always the best climate

Zehnder ComfoCool Q600 with ComfoAir Q600

The Zehnder ComfoCool Q600 is an air temperation device designed to help reduce the risk of overheating in homes. It combines with the ComfoAir Q600 and compliments its features to ensure it automatically activates and deactivates to provide a comfortable, healthy and energy-efficient indoor climate.

CCRFZ Radio Frequency

ComfoSense C67

ComfoSwitch C67

Zehnder ComfoControl App

Key Features

ComfoCool Q

- 1.5kW cooling capacity.
- Easy and space-saving installation in combination with the Zehnder ComfoAir Q600.
- No external device required, just utilise the ventilation units ductwork.
- Filtered fresh supply air, not recycled stale air.
- Controlled via the CAQ600's variety of controller options including ComfoSense C, KNX or ComfoControl app for IOS or Android

ComfoAir Q

- World class 96% efficiency.
- 100% full and filtered modulating summer bypass.
- Left or right hand configuration through software alone, no mechanical alteration required.
- Commissioning wizard for a quick and simple set-up process.
- Flow control to maintain commissioned flow rates.
- Adaptive comfort technology.
- Automatic passive temperature boost in summer.
- Humidity boost continuously monitors the humidity level within the home and looks for a man-made spike before boosting the unit, irrespective of distance or dilution.
- Tool free filter access.
- ISO ePM1 >55% (F7) filter option.
- App for installer and end user option.
- Wireless commissioning option.
- Remote access option.
- KNX compatibility option.
- 0-10V input option.
- Internal pre-heater option.
- Post heater control option.
- Enthalpy cube option.
- Passive House certified.

Article Numbers

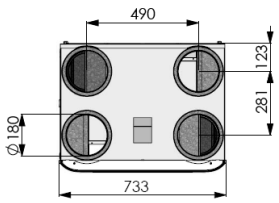
Description	Product Code
Zehnder ComfoCool Q600, left handed	471410005
Zehnder ComfoCool Q600, right handed	471410006
Support frame for Zehnder ComfoAir Q350/450/600, height 252mm	471502008
Condensation water drain kit for Zehnder ComfoCool Q	736000085
Recommended to be used with MVHR unit:	
Zehnder ComfoAir Q600 with enthalpy exchanger	471502026
Suitable for use with MVHR unit:	
Zehnder ComfoAir Q600	471502023
Zehnder ComfoAir Q600 with pre-heater, right handed	471502024
Zehnder ComfoAir Q600 with pre-heater, left handed	471502025
Zehnder ComfoSense C 67 remote display for Zehnder ComfoAir Q350/450/600, incl. mounting box	655010235
Zehnder ComfoSwitch C 67 speed controller for Zehnder ComfoAir Q350/450/600, incl. mounting box	655010255
Zehnder ComfoControl RFZ wireless controller for use with Zehnder ComfoSense 67/C67	CCRFZ
Zehnder ComfoConnect KNX C for ComfoAir Q350/450/600	655011120
Zehnder ComfoConnect LAN C for ComfoAir Q350/450/600	655011100
Zehnder Option Box with additional connectivity for Zehnder ComfoAir Q350/450/600	471502105
Zehnder ComfoSplitter for ComfoAir Q350/450/600	655010275
Zehnder RF-PCB to offer wireless connectivity to the CCRFZ without the use of a ComfoSense C67	400502016

