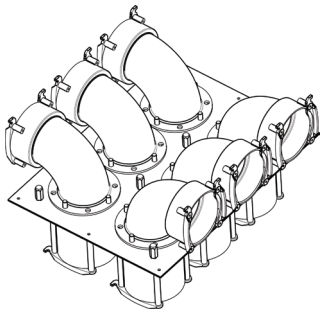
Distribution cases DN 160

Part No.

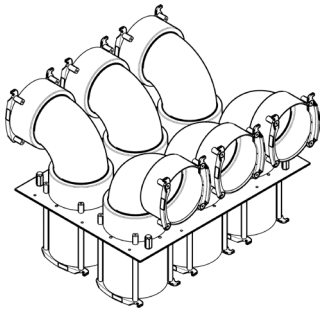
Application:
Preferably concrete installation (mass concrete)



Distribution box VTB-160 9 x 75 — 6054 083
Air distribution box from aluzinc sheet with access panel (can be painted on site). Interior lined with sound insulating material.
Connection nozzle:
2 x DN 160 (downward)
ZUL 9 x 75 resp. ABL 9 x 75
Consisting of:
Box, 6 connection brackets, 2 end caps, orifices for setting the air quantity per flex pipe DN 75.



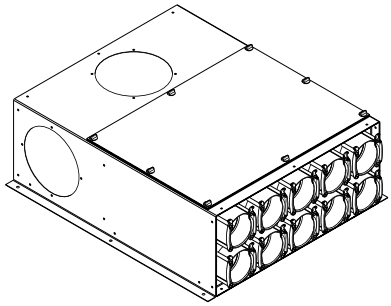
Section distributor SV-6 x 75 — 6042 706
for flexible pipe DN 75
for space-saving routing of 6 flexible pipes in the ceiling.
Optionally 6 x 90° bends, of which max. 3 can be replaced by straight nozzles.
Each 90° bend can be rotated in increments of 45°. 6 x DN 75
For supply and extract air one section distributor each is necessary.



Section distributor SV-6 x 90 — 6044 775
for flexible pipes DN 90
for space-saving routing of 6 flexible pipes in the ceiling.
Optionally 6 x 90° bends, of which max. 3 can be replaced by straight nozzles.
Each 90° bend can be rotated in increments of 45°. 6 x DN 90.
For supply and extract air one section distributor each is necessary

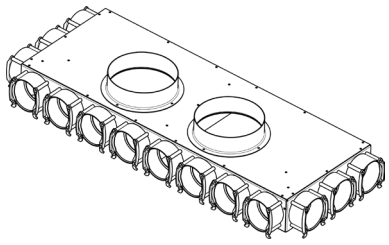
Distribution cases DN 160

Application:
On-wall installation

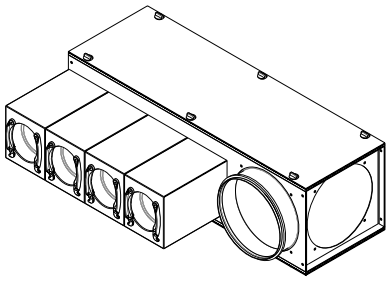


Distribution case VK
Casing of aluzinc sheet with 1 connection nozzle Ø 160 mm (included separately), can be mounted on the front, at the top or laterally on the left or on the right (on site) and x connection nozzles for flexible pipe Ø 75 mm. With internal silencer and access panel.
Incl. throttle 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

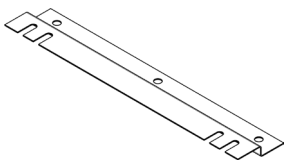


Distribution box VTB-160 14 x 75 6052 044
for concrete installation height 91 mm
Distribution box of aluzinc sheet
without access panel.
Connecting sleeve:
2 x DN 160 supply and extract air
ZUL 7 x DN 75
(4 x front and 3 x side)
ABL 7 x DN 75
(4 x front and 3 x side)



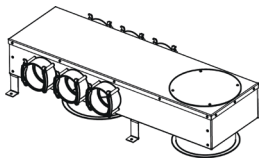
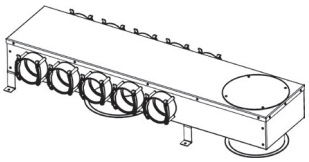
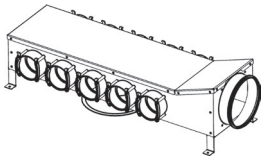
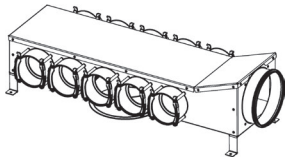
Storey distributor GVT-X
for connecting x flexible tubes Ø 75 mm.
Casing of galvanised sheet steel with sound absorbing mat, connection possibilities Ø 160 mm, incl. 2 nozzles Ø 160 mm with double lip seal. Flexible installation possible due to access panel on both sides.
Incl. throttle orifices

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



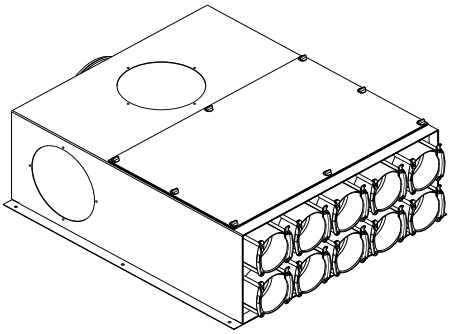
Mounting holder MH 5032 853
for storey distributor GVT-X
from galvanised steel sheet
Length: 0.3 m
Two angle rails recommended per storey distributor.

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

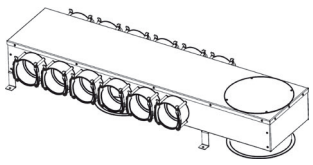


Distribution case VK
Casing of aluzinc sheet with 1 connection nozzle Ø 180 mm (supplied loose), on end, top or left-side mounting (on site) and x connection nozzles for flex pipes Ø 75 resp. 90 mm. An internal sound insulation element with washable outer skin and an access panel.
Incl. throttle orifices

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

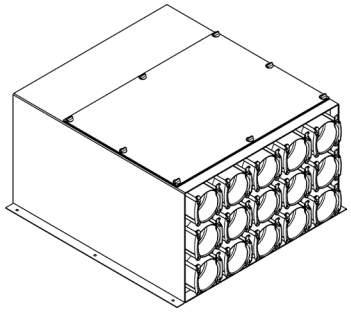
Application:
Preferably concrete installation (mass concrete)



Access panel on bottom

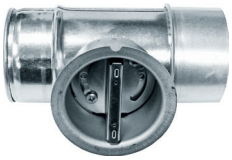
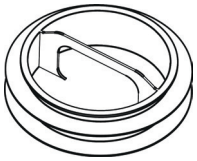
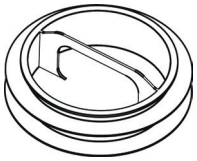
In-wall distribution case UPVK-200 90 x 12 — 6051 623
Distribution case made of aluzinc sheet metal for cementing in. With a sliding connection piece DN 200 and
2 x 6 connections DN 90 (side),
incl. 6 end covers, inner lining of sound insulating material, inspection sliding connection piece DN 180
Incl.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

Application:
On-wall installation



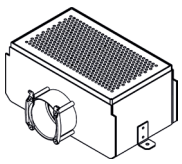
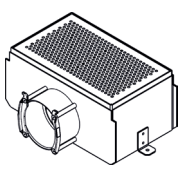
Distribution case VK-200 75 x 15 — 6030 966
Air distribution case of aluzinc sheet with access panel.
Inside with sound insulation element.
Connection nozzles:
1 x DN 200 (on the back)
15 x (3 x 5) DN 75 (on the front)
Incl. throttle orifices

Distribution case accessories

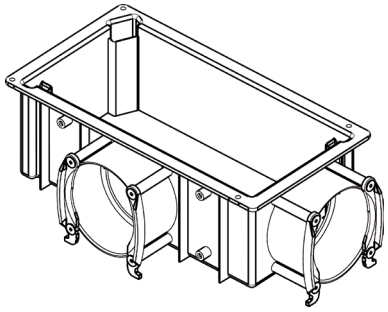
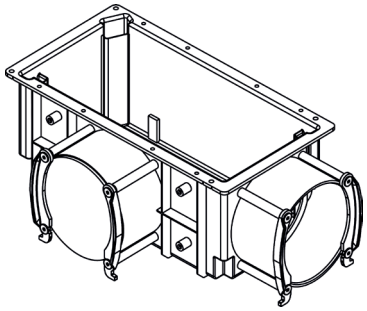
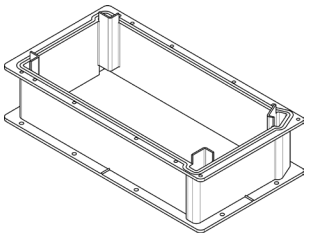
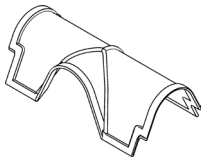
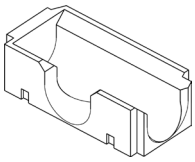
		Part No.
	**Control damper RK-80** for flexible pipe DN 75 sealing control damper for adjustment of the air flow. Of galvanised sheet steel DN 80	6013 654
	**Air flow rate control valve DN 90** for connection housing AG-90, quick 90, floor passage BD-30-90	2070 534
	**End cover quick 75** Cover for unused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

Air grilles – floor

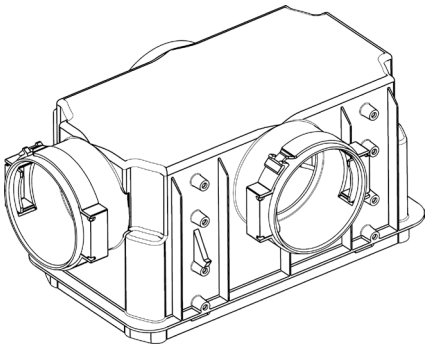
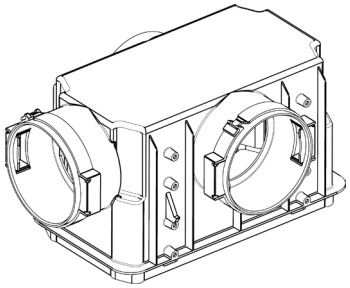
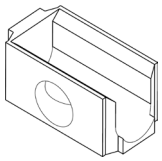
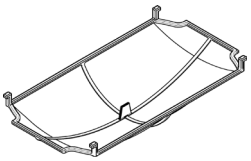
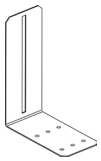
Application:
In the floor structure (finished floor, only supply air)

	**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 m³/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 m³/h Height: 130 to 180 mm	6022 513

Air grilles – wall/ceiling

		Part No.
	Application: **Mass concrete, masonry walls and light-weight 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 up 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
	**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

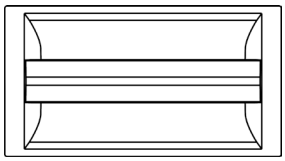
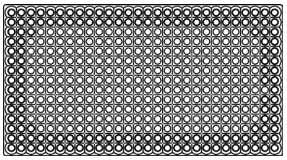
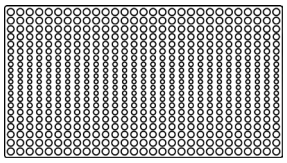
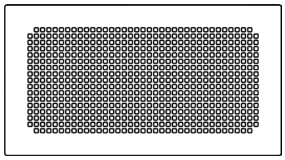
Air grilles – wall/ceiling

		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

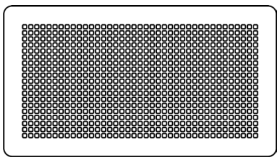
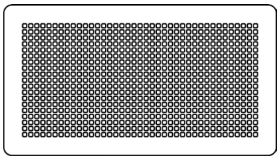
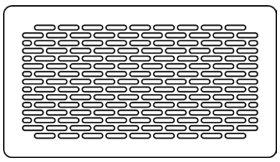
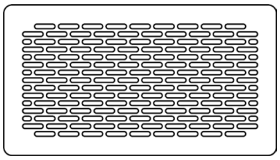
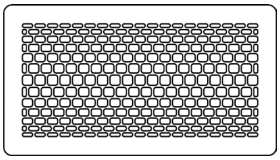
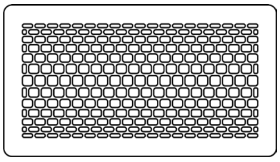
The alignment of the grilles can be slightly corrected after installation.

		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

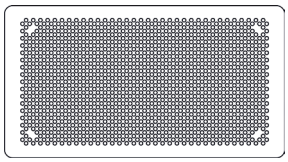
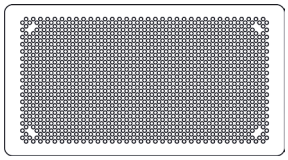
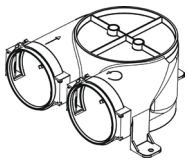
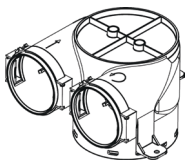
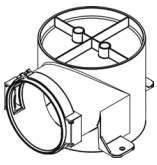
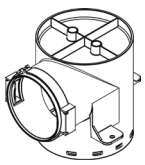
Air grilles – wall/ceiling

Metal supply air/extract air grille

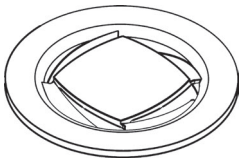
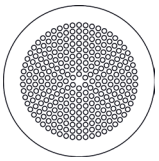
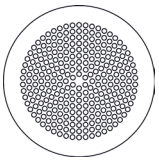
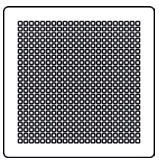
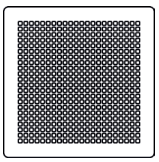
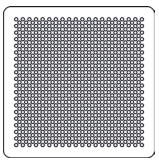
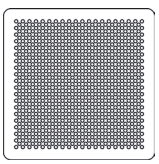
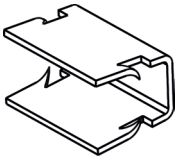
The alignment of the grilles can be slightly corrected after installation.

		Part No.
	**Design grille Pizol** for connection housing AG-60/90 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-60/90 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-60/90 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-60/90 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-60/90 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-60/90 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

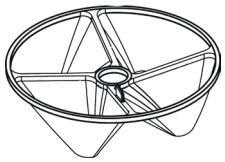
Air grilles – wall/ceiling

		Part No.
	**Design grille Pilatus white** for connection housing AG-60/90 and quick 75/90 Aluminium sheet with flanged edges, with plug connection, painted white (RAL 9016) Suitable for: - Supply air up to 40 m³/h - Extract air up to 60 m³/h	6054 365
	**Design grille Pilatus Alu** for connection housing AG-60/90 and quick 75/90 Aluminium sheet with flanged edges, with plug connection, brushed aluminium anodized Suitable for: - 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

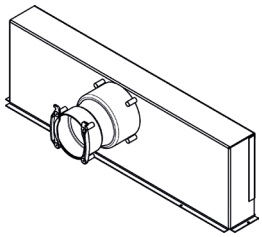
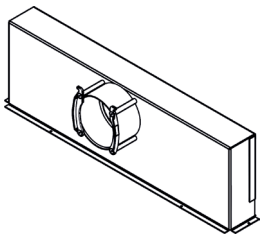
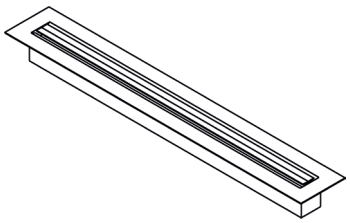
		Part No.
	**Design grille Tangential 125** suitable for connection cylinders quick 75 and 90 made of plastic, with plug-in connection Colour: white RAL 9016, can be painted on site Supply air up to 40 m³/h Extract air up to 50 m³/h	6052 158
	**Design grille Falknis painted white** suitable for connection 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 plug connection 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 plug connection Supply air up to 40 m³/h Extract air up to 60 m³/h	6054 364
	**Steel brackets set of 10** for outlet round 90° lateral 125 in connection with designer grilles	6056 054

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

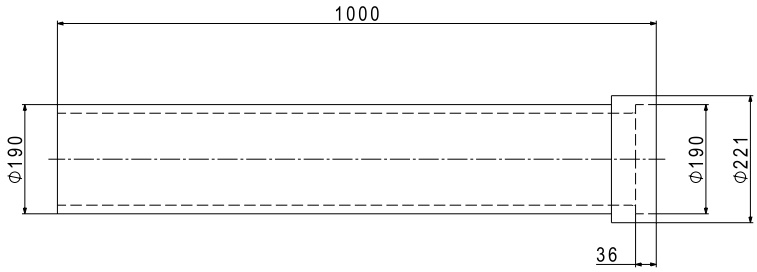
Adhesive tape: of synthetic rubber, 50 mm wide, 15-meter roll

Notice
Comply with regional regulations on thermal insulation.

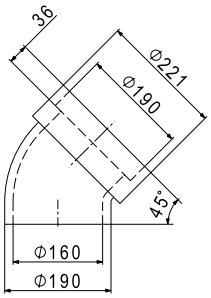
IsiPipe pipe system EPP
Pipeline consists of diffusion-tight EPP
Wall thickness: 15 mm, grey
Thermal conductance: λ = 0.035 W/mK

IsiPipe pipe system EPP-160
(Dimensions in mm)

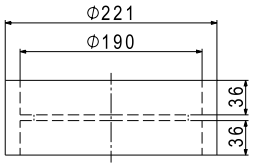
IsiPipe pipeline EPP-160/1000



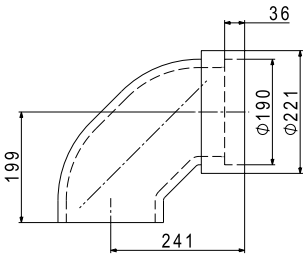
IsiPipe pipe bend EPP-160/45



IsiPipe sleeve EPP-160

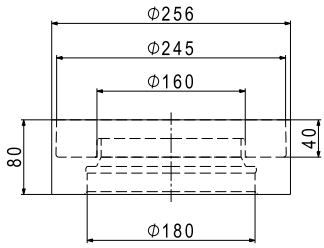


IsiPipe pipe bend EPP-160/90

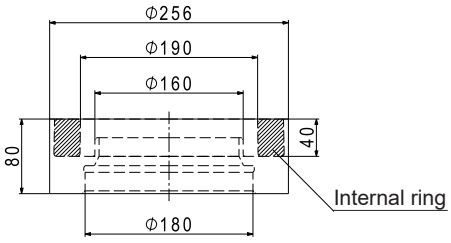


IsiPipe device adapter EPP-160
(Dimensions in mm)

IsiPipe device adapter
without inner ring for IsiPipe Plus (43 mm)



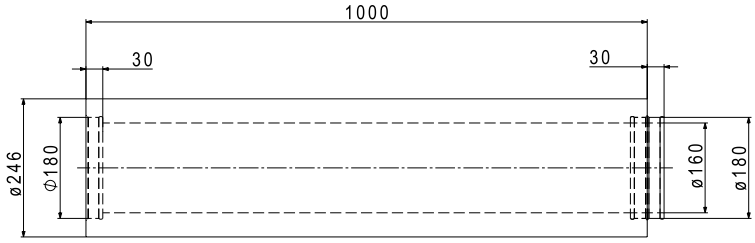
IsiPipe device adapter
with inner ring for IsiPipe (15 mm)



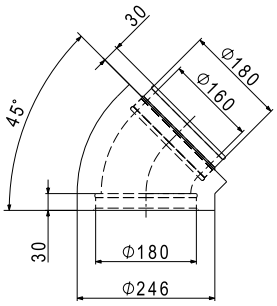
IsiPipe Plus pipe system EPP
Pipeline consists of diffusion-tight EPP
Wall thickness: 43 mm, black
Thermal conductance: λ = 0.035 W/mK

