

# EL 450 E4 01

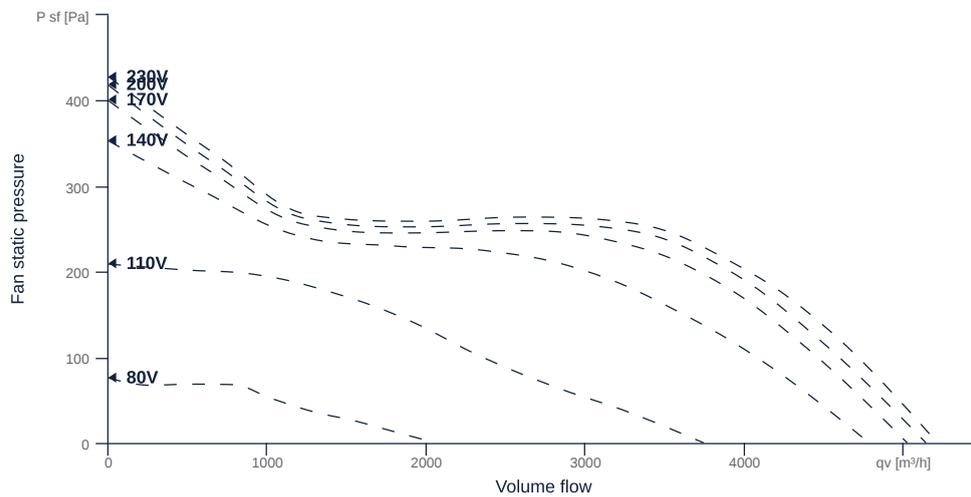
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- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- Robust single phase AC motor
- Conveyed medium temperature up to 80 °C in continuous operation
- Housing made of aluminum



## FAN CURVES

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



to the product detail page

## GENERAL DATA

| Name                                  | Value     | Unit | Formula symbol      |
|---------------------------------------|-----------|------|---------------------|
| Labeling                              | none      |      |                     |
| Duct size                             | -         |      | WxHduct             |
| Pipe connection size (DN)             | DN450     |      | DN                  |
| Rated voltage (entire device)         | 230       | v    | U <sub>rated</sub>  |
| Phases (entire device)                | 1~        |      | phase               |
| Electrical protection (entire device) | 6 A       |      | fuse                |
| Housing material                      | Aluminium |      | matcasing           |
| Impeller material                     | Aluminium |      | matimpeller         |
| IP-protection class (entire device)   | IPX4      |      | IPcompl             |
| IP-Protection class (terminal box)    | IP44      |      | IPebox              |
| Weight                                | 17.84     | kg   | m                   |
| Fan type                              | Diagonal  |      | Fan <sub>type</sub> |
| Category / Installation situation     | A         |      | cat                 |

## MAXIMAL DATA

| Name                            | Value |       | Unit | Formula symbol        |
|---------------------------------|-------|-------|------|-----------------------|
|                                 | 50 Hz | 60 Hz |      |                       |
| Max. power consumption (device) | 454   | 715   | w    | P <sub>ed, max</sub>  |
| Max. operating current (device) | 3.1   | 3.73  | A    | I <sub>ed, max</sub>  |
| Max. speed                      | 1460  | 1710  | rpm  | n <sub>max</sub>      |
| Max. stat. efficiency           | 50.3  | 56.8  | p    | η <sub>es</sub>       |
| Max. fan efficiency             | 54.8  | 60.9  | p    | η <sub>e</sub>        |
| Max. flowrate                   | 5210  | 6250  | CmH  | Q <sub>v, max</sub>   |
| Max. stat pressure              | 430   | 580   | Pa   | p <sub>sf, max</sub>  |
| Max. medium temperature         | 80    | 80    | °C   | T <sub>m, max</sub>   |
| Max. environment temperature    | 80    | 80    | °C   | T <sub>amb, max</sub> |
| Min. environment temperature    | -25   | -25   | °C   | T <sub>amb, min</sub> |
| Min. voltage                    | 80    | 80    | v    | U <sub>min</sub>      |
| Stall current                   | 8.8   | 7.6   | A    | I <sub>LRA</sub>      |



