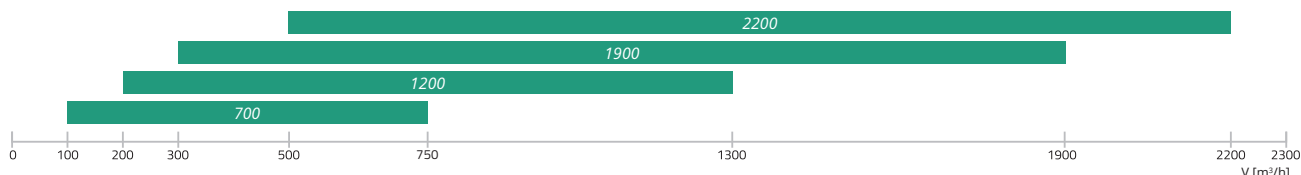
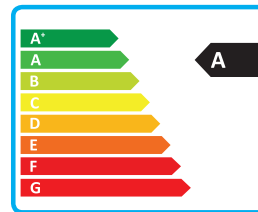


RIS V EKO

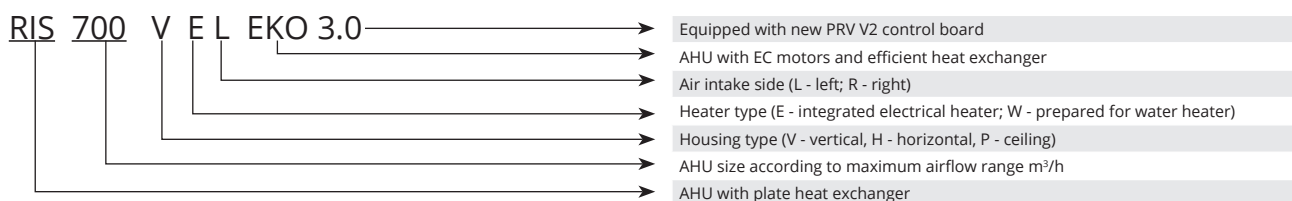


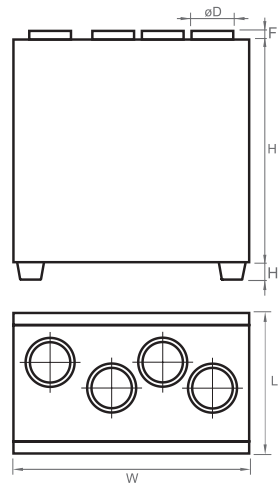
A1/L2



AIR HANDLING UNITS

Application	Ventilation of houses, offices or other heated premises (classrooms, apartments, conference rooms, etc.)
Description	<p>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.</p> <p>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.</p> <p>All the RIS V EKO 3.0 units are fully equipped with automatic controls. Optional external sensors for CO₂ and humidity and so the event planning feature will help to control automatically your climate (demand-level control).</p> <p>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.</p>
Remote control	<p>Three remote control options are available:</p> <ol style="list-style-type: none"> 1. Flex, Stouch or Ptouch remote controllers. 2. Building management system connections. 3. Remote control via PC MB-Gateway.
Features	<ul style="list-style-type: none"> › 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	<ul style="list-style-type: none"> › 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).

















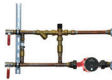



Dimensions [mm]						
Unit	L	W	H	øD	H ₁	F
RIS 700VE/VW EKO 3.0	670	1000	980	250	126	40
RIS 1200VE/VW EKO 3.0	760	1350	1200	315	126	40
RIS 1900VE/VW EKO 3.0	800	2000	1600	400	140	70
RIS 2200VE/VW EKO 3.0	800	2000	1600	400	140	70

