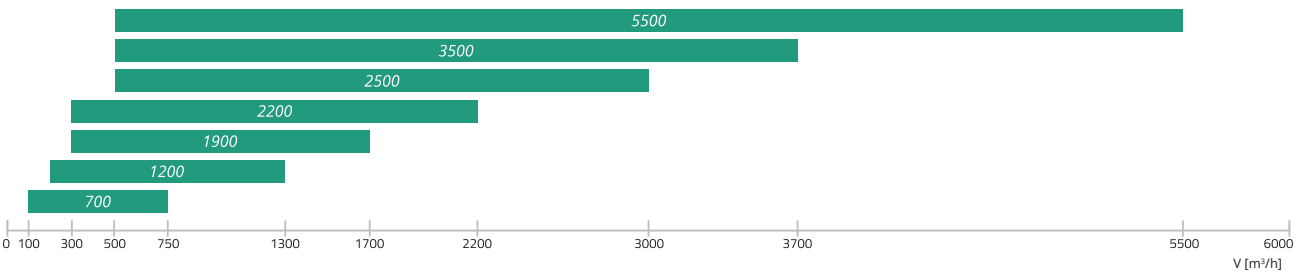
# RIS H EKO




| | |
|---|---|
| **Application** | Ventilation of houses, offices or other heated premises (classrooms, apartments, conference rooms, etc.) |
| **Description** | RIS H EKO 3.0 is a range of heat recovery units with high-efficiency counter-flow heat exchangers and horizontal duct connections. Units are designed for placement on the floor. Due to the horizontal ducting, there is a wide range of applications for outdoor placement. There are 7 sizes (airflow interval 700-5500 m³/h).<br>RIS H EKO 3.0 units have high overall energy savings due to the highly efficient heat recovery (up to 90%), quiet and economical EC fans, effective low-pressure-drop filters and top-level of air tightness.<br>Energy efficiency ensures full thermal comfort for passive houses, without an additional pre-heater at temperatures above -5°C.<br>All the RIS H EKO 3.0 units are fully equipped with automatic controls. Optional external sensors for $CO_2$ and humidity and the event planning feature will help to control automatically your climate (demand-level control).<br>RIS 1200-5500 H EKO 3.0 units have outdoor versions with roofing and outlet cover.<br>RIS H EKO 3.0 units are service-friendly and are easy to mount. Filter pollution may be identified by timers or contamination controls (RIS 1200-5500 H EKO 3.0).<br>All units are supplied tested and ready to install. |
| **Remote control** | Three* remote control options are available:<br>1. Flex, Stouch or Ptouch remote controllers.<br>2. Building management system connections.<br>3. Remote control via PC MB-Gateway.<br>*RIS 1900-5500 H EKO 3.0 units can be optionally provided with SIEMENS Climatix controllers. |
| **Features** | › Outdoor versions.<br>› Ready for Passive House technology: high efficiency.<br>› Easy and quick mounting.<br>› Water/electrical heating options.<br>› Fully integrated plug-and-play control system. |
| **Construction** | › Construction from double-skinned steel, with powder coated paint, panels.<br>› Acoustic and thermal wall insulation: RIS 700 H EKO 3.0 – 30 mm, RIS 1200-5500 H EKO 3.0 – 50 mm.<br>› RIS 700 H EKO 3.0 powder-coated white housing RAL 9016; RIS 1200 – 5500 powder-coated grey housing RAL7040.<br>› RIS 1900-5500 H EKO 3.0 optional roof and outlet covers for outdoor placement.<br>› RIS 3500 H EKO 3.0 delivered in three sections and RIS 5500 H EKO 3.0 - in two sections.<br>› Integrated electrical heater or optional duct-based water heater/cooler.<br>› Low-pressure-drop filters: F7/M5.<br>› Hinged door with locks grants easy access to internal components.<br>› Separate compartment on the top of the unit grants quick access to the control board (plug-and-play).<br>› Stainless steel condensate tray.<br>› Fitted with mounting brackets (optional for RIS 700-1900 H EKO 3.0, RIS 2500-5500 H EKO 3.0 - included).<br>› Integrated anti-frost pressure switch (RIS H 1200-5500 H EKO 3.0). |

RIS 1200 H W EKO 3.0

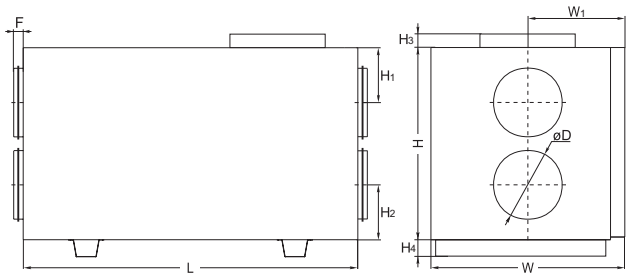
| | |
|---|---|
| RIS | AHU with plate heat exchanger |
| 1200 | AHU size according to maximum airflow range m³/h |
| H | Housing type (V - vertical, H - horizontal, P - ceiling) |
| W | Heater type (E - integrated electrical heater; W - optional water heater) |
| EKO | AHU with EC motors and efficient heat exchanger |
| 3.0 | Equipped with new PRV V2 control board |



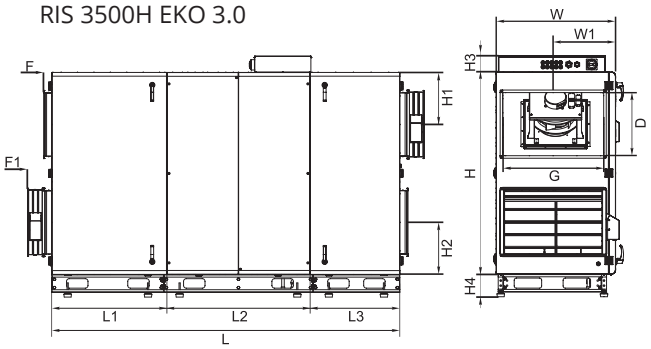


The company reserves the right to make changes of technical data without prior notice

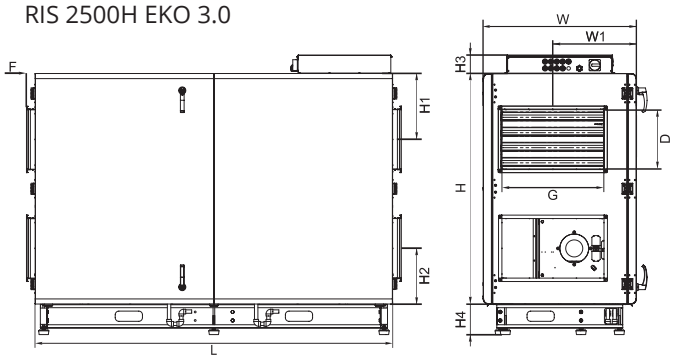
RIS 700H EKO 3.0 - RIS 2200H EKO 3.0



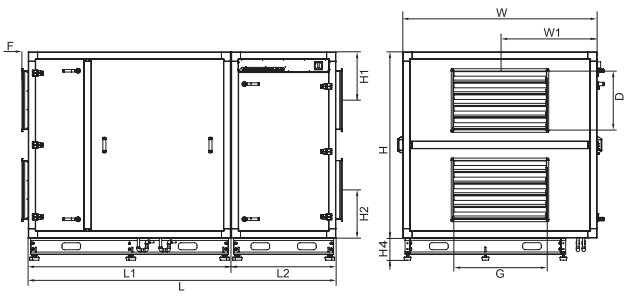

RIS 3500H EKO 3.0




RIS 2500H EKO 3.0




RIS 5500H EKO 3.0




| | Dimensions [mm] | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Unit** | **L** | **$L_1$** | **$L_2$** | **$L_3$** | **W** | **$W_1$** | **øD** | **G** | **D** | **H** | **$H_1$** | **$H_2$** | **$H_3$** | **$H_4$** | **F** | **$F_1$** |
| RIS 700HE/HW EKO 3.0 | 1200 | - | - | - | 670 | 335 | 250 | - | - | 780 | 210 | 210 | 65 | 126 | 40 | - |
| RIS 1200HE/HW EKO 3.0 | 1500 | - | - | - | 760 | 380 | 315 | - | - | 1000 | 269 | 269 | 70 | 141 | 40 | - |
| RIS 1900HE/HW EKO 3.0 | 1800 | - | - | - | 800 | 400 | 400 | - | - | 1245 | 331 | 331 | 106 | 141 | 70 | - |
| RIS 2200HE/HW EKO 3.0 | 1800 | - | - | - | 800 | 400 | 400 | - | - | 1245 | 331 | 331 | 106 | 141 | 70 | - |
| RIS 2500HE/HW EKO 3.0 | 2100 | - | - | - | 900 | 490 | - | 600 | 350 | 1355 | 387 | 327 | 108 | 180 | 50 | - |
| RIS 3500HE/HW EKO 3.0 | 2756 | 909 | 1132 | 709 | 946 | 494 | - | 800 | 500 | 1600 | 413 | 413 | 129 | 180 | 65 | 192 |
| RIS 5500HE/HW EKO 3.0 | 2644 | 1740 | 900 | - | 1670 | 835 | - | 800 | 500 | 1600 | 415 | 415 | - | 180 | 55 | - |

*Accessories*

Remote controller

**Ptouch p. 175**

Control panel

**FLEX p. 177**

Remote controller

**Stouch p. 176**

Net module

**MB-Gateway p. 178**

Shut-off damper

**SKG p. 212**

Pressure transmitter

**S-1141 p. 179**

CO2 sensor

**S-RC02-F2 p. 180**

Humidity sensor

**S-KFF-U p. 181**

Thermic water valve actuator

**SSB p. 195**

Actuator for dampers

**SP p. 210**

Circular duct silencer

**AKS p. 216**

Mounting clamp

**AP p. 219**

Heating coil

**AVS p. 185**

Electrical duct pre-heater

**EKS NV PH p. 203**

Electrical duct pre-heater

**EKA NV PH p. 201**

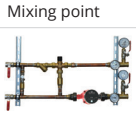
Circular duct water cooler

**AVA p. 193**

Water heater coil

**SVS p. 190**

Mixing point



**RMG p. 196**

2 and 3 way valves

**VVP/VXP p. 197**

Comfort Box

**CB p. 183**

Rectangular duct silencer

**SKS p. 215**

Outlet cover

Roof

# RIS H EKO

| Unit | Optional accessories | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **Ptouch Stouch Flex MB-Gateway** | **S-1141 S-RC02-F2 S-KFF-U** | **AKS SKG AP** | **SKS SVS** | **EKS NV PH** | **AVA AVS** | **EKA NV PH** | **SP** *Supply* | **SP** *Exhaust* |
| RIS 700HE EKO 3.0 | + | + | 250 | - | - | 250 | 250 | CM230-1-F-L | |
| RIS 700HW EKO 3.0 | + | + | 250 | - | - | 250 | 250 | TF230 | CM230-1-F-L |
| RIS 1200HE EKO 3.0 | + | + | 315 | - | - | 315 | 315 | LM230A-TP | |
| RIS 1200HW EKO 3.0 | + | + | 315 | - | - | 315 | 315 | LF230 | LM230A-TP |
| RIS 1900HE EKO 3.0 | + | + | 400 | - | - | 400 | 400 | SM230A-TP | |
| RIS 1900HW EKO 3.0 | + | + | 400 | - | - | 400 | 400 | NF230 | SM230A-TP |
| RIS 2200HW EKO 3.0 | + | + | 400 | - | - | 400 | 400 | SM230A-TP | |
| RIS 2200HE EKO 3.0 | + | + | 400 | - | - | 400 | 400 | NF230 | SM230A-TP |
| RIS 2500HE EKO 3.0 | + | + | - | 600x350 | 600x350 | - | - | int | |
| RIS 2500HW EKO 3.0 | + | + | - | 600x350 | 600x350 | - | - | int | |
| RIS 3500HE EKO 3.0 | + | + | - | 800x500 | 800x500 | - | - | int | |
| RIS 3500HW EKO 3.0 | + | + | - | 800x500 | 800x500 | - | - | int | |
| RIS 5500HE EKO 3.0 | + | + | - | 800x500 | 800x500 | - | - | int | |
| RIS 5500HW EKO 3.0 | + | + | - | 800x500 | 800x500 | - | - | int | |

