

# ETA K 2800 H EOJR

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- Compact air handling unit with counter flow heat exchanger
- Horizontal connections, version right
- Frameless, double wall housing made of galvanized steel sheet, insulated
- Constant air flow EC fans, integrated controls
- Supplied with electric heater for external installation in duct, without cooling, panel filter F7/M5
- For indoor and outdoor installation (optional accessories)
- Constructed acc. to VDI 6022

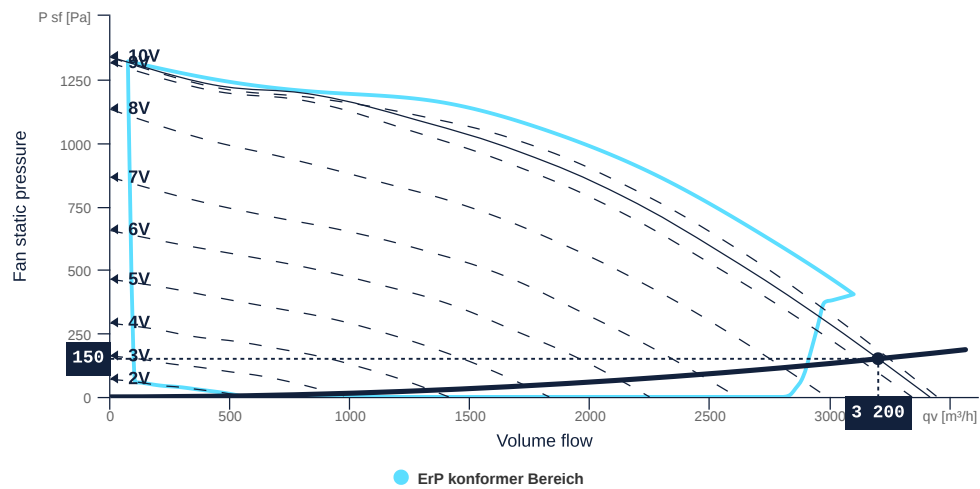


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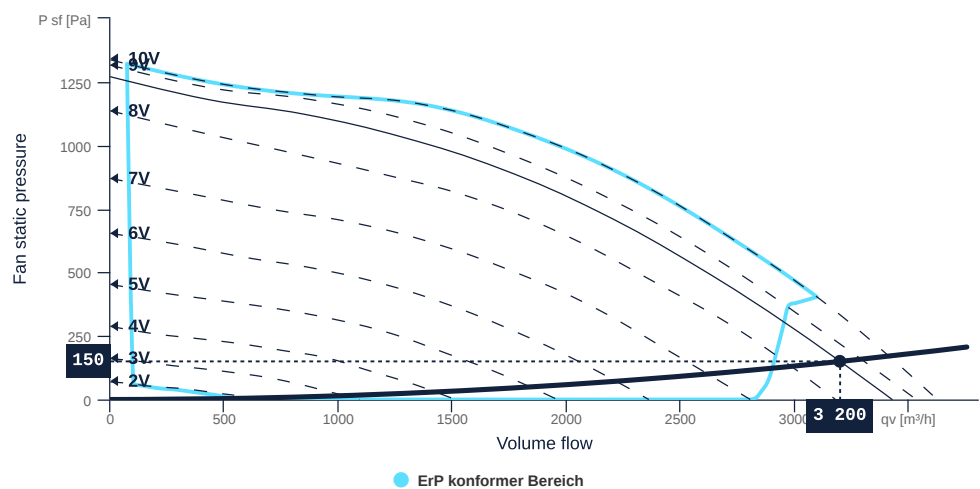
## MAP

| Name        | Value | Unit |
|-------------|-------|------|
| Volume flow | 3200  | m³/h |
| Pressure    | 150   | Pa   |



## EXTRACT AIR MAP

| Name        | Value | Unit |
|-------------|-------|------|
| Volume flow | 3200  | m³/h |
| Pressure    | 150   | Pa   |



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## HEAT RECOVERY SUMMER

| Name                          | Value | Unit |
|-------------------------------|-------|------|
| Outside air temperature       | 32    | °C   |
| Temperature exhaust air       | 24    | °C   |
| Relative humidity outside air | 40    | %    |
| Relative humidity exhaust air | 40    | %    |

## HEAT RECOVERY WINTER

| Name                          | Value | Unit |
|-------------------------------|-------|------|
| Outside air temperature       | -12   | °C   |
| Temperature exhaust air       | 22    | °C   |
| Relative humidity outside air | 90    | %    |
| Relative humidity exhaust air | 40    | %    |

