RIS H EKO

ErP 2015

AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла

AHU with cross-counterflow plate heat exchanger. Air handling units RIS H EKO have high efficiency counterflow heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Energy saving and low noise EC fans.
- Efficiency of heat exchanger up to 94%.
- Integrated electrical heater or optional water/DX heating/cooling.
- Controlled air flow.
- Supply air temperature control.
- Motorizes by-pass damper.
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- Acoustic insulation of the walls – RIS 700 H - 30mm and RIS 1200-5500 - 50 mm.
- RIS 700 - 5500 H EKO all versions can be controlled with UNI, PRO and TPC remote control devices.
- Powder coated painting RAL 7040.
- Easy mounting.
- Full integrated plug & play control system.
- RIS 1900H - 5500H EKO optional SIEMENS Climatix controller.
- Integrated pressure switch for filter pollution.
- Electrical heater control 0 - 10V.
- Optional CO_2, pressure or airflow transmitter.
- RIS 1900H - 5500H EKO optional roof and outlet cover.
- RIS 3500H - delivered in three sections and RIS 5500H in two sections.

Urządzenia wentylacyjne RIS H EKO wyposażone w wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych. Rekuperatory przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Energooszczędne i cicho pracujące wentylatory EC.
- Wydajny płytowy wymiennik ciepła strumieni przeciwbieżnych, zwracający do 94% ciepła.
- Zintegrowany grzejnik elektryczny i opcjonalny kanałowy wodno-freonowy grzejnik/schładzacz.
- Zmienny strumień powietrza.
- Sterowanie temperatury dostarczanego powietrza.
- Zasuwa obejściowa z silnikiem.
- Ochrona przeciwzamarzaniowa wymiennika ciepła.
- Niski poziom hałasu.
- Izolacja przeciwhałasowa ścianek – RIS 700 H - 30 mm i RIS 1200 - 5500 -50 mm.
- RIS 200V - 1900V EKO można sterować za pomocą pilotów UNI, PRO i TPC.
- Obudowa malowana metodą proszkową – kolor RAL 7035.
- Szybki i łatwy montaż.
- Przygotowanie „Plug & play" i całkowicie zintegrowana automatyka sterowania
- RIS 1900H - 5500H EKO opcjonalnie możliwość zamówienia sterownika SIEMENS Climatix.
- Zintegrowany miernik zanieczyszczenia filtrów (RIS V 700-1900 EKO).
- Sterowanie grzejnikiem elektrycznym 0-10V.
- Opcjonalny przetwornik CO_2, ciśnienia lub wilgotności
- RIS 1900H - 5500H EKO opcjonalnie zamawiany okap i króciec.
- RIS 3500H – dostarczany jest w dwóch, a RIS 5500H – w trzech sekcjach.

Vėdinimo įrenginiai RIS H EKO pagaminiti su efektyviu priešpriešinių srautų plokšteliniu šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys EC ventiliatoriai.
- Efektyvus priešpriešinių srautų plokštelinis šilumokaitis, kurio gražinama šiluma iki 94%.
- Integruotas elektrinis šildytuvas ir papildomai komplektuojamas kanalinis vandeninis/freoninis šildytuvas/aušintuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Motorizuota apėjimo sklendė.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Sienelių triukšmo izoliacija – RIS 700 H - 30mm and RIS 1200 - 5500 - 50 mm.
- RIS 700 - 5500 H EKO galima valdyti su UNI, PRO ir TPC pulteliais.
- Milteliniu būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas montavimas.
- „Plug & play" paruošimas ir pilnai integruota valdymo automatika.
- RIS 1900H - 5500H EKO galimybė papildomai užsakyti SIEMENS Climatix valdiklį.
- Integruotas filtrų užterštumo matuoklis (RIS V 700 - 1900 EKO).
- Elektrinio šildytuvo valdymas 0-10V.
- Papildomai komplektuojamas CO_2, slėgio arba drėgmės keitiklis.
- RIS 1900H - 5500H EKO papildomai užsakomas stogas ir atvamzdis.
- RIS 3500H - tiekiamas trijomis, RIS 5500H dvejomis sekcijomis.

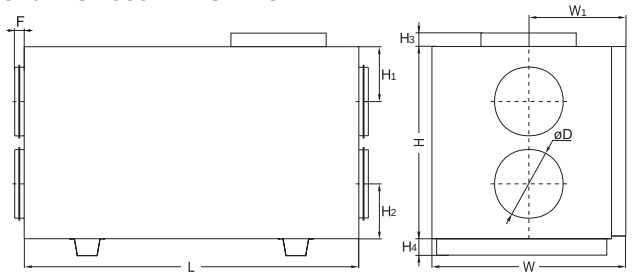
Установки с рекуперацией тепла RIS H EKO очищают, нагревают и подают свежий воздух. Установки RIS EKO извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы EC.
- Пластинчатый теплообменник, эффективность теплоотдачи до 94%.
- Встроенные электрический нагреватель или как опция водяной/DX отопление/охлождение.
- Регулируемый воздушный поток.
- Регулируемая температура приточного воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Акустическая изоляция стенок - RIS 500 H - 30мм, RIS 1200 - 5500 - 50мм.
- RIS 700 – 5500 H EKO с интегрированными возможнастями. упровления с помощью пультов UNI, PRO и TPC.
- Корпус: окрашекнный RAL 7040.
- Легко и быстро монтируються.
- Интегрированная полная система управления агрегата "plug & play".
- RIS 1900 H – 5500H EKO – опция SIEMENS Climatic контроллер.
- Установлен датчик давления для фильтра загрязнения.
- Контроль электрического нагревателя 0 -10 V.
- Опциональная контроль: CO_2, давление в системе и трансмитер приточного воздуха.
- RIS 1900H – 5500H EKO опция козырька и крышка розетки.
- RIS 3500H – разделян на 3 секции и RIS 5500H на 2 секции.

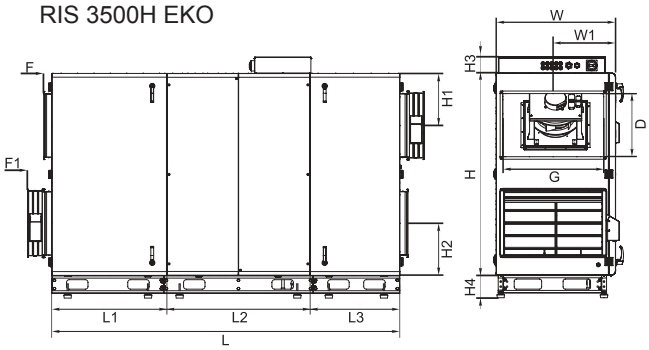
Accessories

Remote controller	Programmable controller	Programmable controller	Pressure transmitter	CO2 transmitter	Duct humidity sensor	Circular duct silencer	Heating coil
							
UNI p. 190	**PRO** p. 189	**TPC** p. 188	**1141** p. 191	**RC02-F2** p. 192	**KFF-U** p. 193	**AKS** p. 236	**AVS** p. 202

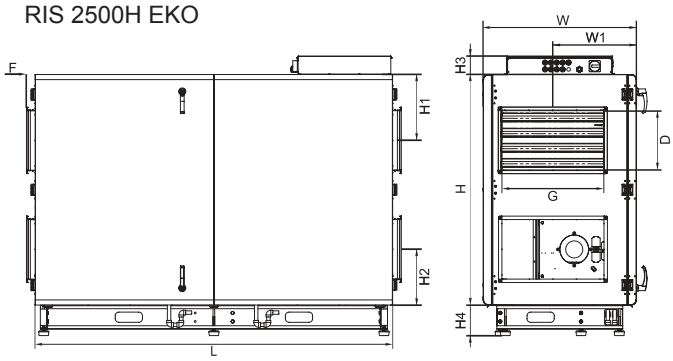
RIS 700H EKO 2.0 - RIS 1200H EKO 2.0
and RIS 1900H EKO EKO



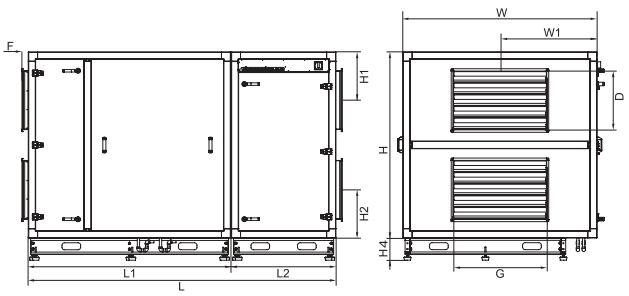
RIS 3500H EKO



RIS 2500H EKO



RIS 5500H EKO



RIS 1200 H W EKO 2.0

RIS	RIS ahu with plate heat exchanger
1200	Air flow m³/h
H	H housing type
W	W heater type
EKO 2.0	Unit with EC fans
	New unit version

Type	Dimensions [mm]															
	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 2.0	1200	-	-	-	670	335	250	-	-	780	210	210	-	126	40	-
RIS 1200HE/HW EKO 2.0	1500	-	-	-	760	380	315	-	-	1200	269	269	70	141	40	-
RIS 1900HE/HW EKO	1800	-	-	-	800	400	400	-	-	1245	331	331	106	141	70	-
RIS 2500HE/HW EKO	2100	-	-	-	900	490	-	600	350	1355	387	327	108	180	50	-
RIS 3500HE/HW EKO	2756	909	1132	709	946	494	-	800	500	1600	413	413	129	180	65	192
RIS 5500HE/HW EKO	2644	1740	900	-	1670	835	-	800	500	1600	415	415	-	180	55	-

Accessories

Circular duct water cooler

AVA p. 212

Mounting clamp

AP p. 235

Shuft-off damper

SKG p. 232

Actuator for dampers

SP p. 199

Thermic water valve actuator

SSB p. 194

Mixing point

RMG p. 195

2 and 3 way valves

VVP/VXP p. 196

Water heater coil

SVS p. 208

RIS H EKO

Type	Accessories						
	UNI PRO TPC	1141 RC02-F2 KFF-U	AKS SKG AP	SKS SVS	AVA	AVS	SP
RIS 700HE EKO 2.0	+	+	250	-	250	250	*
RIS 700HW EKO 2.0	+	+	250	-	250	250	**
RIS 1200HE EKO 2.0	+	+	315	-	315	315	*
RIS 1200HW EKO 2.0	+	+	315	-	315	315	**
RIS 1900HE EKO	+	+	400	-	400	400	*
RIS 1900HW EKO	+	+	400	-	400	400	**
RIS 2500HE EKO	+	+	-	600x350	-	-	int
RIS 2500HW EKO	+	+	-	600x350	-	-	int
RIS 3500HE EKO	+	+	-	800x500	-	-	int
RIS 3500HW EKO	+	+	-	800x500	-	-	int
RIS 5500HE EKO	+	+	-	800x500	-	-	int
RIS 5500HW EKO	+	+	-	800x500	-	-	int

* - SP actuators LM230A-TP or ** - with sprig back NF230A for the fresh air dampers.
If ordering RIS 1900-5500HW EKO and SVS/AVS must be ordered water sensor (TJP 10K) and duct thermostat (C04C)
int - already integrated into the unit

Type	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 2.0	-	81	-	-	-	-	-	-
RIS 700HW EKO 2.0	61	81	3-1,0-4	3-0,63-4	45.10-1,1	45.10-0,63	-	-
RIS 1200HE EKO 2.0	-	81	-	-	-	-	-	-
RIS 1200HW EKO 2.0	61	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63	-	-
RIS 1900HE EKO	-	81	Heaters, coolers and RMG/VVP/VXP data online selection program: ***www.salda.lt***				400	+
RIS 1900HW EKO	61	81					400	+
RIS 2500HE EKO	-	81					600x350	+
RIS 2500HW EKO	61	81					600x350	+
RIS 3500HE EKO	-	81					800x500	+
RIS 3500HW EKO	61	81					800x500	+
RIS 5500HE EKO	-	81					800x500	+
RIS 5500HW EKO	61	81					800x500	+

