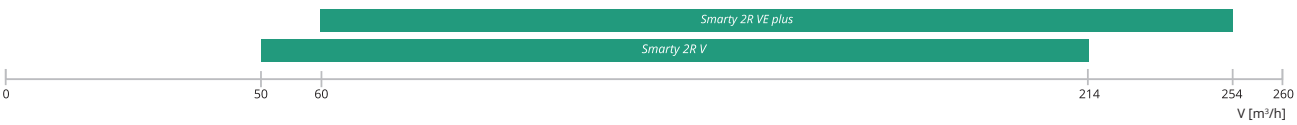
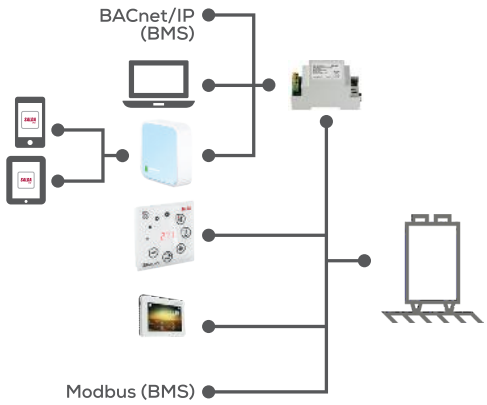
SMARTY R

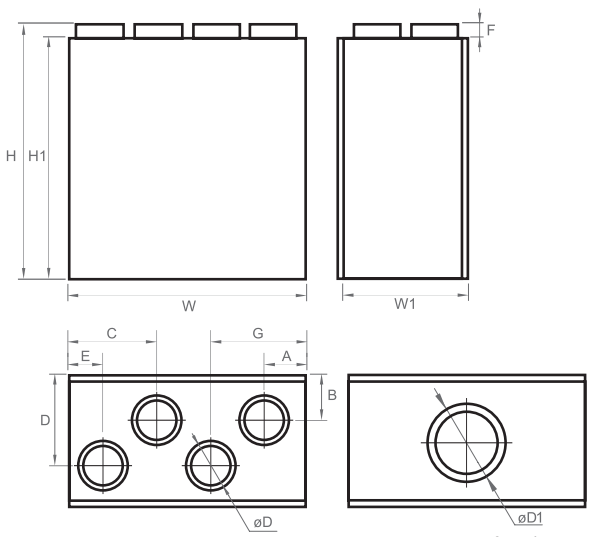


Application	Apartments, private houses, villas and other heated premises.
Description	Smarty RV is a heat recovery unit with a high-efficiency rotary heat exchanger designed for placement in tight spaces: kitchen cabinets, boiler rooms, etc. The unit is characteristic of high overall energy savings due to the highly efficient heat recovery (up to 77%), silent and eco-nomical EC fans, and effective low-pressure-drop filters. Several versions of cooker hoods are available as an accessory for the kitchen extraction. An integrated electrical heater helps maintaining comfortable air temperature on the premises. Smarty RV is fully equipped with demand-control ready control board. CO2 or RH, and presence sensors can be connected for automatic climate control. Rotor fault indicators are included in every AHU. The supplied units have been tested and prepared for installation.
Features	› Designed for placement in a space fit for a kitchen cabinet; › Cooker hood connection; › EC fans and rotary heat exchanger; › Easy maintenance: most of the components can be removed without using tools; › 2 versions: standard and more powerful “Plus”; › MCB tool for multiple installations.
Construction	**Top class casing:** › Frameless structure consisting of double-skinned steel, with powder-coated paint (corrosion resistant class – C3), panels; › Thermal and acoustic insulation: Mineral wool 20 mm. **Heat exchanger:** › Rotary, aluminium; › Rotor gap size: 1.5 mm; › Rotor fault indicator; › Efficiency up to 77% (EU 1253/2014). **Fans:** › EC type; › Specific fan input (SPI) from 0.47 W/(m³/h); › Long lifetime – fans last for more than 10 years[1]. [1]~40000 working hours. **Integrated electrical heater.** **Filters:** › Smarty 2R VE: panel filters; ePM10 55%/ePM10 55% (M5/M5); › Smarty 2R Ve Plus: pocket filters ePM10 65%/ePM10 65% (M5/M5); › Effective filtration of dust, pollens, moulds, spores. **Integrated control board:** › Control of external components : dampers etc. › Connection for demand control sensors (CO2 or RH, presence); › Smart el. heater control on/off; › Extensive control options: 3 manual modes, boost, calendar, night cooling, etc. **Air temperature sensors:** › Extract, Supply, Outdoor. **Cooker hood connection:** › d125.

Control options



CONSTRUCTION



View from buttom

	Dimensions [mm]												
Unit	**A**	**B**	**C**	**D**	**E**	**G**	**W**	**W1**	**H**	**H1**	**øD**	**øD1**	**F**
Smarty 2R VE	100	98	224	214	84	237	598	320	653	620	125	175	30
Smarty 2R VE plus	100	98	224	214	84	237	598	320	653	620	125	175	30

	Optional accessories						
Unit	**Stouch SA-Control MB-Gateway TL-WR802N**	**EKA NV PH**	**AP NP**	**ALU**	**S-RC02-F2 S-KFF-U S-RFF-U-D-F2 S-KCO2**	**RSK SKG-A**	**MUTE**
Smarty 2R VE	+	125	125	125	+	125	125
Smarty 2R VE plus	+	125	125	125	+	125	125

ACCESSORIES

Network Module

MB-Gateway

Nano Router

TL-WR802N

Remote controller

Stouch

Control panel

SA-Control

Humidity sensor

S-KFF-U

S-KFF-U-D-F2

CO2 sensor

S-RC02-F2

S-RC02

Cooker hood

White
Stainless steel
Slimline

Front cover

Stainless steel
White

Silencers

MUTE 125x300
MUTE 125x600
MUTE 125x900
MUTE 125x1200

Panel filter

MPL (2xePM10 55%)

Panel filter

MPL (2xePM1 70%)

Pocket filters

FMK (2xCoarse 65%)

Front coover mounting bracket

Mounting bracket

Actuator for air dampers

CM230-F-L

Damper

SKG-A

Smarty 2R VE

A
B

49 dB

201 m³/h

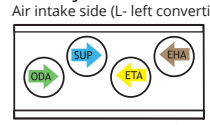
EUROVENT CERTIFIED PERFORMANCE
Residential Air Handling Unit N°. : 19.06.016
Range: SMARTY
www.eurovent-certification.com

		VER	VEL
Ordering code		GAGSMARTY 1975_0102A	GAGSMARTY 1981_0102A
Electrical data			
Fans	[p/VAC/Hz]	~1/230/50	
exhaust	[kW/A]	0.07/0.6	
supply	[kW/A]	0.07/0.6	
Electrical preheater integrated	[kW/A]	Optional on duct	
Electrical heater	[kW/A]	0.6/2,61	
Max.power consumption	[kW/A]	0.75 /3.91	
Power connection	[p/VAC/Hz]	~1/230/50	
Control board		MCB basic	
Ecodesign data			
Energy efficiency class	Time control	B	B
	Local demand control	A	A
Thermal efficiency of heat recovery	[%]	76,6	
Sound power level (Lwa)	[dB(A)]	49	
SPI	[W/(m³/h)]	0.47	
Maximum internal/external leakage rates	[%]	3.0/2.0	
ErP compliance		2018	
Other data			
Filters	Supply/Extract	ePM10 55%/ePM10 55% (M5/M5)	
Housing insulation, mineral wool	[mm]	20	
Colour	white	RAL 9016	
Weight (net, without packing)	[kg]	36	
Housing protection class		IP 34	
Operation		Indoors only (heated premises)	

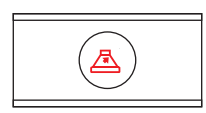
* - ePM1 70% (F7) filter is available as an accessory

Without frost protection	Extract air
-23°C+40°C/ 90%	+15°C/+40°C/60%

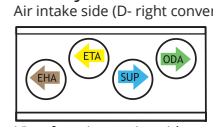
Smarty 2R VEL
Air intake side (L- left convertible)



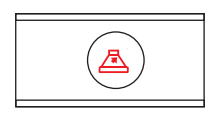
View from inspection side



Smarty 2R VER
Air intake side (D- right convertible)



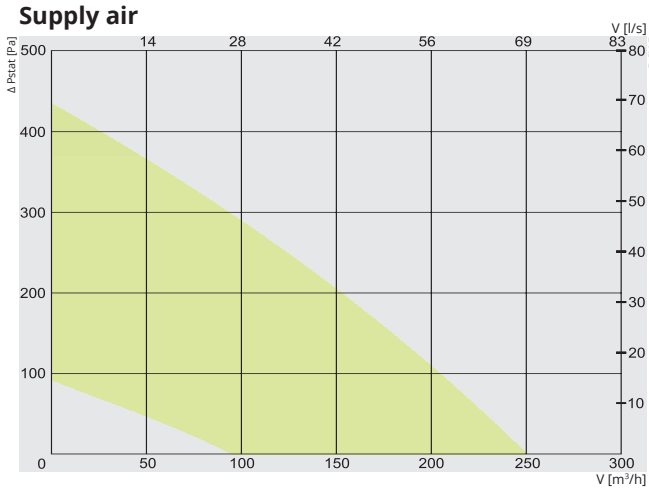
View from inspection side



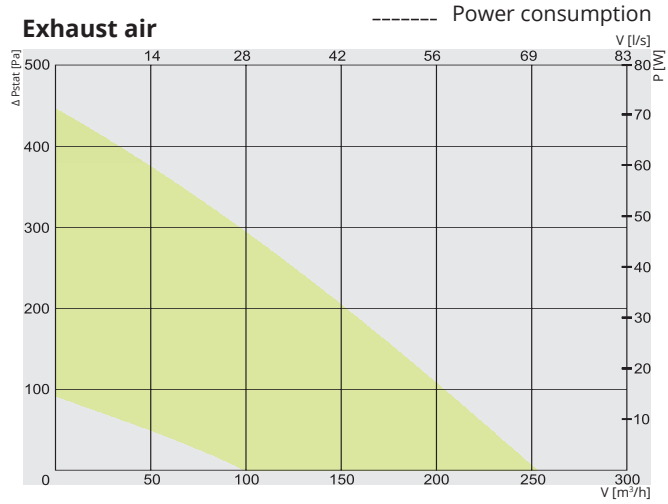
EHA Exhaust air ETA Extract air ODA Outdoor air SUP Supply air Kitchen hood

Performance
Power consumption

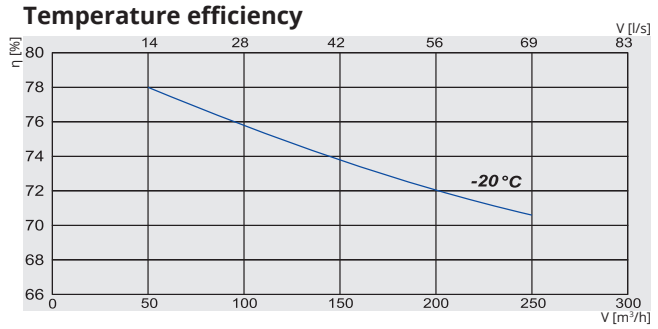
Supply air



Exhaust air



Temperature efficiency



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

Smarty 2R VE	L_{wa} total, dB(A)	L_{WA}, dB(A)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Outdoor	62	22	54	61	48	41	27	20	14
Supply	70	29	61	68	59	60	55	49	43
Extract	62	22	54	61	49	36	28	19	14
Exhaust	69	28	60	67	58	58	52	48	41
Surround	49	10	40	48	36	31	30	30	29

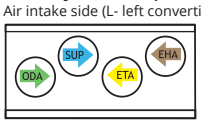
Measured at 140 m³/h, 50 Pa

Smarty 2R VE plus

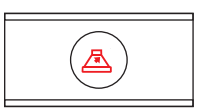
		VER	VEL
Ordering code		GAGSMARTY 1985_0106A	GAGSMARTY 1984_0106A
Electrical data			
Fans	[p/VAC/Hz]	~1/230/50	
exhaust	[kW/A]	0.084/ 0.75	
supply	[kW/A]	0.084/ 0.75	
Electrical preheater integrated	[kW/A]	Optional on duct	
Electrical heater	[kW/A]	0.6/2,61	
Max.power consumption	[kW/A]	0.78 /4.13	
Power connection	[p/VAC/Hz]	~1/230/50	
Control board		MCB basic	
Ecodesign data			
Energy efficiency class	Time control	B	B
	Local demand control	A	A
Thermal efficiency of heat recovery	[%]	75.9	
Sound power level (Lwa)	[dB(A)]	48	
SPI	[W/(m³/h)]	0.5	
Maximum internal/external leakage rates	[%]	3.0/2.0	
ErP compliance		2018	
Other data			
Filters	Supply/Extract	ePM10 65%/ePM10 65% (M5/M5)	
Housing insulation, mineral wool	[mm]	20	
Colour	white	RAL 9016	
Weight (net, without packing)	[kg]	36	
Housing protection class		IP 34	
Operation		Indoors only (heated premises)	

Without frost protection	Extract air
-23°C+40°C/ 90%	+15°C/+40°C/60%

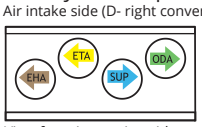
Smarty 2R VEL plus
Air intake side (L- left convertible)



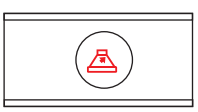
View from inspection side



Smarty 2R VER plus
Air intake side (D- right convertible)



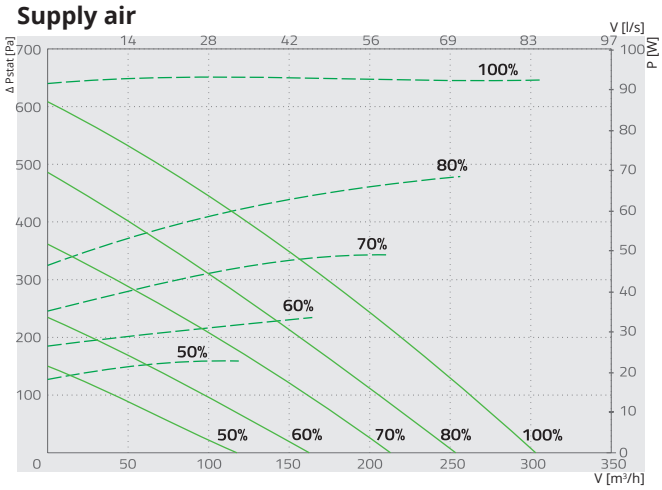
View from inspection side



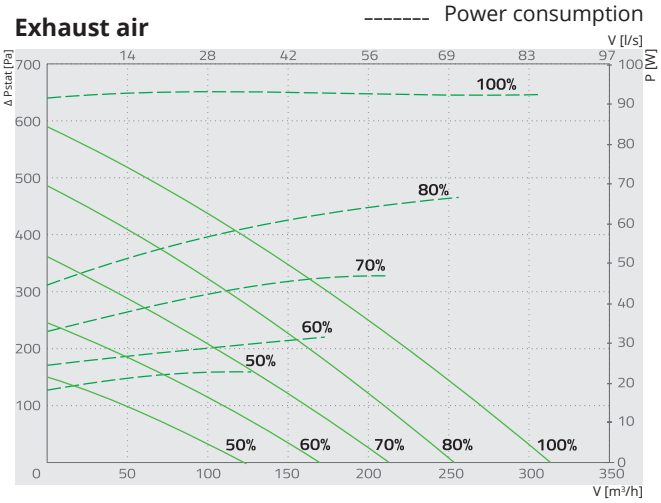
EHA Exhaust air | ETA Extract air | ODA Outdoor air | SUP Supply air | Kitchen hood

Performance
Power consumption

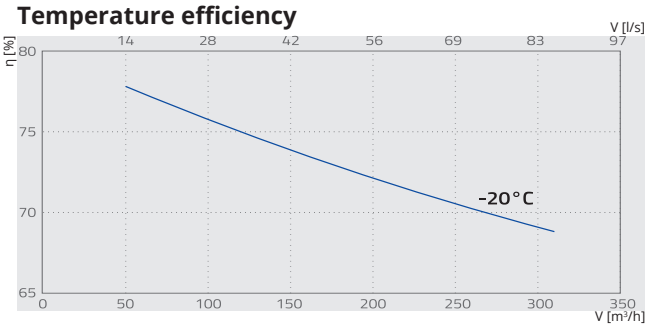
Supply air



Exhaust air



Temperature efficiency

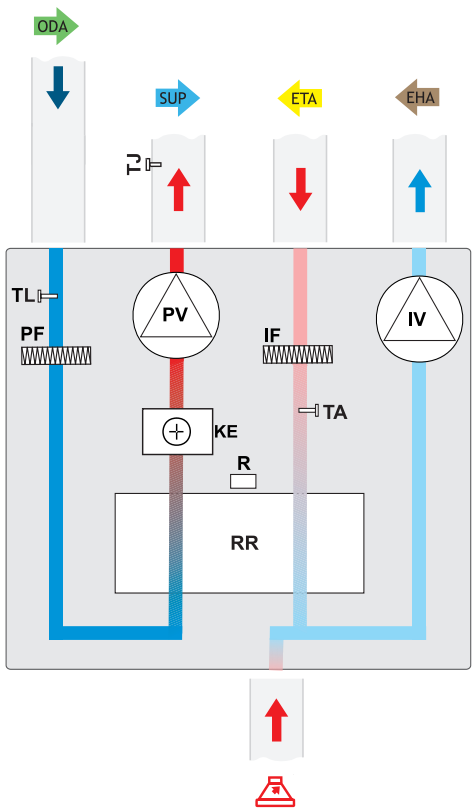


Temperature efficiency (balanced mass flow):
Extract air = 20°C/60%RH | Outdoor air = -20°C

Smarty 2R VE plus	L_{wa} total, dB(A)	L_{WA} dB(A) 63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
Outdoor	60	18	50	58	55	44	28	16	12
Supply	66	23	55	63	61	56	55	48	40
Extract	60	19	50	58	54	40	35	24	17
Exhaust	66	23	55	62	60	56	53	46	36
Surround	48	3	34	44	45	32	31	30	29

Measured at 180 m³/h, 50 Pa

Smarty 2R VE / 2R VE plus (vertical) **with electrical heater**



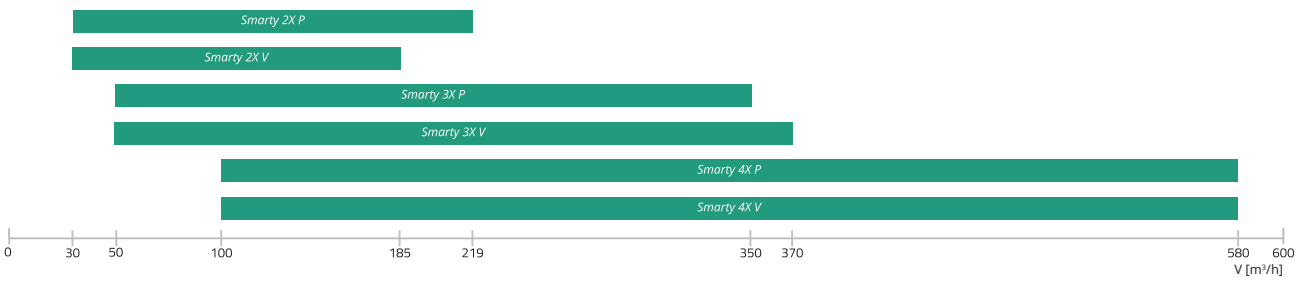
TL - outdoor air temperature sensor
PF - filter for supply air
PV - supply air fan
KE - electrical heater
R - motor of rotor heat exchanger
RR - rotary heat exchanger
TJ - supply air temperature sensor
IF - filter for extract air
TA - extract air temperature sensor
IV - exhaust air fan

FUNCTIONS	
Descriptions of the functions	MCB basic **Smarty range**
Functions	
Date and time settings	+
System modes for easy and-user friedly control: Stand-by, Building protection, Economy, Comfort. (Specific air flows are used in the system and they are dedicated to each type of mode.)	+
BOOST function (Fans operate at highest speed)	+
Cold/heat recovery	+
Fire place function	+
Winter/summer mode	+
System monitoring	o
Digital input confguration	+
Event register (storing up to 50 entries)	+
Dryness protection	o
Manual components control	o
Weekly schedule	+
Holiday schedule	+
CO_2 level indication and reduction function	o
Night cooling function	+
Relative humidity (RH) level indication and reduction function	o
Supply air temperature control according to the extract air sensor	+
Manual components control	o
Reset to factory defaults	+
Functional units	
Fans	
Speed synchronous/asynchronous 0-10V control	+
Protection by RPM	+
Electric heater	
On/off control	+
Air dampers	
Outdoor air dampers control	+
Filters clogging monitoring	
Air filters timer	+
Sensors	
Supply air temperature sensor	+
Outdoor air temperature sensor	+
Extract air temperature sensor	+
Remote controllers	
S-Touch	x
Flex MCB	x
SA Control	x
MB Gateway	x
Building management system	
Modbus	+
BACnet/IP	o

o	**Required additional components: CO2 and RH sensors, switches, etc.**
+	**Standard feature (the number of features depends on the ventilation unit in which the automatics are used); to be confgured through BMS network or remote control panel**
x	**Remote control panels**

RIS EKO

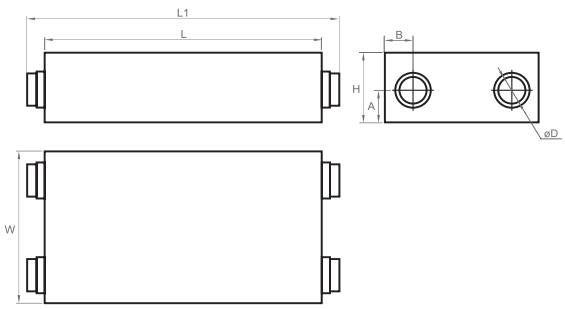
A1



Application	Apartments, private houses, villas, passive houses.
Description	Residential air handling units Smarty X with EPP casing bears the highest energy efficiency (heat recovery rate – up to 94%) and the user-friendly control. Universal positioning of Smarty XP units and the lowest height enables to find a place even in tight spaces. Due to compact sizing Smarty 2XV ideally fits in a place of the kitchen cabinet and Smarty 3XV/4XV above ordinary washing machine. Every Smarty unit is tested for the airtightness in order to assure exceptional quality of assembly. All the internal components (fans, actuators, heat exchanger) are made by top European producers, what guarantees long service life. Smart control board enables to control all the ventilation system components. The main features: › A+/A class efficiency (depends on the unit); › EC fans with high efficiency counter-flow heat exchanger; › High quality: A1 class airtightness; › Smart and user friendly handling by SALDA AIR mobile app (via optional MB-Gateway); › Certified by Passivhaus institute (Smarty 2X and 3X).
Construction features	High class casing: › 1 layer of galvanized steel and an EPP of 20-30 mm. › The external side is powder coated – corrosion class **C3**. Plastic plate heat exchanger: › Efficiency up to **91%** (EU 1253/2014) / **85%** (Passivhaus). EC fans: › Specific fan input (SPI) from 0.27 W/(m³/h). › Long lifetime – fans last for more than 10 years. Motorized by-pass: › 100% summer bypass (night cooling). › Integrated preheater (only Smarty 2XV/3XV/4XV version 1.1). Filters: › Low pressure drop G4/G4 filters (effective filtration of dust, pollens). › Optional supply F7 filter for more efficient filtration (molds, spores, microscopic allergens, fine particles, bacteria). Integrated control board: › Control of external components: pre-heater, heater, dampers, etc. › Connection for demand control sensors (CO2, RH, presence). › Intelligent frost protection. › Smart el.heater control 0-10V. › Extensive control options: 3 manual modes, boost, calendar, night cooling, fireplace mode and etc.

