

# EL 400 EC K 01

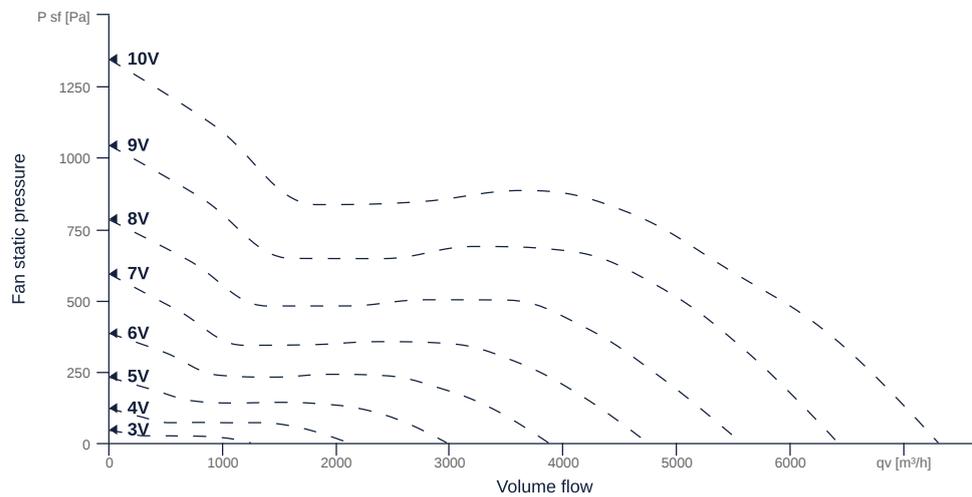
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- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- High efficiency EC motor, steplessly controllable
- Conveyed medium temperature up to 40 °C in continuous operation
- Housing made of aluminum



## FAN CURVES

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



to the product detail page

# EL 400 EC K 01

159288



## GENERAL DATA

| Name                                  | Value     | Unit | Formula symbol      |
|---------------------------------------|-----------|------|---------------------|
| Labeling                              | CE, UKCA  |      |                     |
| Duct size                             | -         |      | WxHduct             |
| Pipe connection size (DN)             | DN400     |      | DN                  |
| Rated voltage (entire device)         | 230       | v    | U <sub>rated</sub>  |
| Phases (entire device)                | 1~        |      | phase               |
| Electrical protection (entire device) | 16 A      |      | fuse                |
| Housing material                      | Aluminium |      | matcasing           |
| Impeller material                     | Aluminium |      | matimpeller         |
| IP-protection class (entire device)   | IPX4      |      | IPcompl             |
| IP-Protection class (terminal box)    | IP66      |      | IPebox              |
| Weight                                | 16.5      | kg   | m                   |
| Fan type                              | Diagonal  |      | Fan <sub>type</sub> |
| Category / Installation situation     | B         |      | cat                 |

## MAXIMAL DATA

| Name                            | Value |       | Unit | Formula symbol        |
|---------------------------------|-------|-------|------|-----------------------|
|                                 | 50 Hz | 60 Hz |      |                       |
| Max. power consumption (device) | 1637  | 1637  | w    | P <sub>ed, max</sub>  |
| Max. operating current (device) | 11.81 | 11.81 | A    | I <sub>ed, max</sub>  |
| Max. speed                      | 3010  | 3010  | rpm  | n <sub>max</sub>      |
| Max. stat. efficiency           | 61.5  | 61.5  | p    | η <sub>es</sub>       |
| Max. fan efficiency             | 63.6  | 63.6  | p    | η <sub>e</sub>        |
| Max. flowrate                   | 7300  | 7300  | CmH  | q <sub>v, max</sub>   |
| Max. stat pressure              | 1340  | 1340  | Pa   | p <sub>sf, max</sub>  |
| Max. medium temperature         | 40    | 40    | °C   | T <sub>m, max</sub>   |
| Max. environment temperature    | 40    | 40    | °C   | T <sub>amb, max</sub> |
| Min. environment temperature    | -20   | -20   | °C   | T <sub>amb, min</sub> |



