

# ROTO K 1050 H WOJR

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- Compact air handling unit with rotary heat exchanger
- Horizontal connections, version right
- Frameless, double wall housing made of galvanized steel sheet, insulated
- Constant air flow EC fans, integrated controls
- Warm water heating, without cooling
- Panel Filter F7/M5
- For indoor and outdoor installation (optional accessories)



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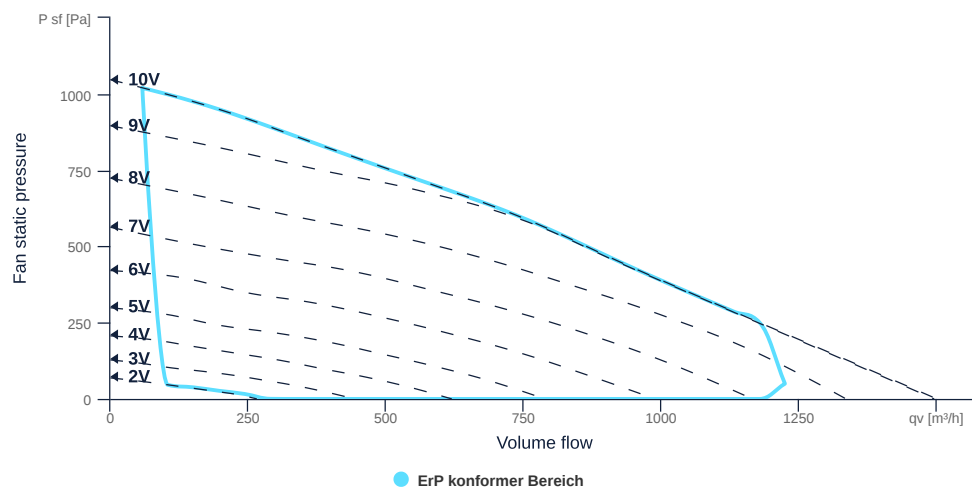
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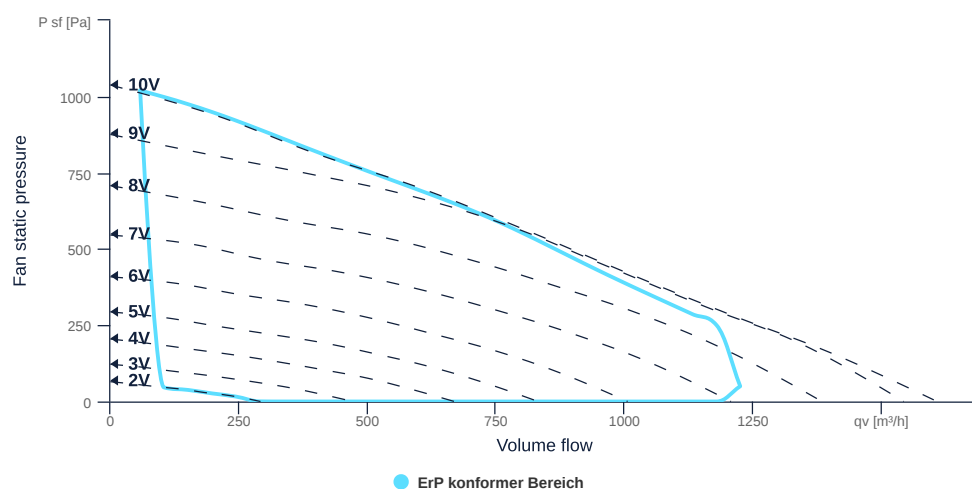
## MAP

| Name        | Value | Unit |
|-------------|-------|------|
| Volume flow | 0     | m³/h |
| Pressure    | 0     | Pa   |



## EXTRACT AIR MAP

| Name        | Value | Unit |
|-------------|-------|------|
| Volume flow | 0     | m³/h |
| Pressure    | 0     | Pa   |



