Heating - Ventilation - Air Conditioning
Heizung - Lüftung - Klimatechnik

Compact Class

WK-compact PT H: plug-in energy-efficient ventilation unit for indoor and outdoor installation

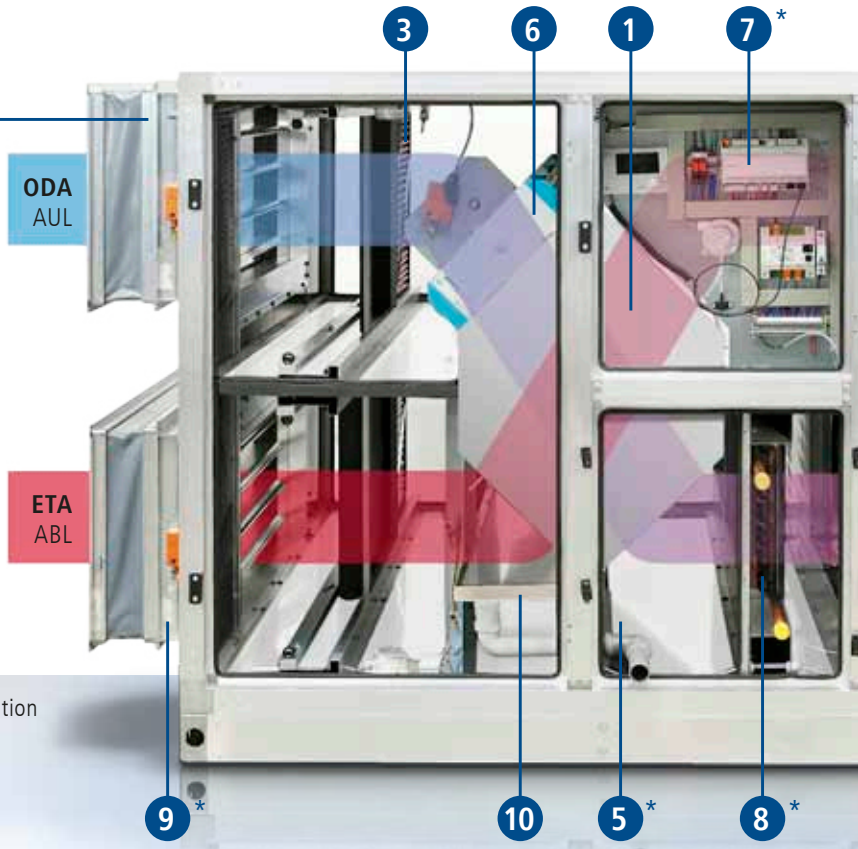
Spirit of Air

WOLF
GEISENFELD

WK-compact PT H - in detail

Outdoor installation

with suction hood (ODA/AUL)
and overhanging roof



continuous performance and highly effective heat recovery...

for indoor and outdoor installation

possible airflows

1 Heat recovery

Designed as a counterflow plate heat exchanger for utilising the sensitive and latent heat energy contained in the air streams. Exhaust and outdoor air flow are completely separated from each other.

They pass along each other by thin aluminum panels arranged in parallel by countercurrent.

2 EC technology

EC motors have a significantly lower power consumption than conventional three-phase AC motors. With the EC motor technology, efficiencies of approximately 96% can be achieved over a very wide revolution speed range.

The continuous controllability guarantees optimal adjustment of the system efficiency, which is very easy with a 0-10 V signal. The EC ventilator motor is not only very effective, but also long-lasting, maintenance-free and quiet.

3 Z-line filter / pocket filter

In addition to high strength and stability under heavy load, the air filter is characterised by one thing in particular: Its low energy consumption, for an environmental consciousness that pays off. By default, with Z-line filter, available with optional pocket filters.

4 Housing

Housing consisting of 42 mm thick double-walled panels with very good sound insulation. (see table)

The inner and outer shell is made from 1.0 mm galvanised sheet steel coated in RAL 7016 / anthracite grey. Alternatively, the panels can also be made of aluminum or stainless steel.

Profile frame made from aluminum, optional stainless steel.

Design and construction according to DIN EN 1886 and based on VDI 6022.
Also available in weatherproof design, i.e. with roof and suction hood (ODA/AUL).