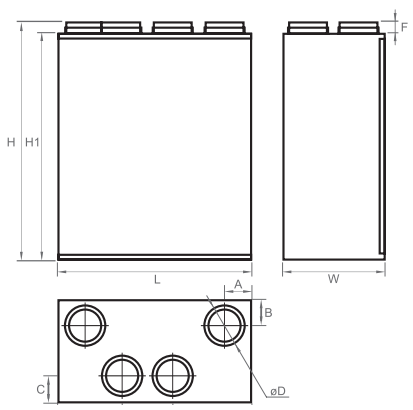
CONSTRUCTION

Smarty 2X P - 4X P

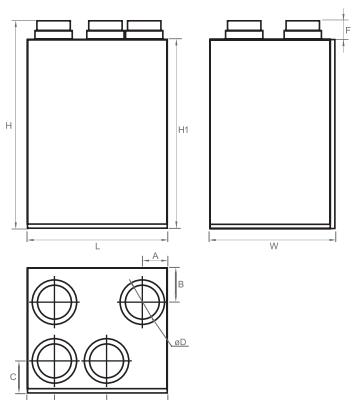


	Dimensions [mm]					
Unit	**L**	**L1**	**w**	**H**	**H1**	**øD**
Smarty 2X P	1009	1043	590	250	113	125/160
Smarty 3X P	1225	1381,5	685,5	320	150	150/160
Smarty 4X P	1225	1381,5	685,5	324	150	150/160

Smarty 2X V

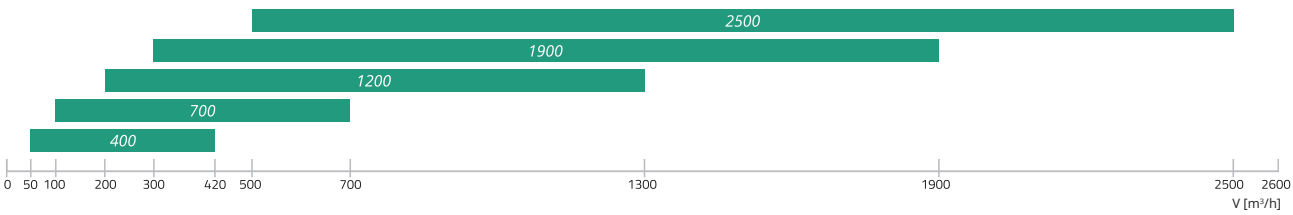


Smarty 3X V - 4X V



	Dimensions [mm]						
Unit	**L**	**W**	**H**	**H1**	**H2**	**F**	**øD**
Smarty 2X V	595	316	732	697	-	35	125/100
Smarty 3X V	599	538	900	810	-	80	150/160
Smarty 4X V	599	533	900,5	810	-	80	150/160
Smarty 4X V	599	533	900,5	810	-	80	150/160

RIS P EKO

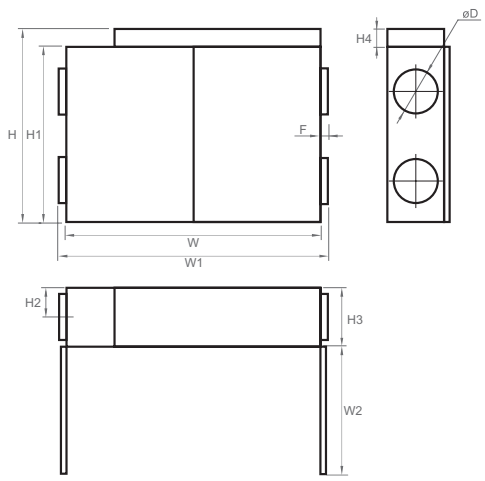


Application	Ventilation of houses, offices or other heated premises (classrooms, apartments, conference rooms, etc.)
Description	RIS P EKO 3.0 is a range of heat recovery units with high-efficiency counter-flow heat exchangers and low height. The units are designed for mounting under ceilings in order to save space. There are 5 sizes (airflow interval 420-2500 m³/h) with separate heaters available for different climate zones. RIS P 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, 100% motorized bypass dampers (for the 1900 and 2500 versions) and top-level of air tightness. Energy efficiency ensures full thermal comfort for passive houses, without an additional pre-heater at temperatures above -5°C. All the RIS P 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). RIS P EKO 3.0 units are service-friendly and are easy to mount. Filter pollution may be identified by timers or contamination controls (RIS 1200-2500 P EKO 3.0). All units are supplied tested and ready to install.
Remote control	Three remote control options are available: 1. Flex, Stouch or Ptouch remote controllers. 2. Building management system connections. 3. Remote control via PC MB-Gateway.
Features	› Ideal for ceiling installations. › Ready for Passive House technology: high efficiency. › Easy and quick mounting. › Water/electrical heating options. › Fully integrated plug-and-play control system.
Construction	› Frameless construction from double-skinned panels. › Acoustic and thermal wall insulation: RIS 400–2500 P EKO 3.0 – 30/50 mm. › RIS 400-700 P EKO 3.0 powder-coated white housing RAL 9016; RIS 1200–2500 P EKO 3.0 powder-coated grey housing RAL 7040. › Integrated electrical heater or optional duct-based water heater/cooler. › Low-pressure-drop filters: F7/M5. › Hinged door with locks grants easy access to internal components. › Separate compartment on the side of the unit grants quick access to the control board (plug-and-play). › Stainless steel condensate tray. › Fitted with mounting brackets. › Integrated anti-frost pressure switch (RIS 1200-2500 P EKO 3.0).

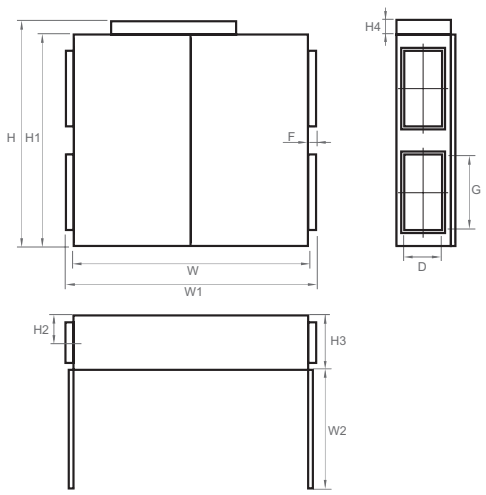
RIS 400 P E 0.9 EKO 3.0

- RIS — AHU with plate heat exchanger
- 400 — AHU size according to maximum airflow range m³/h
- P — Housing type (V - vertical, H - horizontal, P - ceiling)
- E — Heater type (E - integrated electrical heater; W - prepared for water heater)
- 0.9 — Electrical heater power in kW
- EKO — AHU with EC motors and efficient heat exchanger
- 3.0 — Equipped with new PRV V2 control board

RIS 400P EKO - RIS 700P EKO 3.0



RIS 1200P EKO - RIS 2500P EKO 3.0



	Dimensions [mm]											
Unit	**W**	**W1**	**W2**	**H**	**H1**	**H2**	**H3**	**H4**	**F**	**øD**	**G**	**D**
RIS 400PE/PW EKO 3.0	1300	1361	650	768	670	158	330	98	31	200	-	-
RIS 700PE/PW EKO 3.0	1380	1461	695	1069	970	160	350	99	40	250	-	-
RIS 1200PE/PW EKO 3.0	1550	1655	780	1497	1397	172	390	100	52	-	500	250
RIS 1900PE/PW EKO 3.0	1750	1870	710	1955	1850	194	399	105	60	-	700	300
RIS 2500PE/PW EKO 3.0	1850	1970	720	2055	1950	244	499	105	60	-	700	400

	Optional accessories												
Unit	**Flex Stouch Ptouch MB-Gateway**	**S-1141 S-RC02-F2 S-KFF-U**	**SSB** *Heating*	**SSB** *Cooling*	**SP** *Supply*	**SP** *Exhaust*	**SVS**	**SSK SKS**	**RMG**	**VVP/ VXP**	**SKG AKS AP**	**AVS AVA EKA NV PH**	**EKS NV PH**
RIS 400PE EKO 3.0	+	+	-	81	CM230-1-F-L	CM230-1-F-L	-	-	-	-	200	200	-
RIS 400PW EKO 3.0	+	+	61	81	TF230	CM230-1-F-L	-	-	+	+	200	200	-
RIS 700PE EKO 3.0	+	+	-	81	CM230-1-F-L	CM230-1-F-L	-	-	-	-	250	250	-
RIS 700PW EKO 3.0	+	+	61	81	TF230	CM230-1-F-L	-	-	+	+	250	250	-
RIS 1200PE EKO 3.0	+	+	-	-	LM230A-TP	LM230A-TP	-	500x250	-	-	-	-	500x250
RIS 1200PW EKO 3.0	+	+	61	-	NFA	LM230A-TP	500x250	500x250	+	+	-	-	500x250
RIS 1900PE EKO 3.0	+	+	-	-	LM230A-TP	LM230A-TP	-	700x400*	-	-	-	-	700x400*
RIS 1900PW EKO 3.0	+	+	61	-	NFA	LM230A-TP	700x400*	700x400*	+	+	-	-	700x400*
RIS 2500PE EKO 3.0	+	+	-	-	LM230A-TP	LM230A-TP	-	700x400	-	-	-	-	700x400
RIS 2500PW EKO 3.0	+	+	61	-	NFA	LM230A-TP	700x400	700x400	+	+	-	-	700x400

*necessary to order flange adapter STP 700x400-700x300

Accessories

Network Module

MB-Gateway p. 178

Remote controller

Ptouch p. 175

Control panel

FLEX p. 177

Remote controller

Stouch p. 176

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

Water heater coil

SVS p. 190

Damper for rectangular duct

SSK p. 213

Rectangular duct silencer

SKS p. 215

Shut-off damper

SKG p. 212

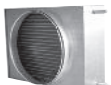
Circular duct silencer

AKS p. 216

Mounting clamps

AP p. 219

Heating coil



AVS p. 185

Circular duct water cooler

AVA p. 193

Electrical duct pre-heater

EKS NV PH p. 203

Electrical duct pre-heater

EKA NV PH p.201

Mixing point

RMG p. 196

2 and 3 way valves

VVP/VXP p. 197

Flange adapter

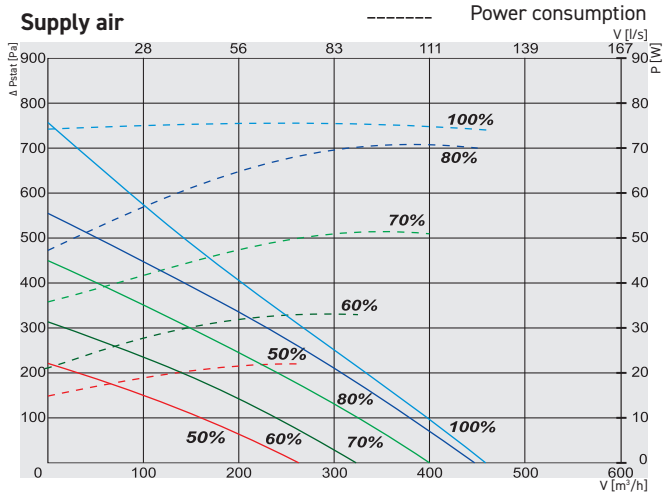
STP p. 220

RIS P EKO

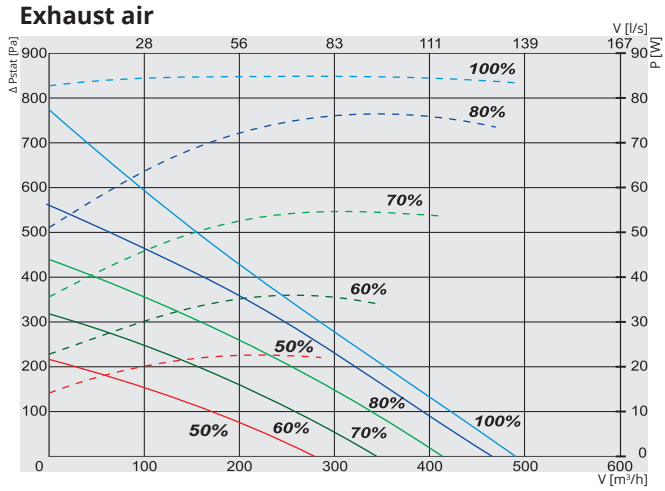
RIS 400PE EKO 3.0

Performance
Power consumption

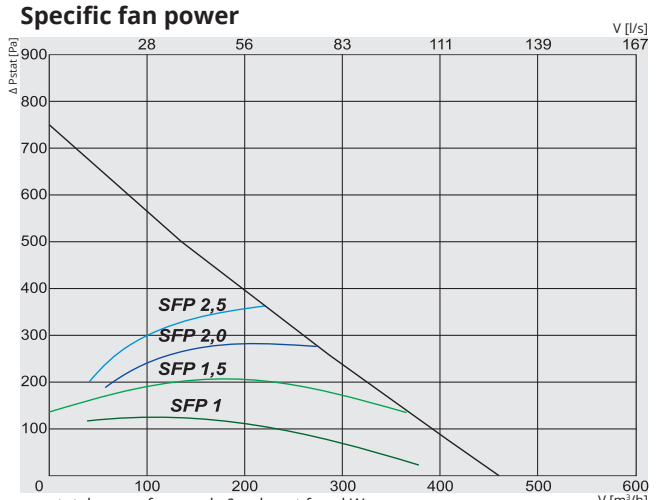
Supply air



Exhaust air

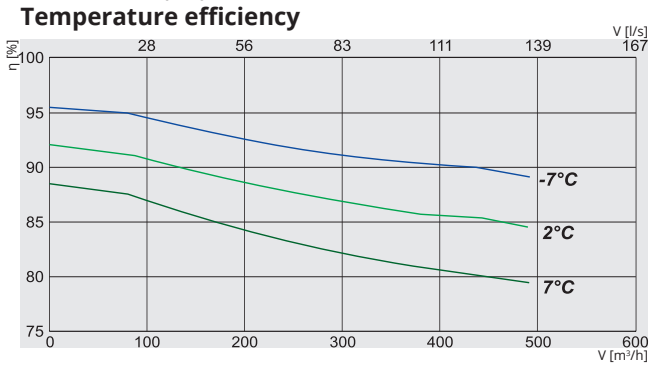


Specific fan power

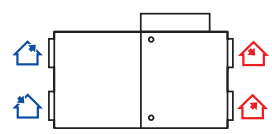


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 400PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.		Version			
GAGRIS1747_0017A	400PE 0.9 EKO 3.0	Integrated electrical heater			
GAGRIS1746_0017A	400PE 1.6 EKO 3.0	Integrated electrical heater			
GAGRIS1692_0016A	400PE 3.0 EKO 3.0	Integrated electrical heater			

			0.9 EKO 3.0	1.6 EKO 3.0	3.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~1, 230
		[kW]	0,9	1,6	3,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230	
exhaust	power/current	[kW/A]		0,085/0,73	
	fan speed	[min⁻¹]		3200	
supply	power/current	[kW/A]		0,085/0,73	
	fan speed	[min⁻¹]		3200	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	1,07/5,50	1,77/8,50	3,17/14,50
Control board				PRV V2	
Filter class	exhaust/supply			M5/F7	
Housing insulation, mineral wool		[mm]		30	
Colour	RAL	white		9016	
Weight (net, without packing)		[kg]		74	
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.

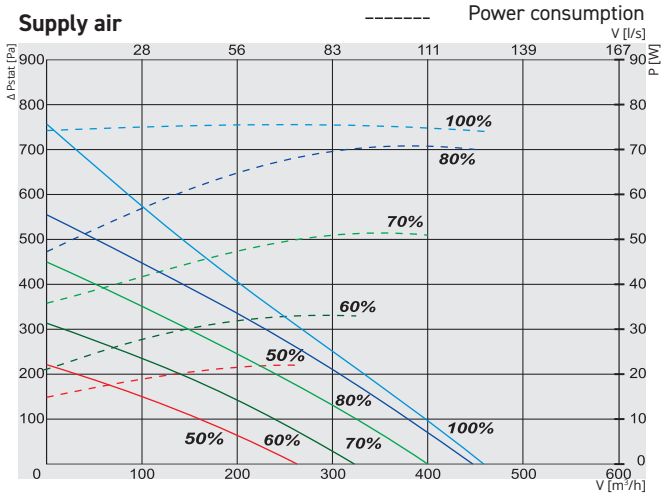
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

RIS 400PE 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	67	54	59	64	58	57	54	47
Extract	58	48	50	53	51	48	46	41
Surrounding	51	40	43	46	45	40	39	36
Measured at 395 m³/h, 100 Pa								

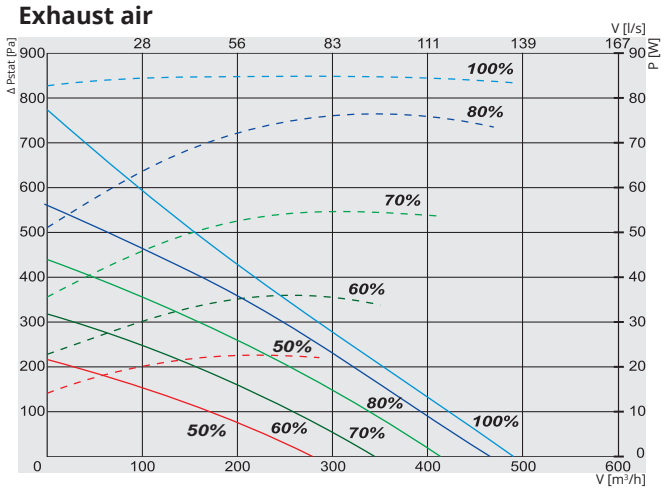
RIS 400PW EKO 3.0

Performance
Power consumption

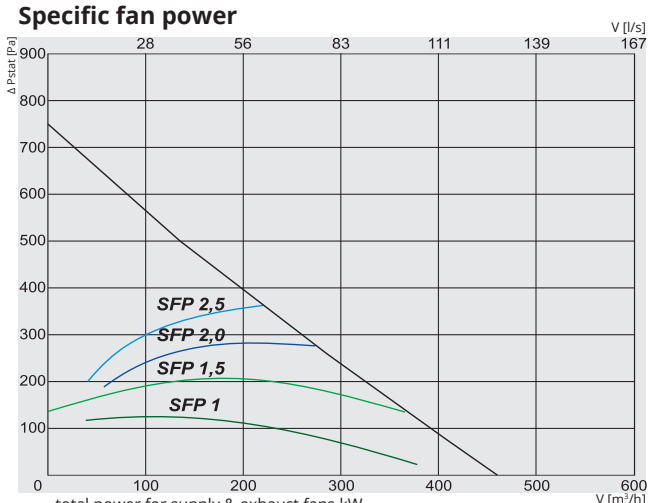
Supply air



Exhaust air

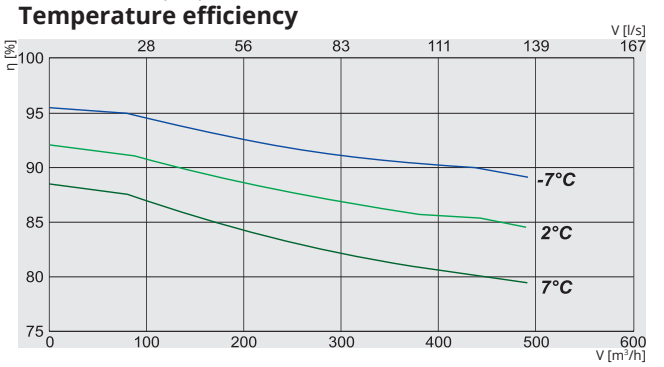


Specific fan power

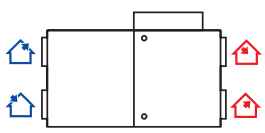


SFP= $\frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3\text{/h}} \times 3600$

Temperature efficiency



RIS 400PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.	Version
GAGRIS1748_0019A	400PW EKO 3.0 Optional water heater

			400PW EKO 3.0
Water heater (optional)			AVS 200
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,085/0,73
	fan speed	[min⁻¹]	3200
supply	power/current	[kW/A]	0,085/0,73
	fan speed	[min⁻¹]	3200
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,17/1,50
Control board			PRV V2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	73
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

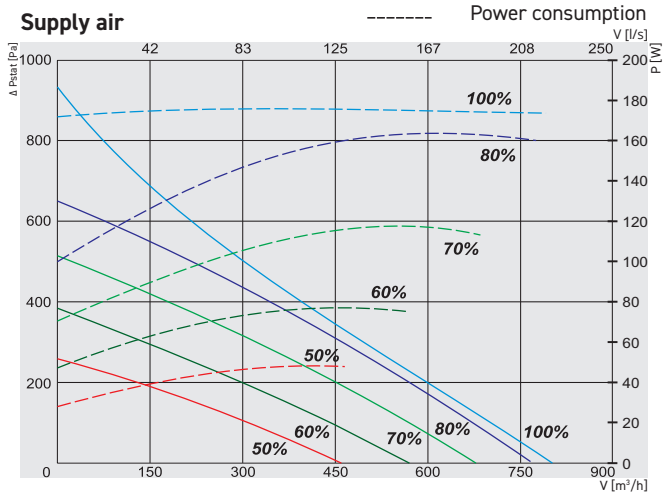
RIS 400PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	67	54	59	64	58	57	54	47
Extract	58	48	50	53	51	48	46	41
Surrounding	51	40	43	46	45	40	39	36
Measured at 395 m³/h, 100 Pa								

RIS P EKO

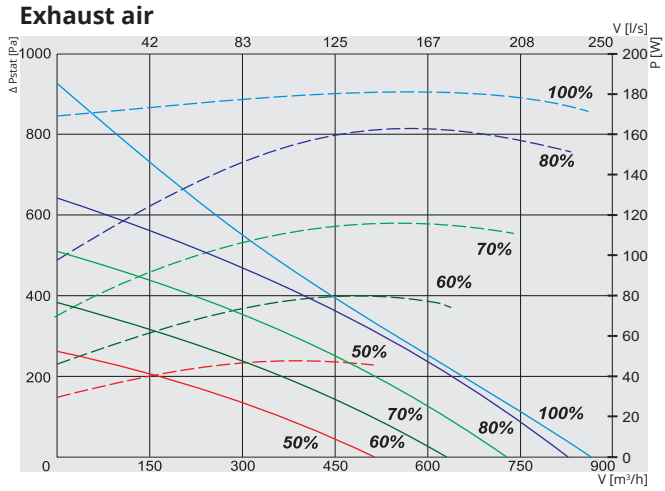
RIS 700PE EKO 3.0

Performance
Power consumption

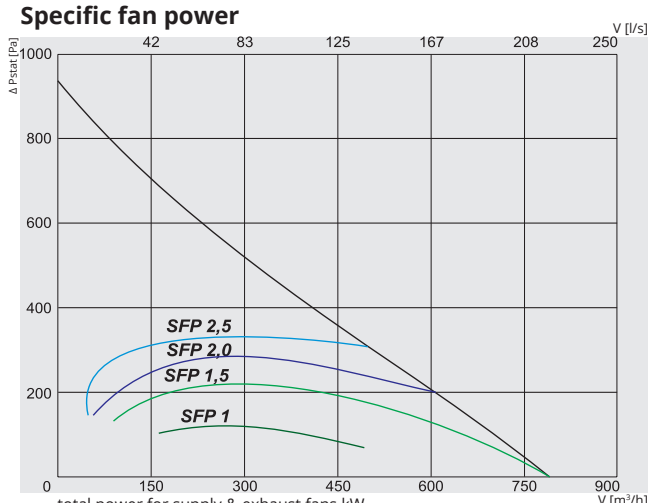
Supply air



Exhaust air

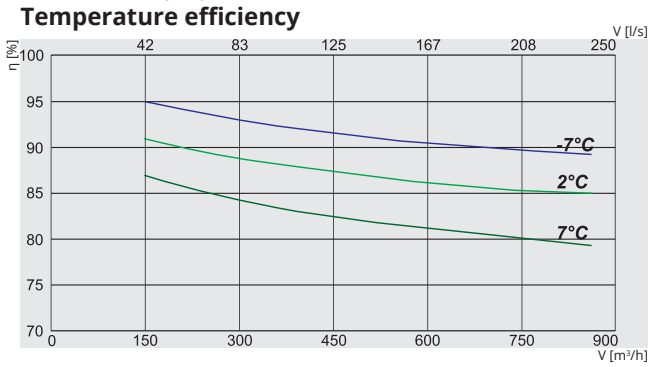


Specific fan power

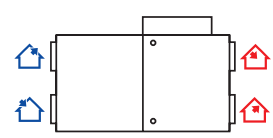


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 700PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.		Version
GAGRIS1737_0008A	700PE 1.2 EKO 3.0	Integrated electrical heater
GAGRIS1736_0007A	700PE 3.0 EKO 3.0	Integrated electrical heater
GAGRIS1693_0005B	700PE 4.5 EKO 3.0	Integrated electrical heater

			1.2 EKO 3.0	3.0 EKO 3.0	4.5 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~1, 230	~3, 400
		[kW]	1,2	3,0	4,5
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		[kW/A]	1,54/8,34	3,34/15,84	4,84/9,3
Control board				PRV V2	
Filter class	exhaust/supply			M5/F7	
Housing insulation, mineral wool		[mm]		30	
Colour	RAL	white		9016	
Weight (net, without packing)		[kg]	103,5	104	104,5
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.

