



AHU with heat recovery

Rekuperatoriniai įrenginiai

Centrale wentylacyjne z odzyskiem ciepła

Вентиляционные агрегаты с рекуперацией тепла



Air handling units RIS P 3.0 have high efficiency plate heat exchanger. AHU is used for ventilation of houses and other heated areas.

- Efficient, low noise fans.
- Efficiency of plate heat exchanger up to 80%.
- Electrical or water heater.
- Controlled air flow.
- Anti-freeze protection of the heat exchanger.
- Low noise level.
- RIS 400P, 700P, 1000P, 1500P 3.0 all versions can be controlled by Flex, Stouch and TPC remote control devices.
- Acoustic insulation of the walls RIS 400P, 700P 3.0 - 30mm and RIS 1000P, 1500P 3.0 - 50mm.
- Housing: powder coated painting RAL 7040.
- Easy mounting.



Vėdinimo įrenginiai RIS P 3.0 pagaminti su efektyviu plokšteline šilumokaičiu. Rekuperatoriai montuojami vėdinti šildomas patalpas.

- Energiją taupantys ir tyliai dirbantys ventiliatoriai.
- Efektyvus plokštelinis šilumokaitis, kurio grąžinama šiluma iki 80%.
- Elektrinis arba papildomai komplektuojamas kanalinis vandens šildytuvas.
- Keičiamas oro srautas.
- Tiekiamo oro temperatūros valdymas.
- Priešužšaliminė šilumokaičio apsauga.
- Žemas triukšmo lygis.
- Galima valdyti su Flex, Stouch ir TPC pulteliais.
- Sienelių triukšmo izoliacija – RIS 400P 3.0, 700P 3.0 - 30mm ir RIS 1000P 3.0, 1500P 3.0 - 50mm.
- Milteliniu būdu dažytas korpusas - spalva RAL 7040.
- Greitas ir lengvas montavimas.



Centrale wentylacyjne z odzyskiem ciepła – RIS P 3.0
Centrale wentylacyjne RIS P 3.0 są wyposażone w krzyżowy wymiennik ciepła. Przeznaczone są do wentylacji ogrzewanych pomieszczeń.

- Układ centrali - podwieszana.
- Wymiennik krzyżowy wykonany w całości z aluminium.
- Energooszczędne i ciche wentylatory AC.
- Zabezpieczenie wymiennika nagrzewnicą elektryczną lub BY-PASS.
- Zabudowane nagrzewnice elektryczne wtórne lub wodne montowane na kanale
- Zmiana wydatku (3 biegi).
- Kontrola zmiany temperatury powietrza nawiewanego.
- Możliwość sterowania sterownikami Flex, Stouch, TPC.
- Izolacja wełną mineralną 30 mm lub 50 mm.
- Obudowa malowana proszkowo (RAL 7040).