Heat recovery

EC technology

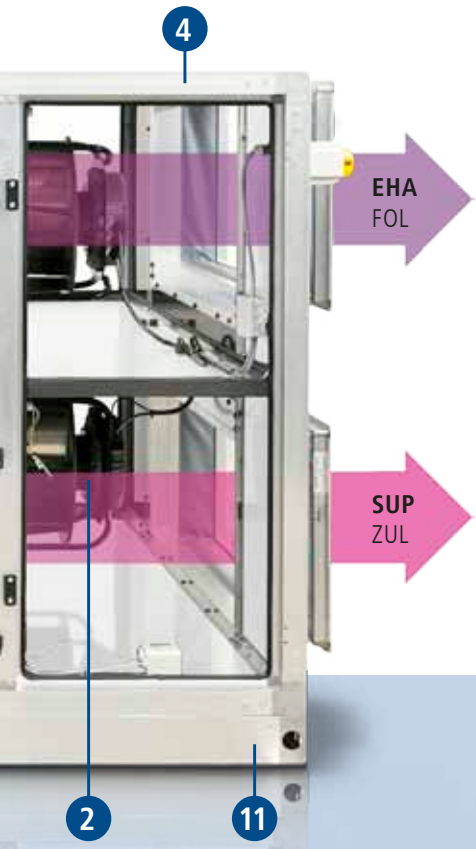
Z-line filter / pocket filter

Housing

Recirculating air flap

Bypass

* optional



Competence

Plug-in ventilation units in compact design for needs-based ventilation with maximum energy efficiency.

Usage examples

Housing complexes, hotels, schools, restaurants, preschools, sports facilities, conference rooms, showrooms, factories, hardware stores or industrial buildings

Advantages

- Highly energy-efficient heat recovery with counterflow heat exchanger for heat recovery coefficients **up to 93.5%**
- Energy-saving EC motor technology
- Software-based control concept
- Compact design with high-quality workmanship
- Optionally equipped with Z-line filter or pocket filter
- Plug & play technology
- 100% summer bypass
- 100% recirculating air operation for bypassing the heat exchanger
- Sophisticated accessories
- Reliable customer service
- Also available in weatherproof design
- Booster circuit for fastest air improvement
- Optional pump warm water (PWW) or electric register
- Optional cooling register or direct evaporator
- optionally ready-to-plug-in with control system

5 Recirculating air flap

Optional: The recirculating air flap can be opened for fast and energy-efficient heating of a room. The counterflow plate heat exchanger and the bypass are closed simultaneously and automatically via servomotors and flaps, so that the heating can be performed with 100% of the circulating air.

6 Bypass

In order to avoid unnecessary heating of the outdoor air in the summer, the bypass flap can be opened and the flap on the countercurrent plate heat exchanger can be closed.

With this flap setting a night cooling can be performed using the control system. The cool outdoor air is thus blown directly into the room past the plate heat exchanger at night.

7 Control

Optionally, the WK-compact PT H also can also be equipped with a factory-integrated control.

Insertion loss of the housing tested in accordance with DIN EN 1886

Frequency band	Measured value
125 Hz	12.9 dB
250 Hz	19.6 dB
500 Hz	27.0 dB
1,000 Hz	28.8 dB
2,000 Hz	30.0 dB
4,000 Hz	33.9 dB
8,000 Hz	38.5 dB

Tightness class of the housing tested in accordance with DIN EN 1886.

