

# EL 315 E2 01

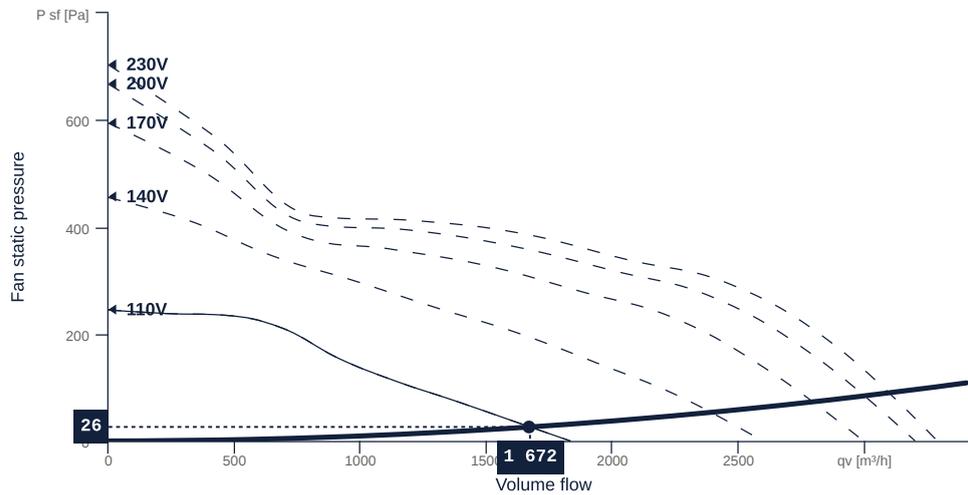
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- Innovative, high-efficiency diagonal fan
- Optimally tuned, CFD-optimized aerodynamics
- The benchmark for efficiency since 2007
- Robust single phase AC motor
- Conveyed medium temperature up to 70 °C in continuous operation
- Housing made of galvanized steel sheet



## FAN CURVES

| Name        | Value  | Unit |
|-------------|--------|------|
| Volume flow | 1672.1 | m³/h |
| Pressure    | 26.21  | Pa   |



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## TECHNICAL SPECIFICATIONS

| Name                                | Value | Unit     | Formula symbol        |
|-------------------------------------|-------|----------|-----------------------|
| Volume flow                         | 1672  | m³/h     | QV <sub>calc</sub>    |
| Pressure                            | 26    | Pa       | psf <sub>calc</sub>   |
| Fan pressure                        | 47    | Pa       | pf                    |
| Fan static pressure                 | 26    | Pa       | psf                   |
| Current consumption Motor           | 2.7   | A        | I <sub>e</sub>        |
| Electrical power consumption        | 292   | W        | P <sub>ek</sub>       |
| Voltage                             | 110   | V        | U                     |
| Rotation speed                      | 1511  | 1/min    | N                     |
| Total static efficiency             | 4     | %        | etaFaPeK              |
| Total efficiency                    | 7     | %        | etatPeK               |
| SFP (entire device)                 | 630   | W/(m³/s) | sfp <sub>device</sub> |
| Sound power level inlet             | 66    | dB(A)    | LwA5                  |
| Sound power level outlet            | 70    | dB(A)    | LwA6                  |
| Sound power level housing radiation | 50    | dB(A)    | LwA2                  |

## SOUND DATA

| Sound power      | mid-frequency tape |    |     |     |     |      |      |      |      |       | Unit  | Formula symbol |
|------------------|--------------------|----|-----|-----|-----|------|------|------|------|-------|-------|----------------|
|                  | Σ                  | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | 16000 |       |                |
| suction          | 67                 | 34 | 42  | 53  | 62  | 61   | 61   | 53   | 42   | 26    | dB(A) | LwA5           |
| blowout          | 71                 | 30 | 51  | 56  | 67  | 66   | 64   | 55   | 43   | 24    | dB(A) | LwA6           |
| Casing break out | 51                 | 30 | 40  | 38  | 46  | 45   | 43   | 38   | 23   | 5     | dB(A) | LwA2           |