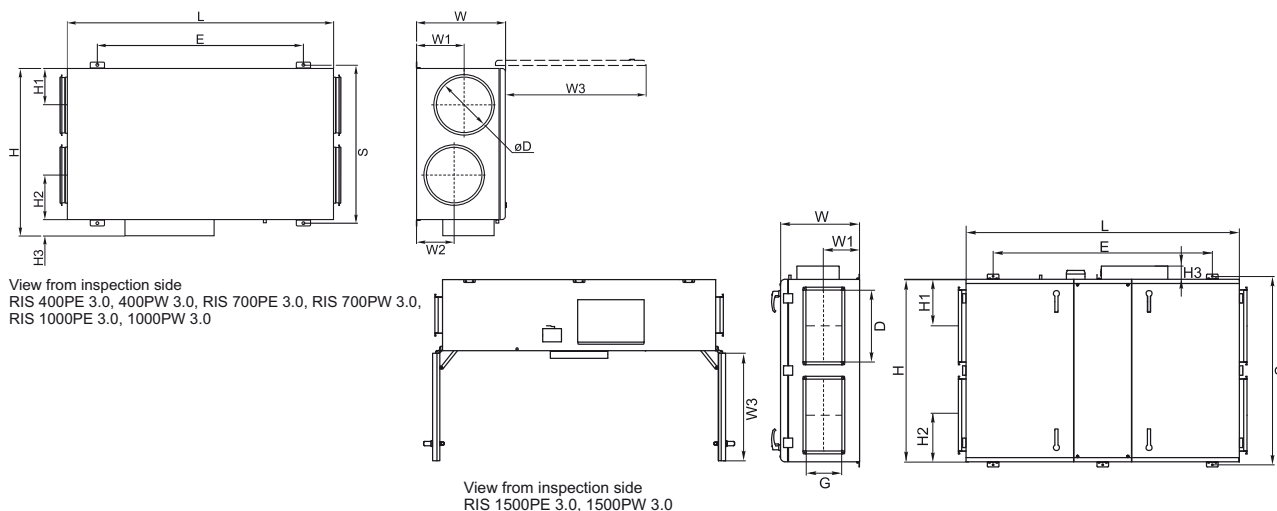


Установки с рекуперацией тепла RIS P 3.0 очищают, нагревают и подают свежий воздух. Установки RIS P 3.0 извлекают тепло у выходящего воздуха и передают его поступающему воздуху.

- Экономные и бесшумные вентиляторы ЕС.
- Пластинчатый теплообменник, эффективность теплоотдачи до 80%.
- Электрический или водяной нагреватель.
- Регулируемый воздушный поток.
- Регулируемая температура подаваемого воздуха.
- Защита теплообменника от замерзания.
- Низкий уровень шума.
- Каждый агрегат проверен отдельно.
- RIS 400P 3.0, 700P 3.0, 1000P 3.0, 1500P 3.0 с интегрированными возможностями управления и наблюдения с помощью пультов управления Flex, Stouch и TPC.
- Акустическая изоляция стенок RIS 400P 3.0, 700P 3.0 - 30мм и RIS 1000P 3.0, 1500P 3.0 - 50мм.
- Корпус: окрашенный RAL 7040.
- Легко монтируются.

Accessories

Control panel	Sensor controller	Programmable controller	Shut-off damper	Circular duct silencer	Mounting clamp	Dampers for rectangular duct	Rectangular duct silencer
							
Flex p. 178	Stouch p. 179	TPC p. 180	SKG p. 226	AKS p. 230	AP p. 229	SSK p. 228	SKS p. 233



RIS 400 P E 3.0

- Equipped with new PRV V1.1 control board
- Heater type (E - integrated electrical heater; W - optional water heater)
- Housing type (V - vertical, H - horizontal, P - under - ceiling)
- AHU size according to air flow range m³/h
- AHU with plate heat-exchanger

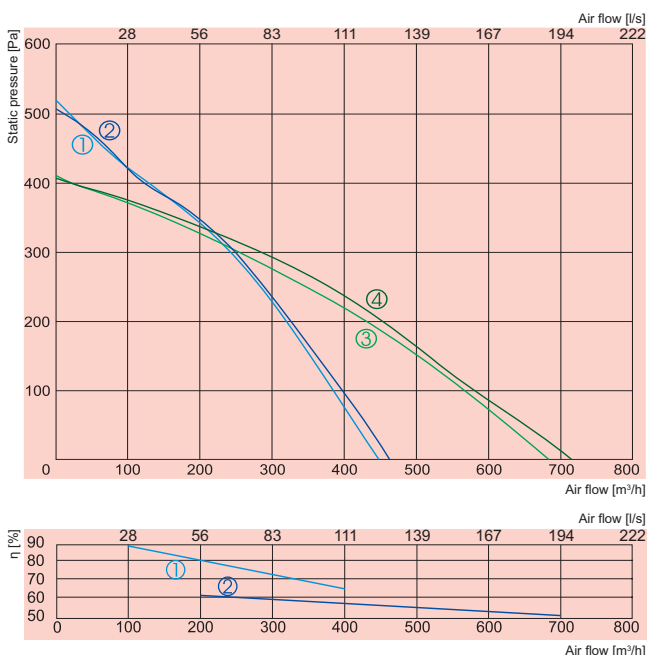
Type	Dimensions [mm]													
	W	W1	W2	W3	H	H1	H2	H3	E	L	S	øD	D	G
RIS 400PE/PW 3.0	264	125	140	484	615	125	120	75	830	970	592	160	-	-
RIS 700PE/PW 3.0	300	134	134	644	775	190	190	75	1040	1200	752	250	-	-
RIS 1000PE/PW 3.0	495	230	230	800	943	206	216	93	1124	1500	890	315	-	-
RIS 1500PE/PW 3.0	549	248	-	715	1363	325	325	93	1524	1900	1310	-	500	250