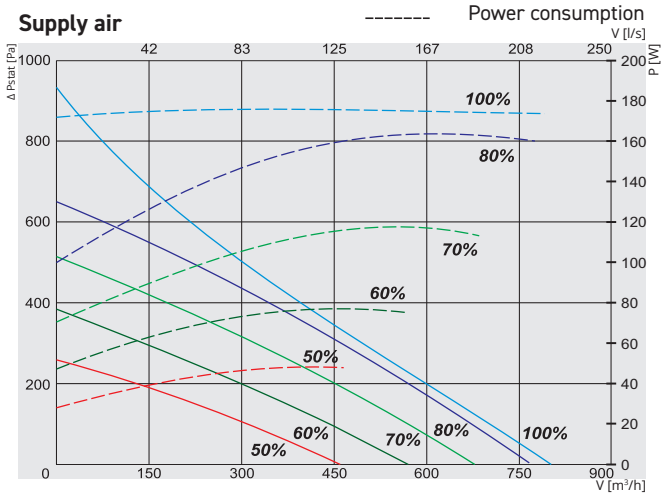
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

RIS 700PE 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	64	66	68	70	66	60	59
Extract	62	53	55	57	56	52	49	45
Surrounding	56	45	47	50	50	47	43	42
Measured at 700 m³/h, 100 Pa								

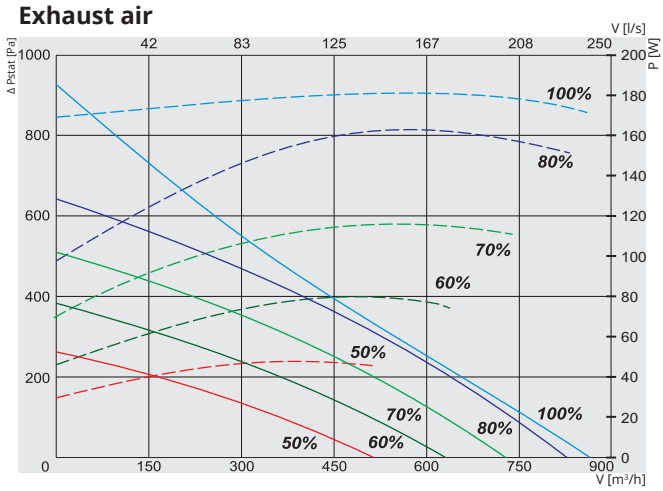
RIS 700PW EKO 3.0

Performance
Power consumption

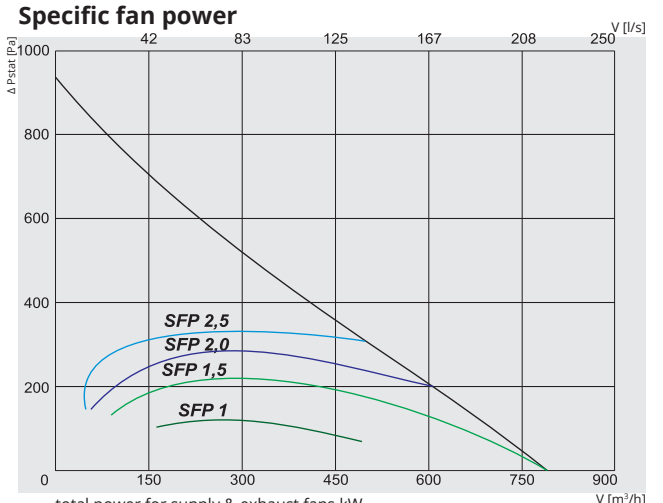
Supply air



Exhaust air

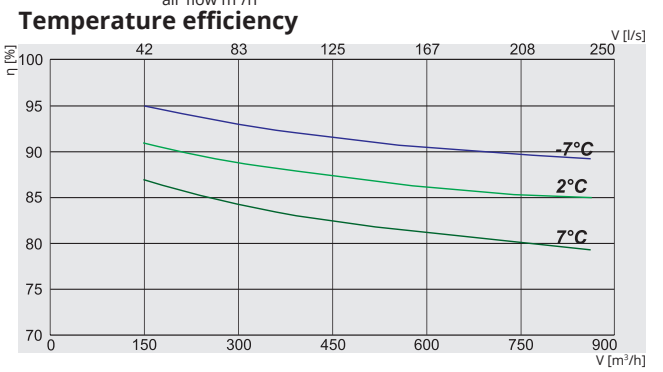


Specific fan power

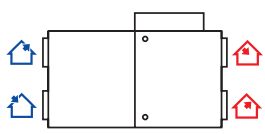


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 700PW EKO 3.0



View from inspection side

Exhaust air Extract air Outdoor air Supply air

Article No.		Version
GAGRIS1738_0009A	700PW EKO 3.0	Optional water heater

			700PW EKO 3.0
Water heater (optional)			AVS 250
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		[kW/A]	0,34/2,84
Control board			PRV V2
Filter class	exhaust/supply		M5/F7
Housing insulation, mineral wool		[mm]	30
Colour	RAL	white	9016
Weight (net, without packing)		[kg]	103
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

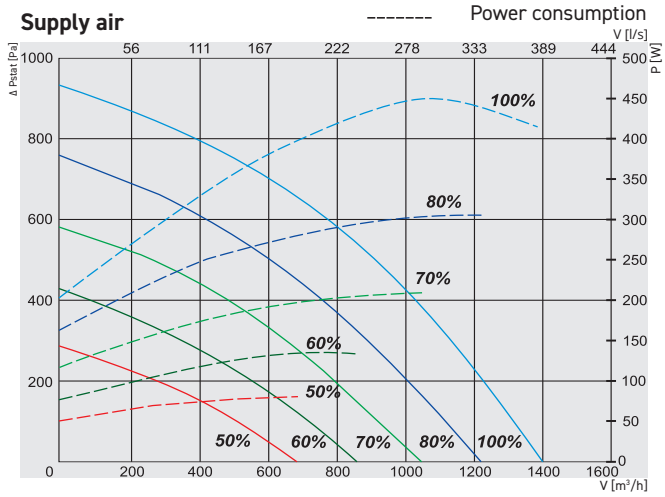
RIS 700PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	75	64	66	68	70	66	60	59
Extract	62	53	55	57	56	52	49	45
Surrounding	56	45	47	50	50	47	43	42
Measured at 700 m³/h, 100 Pa								

RIS P EKO

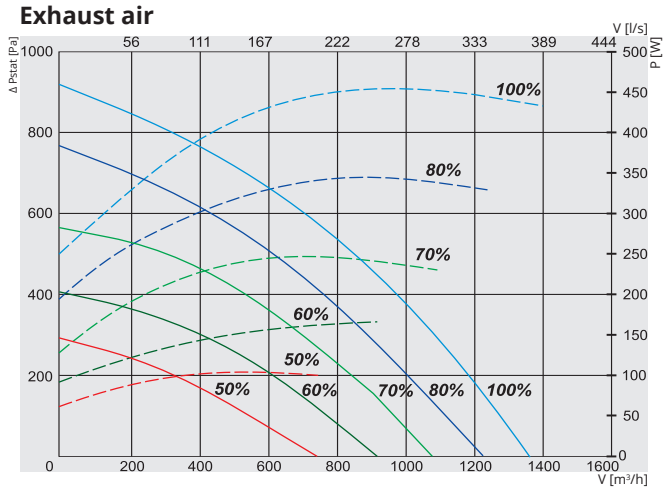
RIS 1200PE EKO 3.0

Performance
Power consumption

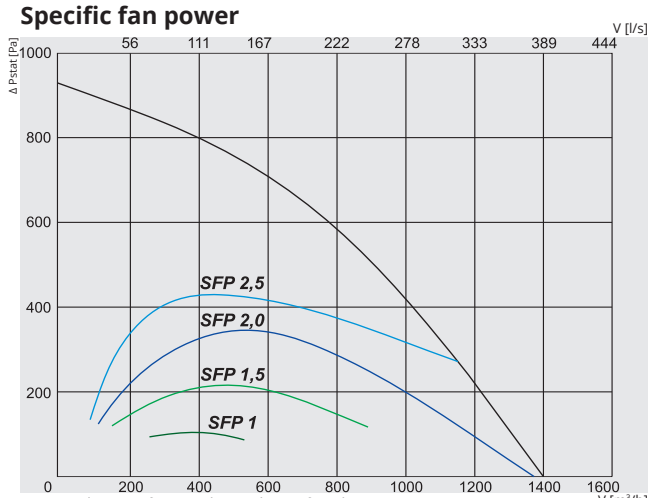
Supply air



Exhaust air

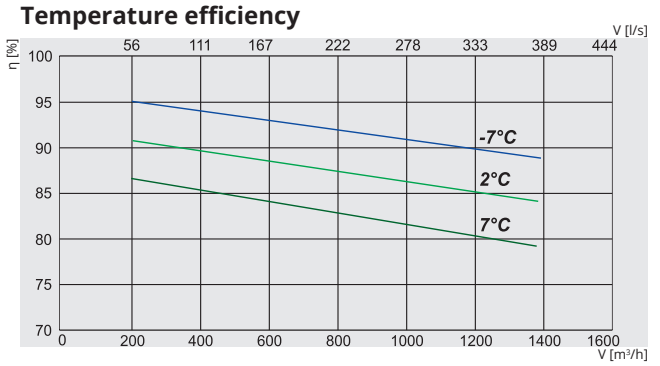


Specific fan power

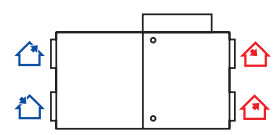


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3\text{/h}} \times 3600$$

Temperature efficiency



RIS 1200PE EKO 3.0



View from inspection side

Exhaust air Extract air Outdoor air Supply air

Article No.		Version
GAGRIS1744_0022A	1200PE 3.0 EKO 3.0	Integrated electrical heater
GAGRIS1745_0021B	1200PE 6.0 EKO 3.0	Integrated electrical heater
GAGRIS1701_0020B	1200PE 9.0 EKO 3.0	Integrated electrical heater

			3.0 EKO 3.0	6.0 EKO 3.0	9.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~3, 400
		[kW]	3,0	6,0	9,0
EC fans	phase/voltage	[50Hz/VAC]		~1,230	
exhaust	power/current	[kW/A]		0,450/2,95	
	fan speed	[min⁻¹]		3400	
supply	power/current	[kW/A]		0,370/2,5	
	fan speed	[min⁻¹]		3400	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	3,82/18,49	6,82/14,19	9,82/18,49
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]		170	
Comply with ERP				2016;2018	
Operation				indoors	
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.

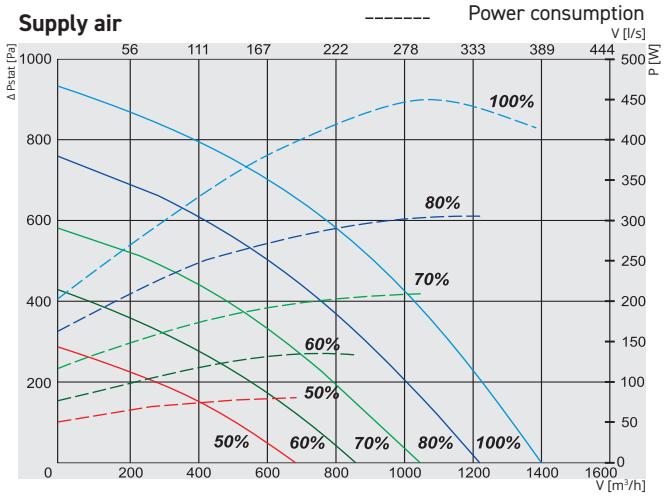
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

RIS 1200PE 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	76	58	69	71	69	67	64	56
Extract	64	52	56	61	56	50	45	42
Surrounding	56	42	48	50	49	48	46	40
Measured at 1298 m³/h, 100 Pa								

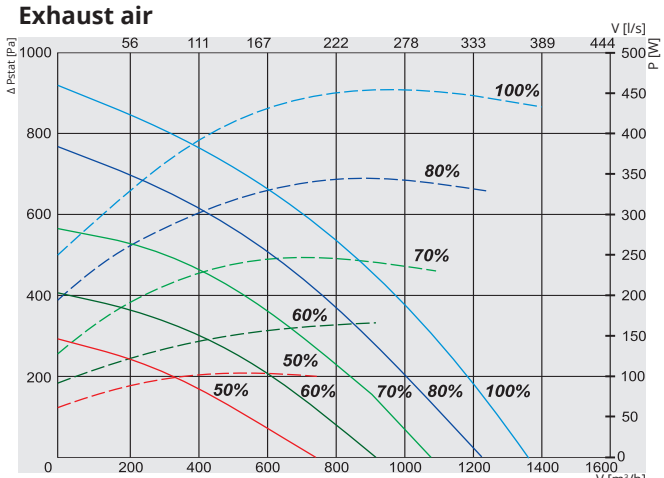
RIS 1200PW EKO 3.0

Performance
Power consumption

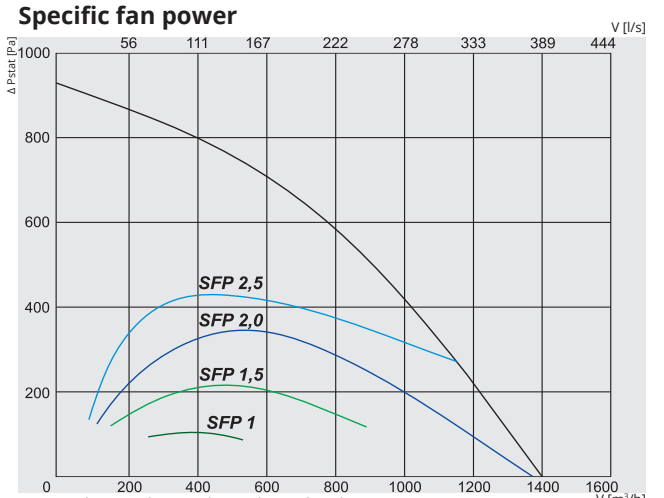
Supply air



Exhaust air

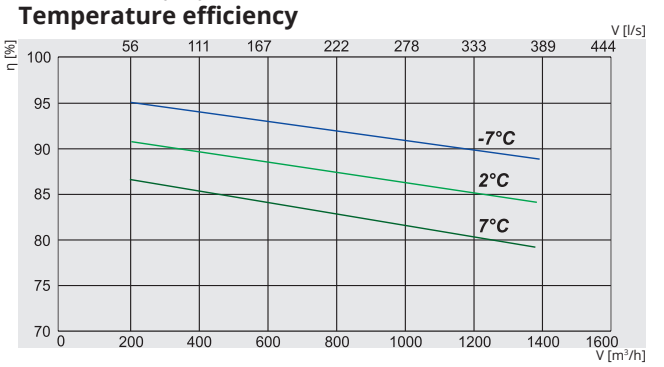


Specific fan power

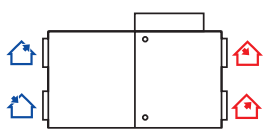


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1200PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.	Version	
GAGRIS1721_0023A	1200PW EKO 3.0	Optional water heater

			1200PW EKO 3.0
Water heater (optional)			SVS 500x250
Fans	phase/voltage	[50Hz/VAC]	~1,230
exhaust	power/current	[kW/A]	0,450/2,95
	fan speed	[min^{-1}]	3400
supply	power/current	[kW/A]	0,370/2,5
	fan speed	[min^{-1}]	3400
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,82/5,49
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]	170
Comply with ERP			2016;2018
Operation			indoors
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.

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

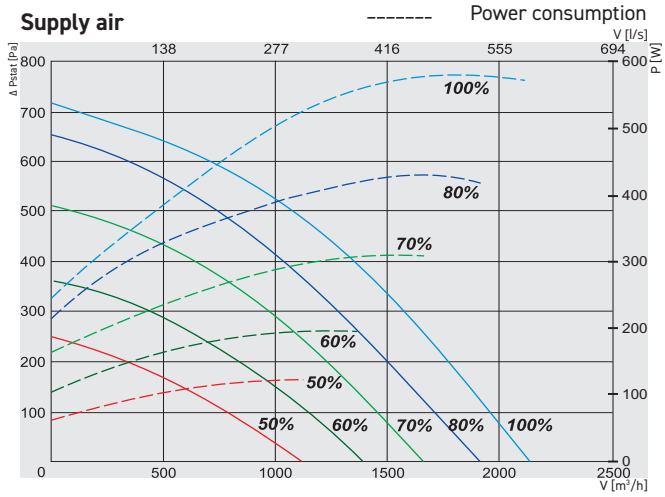
RIS 1200PE EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	76	58	69	71	69	67	64	56
Extract	64	52	56	61	56	50	45	42
Surrounding	56	42	48	50	49	48	46	40
Measured at 1298 m³/h, 100 Pa								

RIS P EKO

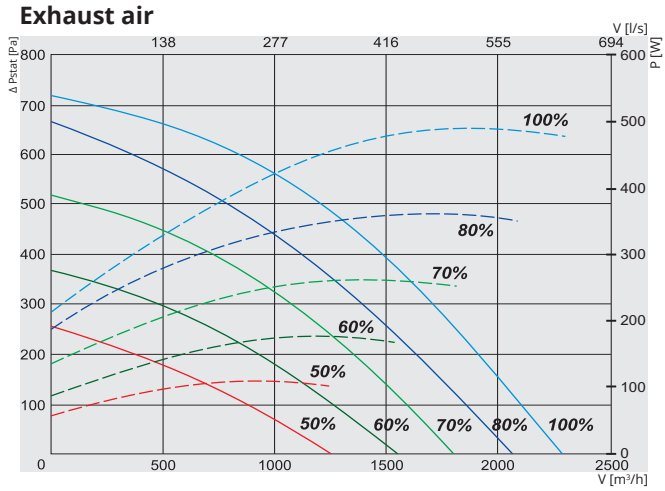
RIS 1900PE EKO 3.0

Performance
Power consumption

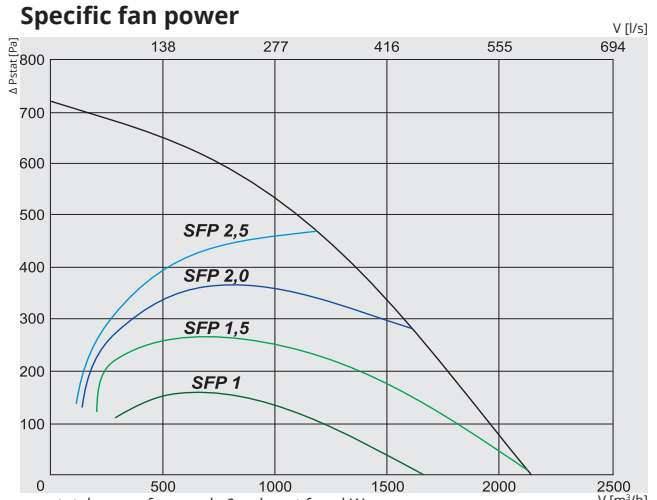
Supply air



Exhaust air

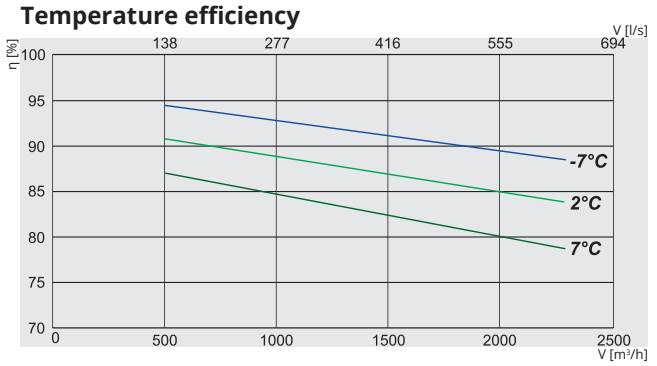


Specific fan power

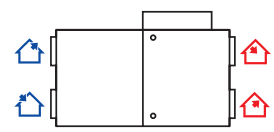


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1900PE EKO 3.0



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.		Version
GAGRIS1751_0025A	1900PE 3.0 EKO 3.0	Integrated electrical heater
GAGRIS1752_0024B	1900PE 6.0 EKO 3.0	Integrated electrical heater
GAGRIS1706_0001B	1900PE 12.0 EKO 3.0	Integrated electrical heater

			3.0 EKO 3.0	6.0 EKO 3.0	12.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~1, 230	~3, 400	~3, 400
		[kW]	3,0	6,0	12,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230	
exhaust	power/current	[kW/A]		0,485/3,12	
	fan speed	[min⁻¹]		2540	
supply	power/current	[kW/A]		0,488/3,16	
	fan speed	[min⁻¹]		2540	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	3,97 /20,32	6,97 /14,92	12,97 /24,32
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]	269	270	272
Comply with ERP				2016;2018	
Operation				indoors	
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.