## SOUND PRESSURE LEVEL CALCULATOR

| Name               | Value       | Unit |
|--------------------|-------------|------|
| Enveloping surface | Halphsphere |      |
| Distance           | 3           | m    |

| Sound pressure   | NR | mid-frequency tape |    |     |     |     |      |      |      |      |       | Unit  | Formula symbol |
|------------------|----|--------------------|----|-----|-----|-----|------|------|------|------|-------|-------|----------------|
|                  |    | Σ                  | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | 16000 |       |                |
| suction          | 45 | 49                 | 17 | 25  | 36  | 44  | 43   | 44   | 36   | 24   | 8     | dB(A) | LwA5           |
| blowout          | 48 | 53                 | 13 | 33  | 38  | 50  | 48   | 47   | 37   | 26   | 6     | dB(A) | LwA6           |
| Casing break out | 27 | 33                 | 12 | 23  | 20  | 28  | 27   | 26   | 21   | 6    | 0     | dB(A) | LwA2           |



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## GENERAL DATA

| Name                                  | Value            | Unit | Formula symbol          |
|---------------------------------------|------------------|------|-------------------------|
| Labeling                              | CE, UKCA         |      |                         |
| Duct size                             | -                |      | WxH <sub>duct</sub>     |
| Pipe connection size (DN)             | DN315            |      | 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                      | Galvanized steel |      | mat <sub>casing</sub>   |
| Impeller material                     | Plastic          |      | mat <sub>impeller</sub> |
| IP-protection class (entire device)   | IPX4             |      | IP <sub>compl</sub>     |
| IP-Protection class (terminal box)    | IP44             |      | IP <sub>ebox</sub>      |
| Weight                                | 15.1             | kg   | m                       |
| Fan type                              | Diagonal         |      | F <sub>antype</sub>     |
| Category / Installation situation     | A                |      | cat                     |

## MAXIMAL DATA

| Name                            | Value |       | Unit | Formula symbol        |
|---------------------------------|-------|-------|------|-----------------------|
|                                 | 50 Hz | 60 Hz |      |                       |
| Max. power consumption (device) | 509   | 775   | w    | P <sub>ed, max</sub>  |
| Max. operating current (device) | 3     | 3.7   | A    | I <sub>ed, max</sub>  |
| Max. speed                      | 2840  | 3275  | rpm  | n <sub>max</sub>      |
| Max. stat. efficiency           | 39    | 36.8  | p    | η <sub>es</sub>       |
| Max. fan efficiency             | 43.5  | 39.5  | p    | η <sub>e</sub>        |
| Max. flowrate                   | 3290  | 3710  | CmH  | q <sub>v, max</sub>   |
| Max. stat pressure              | 700   | 880   | Pa   | p <sub>sf, max</sub>  |
| Max. medium temperature         | 70    | 45    | °C   | T <sub>m, max</sub>   |
| Max. environment temperature    | 70    | 45    | °C   | T <sub>amb, max</sub> |
| Min. environment temperature    | -25   | -25   | °C   | T <sub>amb, min</sub> |
| Min. voltage                    | 110   | 110   | v    | U <sub>min</sub>      |
| Stall current                   | 8.5   |       | A    | I <sub>LRA</sub>      |



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## 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         |          | TMI                 |      | protectmotor   |
| Protection class         |          | IP54                |      | IPmotor        |
| Is pole-changeable       |          | No                  |      | polexch        |
| Type of power supply     |          | AC 1~               |      | pwrsupmotor    |
| Capacity capacitor       |          | 10                  | µF   | Ccond          |
| Voltage capacitor        |          | 400                 | v    | VUcond         |
| Number of poles (1)      |          | 2.000000            |      | num polesw1    |
| Rated voltage            | 230      |                     | v    | Urated, f1     |
| Rated current            | 1.9      |                     | A    | Irated, f1     |
| Nominal power            | 300      |                     | w    | Pa             |
| Speed                    | 2820     |                     | rpm  | nr1            |
| Cos Phi                  | 0.990000 | 0.000000            |      | cos φ          |
| UL-Certification motor   |          | None                |      | ULcert         |