Accessories

Comfort Box

CB **p. 200**

Rectangular duct silencer

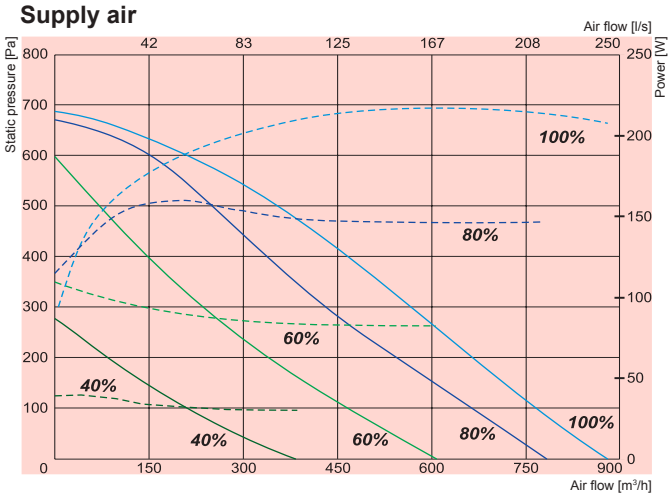
SKS **p. 239**

Outlet cover

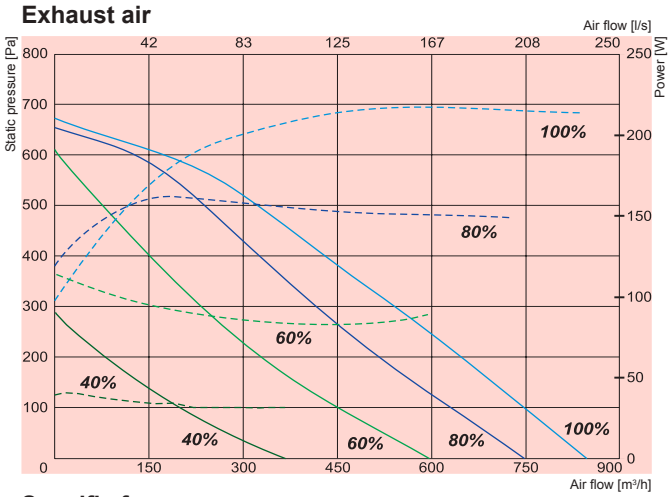
Roof

AVAILABLE FROM 2013 AUTUMN

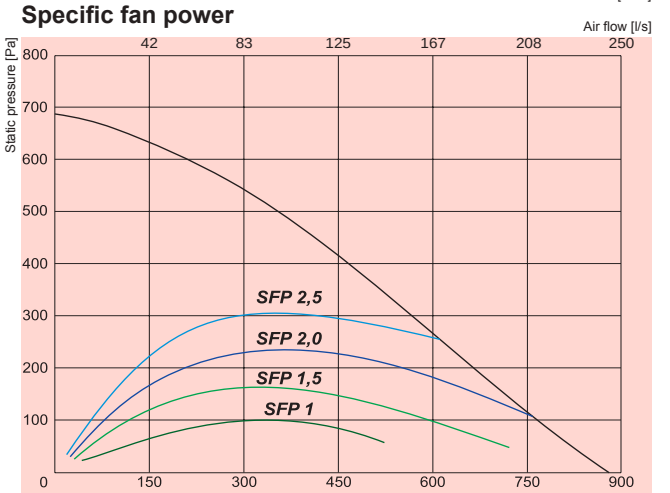
Supply air



Exhaust air

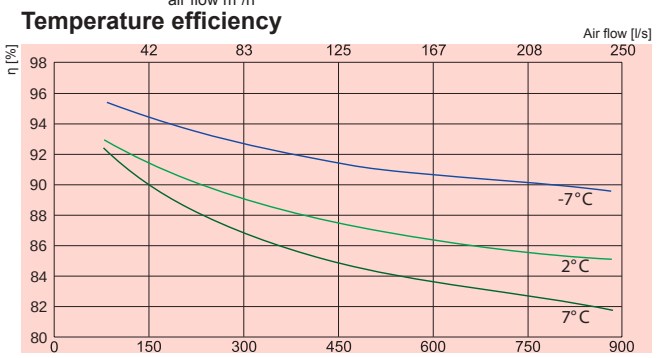


Specific fan power



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

Temperature efficiency

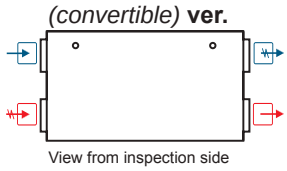


NEW!

RIS 700HE EKO 2.0

——— Performance
------- Power consumption

RIS 700HE EKO 2.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			700HE EKO 2.0
Heater	-phase/voltage	[50Hz/VAC]	~1,230
	-power consumption	[kW]	1,2
EC Fans	-phase/voltage	[50Hz/VAC]	~1, 230
exhaust	-power/current	[kW/A]	0,210/1,59
	-fan speed	[min^{-1}]	3380
supply	-power/current	[kW/A]	0,230/1,69
	-fan speed	[min^{-1}]	3380
Motor protection class			IP-44
Thermal efficiency			90%
Max power consumption		[kW/A]	1,64/7,43
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	30
Weight		[kg]	105,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors only

700HE EKO 2.0	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

——— Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0
——— Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0
——— Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

RIS H EKO

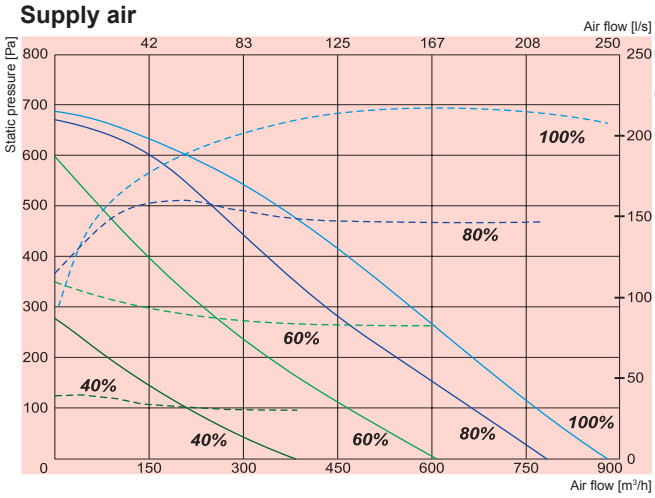
AVAILABLE FROM 2013 AUTUMN

NEW!

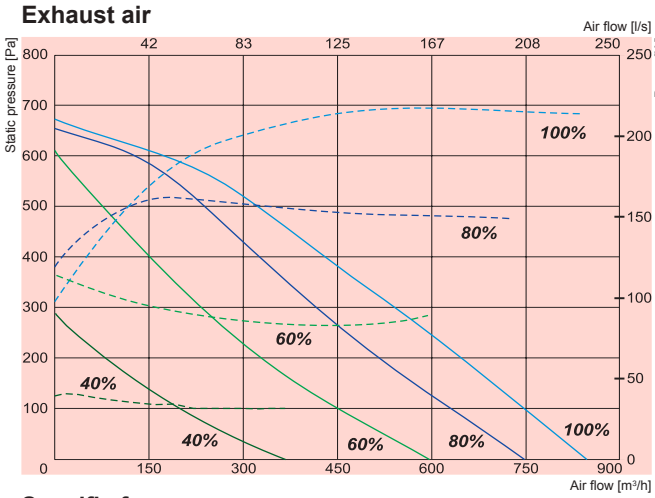
RIS 700HW EKO 2.0

——— Performance
- - - - - - - Power consumption

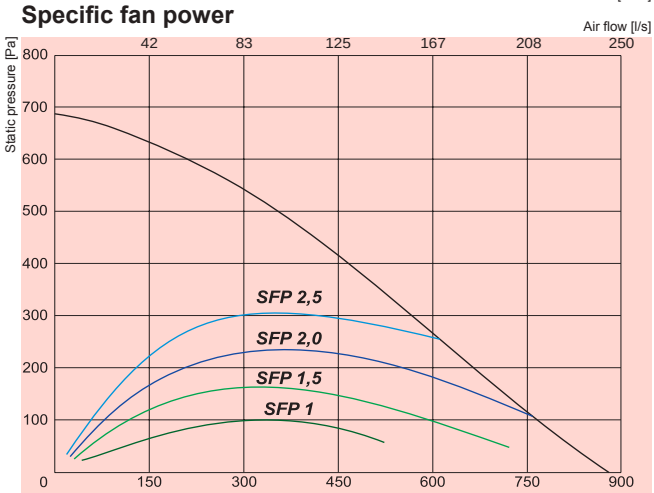
Supply air



Exhaust air

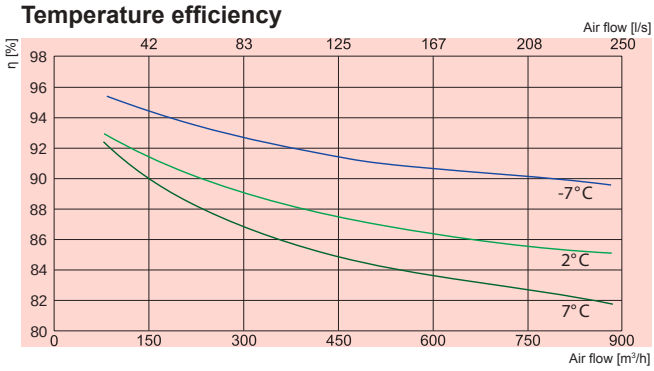


Specific fan power

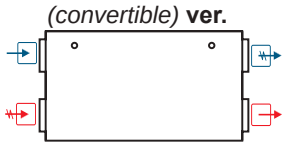


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 700HW EKO 2.0
(convertible) **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			700HW EKO 2.0
Water heater			AVS 250
Fans	-phase/voltage	[50Hz/VAC]	~1, 230
exhaust	-power/current	[kW/A]	0,210/1,59
	-fan speed	[min⁻¹]	3380
supply	-power/current	[kW/A]	0,230/1,69
	-fan speed	[min⁻¹]	3380
Motor protection class			IP-44
Thermal efficiency			90%
Max power consumption		[kW/A]	0,44/1,91
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	30
Weight		[kg]	105,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors only

700HW EKO 2.0	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

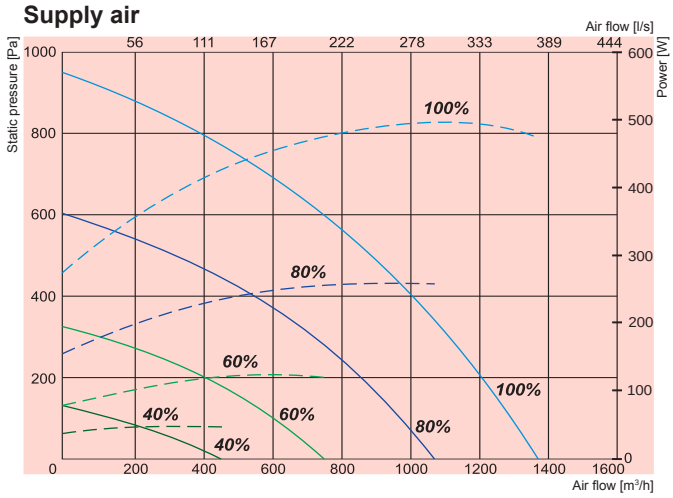
Measured at 760 m³/h, 101 Pa

——— Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0
——— Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0
——— Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

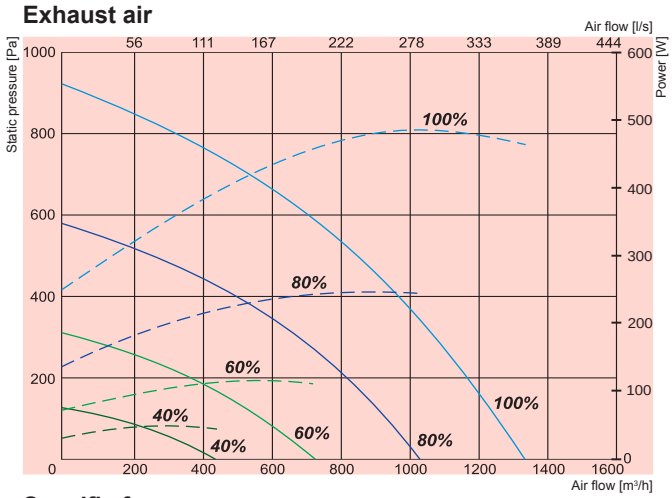
Temperature efficiency calculated according EN 308.