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

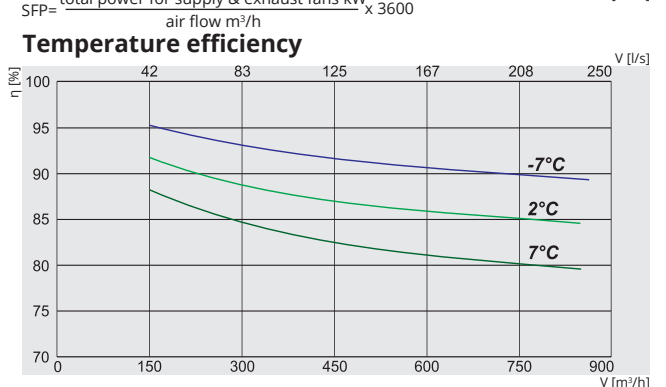
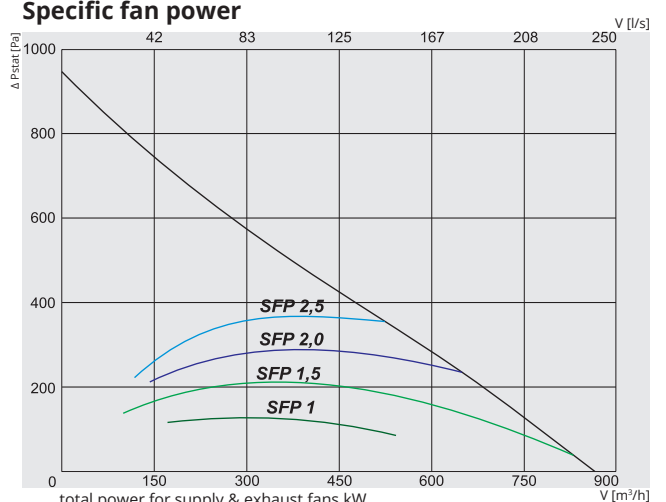
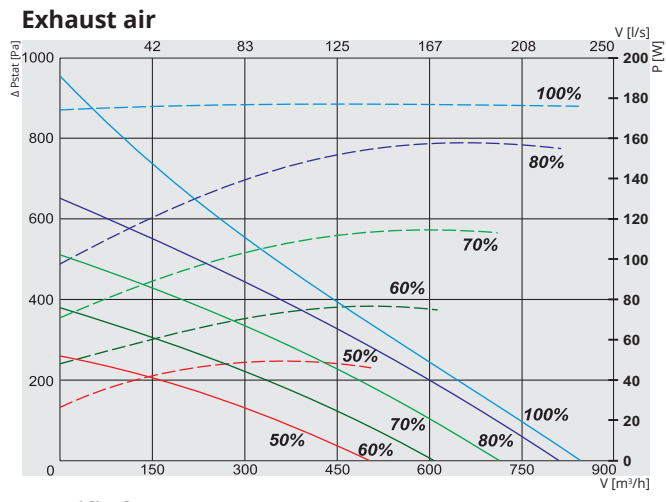
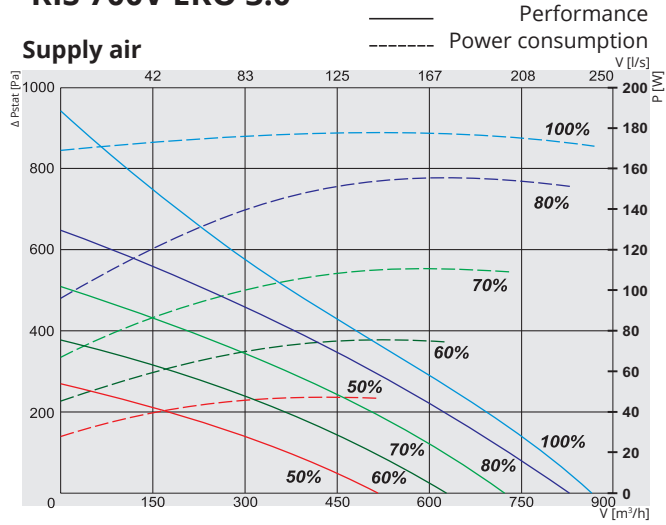
Optional accessories						
Unit	SSB Heating	SSB Cooling	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIS 700VE EKO 3.0	-	81	-	-	-	-
RIS 700VW EKO 3.0	61	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1200VE EKO 3.0	-	81	-	-	-	-
RIS 1200VW EKO 3.0	61	81	3-0,63-4	3-0,63-4	45.10-0.63	45.10-0.63
RIS 1900VE EKO 3.0	-	81	Heaters, coolers and RMG/VVP/VXP data online selection program: www.salda.it			
RIS 1900VW EKO 3.0	61	81				
RIS 2200VE EKO 3.0	-	81				
RIS 2200VW EKO 3.0	61	81				

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

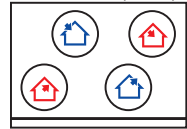
RIS V EKO

RIS 700V EKO 3.0



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	Description
GAGRIS1778_0039A	700VEL EKO 3.0	Left-hand maintenance version with integrated electrical heater
GAGRIS1780_0041A	700VWL EKO 3.0	Left-hand maintenance version prepared for optional water heater
GAGRIS1777_0038A	700VER EKO 3.0	Right-hand maintenance version with integrated electrical heater
GAGRIS1779_0040A	700VWR EKO 3.0	Right-hand maintenance 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.