## ERP DATA (LOT11)

| Name  | Value    | Unit | Formula symbol      |
|---|----------|------|---------------------|
| Speed at the energy efficiency optimum                    | 2758     | rpm  | n <sub>opt</sub>    |
| Efficiency level  | 39.3     | p    | N                   |
| Efficiency category                                       | statisch |      | catefficiency       |
| Input power of the motor at the energy efficiency optimum | 0.47     | kw   | P <sub>e, opt</sub> |
| Overall efficiency  | 53.2     | p    | η <sub>ges</sub>    |
| Measurement category                                      | A        |      | meas cat            |
| Fan pressure at energy efficiency optimum                 | 350      | Pa   | p <sub>f, opt</sub> |
| Flowrate at energy efficiency optimum                     | 1993     | CmH  | q <sub>v, opt</sub> |

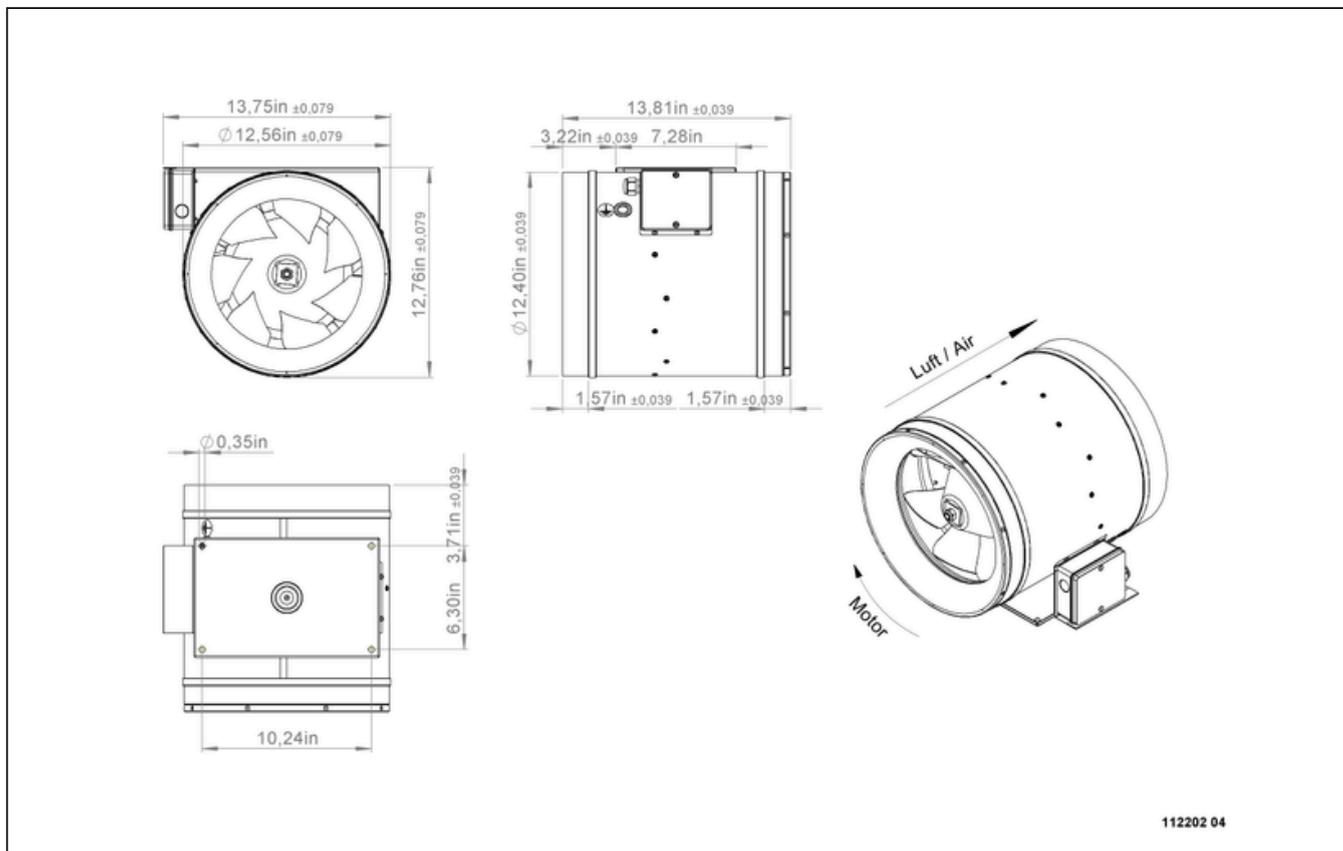


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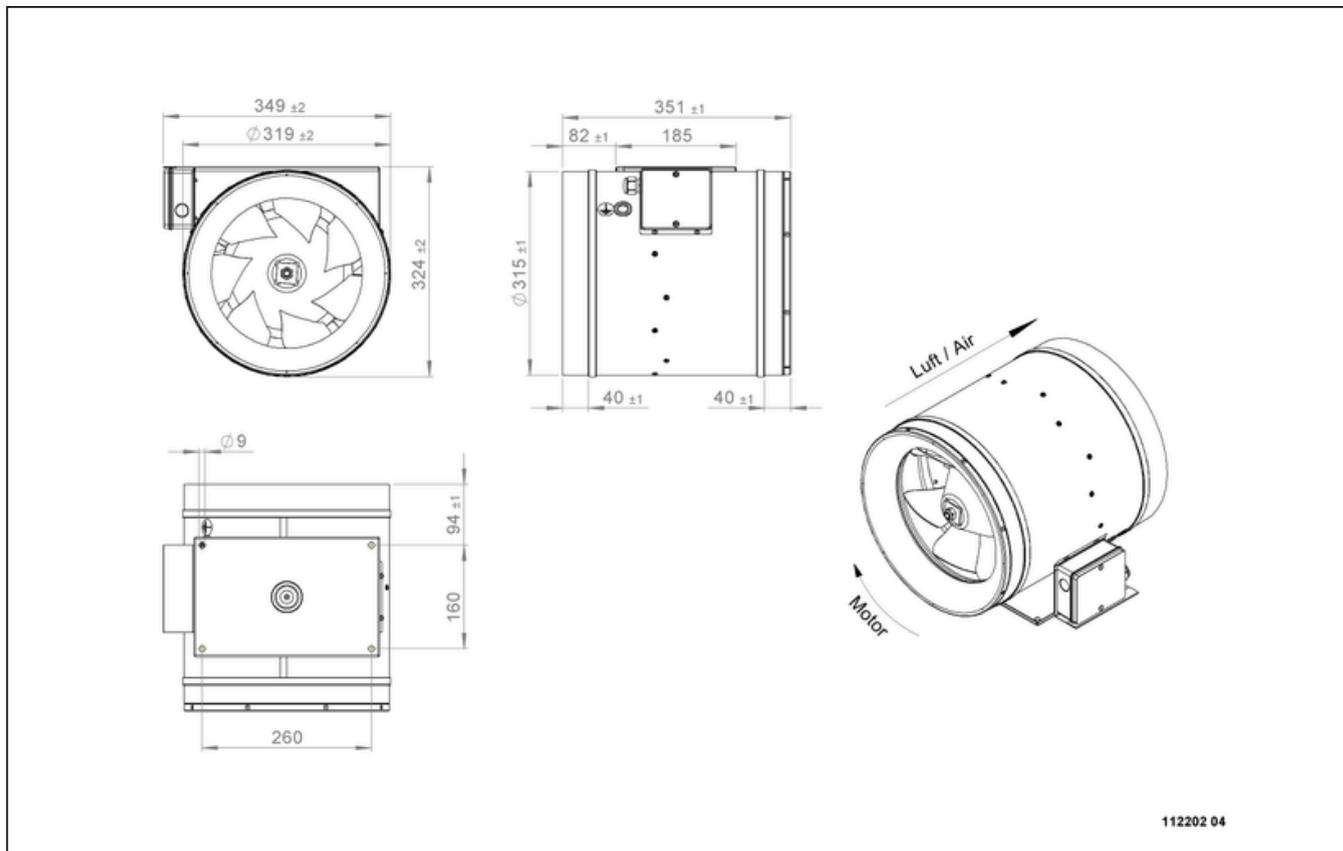
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## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