Type	Accessories												
	Flex Stouch TPC	SKG AKS AP	SSK	SKS	SVS	AVS	SP	TJP 10K CO4C***	SSB Heating	RMG 80/60°C	RMG 60/40°C	VVP/VXP 80/60°C	VVP/VXP 60/40°C
RIS 400PE 3.0	+	160	-	-	-	-	LM230A-TP	-	-	-	-	-	-
RIS 400PW 3.0	+	160	-	-	-	160	TF230	+	81	3-0,63-4	3-0,63-4	45.10-0,63	45.10-0,63
RIS 700PE 3.0	+	250	-	-	-	-	LM230A-TP	-	-	-	-	-	-
RIS 700PW 3.0	+	250	-	-	-	250	TF230	+	81	3-1,0-4	3-0,63-4	45.10-1,0	45.10-0,63
RIS 1000PE 3.0	+	315	-	-	-	-	LM230A-TP	-	-	-	-	-	-
RIS 1000PW 3.0	+	315	-	-	-	315	LF230	int	81	3-1,6-4	3-1,0-4	45.10-1,6	45.10-1,0
RIS 1500PE 3.0	+	-	500x250	50-25	-	-	LM230A-TP	-	-	-	-	-	-
RIS 1500PW 3.0	+	-	500x250	50-25	500x250	-	TF230	int	81	3-2,5-4	3-1,6-4	45.10-2,5	45.10-1,6

*** - anti-frost thermostat
int - already integrated into the unit

Accessories

Water heater coil  SVS p. 198	Heating coil  AVS p. 192	Actuator for dampers  SP p. 188	Duct sensor  TJP 10K p. 187	Thermic water valve actuator  SSB p. 184	Mixing point  RMG p. 185	2 and 3 way valves  VVP/VXP p. 186
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① supply
② exhaust

RIS 400PE 3.0

③ supply
④ exhaust

RIS 700PE 3.0

①
②

RIS 400PE 3.0

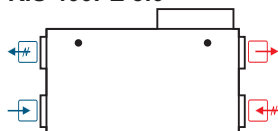
RIS 700PE 3.0

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

		400PE 3.0	700PE 3.0
Heater	-phase/voltage [50Hz/VAC]	~1, 230	~1, 230
	-power consumption [kW]	2,0	3,0
Pre-heater for heat exchanger	[kW]	1,0	1,2
Fans	-phase/voltage [50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current [kW/A]	0,225 / 1,1	0,255 / 1,12
	-fan speed [min ⁻¹]	1850	2000
supply	-power/current [kW/A]	0,225 / 1,1	0,255 / 1,12
	-fan speed [min ⁻¹]	1850	2000
Motor protection class		IP-44	IP-44
Thermal efficiency		75%	57%
Max power consumption	[kW/A]	3,45 / 15,24	4,68 / 20,50
Automatic control		integrated	integrated
Filter class	-exhaust	M5	M5
	supply	M5	M5
Thermal insulation	[mm]	30	30
Weight	[kg]	42,0	57,0
Comply with ERP 2013		+	+