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### GENERAL DATA

| Name                                      | Value                  | Unit | Formula symbol          |
|-------------------------------------------|------------------------|------|-------------------------|
| Labeling                                  | CE, UKCA               |      |                         |
| Duct size                                 | 500x200                |      | WxH <sub>duct</sub>     |
| Rated voltage (entire device)             | 400                    | V    | U <sub>rated</sub>      |
| Phases (entire device)                    | 3-N                    |      | phase                   |
| Electrical protection (entire device)     | 6 A                    |      | fuse                    |
| Housing material                          | Galvanized steel       |      | mat <sub>casing</sub>   |
| IP-protection class (casing)              | IP41                   |      | IP <sub>casing</sub>    |
| IP-protection class (entire device)       | IP44                   |      | IP <sub>compl</sub>     |
| Weight                                    | 206                    | kg   | m                       |
| Nominal air flow rate, nominal point m³/h | 856.8                  | m³/h | q <sub>v,nom</sub>      |
| Nominal external pressure, static         | 504                    | Pa   | p <sub>s,nom</sub>      |
| Connection side supply air                | Right                  |      | L/R                     |
| Type of the ventilation-unit              | BVU - supply air       |      | AHU <sub>type</sub>     |
| Type of heat-recovery-system              | regenerative           |      | HRS <sub>type</sub>     |
| Type of the heater                        | Hot water              |      | H <sub>type</sub>       |
| Type of cooler                            | No                     |      | C <sub>type</sub>       |
| Outdoor installation                      | Yes, up to -20°C       |      | outdoor                 |
| Speed control                             | variable speed control |      | VSD <sub>type</sub>     |
| Filter class extract air                  | ISO ePM10 50%          |      | F <sub>class, eta</sub> |
| Filter class supply air                   | ISO ePM1 55%           |      | F <sub>class, sup</sub> |

### ERP DATA (LOT 6)

| Name                                                | Value                     | Unit  | Formula symbol      |
|-----------------------------------------------------|---------------------------|-------|---------------------|
| Energy performance supply air filter                | E                         |       |                     |
| Energy performance extract air filter               | E                         |       |                     |
| Thermal efficiency HRS, Nominal-point               | 75.8                      | %     | t <sub>NRVU</sub>   |
| Nominal air flow rate, nominal point m³/s           | 0.24                      | m³/s  | q <sub>v,nom</sub>  |
| Actual electrical input power, nominal point        | 0.7                       | kW    | P <sub>e,nom</sub>  |
| Internal specific fan power, nominal point          | 1147.3                    | Ws/m³ | SFP <sub>int</sub>  |
| Face velocity, nominal point                        | 1.3                       | m/s   | V <sub>nom</sub>    |
| Nominal external pressure, static                   | 504                       | Pa    | p <sub>s,nom</sub>  |
| supply air fan static efficiency, nominal point     | 56.1                      | %     | η <sub>es,SUP</sub> |
| static efficiency of the extract fan, nominal point | 56.1                      | %     | η <sub>es,EHA</sub> |
| Highest external air leakage rate                   | 2.7                       | %     |                     |
| Enclosure sound level, nominal point                | 64                        | dB(A) | LWA2                |
| Rating                                              | Product is compliant 2018 |       |                     |