## HEAT RECOVERY

| Name                         | Value  |        | Unit | Formula symbol   |
|------------------------------|--------|--------|------|------------------|
|                              | summer | winter |      |                  |
| Supply air temperature       | 25.44  | 18.29  | °C   | T <sub>sup</sub> |
| Supply air relative humidity | 59     | 9      | %    | φ <sub>sup</sub> |
| Transferred power            | 7.11   | 32.53  | kW   | Q                |
| Efficiency                   | 82     | 89.1   | %    | η                |
| Air pressure drop            | 276    | 276    | Pa   | Δp <sub>v</sub>  |

## HEATER ELECTRICAL

| Name                   | Value | Unit |
|------------------------|-------|------|
| Height above sea level | 0     | m    |
| Intake air temperature | 10    | °C   |
| Outlet air temperature | 22    | °C   |

| Name                   | Value | Unit | Formula symbol   |
|------------------------|-------|------|------------------|
| Supply air temperature | 22.0  | °C   | T <sub>sup</sub> |
| Transferred power      | 12.8  | kW   | Q                |
| Power max.             | 18.0  | kW   | P <sub>max</sub> |
| Air pressure drop      | 185   | Pa   | Δp <sub>v</sub>  |



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## TECHNICAL SPECIFICATIONS

| Name                          | Value | Unit     | Formula symbol |
|-------------------------------|-------|----------|----------------|
| Volumetric flow (supply air)  | 3200  | m³/h     | QVsup          |
| Volumetric flow (extract air) | 3200  | m³/h     | QVeta          |
| Static pressure (supply air)  | 150   | Pa       | dpSext sup     |
| Static pressure (extract air) | 150   | Pa       | dpSext eta     |
| Control voltage (supply air)  | 9     | V        | Uctrl sup      |
| Rotation speed (supply air)   | 3365  | 1/min    | Nsup           |
| Control voltage (extract air) | 8     | V        | Uctrl eta      |
| Rotation speed (extract air)  | 3203  | 1/min    | Neta           |
| SFP (entire device)           | 2166  | W/(m³/s) | sfpdevice      |
| Current consumption Electric  | 2     | A        | Ied            |
| Electrical power consumption  | 1925  | W        | Pedk           |
| Sound power level outdoor air | 70    | dB(A)    | LWAoda         |
| Sound power level supply air  | 87    | dB(A)    | LWAsup         |
| Sound power level extract air | 70    | dB(A)    | LWAeta         |
| Sound power level exhaust air | 89    | dB(A)    | LWAeha         |
| Sound power level housing     | 67    | dB(A)    | LWA casing     |

## SOUND DATA

| Sound power | mid-frequency tape |    |     |     |     |      |      |      |      |       | Unit  | Formula symbol |
|-------------|--------------------|----|-----|-----|-----|------|------|------|------|-------|-------|----------------|
|             | Σ                  | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | 16000 |       |                |
| outside air | 71                 | 45 | 50  | 68  | 65  | 62   | 57   | 49   | 39   | 13    | dB(A) | LWAoda         |
| supply air  | 87                 | 53 | 59  | 81  | 79  | 82   | 81   | 76   | 71   | 50    | dB(A) | LWAsup         |
| exhaust air | 71                 | 54 | 56  | 64  | 67  | 64   | 59   | 48   | 37   | 16    | dB(A) | LWAeta         |
| exhaust air | 89                 | 57 | 67  | 83  | 81  | 84   | 83   | 78   | 74   | 55    | dB(A) | LWAeha         |

## SOUND PRESSURE LEVEL CALCULATOR

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

| Sound pressure | NR | mid-frequency tape |    |     |     |     |      |      |      |      |       | Unit  | Formula symbol |
|----------------|----|--------------------|----|-----|-----|-----|------|------|------|------|-------|-------|----------------|
|                |    | Σ                  | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | 16000 |       |                |
| outside air    | 50 | 53                 | 27 | 33  | 51  | 47  | 45   | 40   | 31   | 22   | 0     | dB(A) | LWAoda         |
| supply air     | 65 | 70                 | 36 | 42  | 63  | 62  | 64   | 64   | 59   | 54   | 33    | dB(A) | LWAsup         |
| exhaust air    | 23 | 30                 | 25 | 26  | 17  | 20  | 22   | 16   | 6    | 0    | 0     | dB(A) | LWAeta         |
| exhaust air    | 37 | 43                 | 32 | 36  | 32  | 33  | 38   | 36   | 27   | 24   | 11    | dB(A) | LWAeha         |