Designed for operation indoors only

RIS 400PE 3.0



RIS 700PE 3.0



View from inspection side

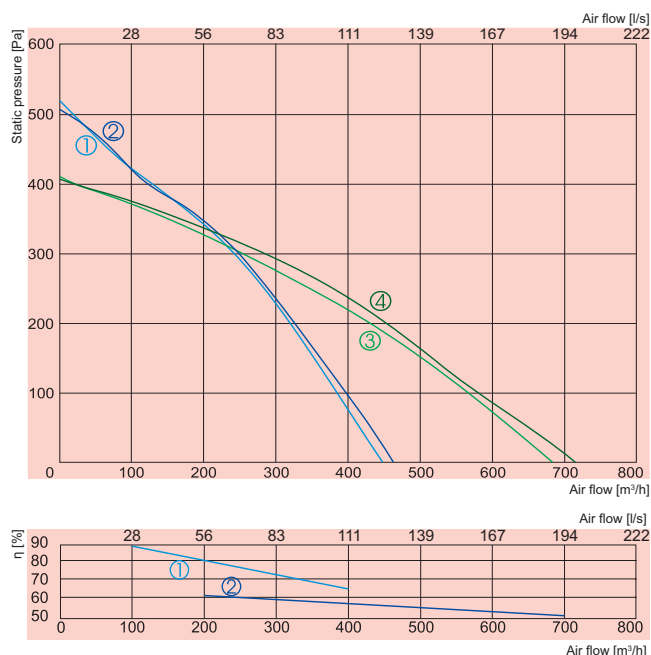
Exhaust air Extract air Fresh air Supply air

400PE 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	52	62	63	57	61	55	51
Extract	55	42	48	52	46	42	39	31
Surrounding	48	36	41	44	40	38	35	30

Measured at 380 m³/h, 108 Pa

700PE 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	55	63	70	73	67	68	60
Extract	61	52	59	52	45	44	39	27
Surrounding	53	42	46	47	45	44	42	34

Measured at 556 m³/h, 106 Pa



① supply
② exhaust

RIS 400PW 3.0

③ supply
④ exhaust

RIS 700PW 3.0

① supply
② exhaust

RIS 400PW 3.0

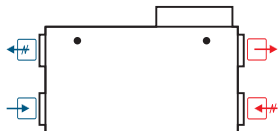
RIS 700PW 3.0

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

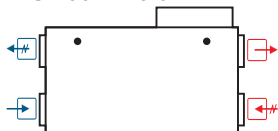
		400PW 3.0	700PW 3.0
Water heater	-power [kW]		
	-water $\cdot T_{in}/T_{out}$ [°C]	AVS 160	AVS 250
	-water flow rate [l/s]		
Pre-heater for heat exchanger	[kW]	1,0	1,2
Fans	-phase/voltage [50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current [kW/A]	0,225 / 1,1	0,255 / 1,12
	-fan speed [min ⁻¹]	1850	2000
supply	-power/current [kW/A]	0,225 / 1,1	0,255 / 1,12
	-fan speed [min ⁻¹]	1850	2000
Motor protection class		IP-44	IP-44
Thermal efficiency		75%	57%
Max power consumption	[kW/A]	1,45 / 6,55	1,71 / 7,46
Automatic control		integrated	integrated
Filter class	-exhaust	M5	M5
	supply	M5	M5
Thermal insulation	[mm]	30	30
Weight	[kg]	42,0	57,0
Comply with ERP 2013		+	+

Designed for operation indoors only

RIS 400PW 3.0



RIS 700PW 3.0



View from inspection side

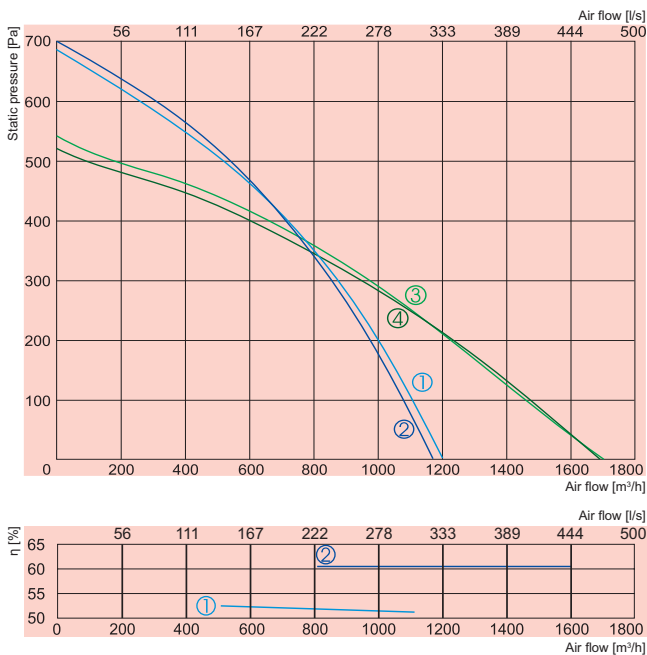
➡ Exhaust air ➡ Extract air ➡ Fresh air ➡ Supply air