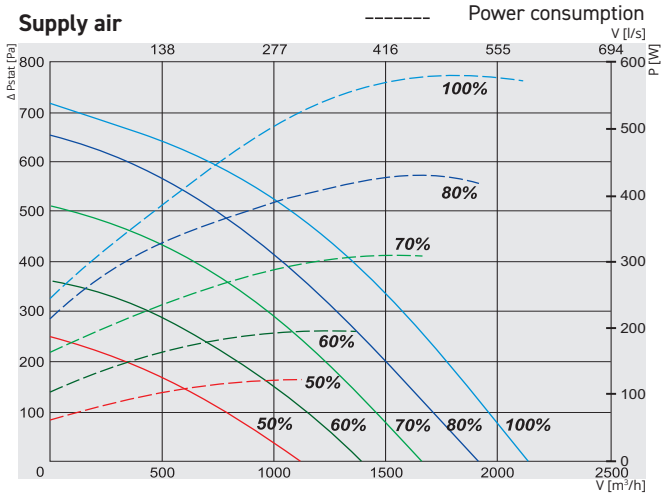
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

RIS 1900PE 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	77	53	64	69	73	70	65	61
Extract	68	42	58	64	62	61	58	55
Surrounding	60	50	52	54	54	50	48	41
Measured at 1938 m³/h, 100 Pa								

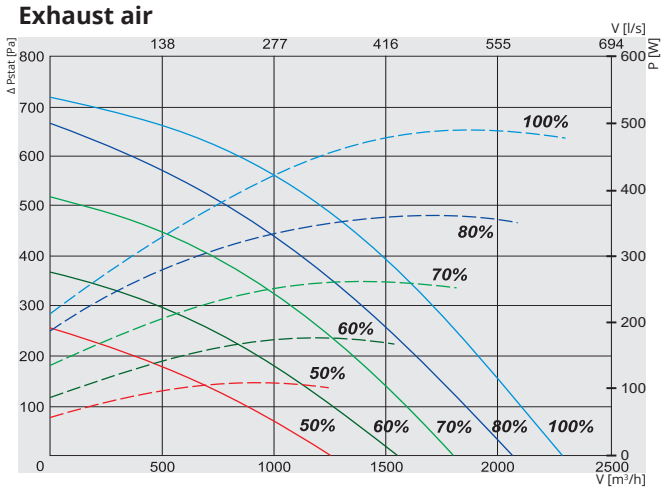
RIS 1900PW EKO 3.0

Performance
Power consumption

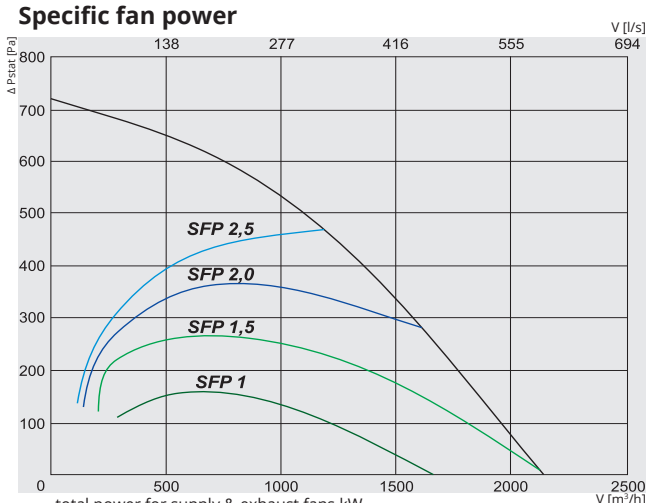
Supply air



Exhaust air

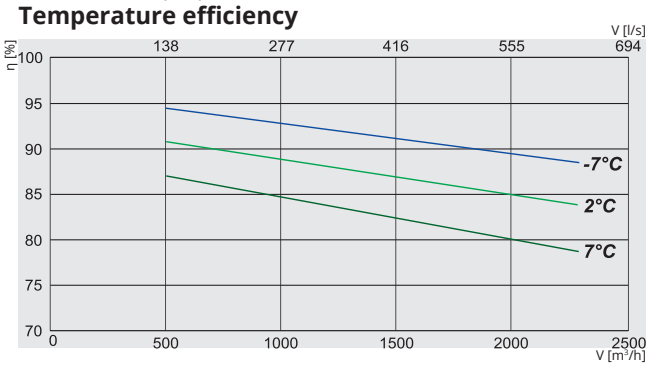


Specific fan power

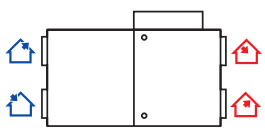


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1900PW EKO 3.0



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.	Version	
GAGRIS1753_0026A	1900PW EKO 3.0	Optional water heater

			1900PW EKO 3.0
Water heater (optional)			SVS 700x400
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,485/3,12
	fan speed	[min^{-1}]	2540
supply	power/current	[kW/A]	0,488/3,16
	fan speed	[min^{-1}]	2540
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	0,97 /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]	269
Comply with ERP			2016;2018
Operation			indoors
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.

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

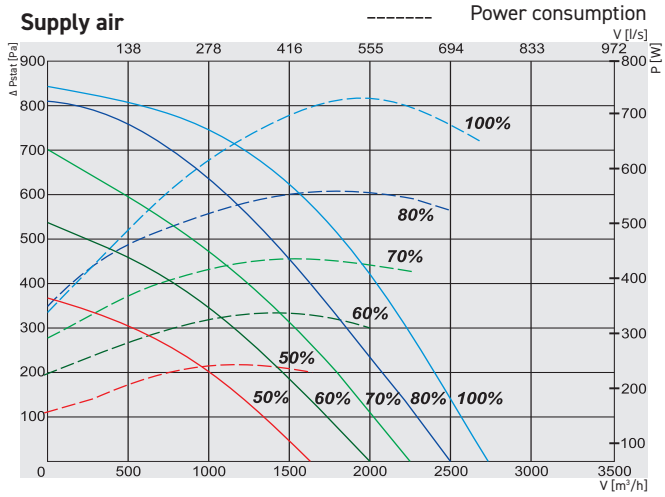
RIS 1900PW EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	77	53	64	69	73	70	65	61
Extract	68	42	58	64	62	61	58	55
Surrounding	60	50	52	54	54	50	48	41
Measured at 1938 m³/h, 100 Pa								

RIS P EKO

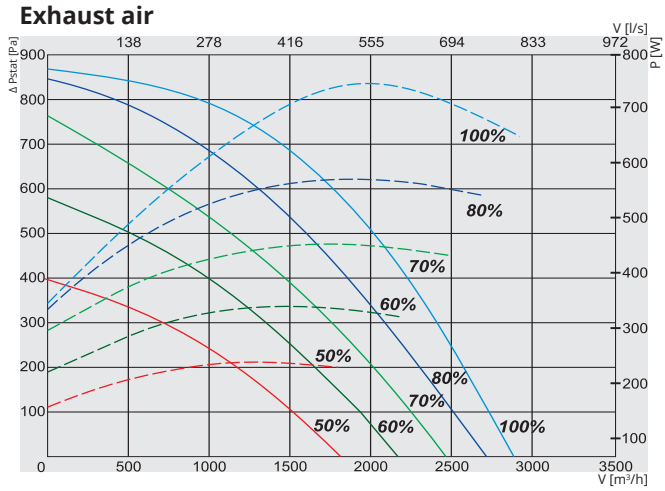
RIS 2500PE EKO 3.0

Performance
Power consumption

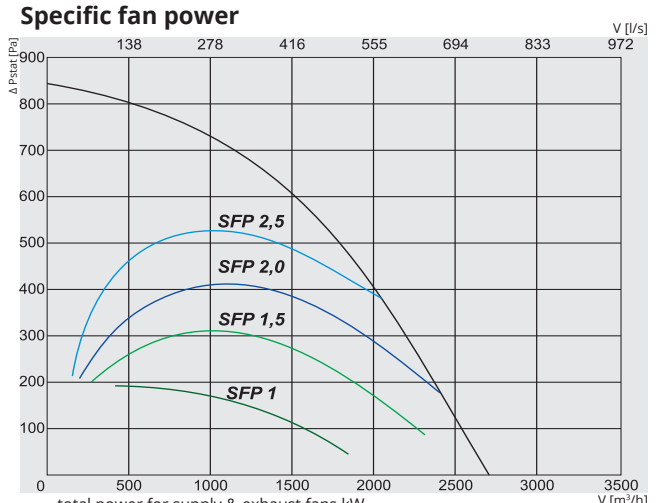
Supply air



Exhaust air

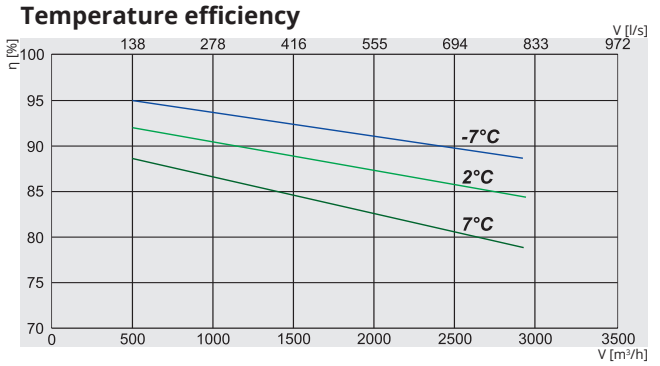


Specific fan power

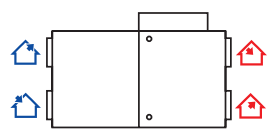


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 2500PE EKO 3.0



View from inspection side

Exhaust air Extract air Outdoor air Supply air

Article No.		Version
GAGRIS1754_0027B	2500PE 4.5 EKO 3.0	Integrated electrical heater
GAGRIS1755_0028B	2500PE 9.0 EKO 3.0	Integrated electrical heater
GAGRIS1707_0015B	2500PE 18.0 EKO 3.0	Integrated electrical heater

			4.5 EKO 3.0	9.0 EKO 3.0	18.0 EKO 3.0
Electrical heater	phase/voltage	[50Hz/VAC]	~3, 400	~3, 400	~3, 400
		[kW]	4,5	9,0	18,0
EC fans	phase/voltage	[50Hz/VAC]		~1,230	
exhaust	power/current	[kW/A]		0,725/3,24	
	fan speed	[min⁻¹]		2800	
supply	power/current	[kW/A]		0,675/3	
	fan speed	[min⁻¹]		2800	
Thermal efficiency up to*				90%	
Motorized by-pass				+	
Max power consumption		[kW/A]	5,90 /12,78	10,40 /19,28	19,40 /32,28
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]		322	
Comply with ERP				2016;2018	
Operation				indoors	
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.

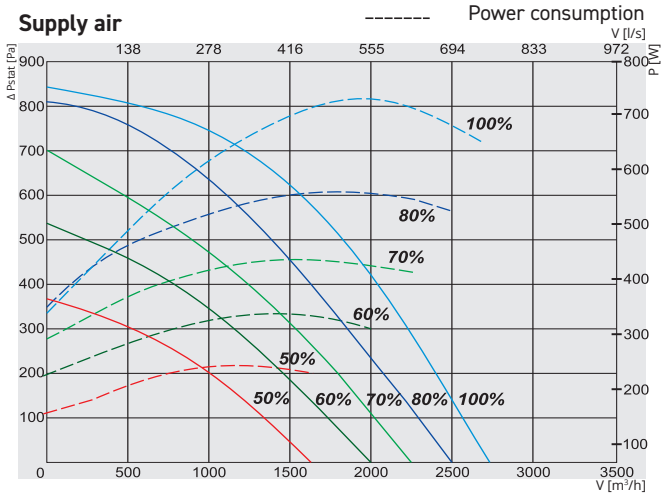
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

RIS 2500PE 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	80	60	68	72	75	74	71	65
Extract	69	56	60	64	63	60	58	41
Surrounding	62	46	54	56	57	54	50	45
Measured at 2548 m³/h, 102 Pa								

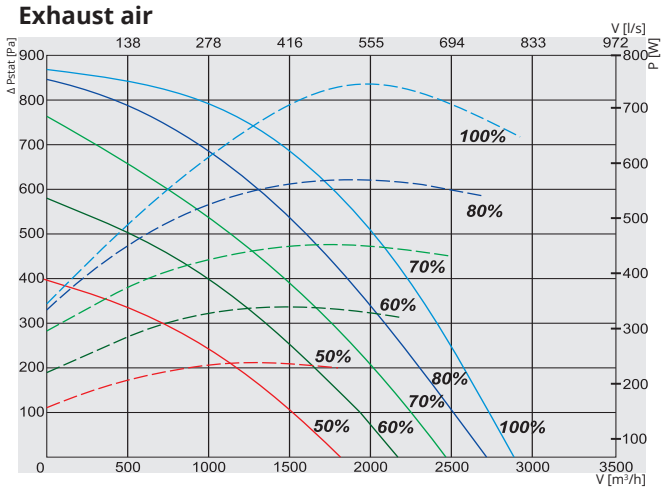
RIS 2500PW EKO 3.0

Performance
Power consumption

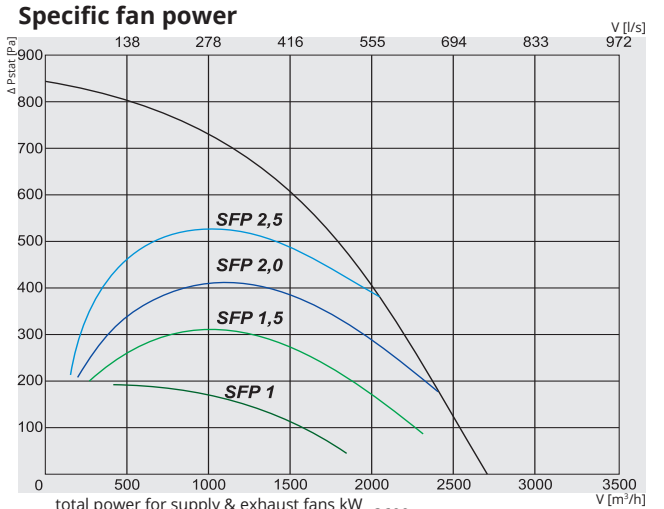
Supply air



Exhaust air

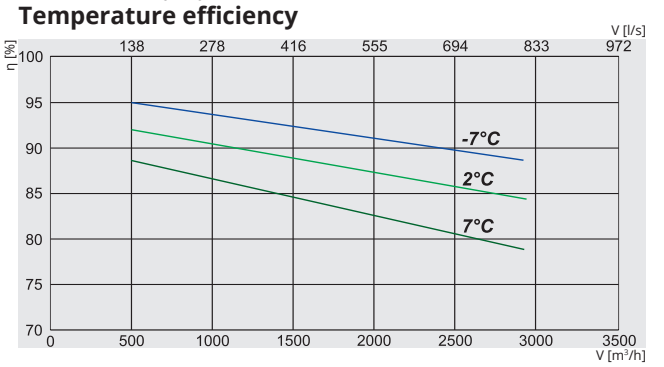


Specific fan power

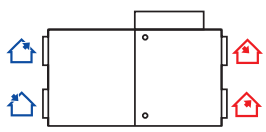


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 2500PW EKO 3.0



View from inspection side

Exhaust air Extract air Outdoor air Supply air

Article No.	Version
GAGRIS1756_0029A	2500PW EKO 3.0 Optional water heater

			2500PW EKO 3.0
Water heater (optional)	phase/voltage	[50Hz/VAC]	SVS 700x400
Fans	phase/voltage	[50Hz/VAC]	~1, 230
exhaust	power/current	[kW/A]	0,725/3,24
	fan speed	[min^{-1}]	2800
supply	power/current	[kW/A]	0,675/3
	fan speed	[min^{-1}]	2800
Thermal efficiency up to*			90%
Motorized by-pass			+
Max power consumption		[kW/A]	1,40 /6,28
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]	322
Comply with ERP			2016;2018
Operation			indoors
Fresh air temperature limits**		°C	-5 - +40
Housing protection class	IP		34

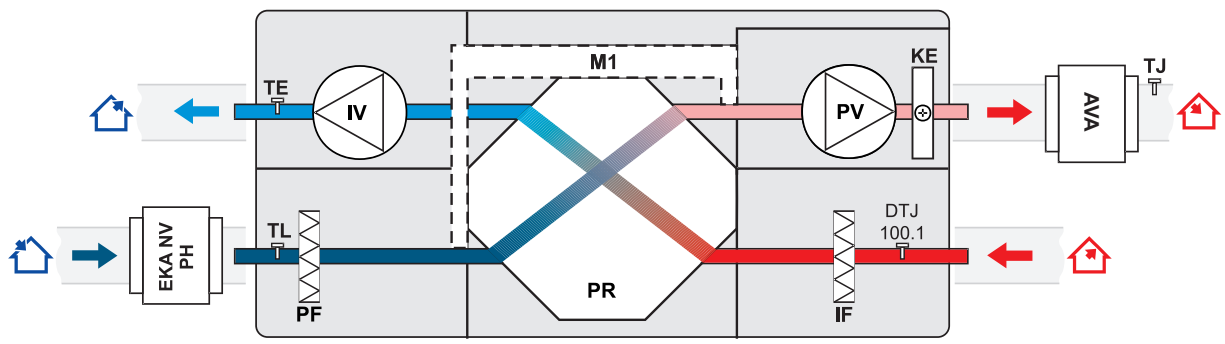
* Calculated wet efficiency.
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.

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

RIS 2500PW 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	80	60	68	72	75	74	71	65
Extract	69	56	60	64	63	60	58	41
Surrounding	62	46	54	56	57	54	50	45
Measured at 2548 m³/h, 102 Pa								

RIS 400PE EKO 3.0 / RIS 700PE EKO 3.0

(ceiling mounted) **versions with electrical heater**

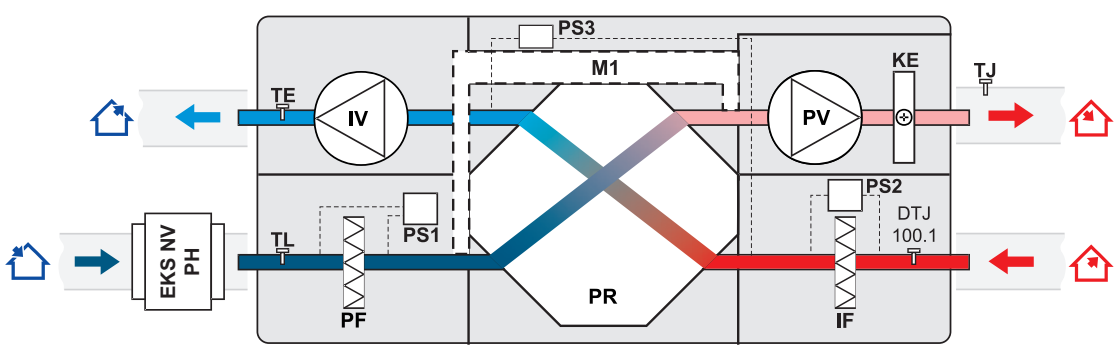


IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
KE - electrical heater
M1 - actuator of by-pass damper

TL - fresh air temperature sensor
TJ - supply air temperature sensor
TE - exhaust air temperature sensor
DTJ 100.1- humidity + temperature sensor
AVA - optionally supplied water cooler
EKA NV PH - optional fresh air pre-heater

RIS 1200PE EKO 3.0 / 1900PE EKO 3.0 / 2500PE EKO 3.0

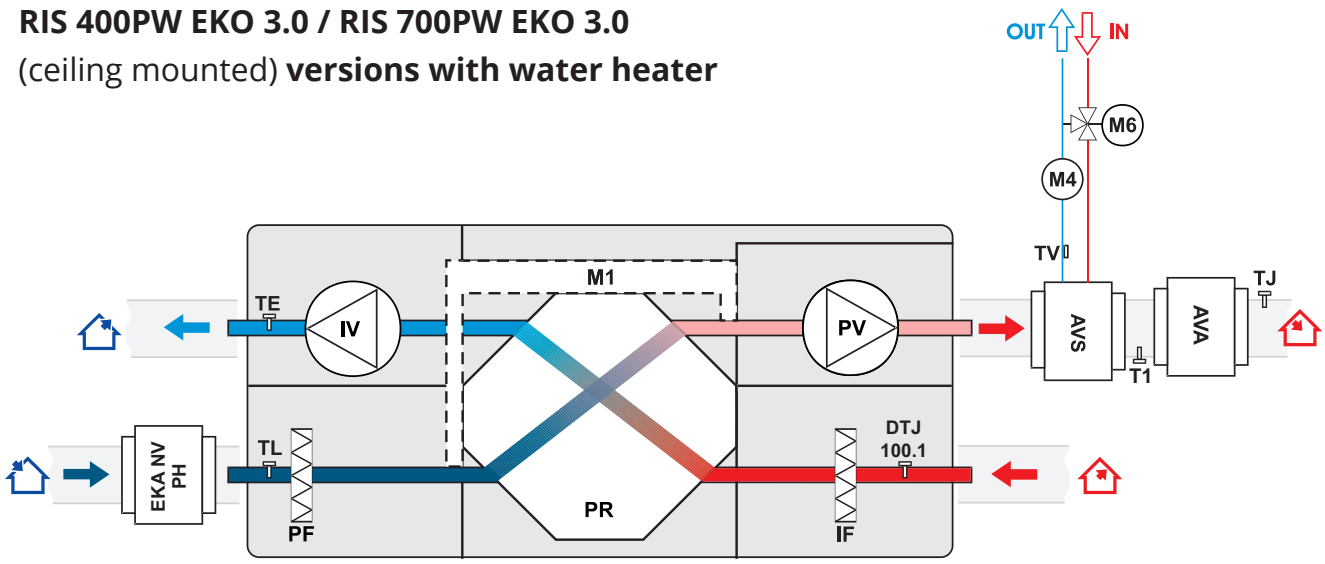
(ceiling mounted) **versions with electrical heater**



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)
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air

EKS NV PH - optional fresh air pre-heater
DTJ 100.1 - humidity + temperature sensor
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

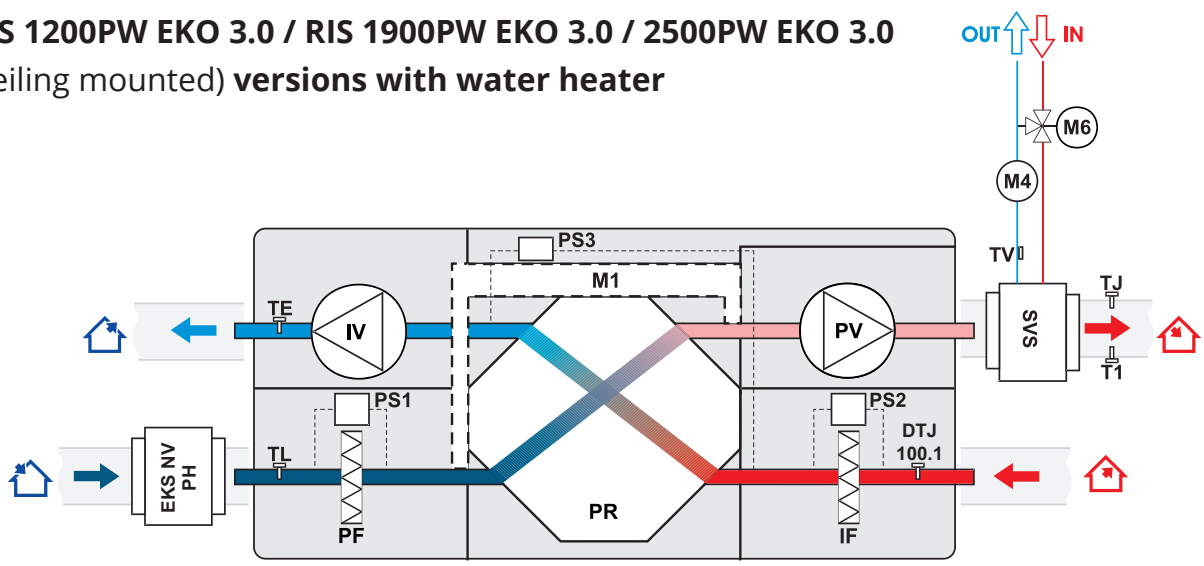
RIS 400PW EKO 3.0 / RIS 700PW EKO 3.0
(ceiling mounted) **versions with water heater**



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)
TV - antifrost sensor
M1 - actuator of by-pass damper
AVA - optionally supplied water cooler

M4 - water heater circulation pump
M6 - optionally supplied mixing valve and motor
TL - fresh air temperature sensor
TJ - supply air temperature sensor
TE - exhaust air temperature sensor
T1 - antifrost thermostat
DTJ 100.1 - humidity + temperature sensor
AVS - optionally supplied water heater
EKA NV PH - optional fresh air pre-heater

RIS 1200PW EKO 3.0 / RIS 1900PW EKO 3.0 / 2500PW EKO 3.0
(ceiling mounted) **versions with water 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)
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
T1 - antifrost thermostat

TV - antifrost sensor
DTJ 100.1 - humidity + temperature sensor
M1 - actuator of by-pass damper
M4 - water heater circulation pump
M6 - optionally supplied mixing valve and motor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
SVS - optionally supplied water heater
EKS NV PH - optional fresh air heater

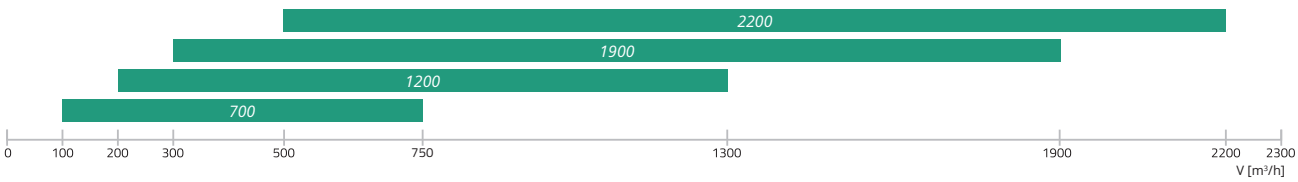
RIS P EKO

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**

Notes

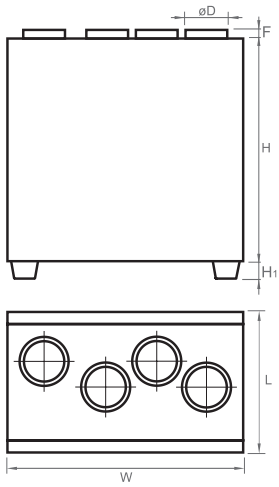
RIS V EKO



Application	Ventilation of houses, offices or other heated premises (classrooms, apartments, conference rooms, etc.)
Description	RIS V EKO 3.0 is a range of heat recovery units with high-efficiency counter-flow heat exchangers and vertical duct connections. Units are designed for placement on the floor. Due to vertical ducting, the units are suitable for installation in various premises (basements, boiler rooms, etc). There are 4 sizes (airflow interval 700-2200 m³/h) with left/right connection sides. RIS V 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. Energy efficiency ensures full thermal comfort for passive houses, without an additional pre-heater at temperatures above -5°C. All the RIS V EKO 3.0 units are fully equipped with automatic controls. Optional external sensors for CO_2 and humidity and so the event planning feature will help to control automatically your climate (demand-level control). RIS V EKO 3.0 units are service-friendly and are easy to mount. Filter pollution may be identified by timers or contamination controls (RIS 1200-2200 V EKO 3.0). All units are supplied tested and ready to install.
Remote control	Three remote control options are available: 1. Flex, Stouch or Ptouch remote controllers. 2. Building management system connections. 3. Remote control via PC MB-Gateway.
Features	› Vertical mounting with left/right versions. › Ready for Passive House technology: high efficiency. › Easy and quick mounting. › Water/electrical heating options. › Fully integrated plug-and-play control system.
Construction	› Construction from double-skinned steel, with powder coated paint, panels. › Acoustic and thermal wall insulation: RIS 700 V EKO 3.0 – 30 mm, RIS1200-2200 V EKO 3.0 – 50 mm. › RIS 700 V EKO 3.0 powder-coated white housing RAL 9016; RIS 1200–2200 V EKO 3.0 powder-coated grey housing RAL 7040. › Integrated electrical heater or optional water heater/cooler on the duct. › Low-pressure-drop filters: F7/M5. › Hinged door with locks grants easy access to internal components by. › Stainless steel condensate tray. › Fitted with mounting brackets (optional). › Integrated anti-frost pressure switch (RIS 1200-2200 V EKO 3.0).