Technical Specification

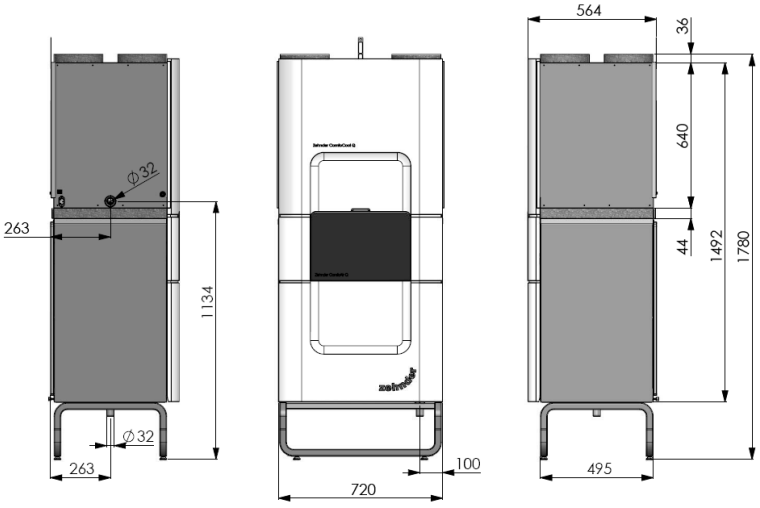
Weight (ComfoCool Q / Combined with ComfoAir Q600)	47 / 97 Kg
Ducting ø	Internal - 180 mm External - 200 mm
Condensate connection ø	32 mm
Materials	Internal EPP / ABS External coated sheet steel
ComfoCool Q	
Supply voltage	230V / single-phase / 50Hz
Maximum power consumption	1026W
Current draw	6.3A
Fuse rating	10 amp
Refrigerant	R134a
Refrigerant volume	0.5kg
COP	up to 3.3
Cooling capacity	1.5kW
ComfoAir Q600	
Supply voltage	230V / single-phase / 50Hz
Maximum power consumption including / excluding pre-heater	2620W / 350W
Current draw including / excluding pre-heater	2.7A / 2.77A
Fuse rating including / excluding pre-heater	13 / 3 amp
Specific Fan Power	0.48 W/l/s
Heat Recovery Efficiency	96%
Preheater power	2.4kW