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## GENERAL DATA

| Name   | Value                  | Unit              | Formula symbol          |
|--|------------------------|-------------------|-------------------------|
| Labeling   | CE, UKCA               |                   |                         |
| Duct size  | 600x400                |                   | 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)                           | IP44                   |                   | IP <sub>casing</sub>    |
| IP-protection class (entire device)                    | IP41                   |                   | IP <sub>compl</sub>     |
| Weight   | 383                    | kg                | m                       |
| Nominal air flow rate, nominal point m <sup>3</sup> /h | 2631.6                 | m <sup>3</sup> /h | q <sub>v,nom</sub>      |
| Nominal external pressure, static                      | 200                    | 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                           | recuperative           |                   | HRS <sub>type</sub>     |
| Type of the heater                                     | Electrical             |                   | 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                                       | 83.61                     | %                 | t <sub>NRVU</sub>              |
| Nominal air flow rate, nominal point m <sup>3</sup> /s                      | 0.73                      | m <sup>3</sup> /s | q <sub>v,nom</sub>             |
| Actual electrical input power, nominal point                                | 1.35                      | kW                | P <sub>e,nom</sub>             |
| Internal specific fan power, nominal point                                  | 1078.7                    | Ws/m <sup>3</sup> | SFP <sub>int</sub>             |
| Face velocity, nominal point  | 1.75                      | m/s               | v <sub>nom</sub>               |
| Nominal external pressure, static   | 200                       | Pa                | p <sub>s,nom</sub>             |
| supply air fan static efficiency, nominal point                             | 64.95                     | %                 | η <sub>es,SUP</sub>            |
| static efficiency of the extract fan, nominal point                         | 60.33                     | %                 | η <sub>es,EHA</sub>            |
| Highest external air leakage rate   | 0.28                      | %                 |                                |
| Enclosure sound level, nominal point  | 66.35                     | dB(A)             | LWA <sub>2</sub>               |
| Rating  | Product is compliant 2018 |                   |                                |
| Internal pressure drop of ventilation components supply air, nominal point  | 360.06                    | Pa                | dp <sub>vent,nom,int,SUP</sub> |
| Internal pressure drop of ventilation components extract air, nominal point | 316.33                    | Pa                | dp <sub>vent,nom,int,EHA</sub> |



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## MAXIMAL DATA

| Name                            | Value | Unit              | Formula symbol |
|---------------------------------|-------|-------------------|----------------|
| Max. power consumption (device) | 2200  | W                 | $P_{ed, max}$  |
| Max. operating current (device) | 3.34  | A                 | $I_{ed, max}$  |
| Max. speed                      | 3480  | 1/min             | $n_{max}$      |
| Max. stat. efficiency           | 44.7  | %                 | $\eta_{es}$    |
| Max. fan efficiency             | 44.8  | %                 | $\eta_e$       |
| Max. flowrate                   | 3440  | m <sup>3</sup> /h | $q_v, max$     |
| Max. stat pressure              | 1340  | Pa                | $p_{sf, max}$  |
| Max. medium temperature         | 40    | °C                | $T_m, max$     |
| Max. environment temperature    | 40    | °C                | $T_{amb, max}$ |
| Min. environment temperature    | -25   | °C                | $T_{amb, min}$ |