AVAILABLE FROM 2013 AUTUMN

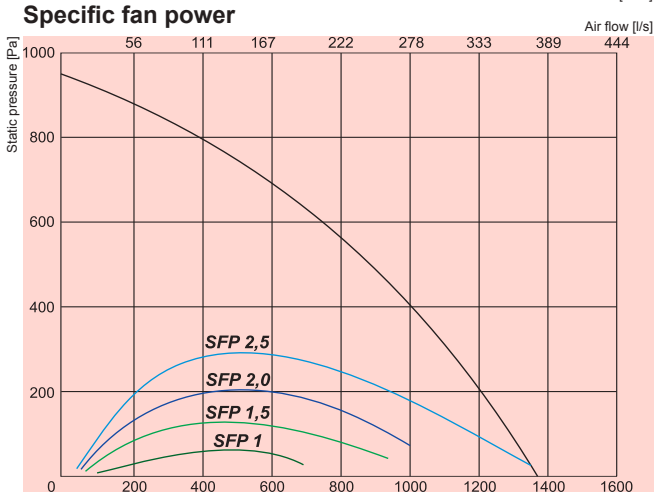
Supply air



Exhaust air

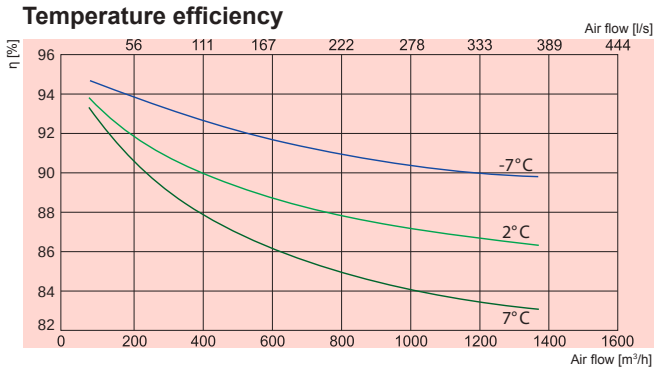


Specific fan power



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

Temperature efficiency

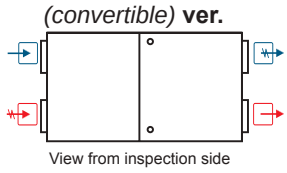


NEW!

RIS 1200HE EKO 2.0

——— Performance
- - - - - - - Power consumption

RIS 1200HE EKO 2.0 *(convertible)* **ver.**



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

1200HE EKO 2.0			
Heater	-phase/voltage	[50Hz/VAC]	~1,230
	-power consumption	[kW]	2,0
EC Fans	-phase/voltage	[50Hz/VAC]	~1, 230
exhaust	-power/current	[kW/A]	0,45/2,9
	-fan speed	[min⁻¹]	3400
supply	-power/current	[kW/A]	0,45/2,9
	-fan speed	[min⁻¹]	3400
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	2,9/14,5
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	172,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors only

1200HE EKO 2.0	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

——— Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

——— Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

——— Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

RIS H EKO

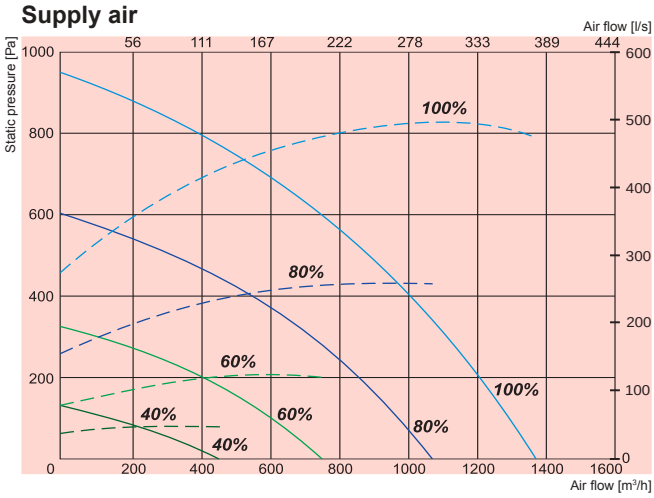
AVAILABLE FROM 2013 AUTUMN

NEW!

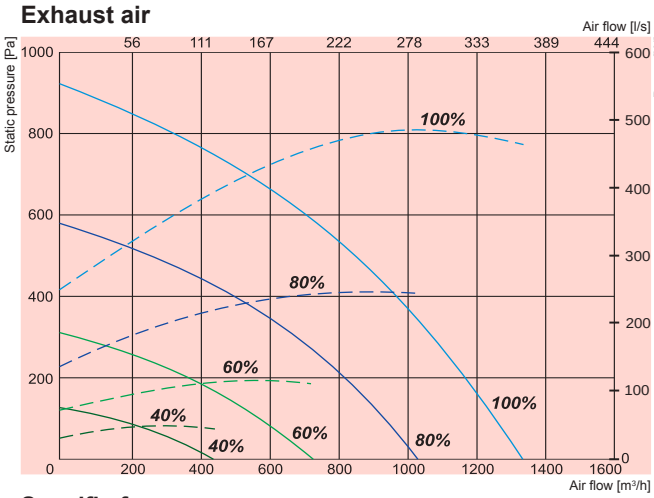
RIS 1200HW EKO 2.0

——— Performance
------- Power consumption

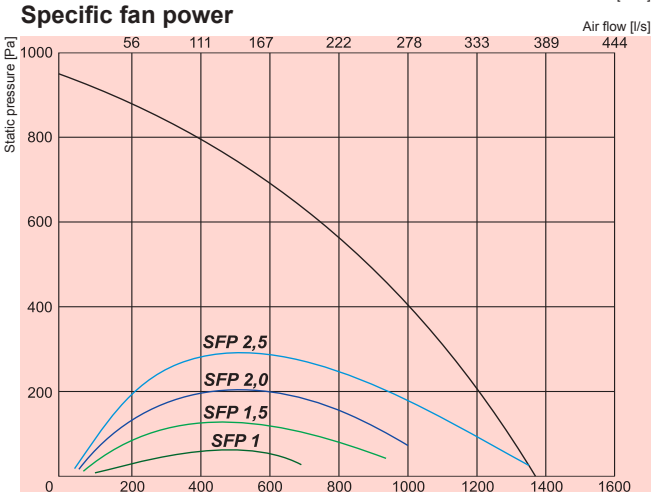
Supply air



Exhaust air

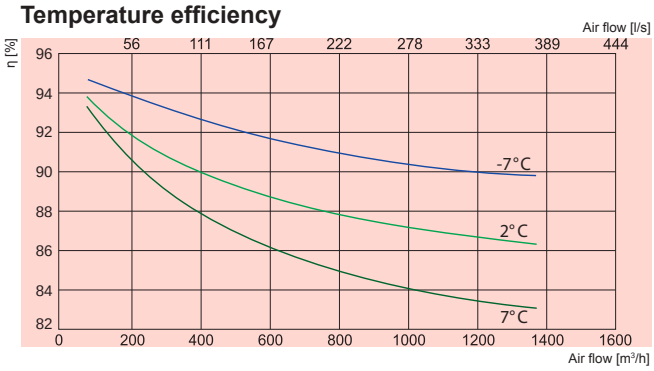


Specific fan power

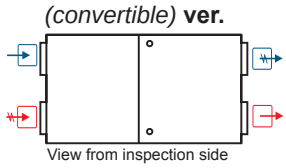


$$SFP = \frac{\text{total power for supply \& exhaust fans kW}}{\text{air flow m}^3/\text{h}} \times 3600$$

Temperature efficiency



RIS 1200HW EKO 2.0
(convertible) **ver.**



Exhaust air | Extract air | Fresh air | Supply air

			1200HW EKO 2.0
Water heater	-power	[kW]	AVS 400
	-water temp. T_{in}/T_{out}	[°C]	
	-water flow rate	[l/s]	
	-water pressure drop	[kPa]	
	-kvs value	[m³/h]	1,62
Fans	-phase/voltage	[50Hz/VAC]	~1, 230
exhaust	-power/current	[kW/A]	0,45/2,9
	-fan speed	[min⁻¹]	3400
supply	-power/current	[kW/A]	0,45/2,9
	-fan speed	[min⁻¹]	3400
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	0,9/5,8
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	174,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors only

1200HW EKO 2.0	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								

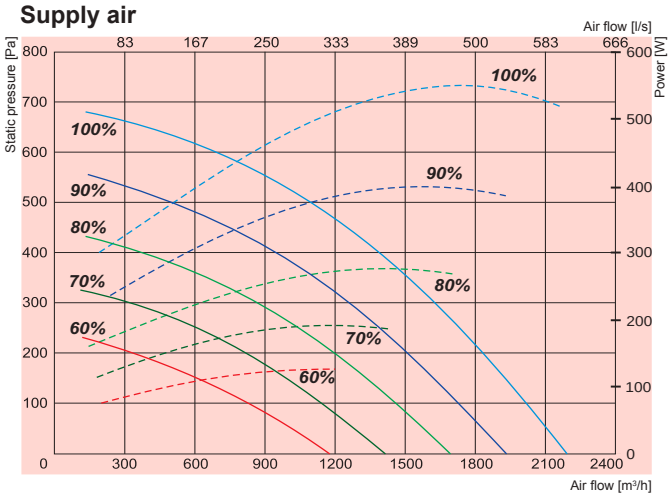
——— Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

——— Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

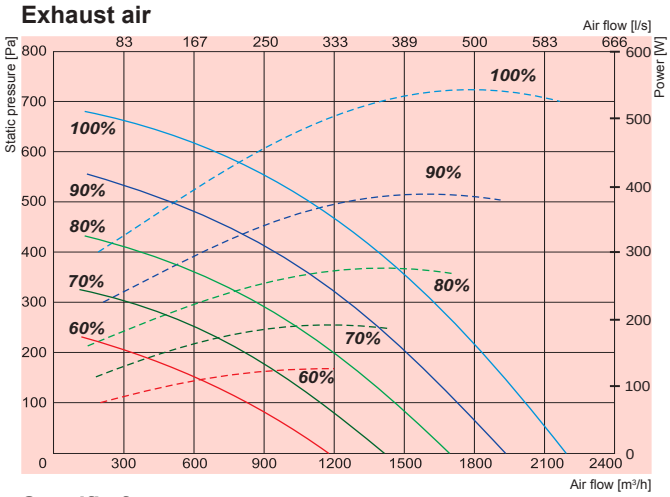
——— Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