Dimensions

Height	1780 mm
Width	733 mm
Depth	656 mm

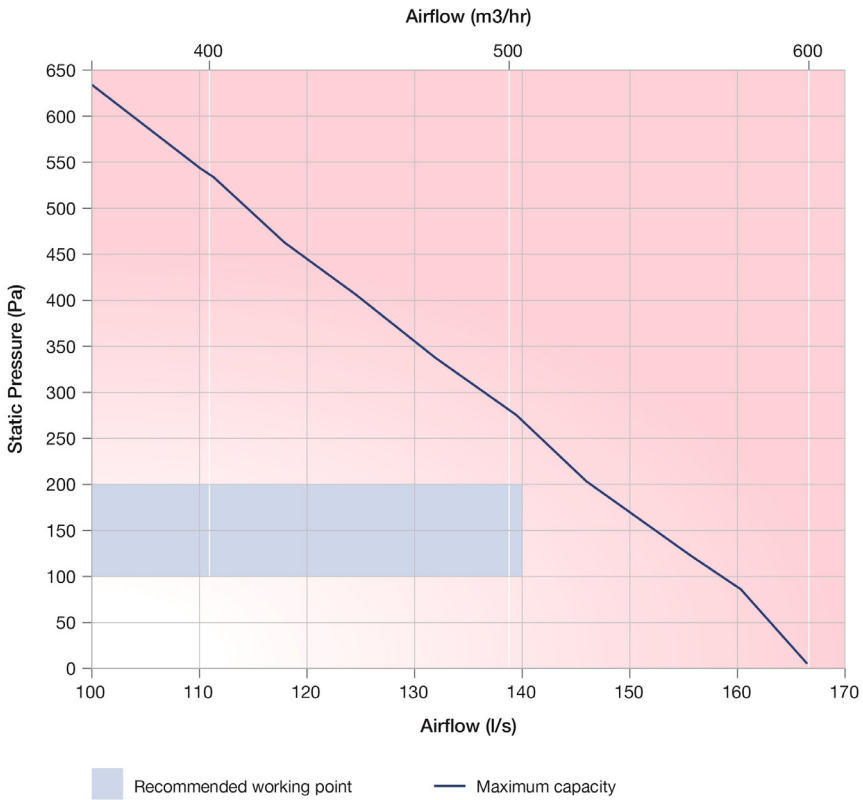


Top view



Side view Front view Side view

Pressure Curve

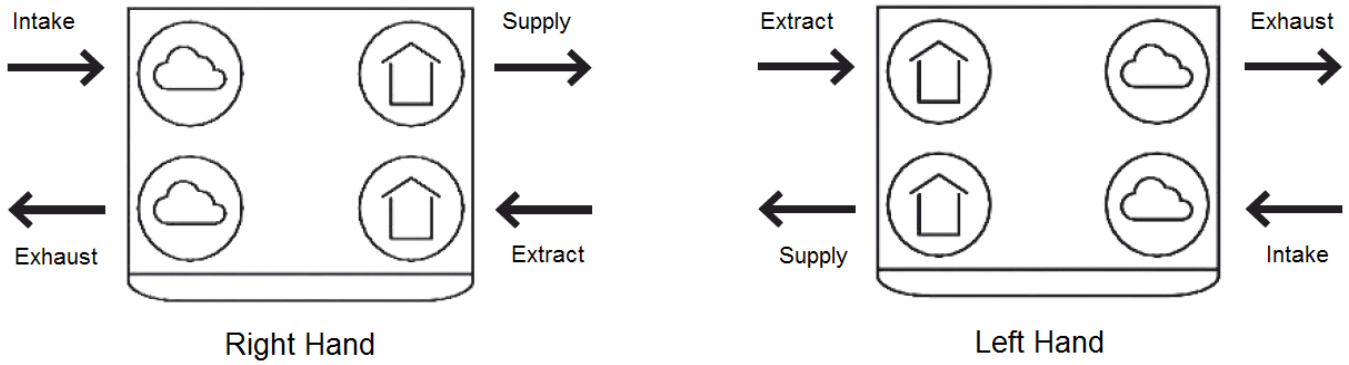


Sound Data

Test Point		Test Area	Octave Band (Hz) Sound Power Level, dB							dB(A) @ 3m
Pst (Pa)	Qv (m^3/h)		125	250	500	1000	2000	4000	8000	
25	250	Casing ComfoCool Q on	58.8	59	51.1	46.2	43.2	35.9	25.3	36.7
		Supply ComfoCool Q off	50	51	35.2	22.7	21.9	24.1	31.6	
		Supply ComfoCool Q on	58.3	50.8	36.1	26.4	22.7	24.7	31.6	
		Extract ComfoCool Q on	43.8	41.5	23.1	8.2	6.2	9.5	26.1	
25	300	Casing ComfoCool Q on	60.2	61	53.8	48.5	45.9	39.4	29.4	39.0
		Supply ComfoCool Q off	52.3	52.3	36.6	24.9	25.6	23.8	29.6	
		Supply ComfoCool Q on	55.1	53.5	36.9	26.7	25.8	24.2	29.7	
		Extract ComfoCool Q on	45.9	42.5	24.4	10.1	9.2	8.2	20.9	
50	350	Casing ComfoCool Q on	62.1	63.7	57.2	51.5	49.3	43.8	34.4	42.0
		Supply ComfoCool Q off	54.5	55.1	40.1	27.9	29	28.3	34.8	
		Supply ComfoCool Q on	57.2	56.3	40.4	29.7	29.2	28.7	34.9	
		Extract ComfoCool Q on	48.2	44.8	27.7	12.5	11.8	11.3	22.3	
50	400	Casing ComfoCool Q on	63.6	65.8	60	53.9	52.1	47.3	38.6	44.5
		Supply ComfoCool Q off	56.9	57.9	47.2	30.7	32.4	30.3	29.7	
		Supply ComfoCool Q on	57.1	58.3	46.5	31.3	32.1	30.6	29.9	
		Extract ComfoCool Q on	50.9	47.2	34.6	14.9	14.4	12.3	14.1	
50	420	Casing ComfoCool Q on	64.3	66.7	61.1	54.8	53.2	48.8	40.3	45.5
		Supply ComfoCool Q off	57.6	58.8	48.3	31.7	33.5	31.8	31.4	
		Supply ComfoCool Q on	57.8	59.2	47.6	32.3	33.3	32	31.6	