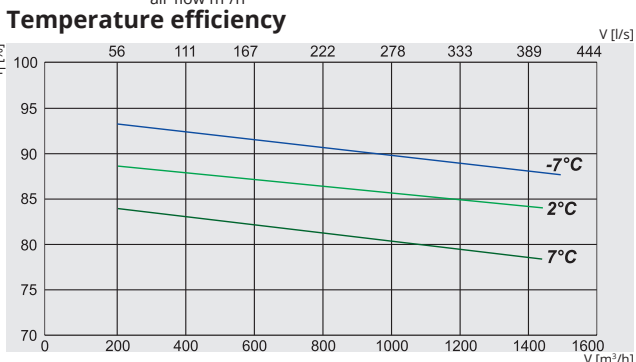
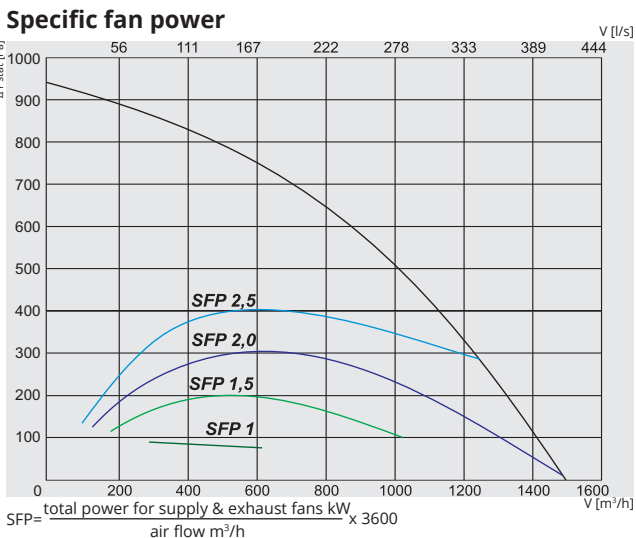
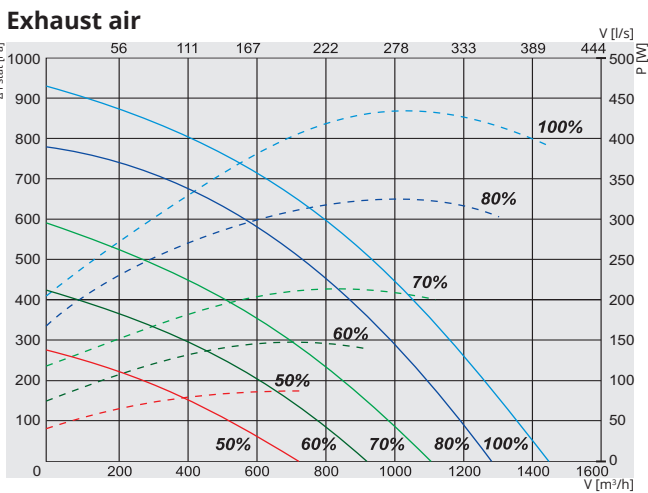
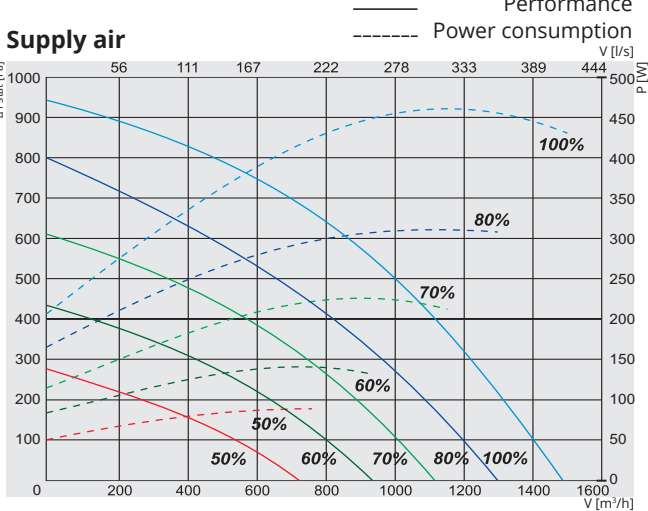
**For temperatures lower than recommended, use electrical pre-heater to ensure balanced operation.