Control

PWW heating register

Multi-leaf dampers

Condensate tub

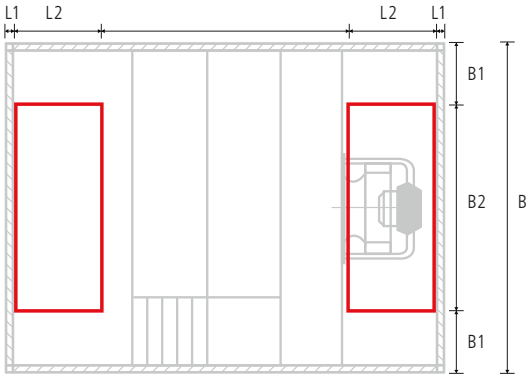
Base frame

with opening for transport bar

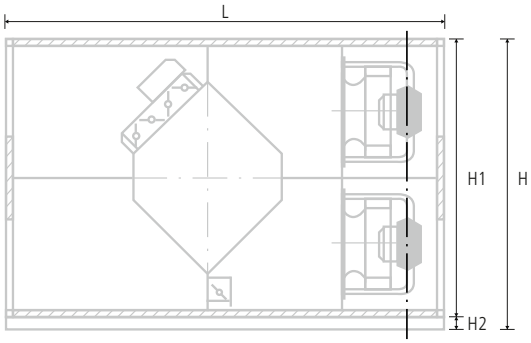
* optional

WK-compact PT H - dimensions and weight

Top view Dimensions for sections – top and bottom

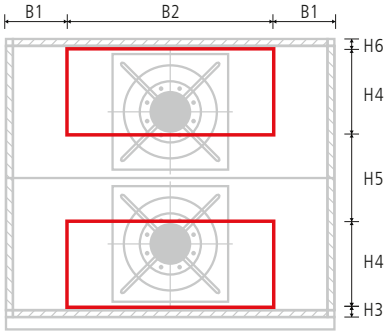


Side view



Section A-A

Section A-A



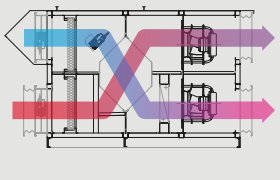
Overall size	Wall thickness [mm]	Overall width W [mm]	Overall height H [mm]	Overall length L [mm]	H1	H2	H3	H4 L2	H5	H6 L1[2)]	W1	W2	Weight* [kg]
1200	42	740	1300	1830	1200	100	50	400[1)]	300	50	50	640	281
2500	42	1180	1400	1980	1300	100	50	450	300	50	290	600	391
3500	42	1720	1400	1980	1300	100	50	450	300	50	380	960	518
5000	42	2260	1400	1980	1300	100	50	450	300	50	505	1250	684
6000	42	2260	1550	2120	1450	100	50	550	250	50	505	1250	809
7500	42	2650	1550	2120	1450	100	50	550	250	50	575	1500	1012
8000	42	2440	1585	2260	1485	100	50	550	285	50	320	1800	1056
9500	42	2760	1585	2260	1485	100	50	550	285	50	380	2000	1164
11000	42	2710	1730	2490	1630	100	50	650	230	50	405	1900	1424
12500	42	3000	2000	2550	1900	100	50	650	500	50	500	2000	1670

* without attachment parts
Subject to change

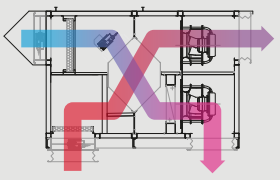
[1)] Vertical outlet: H4 = 640 mm
[2)] with vertical outlet bottom: L1 = 60 mm

Airflow variants Please specify the air direction when ordering.

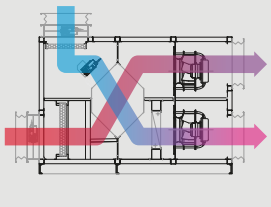
V 1.1 - Indoor unit
V 1.2 - Outdoor unit