to the product detail page

# EL 400 EC K 01

159288

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## MOTOR DATA

| Name                     | Value |                     | Unit | Formula symbol          |
|--------------------------|-------|---------------------|------|-------------------------|
|                          | 50 Hz | 60 Hz               |      |                         |
| Rated frequency (device) |       | 50                  |      | f                       |
| Motor type               |       | EC                  |      | phase                   |
| Control type             |       | stepless-controlled |      | ctrltype                |
| Installation type        |       | IRM (In)            |      | install                 |
| Isolation class          |       | ISO F               |      | ISOclass                |
| Motor-protection         |       | TEC                 |      | protectmotor            |
| Protection class         |       | IP55                |      | IPmotor                 |
| Is pole-changeable       |       | No                  |      | polexch                 |
| Type of power supply     |       | AC 1~               |      | pwsupmotor              |
| Rated voltage            | 220   |                     | v    | U <sub>rated, f1</sub>  |
| Rated voltage (wiring 2) | 277   |                     | v    | U <sub>rated, f2</sub>  |
| Rated current            | 8.7   |                     | A    | I <sub>rated, f1</sub>  |
| Rated current (wiring 2) | 6.9   |                     | A    | I <sub>rated, f2</sub>  |
| Nominal power            | 1100  |                     | w    | P <sub>a</sub>          |
| Nominal power (wiring 2) | 1100  |                     | w    | P <sub>out, f2</sub>    |
| Speed                    | 3000  |                     | rpm  | n <sub>f1</sub>         |
| Speed (wiring 2)         | 3000  |                     | rpm  | n <sub>f2</sub>         |
| Efficiency               | 87.8  |                     | p    | η <sub>m, f1</sub>      |
| Efficiency (wiring 2)    | 87.8  |                     | p    | η <sub>m, f2</sub>      |
| Min. temperature         | -20   |                     | °C   | T <sub>motor, min</sub> |
| UL-Certification motor   |       | None                |      | ULcert                  |

## ERP DATA (LOT11)

| Name  | Value | Unit | Formula symbol      |
|---|-------|------|---------------------|
| Speed at the energy efficiency optimum                    | 2909  | rpm  | n <sub>opt</sub>    |
| Efficiency level  | 68.8  | p    | N                   |
| Efficiency category                                       | total |      | catefficiency       |
| Input power of the motor at the energy efficiency optimum | 1.59  | kw   | P <sub>e, opt</sub> |
| Overall efficiency  | 77.2  | p    | η <sub>ges</sub>    |
| Measurement category                                      | B     |      | meas cat            |
| Fan pressure at energy efficiency optimum                 | 823   | Pa   | pf, opt             |
| Flowrate at energy efficiency optimum                     | 4606  | CmH  | Q <sub>v, opt</sub> |

## SMOKE EXTRACT DATA

| Name                  | Value | Unit | Formula symbol |
|-----------------------|-------|------|----------------|
| Fire resistance class | None  |      | Fclass         |

