

Use

The Zehnder ComfoAir 70 is a decentralized comfort ventilation unit with heat and moisture recovery in synchronous supply and exhaust operation. It is used particularly in renovation of apartments, but also in residential new construction projects. The comfort ventilation unit is particularly suitable for one or two-room apartments, vacation and student apartments.

The unit can be fitted with a second room connector and Zehnder ComfoFlex duct to supply or exhaust air to or from another room. The ComfoAir 70 is equipped with an enthalpy energy exchanger, which provides high heat and humidity recovery and, particularly in the winter, provides a comfortable indoor climate .



Zehnder ComfoAir 70

Efficiency

The centerpiece of the ventilation unit is a highly efficient, oversized enthalpy energy exchanger. It uses both sensitive, as well as the latent energy from the exhaust air. Heat recovery up to 89%, and moisture recovery up to 79 % is possible. The device operates to about 20°F without pre-heater. This not only saves energy, but also ensures a cozy and comfortable indoor climate.

Fans

Supply and exhaust fans are powered by highly energy-efficient EC direct current motors. The high quality centrifugal fans are particularly resistant against heavy wind loads. Because of the arrangement of the fans in the wall and the use of special insulating material, we are able to achieve a very quiet operation of the unit .

The fans can be set to four different speeds.

Filter

By default, the Zehnder ComfoAir 70 is equipped with a G4 filter (coarse dust filter; MERV 7/8) for the supply and return air.

After a timed interval, the displayed on the control unit will indicate a filter change. The filter should be replaced promptly. Optionally, a pollen filter class F7 (fine dust filter; MERV 13) can be installed in the supply air.

Installation

The comfort air handling units are built into the outer wall. There will be no condensation in the device, therefore there is no condensation drain which keeps the house clean and dry. The equipment installation is simple and fast. The installation tube (accessory) is fitted into the outer wall and sealed. Then the ComfoAir 70 is inserted from the room side into the installation tube and the housing is screwed to the inside wall. A 110 VAC power supply can be hard wired, for example, in a junction box behind the unit. The weatherproof exterior wall hood is mounted to the outside wall with a set of screws. Now the ventilation unit is ready to use .

Operation

The Zehnder ComfoAir 70 has a built-in touch control panel on the front side. This makes it simple and easy to control the unit. By tapping the center of the control unit, 4 ventilation levels can be set. The unit can also be shut off by touching the button one more time. Indicators for filter changes and faults are displayed. For minimum power consumption of the control panel, the LED display will turn off after about 60 seconds but the unit is still running on the set ventilation speed. By briefly pressing the control button the display will turn on again. When turning off the ventilation system or by power failure, the built in dampers will close the outdoor air and exhaust air openings to the ventilation unit. The comfort ventilation unit has an automatic frost protection control.



User interface ComfoAir 70

Maintenance

The maintenance tasks of the Zehnder ComfoAir 70 are easy to perform and should be done on a regular base so that the ventilation unit always provides a healthy indoor air climate.

After lifting the front cover of the device the air filters can be changed simply by pulling them out. The enthalpy energy exchanger can also be pulled out for service by lifting the upper part of the EPP insulating cap. The enthalpy energy exchanger can be washed with warm soapy water.

Notes for the service work: Please refer to the user guide.

Frost Protection

Due to the enthalpy energy exchanger, the device operates to about 20° F without a pre-heater. If the outside temperature continues to fall, a frost protection control is activated which regulates the supply of cold outside air. If the outside air temperature drops below 5° F, the unit goes in the standby mode. If the outside temperature rises again, the unit will automatically start to work. The frost protection control prevents freezing of the energy exchanger.

Second room connection

Optional there is the possibility to connect a second room on the rear panel (flush) or laterally to supply or exhaust air. To keep pressure losses low we recommend to keep those runs short. The device can for example be installed in the bathroom and the fresh air is supplied to the living / sleeping area. There is no noise from the unit in the living / sleeping area and the rooms are well ventilated with fresh air.

Decentralized Comfort-ventilation device

Zehnder ComfoAir 70

Advantages

- Enthalpy energy exchanger for particularly good indoor climate and high energy efficiency
- Quiet operation due to high quality centrifugal fans and superior insulation
- Synchronous supply or extract air operation for continuous heat and moisture recovery
- Minimal intrusion into the living area
- Exterior wall hood is paintable.
- Intuitive operation with touch field
- No condensation disposal onto the house facade or condensation tank
- Hygienic, enthalpy energy exchanger is washable
- Simple and quick installation
- Second room connection for good air distribution and flexible planning

Item number

Description	Ref. number	Item number
Zehnder ComfoAir 70, exterior wall hood Aluminium white, without installation tube	527 005 770	9530



Accessories	Ref. number	Item number
Installation tube, plastic , OD Ø 9.85 inch , length 23.6 inch , with 2 plugs	527 005 200	9531

Filter	Ref. number	Item number
Filterset for Zehnder ComfoAir 70 G4/F7 (MERV7/8, MERV13)(1 each) Filterset	527 005 190	9514

What is in the box?

