

Application

The Zehnder ComfoAir 180 comfort ventilation unit was developed for use in a challenging residential environment. It combines maximum comfort, simple operation and a high level of efficiency with flexible integration in building services. The Zehnder ComfoAir 180 ventilation unit moves 180m³/h of air at an external pressure of 160 Pa.

Efficiency

The integrated cross-counterflow heat exchanger achieves efficiencies of up to 95%. For user comfort this means: no unpleasant draft effects, because the supply air is heated almost to room temperature even at temperatures around freezing.

Fans

The two supply and extract fans are driven by efficient DC motors. Differential pressures in the supply and extract air distribution system can be compensated thanks to direct control. The especially quiet fans can be adjusted to the required air flow in 1% steps. The air volumes of the selectable levels can be set between 30 m³/h and 180 m³/h on the Zehnder ComfoAir 180.

Filters

The Zehnder ComfoAir 180 ventilation unit is by standard equipped with class G4 filters (coarse dust filter). An optional F7 pollen filter set consisting of a G4 coarse dust filter and F7 pollen filter is available.

Installation

The wall-mounted Zehnder ComfoAir 180 ventilation unit is characterised by its compact design. Due to the compact dimensions, the unit is ideal for installation in a kitchen cabinet or in a niche in the wall. The supply air connection on the ventilation unit can be repositioned to the left or right in site. Alternatively, the supply air can also be connected at the bottom with DN125.

Operation

The ventilation unit is controlled with the Ease ComfoControl control unit which is installed in living areas.

Maintenance

All maintenance servicing is simple to carry out on the Zehnder ComfoAir 180 ventilation unit. Filter replacement requires no tools thanks to the filter covers integrated in the front of the unit. The heat exchanger can also be easily removed from the unit for cleaning after opening the front. Please see the unit manuals for additional information about servicing tasks.



Frost protection

If the ventilation unit is operated without preheating, the condensate in the extract air may freeze. The frost protection setting prevents this by variably reducing the supply air volume. In order to ensure reliable operation even at extreme outside temperatures an integrated electrical preheater is optionally available ex works.

Bypass

During summer nights and between the seasons during periods of strong sunlight, the house often becomes too warm, while the outside air is pleasantly cool. In this case the cooler outside air is supplied to the air distribution system, bypassing the heat recovery system. The Zehnder ComfoAir 180 ventilation unit is equipped with an automatic bypass for just this purpose. The bypass is a standard component and takes 100% of the extract air past the heat exchanger. The personal comfort temperature is adjustable.

Options

- **Electrical preheater**
The integrated electrical preheater also guarantees continuous frost-free operation even at temperatures below freezing point.
- **Humidity recovery with the Zehnder enthalpy exchanger**
The Zehnder enthalpy exchanger provides a hygienically ideal solution for excessively dry air in winter. Not only heat, but also the moisture contained in the extract air is transferred from the extract air to the supply air. Supply and extract air flows are kept completely separate: no transfer of odours or germs occur. The Zehnder enthalpy exchanger is easy to clean with water.
- **Pollen filter**
An optionally available pollen filter set keeps the inside of the house pollen-free and reduces the pollen load: breathe freely in times of increasing allergies.
- **Wireless remote control**
More installation freedom. With the Zehnder wireless remote control the ventilation unit can be controlled from several switches located throughout the house or apartment.

Benefits

- Comfort ventilation up to 180 m³/h
- Heat recovery of up to 95%
- Low energy consumption thanks to EC fans
- Automatic 100% summer bypass
- Variable frost protection function: Efficient even at low temperatures
- Fast, safe installation and maintenance
- Simple operation
- Filter soiling indicator
- Very compact dimensions: can be used flexibly in the kitchen (kitchen cupboard), bathroom (wall niche) or utility room
- Small minimum air volume especially for residential buildings
- Integrated preheater (optional)
- Enthalpy exchanger (optional)