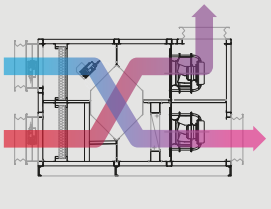
V 1.3 - Outdoor unit



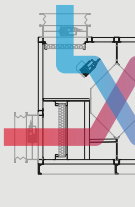
V 1.4 - Indoor unit



V 1.5 - Indoor unit



V 1.6 - Indoor uni

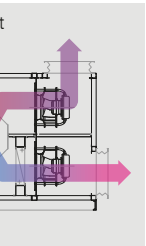


Performance data

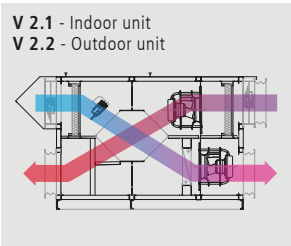
Over-all size		Volume flow [m³/h]	Efficiency* [%]	Heat recovery* [kW]	Supply air temperature [°C]	max. ext. compression [Pa]	Power consumption ** kW]	Current consumption [A]	Voltage [V]	Class H[1)]	Class V[2)]	Sound pressure level *** [dB(A)]
	min.	280	94.1	3.00	20.0	400	0.40	2.36	230			60.8
1200	opt.	940	90.1	9.66	18.6	400	0.81	4.63	230	H1	V1	61.9
	max.	1200	89.0	12.22	18.3	200	0.73	4.17	230			60.1
	min.	400	95.2	4.30	20.4	400	0.63	1.22	400			60.7
2500	opt.	1890	90.1	19.43	18.6	400	1.46	2.43	400	H1	V1	62.5
	max.	2500	89.0	25.41	18.3	200	1.59	2.61	400			64.6
	min.	500	95.7	5.50	20.5	400	0.42	0.65	230			60.9
3500	opt.	2840	90.0	29.19	18.6	400	1.49	2.50	230	H1	V1	63.3
	max.	3500	89.0	35.67	18.4	200	1.79	3.00	230			66.0
	min.	630	95.9	6.90	20.6	400	0.84	1.61	400			62.0
5000	opt.	3790	90.0	38.95	18.6	400	2.59	4.21	400	H1	V1	65.7
	max.	5000	89.0	50.82	18.3	200	3.07	5.12	400			69.7
	min.	780	95.9	8.50	20.6	400	1.06	1.88	400			64.3
6000	opt.	4850	89.9	49.87	18.6	400	3.38	5.23	400	H1	V2	69.6
	max.	6000	89.0	61.07	18.3	200	3.62	5.46	400			72.3
	min.	900	96.0	9.90	20.6	400	1.55	2.98	400			65.0
7500	opt.	5820	89.9	59.74	18.6	400	4.26	7.00	400	H1	V1	67.4
	max.	7500	89.0	76.21	18.3	200	4.50	7.34	400			68.2
	min.	1080	95.7	11.80	20.5	400	1.63	3.12	400			65.1
8000	opt.	7170	89.5	73.24	18.4	400	5.40	8.80	400	H1	V1	68.7
	max.	8000	89.0	81.36	18.3	200	4.88	7.96	400			69.2
	min.	1240	95.7	13.50	20.5	400	1.69	3.22	400			65.1
9500	opt.	8190	89.5	83.65	18.4	400	6.22	10.22	400	H1	V1	70.3
	max.	9500	89.0	96.46	18.2	200	6.10	10.12	400			72.0
	min.	1550	95.5	16.90	20.5	400	2.15	3.80	400			67.4
11000	opt.	9560	89.5	97.67	18.4	400	7.26	11.20	400	H1	V1	72.8
	max.	11000	89.0	111.75	18.3	200	6.98	10.64	400			74.1
	min.	1550	95.8	16.90	20.6	400	2.16	3.78	400			67.3
12500	opt.	10640	89.5	108.70	18.4	400	7.89	12.12	400	H1	V1	74.2
	max.	12500	89.0	126.88	18.2	200	8.26	12.44	400			76.2

[1)] Classification of heat recovery system (DIN EN 13053)
[2)] Flow-through speed unobstructed housing cross-section (DIN EN 13053)

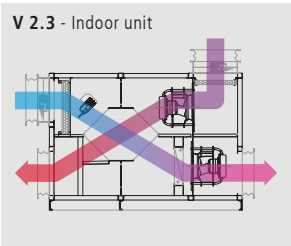
* Outside air -12 °C / 90 % RH, Exhaust air 22 °C / 50 % RH
** at 400 / 200 Pa external compression
*** Distance from the sound source 5 m (hemisphere)



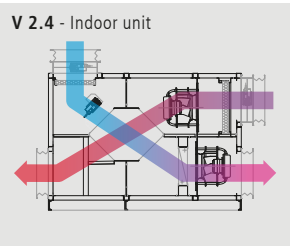
V 2.1 - Indoor unit
V 2.2 - Outdoor unit