| Unit | Optional accessories | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **SSB** *Heating* | **SSB** *Cooling* | **RMG 80/60°C** | **RMG 60/40°C** | **VVP/VXP 80/60°C** | **VVP/VXP 60/40°C** | **Comfort Box** | **Roof Outlet cover** |
| RIS 700HE EKO 3.0 | - | 81 | - | - | - | - | - | - |
| RIS 700HW EKO 3.0 | 61 | 81 | 3-1,0-4 | 3-0,63-4 | 45.10-1,1 | 45.10-0,63 | - | - |
| RIS 1200HE EKO 3.0 | - | 81 | - | - | - | - | - | - |
| RIS 1200HW EKO 3.0 | 61 | 81 | 3-0,63-4 | 3-0,63-4 | 45.10-0,63 | 45.10-0,63 | - | - |
| RIS 1900HE EKO 3.0 | - | 81 | Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt*** | | | | 400 | + |
| RIS 1900HW EKO 3.0 | 61 | 81 | | | | | 400 | + |
| RIS 2200HE EKO 3.0 | - | 81 | | | | | 400 | + |
| RIS 2200HW EKO 3.0 | 61 | 81 | | | | | 400 | + |
| RIS 2500HE EKO 3.0 | - | - | | | | | 600x350 | + |
| RIS 2500HW EKO 3.0 | 61 | - | | | | | 600x350 | + |
| RIS 3500HE EKO 3.0 | - | - | | | | | 800x500 | + |
| RIS 3500HW EKO 3.0 | 61 | - | | | | | 800x500 | + |
| RIS 5500HE EKO 3.0 | - | - | | | | | 800x500 | + |
| RIS 5500HW EKO 3.0 | 61 | - | | | | | 800x500 | + |



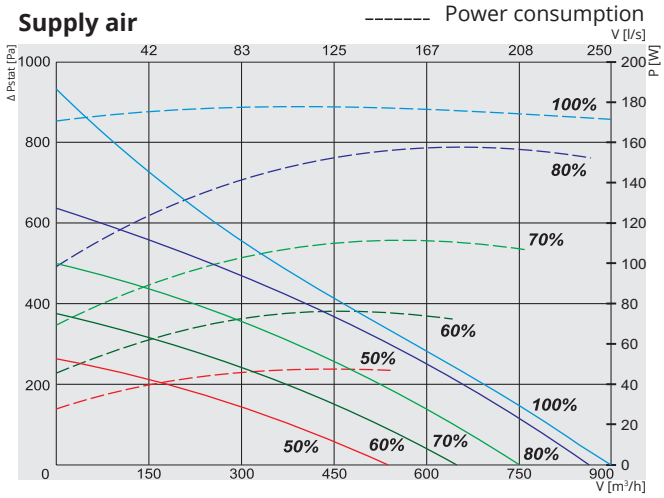


The company reserves the right to make changes of technical data without prior notice

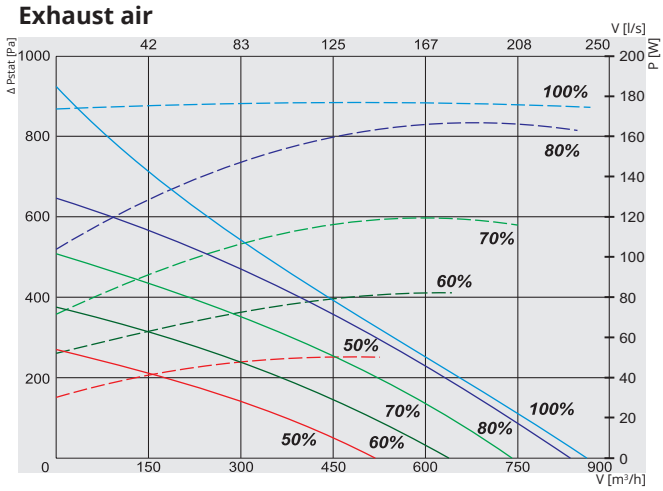
## RIS 700H EKO 3.0

Performance
Power consumption

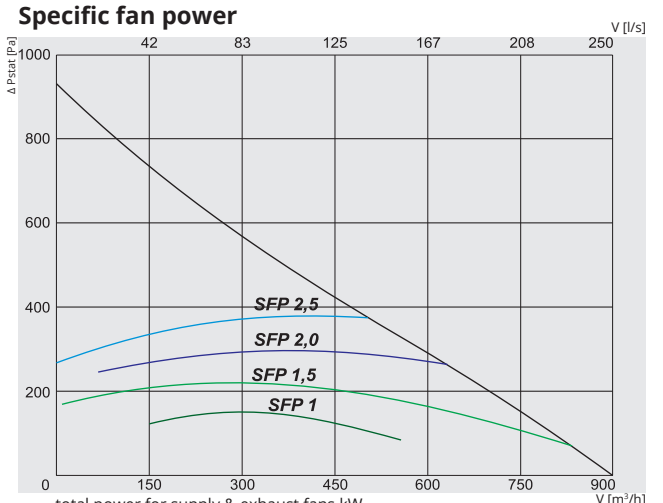
### Supply air




### Exhaust air

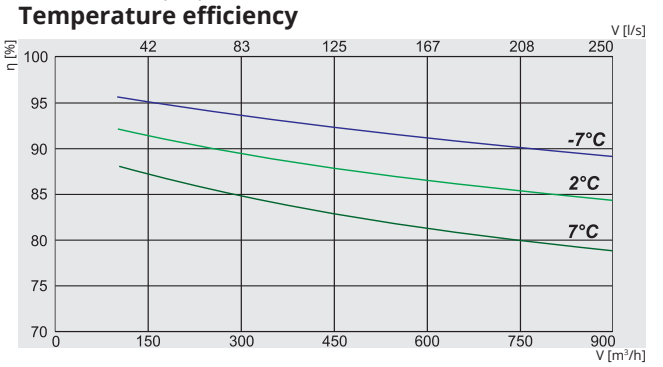



### Specific fan power

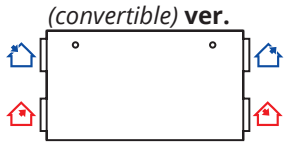



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency



**RIS 700H EKO 3.0**
*(convertible)* **ver.**



View from inspection side

Exhaust air | Extract air | outdoor air | Supply air

| Article No. | Version | |
|---|---|---|
| GAGRIS1791_0036A | 700HE EKO 3.0 | Integrated electrical heater |
| GAGRIS1972_0037A | 700HW EKO 3.0 | Optional water heater |

| | | | **700HE / HW EKO 3.0** | |
|---|---|---|---|---|
| Water heater (optional) HW ver. | | | | AVS 250 |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| | | [kW] | | 1,2 |
| EC fans | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| exhaust | power/current | [kW/A] | | 0,168/1,4 |
| | fan speed | [min⁻¹] | | 3230 |
| supply | power/current | [kW/A] | | 0,168/1,4 |
| | fan speed | [min⁻¹] | | 3230 |
| Thermal efficiency up to* | | | | 90% |
| Motorized by-pass | | | | + |
| Max power consumption HE/HW | | [kW/A] | 1,54/8,02 | 0,34/2,80 |
| Control board | | | | PRV V2 |
| Filter class | exhaust/supply | | | M5/M5 |
| Housing insulation, mineral wool | | [mm] | | 30 |
| Colour | RAL | white | | 9016 |
| Weight (net, without packing) | | [kg] | 111 | 110 |
| Comply with ERP | | | | 2016; 2018 |
| Operation | | | | indoors |
| Fresh air temperature limits** | | °C | | -5 - +40 |
| Housing protection class | IP | | | 34 |

* Calculated according EN 13141-7.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.

Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

| **700HE EKO 3.0** | Lwa total, dB(A) | LWA, dB(A) 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|
| Supply | 73 | 65 | 67 | 65 | 64 | 66 | 63 | 54 |
| Extract | 61 | 54 | 55 | 57 | 49 | 46 | 41 | 40 |
| Surrounding | 56 | 45 | 49 | 54 | 45 | 43 | 40 | 37 |
| Measured at 760 m³/h, 101 Pa | | | | | | | | |

### Certifications

EUROVENT certified
heat exchanger performance

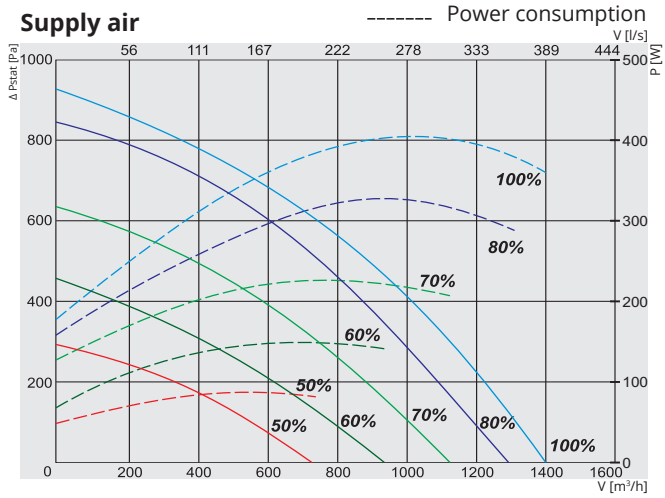
EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