Article numbers

| Description | Article number |
|-------------------------|----------------|
| ComfoAir 180 | 471 212 210 |
| ComfoAir 180 V | 471 212 215 |
| ComfoAir 180, enthalpy | 471 212 230 |
| ComfoAir 180 V enthalpy | 471 212 235 |

| Accessories | Article number |
|--|----------------|
| ComfoControl Ease control unit, cream white | 655 010 100 |
| Surface-mounted housing for Ease control unit, cream white | 659 000 250 |
| Zehnder ComfoControl Ease control unit, RAL 9016 | 655 010 101 |
| Surface-mounted housing for Ease control unit, RAL 9016 | 659 000 251 |

| Filters | Article number |
|--|----------------|
| Filter set for ComfoAir 180 G4 (2 pieces) | 400 100 082 |
| Filter set for ComfoAir 180 G4/F7 (2 pieces) | 400 100 083 |

Equipment

| Equipment | ComfoAir 180 | ComfoAir 180 V | ComfoAir 180 ERV | ComfoAir 180 V ERV |
|--------------------|--------------|----------------|------------------|--------------------|
| Bypass | x | x | x | x |
| Preheater | | x | | x |
| Enthalpy exchanger | | | x | x |

Description

Zehnder ComfoAir 180 comfort ventilation unit

The Zehnder ComfoAir 180 is a centralised compact ventilation unit with heat recovery and integrated summer bypass. This ventilation unit suits excellent for new builds as well as for renovation projects in apartments. The housing, made of galvanised painted sheet steel, is acoustically and thermally insulated.

DC fans guarantee power-saving operation and provide high electrical efficiency. Supply and extract fans can be controlled separately and precisely adjusted to balance the air volume to the exact percentage. The core of Zehnder ComfoAir 180 is the cross-counterflow heat exchanger made of plastic with a heat recovery up to 95%.

It is controlled by the cabled control unit (ComfoControl Ease - not included in the delivery contents), which is connected to the ventilation unit by an on-site cable (YSTY 2 x 2 x 0.6).

All operating conditions and error messages can be read from the control unit display. The Zehnder ComfoAir 180 is delivered ready to plug in. The user can replace the filters easily from the front without opening the unit.

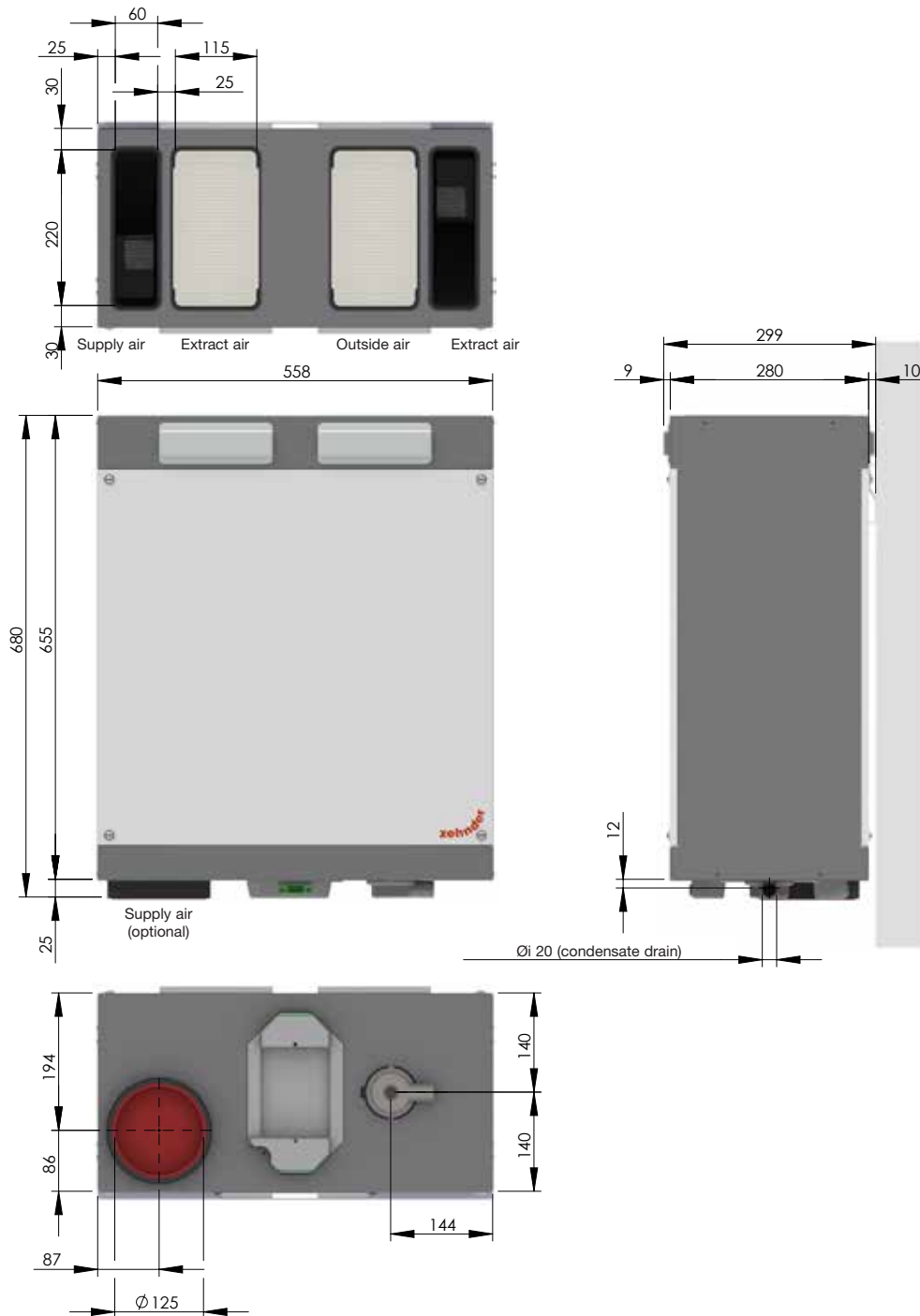
The Zehnder ComfoAir 180 is mounted on the wall. The connection is typically made by the Zehnder ComfoPipe twin-duct system, which also contains adapters to DN 125.