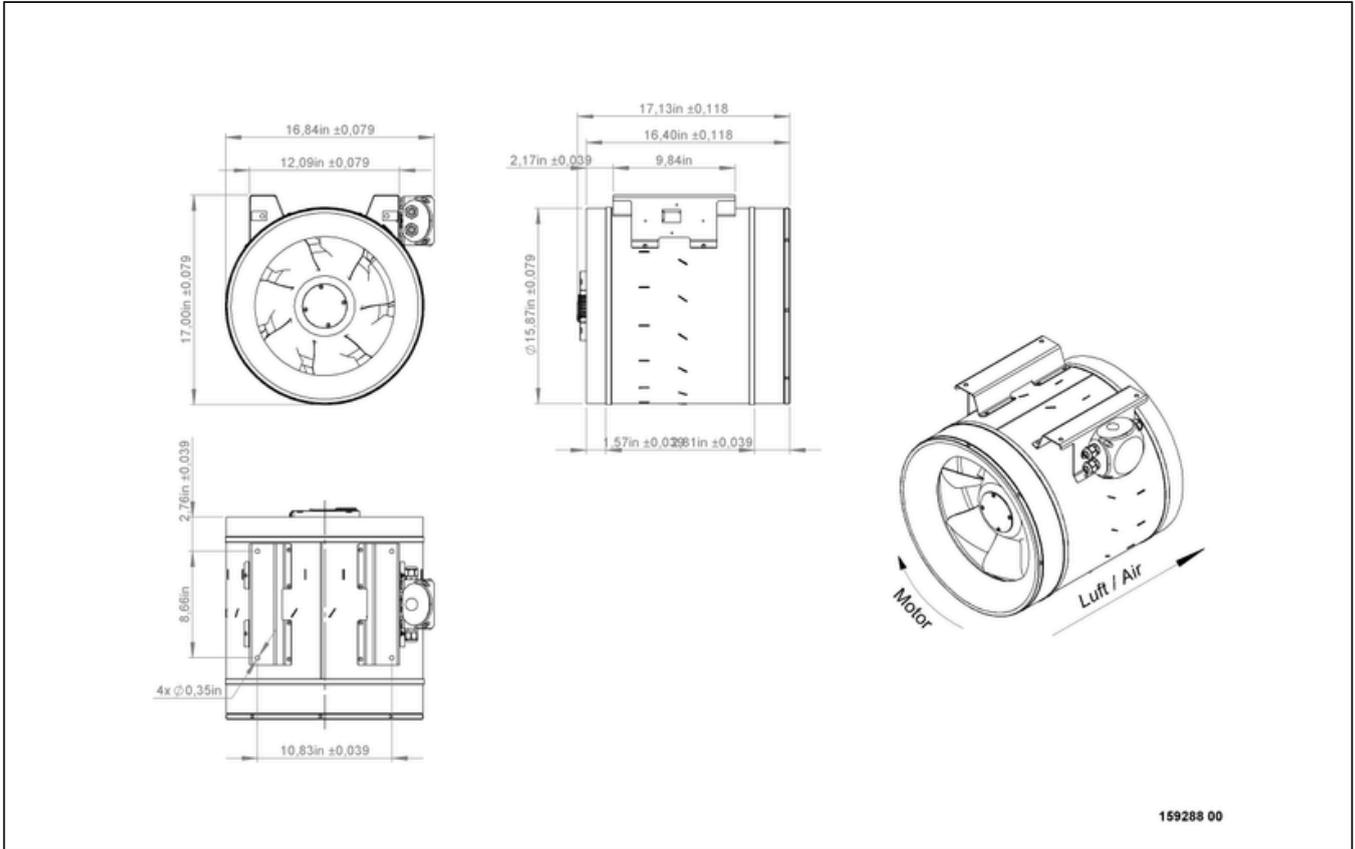


to the product detail page

# EL 400 EC K 01

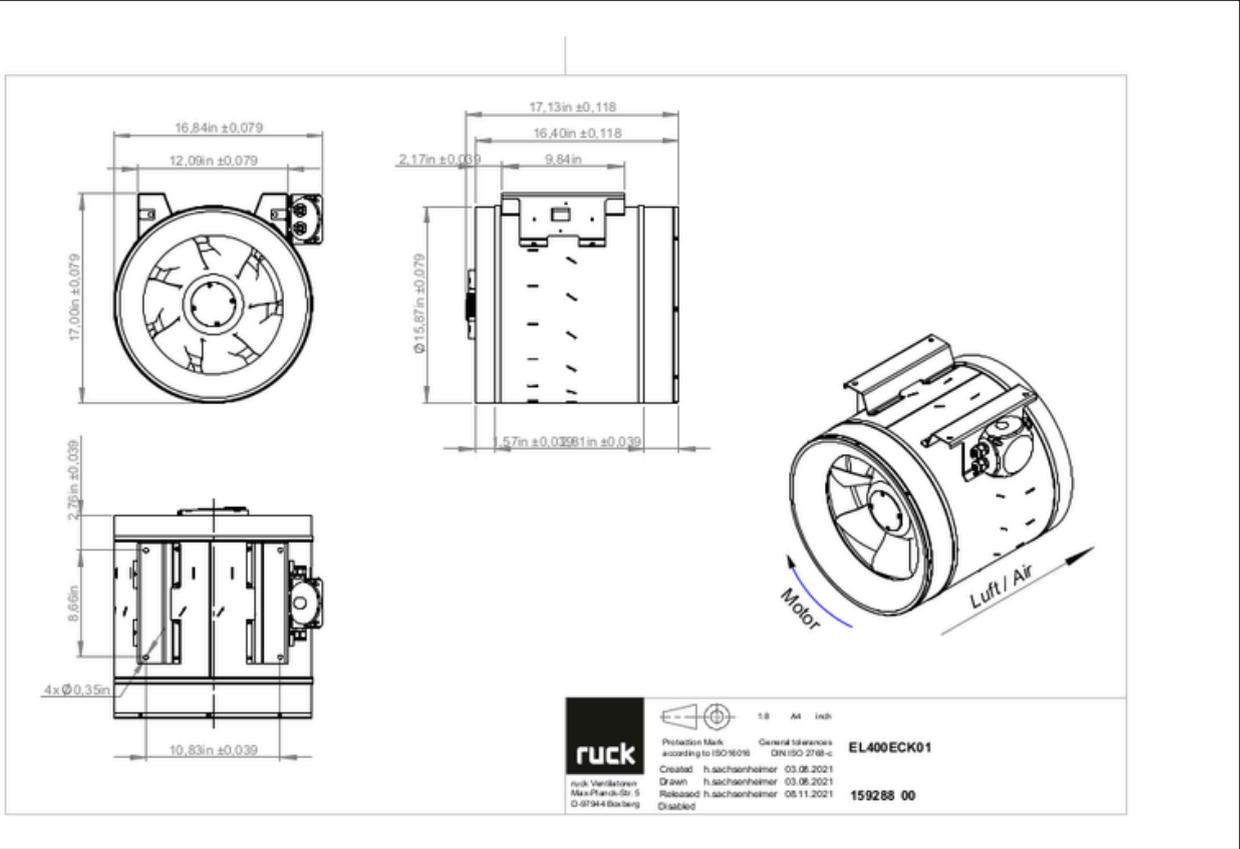
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## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