to the product detail page

# EL 450 E4 01

119336

## MOTOR DATA

| Name                     | Value |                     | Unit | Formula symbol |
|--------------------------|-------|---------------------|------|----------------|
|                          | 50 Hz | 60 Hz               |      |                |
| Rated frequency (device) |       | 50                  |      | f              |
| Motor type               |       | AC 1~               |      | phase          |
| Control type             |       | stepless-controlled |      | ctrltype       |
| Installation type        |       | IRM (In)            |      | install        |
| Rotation direction       |       | right               |      | rotation       |
| Isolation class          |       | ISO F               |      | ISOclass       |
| Motor-protection         |       | TMO                 |      | protectmotor   |
| Protection class         |       | IP54                |      | IPmotor        |
| Is pole-changeable       |       | No                  |      | polexch        |
| Type of power supply     |       | AC 1~               |      | pwrsupmotor    |
| Capacity capacitor       |       | 12                  | μF   | Ccond          |
| Voltage capacitor        |       | 400                 | v    | VUcond         |
| Number of poles (1)      |       | 4.000000            |      | num polesw1    |
| Rated voltage            | 230   | 240                 | v    | Urated, f1     |
| Rated current            | 2.9   |                     | A    | Irated, f1     |
| Nominal power            | 440   |                     | w    | Pa             |
| Speed                    | 1400  | 1700                | rpm  | nr1            |
| UL-Certification motor   |       | UL recognized       |      | UL.cert        |

## ERP DATA (LOT11)

| Name  | Value    | Unit | Formula symbol            |
|---|----------|------|---------------------------|
| Speed at the energy efficiency optimum                    | 1435     | rpm  | n <sub>opt</sub>          |
| Efficiency level  | 50       | p    | N                         |
| Efficiency category                                       | statisch |      | cat <sub>efficiency</sub> |
| Input power of the motor at the energy efficiency optimum | 0.45     | kw   | P <sub>e, opt</sub>       |
| Overall efficiency  | 64.2     | p    | η <sub>ges</sub>          |
| Measurement category                                      | A        |      | meas cat                  |
| Fan pressure at energy efficiency optimum                 | 246      | Pa   | p <sub>f, opt</sub>       |
| Flowrate at energy efficiency optimum                     | 3500     | CmH  | Q <sub>v, opt</sub>       |