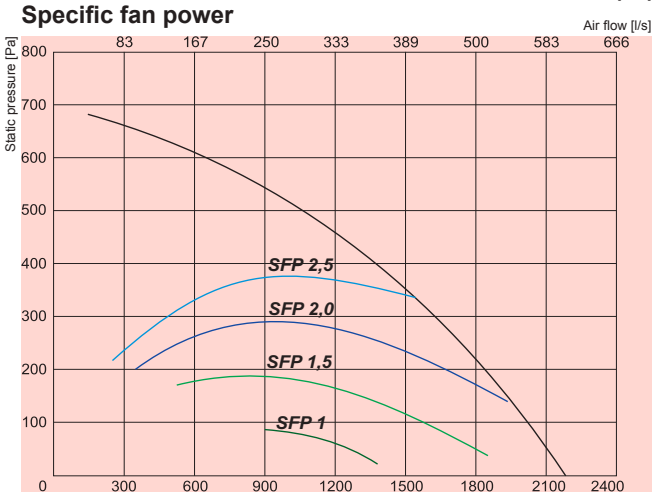
Supply air



Exhaust air

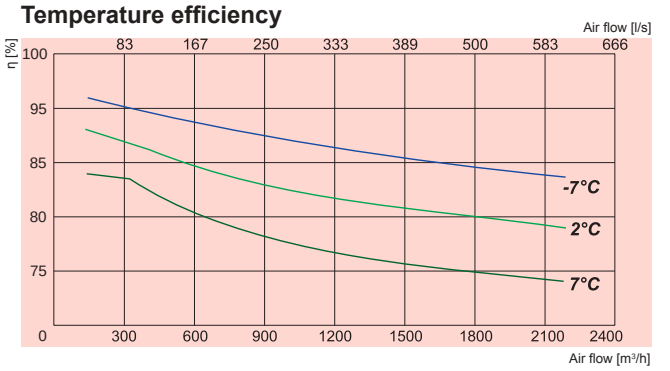


Specific fan power



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

Temperature efficiency

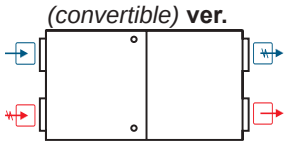


RIS 1900HE EKO

Performance

Power consumption

RIS 1900HE EKO *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			1900HE EKO
Heater	-phase/voltage	[50Hz/VAC]	~1,230
	-power consumption	[kW]	3,0
EC Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	0,549/ 2,47
	-fan speed	[min^{-1}]	2600
supply	-power/current	[kW/A]	0,549/ 2,47
	-fan speed	[min^{-1}]	2600
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	4,1/1,8
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	260,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

1900HE EKO	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

Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

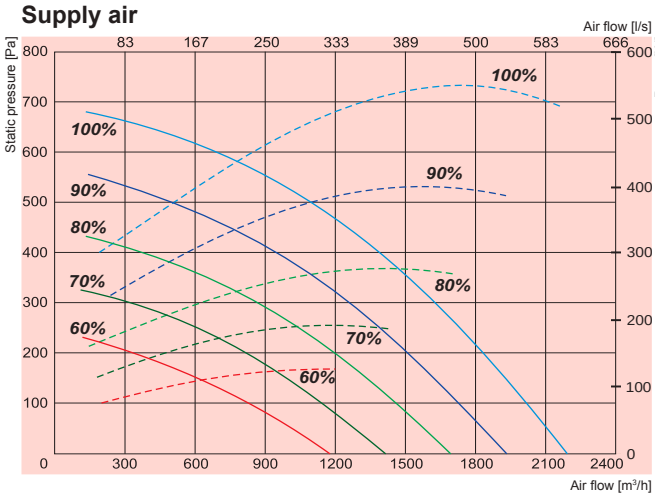
Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

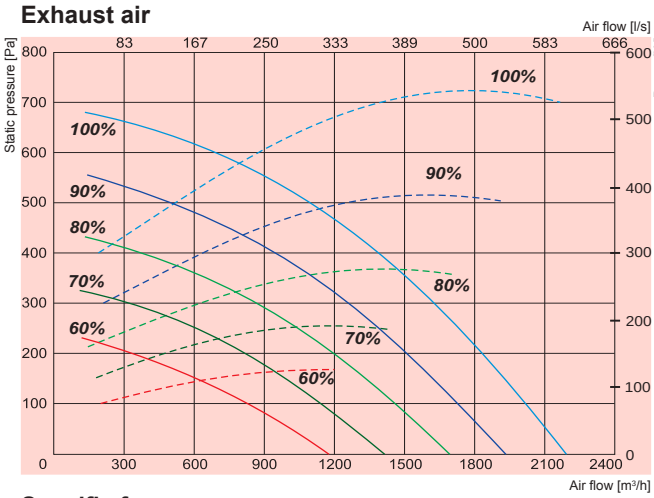
Temperature efficiency calculated according EN 308.

RIS H EKO

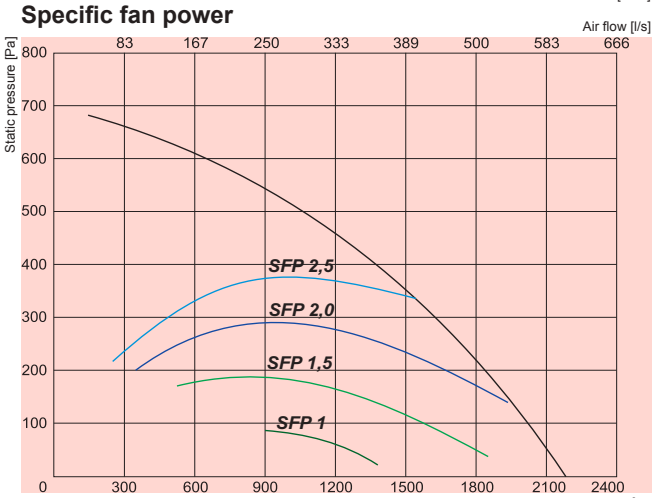
Supply air



Exhaust air

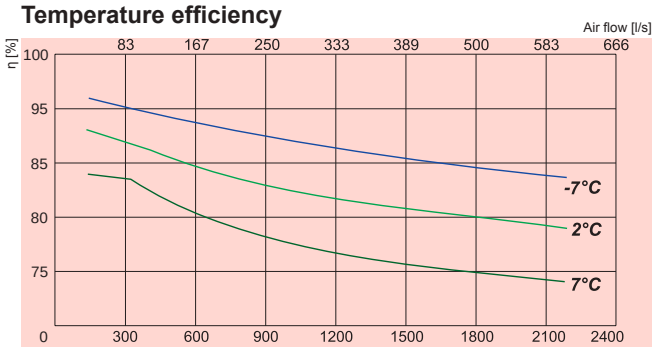


Specific fan power



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

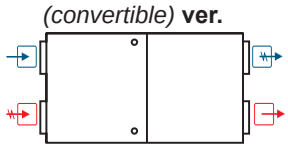
Temperature efficiency



RIS 1900HW EKO

——— Performance
------- Power consumption

RIS 1900HW EKO *(convertible)* ver.



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			1900HW EKO
Water heater			AVS 400 or Comfort Box 400
Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	0,549/2,47
	-fan speed	[min⁻¹]	2600
supply	-power/current	[kW/A]	0,549/2,47
	-fan speed	[min⁻¹]	2600
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	1,1/4,74
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	260,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

1900HW EKO	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								

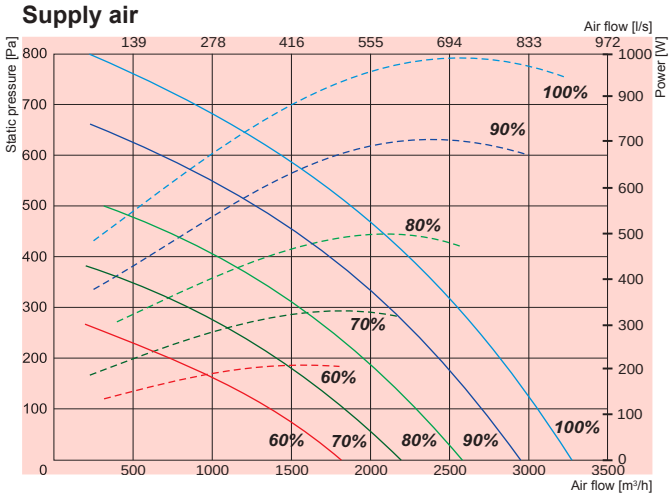
——— Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

——— Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

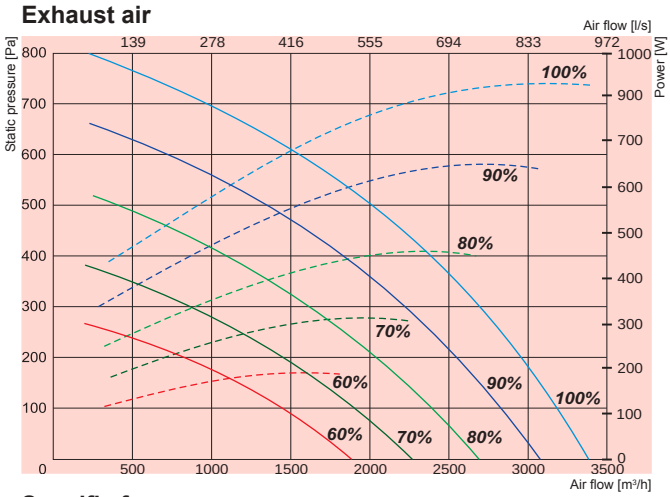
——— Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

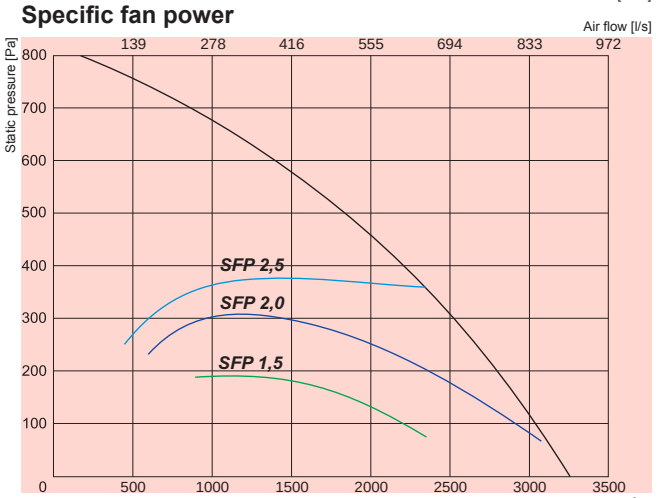
Supply air



Exhaust air

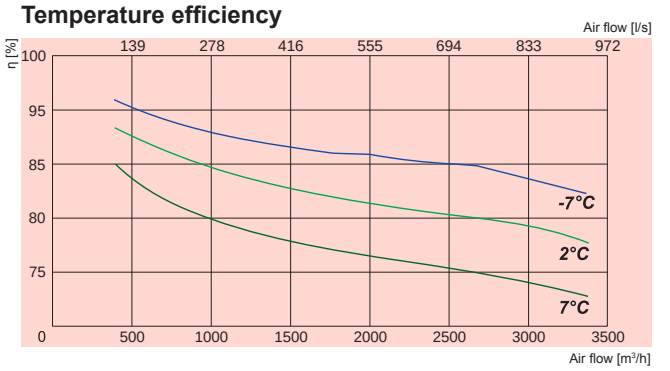


Specific fan power



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

Temperature efficiency

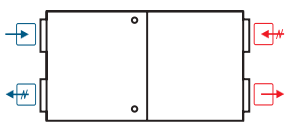


RIS 2500HE EKO

Performance

Power consumption

RIS 2500HE EKO



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			2500HE EKO
Heater	-phase/voltage	[50Hz/VAC]	~3,400
	-power consumption	[kW]	3,6
EC Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	0,996/4,47
	-fan speed	[min⁻¹]	2200
supply	-power/current	[kW/A]	0,882/3,92
	-fan speed	[min⁻¹]	2200
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	5,48/13,7
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	390,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