		Extract ComfoCool Q on	51.6	48	35.7	15.6	15.2	13.3	14.5	
100	450	Casing ComfoCool Q on	65.8	68.9	63.8	57.2	55.9	52.2	44.4	48.0
		Supply ComfoCool Q off	59.3	61	51	34	36.1	35.2	35.5	
		Supply ComfoCool Q on	59.5	61.4	50.3	34.6	35.9	35.4	35.7	
		Extract ComfoCool Q on	53.4	49.8	38.2	17.5	17.2	15.7	15.6	
100	500	Casing ComfoCool Q on	67.4	71	66.5	59.5	58.6	55.7	48.6	50.5
		Supply ComfoCool Q off	60	63.6	54.4	37.2	39.5	39.1	35.9	
		Supply ComfoCool Q on	60.5	64	54.1	37.3	39.3	39.1	35.9	
		Extract ComfoCool Q on	54.4	52.1	41.5	20.2	19.9	18.5	12.9	
150	450	Casing ComfoCool Q on	66.4	69.6	64.8	58	56.9	53.5	45.9	48.9
		Supply ComfoCool Q off	59.9	61.8	52	34.8	37.1	36.4	37	
		Supply ComfoCool Q on	60.1	62.2	51.3	35.5	36.9	36.7	37.1	
		Extract ComfoCool Q on	54.1	50.5	39.2	18.2	17.9	16.5	16	
200	450	Casing ComfoCool Q on	67	70.4	65.7	58.8	57.8	54.7	47.4	49.8
		Supply ComfoCool Q off	60.5	62.6	53	35.7	38.1	37.7	38.5	
		Supply ComfoCool Q on	60.7	63	52.2	36.3	37.9	38	38.6	
		Extract ComfoCool Q on	54.8	51.2	40.1	18.9	18.7	17.4	16.3	
200	500	Casing ComfoCool Q on	68.5	72.5	68.3	61	60.4	58	51.2	52.2
		Supply ComfoCool Q off	61.1	65.1	56.2	38.7	41.3	41.3	38.6	
		Supply ComfoCool Q on	61.6	65.4	55.9	38.8	41.1	41.4	38.6	
		Extract ComfoCool Q on	55.6	53.3	43.2	21.5	21.2	20.1	13.6	
150	550	Casing ComfoCool Q on	17.7	76.8	73.6	65.6	65.6	64.8	59.3	57.3
		Supply ComfoCool Q off	63.5	68.2	60	42	45.1	46.2	44.4	
		Supply ComfoCool Q on	63.5	68.2	60	42	45.1	46.2	44.4	
		Extract ComfoCool Q on	58.2	55.9	46.8	24.1	24.1	23.5	15.1	