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## MAXIMAL DATA

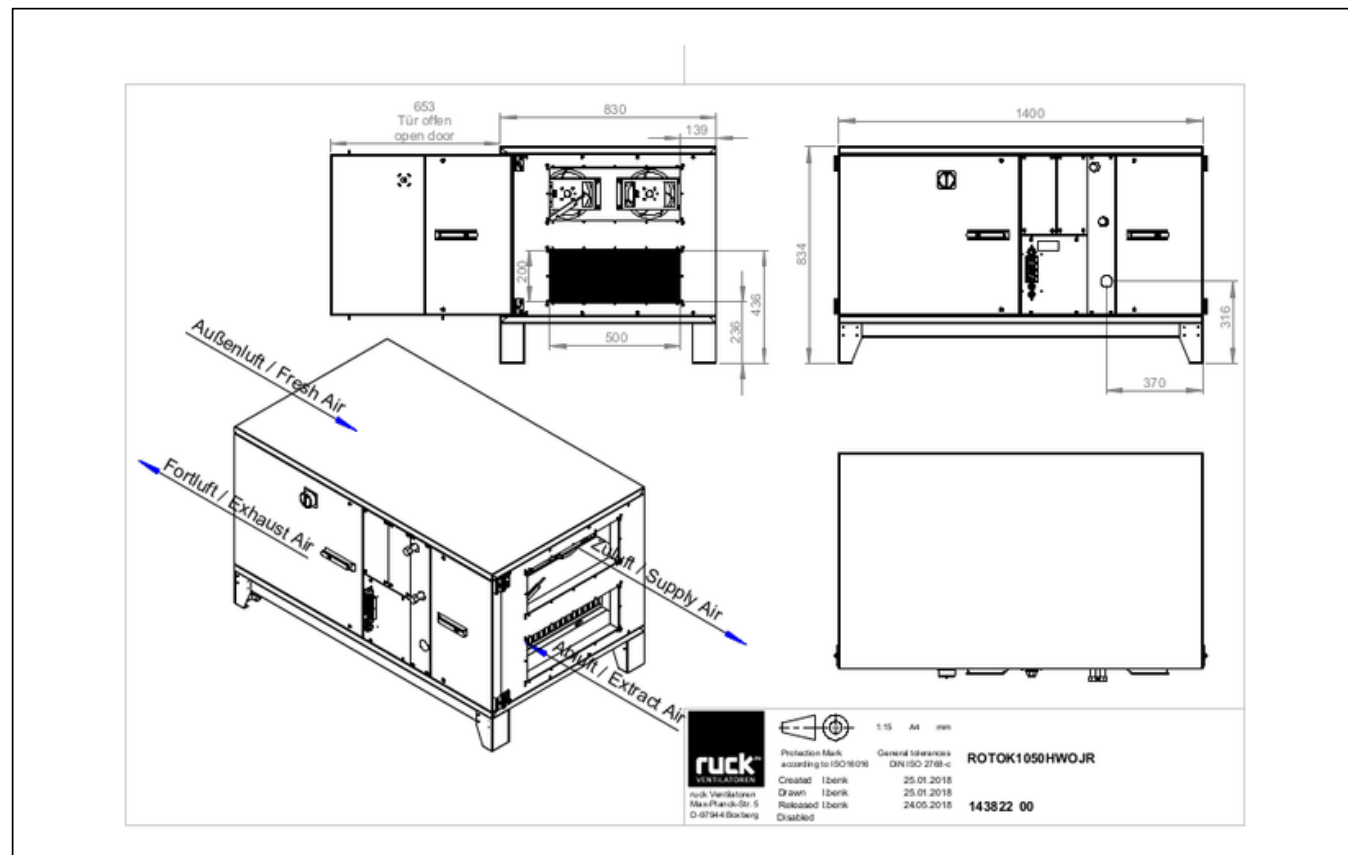
| Name                            | Value | Unit  | Formula symbol        |
|---------------------------------|-------|-------|-----------------------|
| Max. power consumption (device) | 761   | W     | P <sub>ed, max</sub>  |
| Max. operating current (device) | 2.86  | A     | I <sub>ed, max</sub>  |
| Max. speed                      | 4620  | 1/min | n <sub>max</sub>      |
| Max. stat. efficiency           | 32.5  | %     | η <sub>es</sub>       |
| Max. fan efficiency             | 32.6  | %     | η <sub>e</sub>        |
| Max. flowrate                   | 1500  | m³/h  | q <sub>v, max</sub>   |
| Max. stat pressure              | 1040  | Pa    | p <sub>sf, max</sub>  |
| Max. medium temperature         | 40    | °C    | T <sub>m, max</sub>   |
| Max. environment temperature    | 40    | °C    | T <sub>amb, max</sub> |
| Min. environment temperature    | -25   | °C    | T <sub>amb, min</sub> |
| Min. voltage                    | 230   | V     | U <sub>min</sub>      |

## FILTER DATA

| Name                               | Value     | Unit | Formula symbol |
|------------------------------------|-----------|------|----------------|
| Degree of separation (supply air)  | 55        | %    |                |
| Degree of separation (extract air) | 50        | %    |                |
| Filter group (extract air)         | ISO ePM10 |      |                |
| Filter group (supply air)          | ISO ePM1  |      |                |