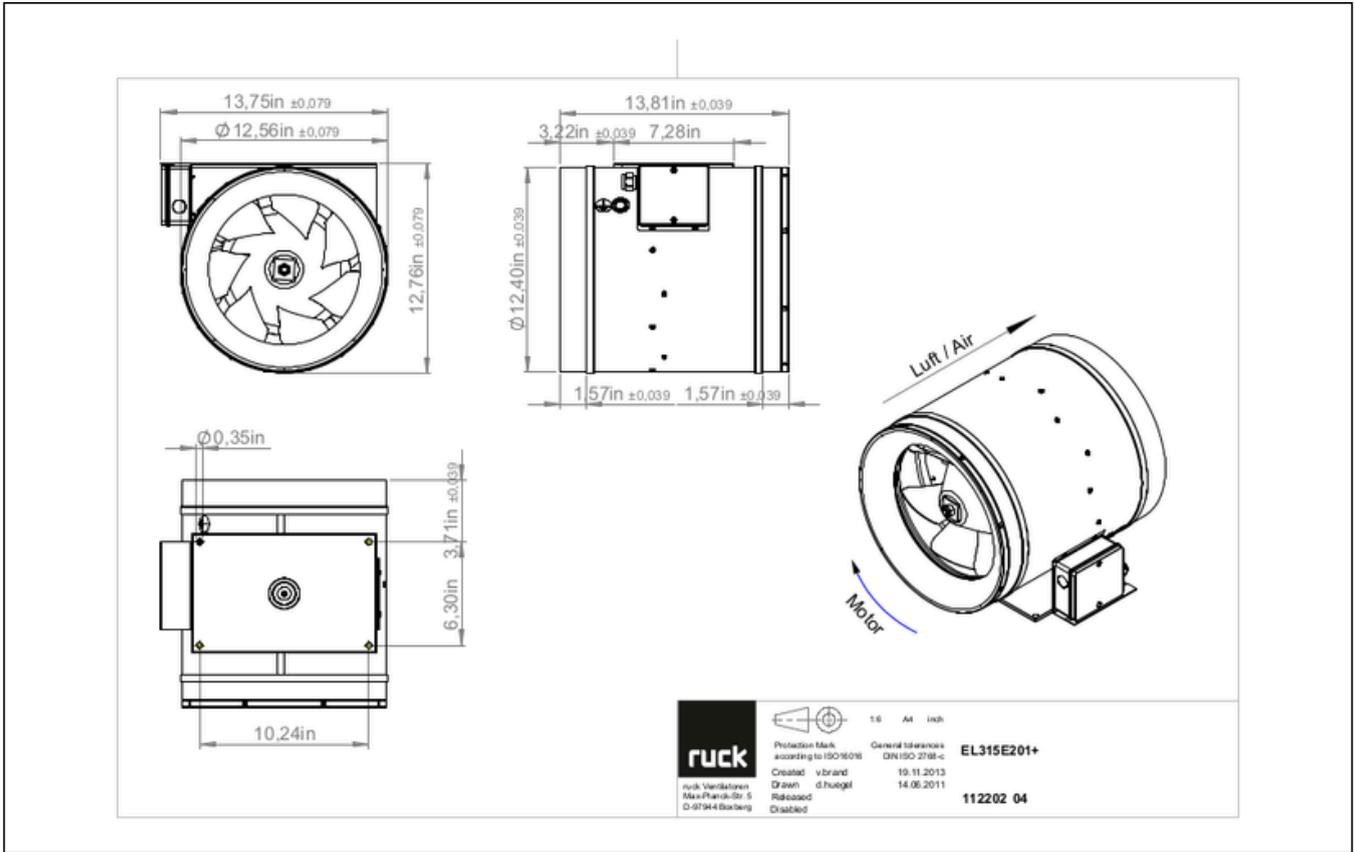
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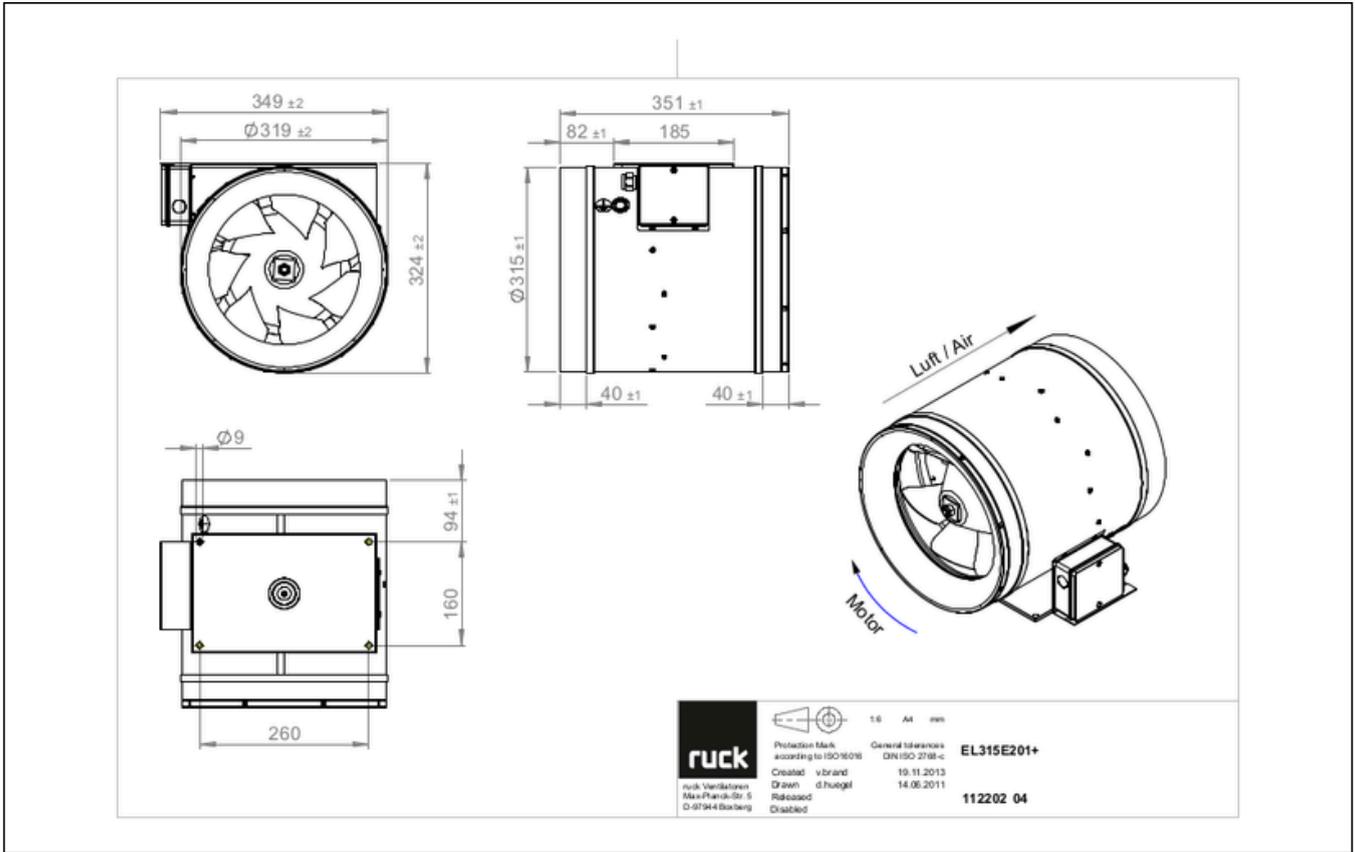
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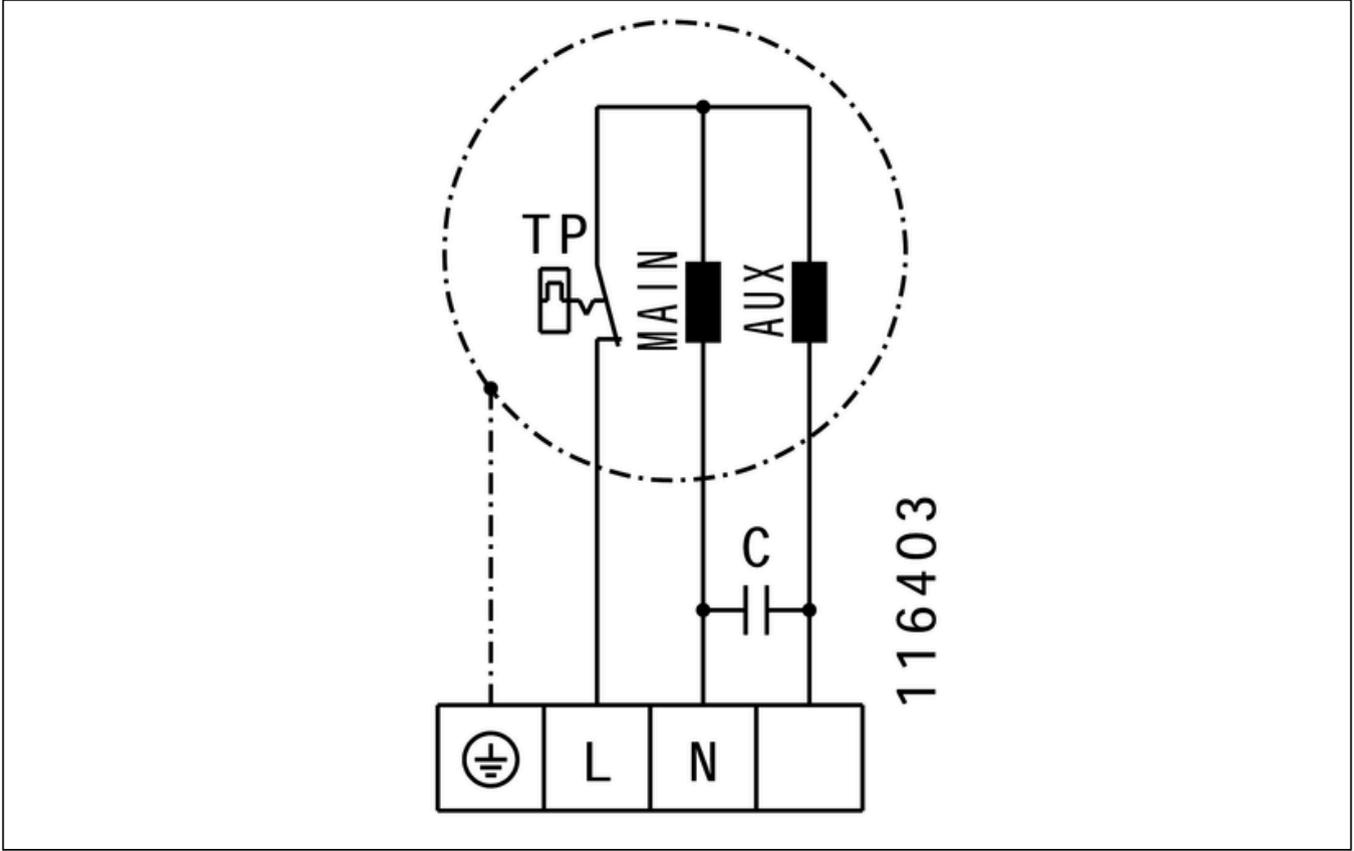
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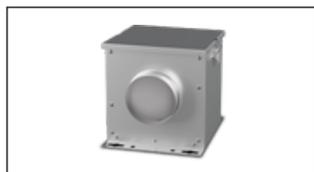
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## MECHANICAL ACCESSORIES

**FV 315 | 112834**



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

**FT 315 | 112846**



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

**FTW 315 | 112855**



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

**RSK 315 | 102664**



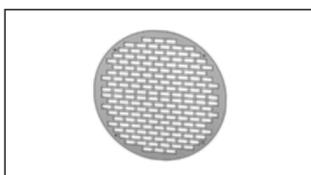
- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps

**UKR 6030 03 | 114640**



- Transition duct / tube
- Steel sheet, galvanized
- 600 x 300 mm / NW 315

**SG 315 02 | 112675**



- Inlet protection grille for Etaline
- Galvanized steel sheet

**RSK 315D | 113489**



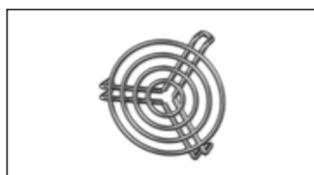
- Back draught shutter for tube fitting
- Galvanized steel sheet housing
- Aluminum flaps
- Integrated gasket

**VM 315 | 102652**



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

**SG 315 01 | 169592**



- Protection grille for tube connection
- Galvanized wire

**SDS 315 | 169609**



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

**SDF 315 | 169645**



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

## 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