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)	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

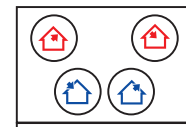
Measured at 750 m³/h, 100 Pa

RIS 1200V EKO 3.0



RIS 1200VL EKO 3.0

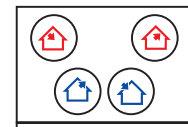
Air intake side (L - left)



View from inspection side

RIS 1200VR EKO 3.0

Air intake side (R - right)



View from inspection side

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

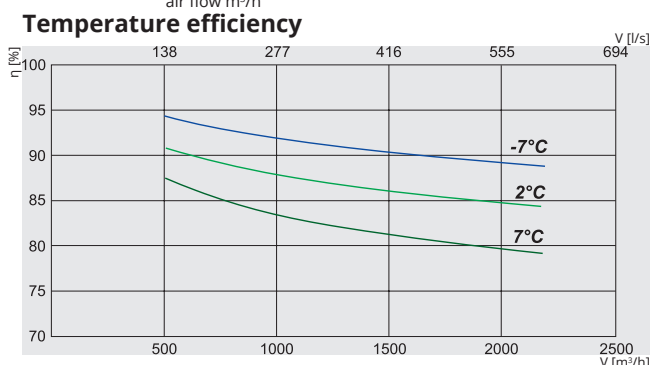
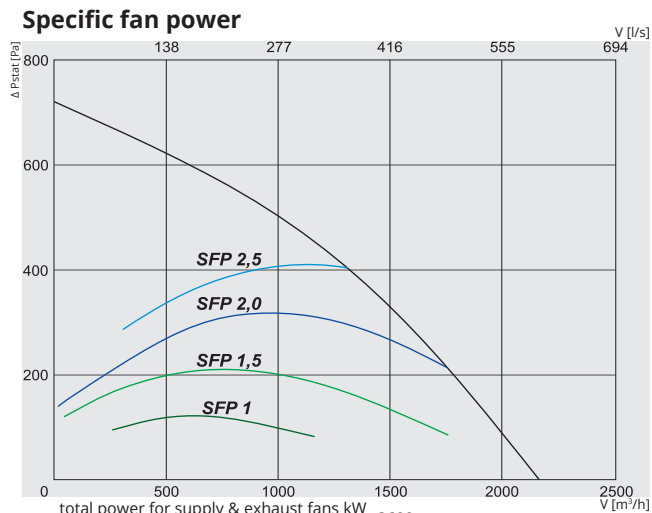
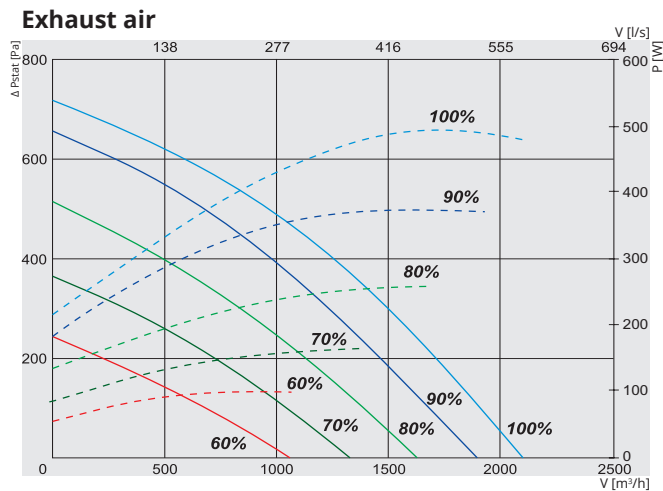
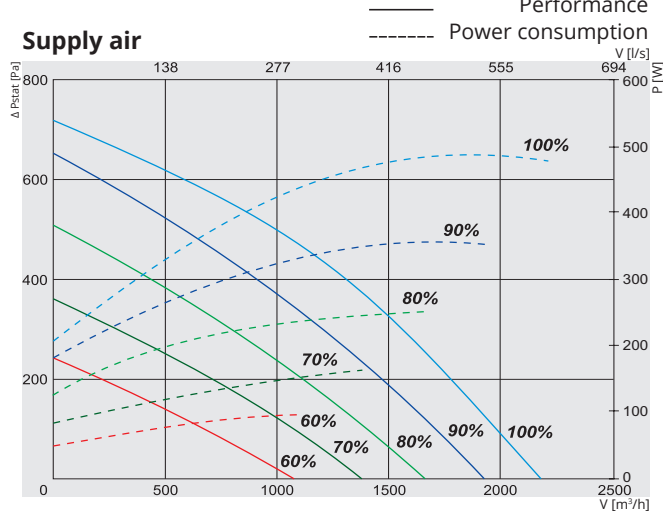
Temperature efficiency (balanced mass flow):
 Extract air = 20°C/60%RH
 Outdoor air = -7°C / 2°C / 7°C