RIS 700 V E L EKO 3.0

EKO 3.0	Equipped with new PRV V2 control board
L	AHU with EC motors and efficient heat exchanger
L	Air intake side (L - left; R - right)
E	Heater type (E - integrated electrical heater; W - prepared for water heater)
V	Housing type (V - vertical, H - horizontal, P - ceiling)
700	AHU size according to maximum airflow range m³/h
RIS	AHU with plate heat exchanger



	Dimensions [mm]					
Unit	**L**	**W**	**H**	**øD**	**H_1**	**F**
RIS 700VE/VW EKO 3.0	670	1000	980	250	126	40
RIS 1200VE/VW EKO 3.0	760	1350	1200	315	126	40
RIS 1900VE/VW EKO 3.0	800	2000	1600	400	140	70
RIS 2200VE/VW EKO 3.0	800	2000	1600	400	140	70

	Optional accessories									
Unit	**Flex Stouch Ptouch MB-Gateway**	**S-1141 S-RC02-F2 S-KFF-U**	**AKS**	**AVS**	**AVA**	**OC**	**EKA NV PH**	**AP SKG**	**SP** *Supply*	**SP** *Exhaust*
RIS 700VE EKO 3.0	+	+	250	-	250	250	250	250	CM230-1-F-L	
RIS 700VW EKO 3.0	+	+	250	250	250	250	250	250	TF230	CM230-1-F-L
RIS 1200VE EKO 3.0	+	+	315	-	315	315	315	315	LM230A-TP	
RIS 1200VW EKO 3.0	+	+	315	315	315	315	315	315	LF230	LM230A-TP
RIS 1900VE EKO 3.0	+	+	400	-	400	400	400	400	SM230A-TP	
RIS 1900VW EKO 3.0	+	+	400	400	400	400	400	400	NFA	SM230A-TP
RIS 2200VE EKO 3.0	+	+	400	-	400	400	400	400	SM230A-TP	SM230A-TP
RIS 2200VW EKO 3.0	+	+	400	400	400	400	400	400	NFA	SM230A-TP

	Optional accessories					
Unit	**SSB** *Heating*	**SSB** *Cooling*	**RMG 80/60°C**	**RMG 60/40°C**	**VVP/VXP 80/60°C**	**VVP/VXP 60/40°C**
RIS 700VE EKO 3.0	-	81	-	-	-	-
RIS 700VW EKO 3.0	61	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1200VE EKO 3.0	-	81	-	-	-	-
RIS 1200VW EKO 3.0	61	81	3-0,63-4	3-0,63-4	45.10-0.63	45.10-0.63
RIS 1900VE EKO 3.0	-	81				
RIS 1900VW EKO 3.0	61	81				
RIS 2200VE EKO 3.0	-	81				
RIS 2200VW EKO 3.0	61	81				

Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt***

Accessories

Remote controller

Ptouch p. 175

Control panel

Flex p. 177

Remote controller

Stouch p. 176

Network Module

MB-Gateway p. 178

Pressure transmitter

S-1141 p. 179

CO2 sensor

S-RC02-F2 p. 180

Humidity sensor

S-KFF-U p. 181

Shut-off damper

SKG p. 212

Thermic water valve actuator

SSB p. 195

Actuator for dampers

SP p. 210

Circular duct silencer

AKS p. 216

Electric duct heater

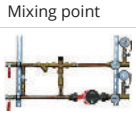
EKA NV PH p. 201

Heating coil

AVS p. 185

Circular duct water cooler

AVA p. 193

Mixing point

RMG p. 196

2 and 3 way valves

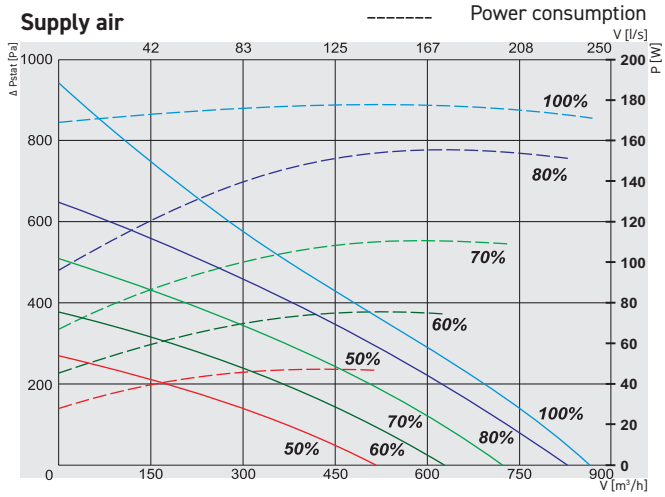
VVP/VXP p. 197

RIS V EKO

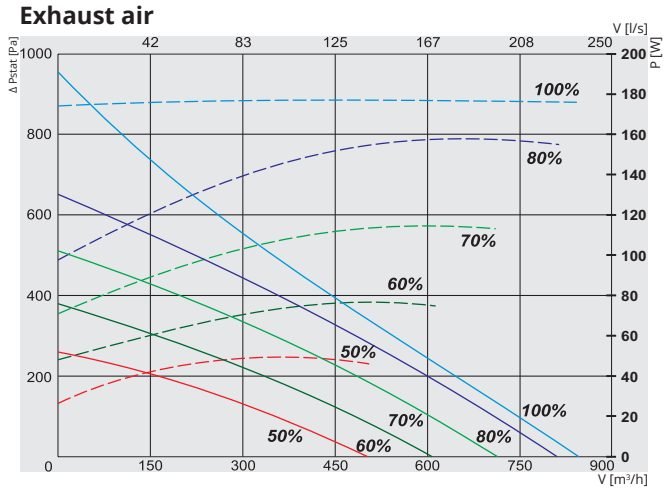
RIS 700V EKO 3.0

Performance
Power consumption

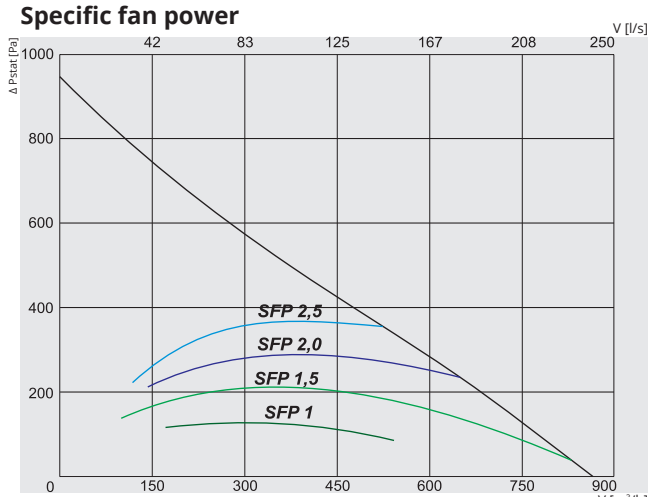
Supply air



Exhaust air

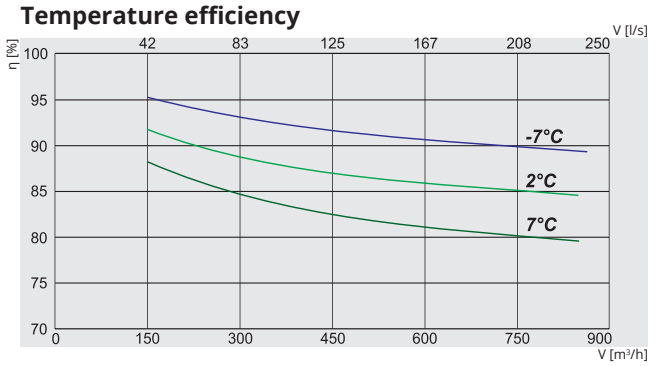


Specific fan power

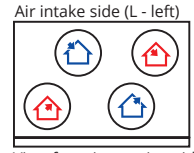


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

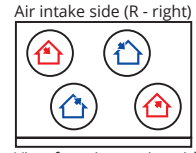


RIS 700VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 700VR EKO 3.0
Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.		Version
GAGRIS1778_0039A	700VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater
GAGRIS1780_0041A	700VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater
GAGRIS1777_0038A	700VER EKO 3.0	Right-hand maintenace version with integrated electrical heater
GAGRIS1779_0040A	700VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater

700VE / VW EKO 3.0				
Water heater (optional) VW ver.				AVS 250
Electrical heater VE 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 VE / VW		[kW/A]	1,54/8,01	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]	112,5	112
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.

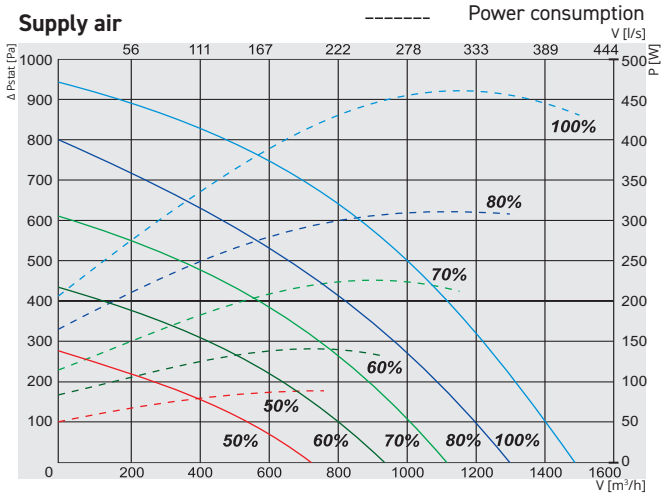
Temperature efficiency (balanced mass flow) EN 13141-7:
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

700V 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	74	68	65	67	66	65	58	56
Extract	60	45	57	53	52	47	42	38
Surrounding	56	51	50	49	45	44	41	37
Measured at 750 m³/h, 100 Pa								

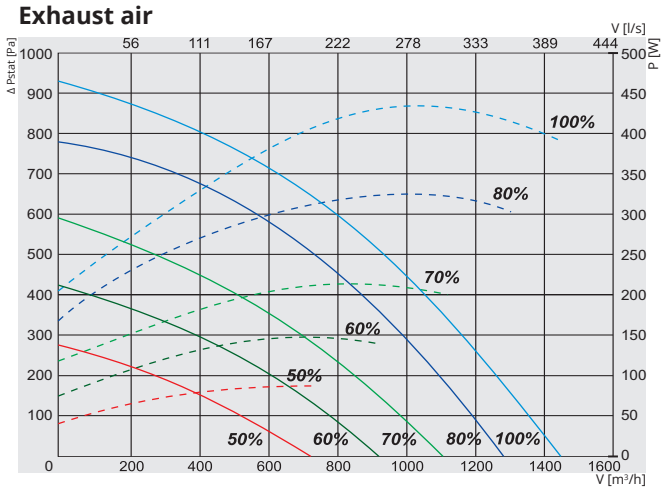
RIS 1200V EKO 3.0

Performance
Power consumption

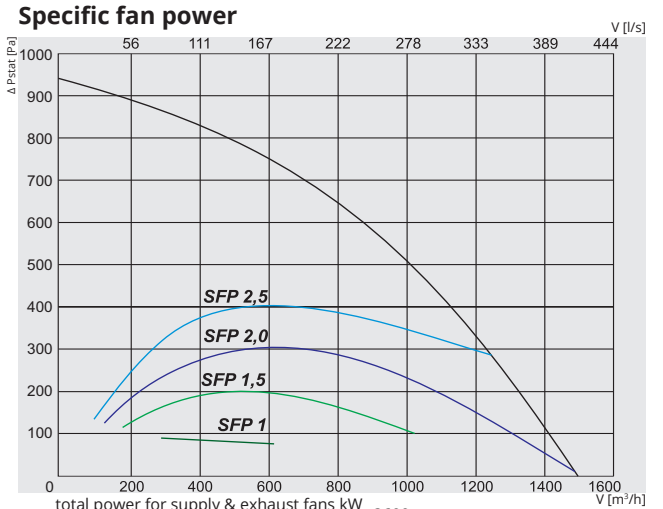
Supply air



Exhaust air

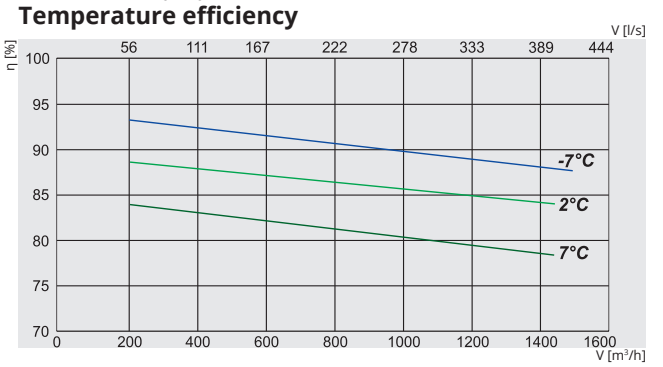


Specific fan power

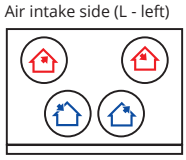


SFP= $\frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3\text{/h}} \times 3600$

Temperature efficiency

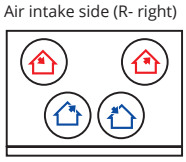


RIS 1200VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 1200VR EKO 3.0
Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.	Version	
GAGRIS1776_0043A	1200VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater
GAGRIS1784_0045A	1200VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater
GAGRIS1775_0042A	1200VER EKO 3.0	Right-hand maintenace version with integrated electrical heater
GAGRIS1783_0044A	1200VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater

1200VE / VW EKO 3.0				
Water heater (optional) VW ver.				AVS/AVA 315
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]		~1, 230
		[kW]		2,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,430/2,95
	fan speed	[min⁻¹]		3400
supply	power/current	[kW/A]		0,435/2,9
	fan speed	[min⁻¹]		3400
Thermal efficiency up to*				90%
Motorized by-pass				+
Max power consumption VE / VW		[kW/A]	2,87/14,49	0,87/5,89
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]		152
Comply with ERP				2016; 2018
Operation				indoors
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.

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

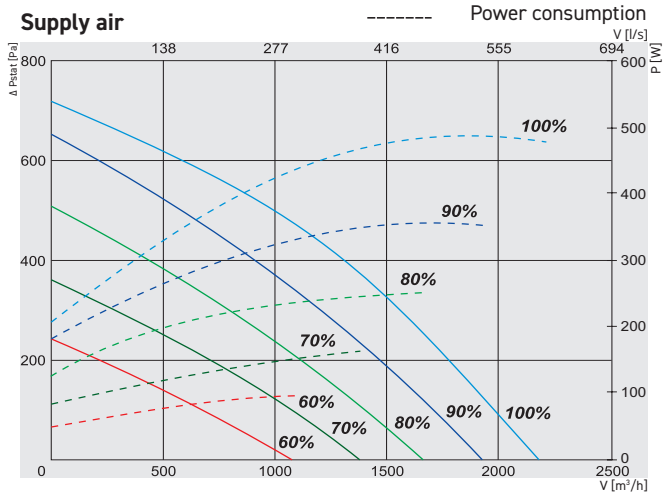
1200V EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	79	66	75	73	72	70	67	58
Extract	68	62	63	64	58	53	48	43
Surrounding	58	51	52	53	50	49	45	40
Measured at 1300 m³/h, 120 Pa								

RIS V EKO

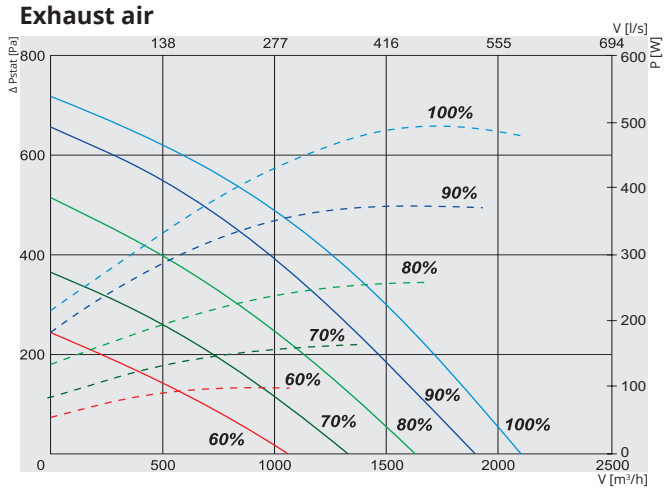
RIS 1900V EKO 3.0

Performance
Power consumption

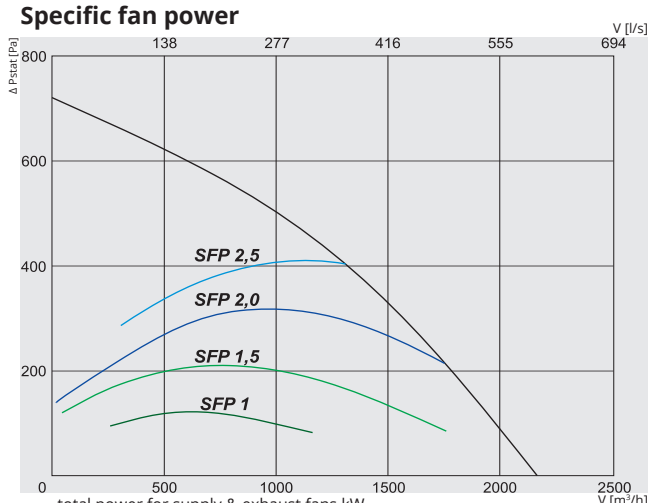
Supply air



Exhaust air

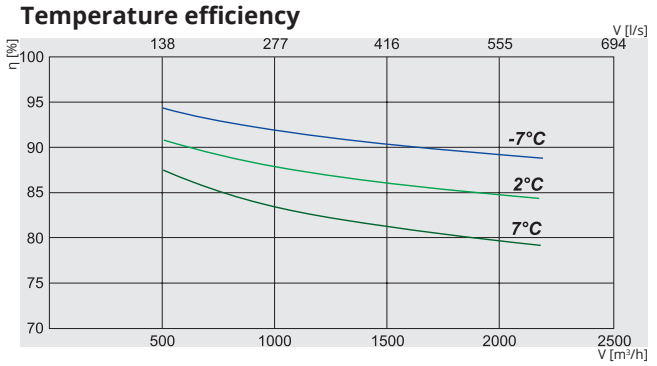


Specific fan power

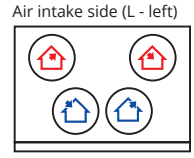


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency

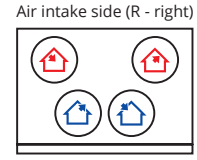


RIS 1900VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 1900VR EKO 3.0
Air intake side (R - right)



View from inspection side

Exhaust air Extract air Outdoor air Supply air

Article No.		Version
GAGRIS1786_0049A	1900VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater
GAGRIS1788_0051A	1900VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater
GAGRIS1785_0048A	1900VER EKO 3.0	Right-hand maintenace version with integrated electrical heater
GAGRIS1787_0050A	1900VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater

			1900VE / VW EKO 3.0	
Water heater (optional) VW ver.			AVS / AVA / Comfort Box 250	
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]	~1, 230	
		[kW]	3,0	
EC fans	phase/voltage	[50Hz/VAC]	~1, 230	
exhaust	power/current	[kW/A]	0,49/3,1	
	fan speed	[min⁻¹]	2540	
supply	power/current	[kW/A]	0,49/3,2	
	fan speed	[min⁻¹]	2540	
Thermal efficiency up to*			90%	
Motorized by-pass			+	
Max power consumption VE / VW		[kW/A]	3,98 /19,32	0,98/6,31
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]	290	
Comply with ERP			2016;2018	
Operation			indoors	
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.