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

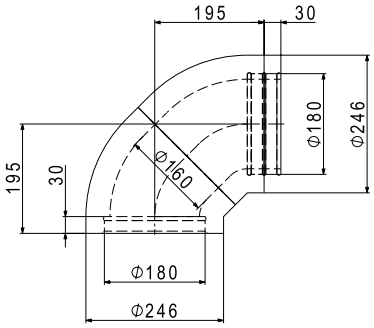
IsiPipe Plus pipeline EPP-160/1000



IsiPipe Plus pipe bend EPP-160

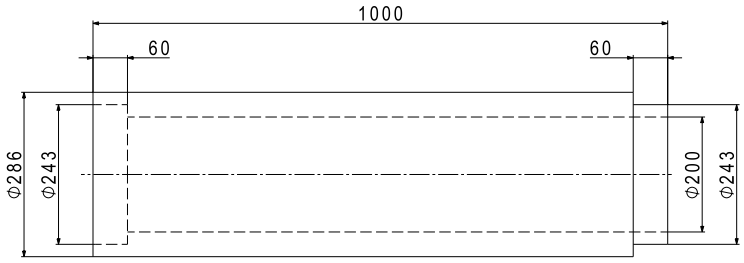


2 IsiPipe Plus pipe bends EPP-160/45

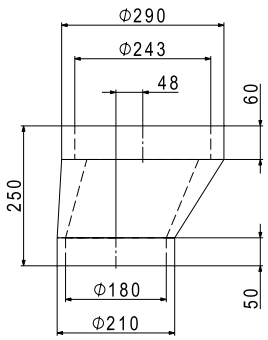


IsiPipe Plus pipe system EPP-200
(Dimensions in mm)

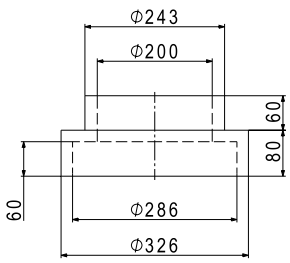
IsiPipe Plus pipeline EPP-200/1000



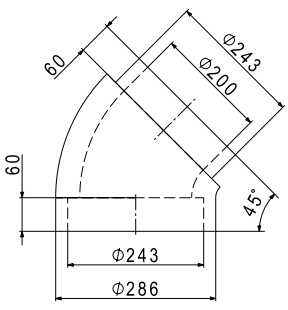
IsiPipe Plus eccentric adapter EPP-180-200



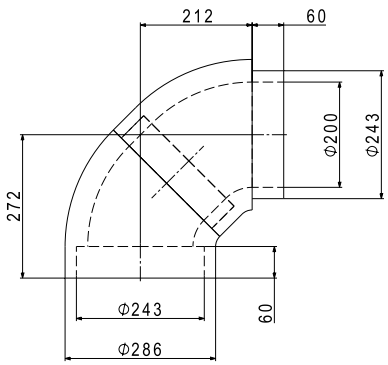
IsiPipe Plus device adapter EPP-200



IsiPipe Plus pipe bend EPP-200/45

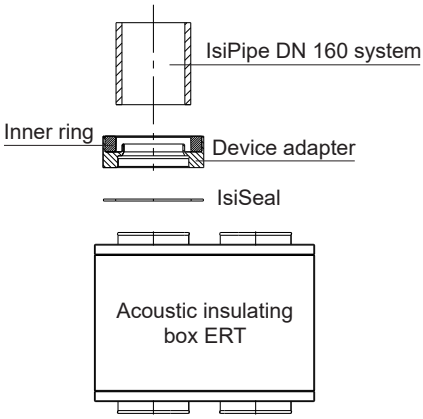


2 IsiPipe Plus pipe bends EPP-200/45

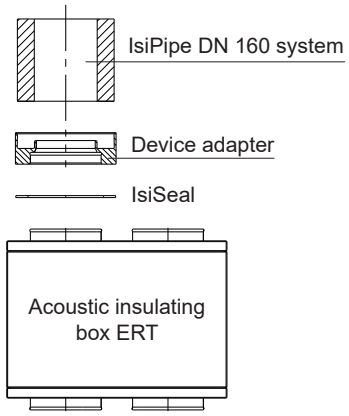


IsiPipe application
Device adapter

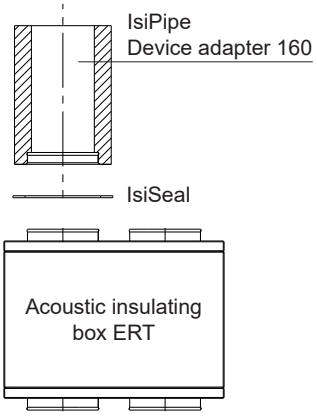
Device adapter with inner ring for connection of IsiPipe DN 160 with wall thickness 15 mm.



Device adapter without inner ring for connecting cut-to-length IsiPipe Plus pipes DN 160 with a wall thickness of 43 mm.

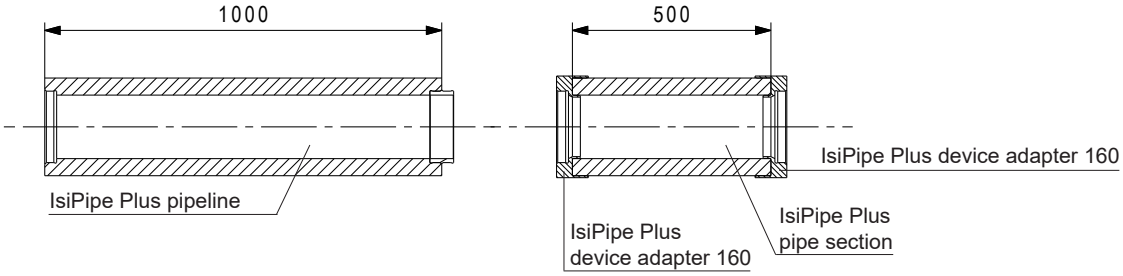


The IsiSeal is glued between the device adapter or IsiPipe to secure and better seal the connection.

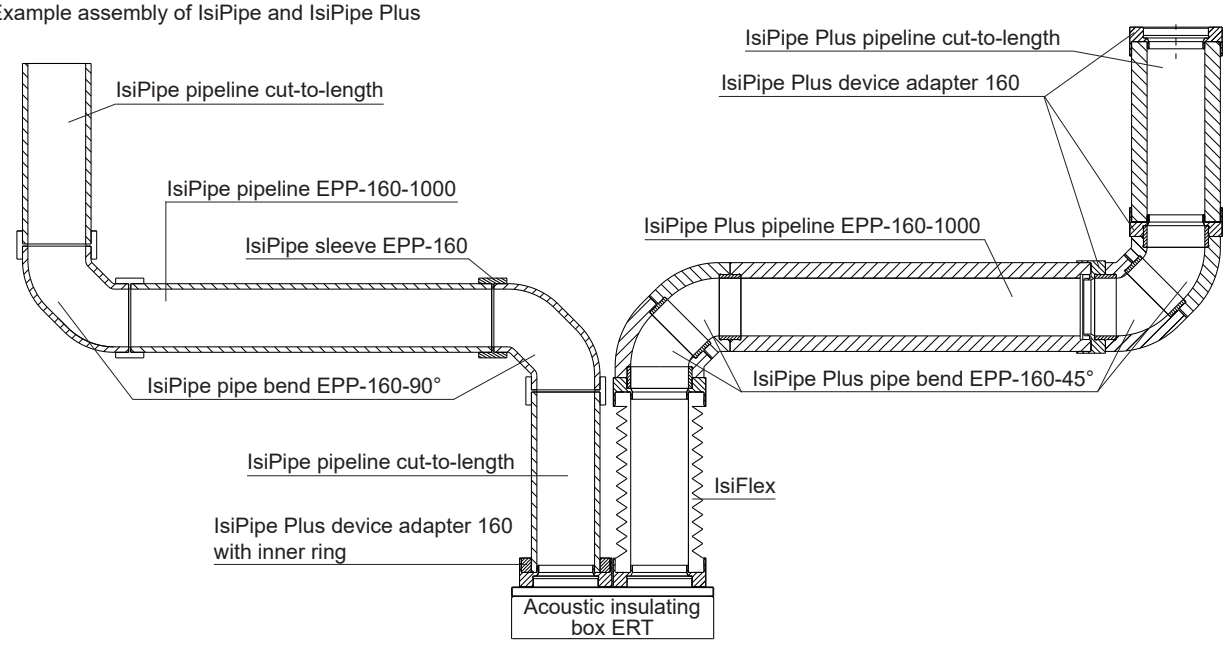


IsiPipe Plus pipeline

Cut-to-length pipes can be connected to the device adapter.

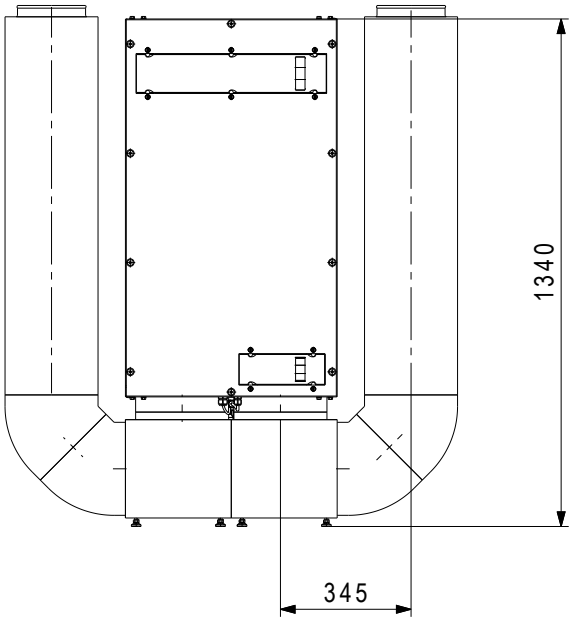


Example assembly of IsiPipe and IsiPipe Plus

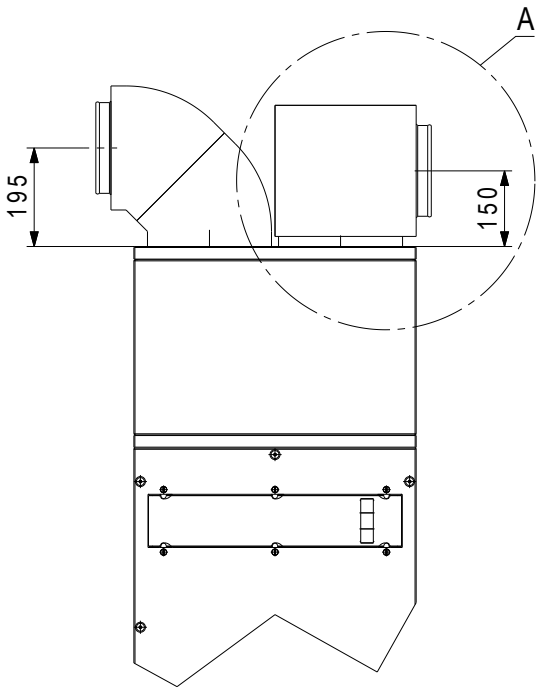


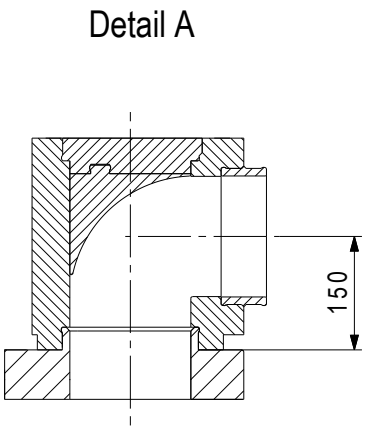
IsiCube application

The IsiCube is used as a base for the HomeVent® ER. This allows a more compact design and the Isipipe system can be connected directly to the Cube.

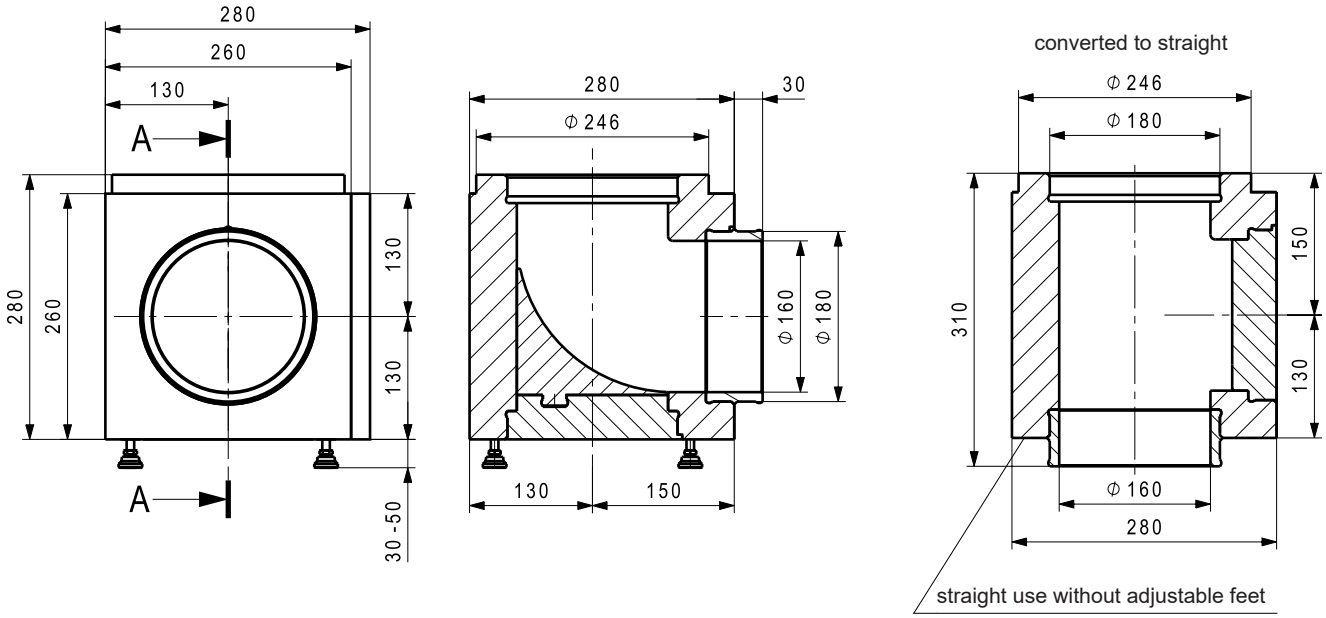


The IsiCube can also be used as a pipe bend to save overall height.

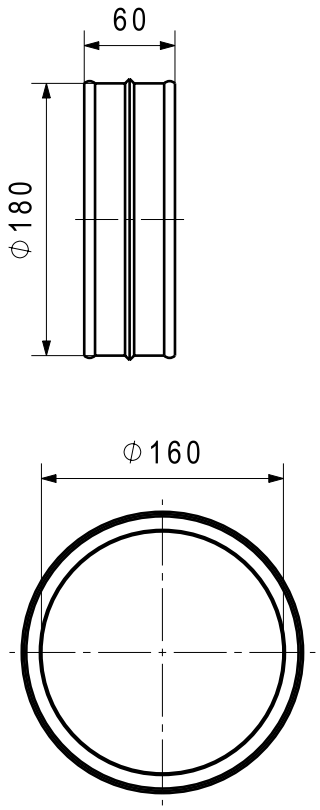




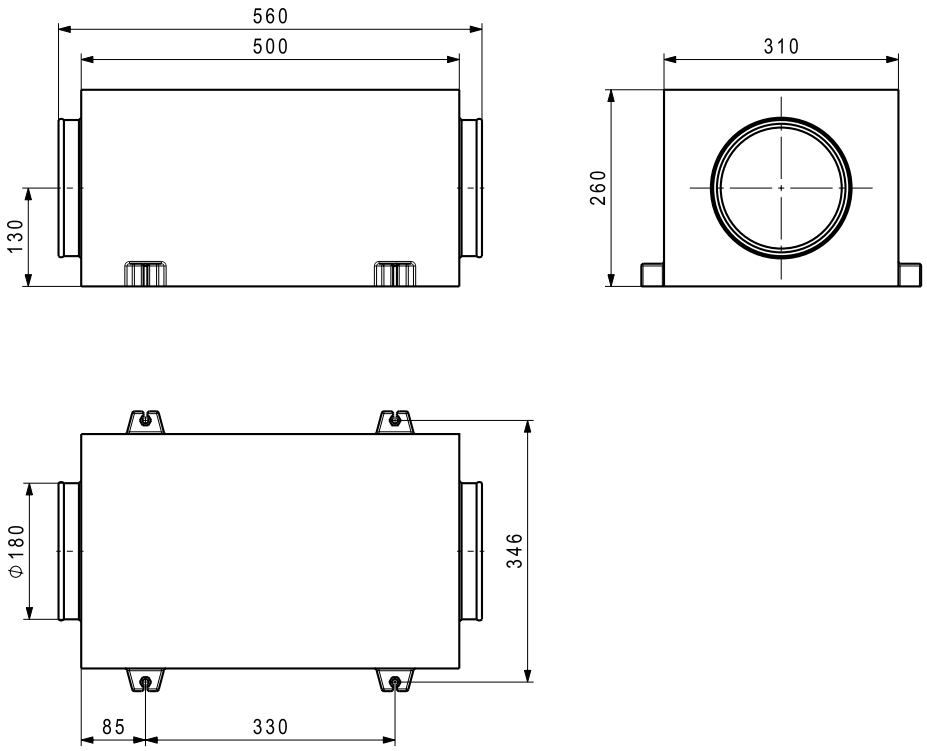
IsiCube
(Dimensions in mm)

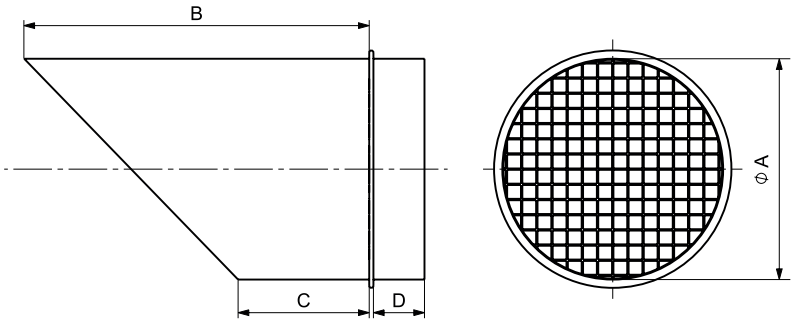


IsiFit



IsiSound

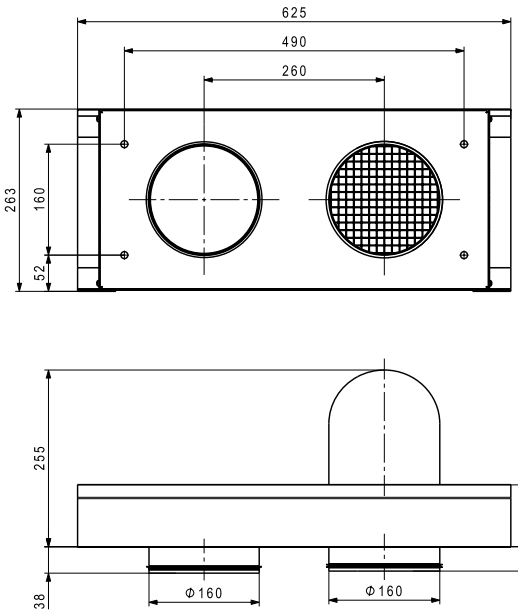




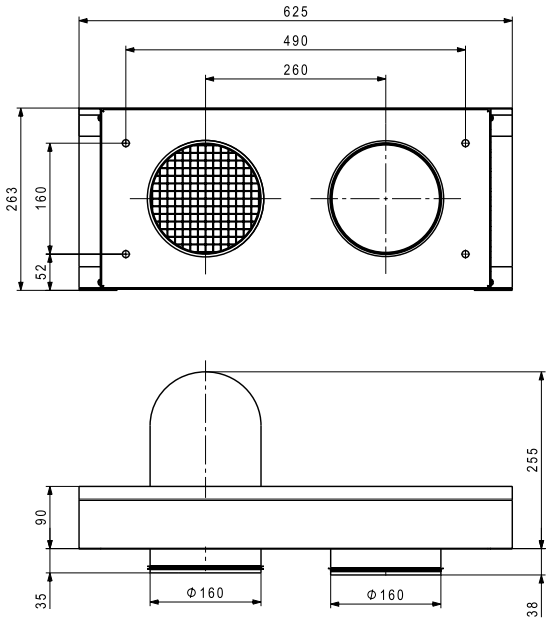
Exhaust air nozzle FST
for spiral-seam tube DN
of galvanised sheet steel
with bird protection grille
for horizontal installation