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

Measured at 1300 m³/h, 120 Pa

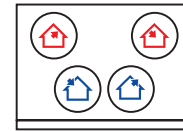
RIS V EKO

RIS 1900V EKO 3.0



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	Description
GAGRIS1786_0049A	1900VEL EKO 3.0	Left-hand maintenance version with integrated electrical heater
GAGRIS1788_0051A	1900VWL EKO 3.0	Left-hand maintenance version prepared for optional water heater
GAGRIS1785_0048A	1900VER EKO 3.0	Right-hand maintenance version with integrated electrical heater
GAGRIS1787_0050A	1900VVR EKO 3.0	Right-hand maintenance 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
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.

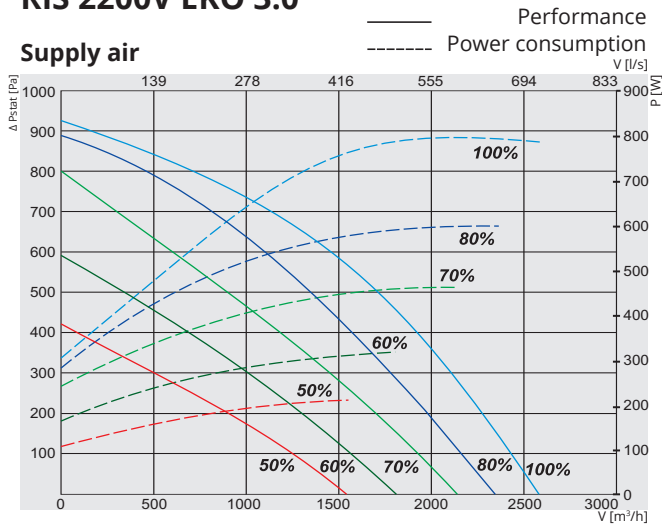
Temperature efficiency (balanced mass flow):
Extract air = 20°C/60%RH
Outdoor air = -7°C / 2°C / 7°C

1900V EKO 3.0	LWA, dB(A)							
	Lwa total, 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