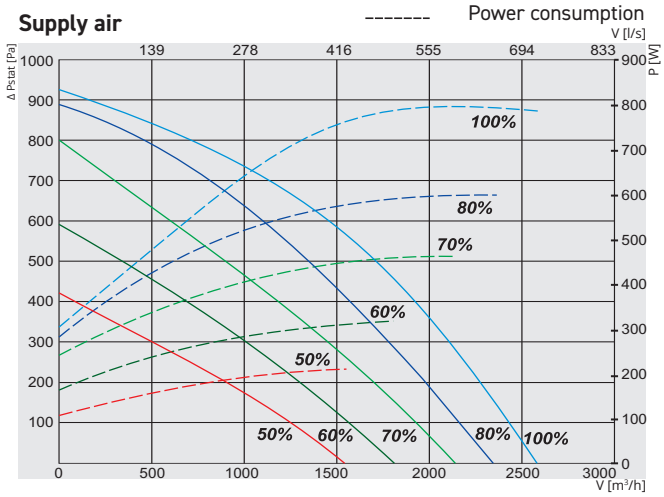
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

1900V 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	77	64	73	70	71	68	65	59
Extract	66	57	62	60	55	58	56	45
Surrounding	59	48	53	52	50	51	49	42
Measured at 2077 m³/h, 150 Pa								

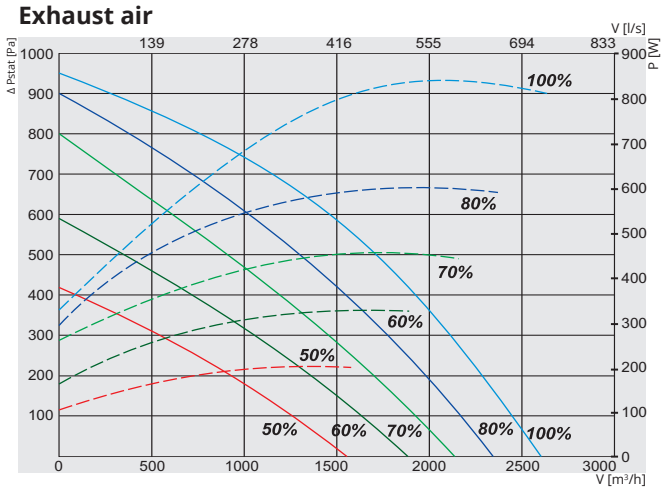
RIS 2200V EKO 3.0

Performance
Power consumption

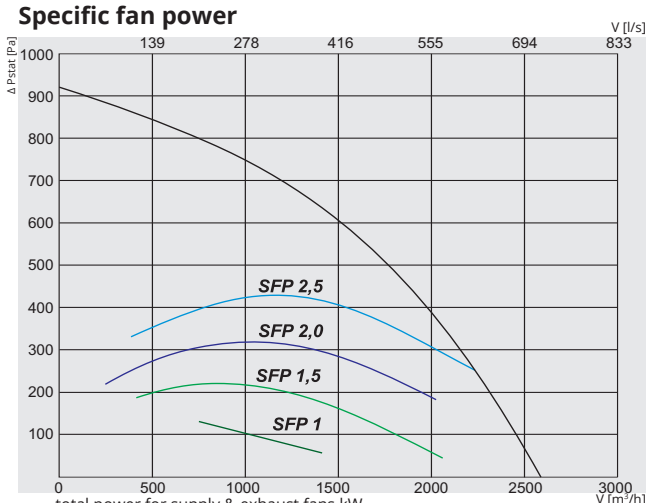
Supply air



Exhaust air

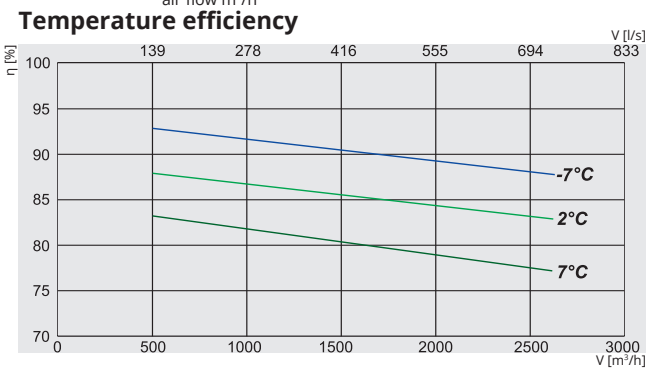


Specific fan power

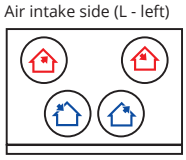


SFP= $\frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3\text{/h}} \times 3600$

Temperature efficiency

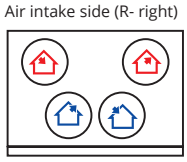


RIS 2200VL EKO 3.0
Air intake side (L - left)



View from inspection side

RIS 2200VR EKO 3.0
Air intake side (R- right)



View from inspection side

Exhaust air | Extract air | Outdoor air | Supply air

Article No.		Version
GAGRIS1935_0134B	2200VEL EKO 3.0	Left-hand maintenace version with integrated electrical heater
GAGRIS1956_0135B	2200VWL EKO 3.0	Left-hand maintenace version prepared for optional water heater
GAGRIS1955_0134B	2200VER EKO 3.0	Right-hand maintenace version with integrated electrical heater
GAGRIS1954_0135B	2200VWR EKO 3.0	Right-hand maintenace version prepared for optional water heater

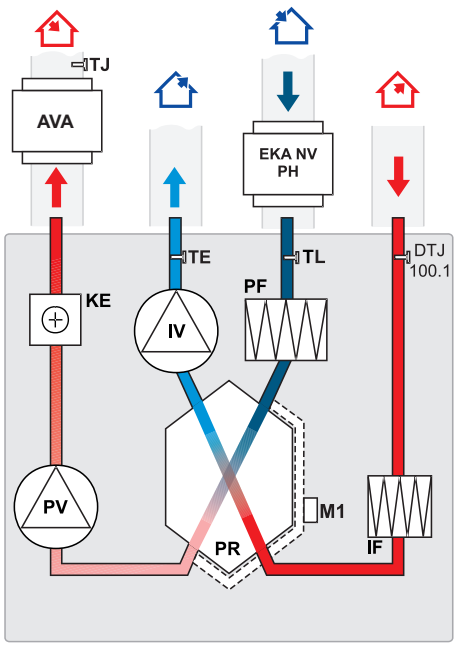
2200VE / VW EKO 3.0				
Water heater (optional) VW ver.				AVS/AVA 400
Electrical heater VE ver.	phase/voltage	[50Hz/VAC]		~1, 230
		[kW]		3,0
EC fans	phase/voltage	[50Hz/VAC]		~1, 230
exhaust	power/current	[kW/A]		0,715/3,2
	fan speed	[min^{-1}]		2800
supply	power/current	[kW/A]		0,715/3,1
	fan speed	[min^{-1}]		2800
Thermal efficiency up to*				90%
Motorized by-pass				+
Max power consumption VE / VW		[kW/A]	4,43/19,32	1,43/6,31
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]		290
Comply with ERP				2016;2018
Operation				indoors
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.

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

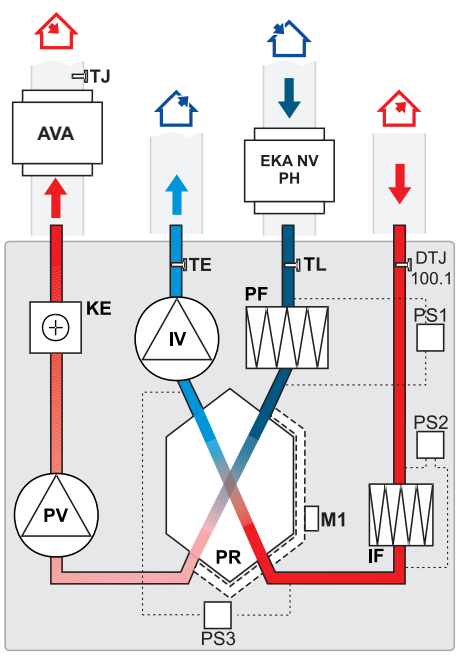
2200V EKO 3.0	Lwa total, dB(A)	LWA, dB(A)							
		63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	63	65	69	71	74	74	71	65
Extract	72	60	61	63	66	65	64	62	58
Surrounding	63	44	51	58	57	55	54	51	46
Measured at 2150 m³/h, 250 Pa									

RIS 700VE EKO 3.0 (vertical) **version with electrical heater**



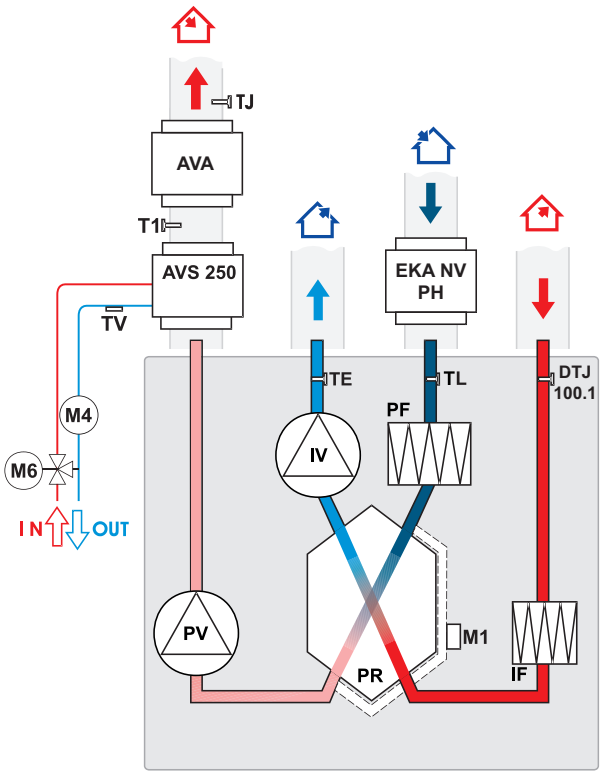
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for fresh air (class M5)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
TE - temperature sensor for exhaust air
DTJ 100.1 - humidity + temperature sensor
EKA NV PH - optional fresh air pre-heater
AVA - optionally supplied water cooler

RIS 1200VE EKO 3.0 / RIS 1900VE EKO 3.0 / RIS 2200VE EKO 3.0 (vertical) **versions with electrical heater**



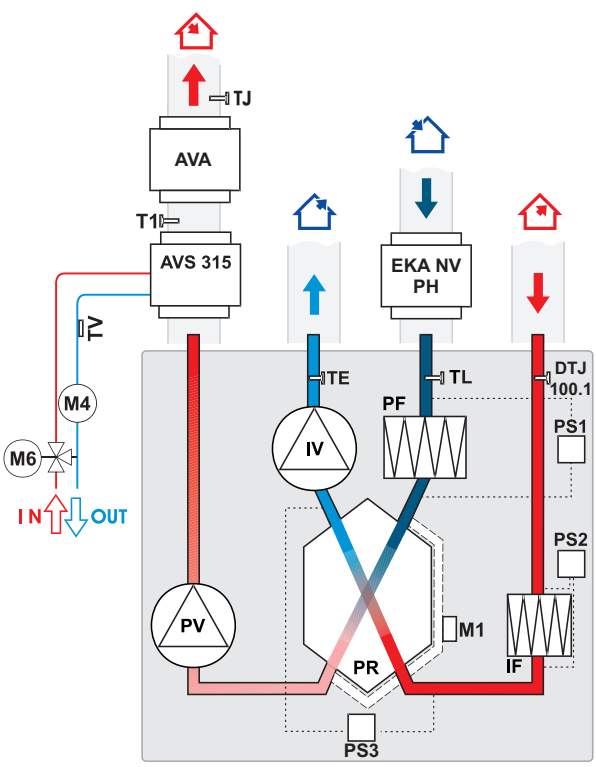
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
PF - filter for fresh air (class F7)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TJ - temperature sensor for supply air
DTJ100.1 - humidity + temperature sensor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
EKA NV PH - optional fresh air pre-heater
AVA - optionally supplied water cooler

RIS 700VW EKO 3.0 (vertical) **version with water heater**



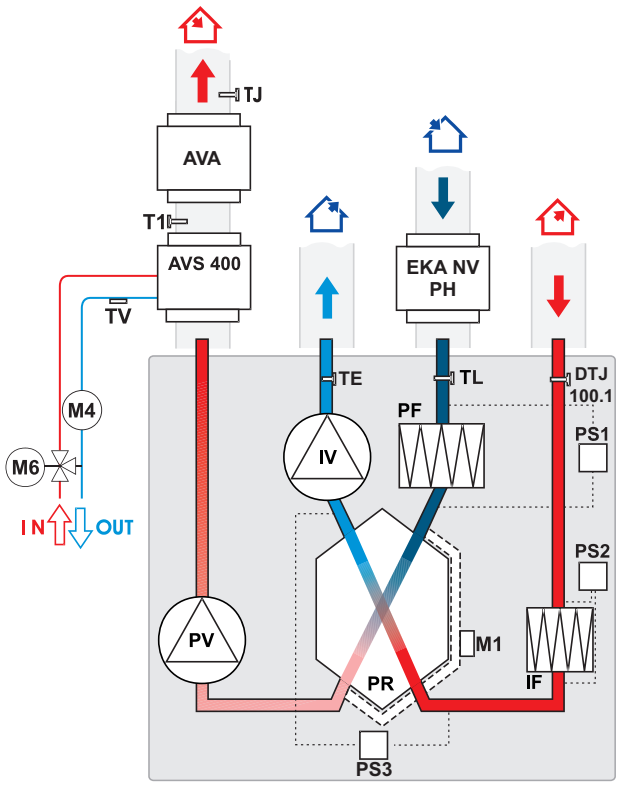
AVS - optionally supplied water heater
AVA - optionally supplied water cooler
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for fresh air (class M5)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
M6 - optionally supplied mixing valve and motor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

RIS 1200VW EKO 3.0 (vertical) **version with 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 F7)
IF - filter for extract air (class M5)
M1 - actuator of by-pass damper
M4 - optionally supplied water heater circulation pump
M6 - optionally supplied mixing valve and motor
TJ - temperature sensor for supply air
TE - temperature sensor for exhaust air
TL - temperature sensor for fresh air
TV - antifrost sensor
T1 - antifrost thermostat
DTJ100.1 - humidity + temperature sensor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
EKA NV PH - optional fresh air pre-heater

RIS 1900VW EKO 3.0 / RIS 2200VW EKO 3.0 (vertical) versions with water heater

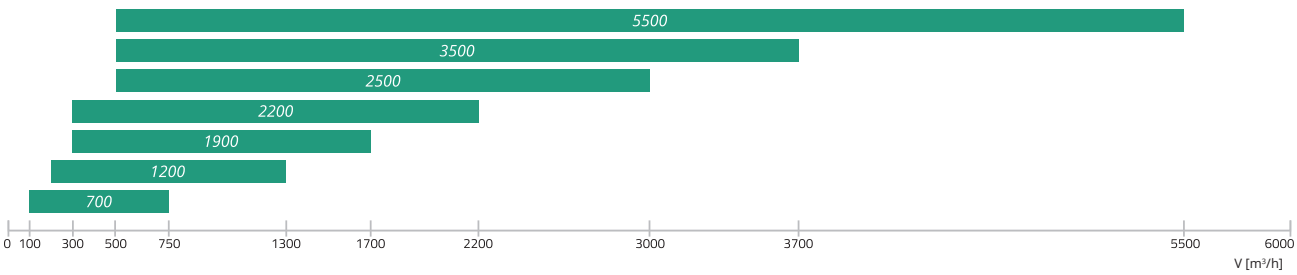


AVS - optionally supplied water heater
AVA - optionally supplied water cooler
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class M5)
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
M1 - actuator of by-pass damper
M6 - optionally supplied mixing valve and motor
M4 - optionally supplied water heater circulation pump
TJ - temperature sensor for supply air
TV - antifrost sensor
T1 - antifrost thermostat
DTJ100.1 - humidity + temperature sensor
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
PS3 - heat exchanger antifrost pressure switch
EKA NV PH - optional fresh air pre-heater

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

RIS H EKO

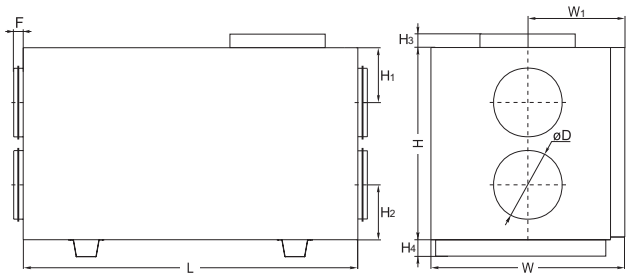


Application	Ventilation of houses, offices or other heated premises (classrooms, apartments, conference rooms, etc.)
Description	RIS H EKO 3.0 is a range of heat recovery units with high-efficiency counter-flow heat exchangers and horizontal duct connections. Units are designed for placement on the floor. 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). 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. Energy efficiency ensures full thermal comfort for passive houses, without an additional pre-heater at temperatures above -5°C. 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). RIS 1200-5500 H EKO 3.0 units have outdoor versions with roofing and outlet cover. 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). All units are supplied tested and ready to install.
Remote control	Three* remote control options are available: 1. Flex, Stouch or Ptouch remote controllers. 2. Building management system connections. 3. Remote control via PC MB-Gateway. *RIS 1900-5500 H EKO 3.0 units can be optionally provided with SIEMENS Climatix controllers.
Features	› Outdoor versions. › Ready for Passive House technology: high efficiency. › Easy and quick mounting. › Water/electrical heating options. › Fully integrated plug-and-play control system.
Construction	› Construction from double-skinned steel, with powder coated paint, panels. › Acoustic and thermal wall insulation: RIS 700 H EKO 3.0 – 30 mm, RIS 1200-5500 H EKO 3.0 – 50 mm. › RIS 700 H EKO 3.0 powder-coated white housing RAL 9016; RIS 1200 – 5500 powder-coated grey housing RAL7040. › RIS 1900-5500 H EKO 3.0 optional roof and outlet covers for outdoor placement. › RIS 3500 H EKO 3.0 delivered in three sections and RIS 5500 H EKO 3.0 - in two sections. › Integrated electrical heater or optional duct-based water heater/cooler. › Low-pressure-drop filters: F7/M5. › Hinged door with locks grants easy access to internal components. › Separate compartment on the top of the unit grants quick access to the control board (plug-and-play). › Stainless steel condensate tray. › Fitted with mounting brackets (optional for RIS 700-1900 H EKO 3.0, RIS 2500-5500 H EKO 3.0 - included). › Integrated anti-frost pressure switch (RIS H 1200-5500 H EKO 3.0).

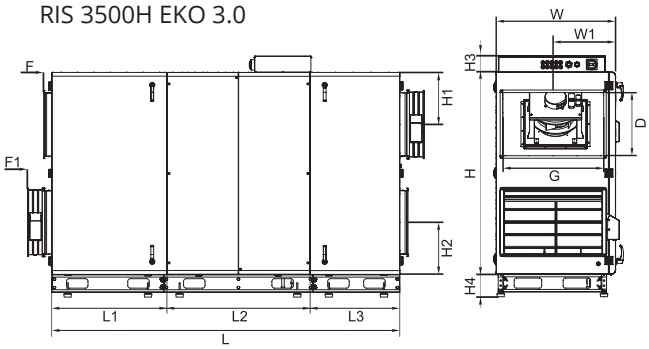
RIS 1200 H W EKO 3.0

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

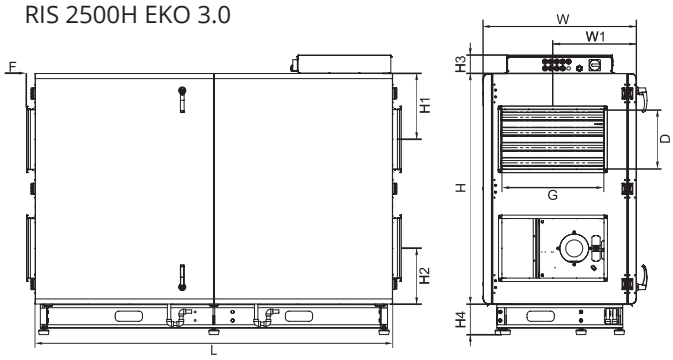
RIS 700H EKO 3.0 - RIS 2200H EKO 3.0



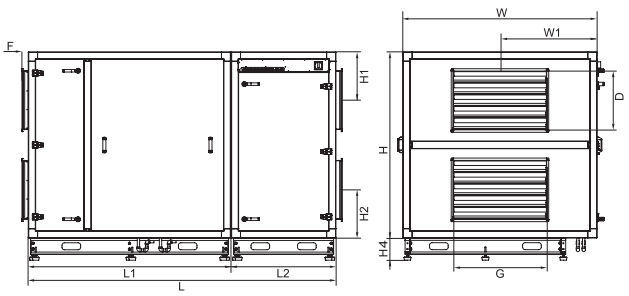
RIS 3500H EKO 3.0



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

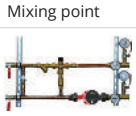
EKA NV PH p. 201

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

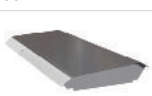
Comfort Box

CB p. 183

Rectangular duct silencer

SKS p. 215

Outlet cover


Roof


RIS H EKO

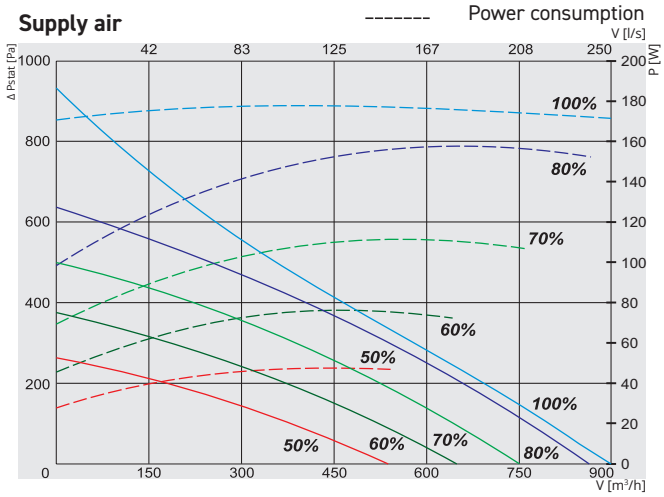
Unit	Optional accessories								
	Ptouch Stouch Flex MB-Gateway	**S-1141 S-RC02-F2 S-KFF-U**	**AKS SKG AP**	**SKS SVS**	**EKS NV PH**	**AVA AVS**	**EKA NV PH**	**SP** *Supply*	**SP** *Exhaust*
RIS 700HE EKO 3.0	+	+	250	-	-	250	250	CM230-1-F-L	
RIS 700HW EKO 3.0	+	+	250	-	-	250	250	TF230	CM230-1-F-L
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	NFA	SM230A-TP
RIS 2200HW EKO 3.0	+	+	400	-	-	400	400	SM230A-TP	
RIS 2200HE EKO 3.0	+	+	400	-	-	400	400	NFA	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	+

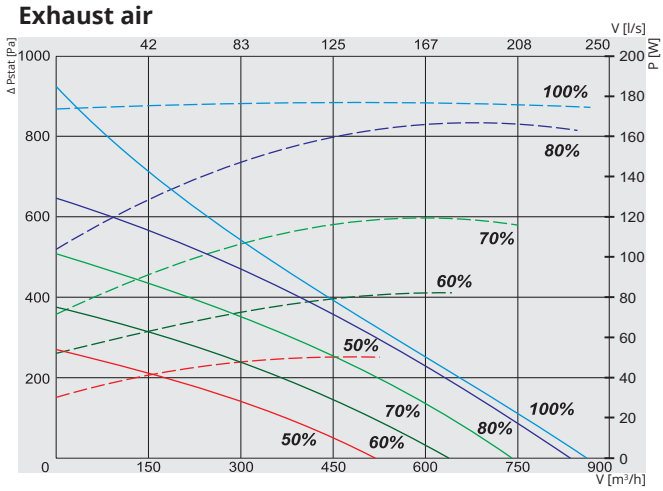
RIS 700H EKO 3.0

Performance
Power consumption

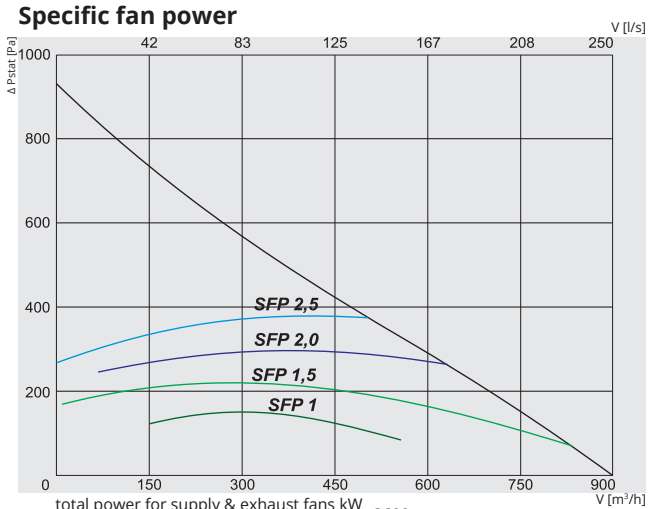
Supply air



Exhaust air

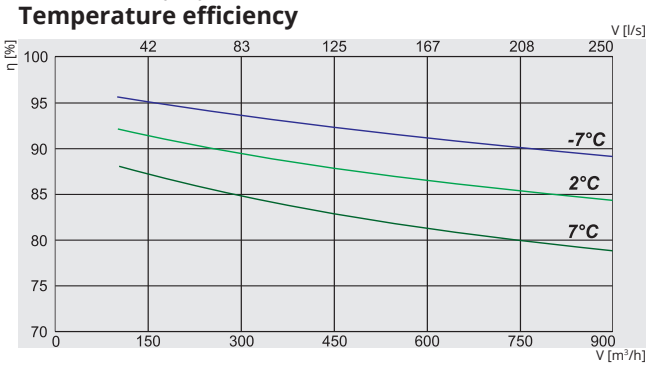


Specific fan power

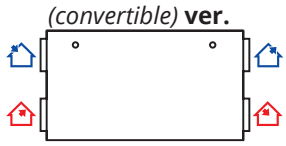


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

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

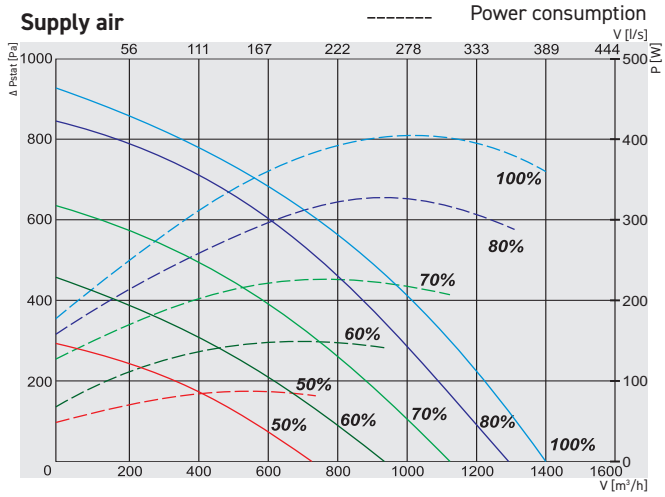
700HE EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	73	65	67	65	64	66	63	54
Extract	61	54	55	57	49	46	41	40
Surrounding	56	45	49	54	45	43	40	37
Measured at 760 m³/h, 101 Pa								