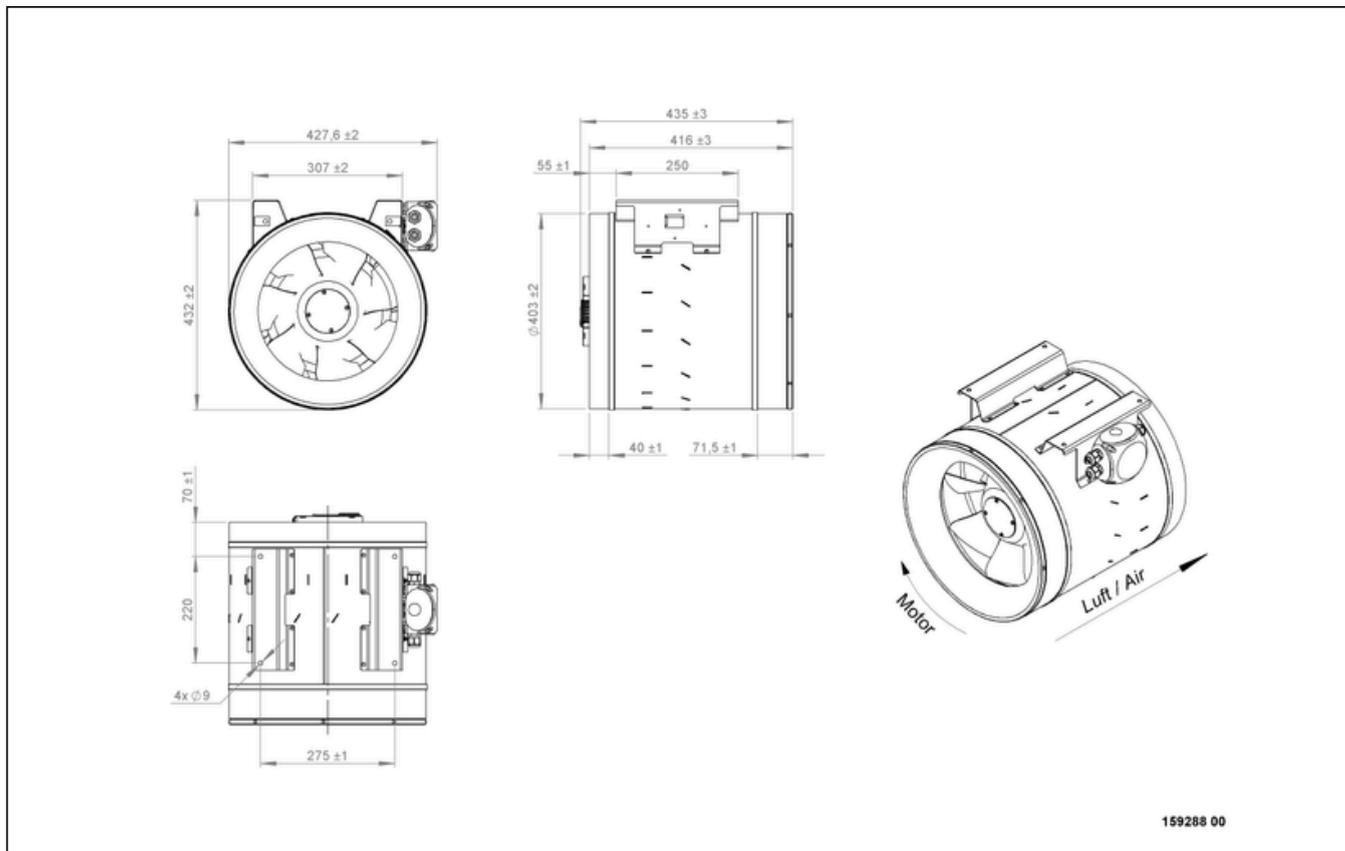
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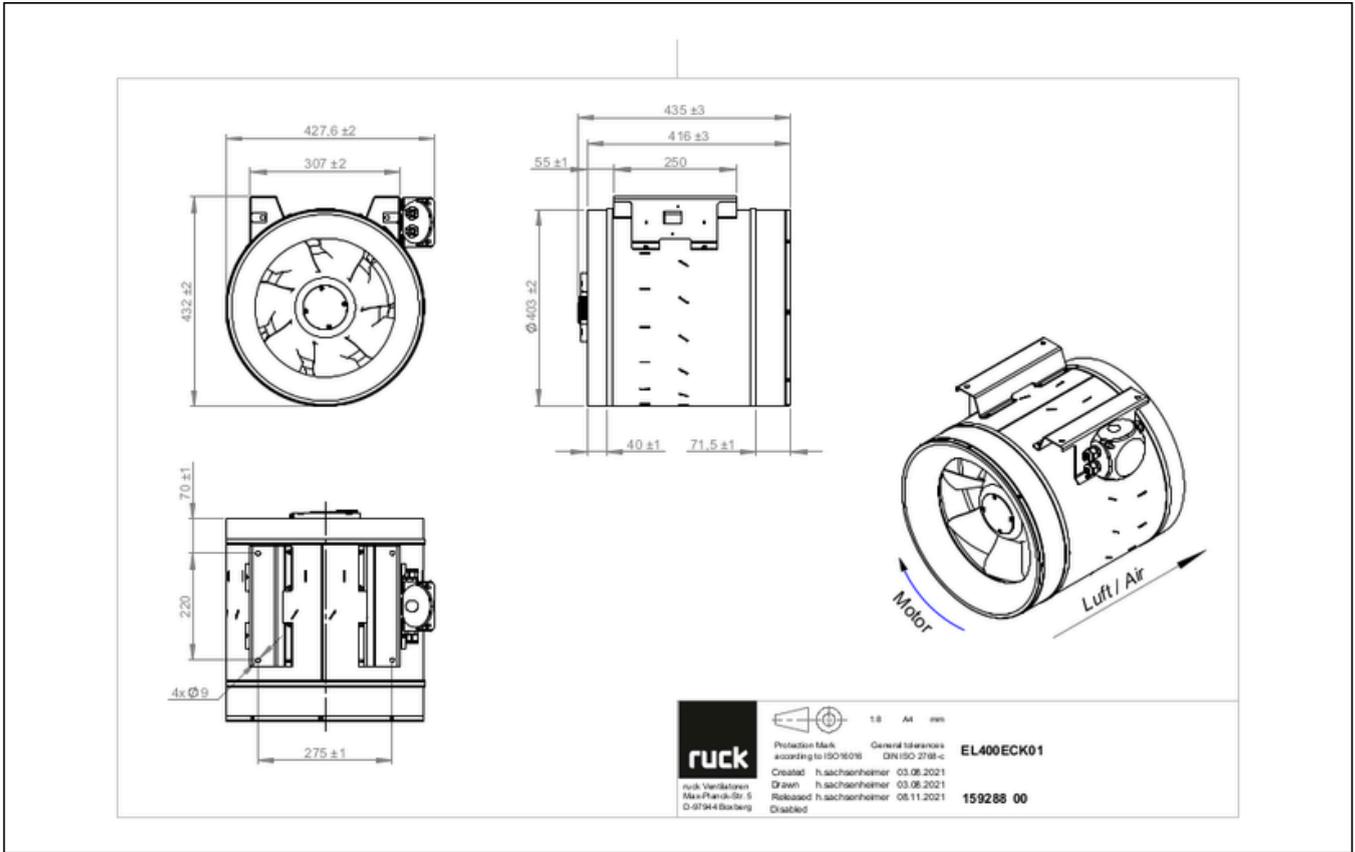