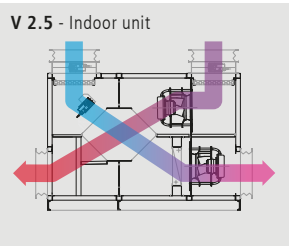
V 2.3 - Indoor unit



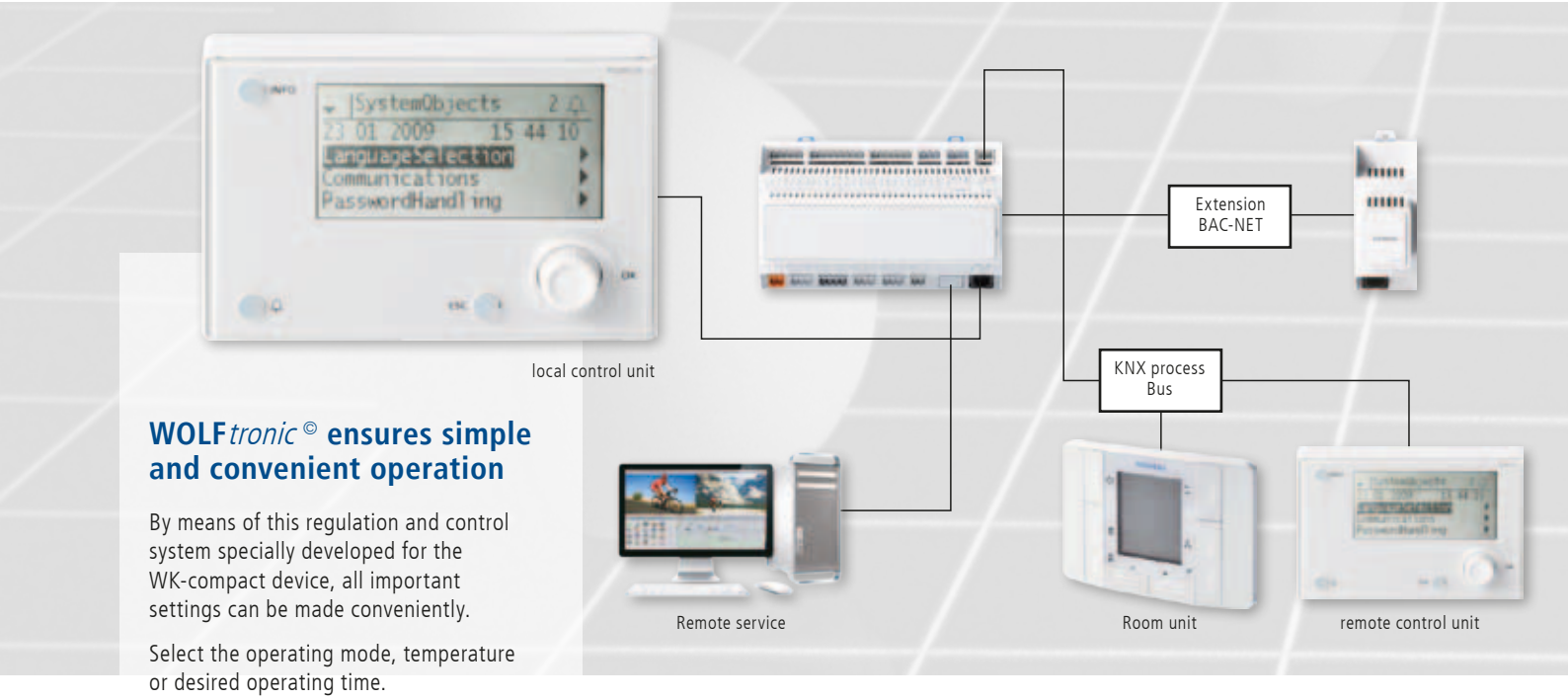
V 2.4 - Indoor unit



V 2.5 - Indoor unit



WK-compact PT H - mit **WOLF***tronic* © Control



WOLF*tronic* © ensures simple and convenient operation

By means of this regulation and control system specially developed for the WK-compact device, all important settings can be made conveniently.

Select the operating mode, temperature or desired operating time.

System-specific ex works

For a customer-friendly initial operation, the WOLF*tronic* © system is already configured for any specific customer installation ex works. For the initial operation of the heat recovery unit, only the target values, revolution speeds and circuit times must be adjusted individually by the customer.

At a glance

- Room unit for on-site operation
- Control panel (HMI) for initial operation and adding functions
- Ex works pre-programmed and configured control system
- User-friendly menu
- BAC-NET interface expansion modules (pre-programmed)*
- Remote service via TCP/IP*
- CO_2 pressure, constant volume flow control or humidity control possible
- Software updates via SD card

Volume flow control

- Continuous 0-100 % via 3-step automatic transmission
- Constant volume flow*
- Constant pressure*
- CO_2 control *
- Humidity control*