RIS H EKO

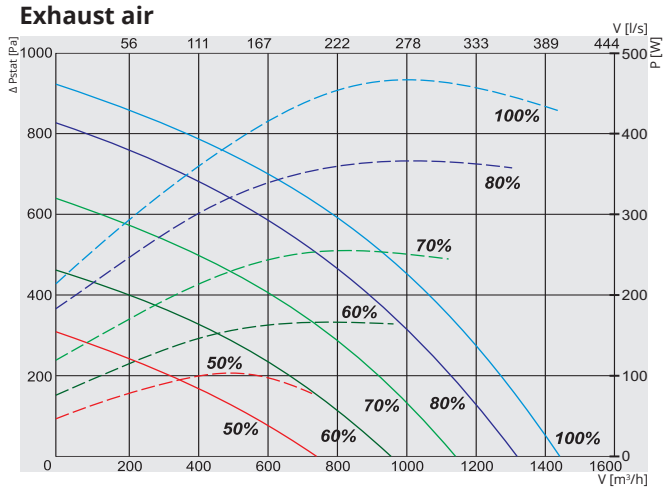
RIS 1200H EKO 3.0

Performance
Power consumption

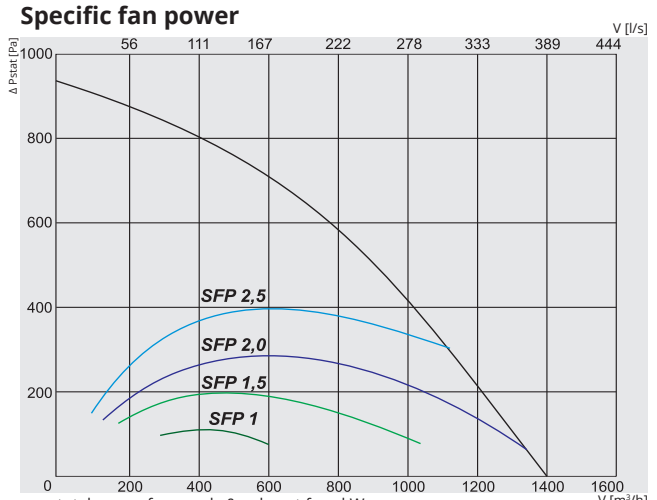
Supply air



Exhaust air

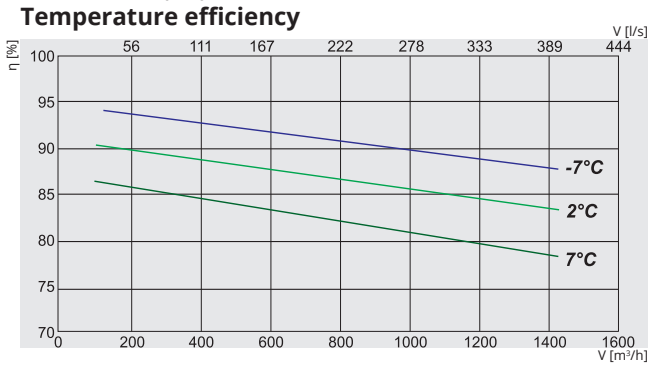


Specific fan power

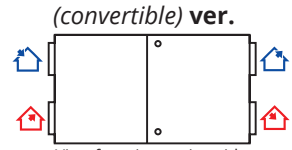


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

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.

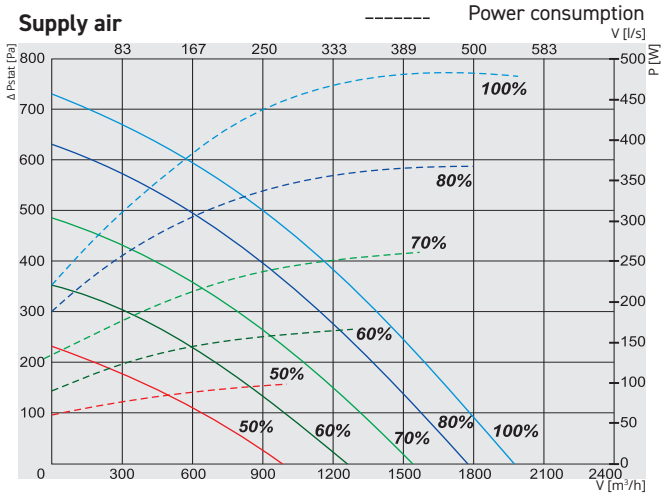
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

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								

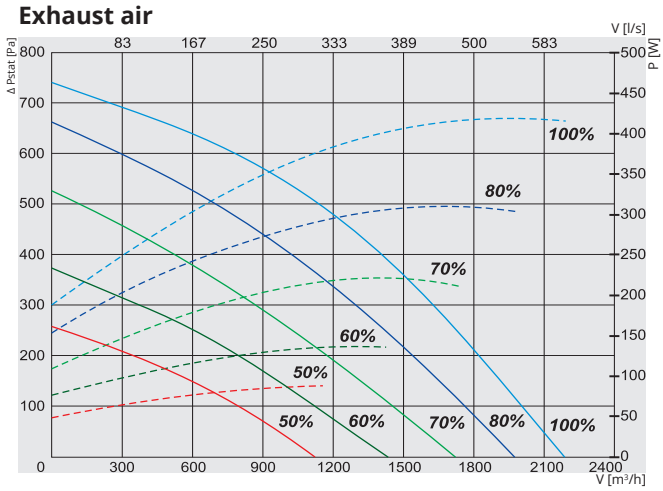
RIS 1900H EKO 3.0

Performance
Power consumption

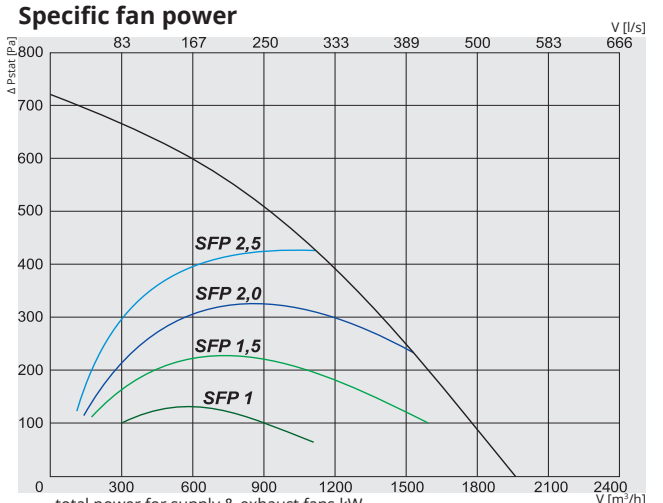
Supply air



Exhaust air



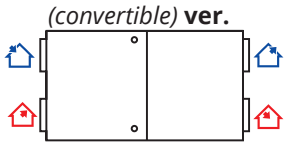
Specific fan power



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

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

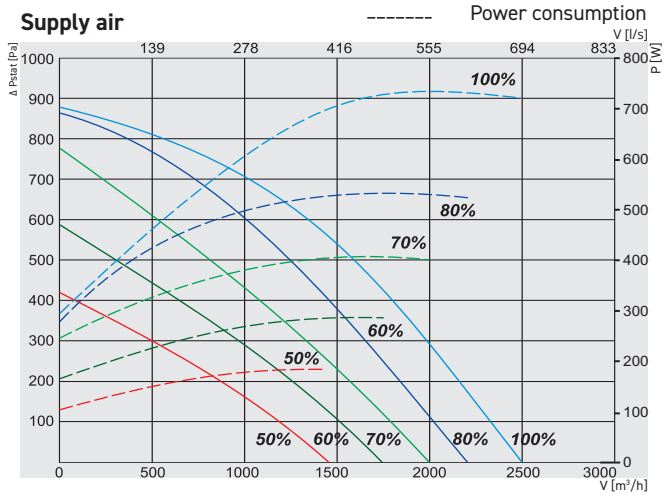
1900H EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	78	58	71	72	73	71	65	62
Extract	67	49	58	60	59	58	57	44
Surrounding	60	41	51	55	53	52	49	42
Measured at 2016 m³/h, 100 Pa								

RIS H EKO

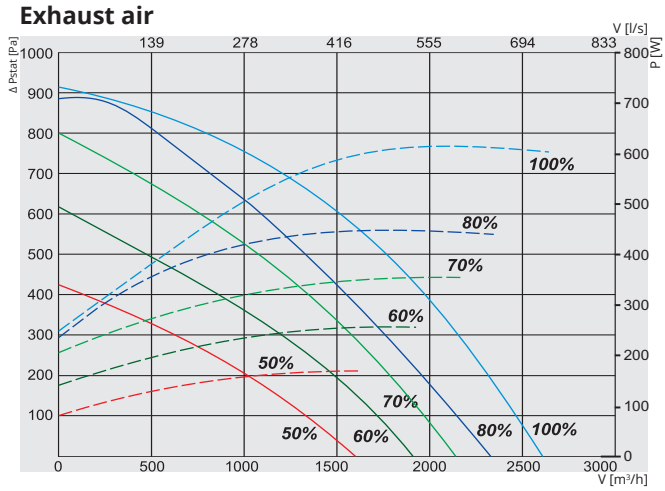
RIS 2200H EKO 3.0

Performance
Power consumption

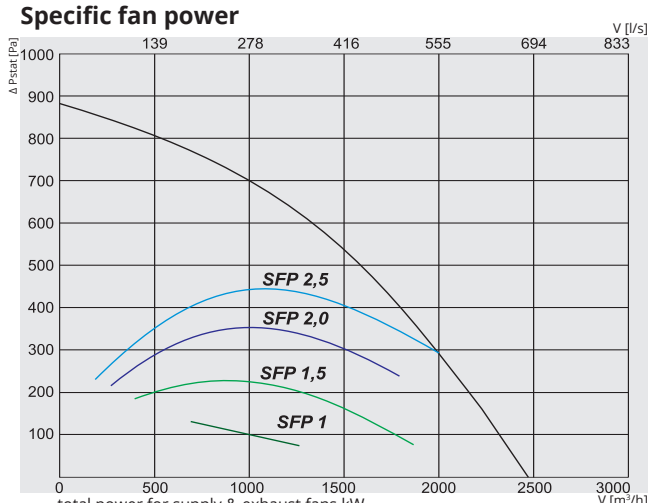
Supply air



Exhaust air

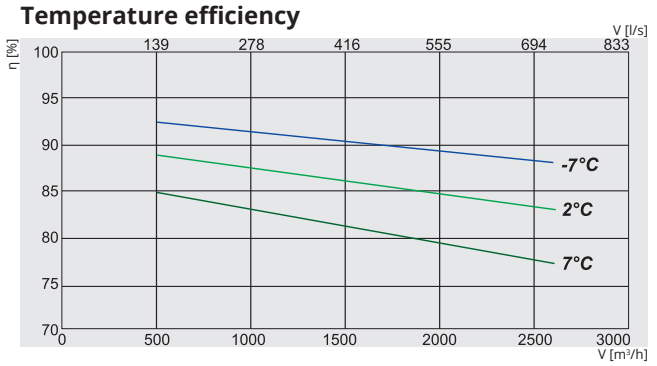


Specific fan power



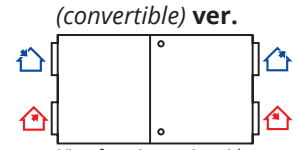
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



NEW!

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

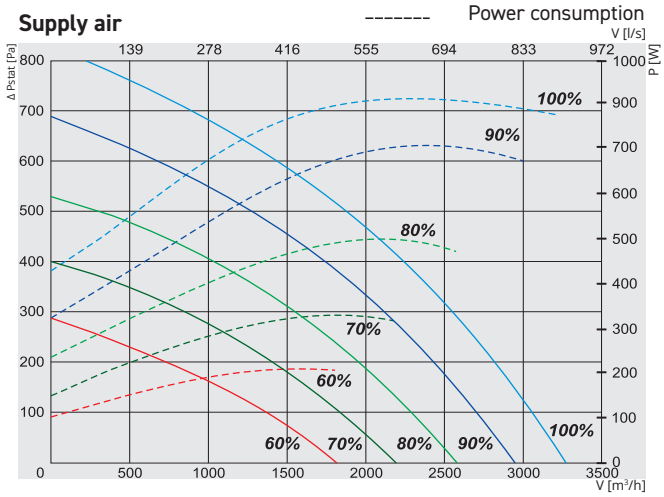
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

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									

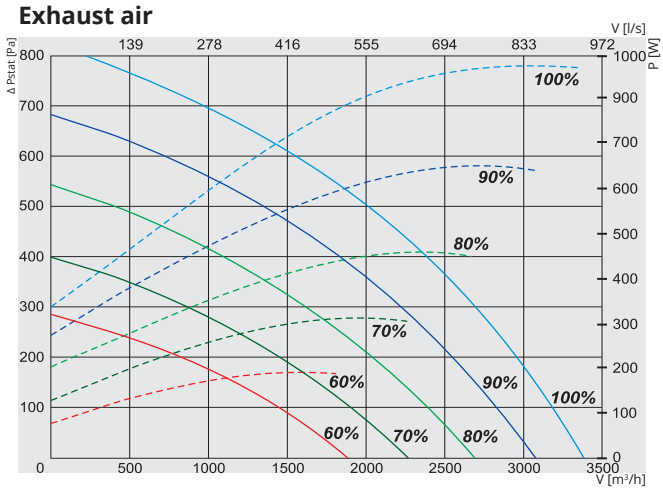
RIS 2500H EKO 3.0

Performance
Power consumption

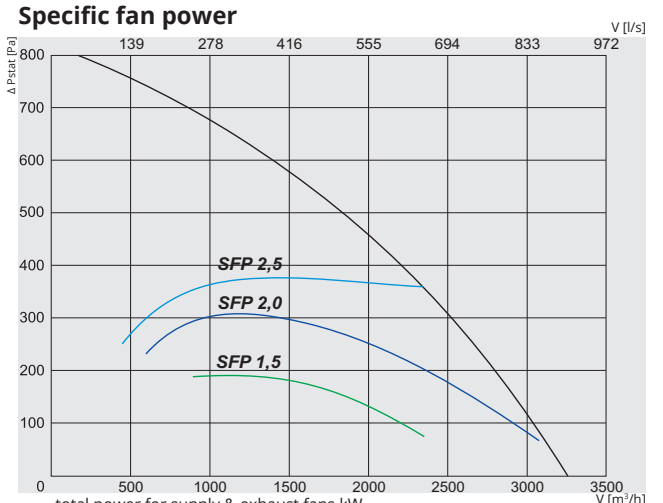
Supply air



Exhaust air

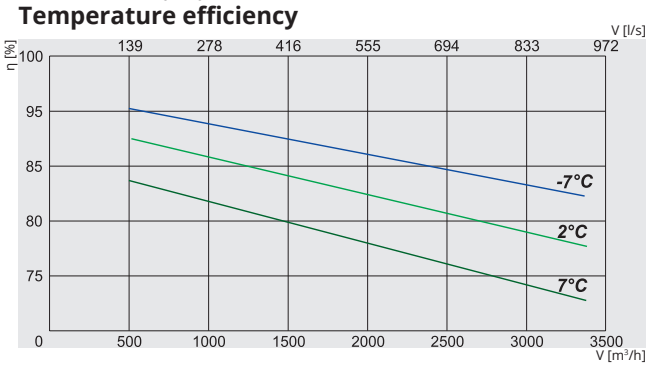


Specific fan power



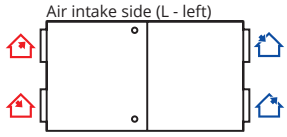
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 2500HL EKO 3.0

Air intake side (L - left)

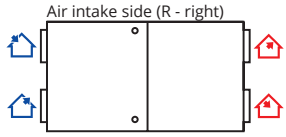


View from inspection side

Exhaust air Extract air

RIS 2500HR EKO 3.0

Air intake side (R - right)



View from inspection side

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

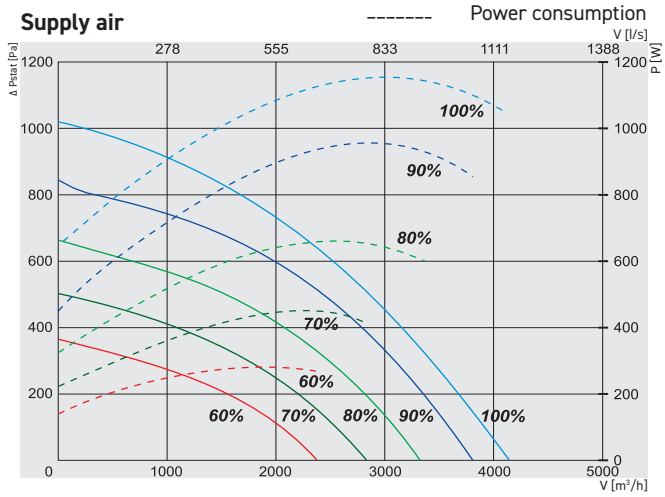
2500H EKO 3.0	Lwa total, dB(A)	LWA, dB(A) 125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	83	65	73	75	78	79	71	61
Extract	65	57	61	59	56	54	49	39
Surrounding	62	45	57	58	55	52	44	36
Measured at 2976 m³/h, 121 Pa								

RIS H EKO

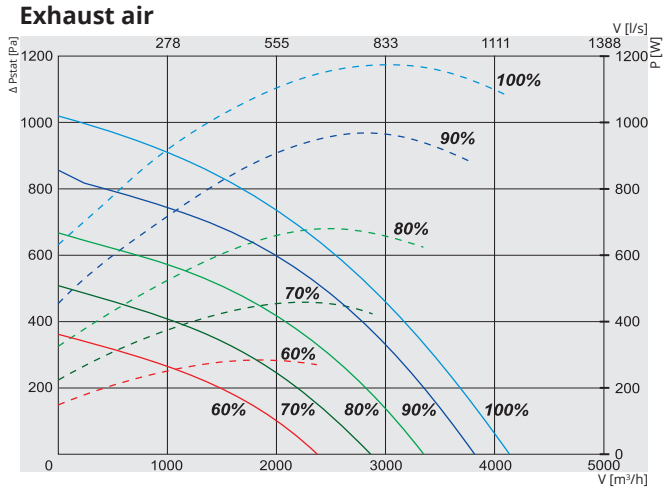
RIS 3500H EKO 3.0

Performance
Power consumption

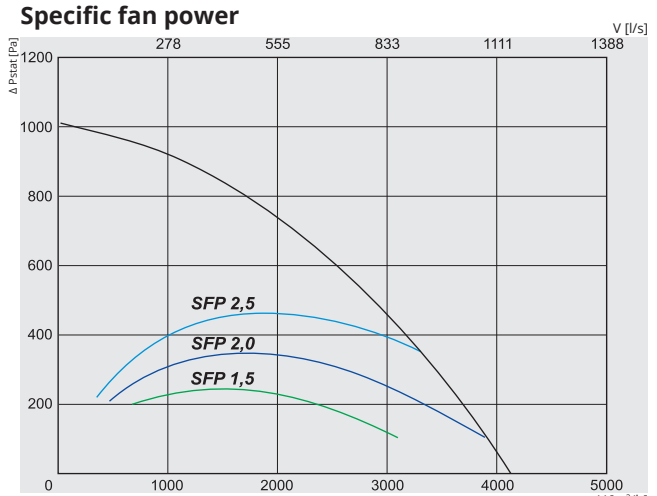
Supply air



Exhaust air

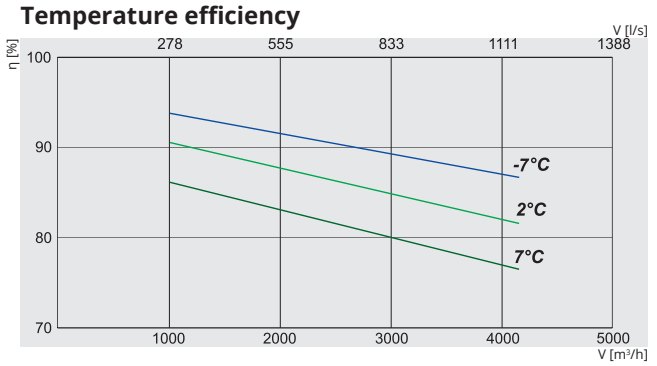


Specific fan power



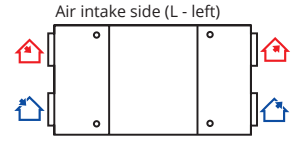
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

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.