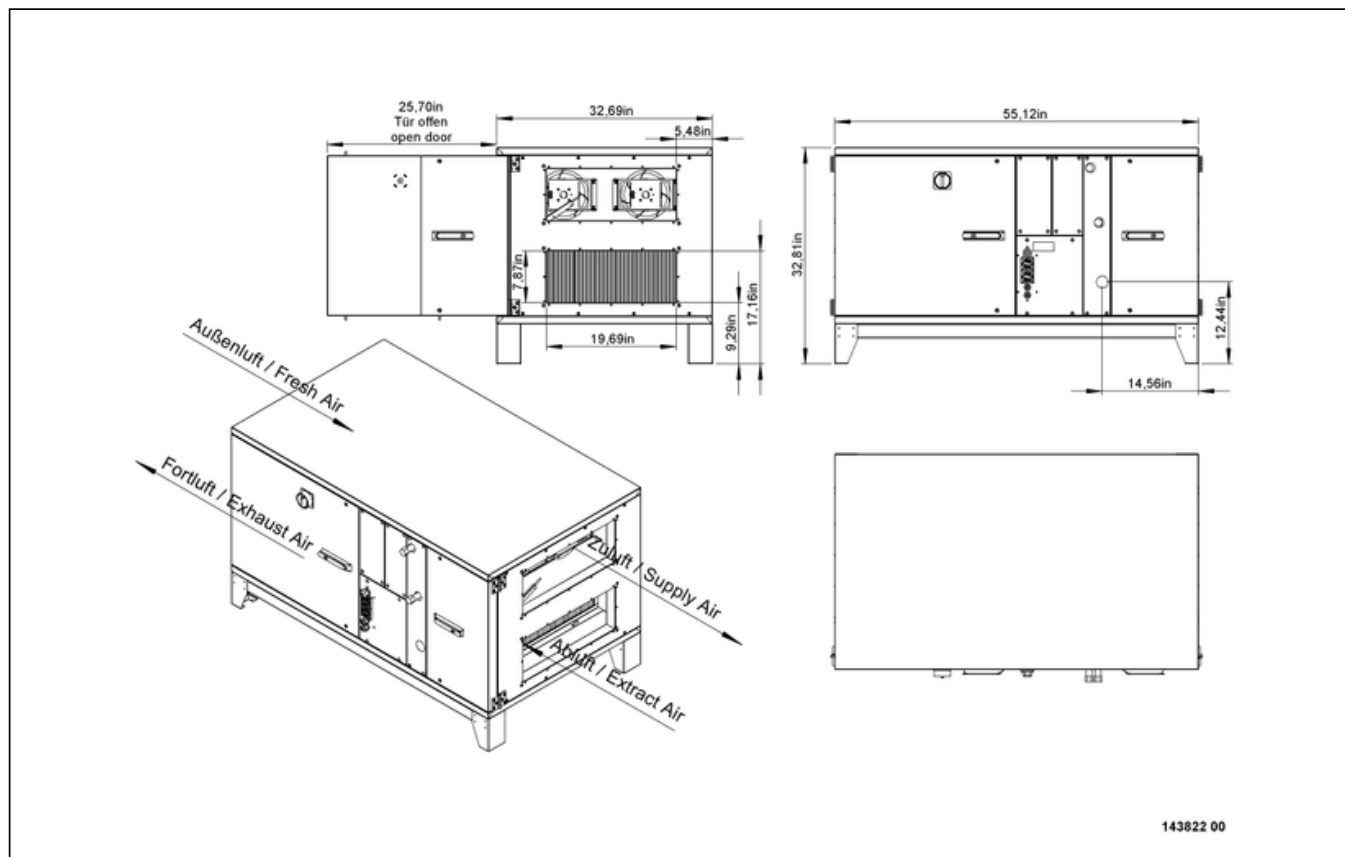
## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