400PW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	68	52	62	63	57	61	55	51
Extract	55	42	48	52	46	42	39	31
Surrounding	48	36	41	44	40	38	35	30

Measured at 380 m³/h, 108 Pa

700PW 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	55	63	70	73	67	68	60
Extract	61	52	59	52	45	44	39	27
Surrounding	53	42	46	47	45	44	42	34

Measured at 556 m³/h, 106 Pa



① supply
② exhaust

③ supply
④ exhaust

RIS 1000PE 3.0

RIS 1500PE 3.0

①
②

RIS 1000PE 3.0

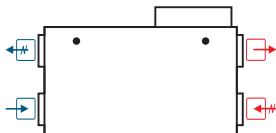
RIS 1500PE 3.0

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

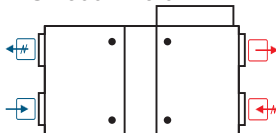
		1000PE 3.0	1500PE 3.0
Heater	-phase/voltage [50Hz/VAC]	~3, 400	~3, 400
	-power consumption [kW]	6,0	9,0
Fans	-phase/voltage [50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current [kW/A]	0,303/1,32	0,359/1,57
	-fan speed [min ⁻¹]	2250	2750
supply	-power/current [kW/A]	0,322/1,4	0,373/1,63
	-fan speed [min ⁻¹]	2250	2750
Motor protection class		IP-44	IP-44
Thermal efficiency		50%	62%
Max power consumption	[kW/A]	6,63/11,40	9,73/16,19
Automatic control		integrated	integrated
Filter class	-exhaust	M5	M5
	-supply	M5	M5
Thermal insulation	[mm]	30	50
Weight	[kg]	113,0	194,0
Comply with ERP 2013		+	-

Designed for operation indoors only

RIS 1000PE 3.0



RIS 1500PE 3.0



View from inspection side

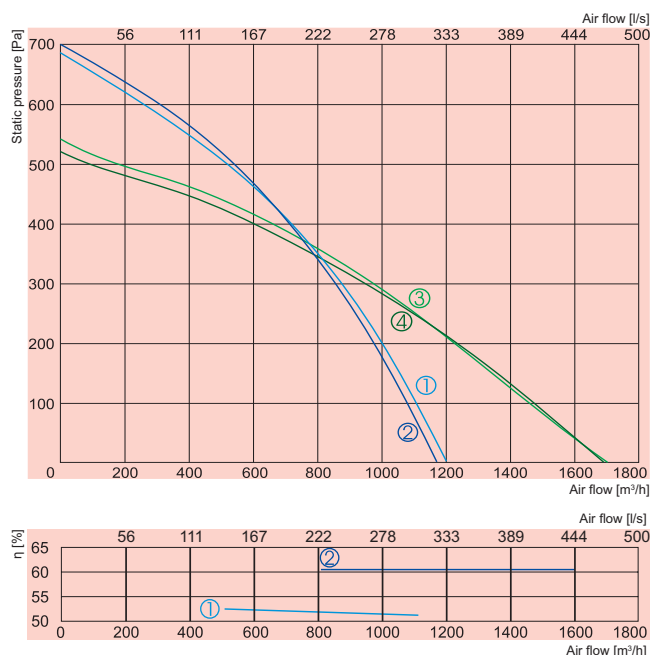
Exhaust air Extract air Fresh air Supply air