2500HE EKO	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

Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

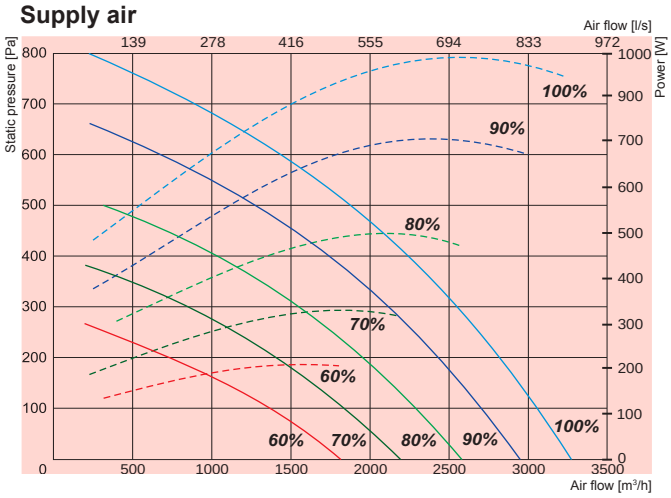
Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

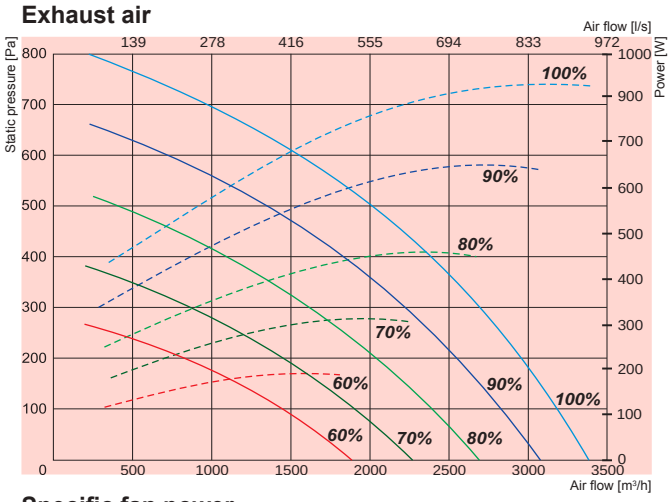
Temperature efficiency calculated according EN 308.

RIS H EKO

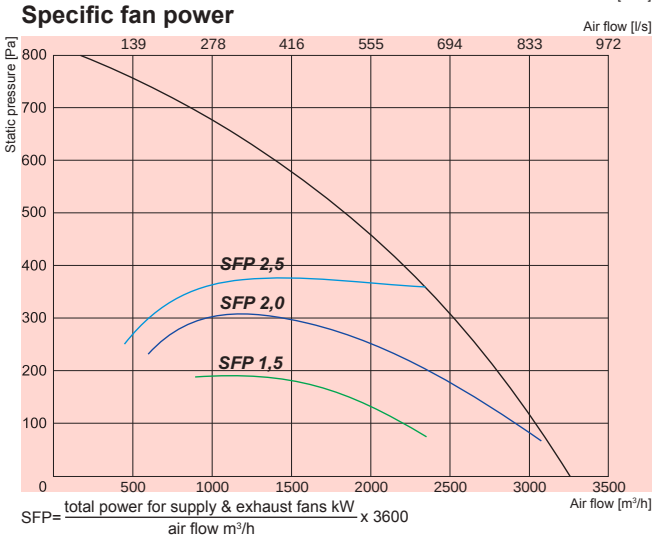
Supply air



Exhaust air

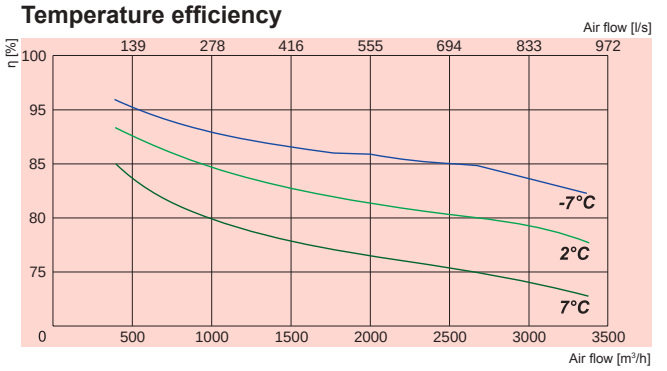


Specific fan power



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

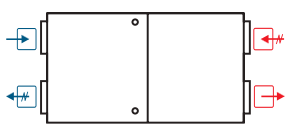
Temperature efficiency



RIS 2500HW EKO

Performance
Power consumption

RIS 2500HW EKO



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			2500HW EKO
Water heater			SVS 600x350 or Comfort Box 600x350
Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	0,996/4,47
	-fan speed	[min⁻¹]	2200
supply	-power/current	[kW/A]	0,882/3,92
	-fan speed	[min⁻¹]	2200
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	1,88/8,49
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	390,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

2500HW EKO	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								

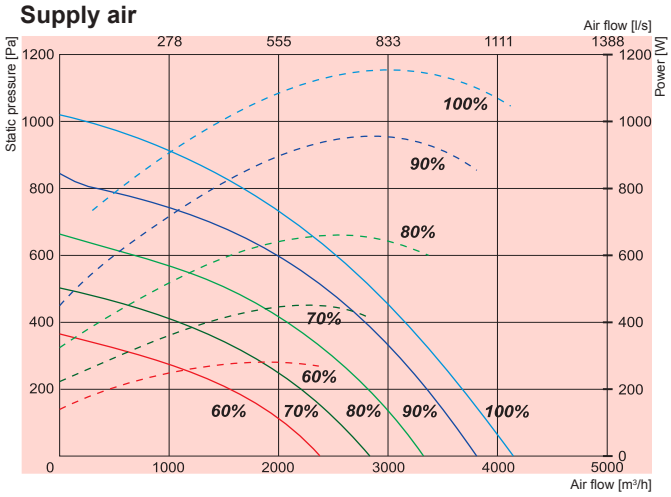
Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

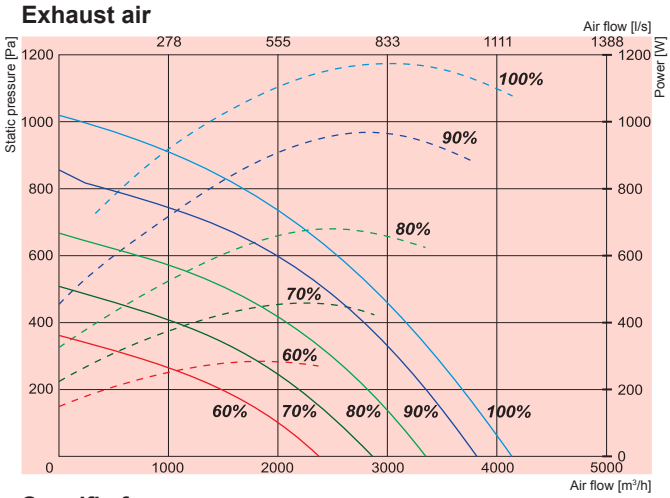
Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

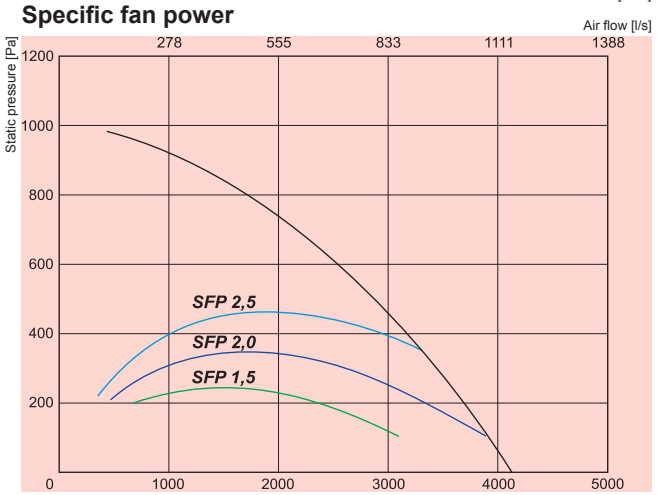
Supply air



Exhaust air

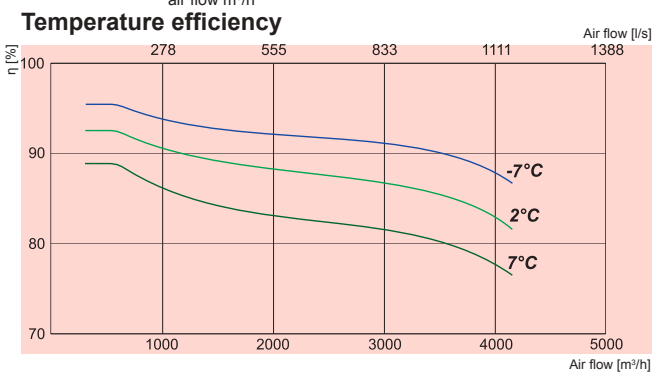


Specific fan power



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

Temperature efficiency



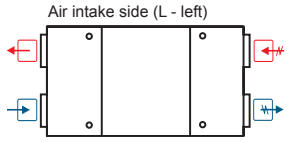
RIS 3500HE EKO

Performance

Power consumption

RIS 3500HEL EKO

Air intake side (L - left)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			3500 HE EKO
Heater	-phase/voltage	[50Hz/VAC]	~3,400
	-power consumption	[kW]	6,0
EC Fans	-phase/voltage	[50Hz/VAC]	~1/230
exhaust	-power/current	[kW/A]	1,173/5,43
	-fan speed	[min^{-1}]	2390
supply	-power/current	[kW/A]	1,160/5,4
	-fan speed	[min^{-1}]	2390
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	8,34/19,6
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	627,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

3500HE EKO	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								

Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

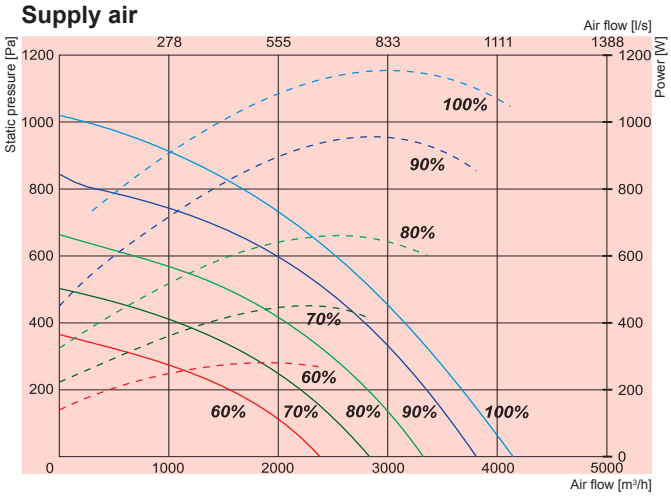
Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

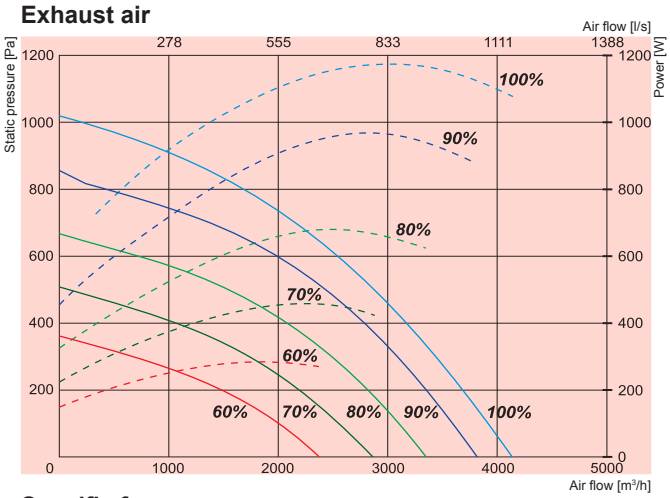
Temperature efficiency calculated according EN 308.