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

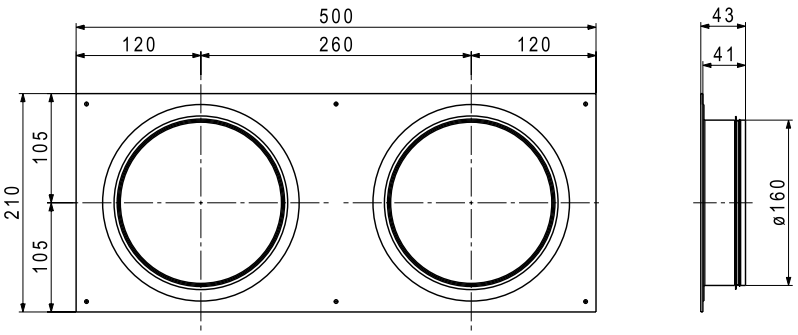
Wall outlet Ø 160 left

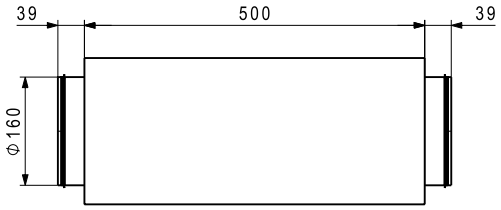


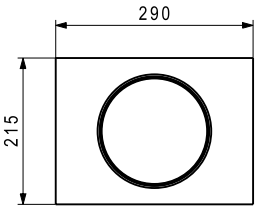
Wall outlet Ø 160 right



Plywood
for wall outlet, Ø 160

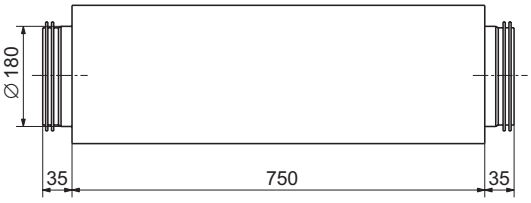


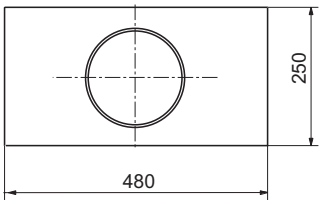




Silencer SD-160-500
The silencer consists of a rectangular casing of galvanised steel with connection nozzles on both sides. The housing is lined on the inside with highly effective sound absorbing material. The unit can be cleaned through the pipe nozzle. When used in fresh air and exhaust air, the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

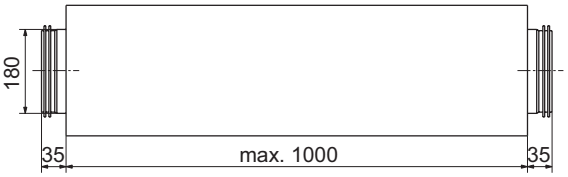
Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	6	10	19	23	32	25	16

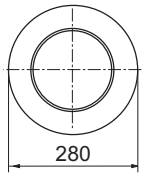




Silencer FSR-180-750
The silencer consists of a rectangular casing of galvanised steel with connection nozzles on both sides. The housing is lined on the inside with highly effective sound absorbing material. The unit can be cleaned through the pipe nozzle. When used in fresh air and exhaust air, the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

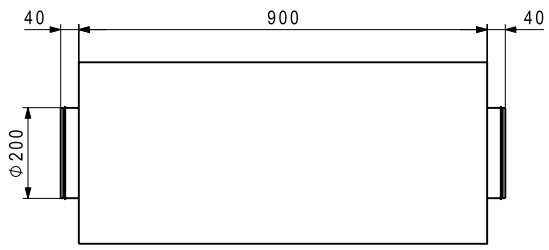
Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	6	16	19	19	19	18	5

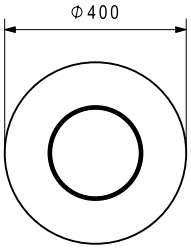




Silencer FLSDA-180-1000
The silencer consists of a flexible aluminium envelope tube, inside from perforated aluminium tube with connection nozzles on both sides with double lip seal.

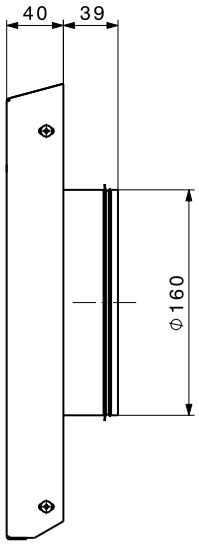
Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	5	13	30	42	34	24	13

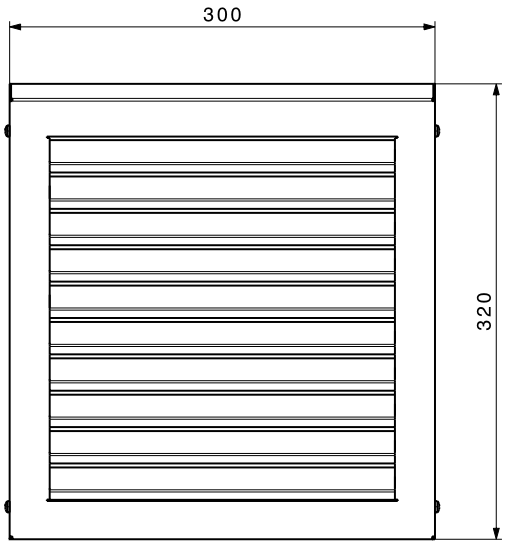




Silencer SD-200-1000
The silencer consists of a round casing of galvanised steel with connection nozzles on both sides. The housing is lined on the inside with highly effective sound absorbing material. The unit can be cleaned through the pipe nozzle.

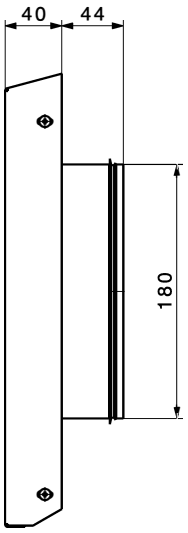
Frequency [Hz]	125	250	500	1000	2000	4000	8000
Simple damping [dB]	5	15	27	27	20	10	5

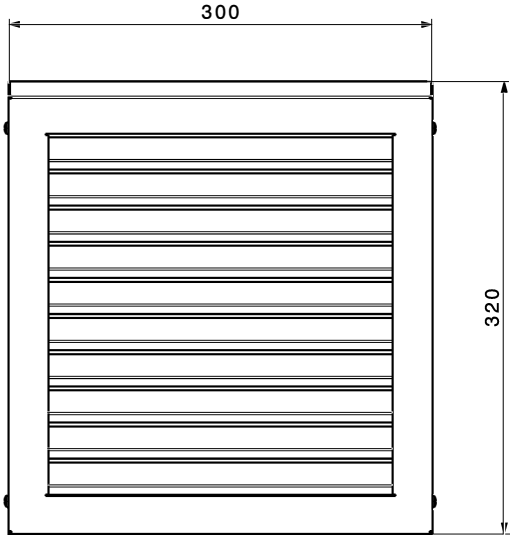




Weatherproof grille WG-160
for spiral-seam tube DN 160
for outside and exhaust air
of aluminium with rain lug,
can be painted with double lip seal,
pipe nozzle DN 160

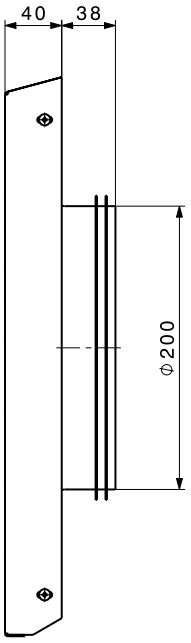
Flow rate [m³/h]	Pressure drop Outside air [Pa]	Pressure drop Exhaust air [Pa]
250	6	7
450	10	18

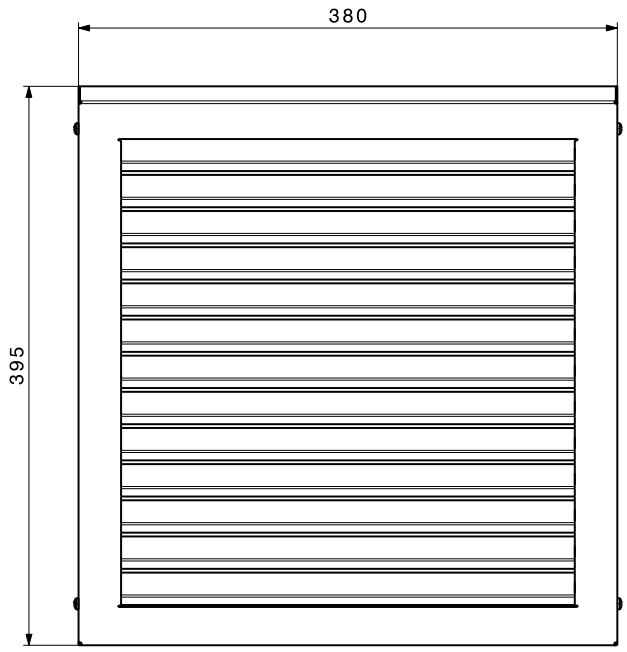




Weatherproof grille WG-180
for spiral-seam tube DN 180
for outside and exhaust air
of aluminium with rain lug,
can be painted with double lip seal,
pipe nozzle DN 180

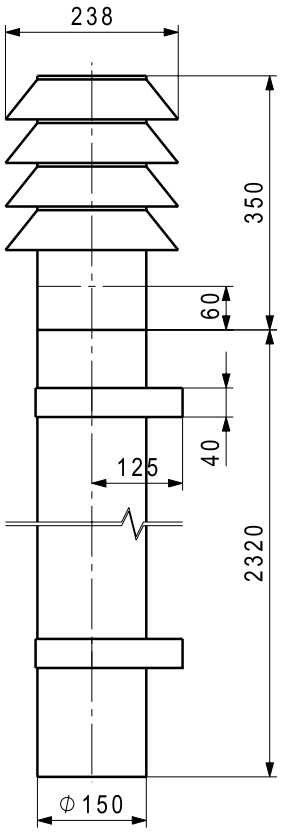
Flow rate [m³/h]	Pressure drop Outside air [Pa]	Pressure drop Exhaust air [Pa]
250	5	6
450	9	17





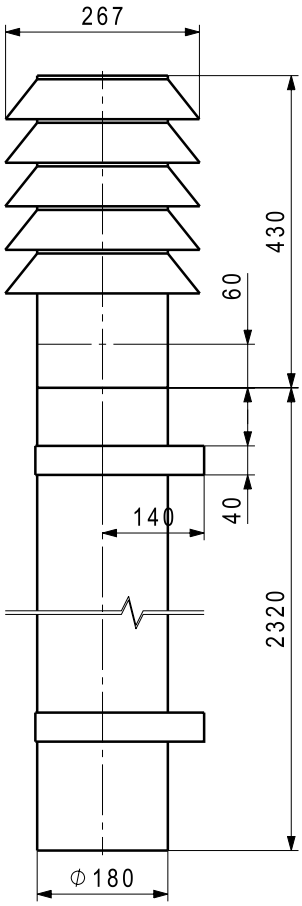
Weatherproof grille WG-200
for spiral-seam tube DN 200
for outside and exhaust air
of aluminium with rain lug,
can be painted with double lip seal,
pipe nozzle DN 200

Flow rate [m³/h]	Pressure drop Outside air [Pa]	Pressure drop Exhaust air [Pa]
250	4	5
450	8	16

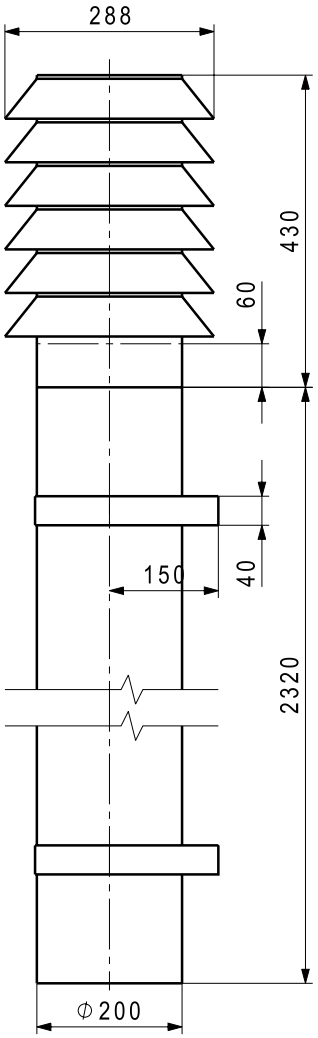


Outside air intake set AAS-150
for spiral-seam tube DN 150
galvanic isolation of the connection
for outside and exhaust air
of stainless steel, lamella cowl,
consisting of:
1 cowl DN 150,
1 pipe DN 150, length: 0.5 m,
2 pipes DN 150, length: 1 m and
2 wall mountings

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



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



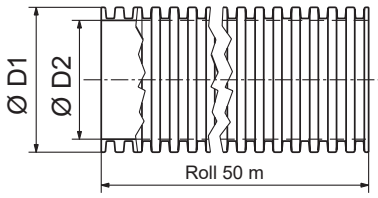
Stainless steel cowl AAS-200
for spiral-seam tube DN 200
galvanic isolation of the connection
for outside and exhaust air
of stainless steel, lamella cowl,
consisting of:
1 cowl DN 200,
1 pipe DN 200, length: 0.5 m,
2 pipes DN 200, length: 1 m and
2 wall mountings

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 −15 … 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

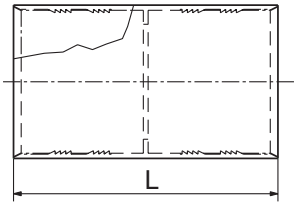
Flexible pipe FR



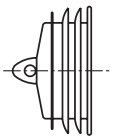
Sealing ring DI

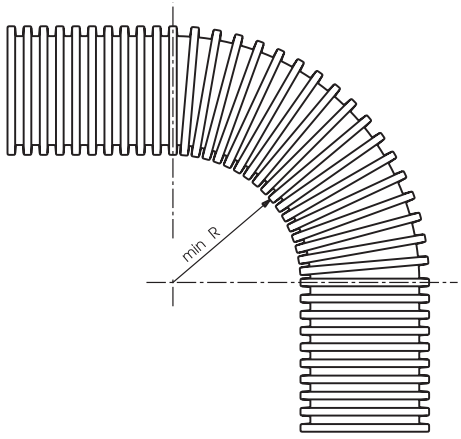


Double sleeve DM

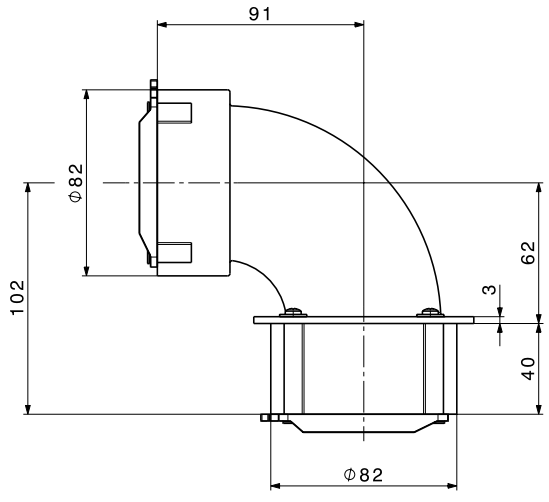


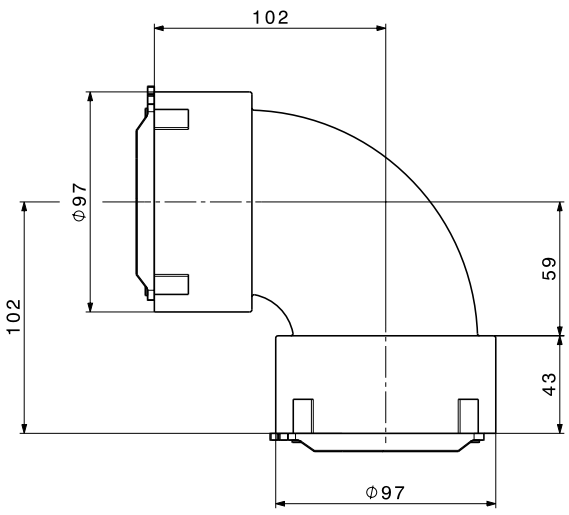
Stopper ST

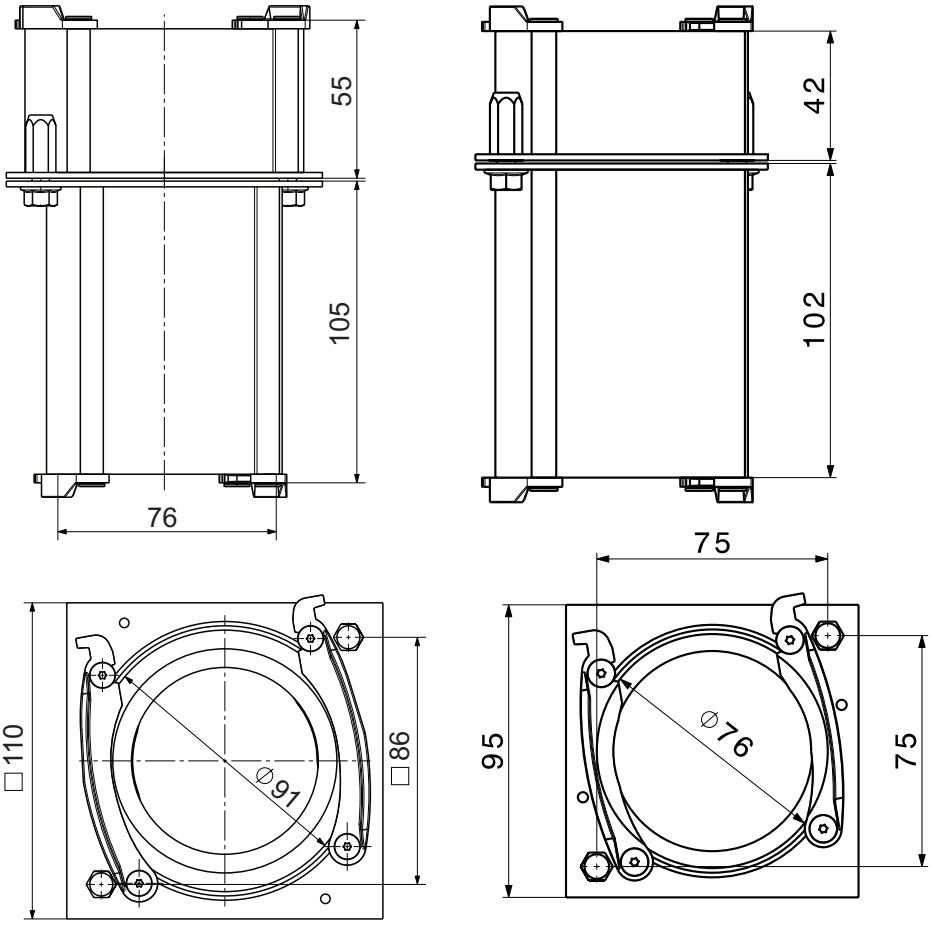




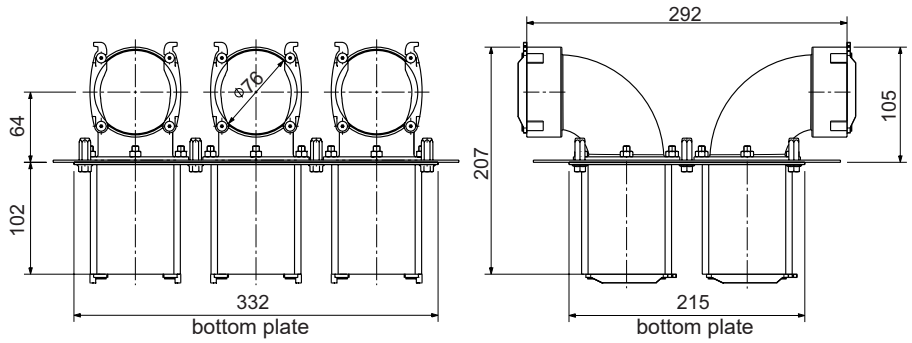
Pipe system	D1 [mm]	D2 [mm]	L [mm]	R [mm]
DN 75	75	62	100	150
DN 90	90	76	100	150



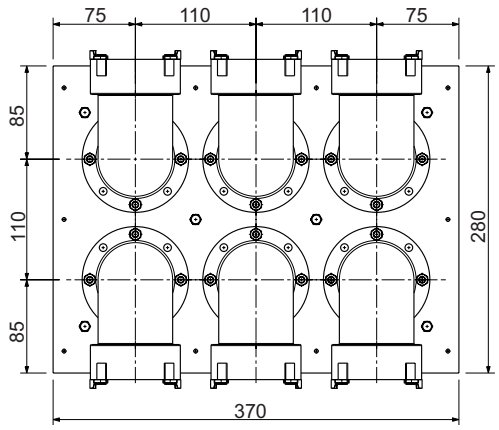


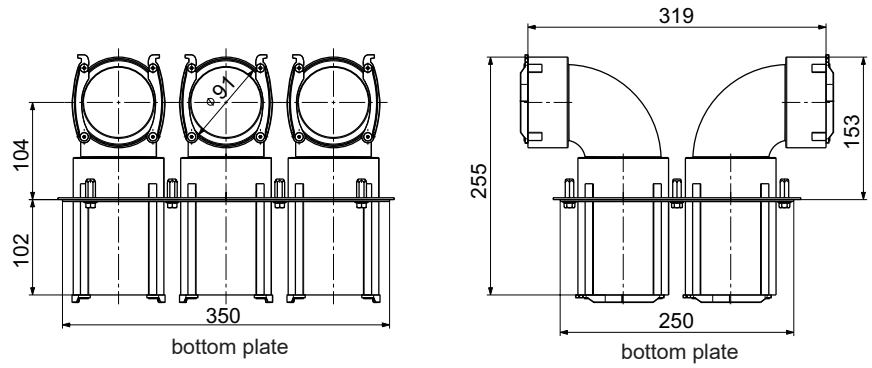


Formwork coupling SK-75/90
for flexible pipe DN 75 and 90 for extending a flexible pipe through the ceiling or the floor and extension from DN 75 to DN 90 without damaging the boarding.