- Automatic frost protection controller
- Time-controlled filter replacement indicator
- Automatic and temperature-controlled 100% summer bypass
- Supply and extract fans can be activated separately
- Comfort temperature controller
- Weekly timer programmes
- Open fire programme

General specifications

| | |
|--------------------------|--|
| Heat exchanger | Plastic |
| Fans | EC-DC fans |
| Interior lining material | EPP / PA |
| Filters | Extract air: G4 Outside air: G4 (optional F7 pollen filter) |
| Condensate drain | 20 mm |
| Air tube connections | 4 x rectangular, for ComfoPipe twin duct optional supply air DN 125, bottom |
| Electrical connection | 230 V, 50 Hz |
| Temperature ranges | 7°C to 40°C in installation location, observe insulation requirements where necessary |
| Volume flow rates | maximum 180 m ³ /h, minimum 30m ³ /h |
| Dimensions | Width: 560 mm Height: 680 mm Depth: 280 mm |
| Weight | 27 kg |

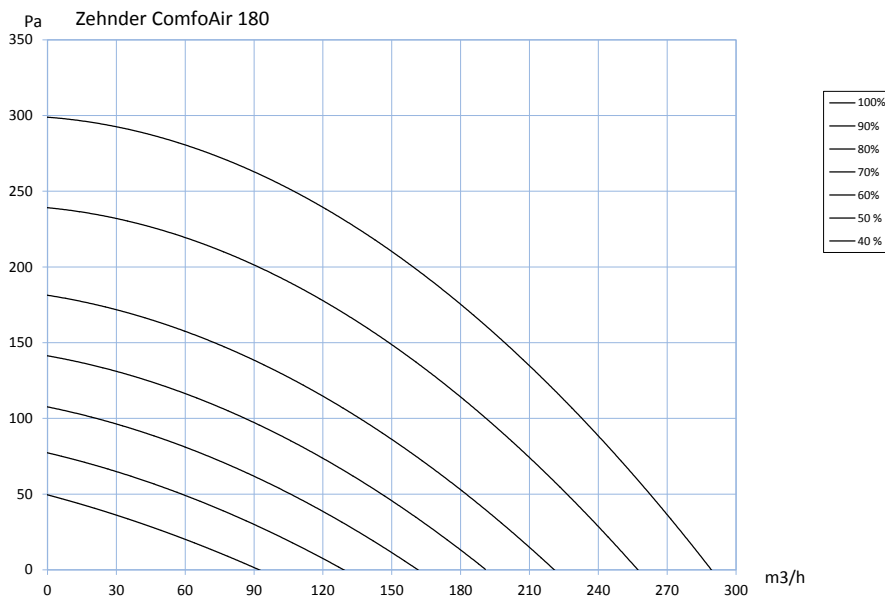
Dimensional drawing



Technical specifications

(preliminary measured values)