## 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  |      |                |

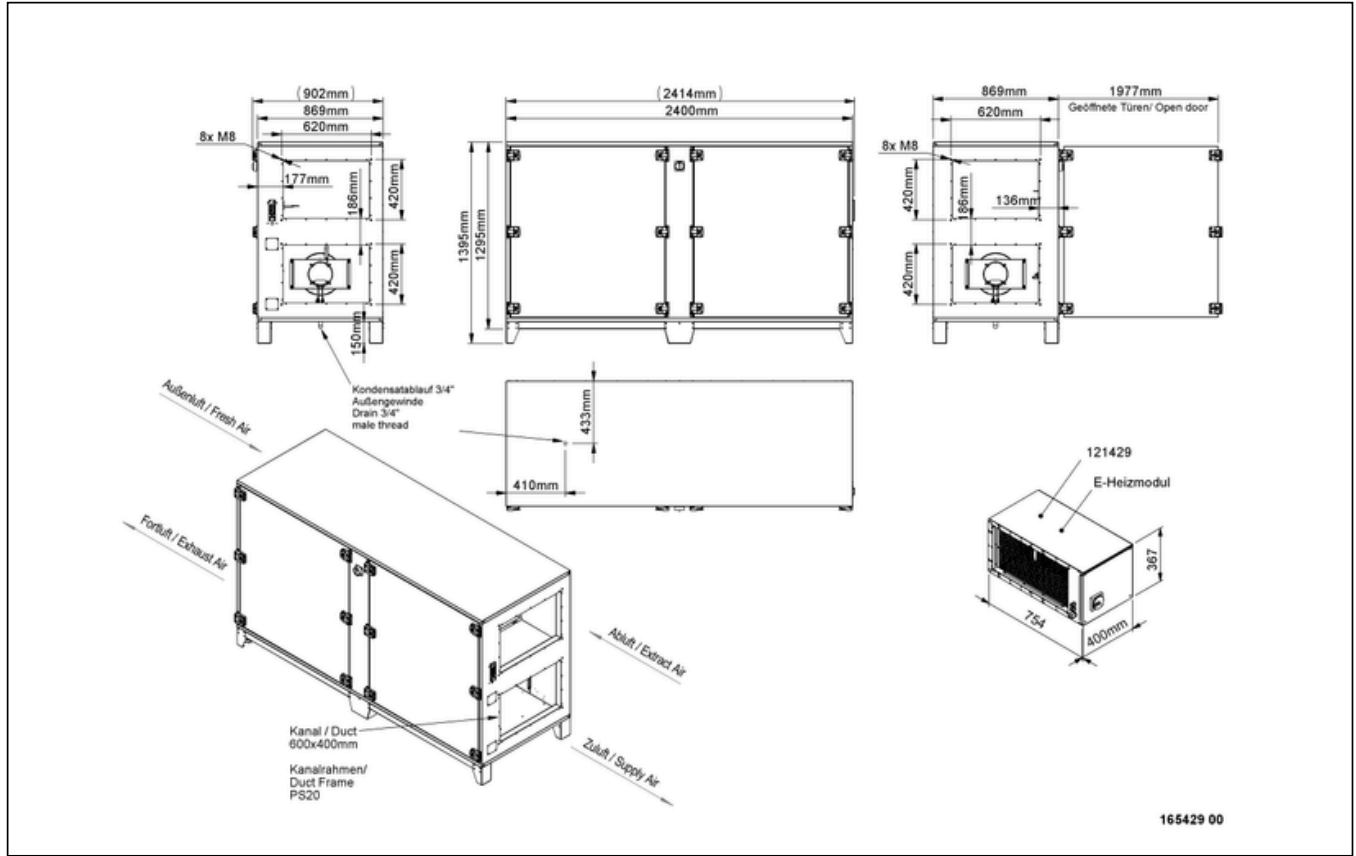
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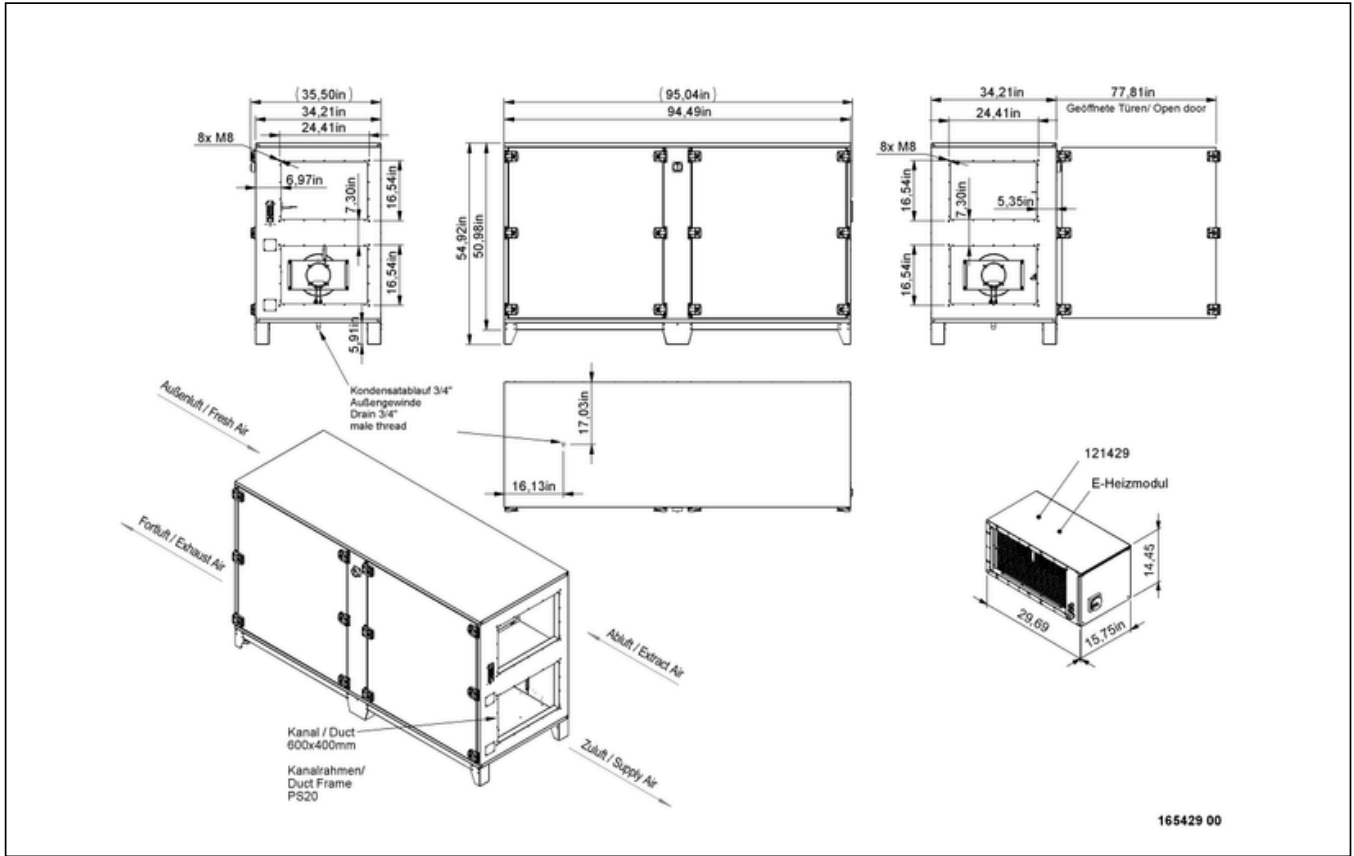
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## CIRCUIT DIAGRAMS / DIMENSIONAL DRAWINGS