## SMOKE EXTRACT DATA

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

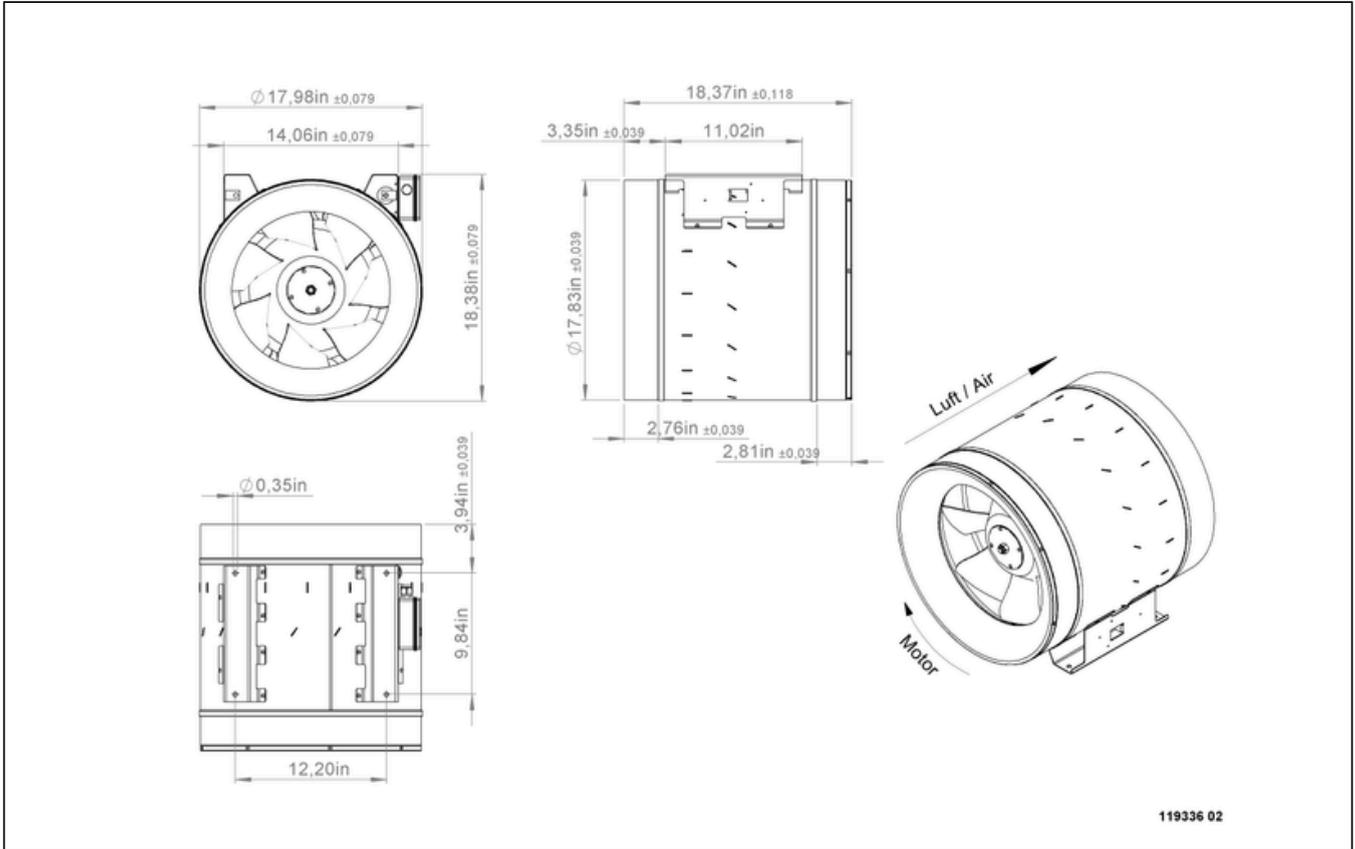


to the product detail page

# EL 450 E4 01

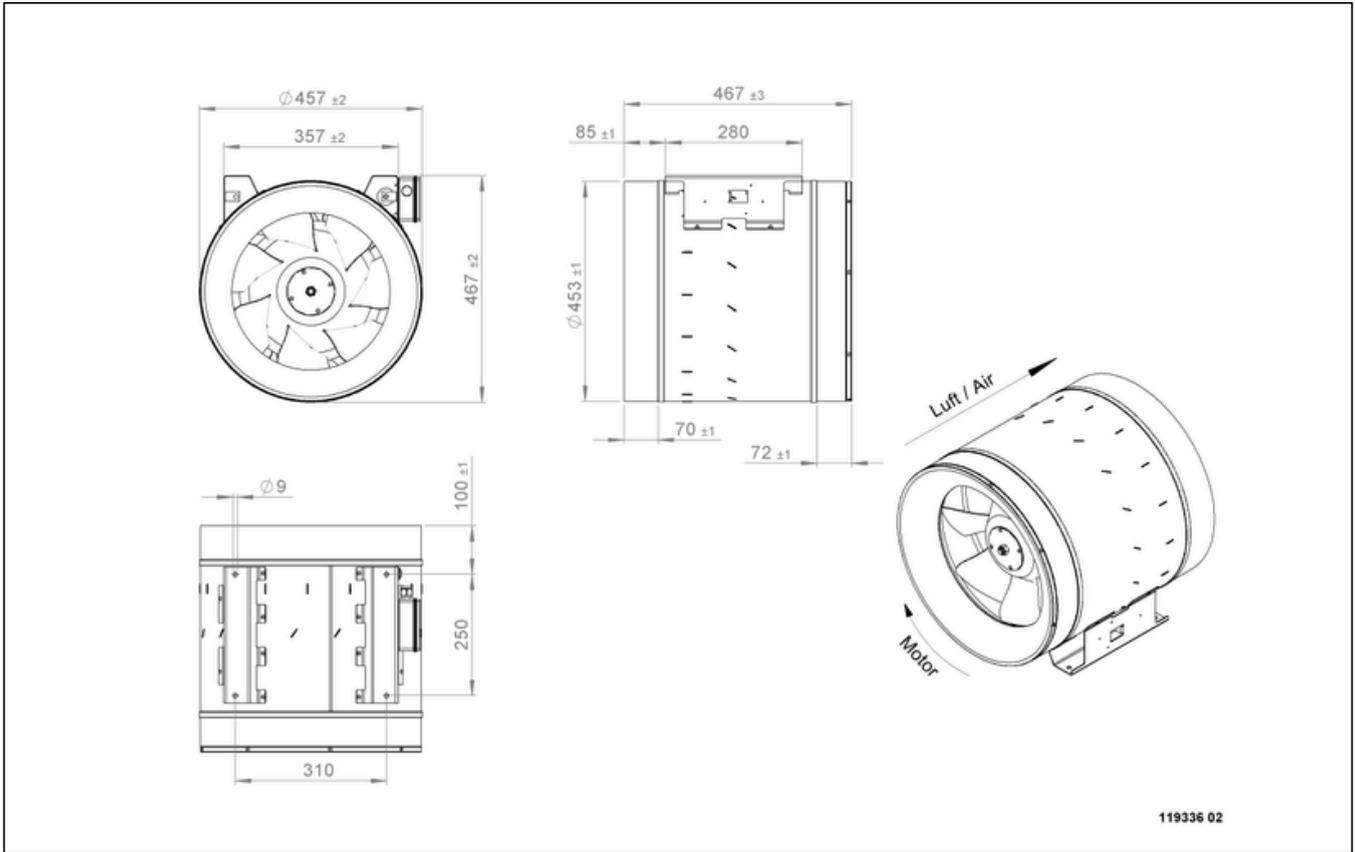
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## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