Casing tested according to ISO 3741:2010. Supply and Extract tested according to ISO 5135:1997 showing induct sound power level corrected for end duct reflection according EN13053:2006. Casing dB(A) @ 3m given as hemispherical.

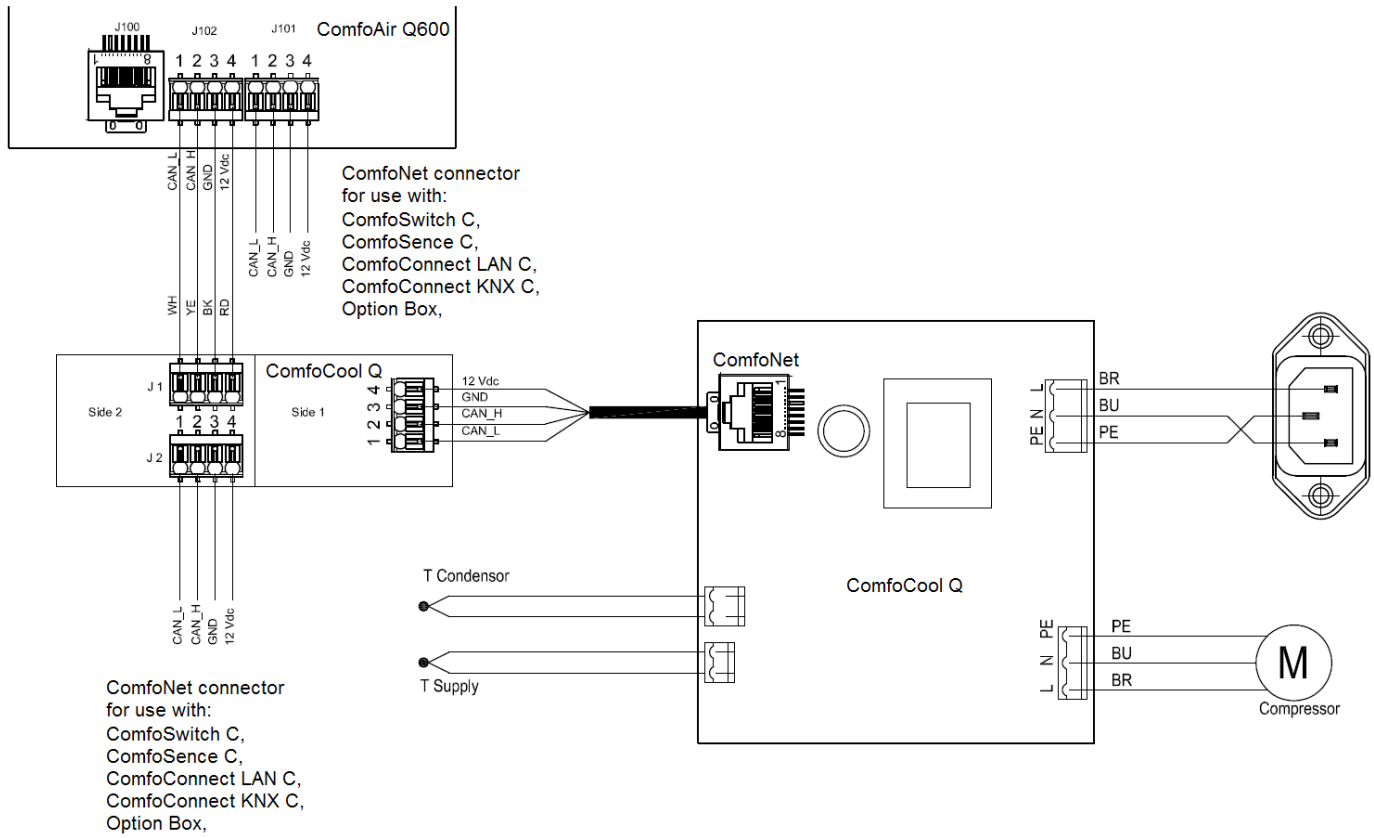
Air Direction/Connection



Wiring

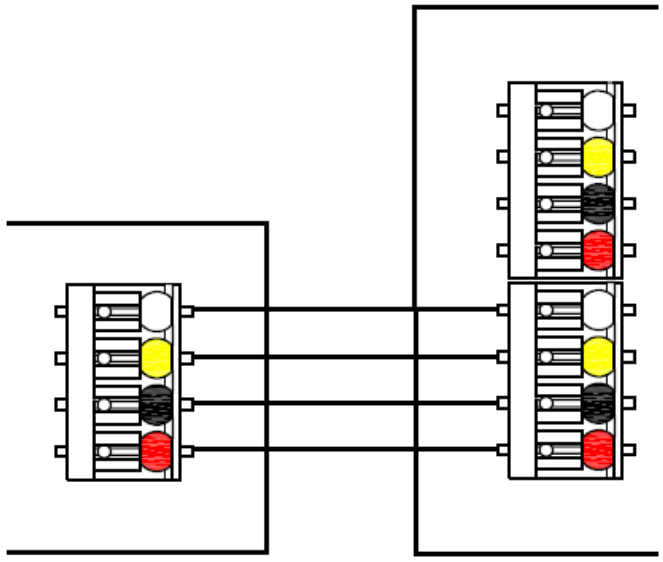
Electrical connections should be carried out in accordance to IEE regulations by a qualified electrician. The unit is supplied with a flying lead for connection to the mains supply.

ComfoCool Q



Wiring

CAQ ancillary wiring



ComfoSwitch C,
ComfoSence C,
ComfoConnect LAN C,
ComfoConnect KNX C,
Option Box

ComfoAir Q

4 core cable, 1.5mm Max.
(up to 50 metres)

Consultant Specification

Specification

The units shall consist of a body manufactured in powder coated steel. The units shall be fully insulated using high quality EPP to maintain excellent thermal characteristics and prevent shrinkage over time.
The air temperation unit shall be capable of working in conjunction with the whole house ventilation system with heat recovery ComfoAir Q600, utilising the fresh and filtered external air. The air temperation unit shall temper the supply air from the ComfoAir Q600 unit utilising a compression air temperation system.
The air temperation unit shall contain a non-flammable and non-toxic coolant R134a.
The air temperation unit shall be controlled by the average return temperature from the ComfoAir Q600 unit.
The air temperation unit shall be constructed to have a removable cover to allow full maintenance access. The removable cover shall enable access to the electrical connections, sensors and cooling skid. The entire cooling skid shall be suitable for removal without the requirement for the unit to be removed from situ and be available as spare parts for a minimum of 10 years even after ceasing manufacture of the unit.

The ventilation unit shall have DC motors with sealed for life bearings. The fans impellors should be low pressure centrifugal type with backward curved blades within ABS scroll housing and flow ring to provide accurate pressure measurement and incorporate a flow grid to optimise the airflow into the fan. The heat exchanger shall be a diamond shaped multi-plate, counter flow design constructed from Polystyrene with laser welded joints and shall retain up to 96% of the temperature differential of outgoing air with the option to upgrade to an enthalpy heat exchanger for latent and sensible heat transfer plus moisture recovery negating the need for a condensate drain.