- 1x Ventilation unit CA 70
- 1x Outside Hood
- 1x Transformer 100 -240V/ 50-60Hz to 12V Dc

What else is needed?

Hardwireing

- 1x 2 wire cable 18 gauge
- 1x 2 wire Communication cable 20 gauge
- 1x in wall connection box

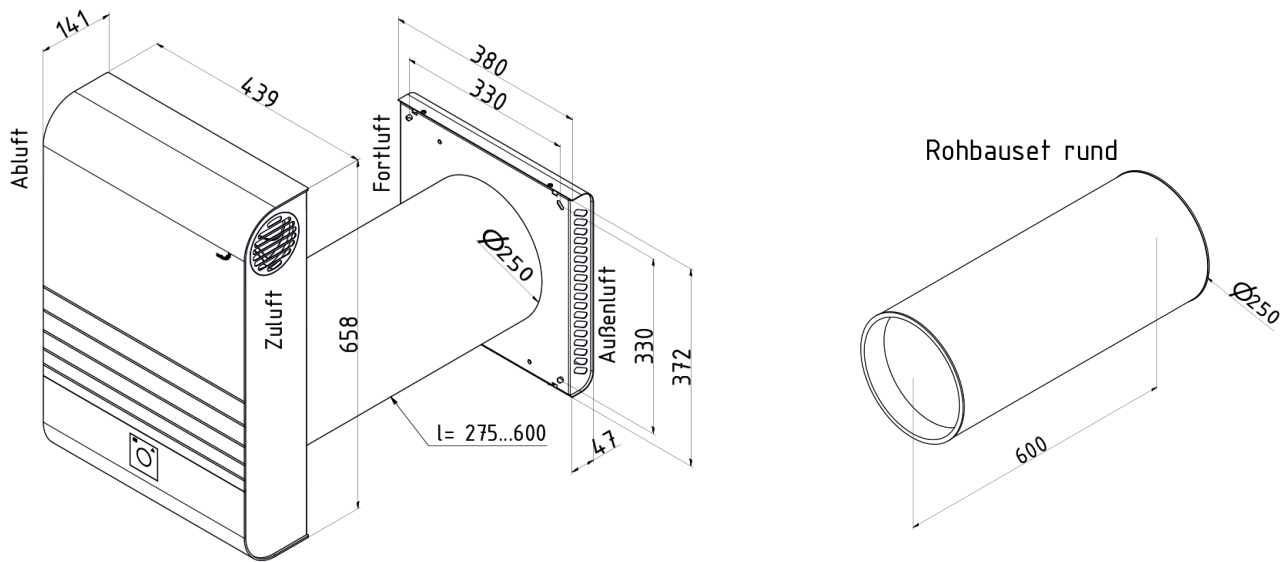
Plug in

- 1x 2 wire power cable with US plug 18 gauge
- 1x 2 wire Communication cable 20 gauge
- 1x in wall connection box
- 1x 1/2" metal drill bit
- 2x rubber gasket 1/2"

Technical specifications

Device type	Decentralized Comfort-ventilation device 29 x
Dimensions (HxWxD)	17.3 x 5.7 inch
Outer wall thickness	min. 11 inch / max 23.6 inch
Installation Tube	Ø 9.85" x 23.6"
Wall opening required	Ø ~ 10.5 inch
Fan	DC-radial fan
Filter class	G4 (MERV7/8) (optional Supply F7;MERV 13)
Heat exchanger	Countercurrent flow enthalpy exchanger
Housing	Powder-coated aluminum , RAL 9016 , fine mat
Device core	Expanded polypropylene(EPP)
Electrical connection	100 - 230 VAC / 50 - 60 Hz / 24 VDC
Operating load Max.	0,75 A
Current consumption	4 W to 17 W (Standby: 3 W)
Protection class	III (Extra Low Voltage)
Protection	IP30
Volume flow	8.8 - 14.7 - 23.5 - 35.3 cfm
Energy efficiency	up to 90% Heat recovery up to 84% Moisture recovery
Weight	48.5 lb
Temperature range	5°F to 104°F
Antifreeze control	20°F to 5°F, then the device is switching into standby mode
Control	4 fan speeds , device off Filter indication, fault indication, dampers close by shut off or power failure
Leakage (DIN 13141 Section 8 -2006)	Internal: 0,1% External: 0,9%