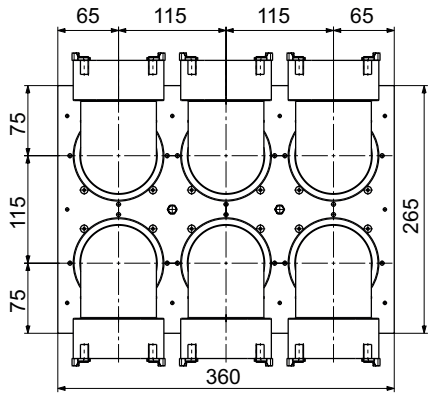


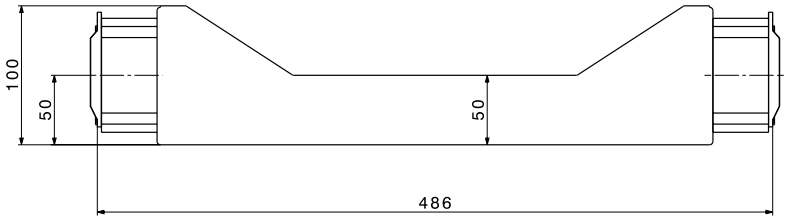
Section distributor SV-6 x 75
For quick, space-saving installation of flexible pipes FR-75 in ceilings/floors and walls. Each 90° connection can be rotated in increments of 45°.
After completion of the building shell, the lower distributor plate is fitted and the flexible pipes FR-75 are simply connected up. The inside of the 90° nozzles is rounded to allow easy cleaning of the ducts.

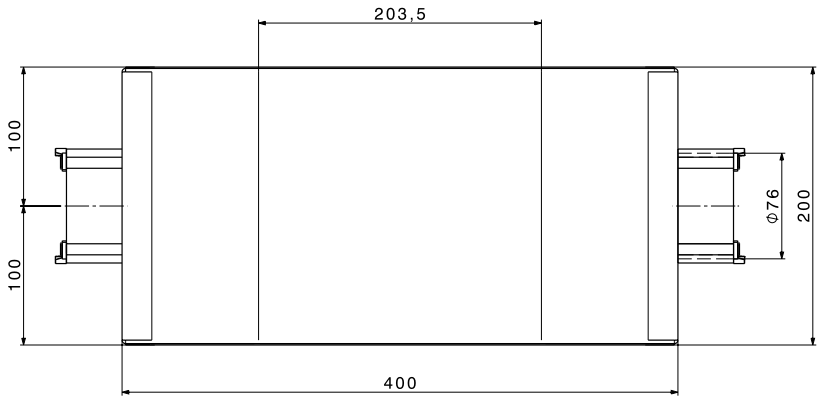




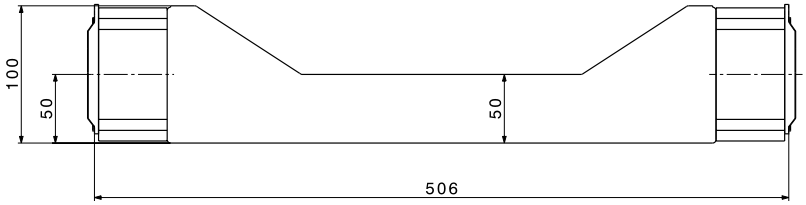
Section distributor SV-6 x 90
For quick, space-saving installation of flexible pipes FR-75 in ceilings/floors and walls. Each 90° connection can be rotated in increments of 45°.
After completion of the building shell, the lower distributor plate is fitted and the flexible pipes FR-75 are simply connected up. The inside of the 90° nozzles is rounded to allow easy cleaning of the ducts.

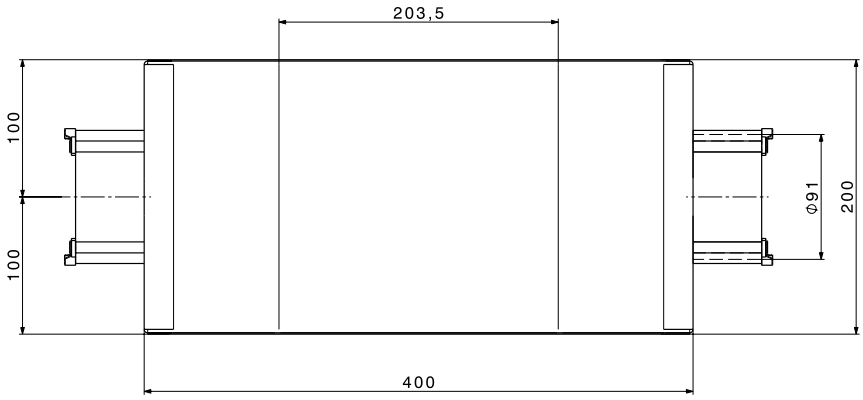






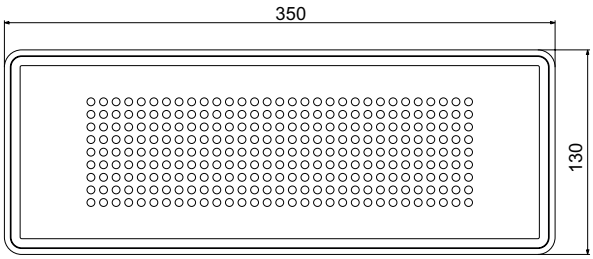
Flexible pipe crossing FRK-75
for flexible pipe DN 75
for crossing two flexible pipes DN 75
with reduced construction height (100 mm).
For one crossing 2 pieces are necessary.



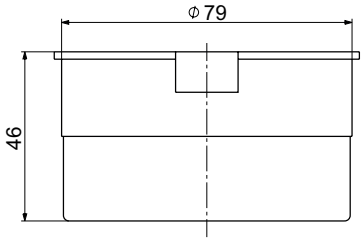


Flexible pipe crossing FRK-90
for flexible pipe DN 90
for crossing two flexible pipes DN 90
with reduced construction height (100 mm).
For one crossing 2 pieces are necessary.

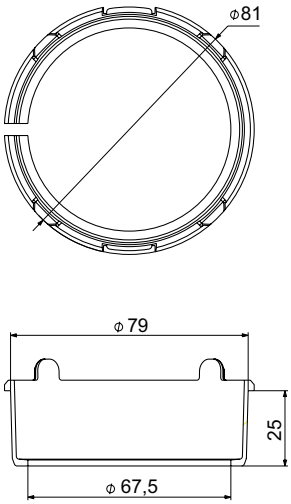
Floor grille 100, 140
inox or white colour
for flat channel system 100 and 140
Dimensions: 350 x 130 mm



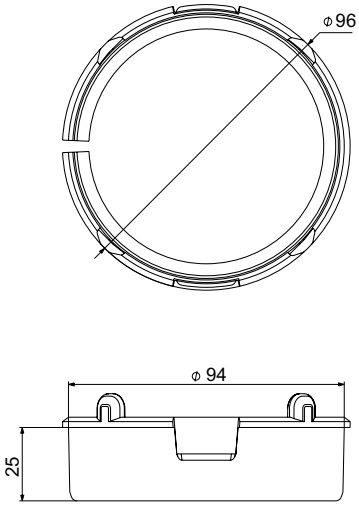
Stopper flat 75
sealing plug for outlet 90°
lateral 125-2 x 75



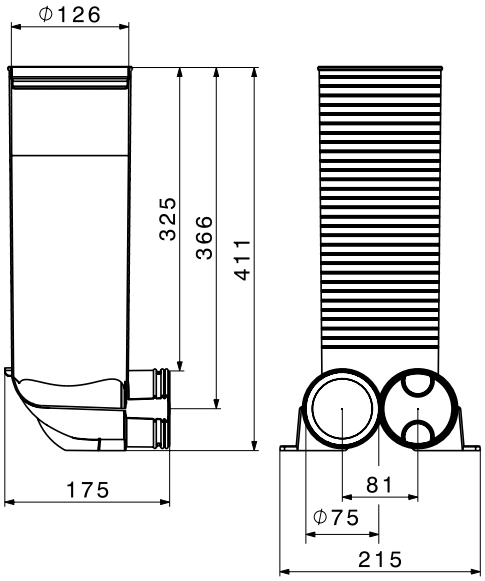
Click ring 75
for outlet 90° lateral 125-2 x 75



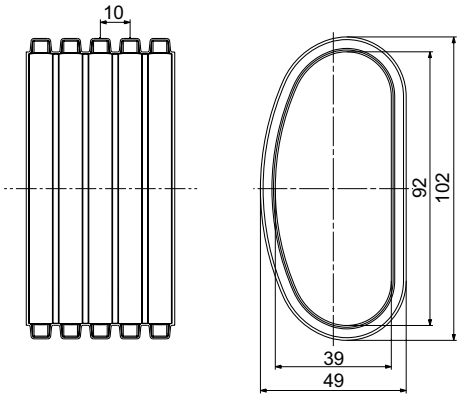
Click ring 90
for outlet 90° lateral 125-2 x 90



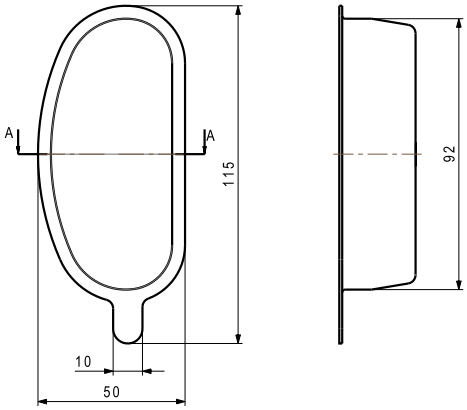
Outlet flat 90 125-75
Outlet round 90° lateral 125-2 x 75
made of plastic 2 x 75/125 mm
Usable length 325 mm

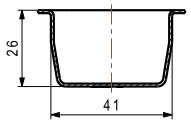


Flat channel 100
Flexible ventilation pipe 102 x 49 mm
Roll length 50 m
minimum bending radius 200 mm

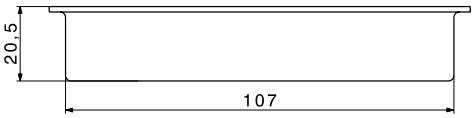


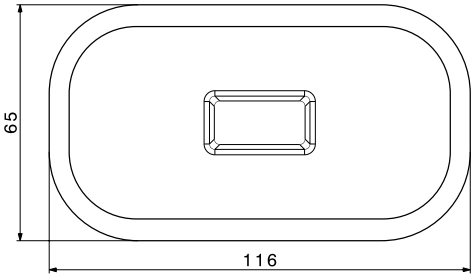
Plug flat channel 100



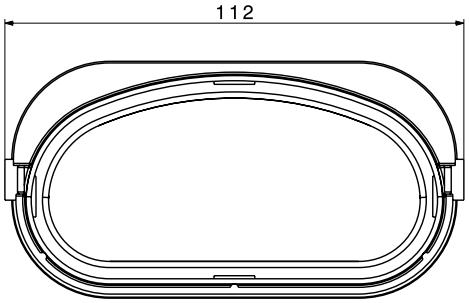


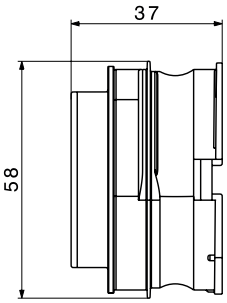
Stopper flat 100
for flat channel system 100 connections



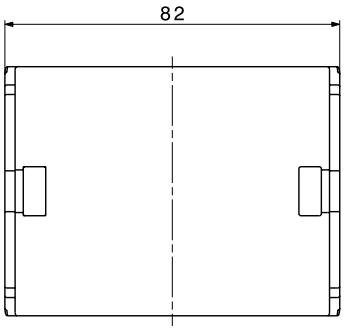


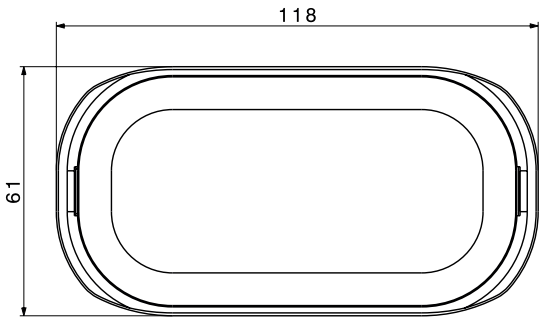
Seal flat 100
for flat channel 100



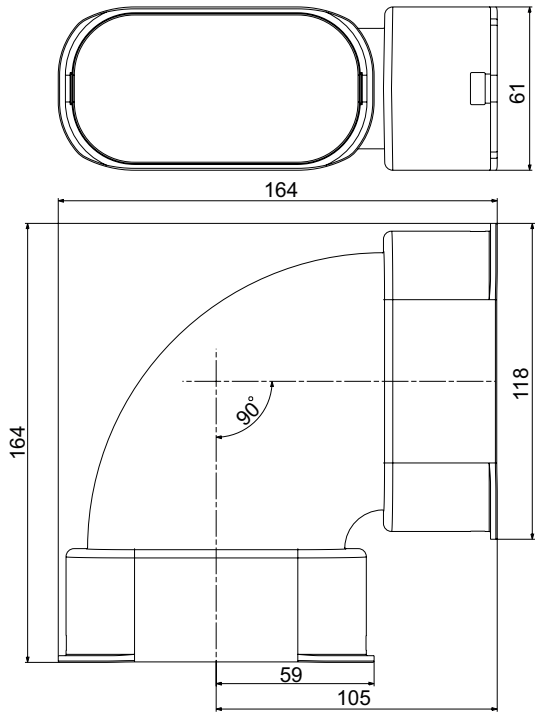


Sleeve 100
for flat channel 100

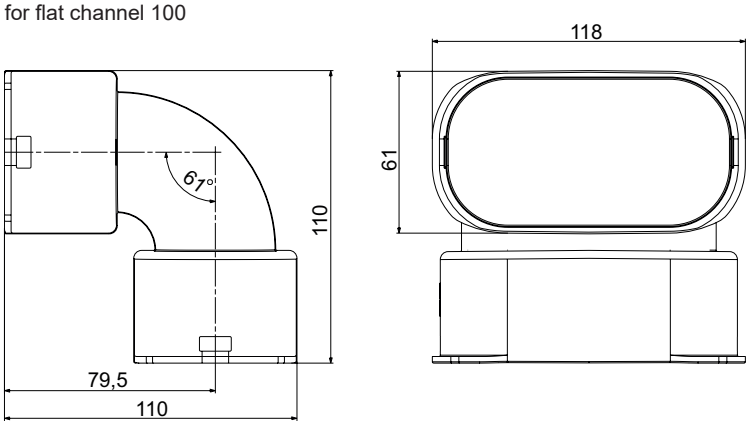




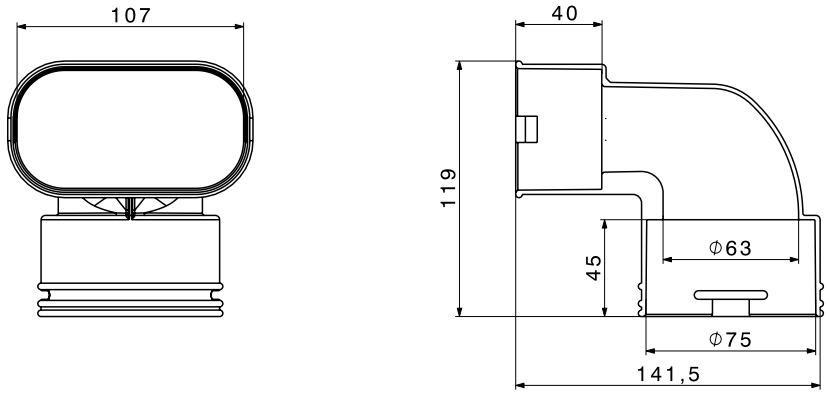
Arch horizontal flat 100
for flat channel 100



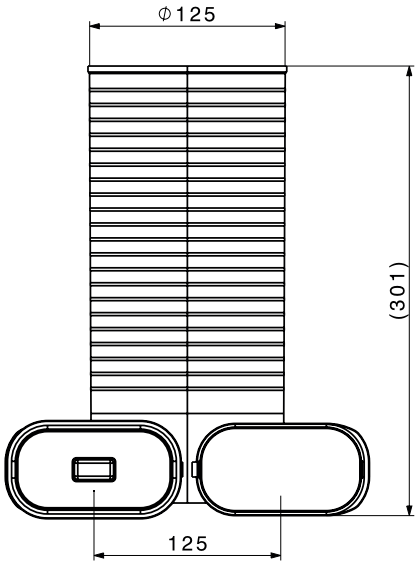
Arch vertical flat 100
for flat channel 100