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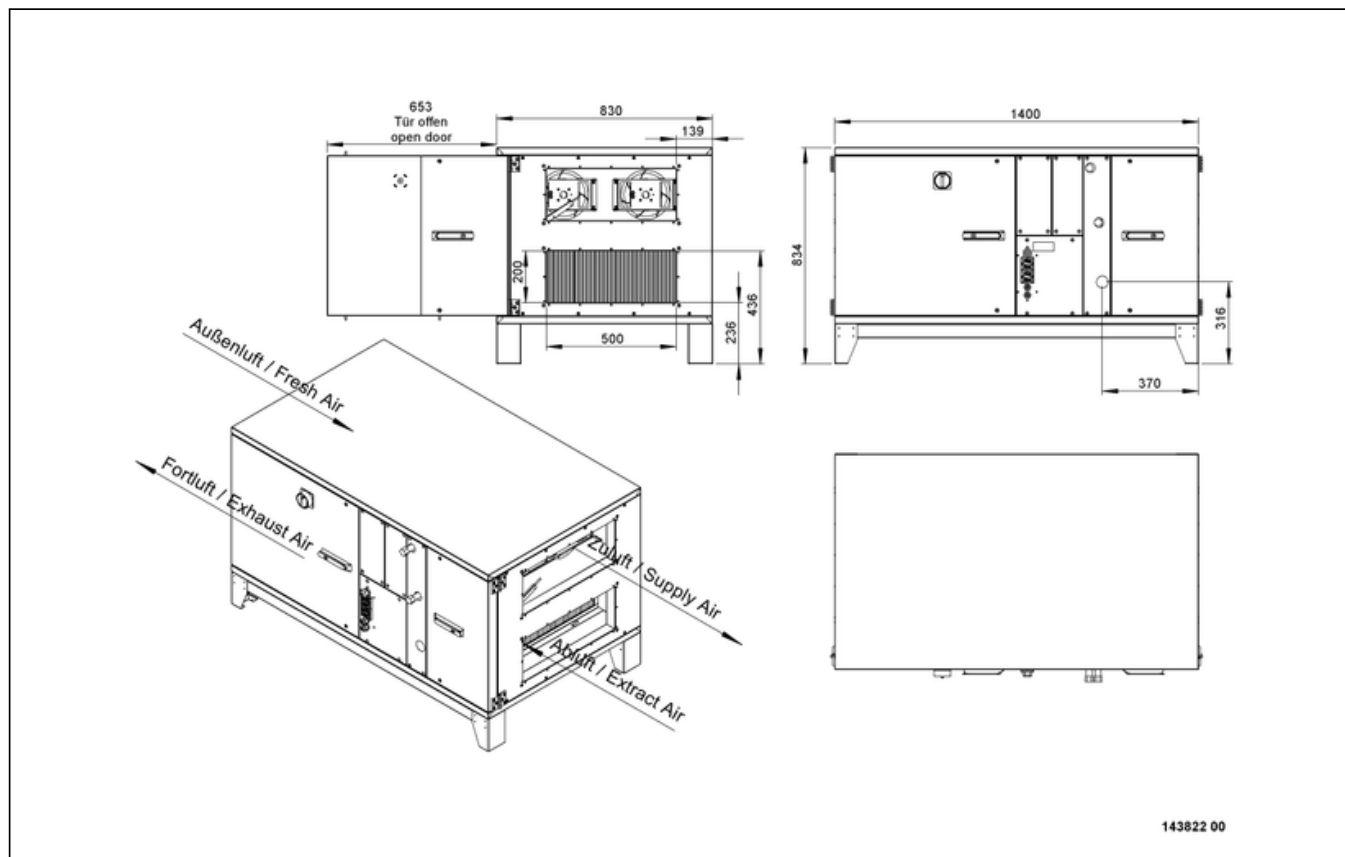
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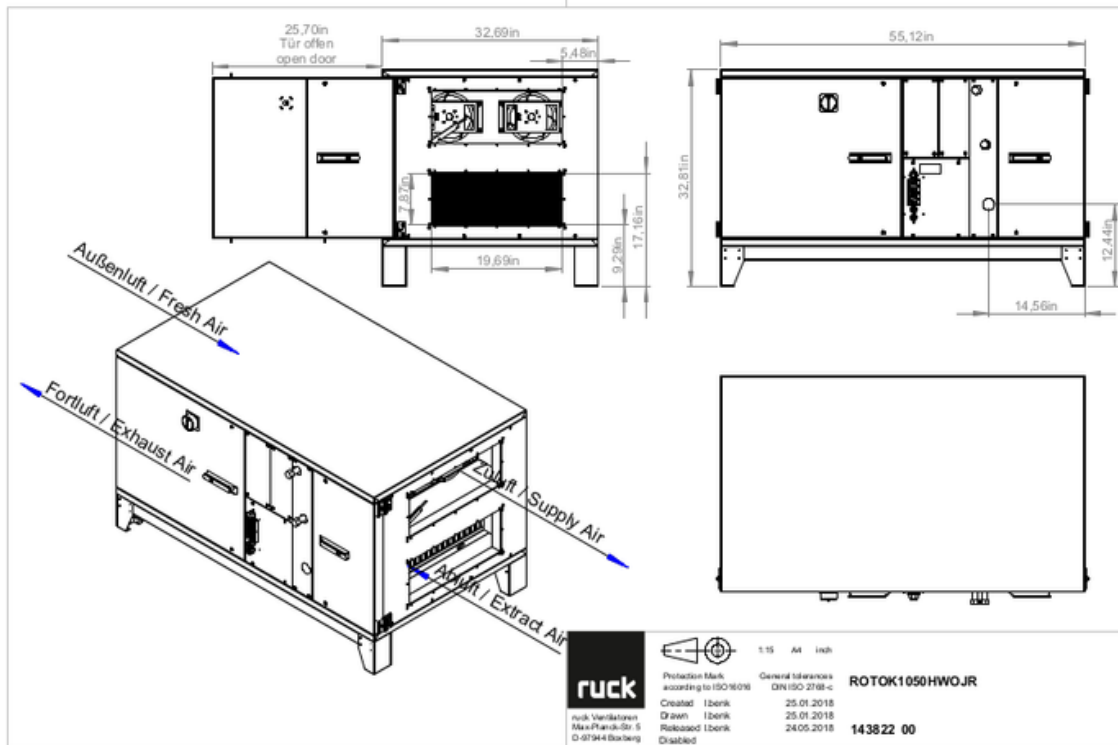
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## MECHANICAL ACCESSORIES