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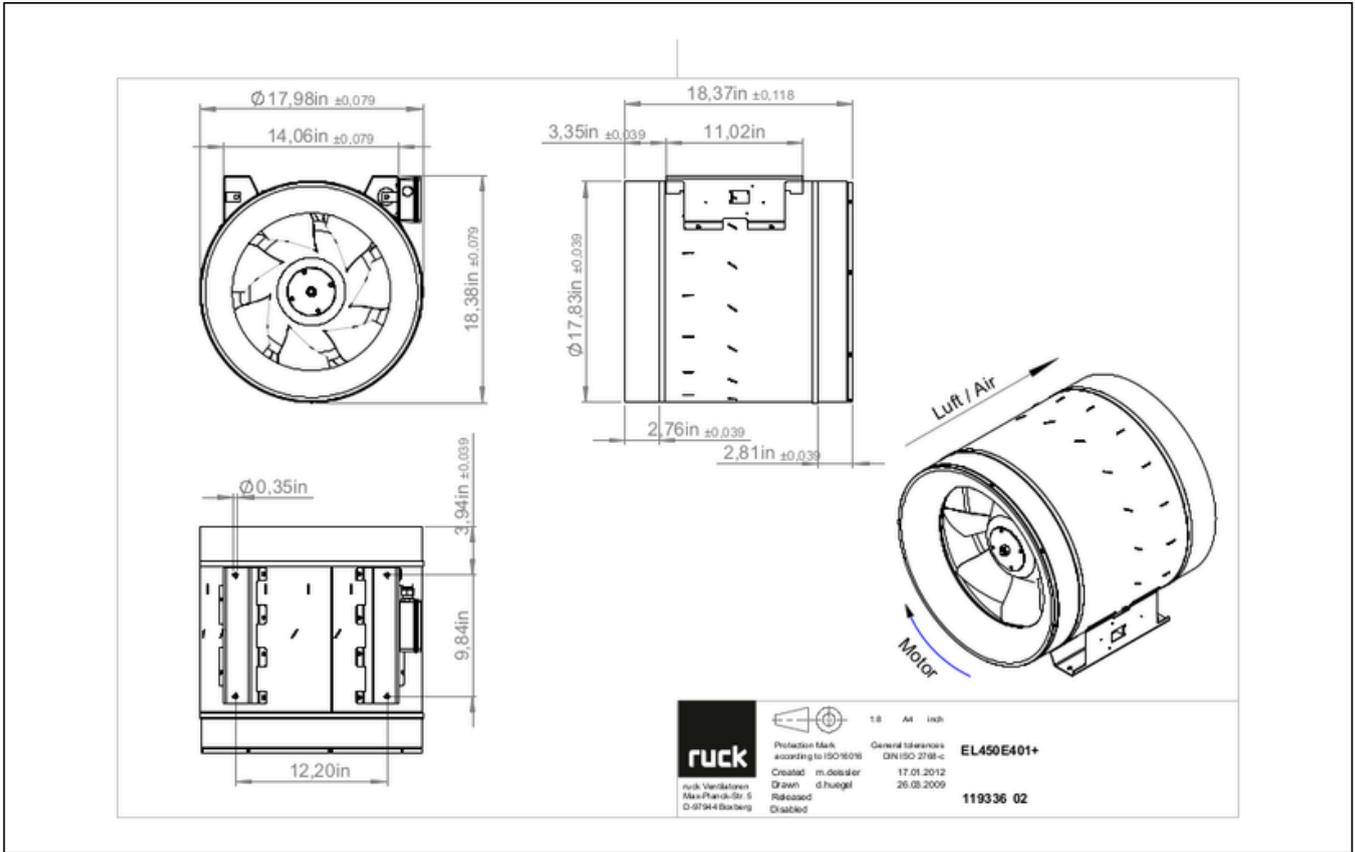
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to the product detail page