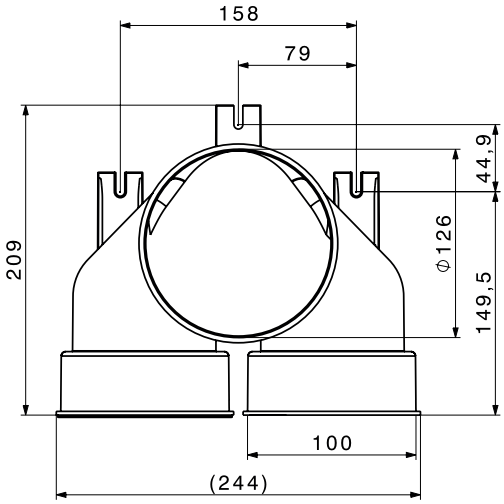


Arch vertical flat to round 100-75
Transition 90° round to flat

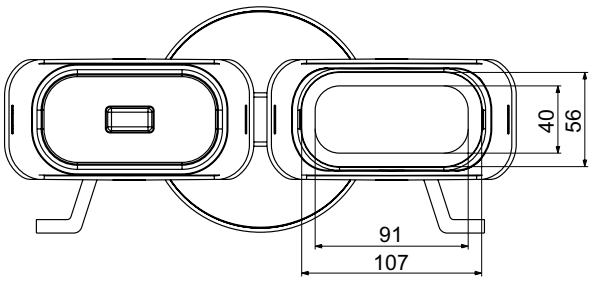


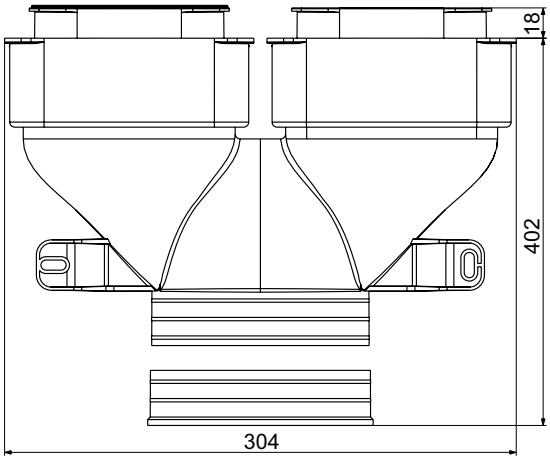
Outlet round, lateral 90° 125-2 x 100
for flat channel 100
incl. mounting bracket



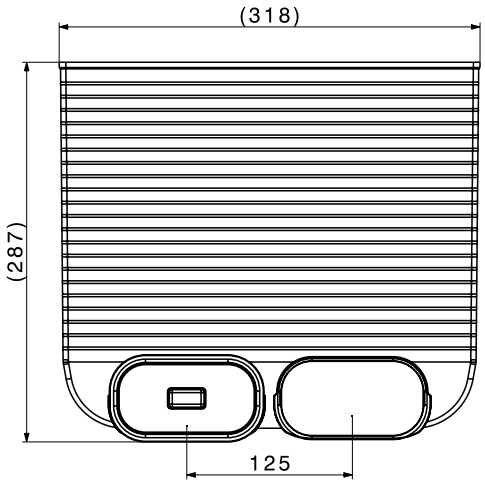


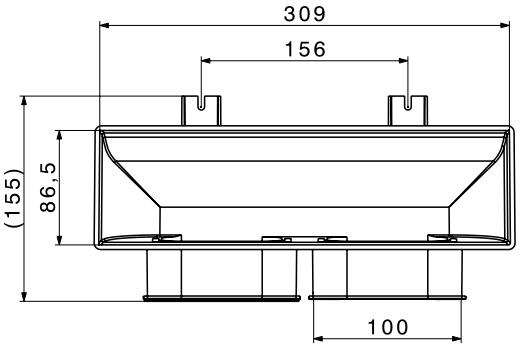
Outlet round, front 125-2 x 100
for flat channel 100
incl. mounting bracket



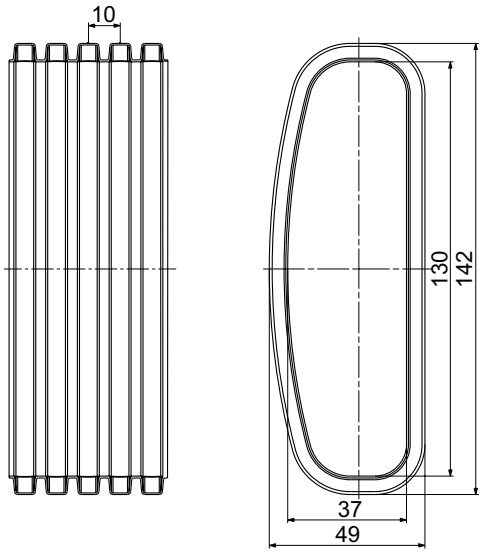


Floor exhaust flat 2 x 100
309 x 86.5 mm interior
2 flat channel 100 connections

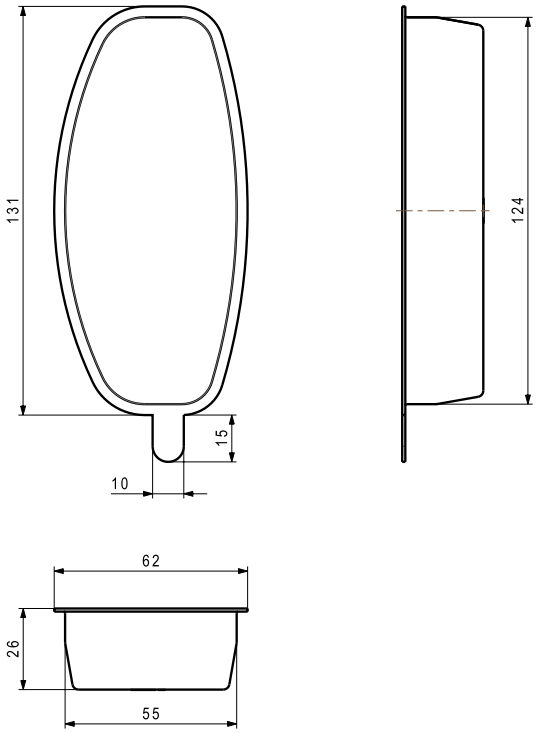




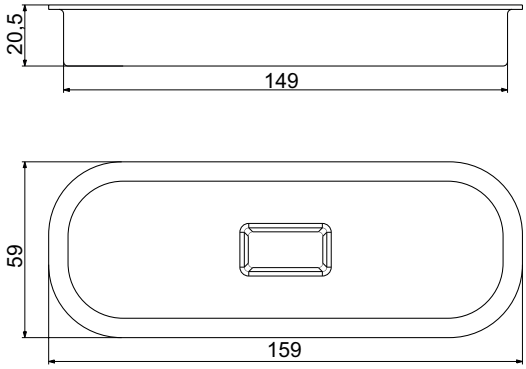
Flat channel 140
Flexible ventilation pipe 142 x 49 mm
Roll length 20 m
minimum bending radius 200 mm



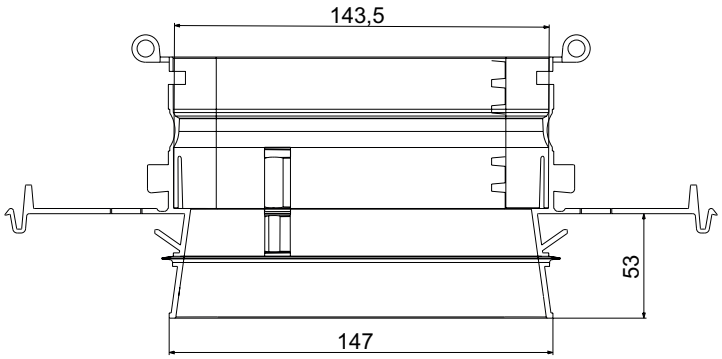
Plug flat channel 140

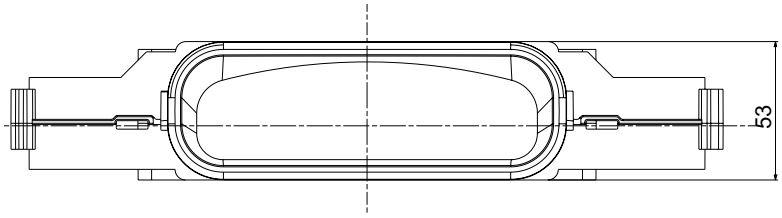


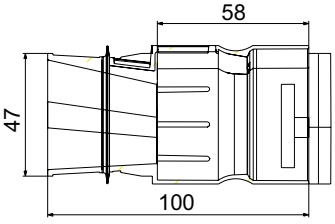
Stopper flat 140
for flat channel system 140 connections



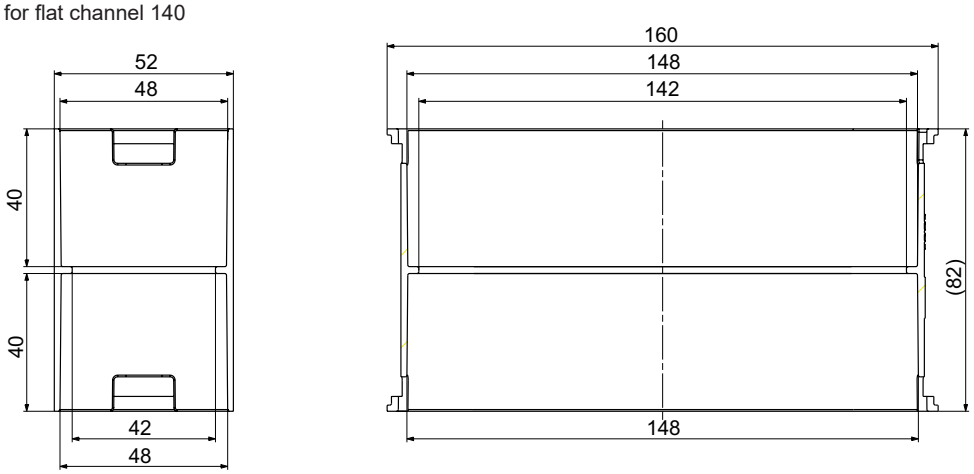
Seal flat 140
for flat channel 140



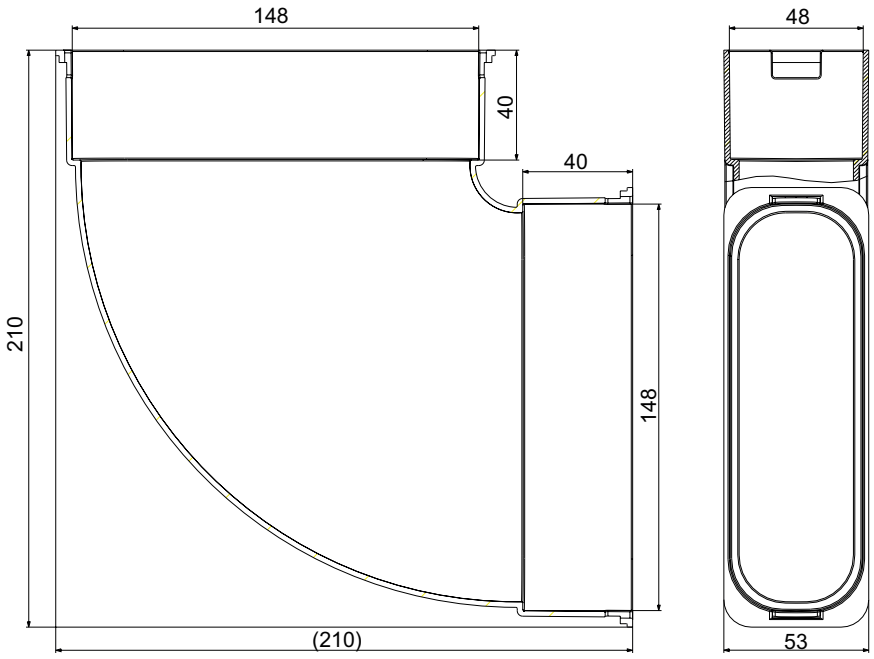




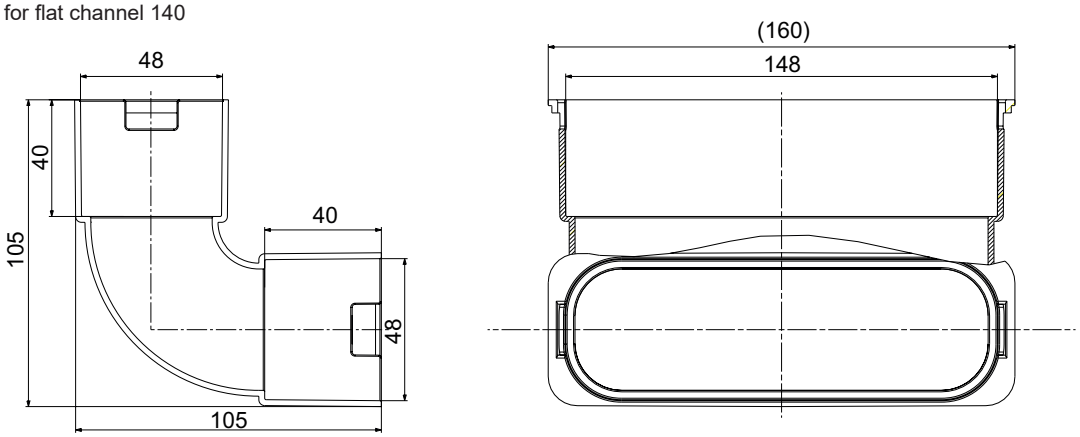
Sleeve 140
for flat channel 140



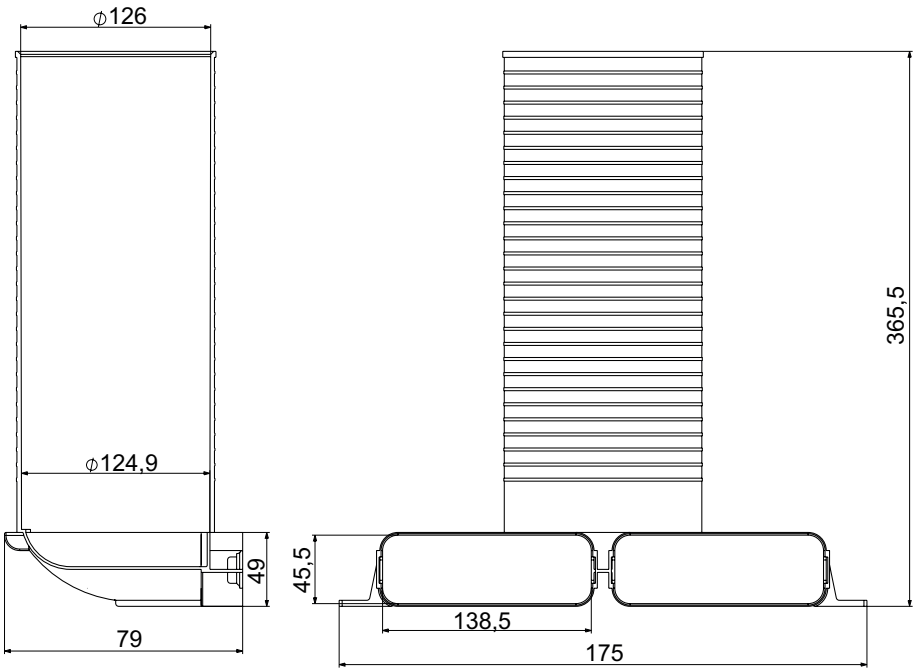
Arch horizontal flat 140
for flat channel 140



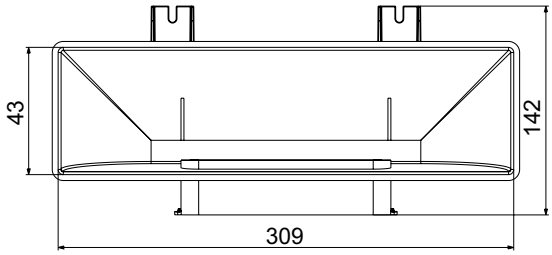
Arch vertical flat 140
for flat channel 140

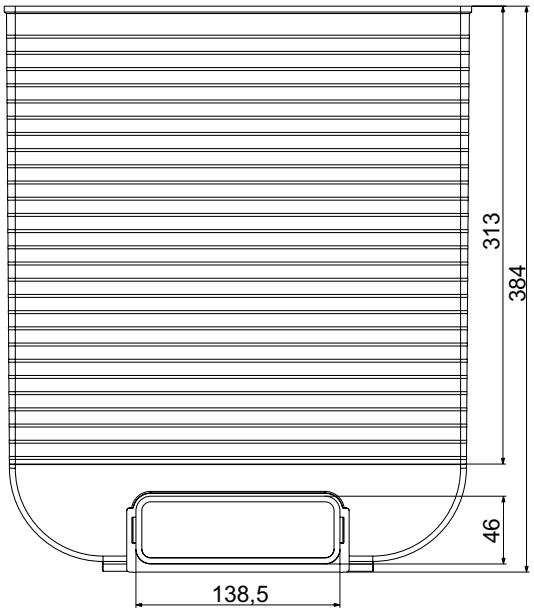


Outlet round, lateral 90° 125-2 x 140
for flat channel 140
incl. mounting bracket

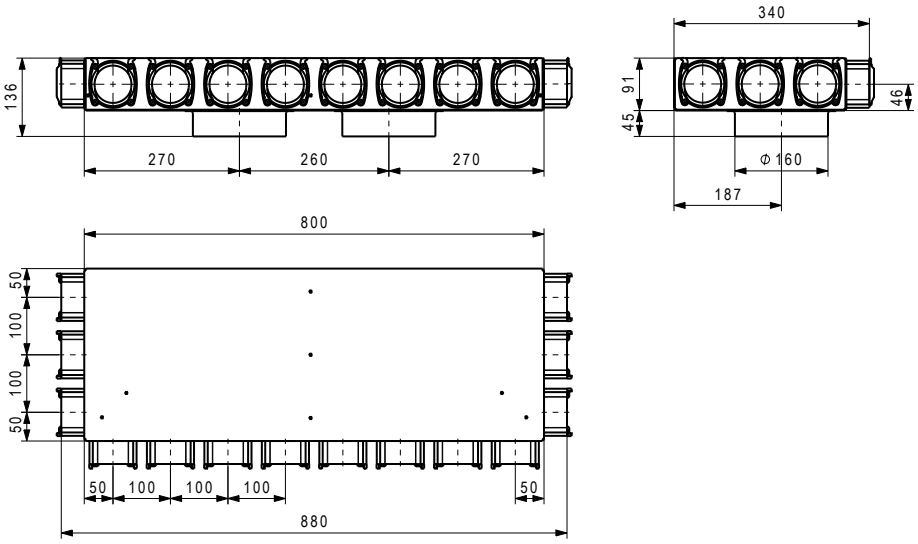


Floor exhaust flat 1 x 140
309 x 85 mm interior
1 flat channel 140 connection



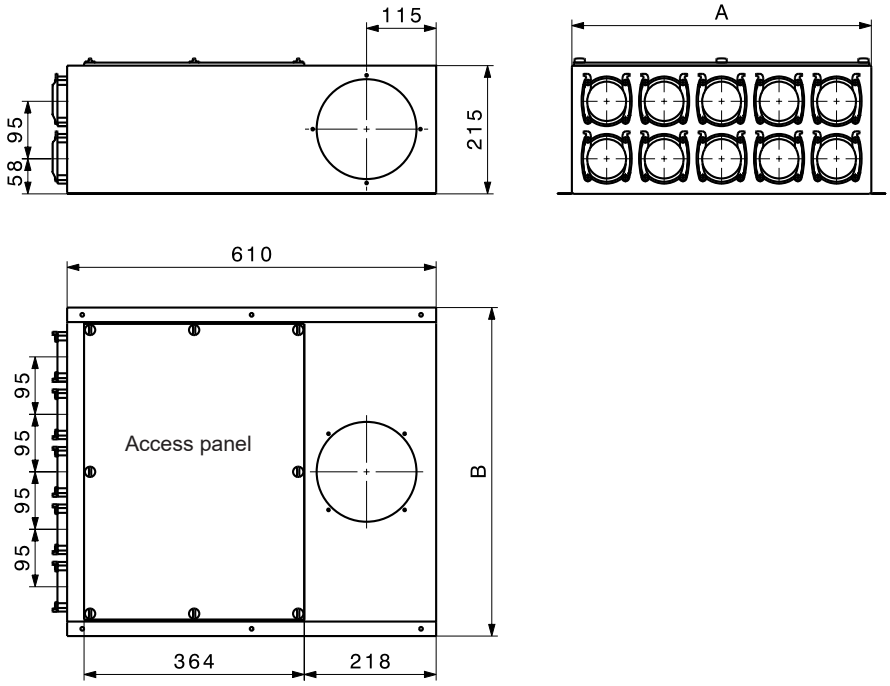


Distribution cases DN 160



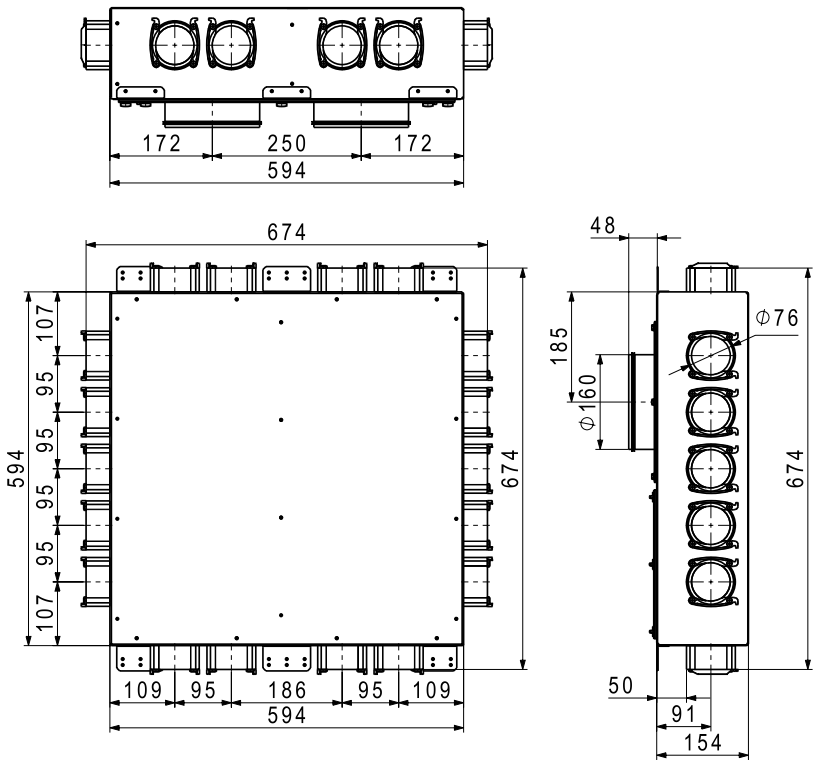
Distribution box VTB-160 14 x 75
Air distribution box of aluzinc sheet without access panel.
Connection nozzles:
2 x DN 160 supply and extract air
ZUL 7 x DN 75 (4 x front and 3 x side)
ABL 7 x DN 75 (4 x front and 3 x side)

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.