The ventilation unit shall contain filters manufactured from recyclable material which has been tested to a minimum of ISO Coarse >65% (G4) standard with the option to upgrade to ISO ePM1 >55% (F7). The filters shall be pleated to reduce the pressure drop and required cleaning time. The ventilation unit shall have 180mm duct connections, and be suitable for vertical wall mounting or floor stand with the ability to allow left or right hand configuration through the unit's software alone – no mechanical reconfiguration shall be required. Integrated modulating preheater options shall be available to regulate its output to enable balanced ventilation with external air temperatures -10°C.

The ventilation unit shall have a 100% full summer bypass using an in-line modulating mechanism to provide filtered supply air 365 days of the year, even under bypass conditions. It shall provide fresh filtered air to aid night time cooling and prevent condensation within the supply pipework, regardless of the external air temperature. The ventilation unit shall contain a temperature sensor for each air stream to ensure correct and logical operation of the bypass damper by evaluating differential as well as absolute temperature to maximise the opportunity for free cooling. The ventilation unit shall control air flow to react to prolonged, sustained increased pressure drops to best achieve the commissioned flow rate even when filter degradation occurs. Airflow should not react to short term 'wind gusts' to avoid nuisance running.

The ventilation unit shall be constructed to have a removable cover to allow full maintenance access. The removable cover shall enable access to the supply/extract fan, heat exchanger and access to electrical connections. The motors shall be suitable for removal without the requirement for the unit to be removed from situ and be available as spare parts for a minimum of 10 years even after ceasing manufacture of the unit.
The units shall conform to LVD and EMC standards and be CE Marked in addition to having an EU compliant energy rating label (SEC) with a minimum grade of A. The units shall be manufactured by Zehnder.

Operation

The air temperation unit shall be a ComfoCool manufactured by Zehnder and shall be suitable to mount directly onto a ComfoAir Q600 supply and extract unit mounted onto a floor stand in accordance with the specification.

The air temperation unit shall remove heat energy and moisture from the supply air. The heat energy shall be transferred from the supply air to the exhaust air and directed to outside via the ComfoAir Q600 system with enthalpy cube. The units shall not require external units but instead only rely on the intake and exhaust terminations of the ComfoAir Q600 unit. The dehumidification of the air creates condensation which shall be drained to the waste water system.
The air temperation unit shall have the ability to activate or deactivate automatically based on the selected temperature profile.
The supply and extract ventilation unit shall be a ComfoAir Q manufactured by Zehnder and shall be suitable to mount on a floor stand, wall or in a cupboard in accordance with the specification.

The fresh filtered air from outside shall be supplied to each of the habitable rooms and pre-heated by the warm extract air from the wet areas, such as kitchen or bathroom, via the plastic counter flow heat exchanger. The ventilation unit shall vary its speed of the EC motors automatically when it receives a signal from one of the inbuilt sensors or via external switches.

Consultant Specification

Controls

The ComfoCool Q unit shall contain the following functions within the unit pre-wired and factory fitted by the manufacturer:

- Temperature sensors to monitor internal and external conditions in addition to the supply air to determine when to activate

All ComfoAir Q units shall contain the following functions within the unit pre-wired and factory fitted by the manufacturer:

- Dial-a-duty motor control
- 4 Variable speed flow rate set points
- Automatic filtered modulating summer bypass with timed manual override option
- Heat exchanger frost protection
- Commissioning wizard to enable commissioning of the unit
- Integral service, fault and operation indicators
- Control panel PIN protection
- Tool free filter access
- Humidity sensors to operate the unit in response to humidity spikes above natural background humidity levels as opposed to a single threshold humidity point to activate the high set point
- Automatic passive boost for night time cooling
- Variable overrun timer relative to high speed activation period
- BMS compatibility via KNX protocol option
- Wi-Fi connectivity option
- RFZ wireless connectivity option
- Switched live input option
- Volt free contact option
- 0-10V input option
- Pre-heater frost protection option
- Post-heater control option
- Control input for single or multiple capacitive touch speed controllers with 7 day programmer capabilities
- Control input for single or multiple 4 speed manual/auto controller with filter alert

zehnder

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