Dimensional Drawing



Noise level

Sound pressure level at 10 feet distance

	Device with out an additional room connection	Device with 1 additional room connection	Device with 2 additional room connections
Hibernation			
Ventilation level 1	11,0 dB(A)	9,2 dB(A)	2,9 dB(A)
Ventilation level 2	23,6 dB(A)	16,3 dB(A)	16,0 dB(A)
Ventilation level 3	29,4 dB(A)	24,3 dB(A)	16,2 dB(A)
Ventilation level 4	36,4 dB(A)	31,2 dB(A)	22,7 dB(A)

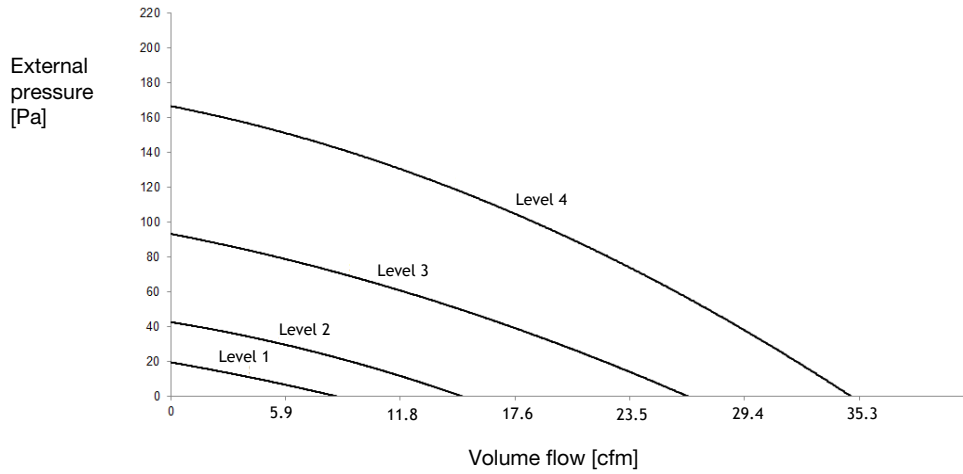
Sound Transmission

	evaluated sound absorption R_w [dB]
Damper open	17
Damper closed	25

Data

	Volume flow [cfm]	temperature change degradent [%]	Humidity change degradent [%]	Power input [W]
Hibernation				3
Ventilation level 1	8.8	90	84	4
Ventilation level 2	14.7	83	73	5
Ventilation level 3	23.5	76	61	8.5
Ventilation level 4	35.3	71	54	19

Pressure drop diagram



Zertifikat

Zertifizierte Passivhaus Komponente

Für kühl-gemäßigtes Klima, gültig bis 31.12.2016

Kategorie: **Wärmerückgewinnungsgerät**
 Hersteller: **Zehnder Group AG**
Paul Wärmerückgewinnung GmbH
08141 Reinsdorf, GERMANY
 Produkt: **ComfoAir 70 mit Zweitraumanschluss**

Folgende Kriterien wurden für die Zuerkennung des Zertifikates geprüft:

Passivhaus Behaglichkeitskriterium	$\theta_{\text{Zuluft}} \geq 16,5 \text{ °C}$ bei $\theta_{\text{Außenluft}} = -10 \text{ °C}$
Wärmebereitstellungsgrad	$\eta_{\text{WRG,eff}} \geq 75 \%$
Elektroeffizienz	$P_{\text{el}} \leq 0,45 \text{ Wh/m}^3$
Dichtheit	Der interne und externe Leckluftstrom erfüllt die Anforderungen von 3 % des Nennvolumenstromes.
Abgleich und Regelbarkeit	Balanceeinstellung möglich: ja Automatische Volumenstrombalance: nein
Schallschutz	Schalldruckpegel im Funktionsraum: $\leq 30 \text{ dB(A)}$
Raumlufthygiene	Außenluftfilter mindestens F7 Abluftfilter mindestens G4
Frostschutz	Frostschutz des Wärmeübertragers bis $\theta_{\text{Außenluft}} = -15 \text{ °C}$ ²⁾

- 1) Im Bedarfsbetrieb kann es zu Überschreitungen der Schallanforderungen an den Raum kommen.
- 2) Frostschutzstrategie geeignet bis Außenlufttemperaturen von -10 °C .

Weitere Informationen siehe Anlage zum Zertifikat.

www.passiv.de

0826vs03

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 GERMANY



Einsatzbereich

15 – 25 m³/h
(Dauerbetrieb)

15 – 40 m³/h ¹⁾
(Bedarfsbetrieb zur Kompensation erhöhter Lasten)

$\eta_{\text{WRG,eff}}$
85 %

mittleres Feuchteverhältnis
 $\eta_x = 0,64$

Elektroeffizienz
0,24 Wh/m³



**ZERTIFIZIERTE
 KOMONENTE**

Passivhaus Institut

zehnder

Decentralized Comfort-ventilation device

Zehnder ComfoAir 70

CDE-FLYERTS126, V0116_2, de, Änderungen vorbehalten

zehnder