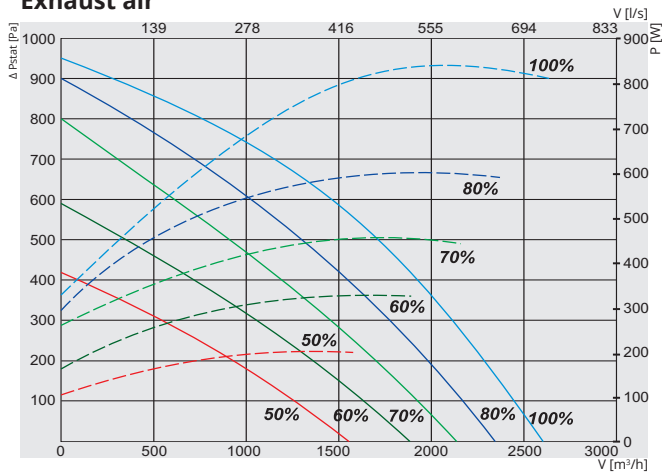
Measured at 2077 m³/h, 150 Pa

RIS 2200V EKO 3.0

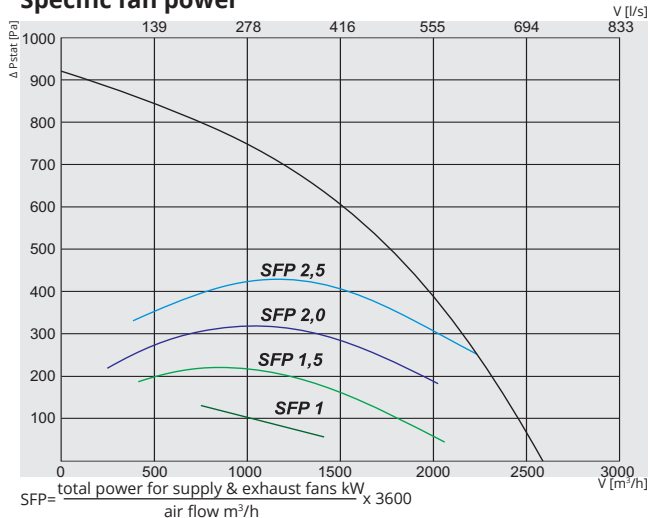
Supply air



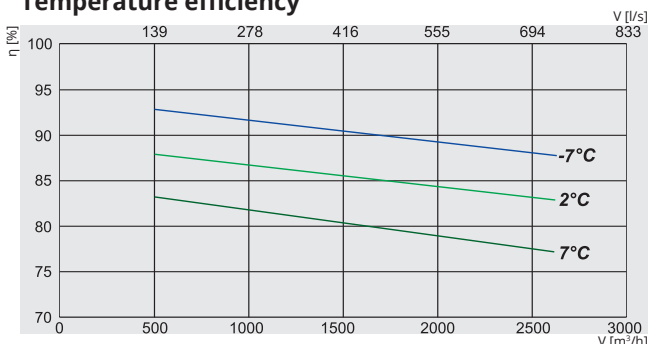
Exhaust air



Specific fan power

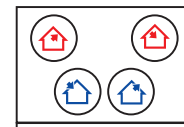


Temperature efficiency



RIS 2200VL EKO 3.0

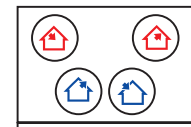
Air intake side (L - left)



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 maintenance version with integrated electrical heater
GAGRIS1956_0135B	2200VWL EKO 3.0 Left-hand maintenance version prepared for optional water heater
GAGRIS1955_0134B	2200VER EKO 3.0 Right-hand maintenance version with integrated electrical heater
GAGRIS1954_0135B	2200VVR EKO 3.0 Right-hand maintenance 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.

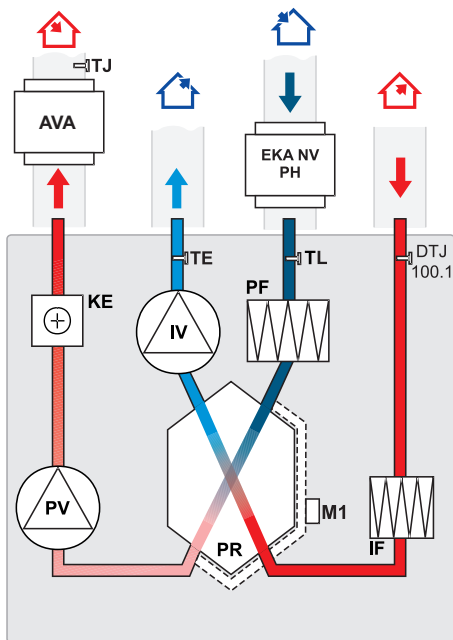
Temperature efficiency (balanced mass flow):
 Extract air = 20°C/60%RH
 Outdoor air = -7°C / 2°C / 7°C

2200V EKO 3.0	Lwa total, dB(A)	63 Hz	125 Hz	250 Hz	500 Hz	LWA, dB(A)	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