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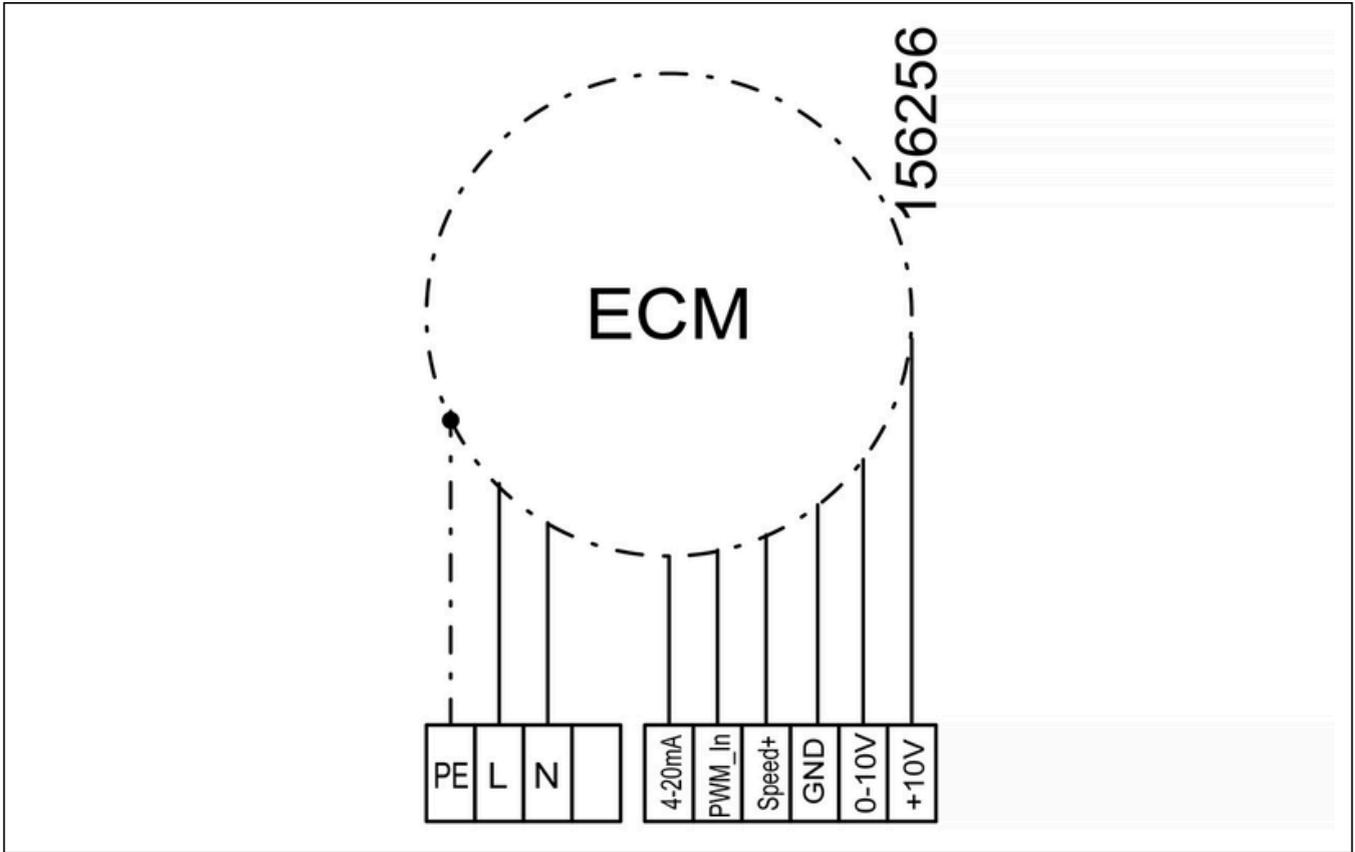
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159288