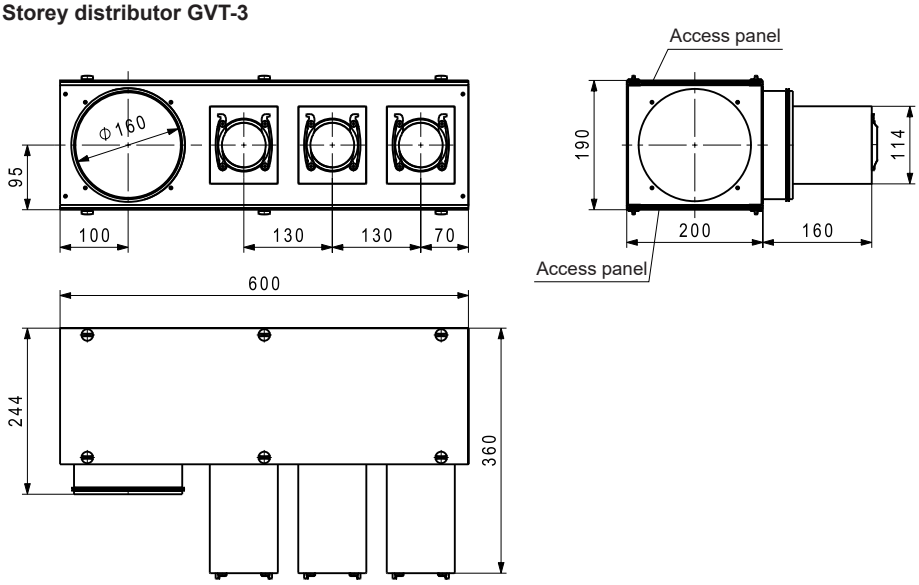
Type	A	B	n
VK-160-75 x 6	305	355	6
VK-160-75 x 8	400	450	8
VK-160-75 x 10	495	545	10



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

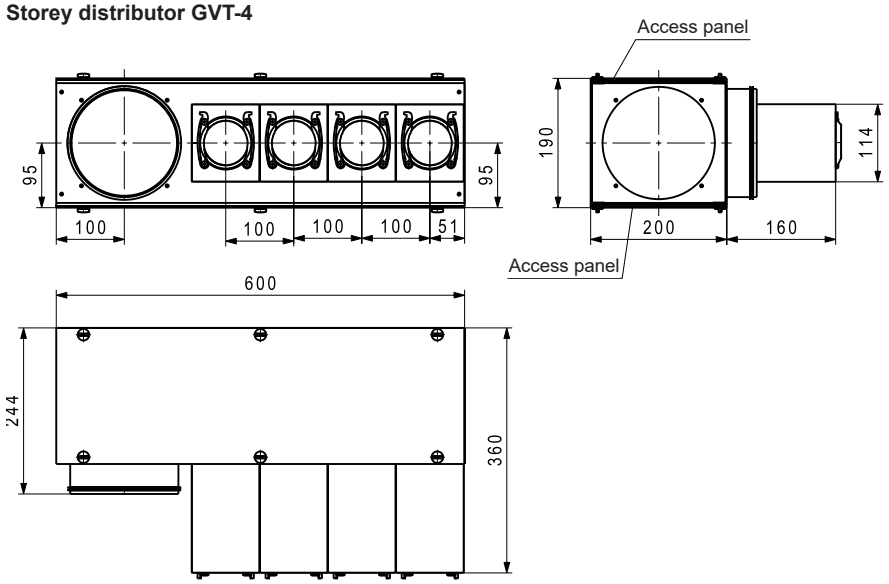
Storey distributor GVT-3



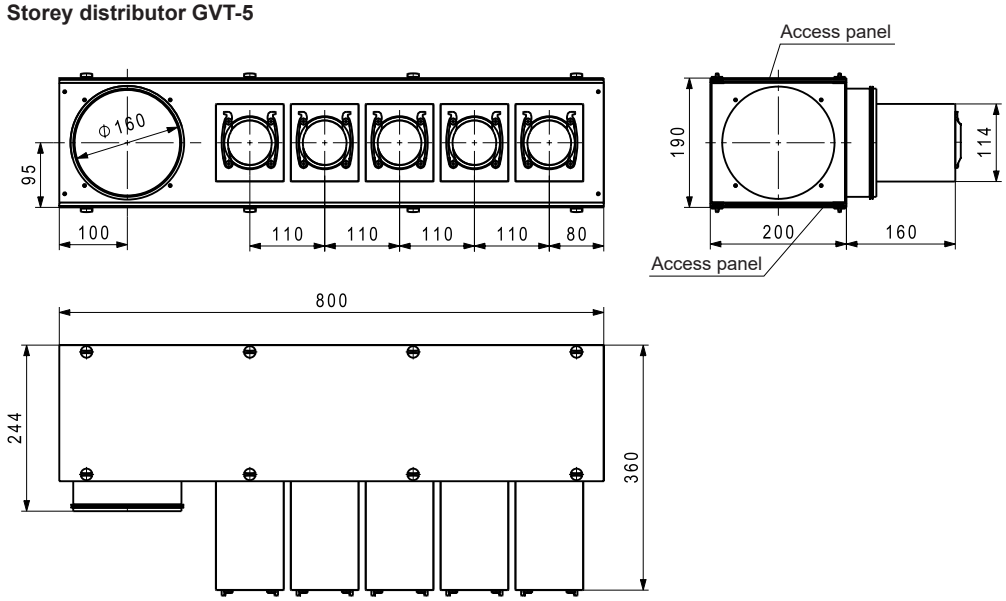
Storey distributor GVT-3 ... GVT-6
Storey distributor with 4 connection options for the main duct, incl. 2 connection nozzles DN 160, incl. 3 sealing caps DN 160. Flexible installation and easy cleaning of the pipes via the access panels on both sides. Orifices for setting the air quantity per flexible 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.

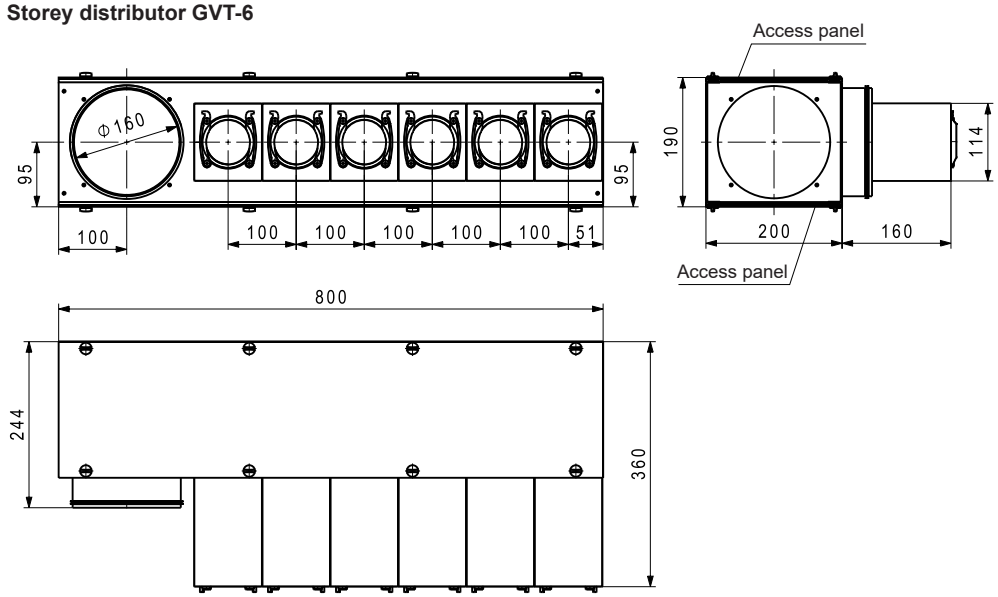
Storey distributor GVT-4



Storey distributor GVT-5

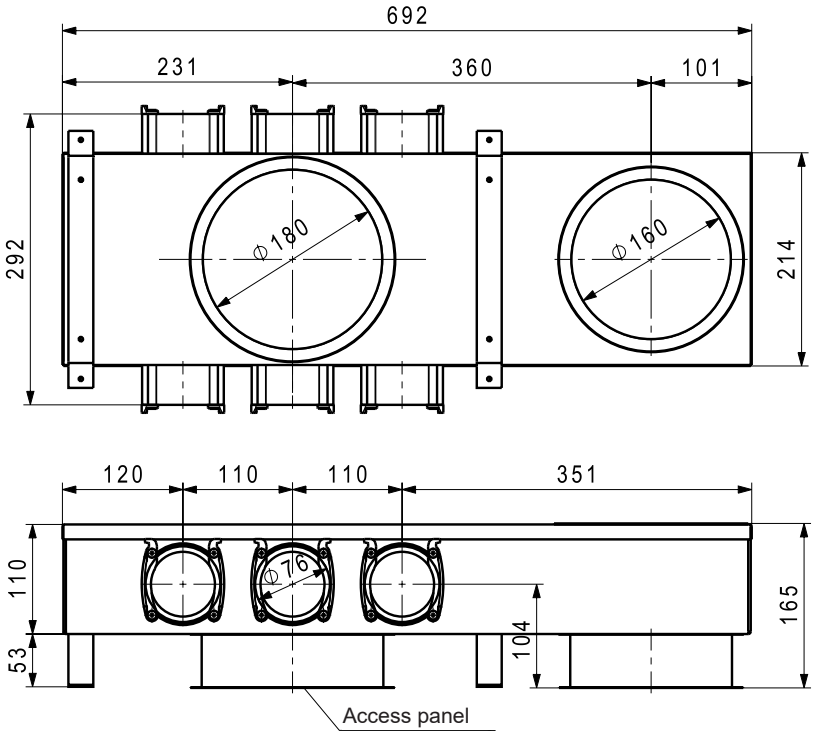


Storey distributor GVT-6



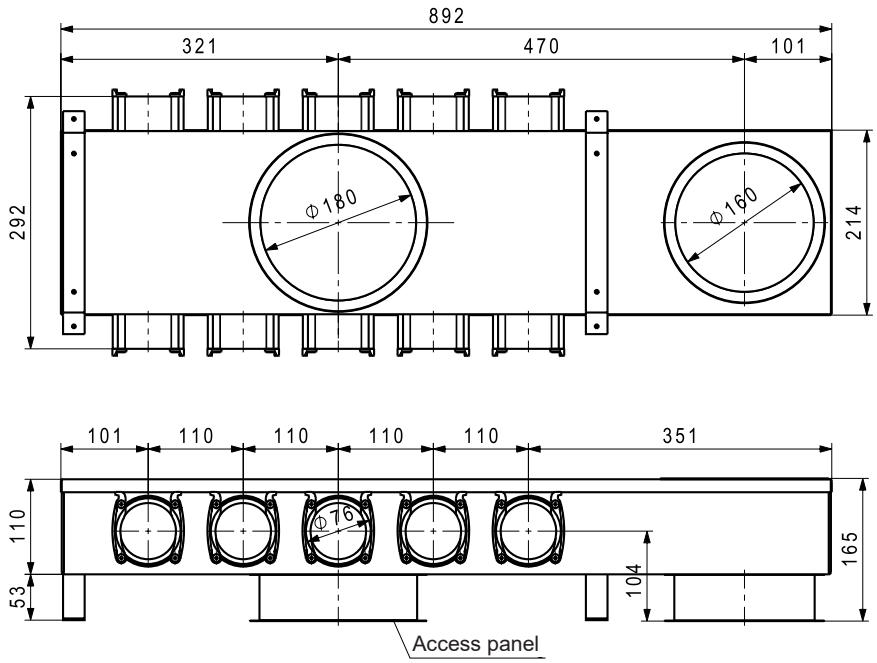
Distribution cases DN 160

UPVK 75 x 6



In-wall distribution case 75 x 6
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 insulating material, orifices for setting the air quantity per flexible pipe.

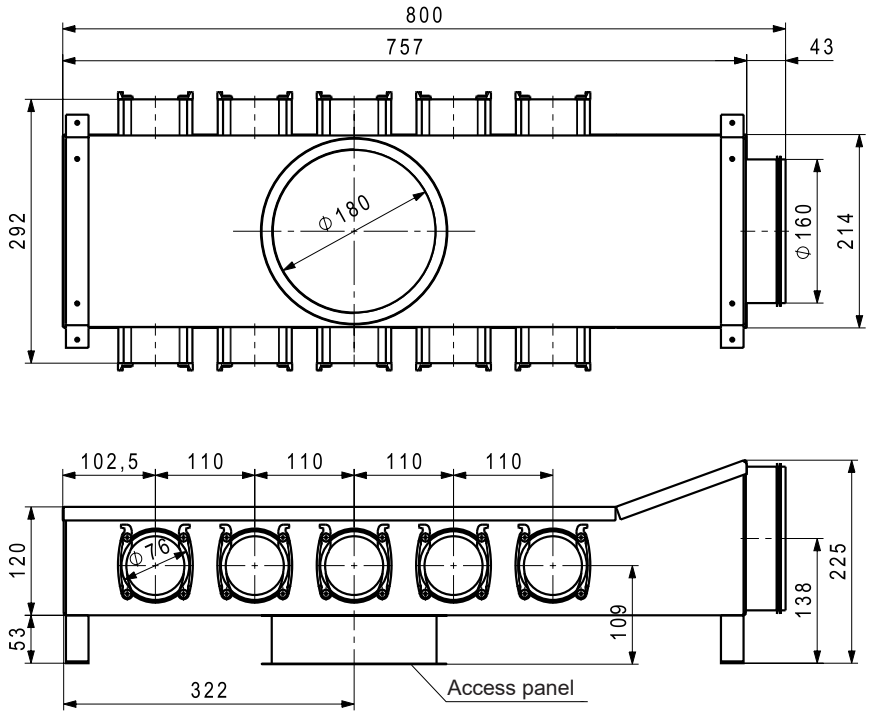
UPVK 75 x 10



In-wall distribution case 75 x 10
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 insulating material. Orifices for setting the air quantity per flexible pipe.

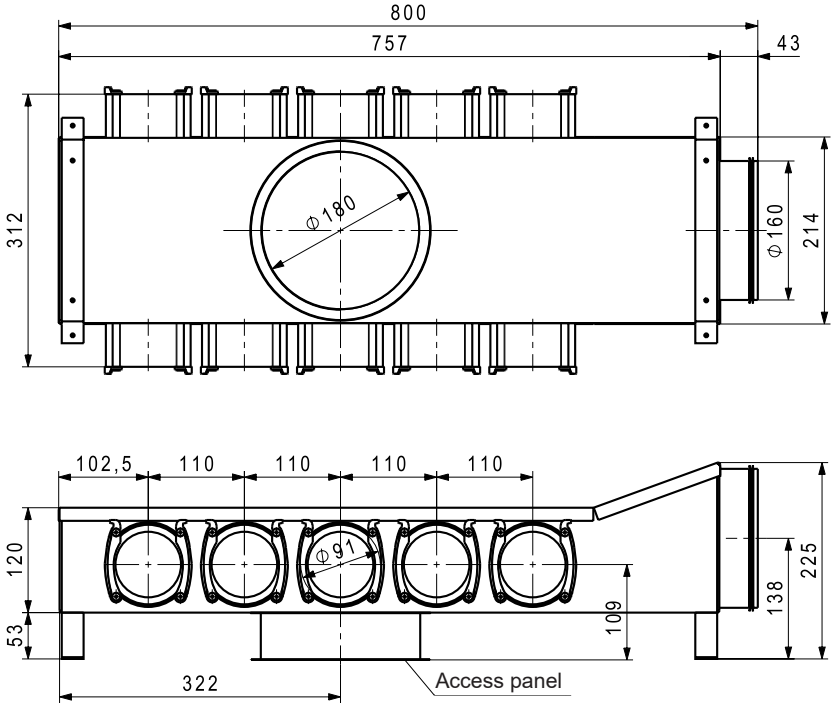
Distribution cases DN 160

In-wall distribution case UPVKS 75 x 10



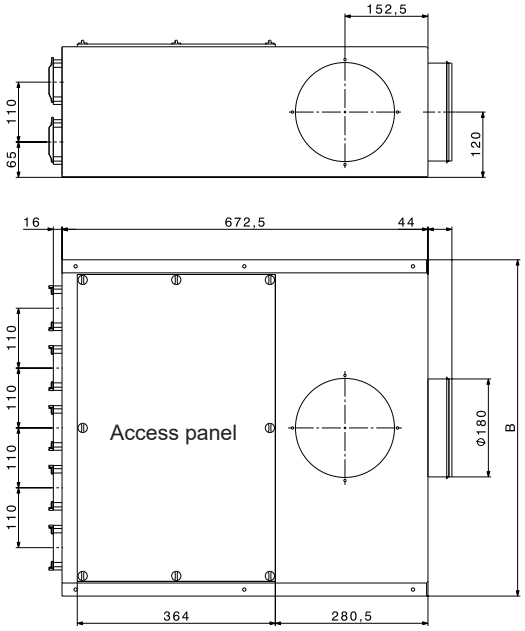
In-wall distribution case UPVKS 75 x 10 / 90 x 10
for concrete installation
Distribution case made from aluzinc sheet. With one connection nozzle DN 160 (on face) and 2 x 5 nozzles DN 75 and DN 90 (lateral), incl. 4 end covers, inside lining of sound insulating material, incl. throttle orifices.