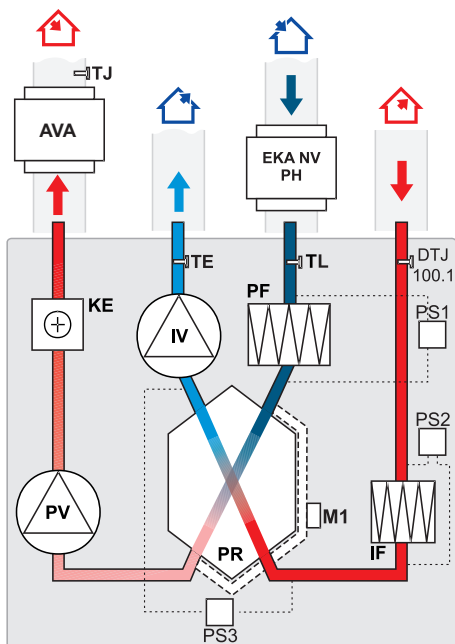
RIS V EKO

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



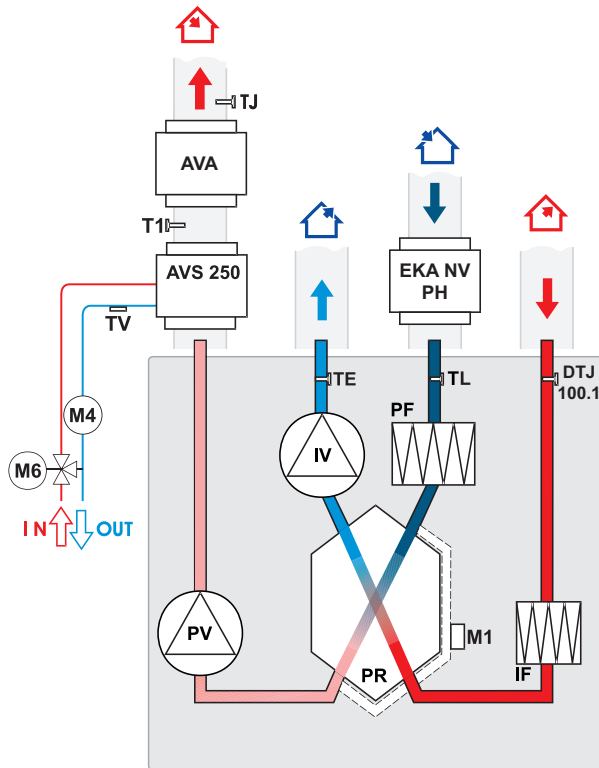
- IV - exhaust air fan
- PV - supply air fan
- PR - plate heat exchanger
- KE - electrical heater
- PF - filter for fresh air (class M5)
- IF - filter for extract air (class M5)
- M1 - actuator of by-pass damper
- TL - temperature sensor for fresh air
- TJ - temperature sensor for supply air
- TE - temperature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



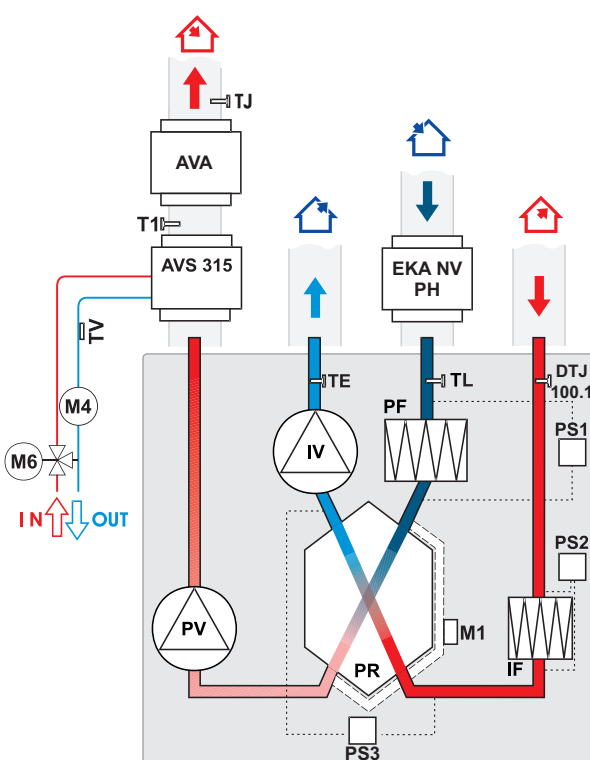
- IV - exhaust air fan
- PV - supply air fan
- PR - plate heat exchanger
- KE - electrical heater
- PF - filter for fresh air (class F7)
- IF - filter for extract air (class M5)
- M1 - actuator of by-pass damper
- TE - temperature sensor for exhaust air
- TL - temperature sensor for fresh air
- TJ -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

FUNCTIONS			
Description of the functions	Functions	PRV V2	
		RIS EKO 3.0	
		E	W
	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	✓	✓
	CO₂ 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 thermostat (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
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