# EL 450 E4 01

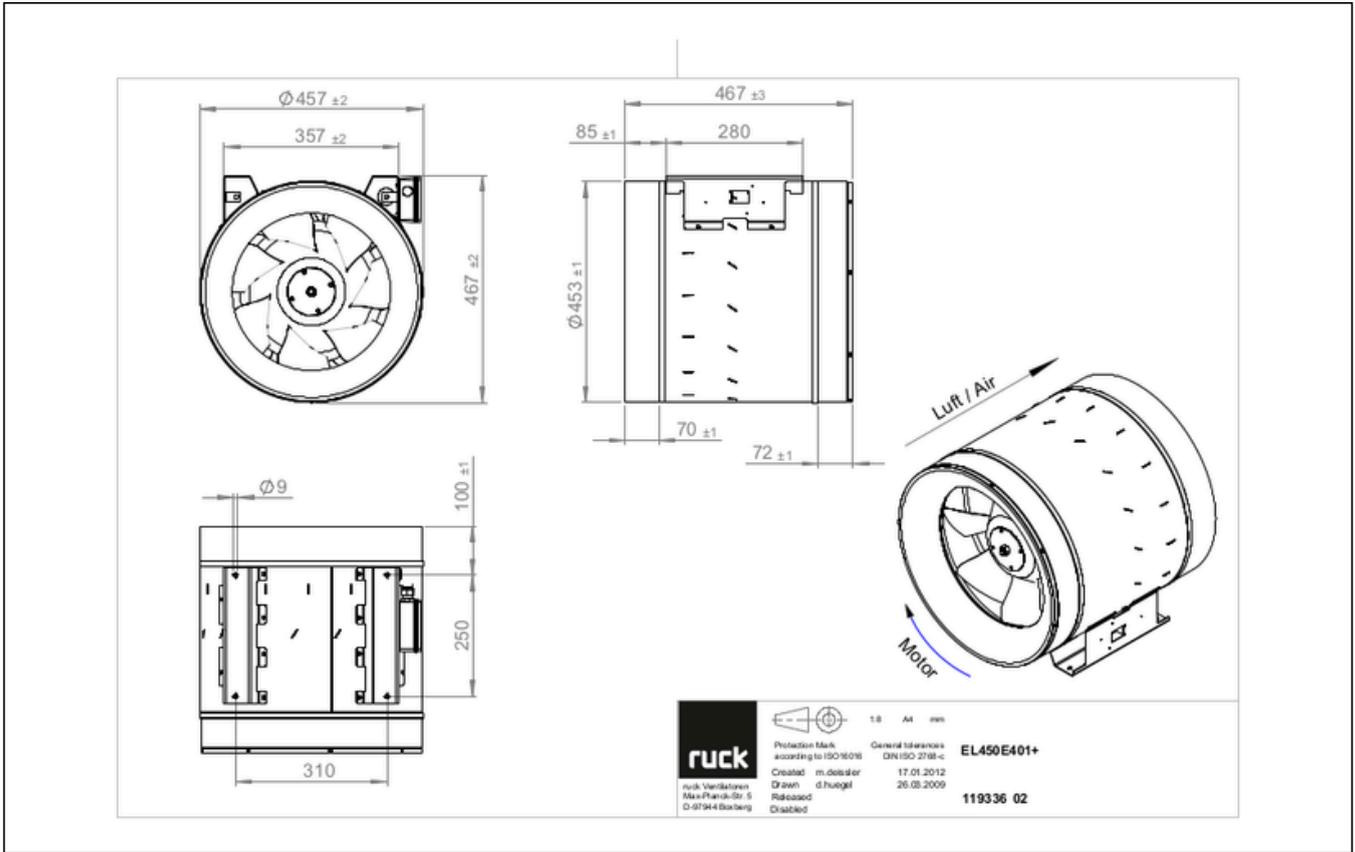
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to the product detail page