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159288

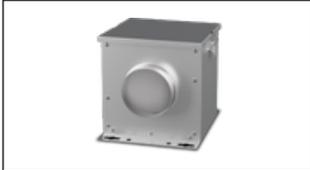


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159288

## MECHANICAL ACCESSORIES

**FV 400 | 112836**



- Air filter box with mat filter ISO Coarse 45 % (G3)
- Toggle-type fastener

**FT 400 | 112848**



- Air filter box for pocket filter
- Toggle-type fastener
- Galvanized steel sheet housing
- Without filter

**FTW 400 | 112857**



- Air filter box with pocket filter M5
- Integrated warm water heating coil
- Galvanized steel sheet housing
- Toggle-type fastener

**RSK 400 | 102691**



- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps

**RSK 400D | 113490**



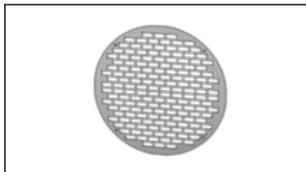
- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps
- Integrated gasket

**VM 400 | 102654**



- Fast clamps for sound decoupling and sealing
- Galvanized steel sheet, 5 mm Neopren gasket
- 1 Pack = 2 pieces

**SG 400 02 | 123949**



- Inlet protection grille for Etaline
- Galvanized steel sheet

**SDS 400 | 169612**



- Rigid tube silencer
- Galvanized steel sheet
- Sound insulation packing 50 mm (mineral wool)

**SDF 400 | 169647**



- Flexible tube silencer
- Galvanized steel sheet
- Sound insulation packing 50 mm



to the product detail page

# EL 400 EC K 01

159288

## ELECTRICAL ACCESSORIES

MTP 20 | 128146



- Potentiometer 10 k $\Omega$
- Switching contact 1A/250V AC - 2,5A/12V DC
- Max. ambient temperature 50 °C
- VDE

MTP 30 | 143289



- Stepped potentiometer 10 k $\Omega$
- Step 1 + 2 settable 10 % - 100 % Vdc
- Step 3 100 % Vdc
- Supply voltage +10 Vdc

MTP 40 | 147359



- Potentiometer 10 k $\Omega$
- Connection in terminal box
- Max. ambient temperature 50 °C
- PU: 20 pieces

SEN AIR | 148641



- Airflow and temperature transducer
- Measuring range temperature 0...+50 °C
- With adjustable switching threshold (air speed)
- Measuring range air velocity up to 20 m/s

CON P1000 | 115259



- Constant pressure control
- Actual value display possible via optional control unit
- Output 0-10 V DC + FC enable + setpoint reached
- Pressure setting by means of decade switch

MTP 50 | 168752



- Potentiometer with multifunction output
- 230 VAC  $\pm$ 10 % / 50-60 Hz
- Selectable output: 1-10 VDC / 2-20 mA / 10-100 % PWM
- Min. and max. output value adjustable

GS 02 | 169671



- Isolator switch
- U<sub>max</sub> = 400 V, 50/60 Hz
- Switching capacity 400 V 3~ = 7,5 kW
- I<sub>max</sub> = 25 A

UniControl 01 | 175813



- Universal fan controller
- Output signal 2 x 0-10V
- Main supply 100V - 240V 50/60Hz



to the product detail page