In-wall distribution case UPVKS 90 x 10



Distribution cases DN 180

Distribution case VK-180-75

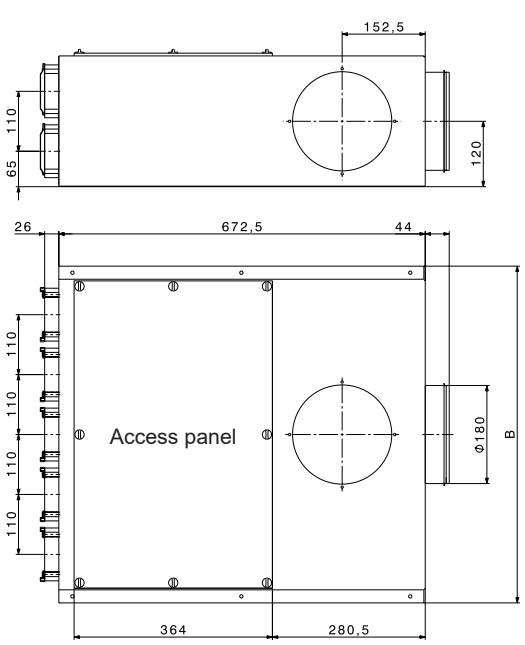


Distribution case for 8, 10 or 12 connections VK-180-75 resp. VK-180-90
This distribution case with an integrated silencer is used if the pipes can be arranged and laid centrally.
Incl. throttle orifices.
In type VK, the DN 75 resp. DN 90 connections are on the end; the connection nozzle DN 180 is supplied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

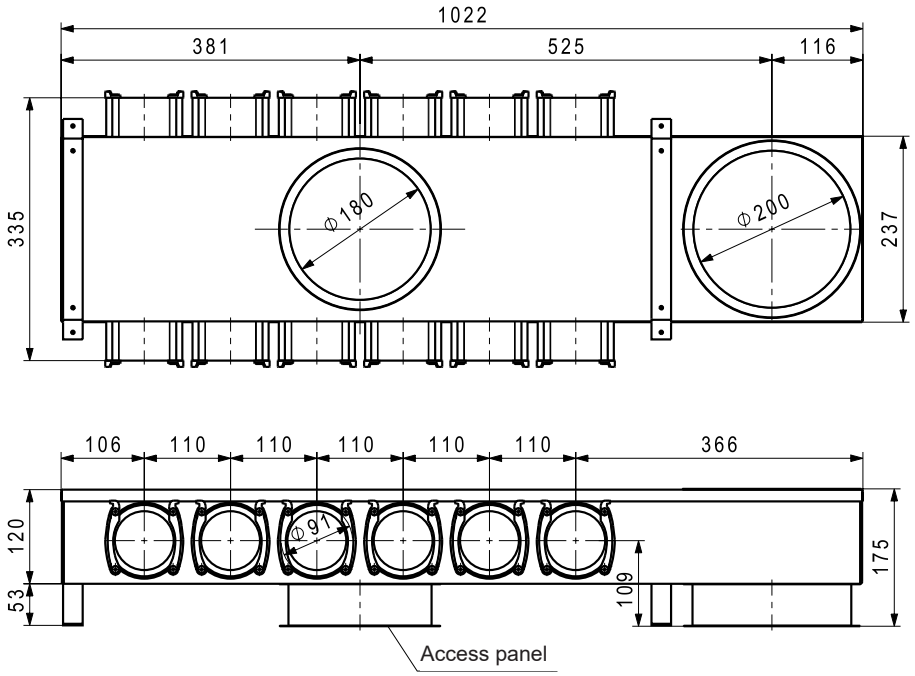
Distribution case VK-180-90



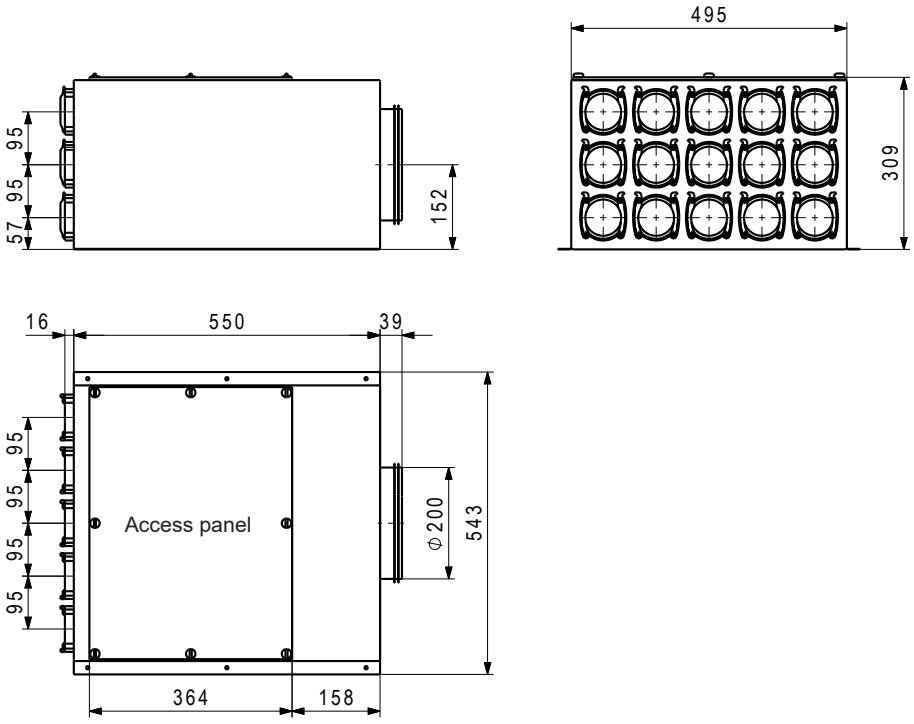
Dimensions distribution case VK-180-90x..

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

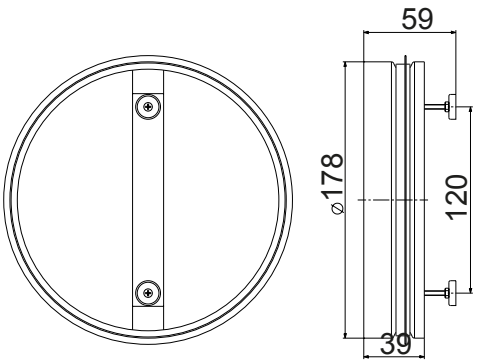
Distribution cases DN 200



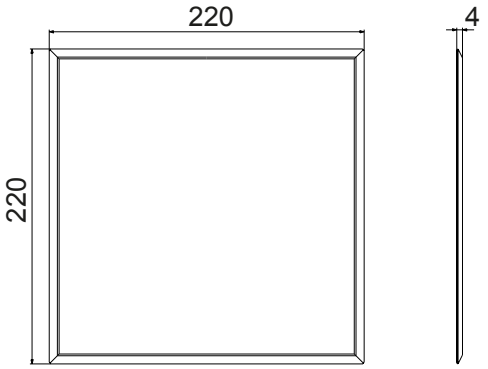
In-wall distribution cases UPVK-200 90 x 12
for concrete installation
Distribution case made from aluzinc sheet.
Lined on the inside with sound absorbing material.
Connection nozzles:
2 x DN 200, 2 x 6 DN 90 (sideways).
Incl. end covers, 1 connection nozzle DN 200, incl. throttle orifices



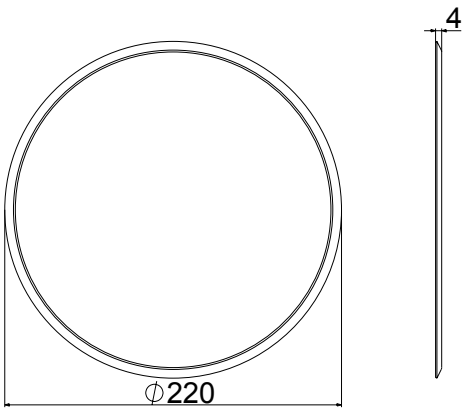
Distribution case VK-200 75 x 15
Distribution case of aluzinc sheet with access panel.
Inside with sound absorption block.
Connection nozzles:
1 x DN 200 (on the back)
15 x DN 75 (on the front)
Incl. throttle orifices



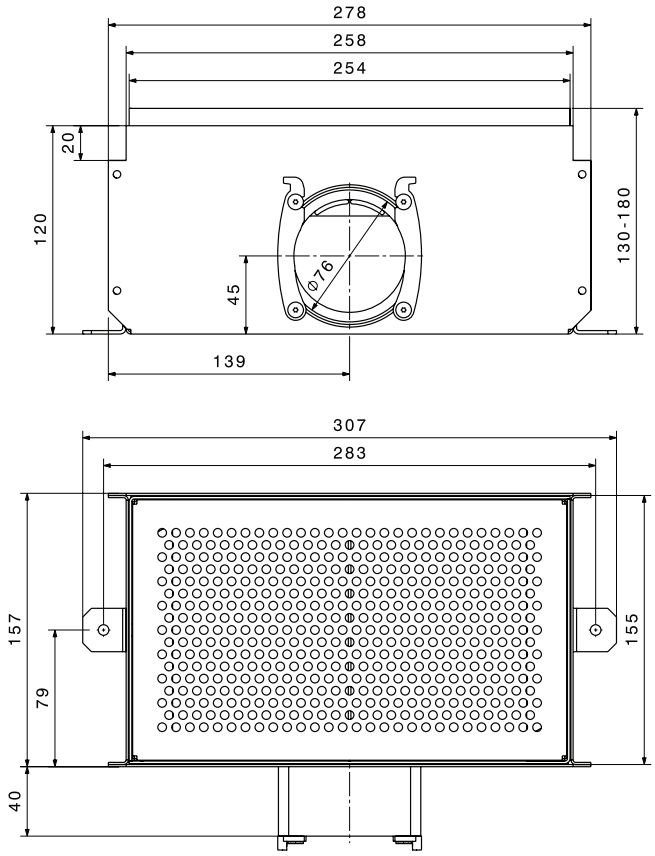
Access panel Ø 180 for UPV
from galvanised sheet incl. 2 magnets



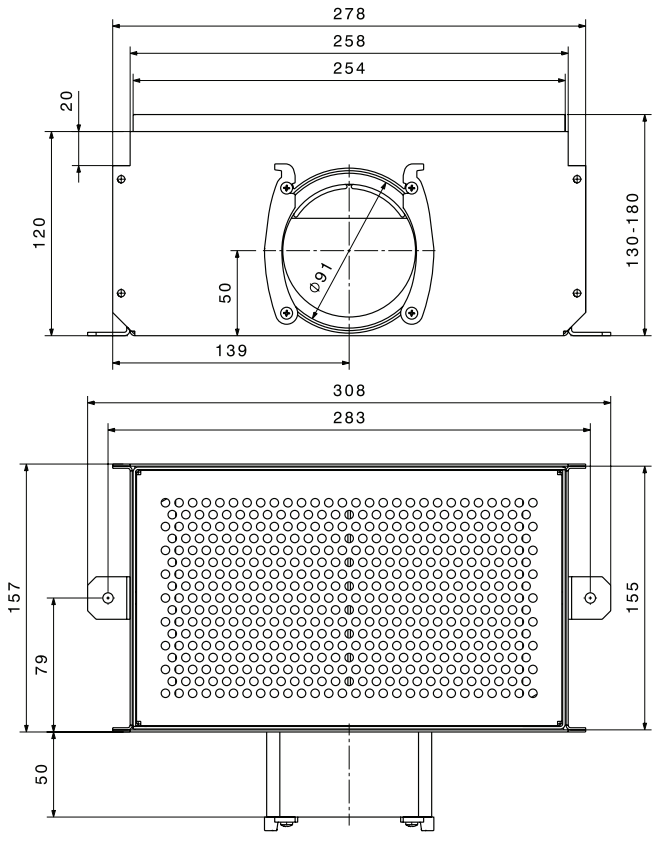
Design cover 220 x 220
suitable for access panel Ø 180
white RAL 9016



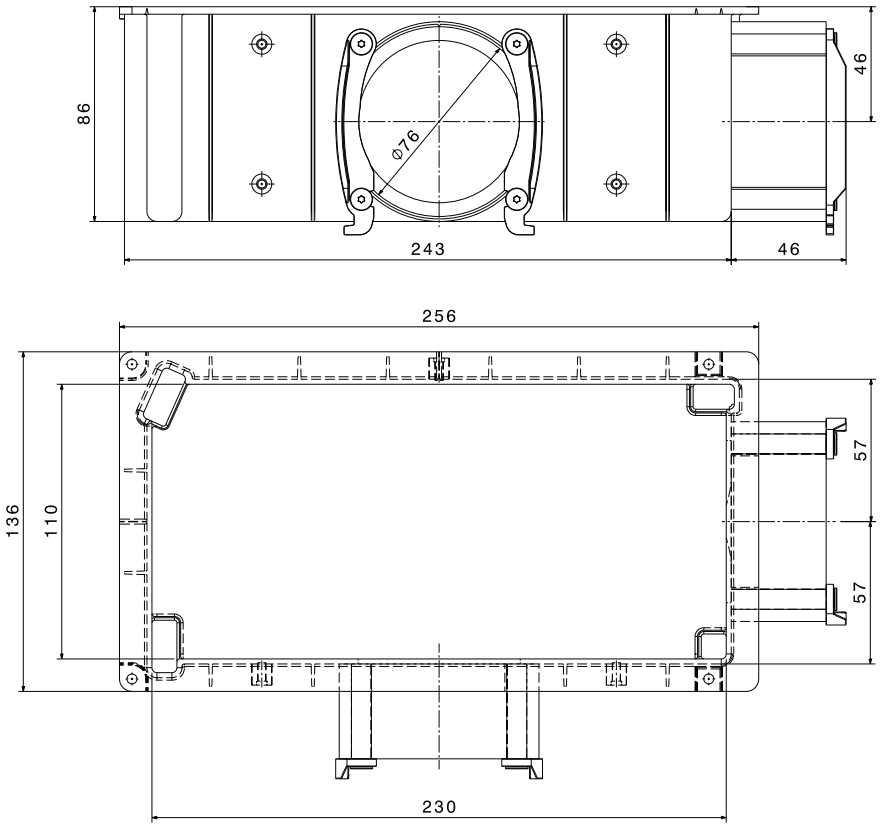
Design cover Ø 220
suitable for access panel Ø 180
white RAL 9016



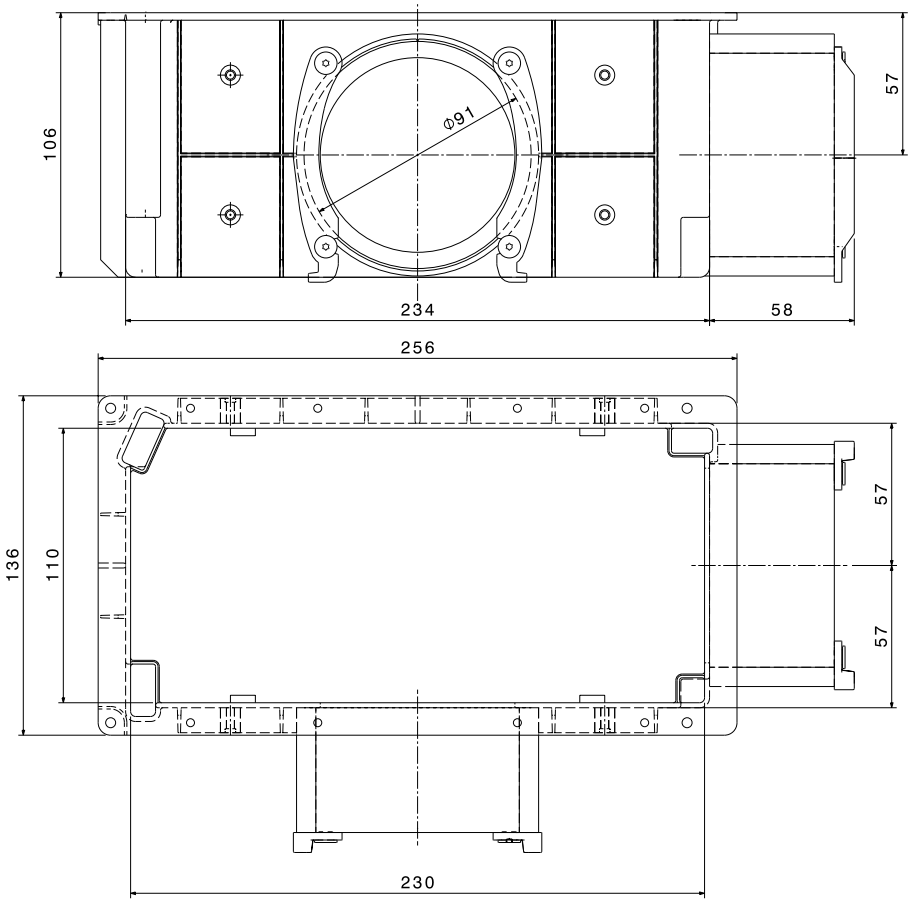
Floor grille BD-30-75
For installation in the floor structure, supply air flow rate 30 m³/h. Perforated stainless steel grille in an adjustable casing, height 130-180 mm, inner component of stainless steel with 3 contact points, outer component of aluzinc sheet with 2 fastening catches and one connection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



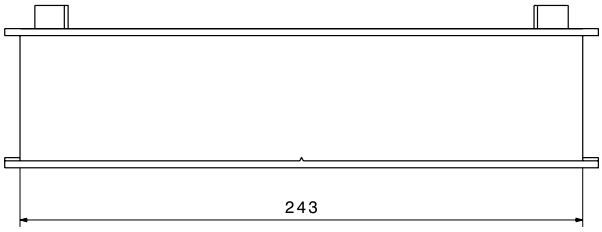
Floor grille BD-30-90
For installation in the floor structure, supply air flow rate 40 m³/h. Perforated stainless steel grille in an adjustable casing, height 130-180 mm, inner component of stainless steel with 3 contact points, outer component of aluzinc sheet with 2 fastening catches and one connection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



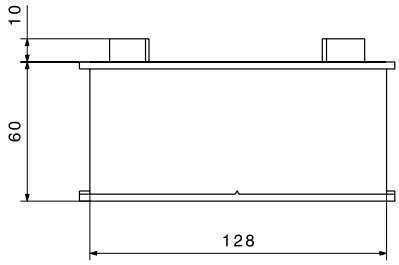
Connection housing AG-60
In combination with the design grilles. The extension allows fine adjustment of the grille (rotating) after installation. Suitable for installation in mass concrete, masonry walls or lightweight construction. Of plastic with 2 connection nozzles DN 75. Incl. fixing angles, sound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

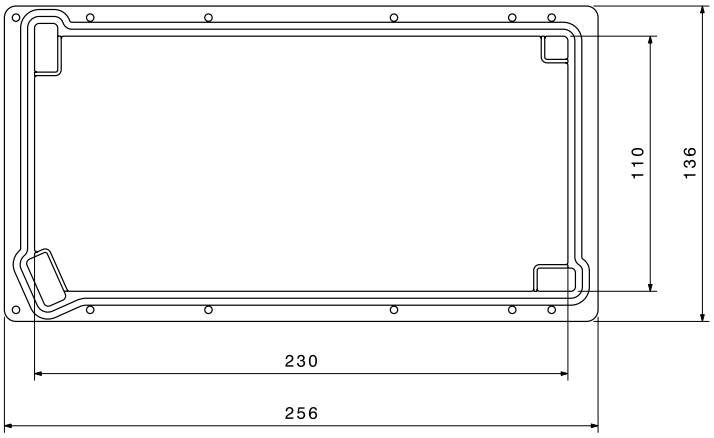


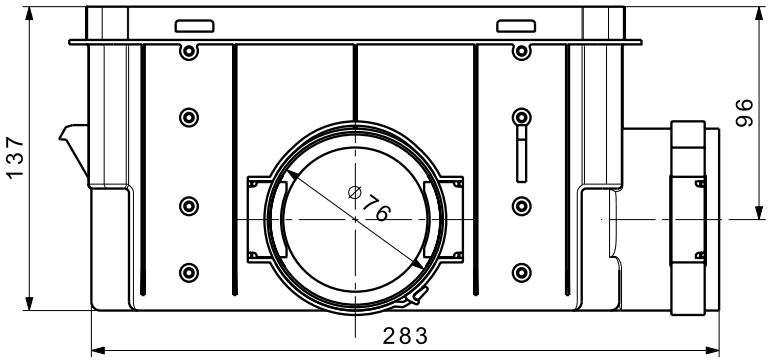
Connection housing AG-90
In combination with the design grilles. The housing allows fine adjustment of the grille (rotating) after installation. Suitable for installation in mass concrete, masonry walls or lightweight construction. Of plastic with 2 connection nozzles DN 90. Incl. fixing angles, sound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



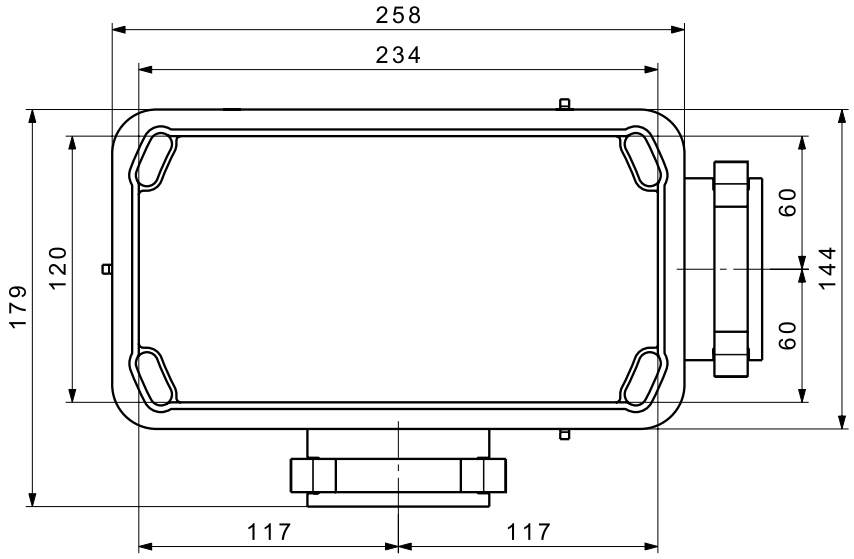
Extension VAG-60/VAG-90
For installation of AG-60 and AG-90 on the formwork panel. Extension permits precise grille alignment after installation.