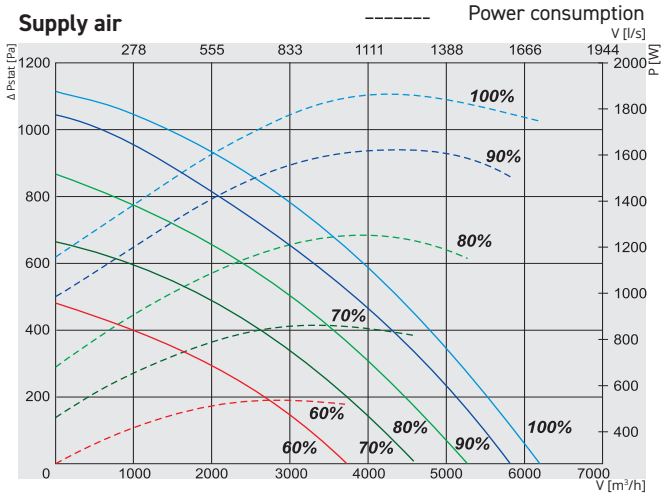
Temperature efficiency (balanced mass flow) :
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

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								

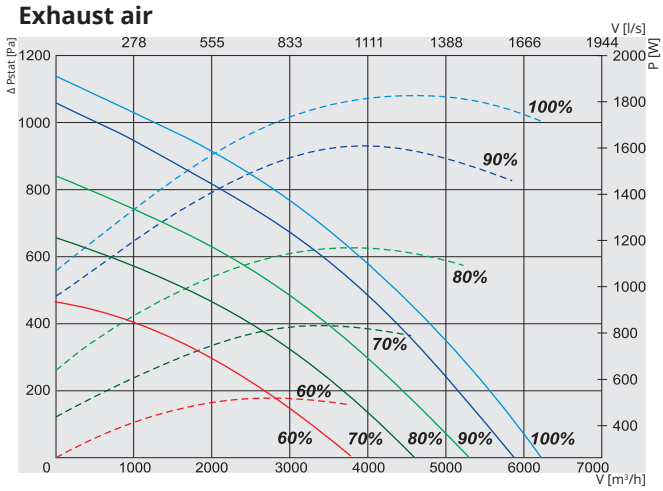
RIS 5500H EKO 3.0

Performance
Power consumption

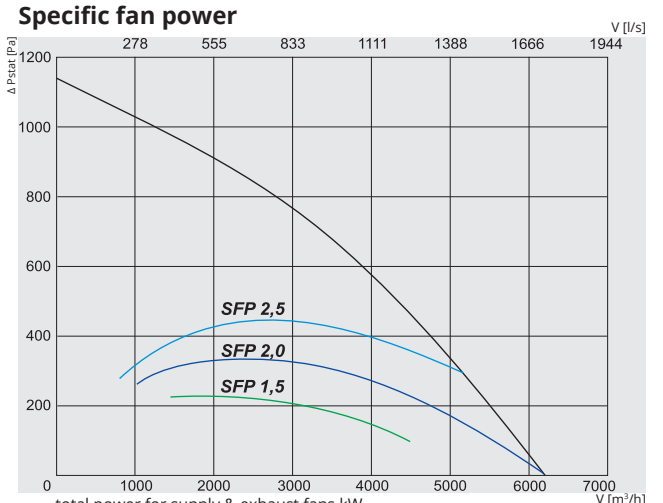
Supply air



Exhaust air

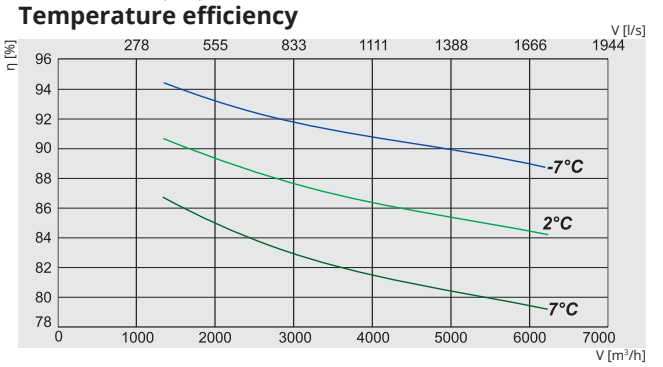


Specific fan power



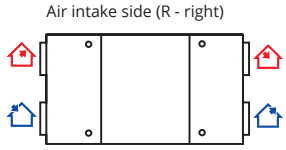
$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

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

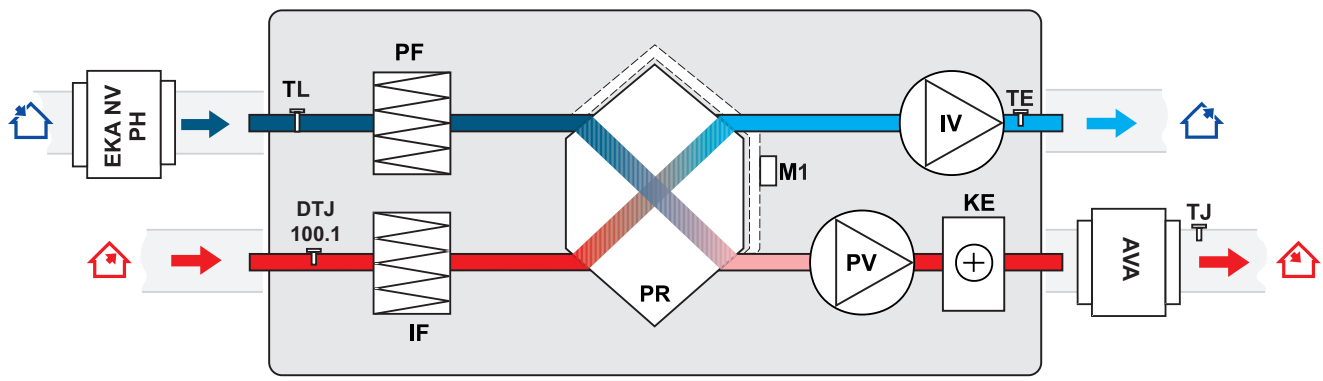
Water heater (optional) HW ver.			SVS / Comfort Box 800x500
Electrical heater HE ver.	phase/voltage	[50Hz/VAC]	~3, 400
		[kW]	12
EC fans	phase/voltage	[50Hz/VAC]	~3, 400
exhaust	power/current	[kW/A]	1,87/3,06
	fan speed	[min^{-1}]	2180
supply	power/current	[kW/A]	1,84/2,88
	fan speed	[min^{-1}]	2180
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								

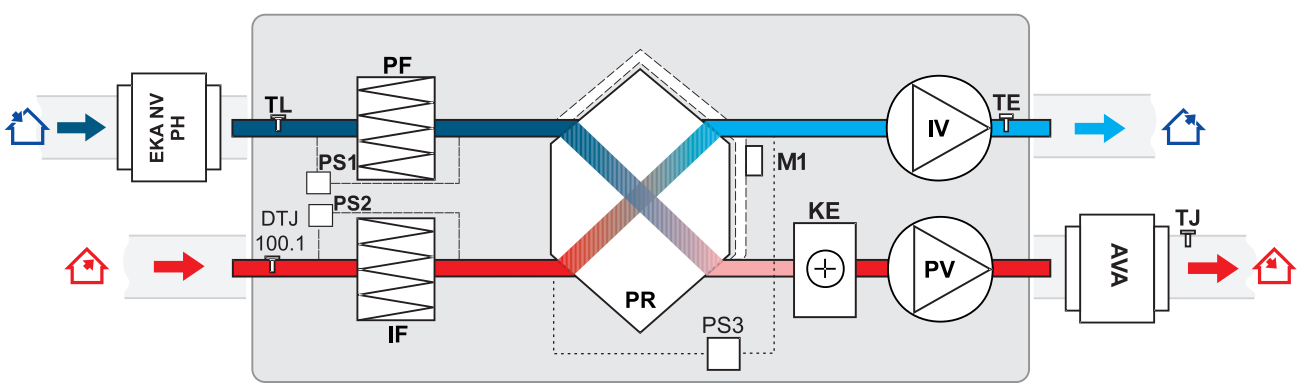
RIS 700HE EKO 3.0 (horizontal) **version with electrical heater**



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

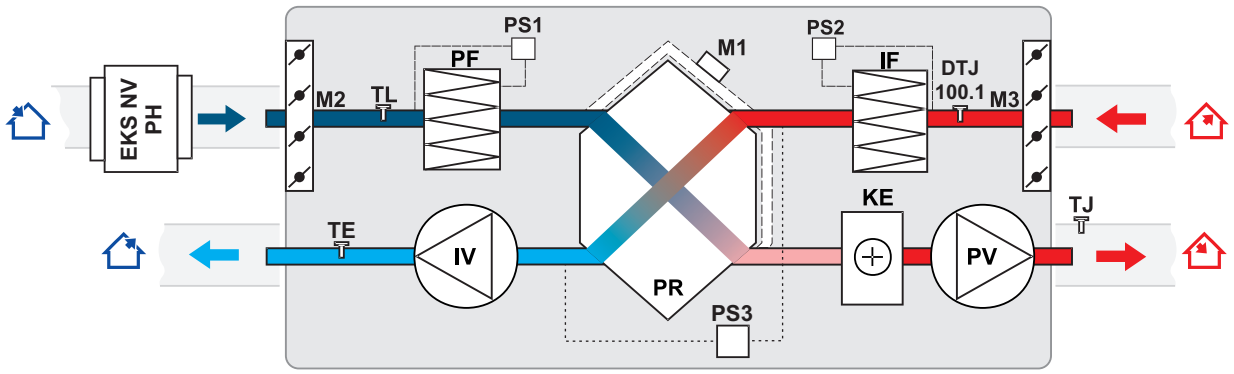
RIS 1200HE EKO 3.0 / RIS 1900HE EKO 3.0 / RIS 2200HE EKO 3.0 (horizontal) **versions with electrical heater**



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

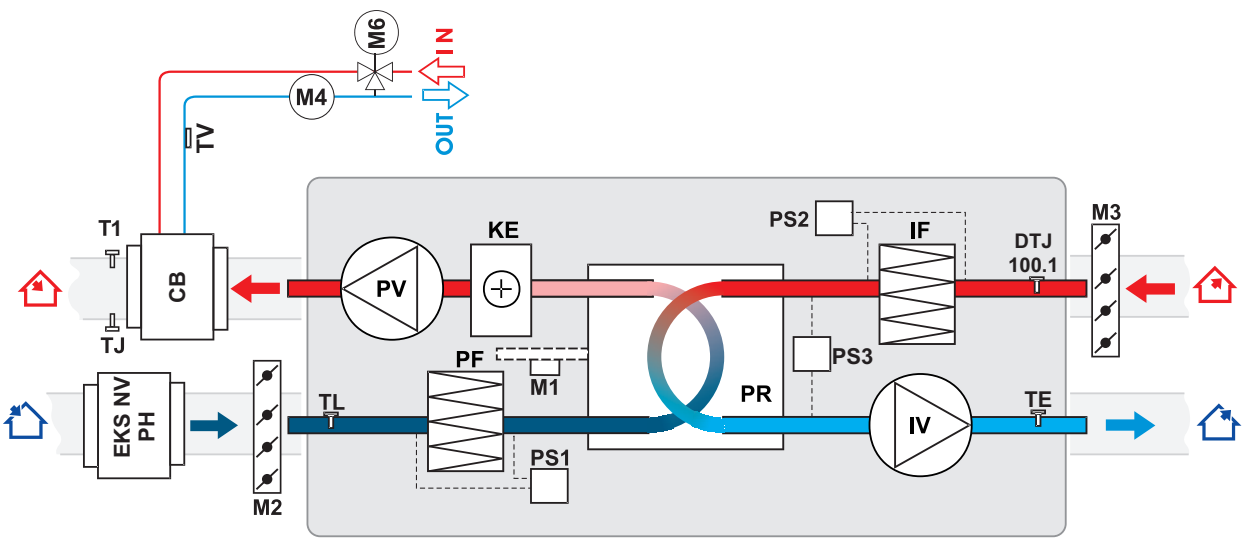
RIS 2500HE EKO 3.0 (horizontal) **version with electrical heater**



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

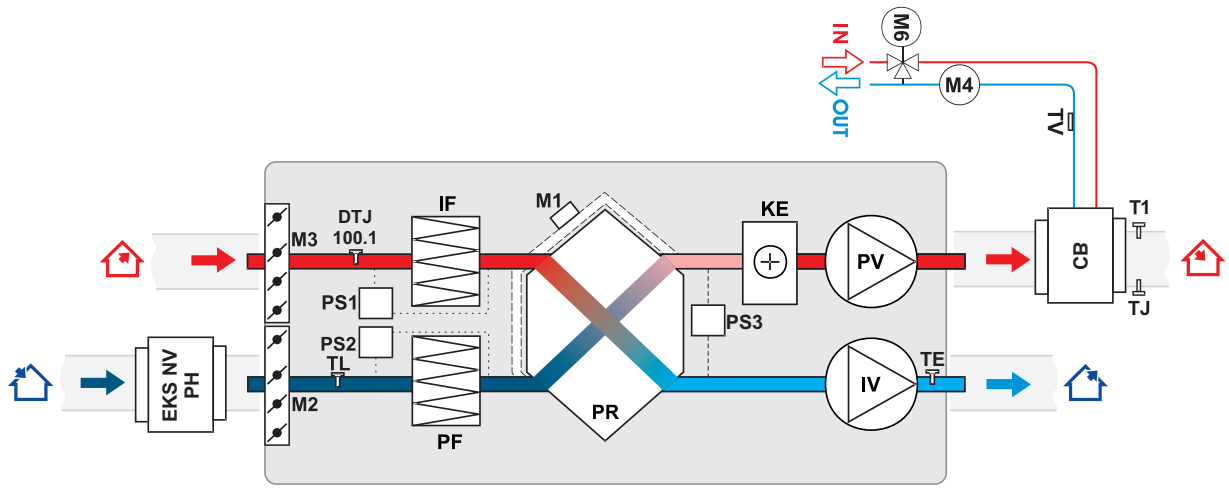
RIS 3500HE EKO 3.0 (horizontal) **version with electrical heater**



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

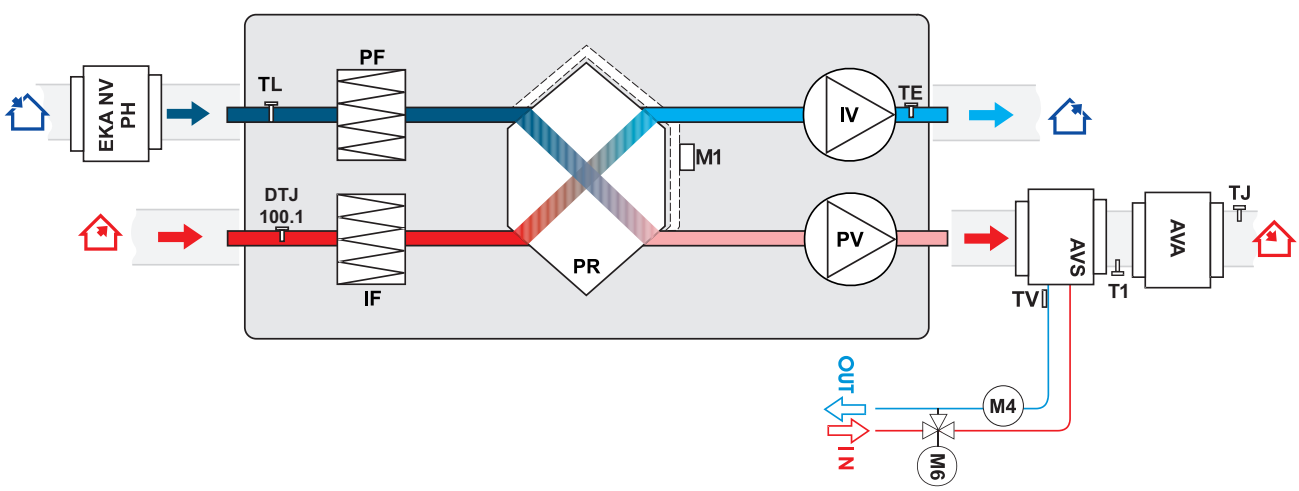
RIS 5500HE EKO 3.0 (horizontal) **version with electrical heater**



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

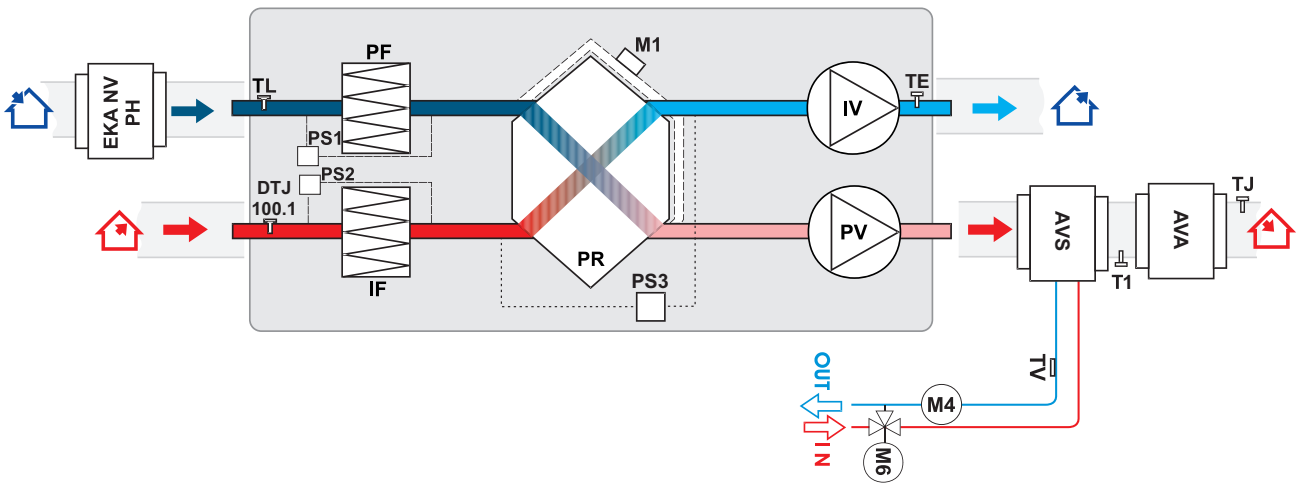
RIS 700HW EKO 3.0 version with optional water heater



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

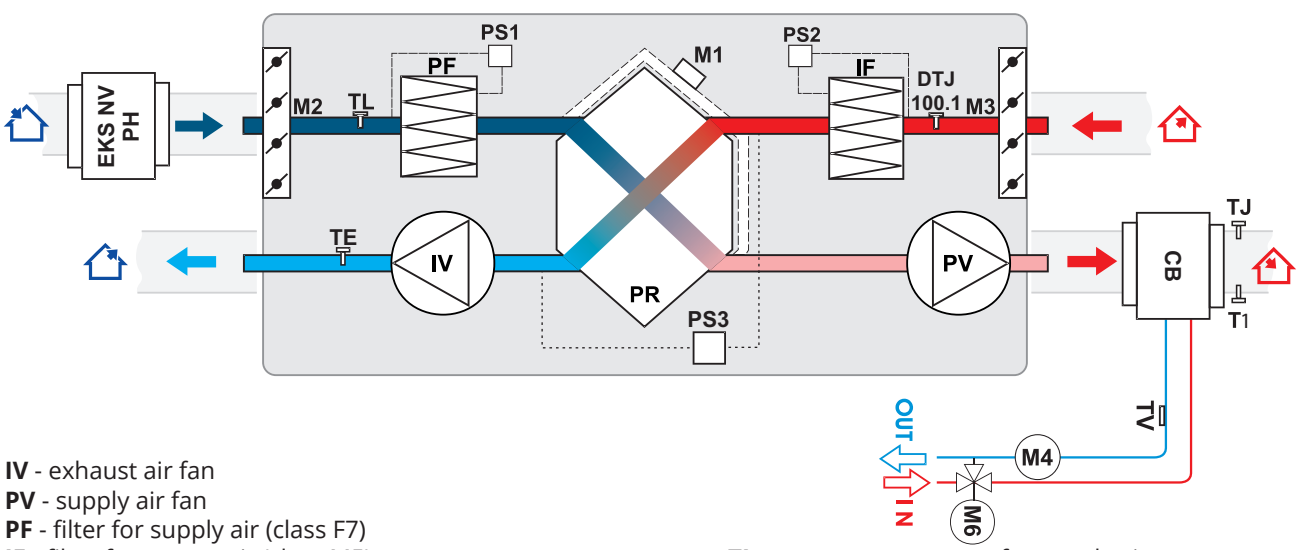
RIS 1200HW EKO 3.0 / RIS 1900HW EKO 3.0 / RIS 2200HW EKO 3.0 (horizontal) **version with optional water heater**



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

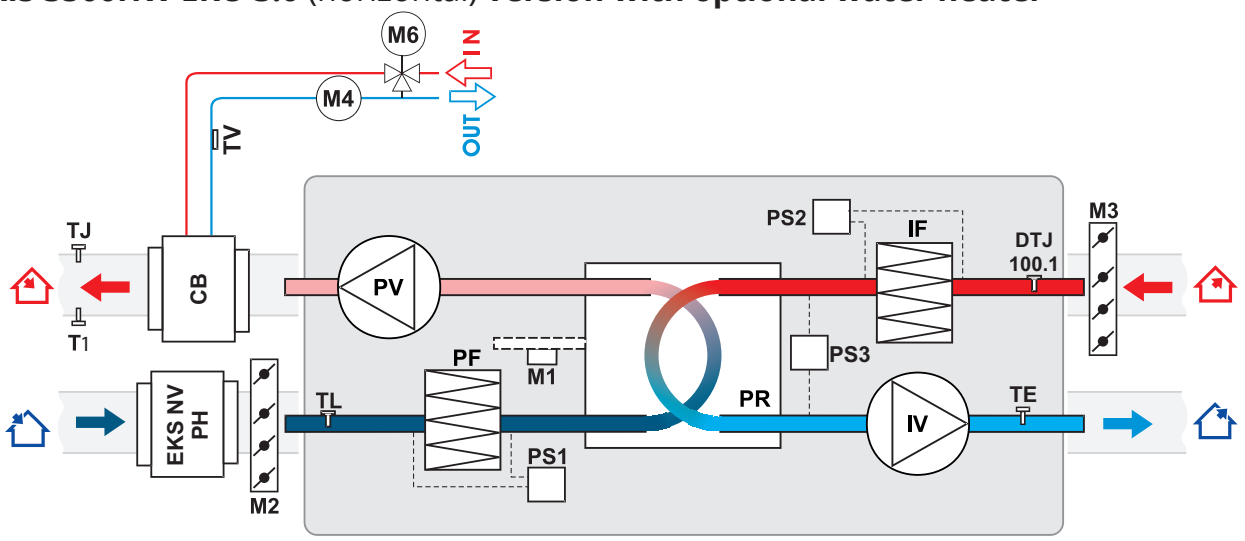
RIS 2500HW EKO 3.0 (horizontal) **version with optional water heater**



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

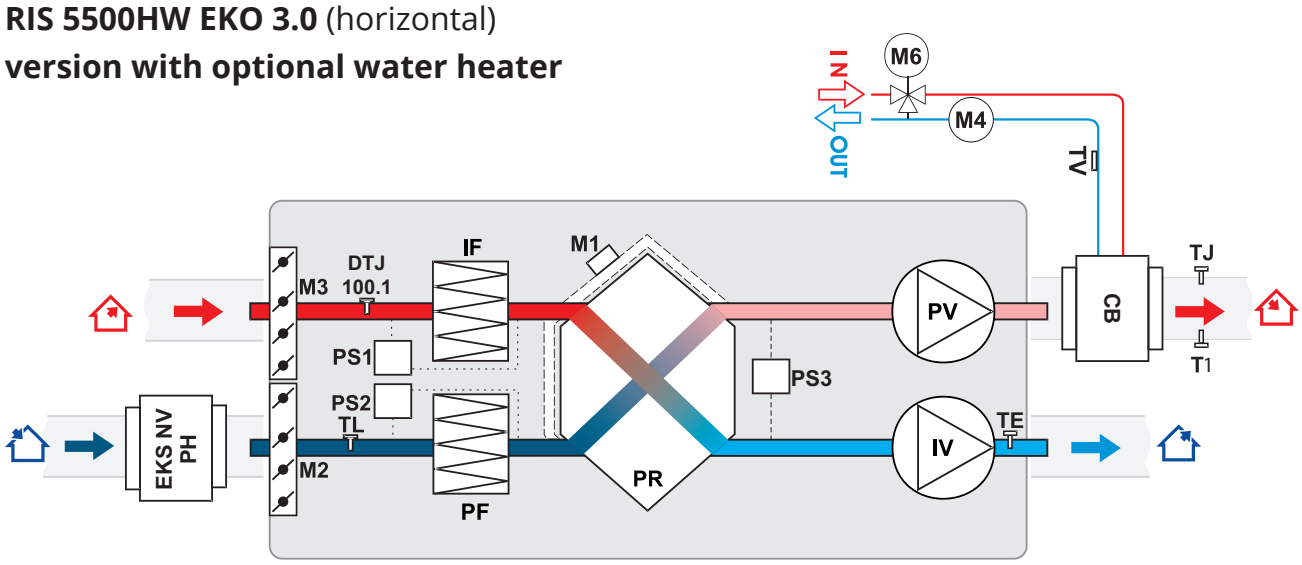
RIS 3500HW EKO 3.0 (horizontal) version with optional water heater



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

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**