### VS 5020 | 146079



- Duct connector, flexible
- Standard profile flange P20
- Galvanized steel sheet, plastic band (PVC)
- Temperature resistant up to 70 °C

### 146011 | 146011



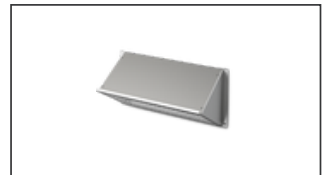
- Motor shut-off flap
- With spring return (VDI 6022)
- Combined outdoor and exhaust air multileaf damper
- Galvanized steel sheet housing

### MAK R 1050 H02 | 146019



- Motor shut-off flap
- With actuator 3-point-control, connection cable 1 m long
- Combined outdoor and exhaust air multileaf damper
- Galvanized steel sheet housing

### WSH ROTO K 1050 H | 148014



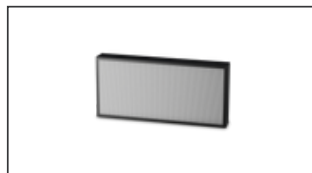
- Weather protection hood
- Galvanized steel sheet

### RD ROTO 1050 H | 145816



- Rain cover for outdoor installation
- Galvanized steel sheet

### LFP 65 ISO ePM10 50% | 168793



- Air filter panel
- ISO ePM10 50%
- 725x262x96 mm

### LFP 65 ISO ePM1 55% | 168797



- Air filter panel
- ISO ePM1 55%
- 725x262x96 mm



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## ELECTRICAL ACCESSORIES

**112934 | 112934**



- 3-way ball-valve with actuator 230 V
- With actuator: Control 3-punct or ON/OFF
- Connections internal thread 1/2 ``
- Temperature range 0 °C...+50 °C

**EHM 5025 R09 01 | 121419**



- Electric heating module 50/25, 9 kW
- Steady temperature control
- Automatic device detection
- Connection side in supply air direction right

**EHM 5025 L09 01 | 121420**



- Electric heating module 50/25, 9 kW
- Steady temperature control
- Automatic device detection
- Connection side in supply air direction left

**COM 02-OPTION | 128549**



- Extension board
- For connecting several ventilation units via Modbus
- Switchable terminating resistor
- Switchable pull-up and pull-down resistor

**SEN RAUCH 02 | 148637**



- Duct smoke sensor
- Contamination display in % and message at 70 %
- 1 Switching contact, 8 A, 250 V AC 1 nc, 8 A, 250 V AC
- Supply flow 1 - 20 m/s

**SEN TEMP | 148639**



- Duct temperature sensor
- Measuring range -50...+150 °C
- NTC 5k
- Incl. mounting clip, mounting screws

**SEN P1000 | 126080**



- Differential pressure sensor
- P-control, PV-control
- P = 2 pcs. required, PV = 1 pcs. required

**SEN RH | 148636**



- Humidity sensor
- Humidity 0...100 % rH
- Output 2 x 0-10V
- 15...24Vdc, max 0,3 W

**SEN RAUCH 01 | 148638**



- Duct smoke sensor
- Contamination display in % and message at 70 %

**SEN CO2 03 | 168178**



- CO2 sensor for demand based volume flow control
- Supply voltage 24 V
- Output 0-10 V DC
- Protection class IP 20

**SEN CO2 02 | 168750**



- Sensor for demand-based volume flow control
- 24 V AC  $\pm$  20 %, 15 - 35 V DC or 19 - 29 V AC
- Output 0 - 10 V DC
- Measurement 0 - 2000 ppm CO2