# RIS H EKO

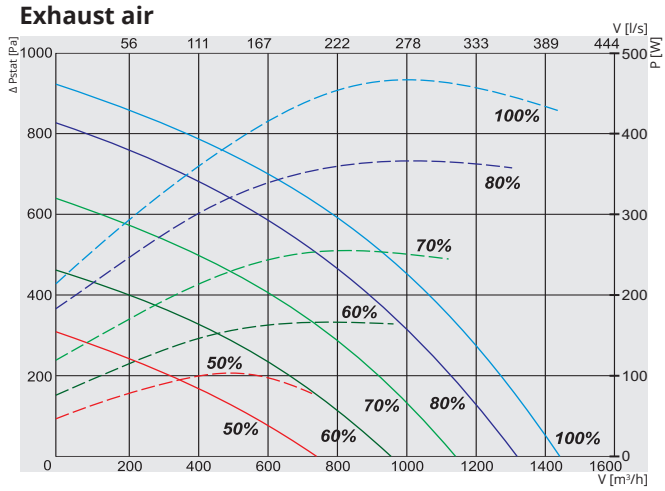
## RIS 1200H EKO 3.0

Performance
Power consumption

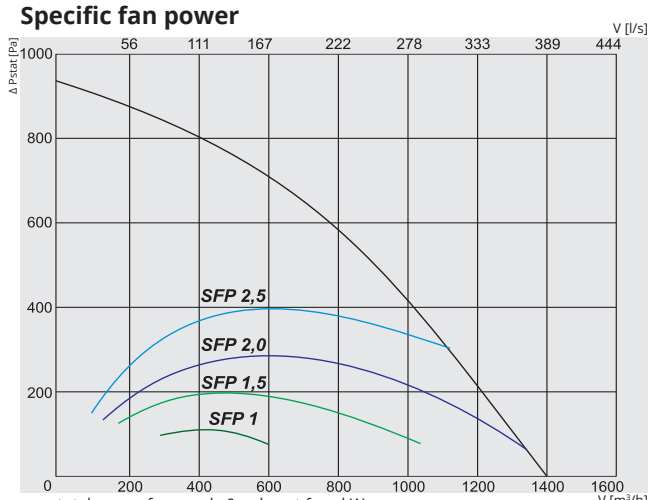
### Supply air




### Exhaust air

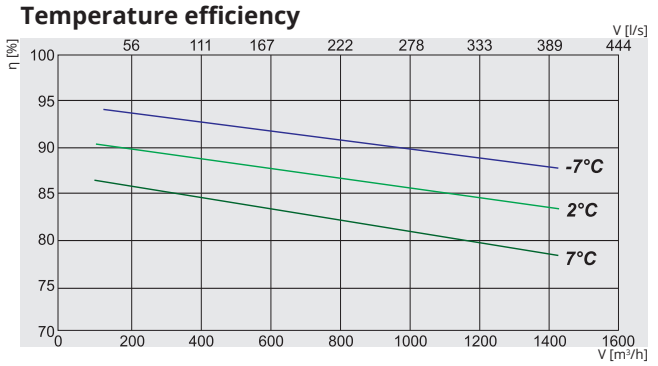



### Specific fan power

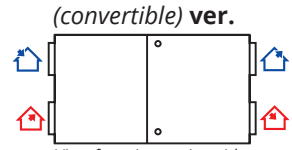



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency



**RIS 1200H EKO 3.0**
*(convertible)* **ver.**



View from inspection side

Exhaust air  Extract air  Outdoor air  Supply air

| Article No. | | Version |
|---|---|---|
| GAGRIS1740_0006A | 1200HE EKO 3.0 | Integrated electrical heater |
| GAGRIS1767_0030A | 1200HW EKO 3.0 | Optional water heater |

**1200HE / HW EKO 3.0**

| | | | | |
|---|---|---|---|---|
| Water heater (optional) HW ver. | | | | AVS 315 |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| | | [kW] | | 2,0 |
| EC fans | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| exhaust | power/current | [kW/A] | | 0,4/2,61 |
| | fan speed | [min$^{-1}$] | | 3400 |
| supply | power/current | [kW/A] | | 0,42/2,72 |
| | fan speed | [min$^{-1}$] | | 3400 |
| Thermal efficiency up to* | | | | 90% |
| Motorized by-pass | | | | + |
| Max power consumption HE/HW | | [kW/A] | 2,82/14,07 | 0,82 /5,37 |
| Control board | | | | PRV V2 |
| Filter class | exhaust/supply | | | M5/F7 |
| Housing insulation, mineral wool | | [mm] | | 50 |
| Colour | RAL | grey | | 7040 |
| Weight (net, without packing) HE/HW | | [kg] | 171 | 173 |
| Comply with ERP | | | | 2016; 2018 |
| Operation | | | | indoors/outdoors*** |
| Fresh air temperature limits** | | °C | | -5 - +40 |
| Housing protection class | IP | | | 34 |

* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.
***With proper roof mounted.

Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

| **1200H EKO 3.0** | Lwa total, dB(A) | LWA, dB(A) 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|
| Supply | 75 | 62 | 65 | 71 | 70 | 65 | 63 | 53 |
| Extract | 57 | 51 | 49 | 52 | 51 | 45 | 40 | 32 |
| Surrounding | 53 | 44 | 43 | 48 | 47 | 43 | 40 | 33 |
| Measured at 1271 m³/h, 119 Pa | | | | | | | | |

## Certifications

EUROVENT certified
heat exchanger performance

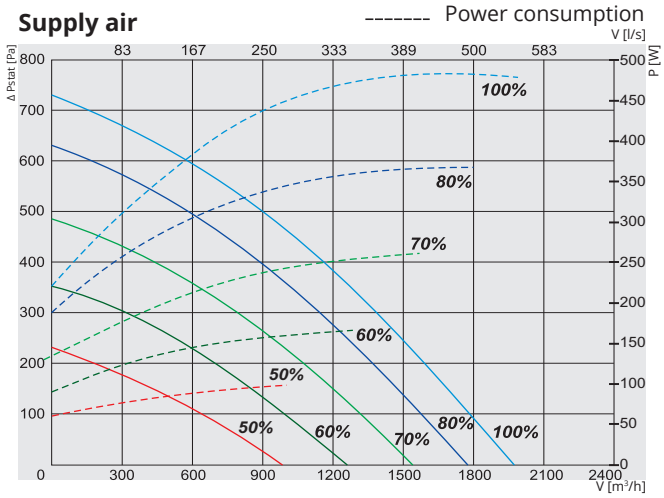


The company reserves the right to make changes of technical data without prior notice

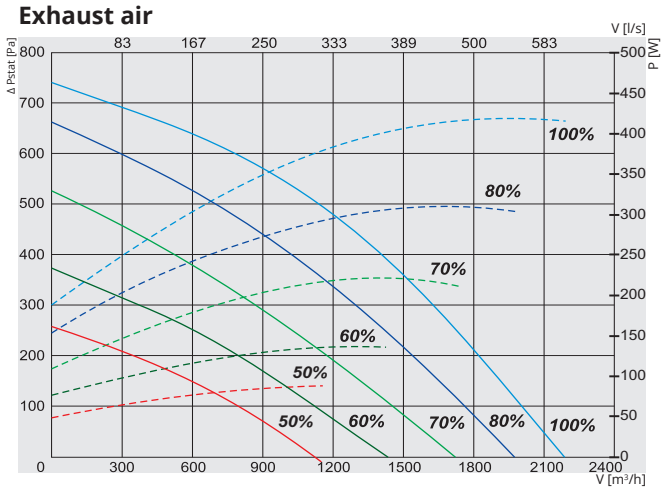
## RIS 1900H EKO 3.0

Performance
Power consumption

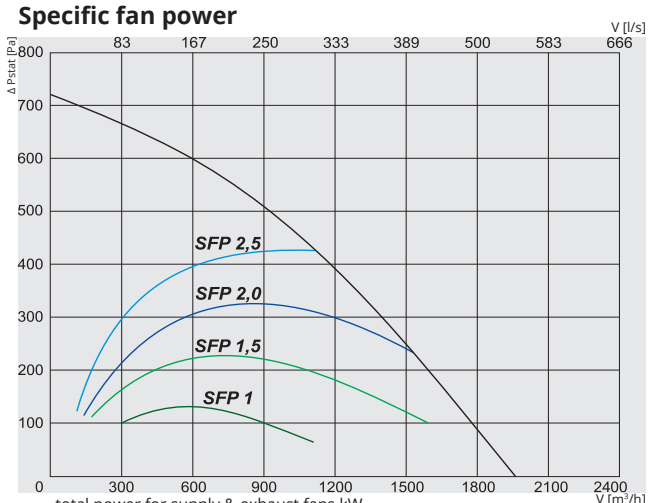
### Supply air




### Exhaust air



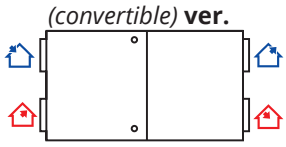

### Specific fan power




$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency

### RIS 1900HE EKO 3.0 *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

| Article No. | | Version |
|---|---|---|
| GAGRIS1789_0046A | 1900HE EKO 3.0 | Integrated electrical heater |
| GAGRIS1790_0047A | 1900HW EKO 3.0 | Optional water heater |

| 1900HE / HW EKO 3.0 | | | | |
|---|---|---|---|---|
| Water heater (optional) HW ver. | | | AVS / Comfort Box 400 | |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | ~1, 230 | |
| | | [kW] | 3,0 | |
| EC fans | phase/voltage | [50Hz/VAC] | ~1, 230 | |
| exhaust | power/current | [kW/A] | 0,48/3,1 | |
| | fan speed | [min$^{-1}$] | 2540 | |
| supply | power/current | [kW/A] | 0,505/3,2 | |
| | fan speed | [min$^{-1}$] | 2540 | |
| Thermal efficiency up to* | | | 90% | |
| Motorized by-pass | | | + | |
| Max power consumption HE/HW | | [kW/A] | 3,99 /19,32 | 0,99/6,32 |
| Control board | | | PRV V2 | |
| Filter class | exhaust/supply | | M5/F7 | |
| Housing insulation, mineral wool | | [mm] | 50 | |
| Colour | RAL | grey | 7040 | |
| Weight (net, without packing) | | [kg] | 252 | 251 |
| Comply with ERP | | | 2016; 2018 | |
| Operation | | | indoors/outdoors*** | |
| Fresh air temperature limits** | | °C | -5 - +40 | |
| Housing protection class | IP | | 34 | |

* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.
***With proper roof mounted.

Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

| 1900H EKO 3.0 | Lwa total, dB(A) | LWA, dB(A) 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|
| Supply | 78 | 58 | 71 | 72 | 73 | 71 | 65 | 62 |
| Extract | 67 | 49 | 58 | 60 | 59 | 58 | 57 | 44 |
| Surrounding | 60 | 41 | 51 | 55 | 53 | 52 | 49 | 42 |
| Measured at 2016 m³/h, 100 Pa | | | | | | | | |

### Certifications

EUROVENT certified
heat exchanger performance

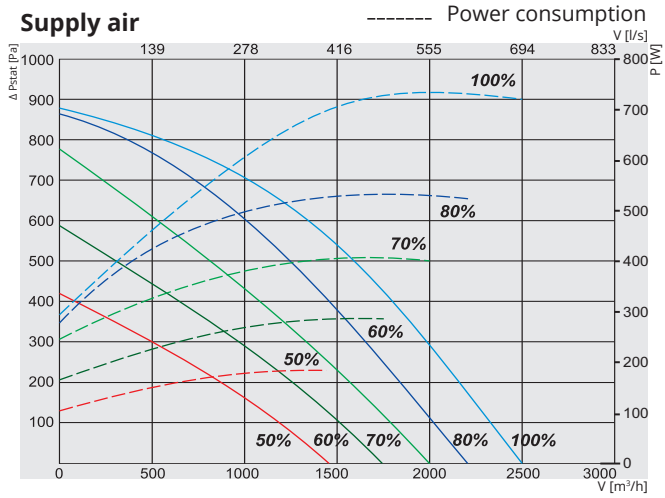
EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

# RIS H EKO

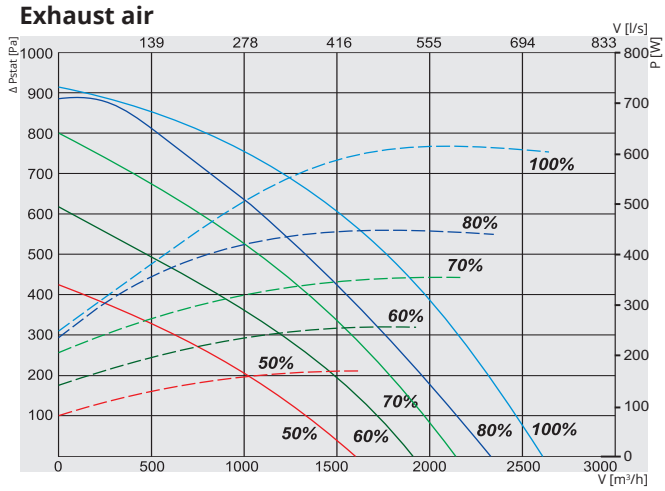
## RIS 2200H EKO 3.0

Performance
Power consumption

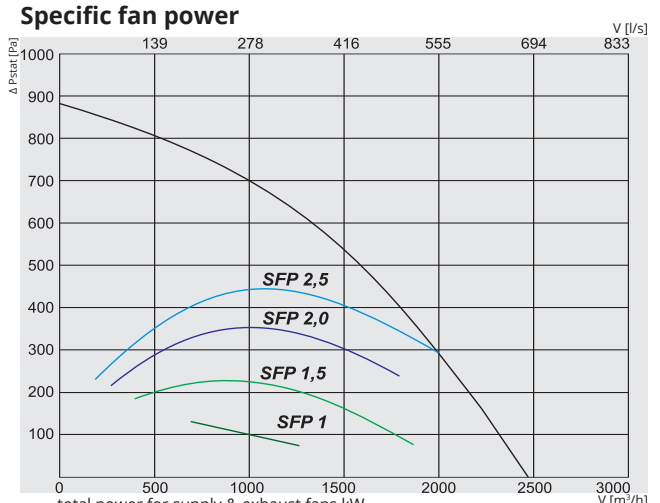
### Supply air




### Exhaust air

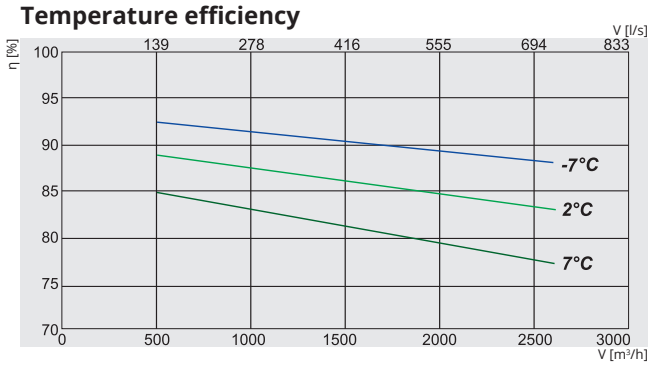



### Specific fan power

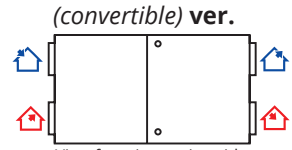



$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency



**RIS 2200H EKO 3.0**
*(convertible)* **ver.**



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

| Article No. | | Version |
|---|---|---|
| GAGRIS1970_0151A | 2200HE EKO 3.0 | Integrated electrical heater |
| GAGRIS1971_0153A | 2200HW EKO 3.0 | Optional water heater |

| **2200HE / HW EKO 3.0** | | | | |
|---|---|---|---|---|
| Water heater (optional) HW ver. | | | | AVS / Comfort Box 400 |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| | | [kW] | | 3,0 |
| EC fans | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| exhaust | power/current | [kW/A] | | 0,72/3,1 |
| | fan speed | [min⁻¹] | | 2800 |
| supply | power/current | [kW/A] | | 0,72/3,1 |
| | fan speed | [min⁻¹] | | 2800 |
| Thermal efficiency up to* | | | | 90% |
| Motorized by-pass | | | | + |
| Max power consumption HE/HW | | [kW/A] | 4,44/19,20 | 1,44/6,22 |
| Control board | | | | PRV V2 |
| Filter class | exhaust/supply | | | M5/F7 |
| Housing insulation, mineral wool | | [mm] | | 50 |
| Colour | RAL | grey | | 7040 |
| Weight (net, without packing) HE/HW | | [kg] | 252 | 250 |
| Comply with ERP | | | | 2016; 2018 |
| Operation | | | | indoors/outdoors*** |
| Fresh air temperature limits** | | °C | | -5 - +40 |
| Housing protection class | IP | | | 34 |

* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.
***With proper roof mounted

Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

| **2200H EKO 3.0** | Lwa total, dB(A) | LWA, dB(A) 63 Hz | 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|---|
| Supply | 79 | 63 | 64 | 68 | 70 | 73 | 74 | 68 | 63 |
| Extract | 70 | 60 | 58 | 62 | 65 | 63 | 61 | 59 | 51 |
| Surrounding | 62 | 43 | 48 | 57 | 56 | 54 | 52 | 48 | 44 |
| Measured at 2070 m³/h, 250 Pa | | | | | | | | | |

## Certifications

EUROVENT certified
heat exchanger performance

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

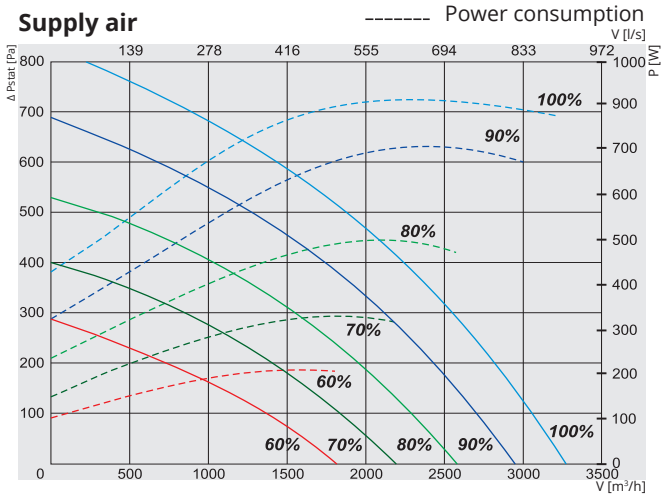


The company reserves the right to make changes of technical data without prior notice

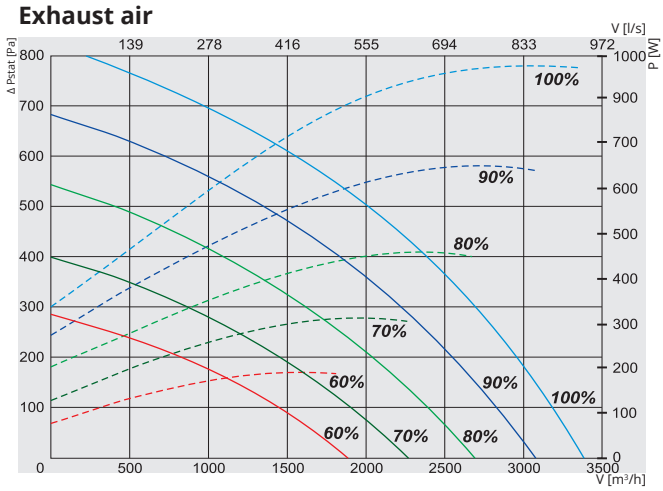
## RIS 2500H EKO 3.0

Performance
Power consumption

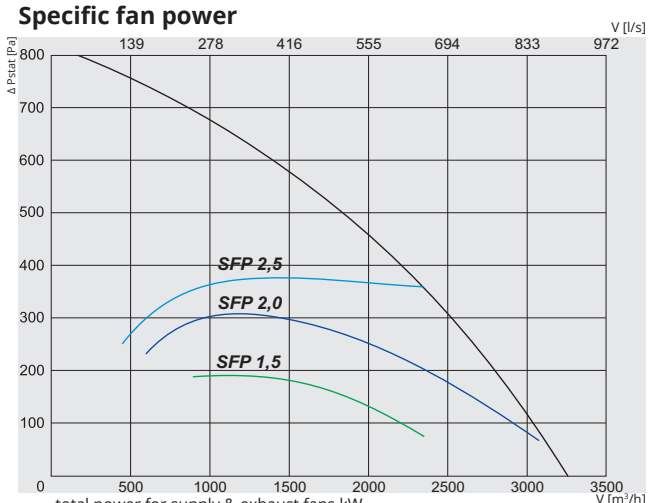
### Supply air




### Exhaust air

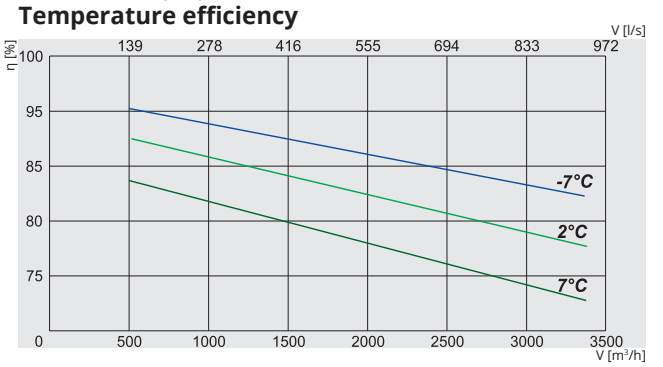



### Specific fan power



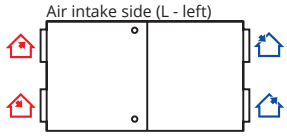

$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency



### RIS 2500HL EKO 3.0

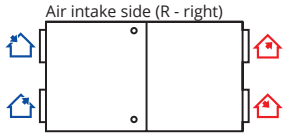
Air intake side (L - left)



View from inspection side

### RIS 2500HR EKO 3.0

Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

| Article No. | | Version |
|---|---|---|
| GAGRIS1793_0031B | 2500HE EKO 3.0 | Right-hand maintenace version with integrated electrical heater |
| GAGRIS1794_0032A | 2500HW EKO 3.0 | Right-hand maintenace version prepared for optional water heater |

| | | | 2500HE / HW EKO 3.0 | |
|---|---|---|---|---|
| Water heater (optional) HW ver. | | | SVS / | Comfort Box 600x350 |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | | ~3, 400 |
| | | [kW] | | 3,6 |
| EC fans | phase/voltage | [50Hz/VAC] | | ~1, 230 |
| exhaust | power/current | [kW/A] | | 0,88/3,92 |
| | fan speed | [min⁻¹] | | 2200 |
| supply | power/current | [kW/A] | | 1,0/4,47 |
| | fan speed | [min⁻¹] | | 2200 |
| Thermal efficiency up to* | | | | 90% |
| Motorized by-pass | | | | + |
| Max power consumption HE/HW | | [kW/A] | 5,49/13,69 | 1,89/8,49 |
| Control board | | | | PRV V2 |
| Filter class | exhaust/supply | | | M5/F7 |
| Housing insulation, mineral wool | | [mm] | | 50 |
| Colour | RAL | grey | | 7040 |
| Weight (net, without packing) | | [kg] | 390 | 360 |
| Comply with ERP | | | | 2016; 2018 |
| Operation | | | | indoors/outdoors*** |
| Fresh air temperature limits** | | °C | | -5 - +40 |
| Housing protection class | IP | | | 34 |

* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.
***With proper roof mounted.

Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

| 2500H EKO 3.0 | Lwa total, dB(A) | LWA, dB(A) 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|
| Supply | 83 | 65 | 73 | 75 | 78 | 79 | 71 | 61 |
| Extract | 65 | 57 | 61 | 59 | 56 | 54 | 49 | 39 |
| Surrounding | 62 | 45 | 57 | 58 | 55 | 52 | 44 | 36 |
| Measured at 2976 m³/h, 121 Pa | | | | | | | | |

### Certifications

EUROVENT certified
heat exchanger performance

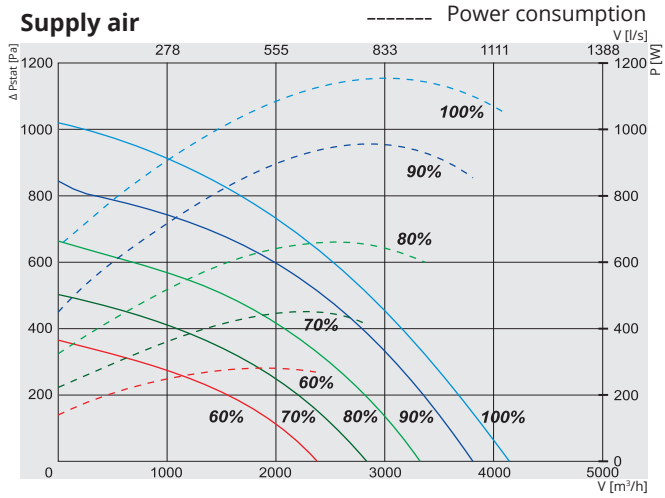
EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

# RIS H EKO

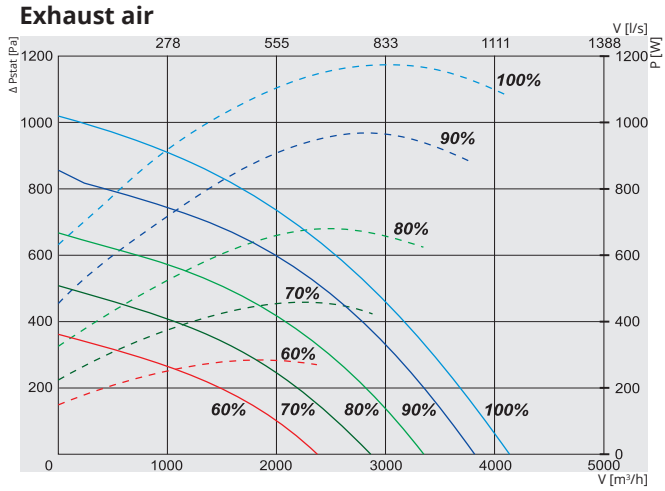
## RIS 3500H EKO 3.0

Performance
Power consumption

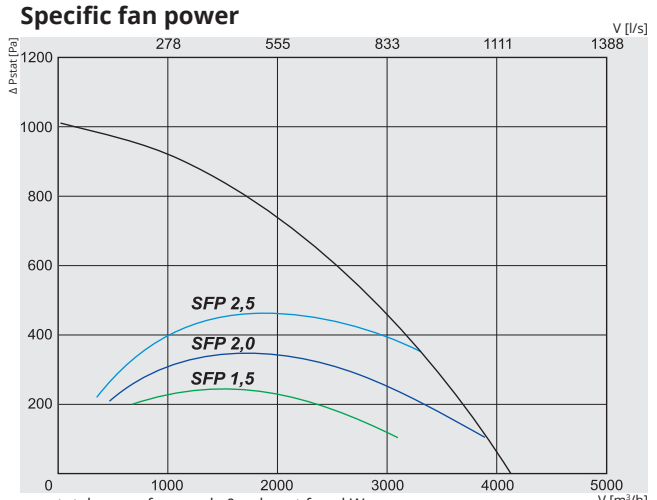
### Supply air




### Exhaust air

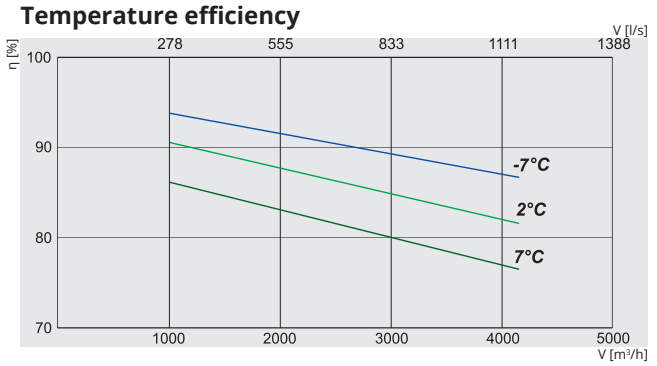



### Specific fan power



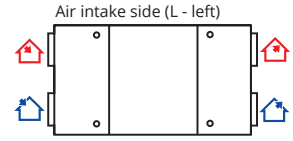

$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency



### RIS 3500HL EKO 3.0

Air intake side (L - left)



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

| Article No. | | Version |
|---|---|---|
| GAGRIS1781_0052B | 3500HEL EKO 3.0 | Left-hand maintenace version with integrated electrical heater |
| GAGRIS1782_0053A | 3500HWL EKO 3.0 | Left-hand maintenace version prepared for optional water heater |

| | | | **3500HE / HW EKO 3.0** |
|---|---|---|---|
| Water heater (optional) HW ver. | | | SVS / Comfort Box 800x500 |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | ~3, 400 |
| | | [kW] | 6,0 |
| EC fans | phase/voltage | [50Hz/VAC] | ~1, 230 |
| exhaust | power/current | [kW/A] | 1,16/5,4 |
| | fan speed | [min⁻¹] | 2390 |
| supply | power/current | [kW/A] | 1,173/5,43 |
| | fan speed | [min⁻¹] | 2390 |
| Thermal efficiency up to* | | | 90% |
| Motorized by-pass | | | + |
| Max power consumption HE / HW | | [kW/A] | 8,34 /19,59 2,34 /10,95 |
| Control board | | | PRV V2 |
| Filter class | exhaust/supply | | M5/F7 |
| Housing insulation, mineral wool | | [mm] | 50 |
| Colour | RAL | grey | 7040 |
| Weight (net, without packing) | | [kg] | 627 622 |
| Comply with ERP | | | 2016; 2018 |
| Operation | | | indoors/outdoors*** |
| Fresh air temperature limits** | | °C | -5 - +40 |
| Housing protection class | IP | | 34 |

* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.
***With proper roof mounted.

Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

| 3500H EKO 3.0 | Lwa total, dB(A) | LWA, dB(A) 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|
| Supply | 86 | 68 | 82 | 78 | 80 | 77 | 70 | 68 |
| Extract | 72 | 66 | 66 | 65 | 64 | 58 | 49 | 45 |
| Surrounding | 69 | 59 | 65 | 62 | 62 | 59 | 52 | 58 |
| Measured at 3746 m³/h, 181 Pa | | | | | | | | |

### Certifications

EUROVENT certified
heat exchanger performance

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

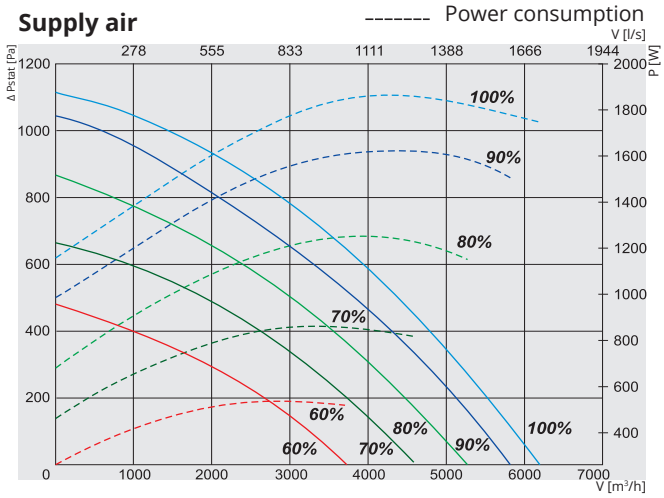


The company reserves the right to make changes of technical data without prior notice

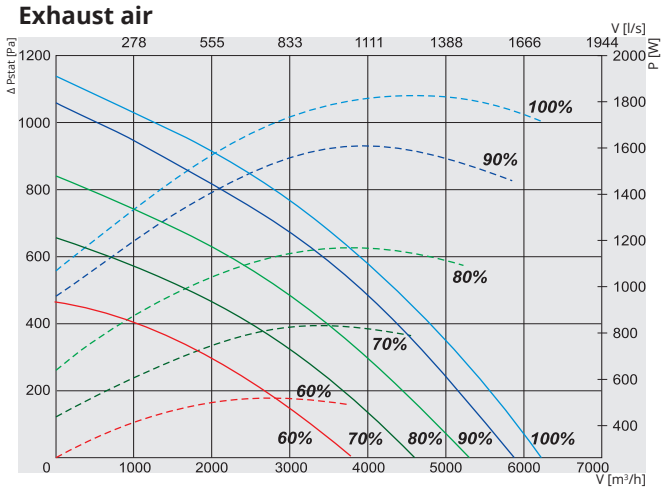
## RIS 5500H EKO 3.0

Performance
Power consumption

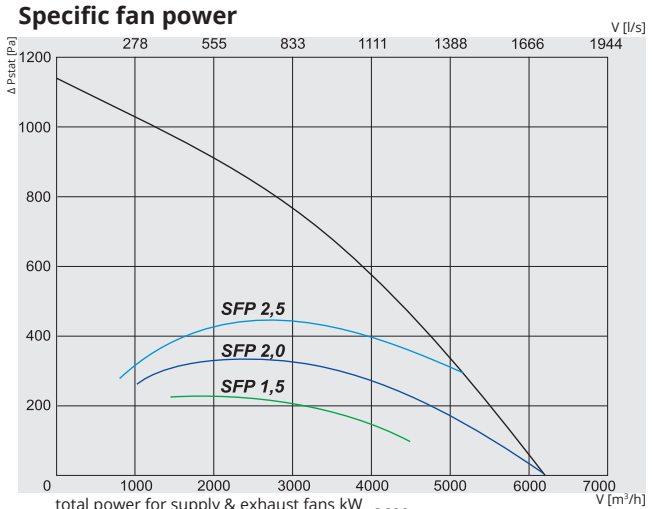
### Supply air




### Exhaust air

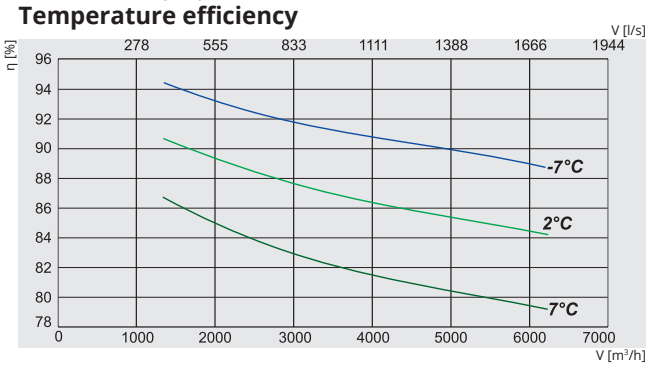



### Specific fan power



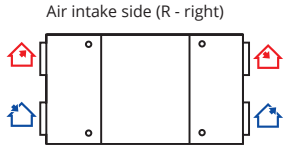

$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

### Temperature efficiency



### RIS 5500HR EKO 3.0

Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

| Article No. | | Version |
|---|---|---|
| GAGRIS1773_0054B | 5500HER EKO 3.0 | Right-hand maintenace version with integrated electrical heater |
| GAGRIS1774_0055B | 5500HWR EKO 3.0 | Right-hand maintenace version prepared for optional water heater |