# EL 450 E4 01

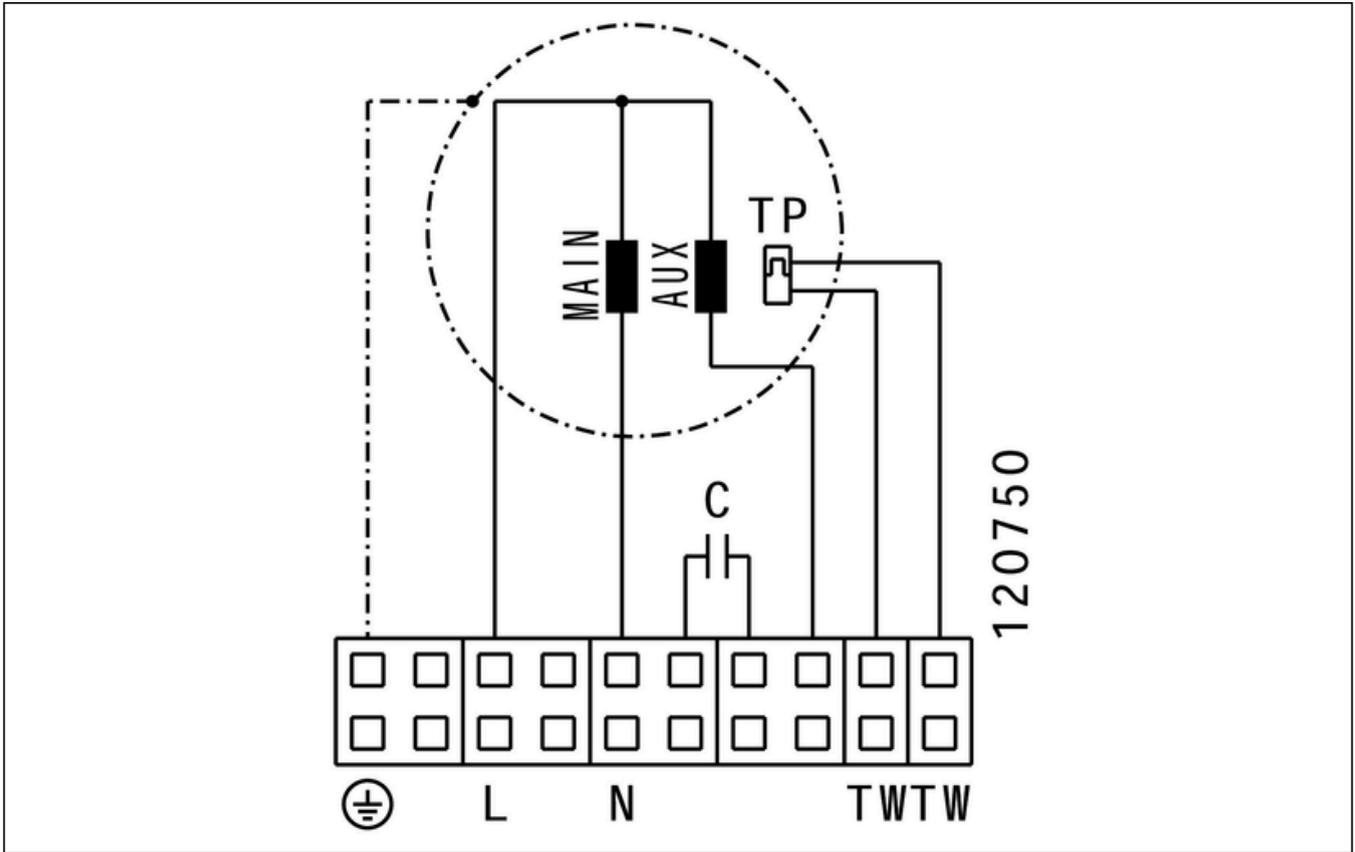
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to the product detail page

# EL 450 E4 01

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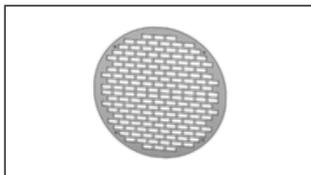
## MECHANICAL ACCESSORIES

VM 450 | 119495



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

SG 450 02 | 119411



- Inlet protection grille for Etaline
- Galvanized steel sheet

SDS 450 | 169613



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



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## ELECTRICAL ACCESSORIES

GS 01 | 102787



- Isolator switch
- Umax = 400 V, 50/60 Hz
- Switching capacity 400 V 3~ = 7,5 kW
- Imax = 25 A

TEM 035 | 103502



- 5-step transformer
- 230 V, 50/60 Hz, 3,5 A
- Output voltage: 230-190-170-140-110-80-0 V
- Protection class IP 54

TES 035 02 | 146195



- 5-step transformer
- 230 V, 50/60 Hz, 3,5 A
- Without housing, control cabinet installation
- Protection class IP 20



to the product detail page