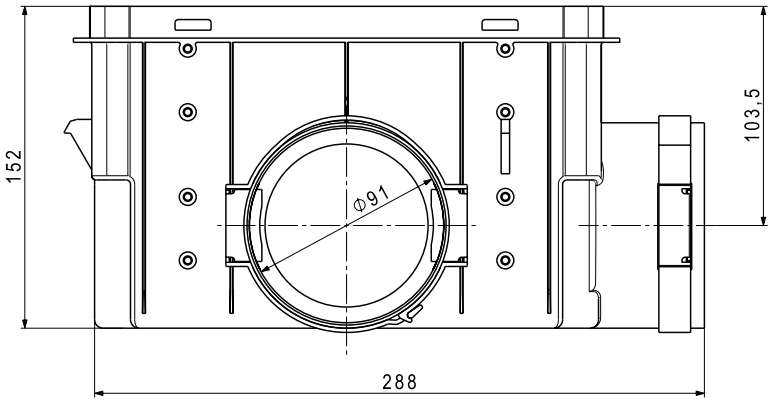


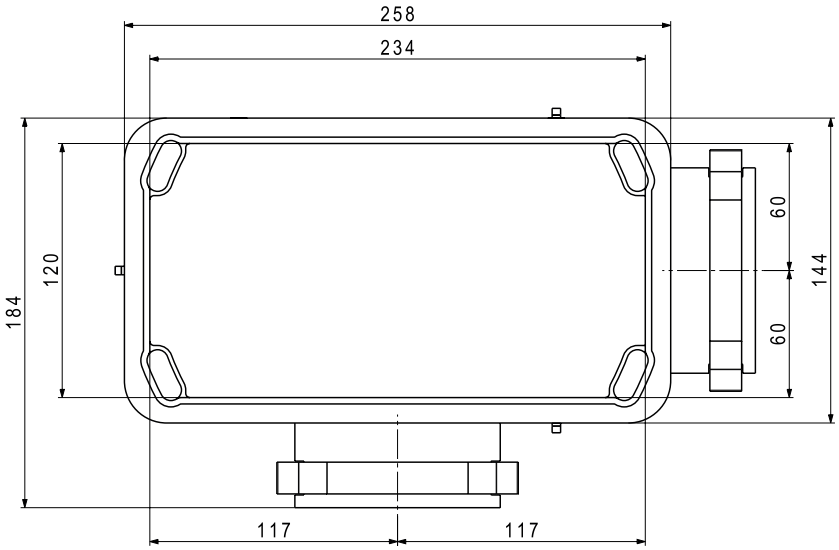




Connection housing quick 75
for supply and extract air incombination with the design grilles. The housing allows fine adjustment of the grilles after installation. Plastic housing with 2 connection nozzles DN 75.
Very easy to mount, no nails in concrete after stripping.
Supply air:
1 x DN 75 up to 30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

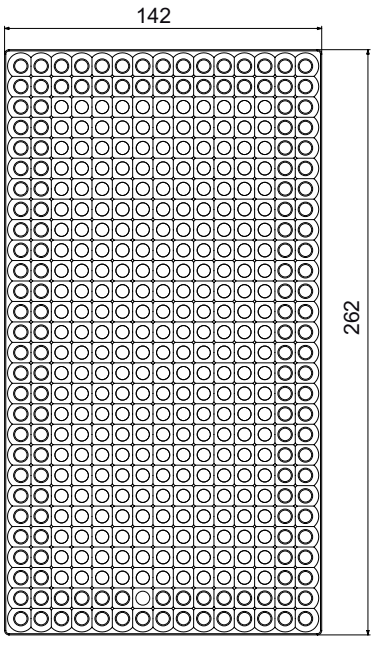




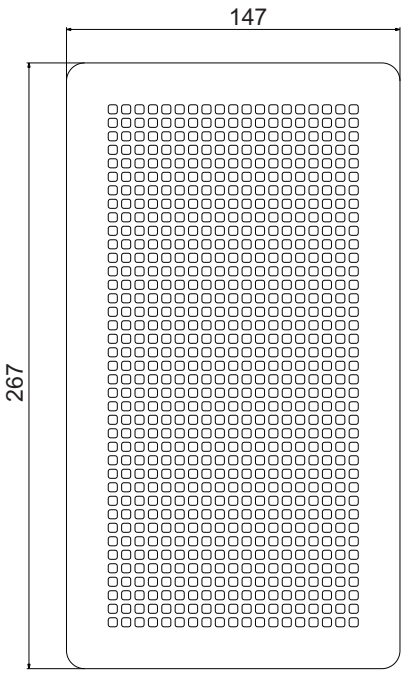


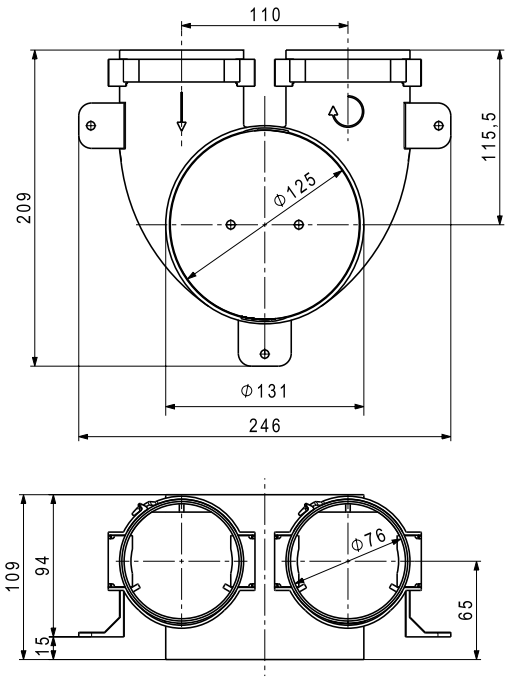
Connection housing quick 90
for supply and extract air in combination with the design grilles. The housing allows fine adjustment of the grilles after installation. Plastic housing with 2 connection nozzles DN 90.
Very easy to mount, no nails in concrete after stripping.
Supply air:
1 x DN 90 up to 40 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 four grille designs (Alvier, Säntis, Pizol, Pilatus) in different variants. The outside dimensions are identical for all grilles. The wall/ceiling plaster must not exceed 30 mm.

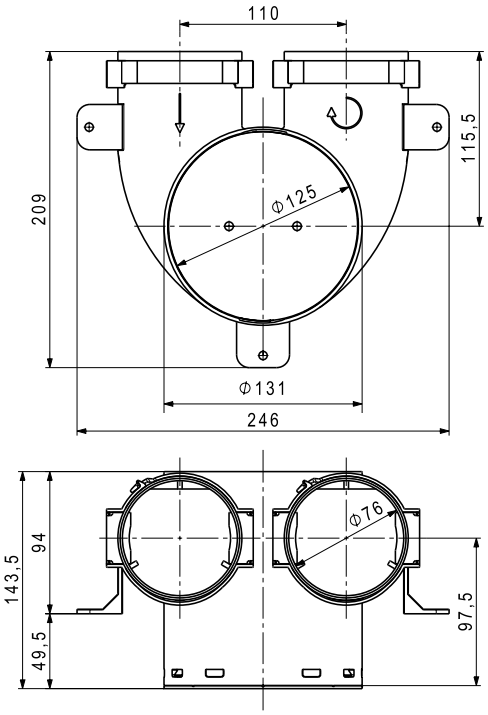




Connection cylinder quick 75 short
For masonry, lightweight and wood construction. Plastic casing, two connections DN 75 incl. 1 stopper DN 75

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

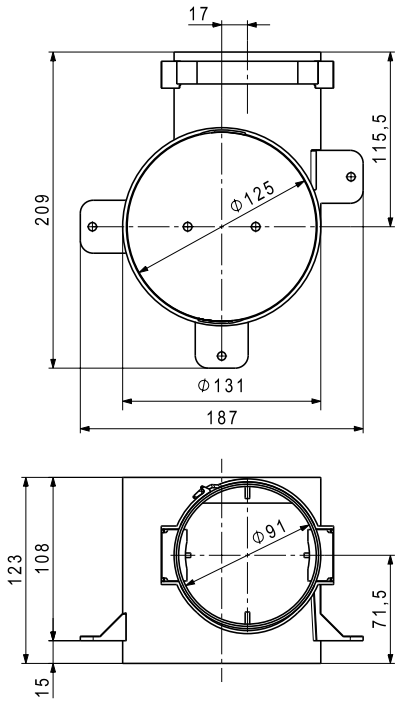
Extract air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 60 m³/h



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

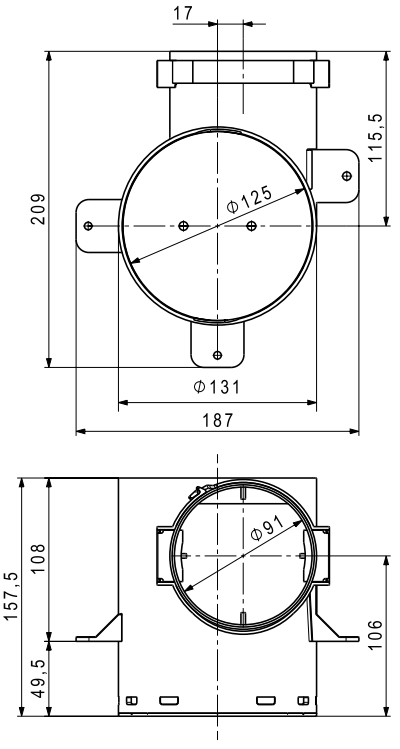
Extract air:
1 x DN 75 up to 30 m³/h
2 x DN 75 up to 60 m³/h



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

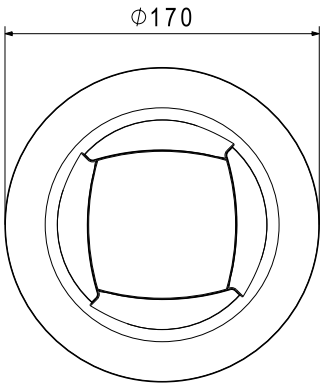
Extract air:
1 x DN 90 up to 60 m³/h



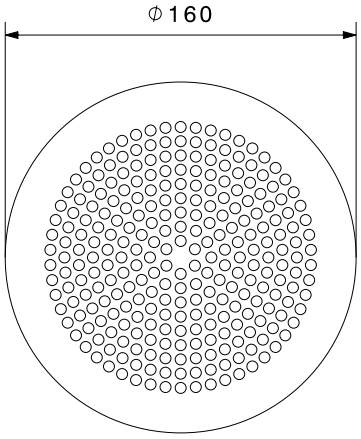
Connection cylinder quick 90 medium
for element ceiling up to 60 mm, solid concrete
Plastic casing, with connection DN 90
incl. building protection cover

Supply air:
1 x DN 90 up to 40 m³/h

Extract air:
1 x DN 90 up to 60 m³/h

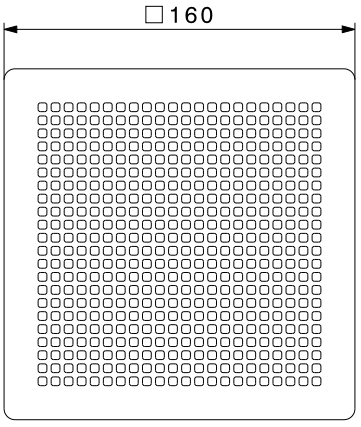


Design grille Tangential 125
suitable for:
Connection cylinder quick 75 and 90 made of plastic, with plug-in connection.
Colour: white RAL 9016, can be painted on site
Supply air up to 40 m³/h
Extract air up to 50 m³/h



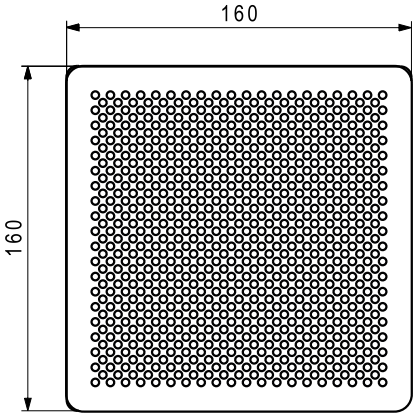
Stainless steel design grille Falknis
suitable for:
Connection cylinder quick 75 and 90
Brushed stainless steel
With plug-in connection
Supply air up to 40 m³/h
Extract air up to 50 m³/h

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

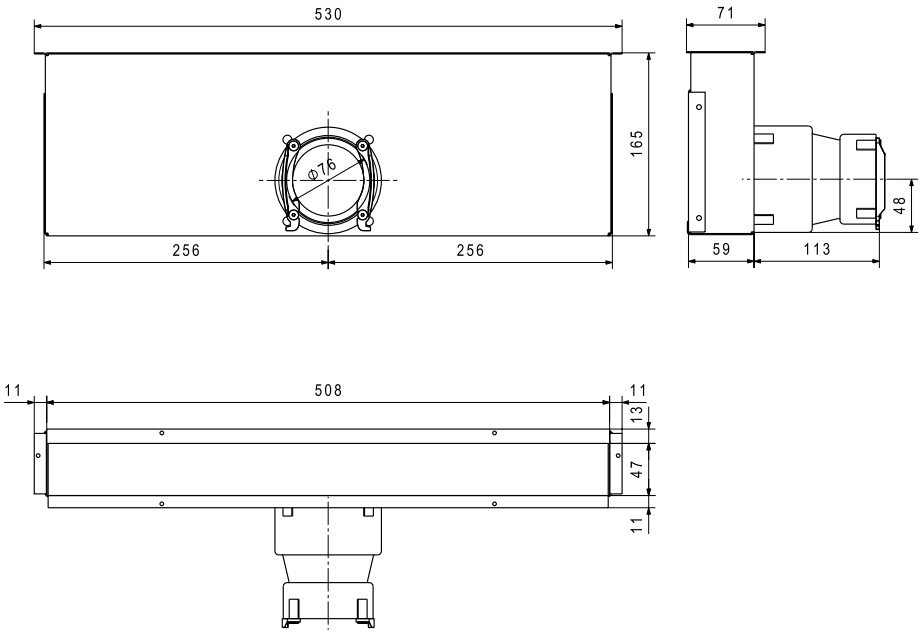
Design grille Calanda painted white
suitable for:
Connection cylinder quick 75 and 90
Steel, painted white (RAL 9016)
With plug-in connection
Supply air up to 40 m³/h
Extract air up to 50 m³/h



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

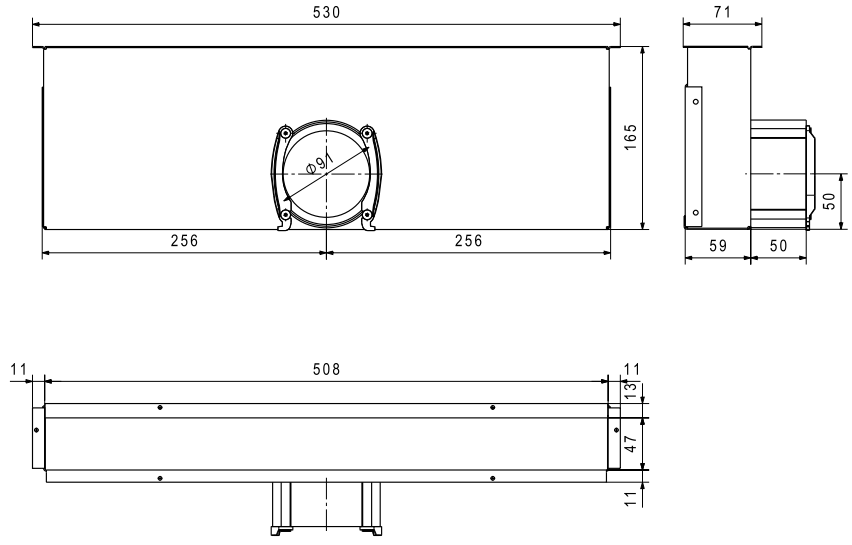
Design grille Rigi white
Suitable for connection cylinder quick 75 and 90.
Aluminium sheet with flanged edges
Painted white (RAL 9016)
With holding fixture for connection cylinder quick 75 and 90
Supply air up to 40 m³/h
Extract air up to 60 m³/h

Connection box SD-75



Connection box 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.

Connection box 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
- Building Energy Act GEG
- Ventilation System Guideline LüAR

General

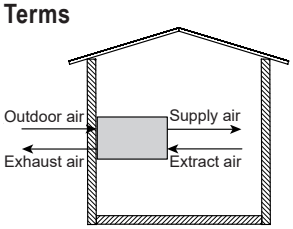
The following information is required for planning the comfort ventilation:

- 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 regulations), no special fire protection requirements are imposed on free-standing buildings with a height of 7 m and no more than two utilisation units with a total area of no more than 400 m². 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. In the first few winters, additional window ventilation may be necessary depending on the room humidity, e.g. after showering or cooking.

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.

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 volume flows 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 volume flows however max. 1.2 times the value from Table 2). 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 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

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). When laying in shafts, the conditions (temperature and humidity) must be calculated and taken into account. 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 ER 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 ERT 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-pin CAT 5 patch ribbon cable. For distances over 3 m, we recommend installing shielded cables 4 x 2 x 0.8 mm² to a network socket (RJ45) 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.

Hoval quality.
You can count on us.

Hoval

Hoval is one of the leading international companies for heating and indoor climate solutions. Drawing on more than 80 years of experience and benefiting from a close-knit team culture, the Hoval Group delivers exciting solutions and develops technically superior products. This leadership role requires a sense of responsibility for energy and the environment, which is expressed in an intelligent combination of different heating technologies and customised indoor climate solutions.

Hoval also provides personal consultations and comprehensive customer service. With around 2500 employees in 15 companies around the world, Hoval sees itself not as a conglomerate, but as a large family that thinks and acts globally.
Hoval heating and indoor climate solutions are currently exported to more than 50 countries.

Responsibility for energy and environment

Liechtenstein
Hoval Aktiengesellschaft
9490 Vaduz
+423 399 24 00
hoval.com

United Kingdom
Hoval Ltd.
Newark Notts. NG 24 1JN
+44 1636 672 711
hoval.co.uk

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