### 5500HE / HW EKO 3.0

| | | | |
|---|---|---|---|
| Water heater (optional) HW ver. | | | SVS / Comfort Box 800x500 |
| Electrical heater HE ver. | phase/voltage | [50Hz/VAC] | ~3, 400 |
| | | [kW] | 12 |
| EC fans | phase/voltage | [50Hz/VAC] | ~3, 400 |
| exhaust | power/current | [kW/A] | 1,87/3,06 |
| | fan speed | [min$^{-1}$] | 2180 |
| supply | power/current | [kW/A] | 1,84/2,88 |
| | fan speed | [min$^{-1}$] | 2180 |
| Thermal efficiency up to* | | | 90% |
| Motorized by-pass | | | + |
| Max power consumption HE/HW | | [kW/A] | 15,71/23,38 3,72/6,04 |
| Control board | | | PRV V2 |
| Filter class | exhaust/supply | | M5/F7 |
| Housing insulation, mineral wool | | [mm] | 60 |
| Colour | RAL | grey | 7040 |
| Weight (net, without packing) HE / HW | | [kg] | 788 |
| Comply with ERP | | | 2016; 2018 |
| Operation | | | indoors/outdoors*** |
| Fresh air temperature limits** | | °C | -5 - +40 |
| Housing protection class | IP | | 34 |

* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.
***With proper roof mounted.

Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

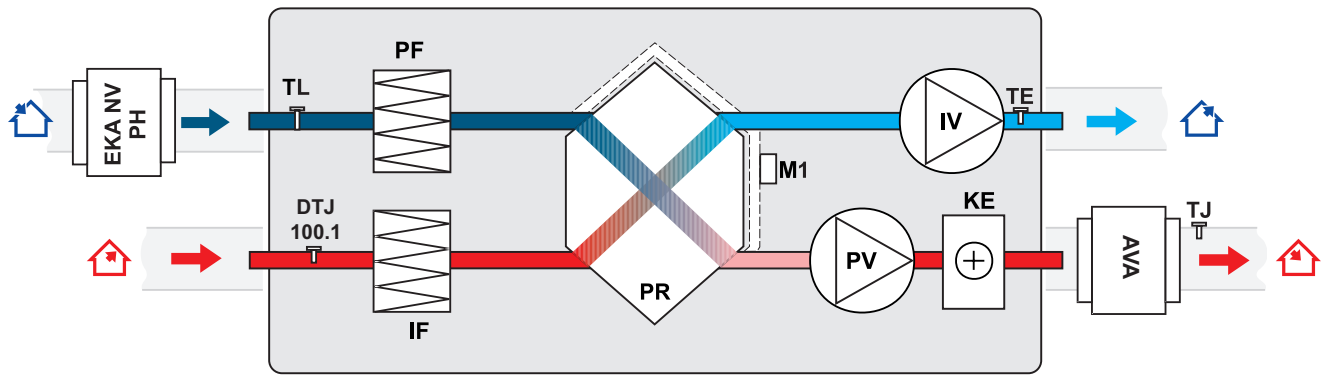
| 5500HW EKO 3.0 | Lwa total, dB(A) | LWA, dB(A) 125 Hz | 250 Hz | 500 Hz | 1 kHz | 2 kHz | 4 kHz | 8 kHz |
|---|---|---|---|---|---|---|---|---|
| Supply | 88 | 65 | 82 | 81 | 83 | 81 | 78 | 69 |
| Extract | 75 | 64 | 72 | 70 | 66 | 60 | 55 | 50 |
| Surrounding | 77 | 54 | 71 | 72 | 71 | 68 | 65 | 58 |
| Measured at 5819 m³/h, 120 Pa | | | | | | | | |

### Certifications

EUROVENT certified
heat exchanger performance

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

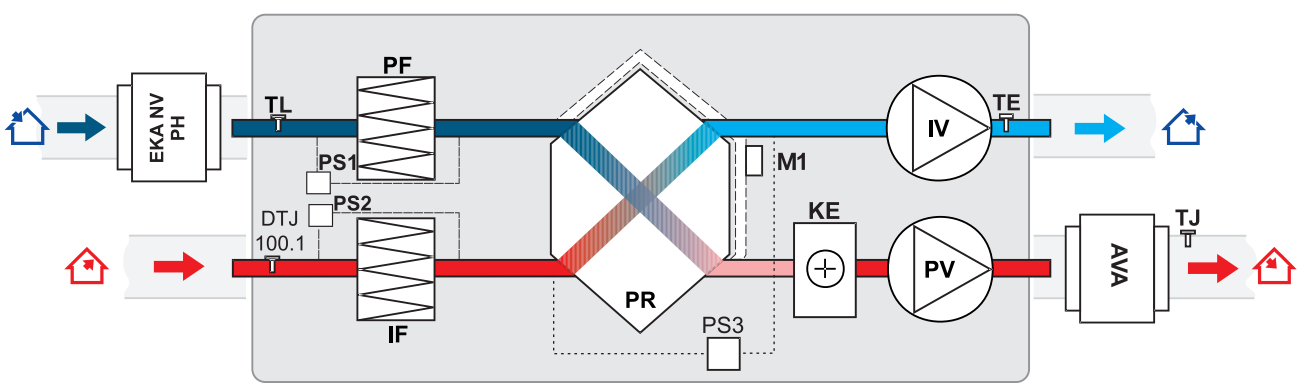
## **RIS 700HE EKO 3.0** (horizontal) **version with electrical heater**




**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**KE** - electrical heater
**PF** - filter for supply air (class M5)
**IF** - filter for extract air (class M5)

**TJ** - temperature sensor for supply air
**TL** - temperature sensor for fresh air
**TE** - temperature sensor for exhaust air
**M1** - actuator of by-pass damper
**DTJ 100.1** - humidity + temperature sensor
**EKA NV PH** - optional fresh air pre-heater
**AVA** - optionally supplied water cooler

## **RIS 1200HE EKO 3.0 / RIS 1900HE EKO 3.0 / RIS 2200HE EKO 3.0** (horizontal) **versions with electrical heater**



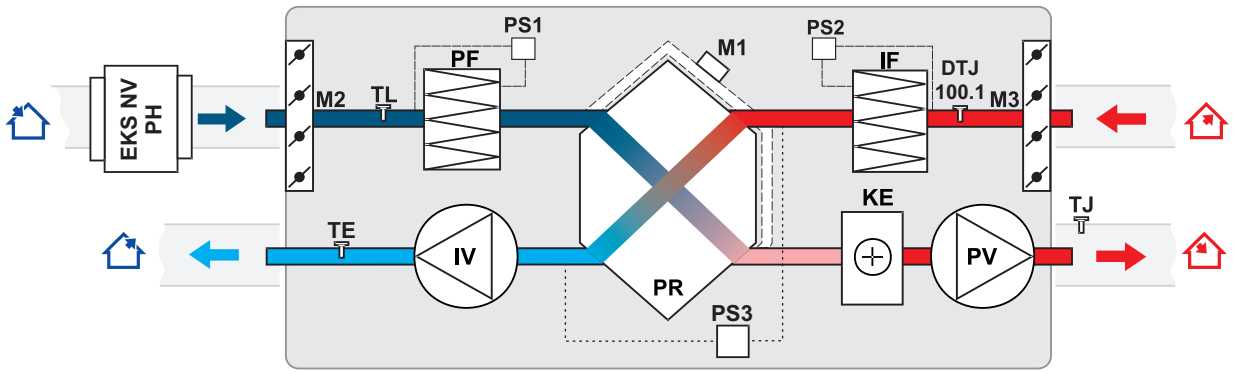

**EKA NV PH** - optional fresh air pre-heater
**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**KE** - electrical heater
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**TE** - temperature sensor for extract air

**AVA** - optionally supplied water cooler
**TL** - temperature sensor for fresh air
**TJ** - temperature sensor for supply air
**M1** - actuator of by-pass damper
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch
**DTJ 100.1** - humidity + temperature sensor



The company reserves the right to make changes of technical data without prior notice

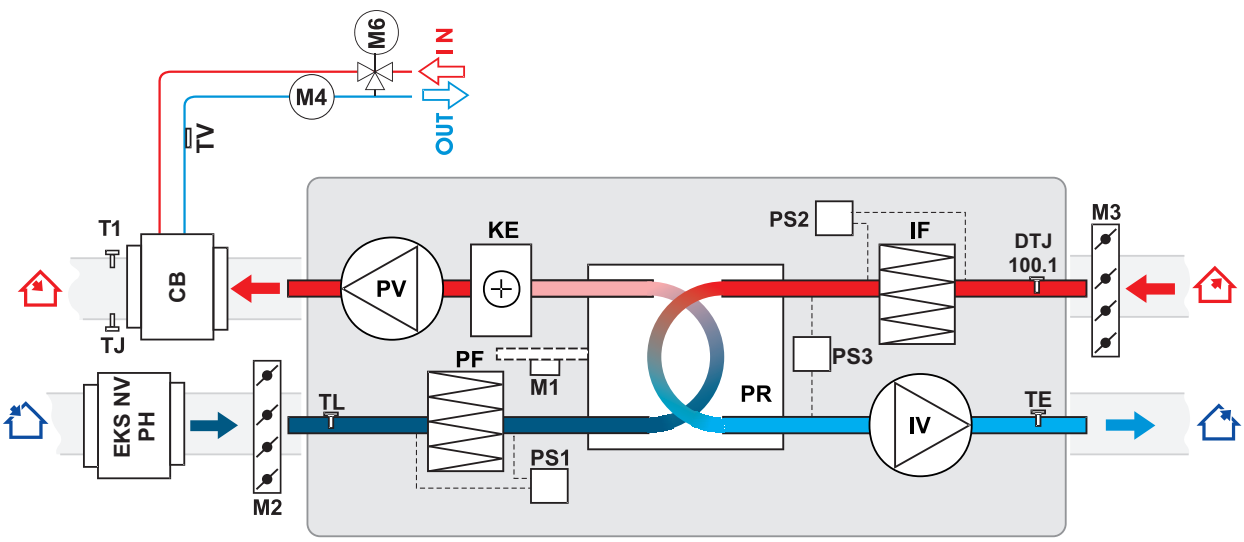
## **RIS 2500HE EKO 3.0** (horizontal) **version with electrical heater**