| Switch setting | Air volume | Pressure | Power consumption | COS |
|----------------------|-------------------|-----------------|-------------------|--------|
| Factory setting | Qv | ΔP_{st} | | ϕ |
| Speed % | m ³ /h | Pa | W | (-) |
| Zehnder ComfoAir 180 | | | | |
| 40 | 63 | 18 | 15 | 0.34 |
| 50 | 85 | 35 | 19 | 0.36 |
| 60 | 105 | 50 | 26 | 0.37 |
| 70 | 124 | 70 | 34 | 0.38 |
| 80 | 142 | 95 | 45 | 0.38 |
| 90 | 167 | 130 | 63 | 0.42 |
| 100 | 188 | 165 | 84 | 0.44 |



Sound, supply air

(preliminary measured values)

Sound power at the supply air connection at a distance of 0 m

| Zehnder ComfoAir 180 | Air volume Qv | Pressure ΔP st | | | | | | | | | |
|-------------------------|-------------------|-------------------|-------|--------|--------|--------|----------|----------|----------|----------|-------|
| Speed level | m ³ /h | Pa | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1,000 Hz | 2,000 Hz | 4,000 Hz | 8,000 Hz | dB(A) |
| 68 % | 120 | 67 | 67.0 | 62.5 | 57.5 | 52.0 | 50.5 | 43.5 | 37.5 | 28.5 | 55.7 |
| 76 % | 120 | 100 | 69.5 | 67.5 | 61.0 | 54.5 | 52.5 | 46.0 | 40.0 | 32.5 | 58.7 |
| 100 % | 188 | 164 | 70.0 | 69.0 | 64.5 | 59.5 | 58.5 | 55.0 | 49.5 | 44.5 | 63.7 |

Sound, extract air

(preliminary measured values)

Sound power at the return air connection at a distance of 0 m

| Zehnder ComfoAir 180 | Air volume Qv | Pressure ΔP st | | | | | | | | | |
|-------------------------|-------------------|-------------------|-------|--------|--------|--------|----------|----------|----------|----------|-------|
| Speed level | m ³ /h | Pa | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1,000 Hz | 2,000 Hz | 4,000 Hz | 8,000 Hz | dB(A) |
| 68 % | 120 | 67 | 65.5 | 53.0 | 50.0 | 43.5 | 41.0 | 26.0 | 20.5 | 22.0 | 45.6 |
| 76 % | 120 | 100 | 66.0 | 54.0 | 52.0 | 47.0 | 43.0 | 28.5 | 22.0 | 20.0 | 49.1 |
| 100 % | 188 | 164 | 68.0 | 56.5 | 56.0 | 51.0 | 47.0 | 37.5 | 31.0 | 36.0 | 53.1 |

Sound, unit emission

(preliminary measured values)

Sound power at unit at a distance of 0 m

| Zehnder ComfoAir 180 | Air volume Qv | Pressure ΔP st | | | | | | | | | |
|-------------------------|-------------------|-------------------|-------|--------|--------|--------|----------|----------|----------|----------|-------|
| Speed level | m ³ /h | Pa | 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1,000 Hz | 2,000 Hz | 4,000 Hz | 8,000 Hz | dB(A) |
| 68 % | 120 | 67 | 42.0 | 42.5 | 43.0 | 37.5 | 32.5 | 22.0 | 20.0 | 20.0 | 38.9 |
| 78 % | 120 | 100 | 46.0 | 45.5 | 45.0 | 40.0 | 34.5 | 24.0 | 20.0 | 20.0 | 49.1 |
| 100 % | 188 | 164 | 48.0 | 46.5 | 49.5 | 44.0 | 40.5 | 33.0 | 27.5 | 26.0 | 46.0 |

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