Summer / winter bypass

- Internal sensor with adjustable limit values for heat recovery
- Free cooling

Filter monitoring

- Pressure capsule*

Recirculating air flap

- Only in night mode "ON"*

Shutdown fire alarm control panel

- Supply and exhaust air "OFF"
- Exhaust air "OFF"*

Anti-freezing of the heat recovery unit

- Pressure capsule
- Electric pre-heating register*

Control type

- Extracted air cascade
- Room air cascade
- Supply air cascade

Reheating register

- Pump warm water (PWW) register*
- Electric heating register*
- Heat pump*

Cooling

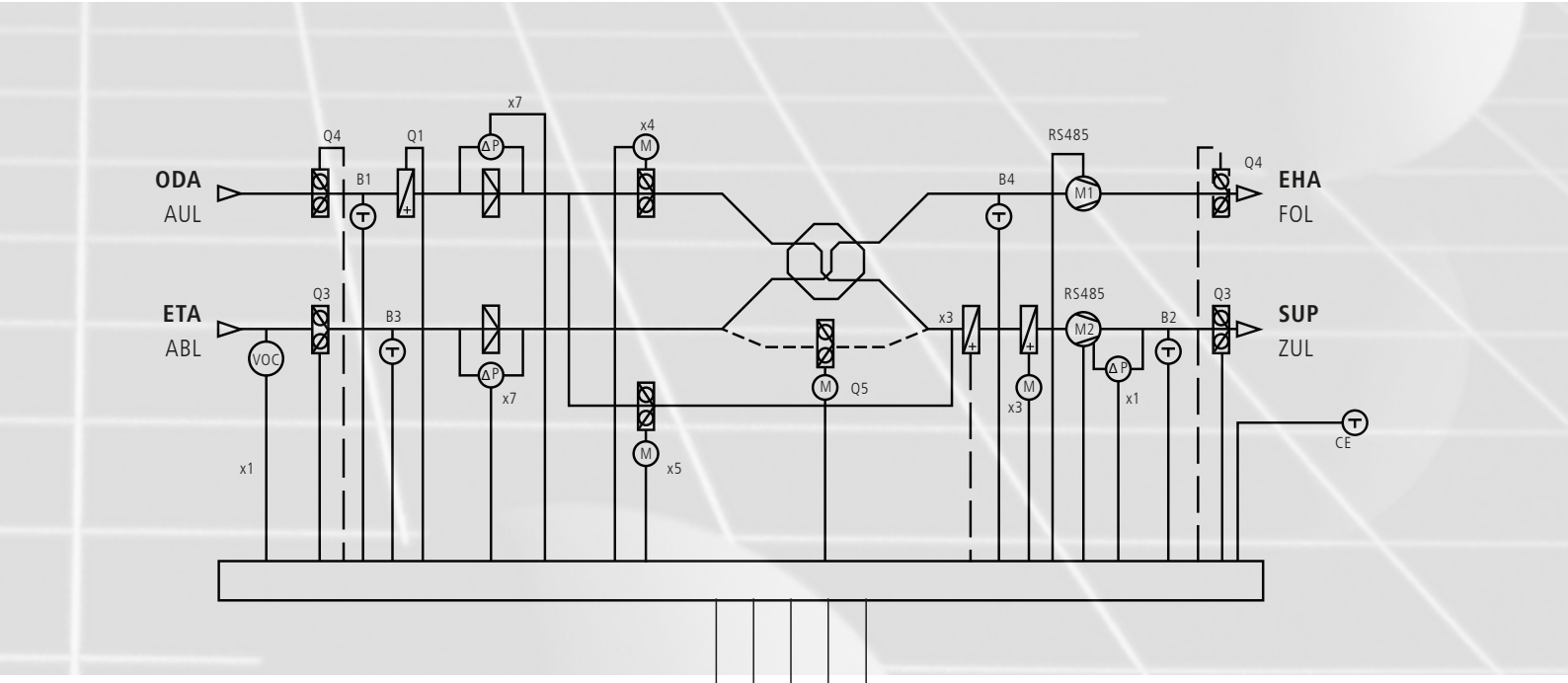
- Free cooling
- Pump cold water cooling register*
- DX cooling register (heat pump)*

Communication

- SD card and internal memory
- Remote service via TCP/IP*
- BAC-Net interface*

* optional

Circuit diagram



B1	Outdoor air sensor
B2	Supply air sensor
B3	Extracted air sensor
B4	Exhaust air sensor*
CE	Room air sensor
Q1	Electric heating register* "Frost protection"*
Q3	Supply air actuator*
Q3	Extracted air / room air actuator*
Q4	Exhaust air actuator*
Q4	Outdoor air actuator*
Q5	Circulated air actuator*
RS485	Supply air ventilator
RS485	Exhaust air ventilator
x1	Supply air quality sensor, extracted air*
x1	Constant pressure/constant volume flow control*
x3	PWW heating register*
x3	Electric subsequent heater*
x4	Heat recovery
x5	Bypass
x7	Filter pressure capsule outdoor air
x7	Filter pressure capsule extracted air

Control unit

Room unit

BAC-NET interface*

Remote service via TCP/IP*

Heat pump control
Q6 Heating
Q7 Cooling

* optional

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