**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**KE** - electrical heater
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**DTJ 100.1** - humidity + temperature sensor
**TE** - temperature sensor for extract air
**EKS NV PH** - optional outdoor air heater

**TL** - temperature sensor for fresh air
**TJ** - temperature sensor for supply air
**M1** - actuator of by-pass damper
**M2** - actuator of fresh air damper
**M3** - actuator of extract air damper
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch

## **RIS 3500HE EKO 3.0** (horizontal) **version with electrical heater**



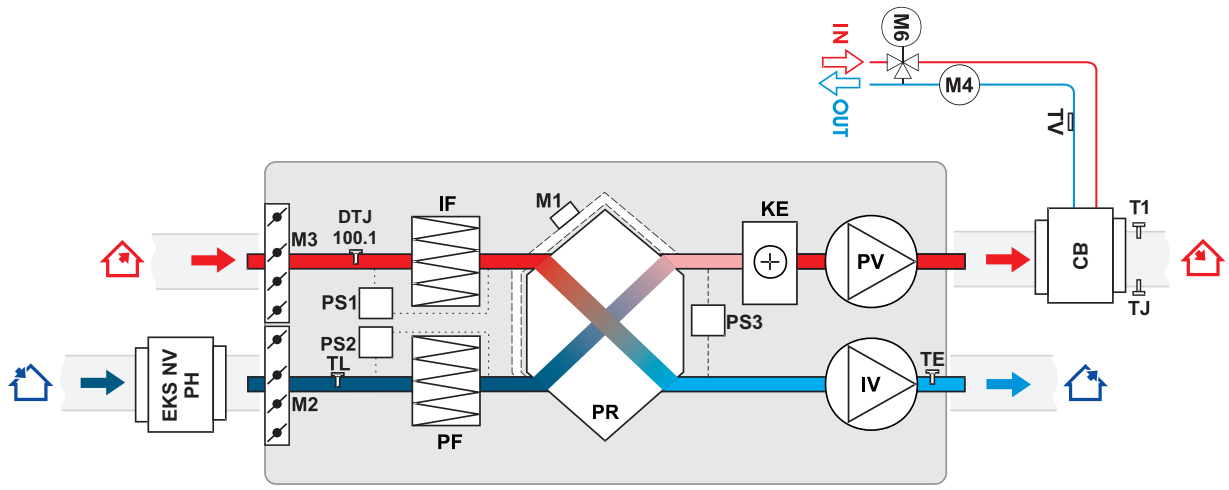

**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**KE** - electrical heater
**PF** - filter for fresh air (class F7)
**IF** - filter for extract air (class M5)
**DTJ 100.1** - humidity + temperature sensor
**TL** - temperature sensor for fresh air
**CB** - water heater/cooler
**M6** - optionally supplied mixing valve and motor
**M4** - water heater circulation pump

**TE** - temperature sensor for exhaust air
**TV** - antifrost sensor
**T1** - antifrost thermostat
**EKS NV PH** - optional outdoor air heater
**TJ** - temperature sensor for supply air
**M1** - actuator of by-pass damper
**M2** - actuator of fresh air damper
**M3** - actuator of extract air damper
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch



The company reserves the right to make changes of technical data without prior notice

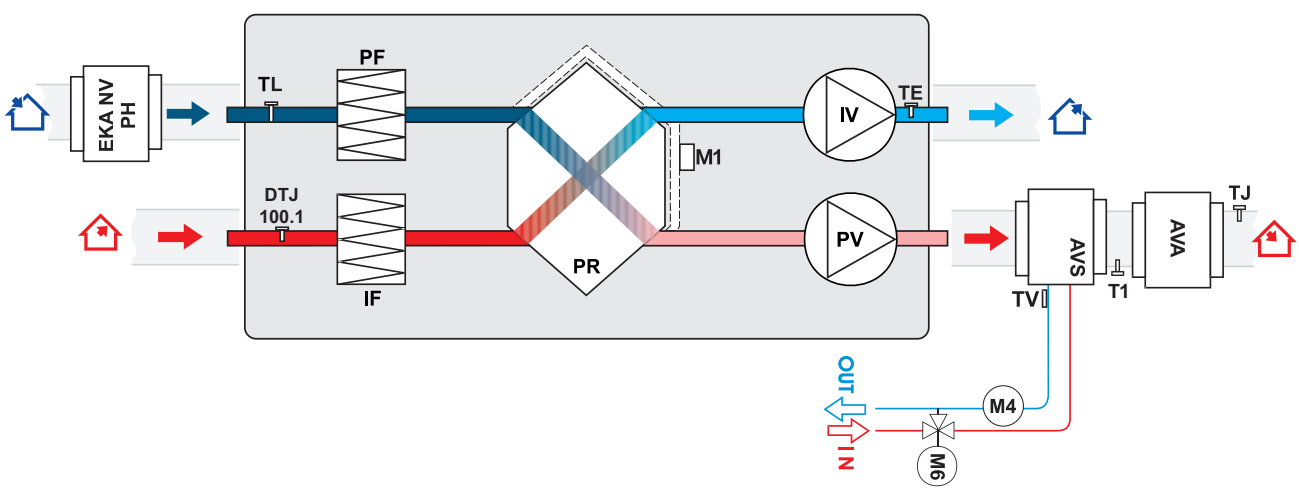
## **RIS 5500HE EKO 3.0** (horizontal) **version with electrical heater**




**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**KE** - electrical heater
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**DTJ 100.1** - humidity + temperature sensor
**TL** - temperature sensor for fresh air
**TE** - temperature sensor for exhaust air
**TV** - antifrost sensor
**T1** - antifrost thermostat

**CB** - water heater/cooler
**EKS NV PH** - optional outdoor air heater
**TJ** - temperature sensor for supply air
**M1** - actuator of by-pass damper
**M2** - actuator of fresh air damper
**M3** - actuator of extract air damper
**M6** - optionally supplied mixing valve and motor
**M4** - water heater circulation pump
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch

## **RIS 700HW EKO 3.0** version with optional water heater



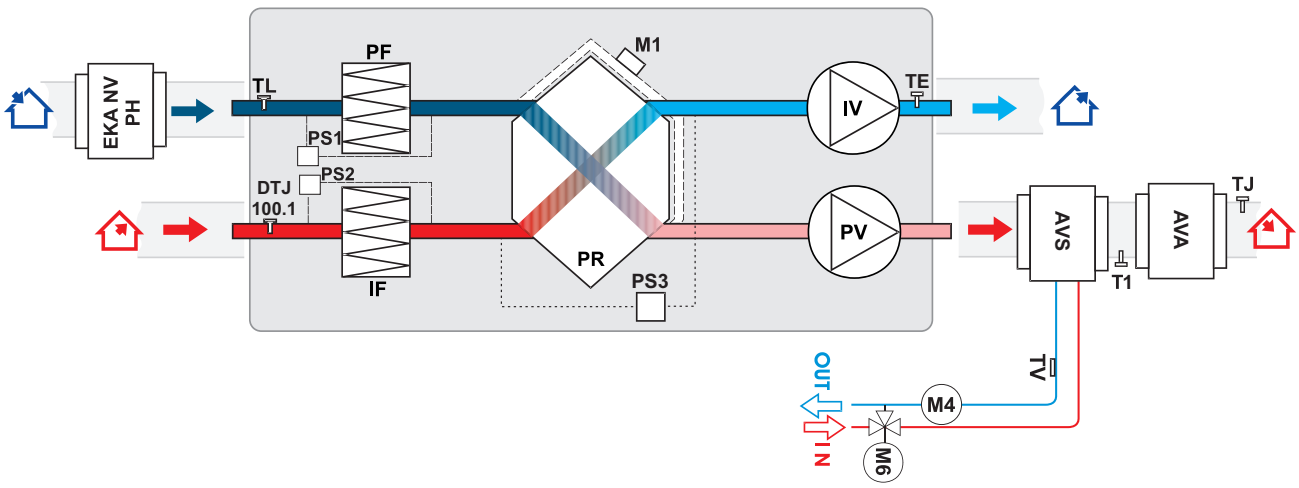

**AVS** - optionally supplied water heater
**AVA** - optionally supplied water cooler
**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**PF** - filter for supply air (class M5)
**IF** - filter for extract air (class M5)
**TJ** - temperature sensor for supply air
**TL** - temperature sensor for fresh air

**TE** - temperature sensor for exhaust air
**TV** - antifrost sensor
**T1** - antifrost thermostat
**DTJ 100.1** - humidity + temperature sensor
**M1** - actuator of by-pass damper
**M4** - water heater circulation pump
**M6** - optionally supplied mixing valve and motor
**EKA NV PH** - optional fresh air pre-heater



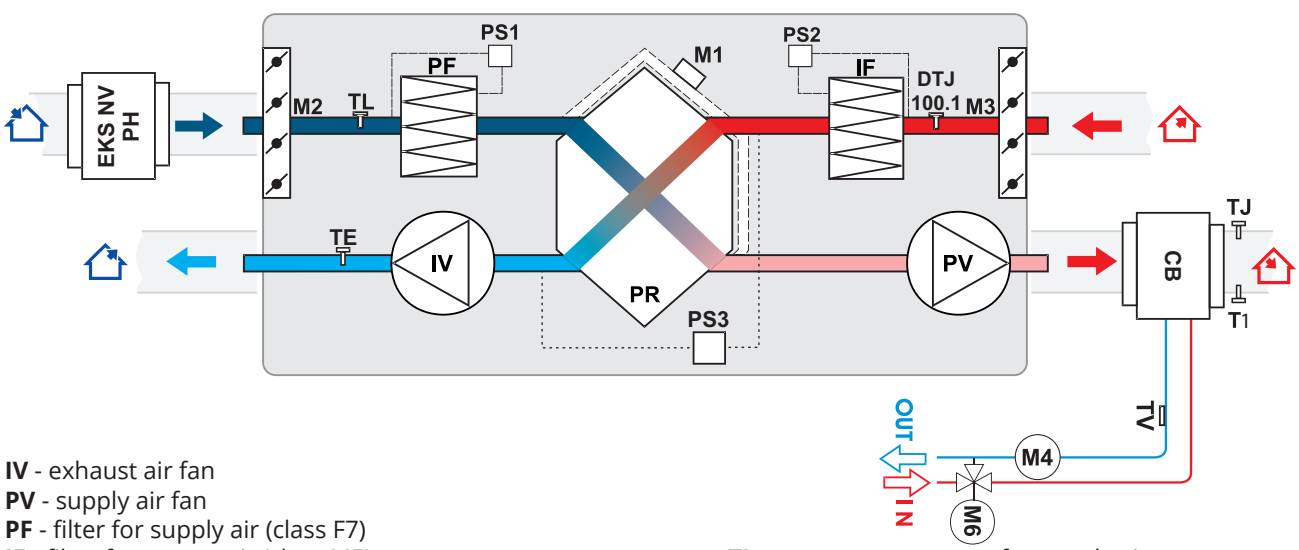
The company reserves the right to make changes of technical data without prior notice