RIS H EKO

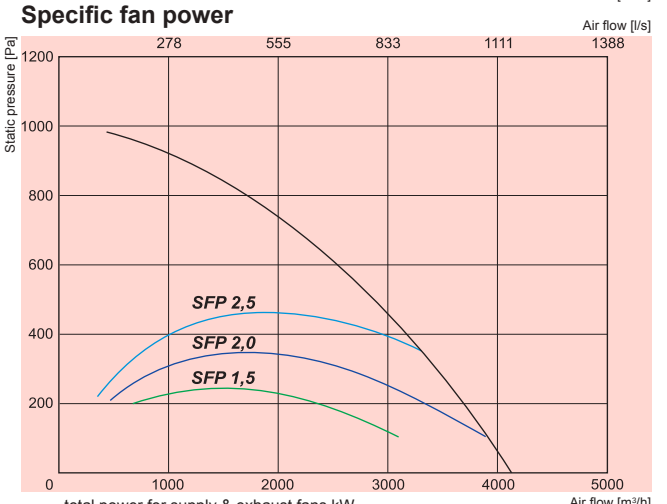
Supply air



Exhaust air

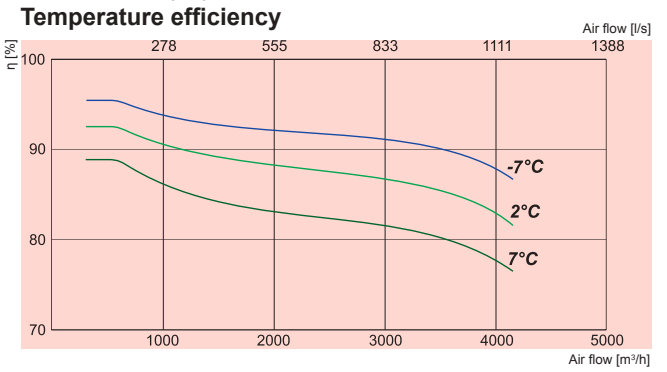


Specific fan power



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

Temperature efficiency

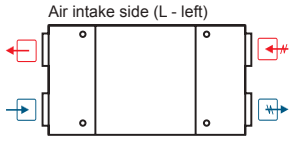


RIS 3500HW EKO

Performance
Power consumption

RIS 3500HWL EKO

Air intake side (L - left)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			3500HW EKO
Water heater			SVS 800x500 or Comfort Box 800x500
Fans	-phase/voltage	[50Hz/VAC]	~1,230
exhaust	-power/current	[kW/A]	1,173/5,43
	-fan speed	[min⁻¹]	2390
supply	-power/current	[kW/A]	1,160/5,4
	-fan speed	[min⁻¹]	2390
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	2,34/11
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	627,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

3500HW EKO	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								

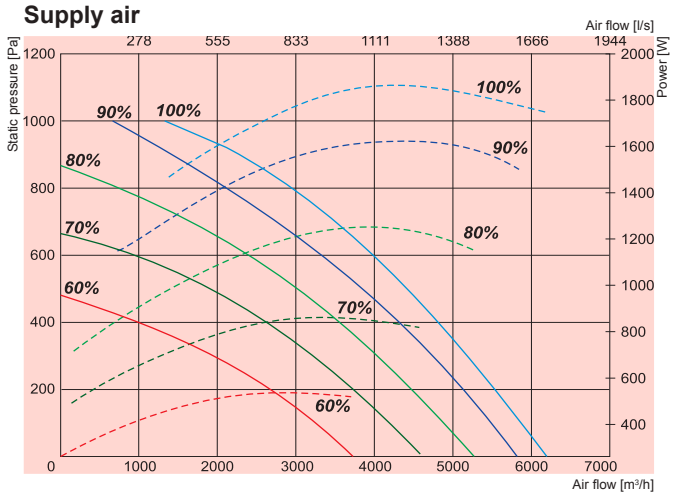
Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

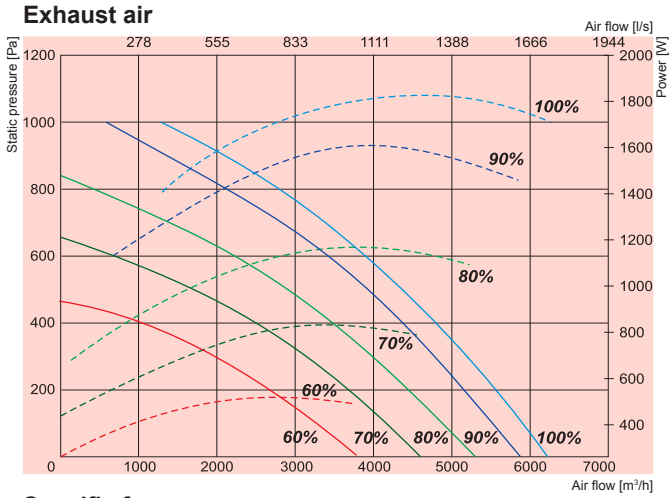
Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

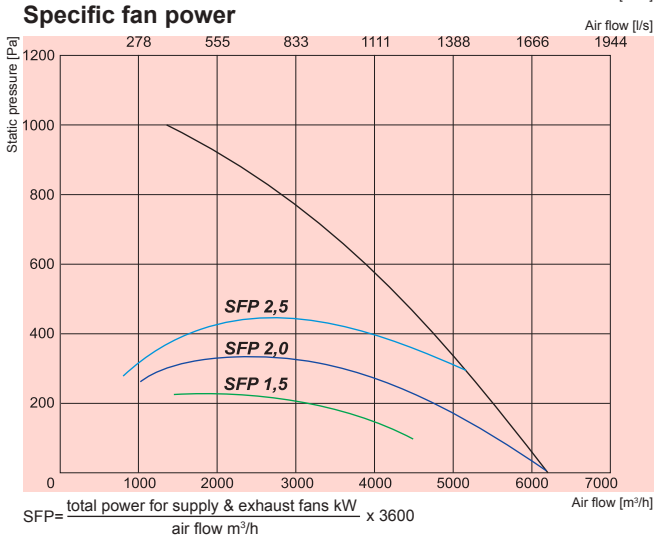
Supply air



Exhaust air

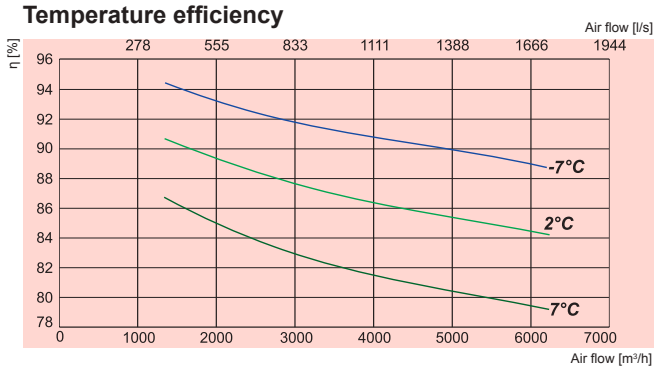


Specific fan power



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

Temperature efficiency

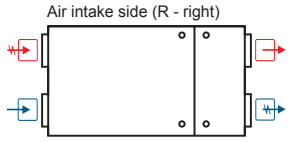


RIS 5500HE EKO

——— Performance
- - - - - - - Power consumption

RIS 5500HER EKO

Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			5500HE EKO
Heater	-phase/voltage	[50Hz/VAC]	~3,400
	-power consumption	[kW]	12
EC Fans	-phase/voltage	[50Hz/VAC]	~3,400
exhaust	-power/current	[kW/A]	1,835/2,88
	-fan speed	[min⁻¹]	2180
supply	-power/current	[kW/A]	1,865/3,06
	-fan speed	[min⁻¹]	2180
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	15,7/23,4
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	788,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

5500HE EKO	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

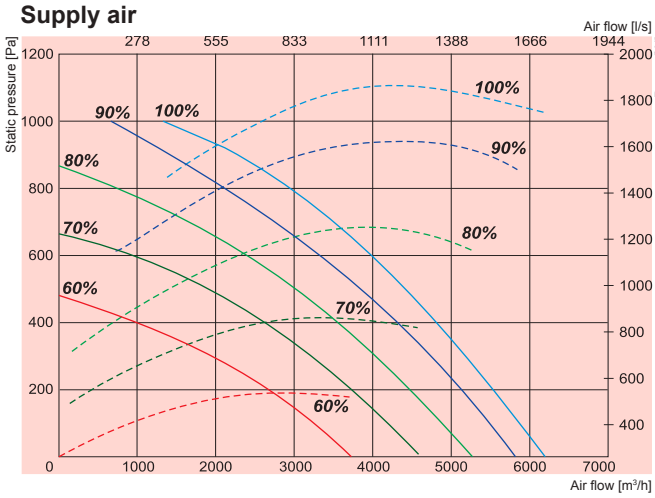
Measured at 5819 m³/h, 120 Pa

——— Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0
——— Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0
——— Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

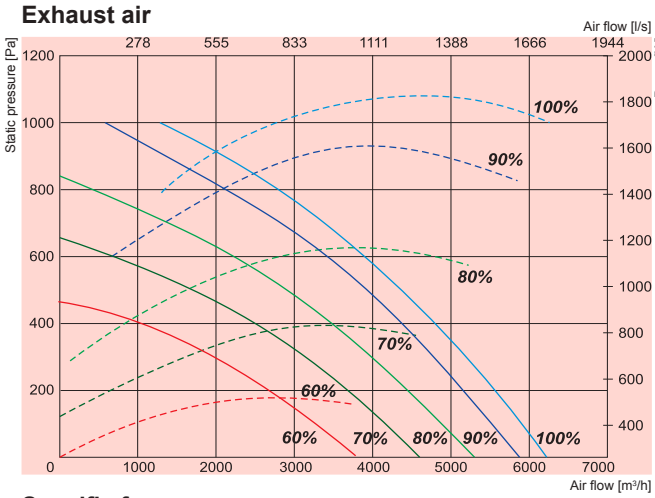
Temperature efficiency calculated according EN 308.

RIS H EKO

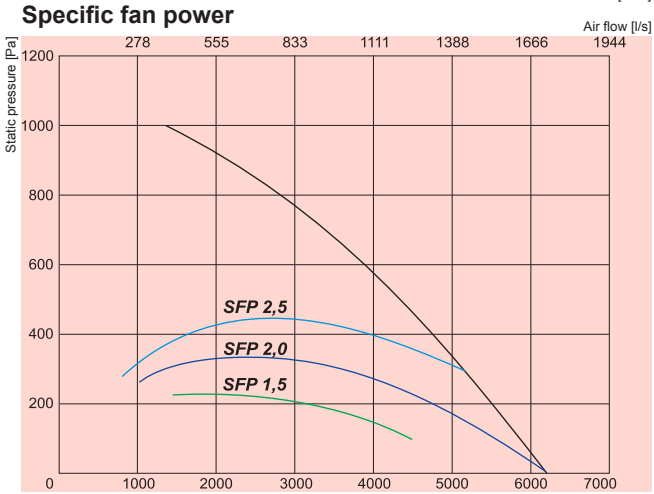
Supply air



Exhaust air

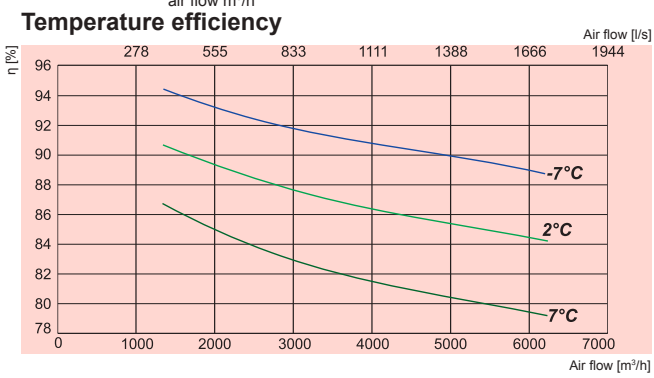


Specific fan power



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

Temperature efficiency

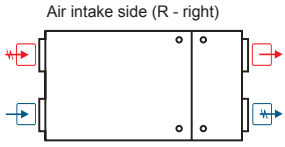


RIS 5500HW EKO

Performance
Power consumption

RIS 5500HWR EKO

Air intake side (R - right)