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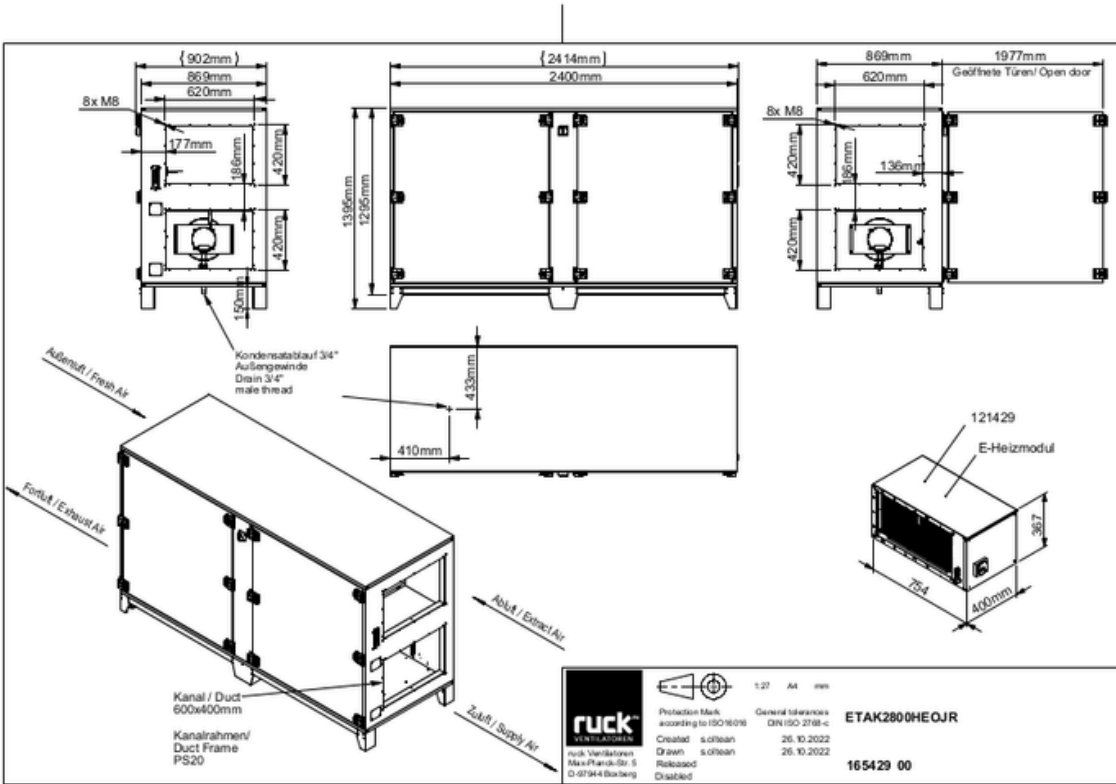