## **RIS 1200HW EKO 3.0 / RIS 1900HW EKO 3.0 / RIS 2200HW EKO 3.0** (horizontal) **version with optional water heater**




**EKA NV PH** - optional fresh air pre-heater
**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**TL** - temperature sensor for fresh air
**TJ** - temperature sensor for supply air
**TV** - antifrost sensor
**T1** - antifrost thermostat
**AVA** - optionally supplied water cooler
**AVS** - water heater
**M1** - actuator of by-pass damper
**M6** - optionally supplied mixing valve and motor
**M4** - water heater circulation pump
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch
**DTJ 100.1** - humidity + temperature sensor
**TE** - temperature sensor for extract air

## **RIS 2500HW EKO 3.0** (horizontal) **version with optional water heater**

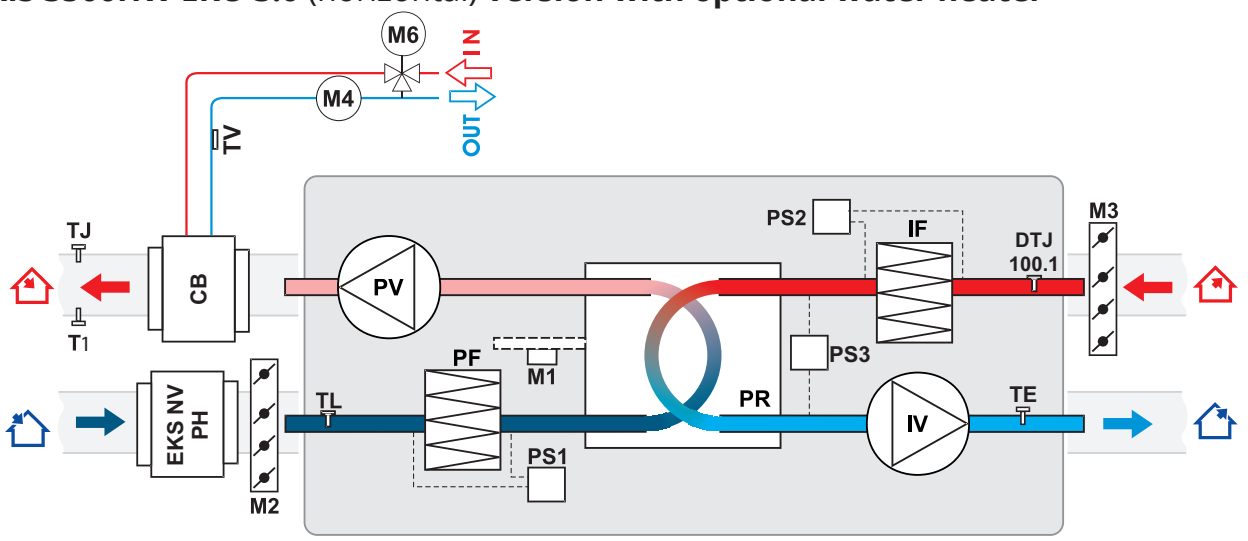



**IV** - exhaust air fan
**PV** - supply air fan
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**PR** - plate heat exchanger
**DTJ 100.1** - humidity + temperature sensor
**TL** - temperature sensor for fresh air
**TV** - antifrost sensor
**T1** - antifrost thermostat
**TE** - temperature sensor for extract air
**EKS NV PH** - optional outdoor air heater
**CB** - water heater/cooler
**TJ** - temperature sensor for supply air
**M** - actuator of by-pass damper
**M2** - actuator of fresh air damper
**M3** - actuator of extract air damper
**M6** - optionally supplied mixing valve and motor
**M4** - water heater circulation pump
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch



The company reserves the right to make changes of technical data without prior notice

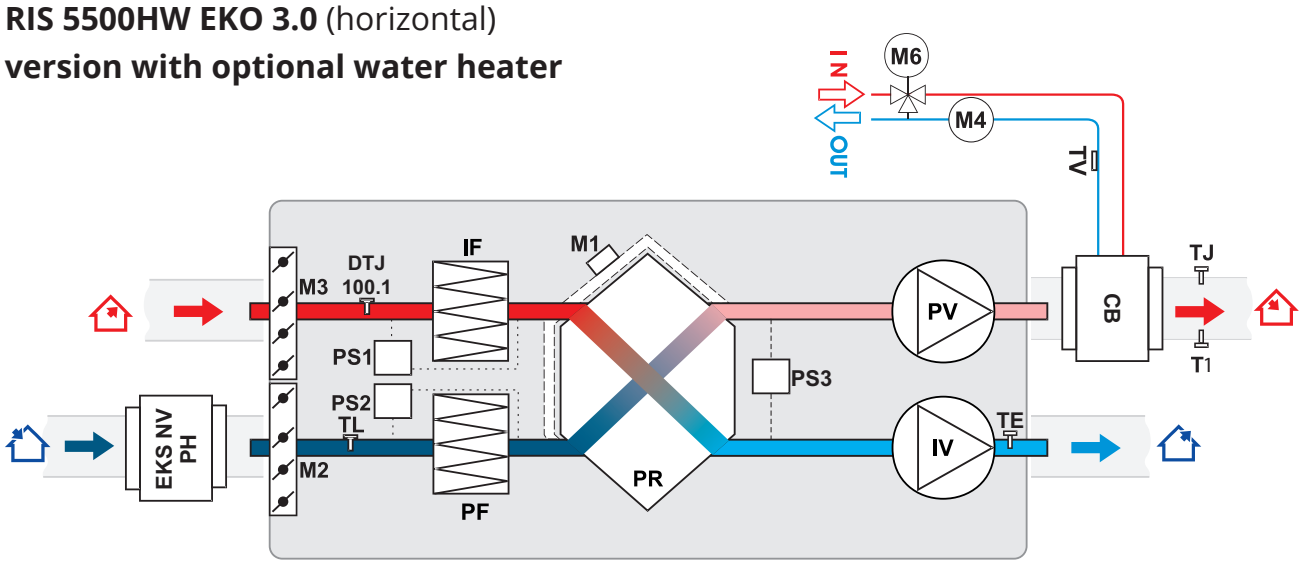
## **RIS 3500HW EKO 3.0** (horizontal) **version with optional water heater**




**CB** - water heater/cooler
**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**DTJ 100.1** - humidity + temperature sensor
**TL** - temperature sensor for fresh air
**TV** - antifrost sensor
**T1** - antifrost thermostat
**TE** - temperature sensor for exhaust air

**EKS NV PH** - optional outdoor air heater
**TJ** - temperature sensor for supply air
**M1** - actuator of by-pass damper
**M2** - actuator of fresh air damper
**M3** - actuator of extract air damper
**M6** - optionally supplied mixing valve and motor
**M4** - water heater circulation pump
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch

## **RIS 5500HW EKO 3.0** (horizontal) **version with optional water heater**




**CB** - water heater/cooler
**IV** - exhaust air fan
**PV** - supply air fan
**PR** - plate heat exchanger
**PF** - filter for supply air (class F7)
**IF** - filter for extract air (class M5)
**DTJ 100.1** - humidity + temperature sensor
**TL** - temperature sensor for fresh air
**TV** - antifrost sensor
**T1** - antifrost thermostat

**TJ** - temperature sensor for supply air
**M1** - actuator of by-pass damper
**M2** - actuator of fresh air damper
**M3** - actuator of extract air damper
**M6** - optionally supplied mixing valve and motor
**M4** - water heater circulation pump
**PS1** - supply air differential pressure switch
**PS2** - extract air differential pressure switch
**PS3** - heat exchanger antifrost pressure switch
**EKS NV PH** - optional outdoor air heater



The company reserves the right to make changes of technical data without prior notice

| FUNCTIONS | | |
|---|---|---|
| Description of the functions | PRV V2 | |
| | RIS EKO 3.0 | |
| | E | W |
| **Functions** | | |
| **Date and time settings** | ✓ | ✓ |
| **4 speeds for easy and user-friendly control** ("Stop" – the unit is stopped; "Low", medium", and "High". Service menu allows adjusting each speed individually) | ✓ | ✓ |
| **BOOST function** (Fans operate at highest speed) | ✓ | ✓ |
| **Comfortable air temperature function** | ✓ | ✓ |
| **Cold/heat recovery** | ✓ | ✓ |
| **Fire place function** | ✓ | ✓ |
| **Dryness protection** | ✓ | ✓ |
| **Weekly schedule** | ✓ | ✓ |
| **Holiday schedule** | ✓ | ✓ |
| **User and service control levels** | ✓ | ✓ |
| **Manual air flow balancing** | ✓ | ✓ |
| **$CO_2$ level indication and reduction function** | ✓ | ✓ |
| **Night cooling function** | ✓ | ✓ |
| **Relative humidity (RH) level indication and reduction function** | ✓ | ✓ |
| **Software and configuration update possibility** | ✓ | ✓ |
| **Supply air temperature control according to the extract air sensor** | ✓ | ✓ |
| **Monitoring function** (all sensors and I/O) | ✓2 | ✓2 |
| **Mode switch (start/stop)** | ✓ | ✓ |
| **Extracted air relative humidity converter** | ✓ | ✓ |
| **Manual components control** | ✓1 | ✓1 |
| **Functional units** | | |
| **Fans** | | |
| **Soft start and stop** | ✓ | ✓ |
| **Fan failure protection** | ✓ | ✓ |
| **Speed synchronous/asynchronous 0-10V control** | ✓ | ✓ |
| **Electric heater** | | |
| **On/Off / PWM control** | ✓ | |
| **Manual protection** | ✓ | |
| **Overheat protection** (additional protection software) | ✓ | ✓ |
| **Water heater** | | |
| **Pulse-width modulation (PWM) valve actuator control** | | ✓ |
| **Protection using temperature sensor** | | ✓ |
| **Protection using termostat (NC)** | | ✓ |
| **Circulation pump control** | | ✓ |
| **Return water temperature sensor** | ✓ | ✓ |
| **DX cooler** | | |
| **Control On/Off** | ✓ | ✓ |
| **Water cooler** | | |
| **Pulse-width modulation (PWM) valve actuator control** | | ✓ |
| **Control with three-positional valve actuator** | ✓ | ✓ |
| **Bypass damper** | | |
| **3-position actuator control** | ✓ | ✓ |
| **Filter pollution monitoring** | | |
| **By pressure switch (NC)** | ✓ | ✓ |
| **By filter timer** | ✓ | ✓ |
| **Sensors** | | |
| **Supply air temperature sensor** | ✓ | ✓ |
| **Fresh air temperature sensor** | ✓ | ✓ |
| **Exhaust air temperature sensor** | ✓ | ✓ |
| **Extract air temperature sensor** | ✓ | ✓ |
| **Emergency signals and inputs/outputs** | | |
| **Fire protection input** | ✓ | ✓ |
| **Working indication output** | ✓ | ✓ |
| **Alarm indication output** | ✓ | ✓ |
| **Remote controllers** | | |
| **Stouch** | ✓ | ✓ |
| **Flex** | ✓ | ✓ |
| **Ptouch** | ✓ | ✓ |
| **MB-Gateway** | ✓ | ✓ |

| | | | |
|---|---|---|---|
| 1 | With FLEX TEST remote controler | 2 | Only sensors |