View from inspection side

Exhaust air | Extract air | Fresh air | Supply air

			5500HW EKO
Water heater			SVS 800x500 or Comfort Box 800x500
Fans	-phase/voltage	[50Hz/VAC]	~3,400
exhaust	-power/current	[kW/A]	1,835/2,88
	-fan speed	[min⁻¹]	2180
supply	-power/current	[kW/A]	1865/3,06
	-fan speed	[min⁻¹]	2180
Motor protection class			IP-54
Thermal efficiency			90%
Max power consumption		[kW/A]	3,7/6,0
Automatic control			integrated
Filter class	-exhaust		F5
	supply		F7
Thermal insulation		[mm]	50
Weight		[kg]	768,0
Comply with ERP 2013			+

Air flow temperature range from -7°C to +40°C
Designed for operation indoors and outdoors

5500HW EKO	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								

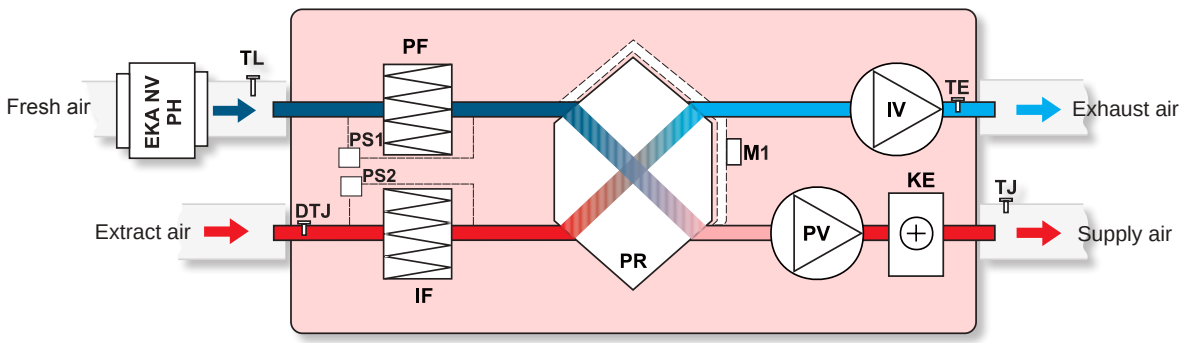
Extract air = 20°C/60% RH - Outdoor air = -7°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 2°C/90% RH
Balance between supply air/extract air = 1.0

Extract air = 20°C/60% RH - Outdoor air = 7°C/90% RH
Balance between supply air/extract air = 1.0

Temperature efficiency calculated according EN 308.

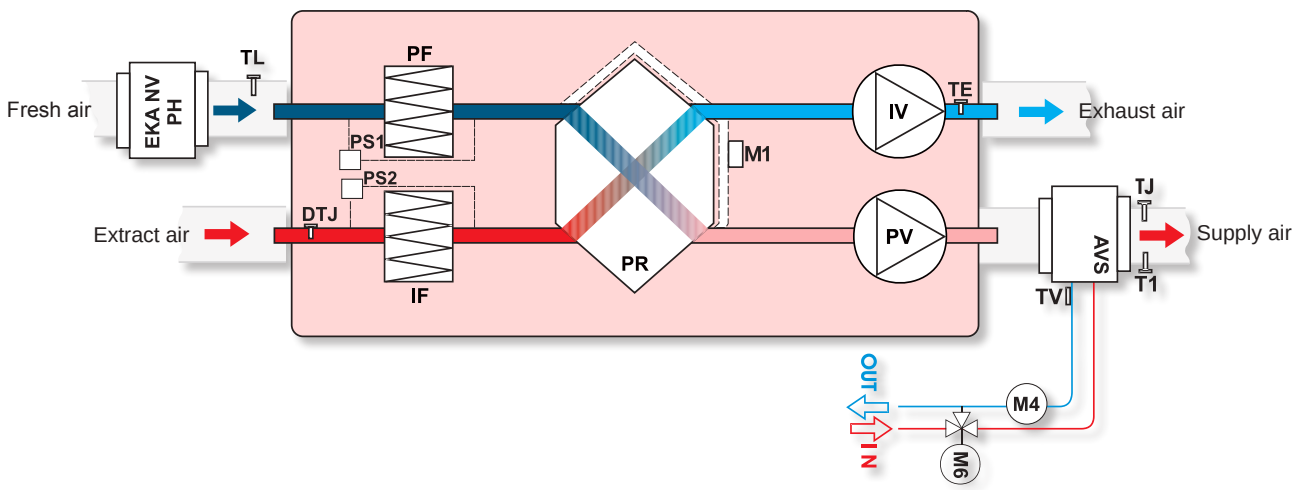
RIS 700HE EKO 2.0 version with electrical heater



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 F5)

TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
DTJ - humidity sensor
EKA NV PH - fresh air pre-heater

RIS 700HW EKO 2.0 version with optional water heater

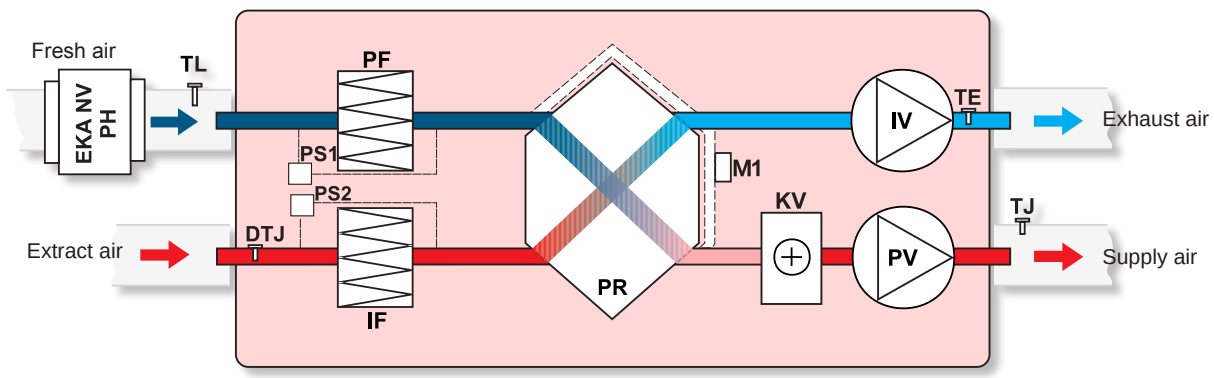


AVS - optionally supplied water heater
IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class F5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
TE - temperature sensor for exhaust air

TV - antifrost sensor
T1 - antifrost thermostat
DTJ - humidity sensor
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
M6 - optionally supplied mixing valve and motor
M4 - water heater circulator pump
EKA NV PH - fresh air pre-heater

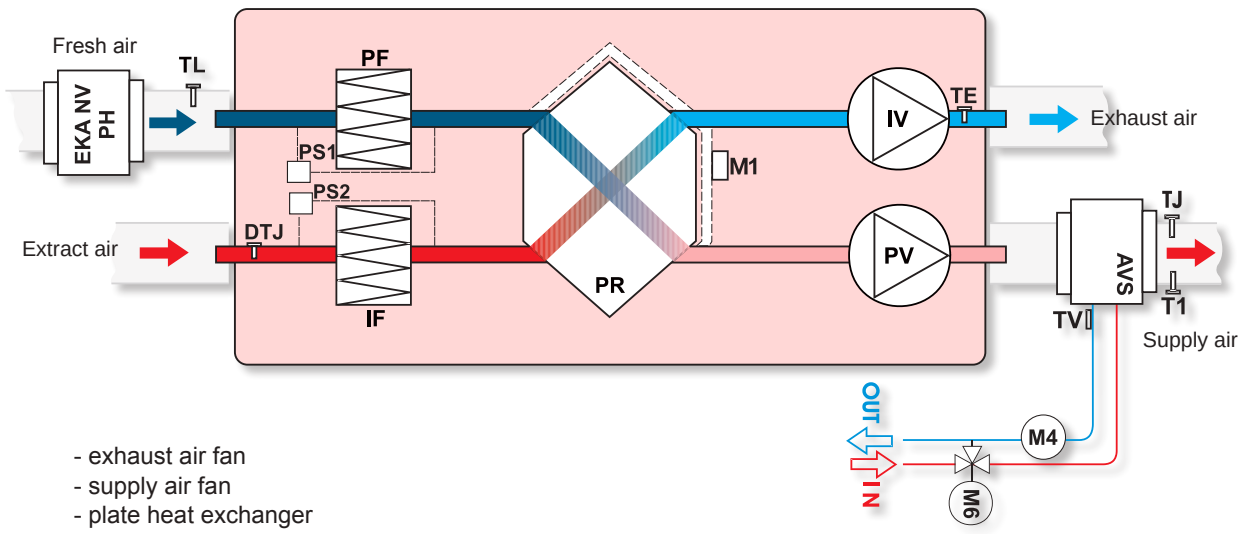
RIS H EKO

RIS 1200HE EKO 2.0 version with electrical heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
KE - electrical heater
TE - temperature sensor for exhaust air
PF - filter for supply air (class F7)
IF - filter for extract air (class F5)
TJ - temperature sensor for supply air
TL - temperature sensor for fresh air
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch
DTJ - humidity sensor
EKA NV PH - fresh air pre-heater

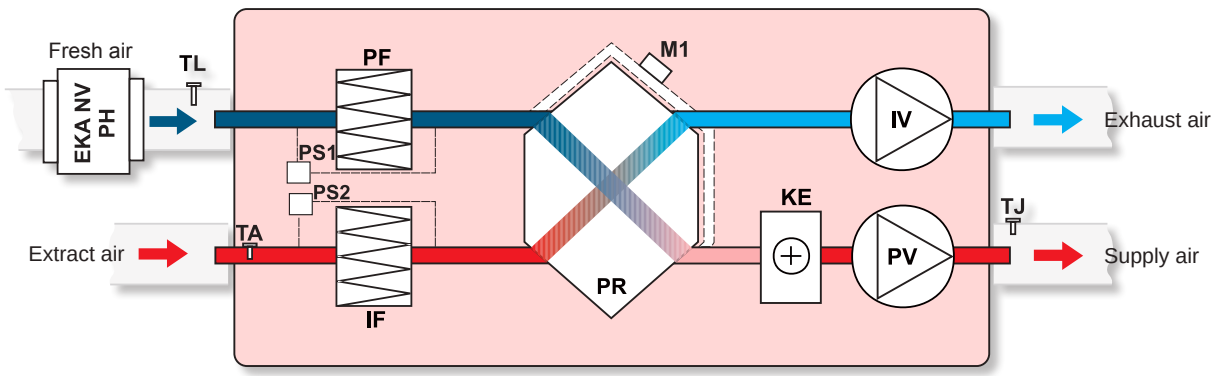
RIS 1200HW EKO 2.0 version with water heater



IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
AVS - water heater
PF - filter for supply air (class F5)
IF - filter for extract air (class F5)
TJ - temperature sensor for supply air
M6 - optionally supplied mixing valve and motor
M4 - water heater circulator pump
DTJ - humidity sensor
TE - temperature sensor for extract air

EKA NV PH - fresh air pre-heater
TL - temperature sensor for fresh air
TV - antifrost sensor
T1 - antifrost thermostat
M1 - actuator of by-pass damper
PS1 - supply air differential pressure switch
PS2 - extract air differential pressure switch