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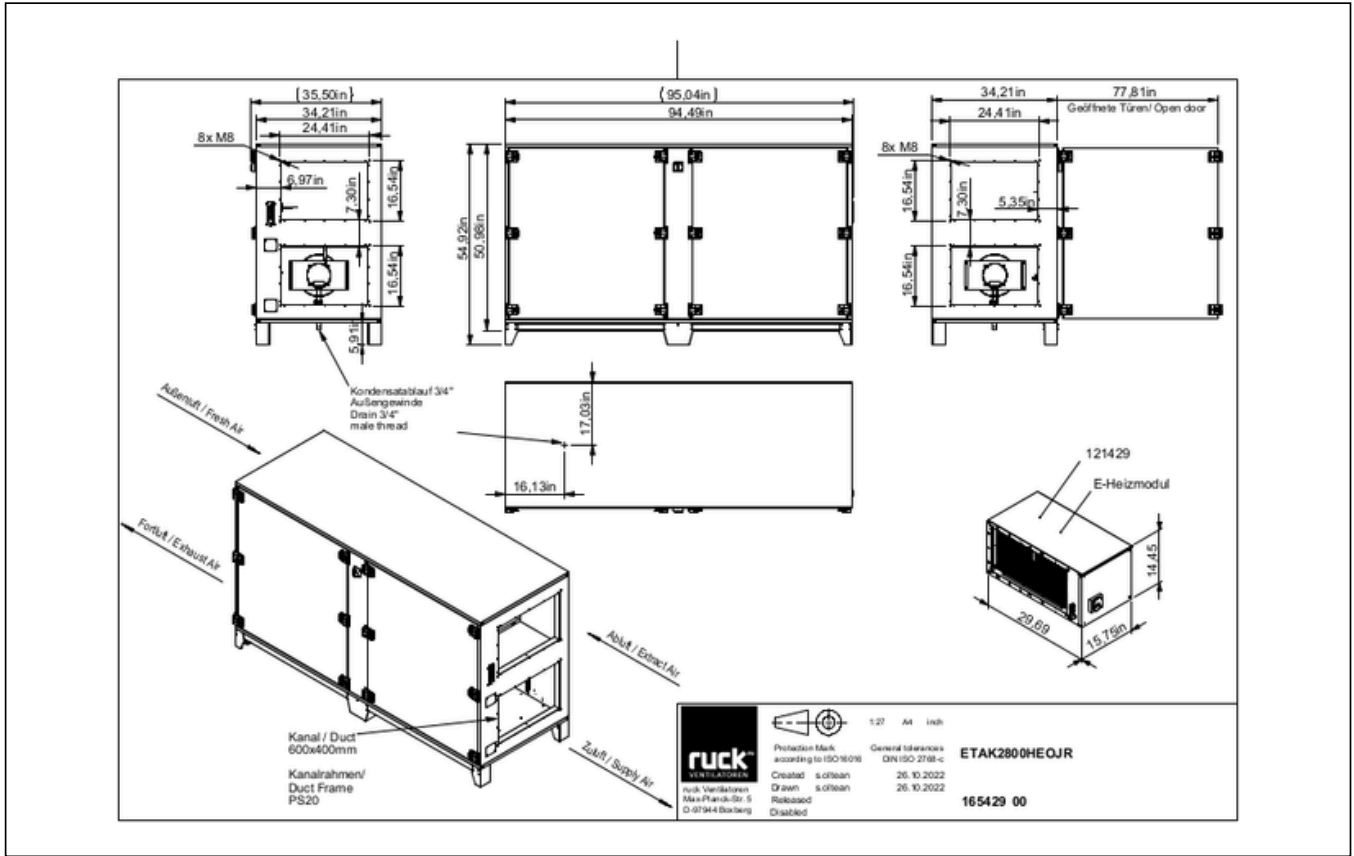
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