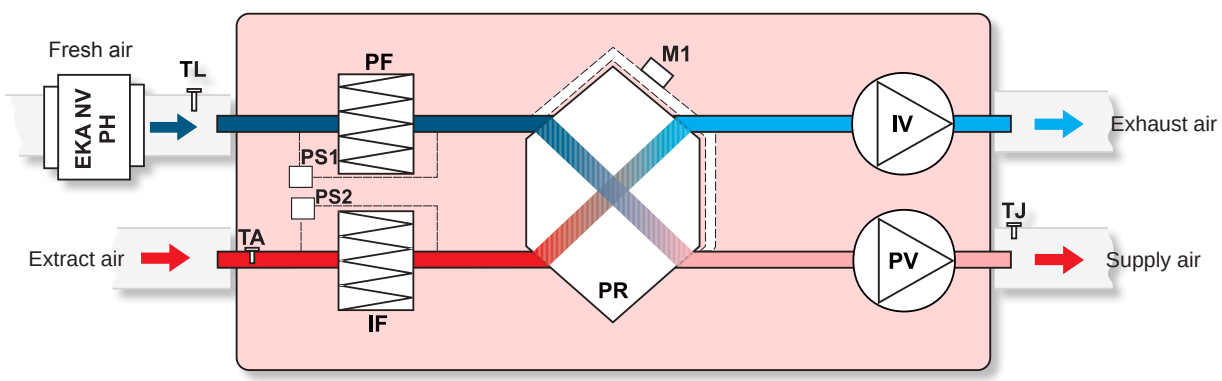
RIS 1900HE EKO version with electrical heater



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 F5)
EKA NV PH - fresh air pre-heater

TA - temperature sensor for extract air
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

RIS 1900HW EKO version with optional water heater

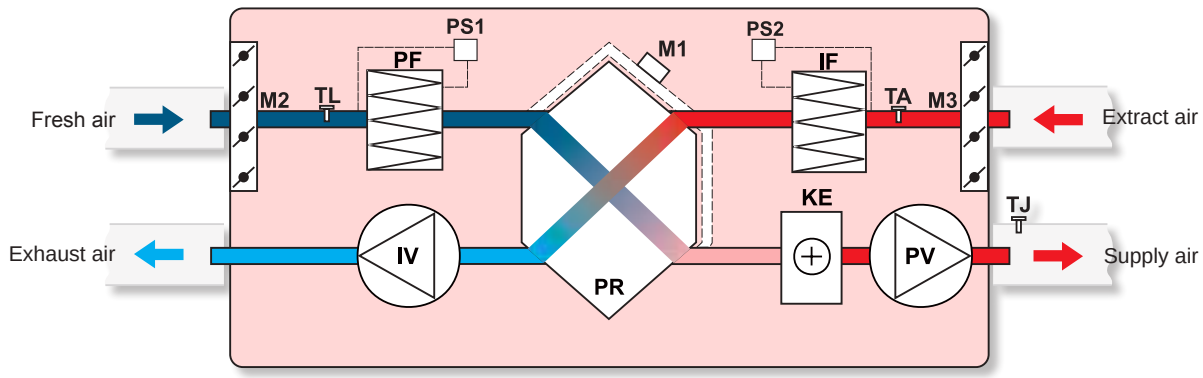


IV - exhaust air fan
PV - supply air fan
PR - plate heat exchanger
PF - filter for supply air (class F7)
IF - filter for extract air (class F5)
TA - temperature sensor for extract air

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
EKA NV PH - fresh air pre-heater

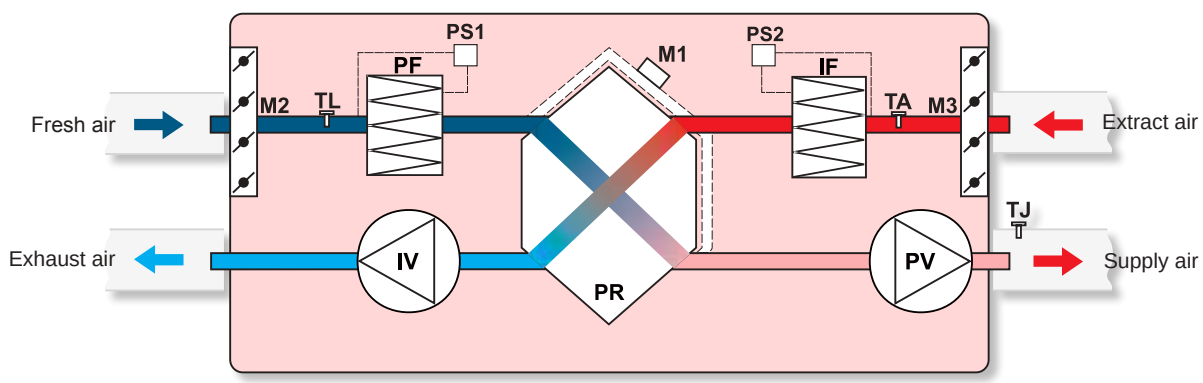
RIS H EKO

RIS 2500HE EKO version with electrical heater



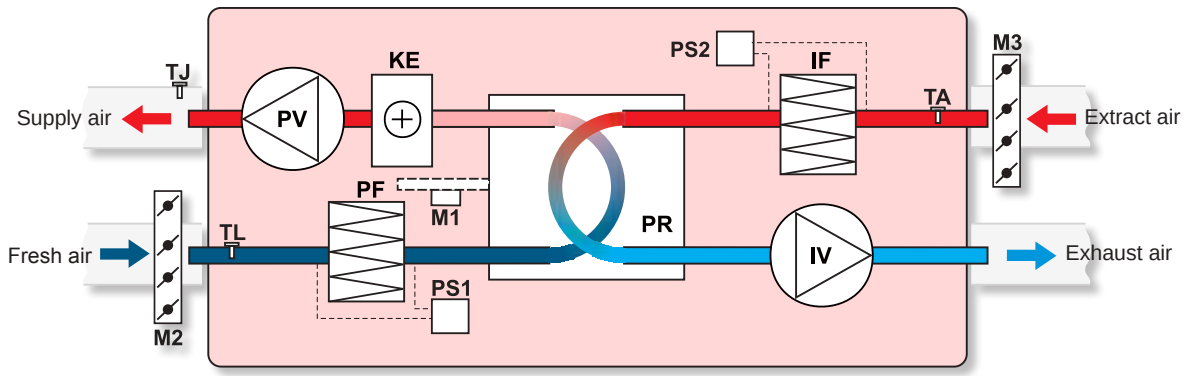
IV	- exhaust air fan
PV	- supply air fan
PR	- plate heat exchanger
KE	- electrical heater
PF	- filter for supply air (class F7)
IF	- filter for extract air (class F5)
TA	- temperature sensor for extract air
TL	- temperature sensor for fresh air
TJ	- temperature sensor for supply air
M1	- actuator of 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

RIS 2500HW EKO version with optional water heater



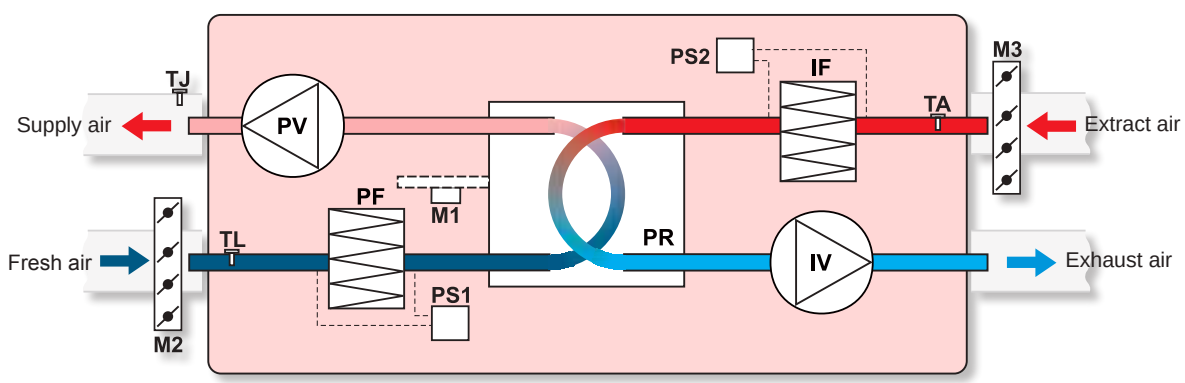
IV	- exhaust air fan
PV	- supply air fan
PF	- filter for supply air (class F7)
IF	- filter for extract air (class F5)
PR	- plate heat exchanger
TA	- temperature sensor for extract air
TL	- temperature sensor for fresh air
TJ	- temperature sensor for supply air
M1	- actuator of by-pass damper
M2	- actuator of fresh air damper
M3	- actuator of extract air damper
PS1	- supply air differential pressure switch
PS2	- extract air differential pressure switch

RIS 3500HE EKO 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 F5)
TA	- temperature sensor for extract air
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

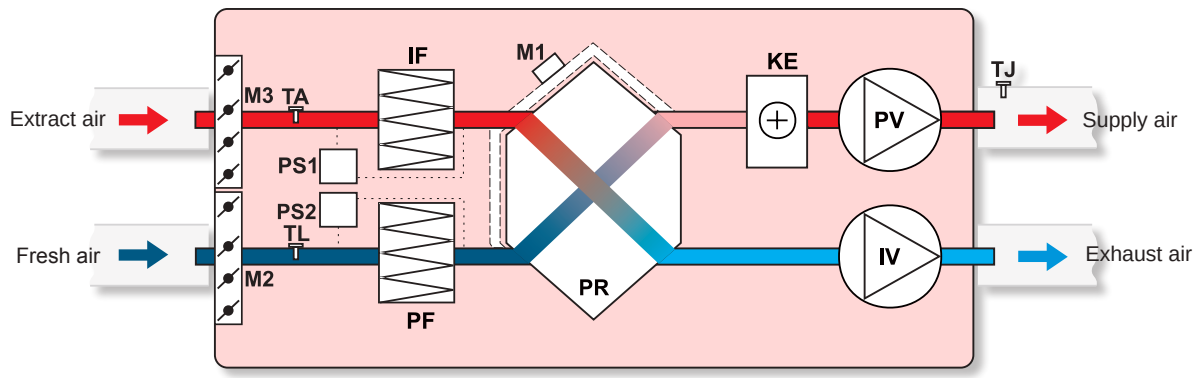
RIS 3500HW EKO version with optional water heater



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 F5)
TA	- temperature sensor for extract air
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

RIS H EKO

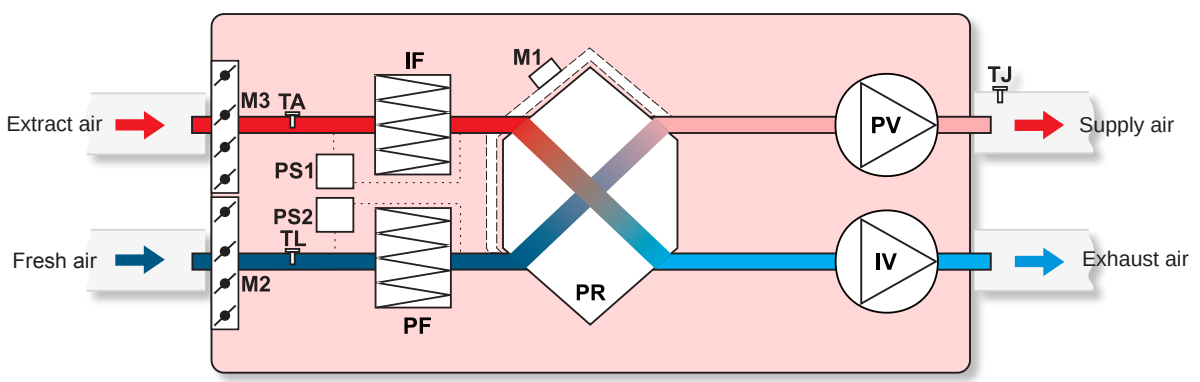
RIS 5500HE EKO version with electrical heater



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 F5)
TA - temperature sensor for extract air
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

RIS 5500HW EKO version with optional 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 F5)
TA - temperature sensor for extract air
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