1000PE 3.0	Lwa total, dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	72	54	59	67	68	65	62	56
Extract	57	44	43	53	54	44	42	35
Surrounding	55	42	46	50	48	45	44	39

Measured at 935 m³/h, 90 Pa

1500PE 3.0	Lwa total, dB(A)	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	80	69	71	76	74	69	68	65
Extract	59	52	51	56	50	41	32	27
Surrounding	58	48	50	54	52	46	38	36

Measured at 1507 m³/h, 101 Pa



① supply **RIS 1000PW 3.0**
② exhaust

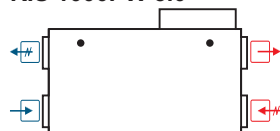
③ supply **RIS 1500PW 3.0**
④ exhaust

① **RIS 1000PW 3.0**
② **RIS 1500PW 3.0**

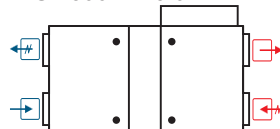
		1000PW 3.0	1500PW 3.0
Water heater	-power [kW]	AVS 315	SVS 500x250
	-water . T_{in}/T_{out} [°C]		
	-water flow rate [l/s]		
Fans	-phase/voltage [50Hz/VAC]	~1, 230	~1, 230
exhaust	-power/current [kW/A]	0,286/1,25	0,359/1,57
	-fan speed [min ⁻¹]	2250	2750
supply	-power/current [kW/A]	0,312/1,36	0,373/1,63
	-fan speed [min ⁻¹]	2250	2750
Motor protection class		IP-44	IP-44
Thermal efficiency		50%	62%
Max power consumption	[kW/A]	0,6/2,63	0,732/3,2
Automatic control		integrated	integrated
Filter class	-exhaust	M5	M5
	supply	M5	M5
Thermal insulation	[mm]	30	50
Weight	[kg]	113,0	189,0
Comply with ERP 2013		+	-

Designed for operation indoors only

RIS 1000PW 3.0



RIS 1500PW 3.0



View from inspection side

➡ Exhaust air ➡ Extract air ➡ Fresh air ➡ Supply air

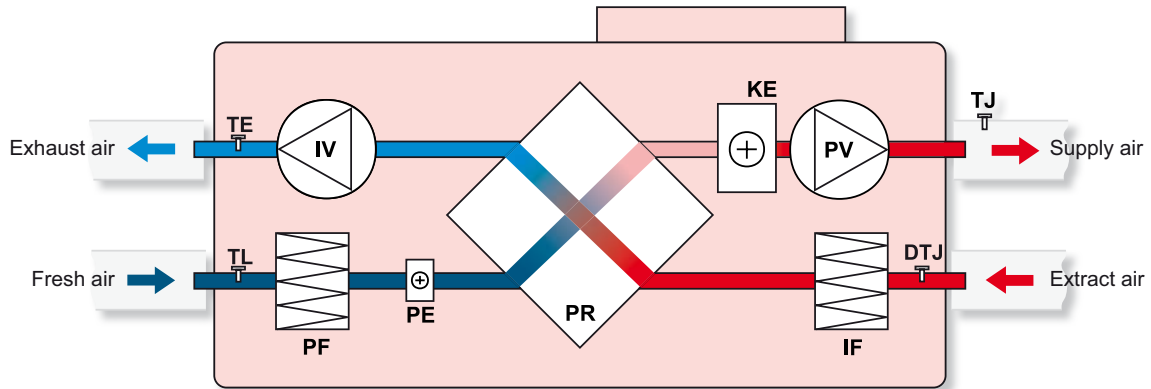
1000PW 3.0	Lwa total, dB(A)	LWA, dB(A)						
		125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz
Supply	72	54	59	67	68	65	62	56
Extract	57	44	43	53	54	44	42	35
Surrounding	55	42	46	50	48	45	44	39

Measured at 935 m³/h, 90 Pa

1500PW 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	69	71	76	74	69	68	65
Extract	59	52	51	56	50	41	32	27
Surrounding	58	48	50	54	52	46	38	36

Measured at 1507 m³/h, 101 Pa

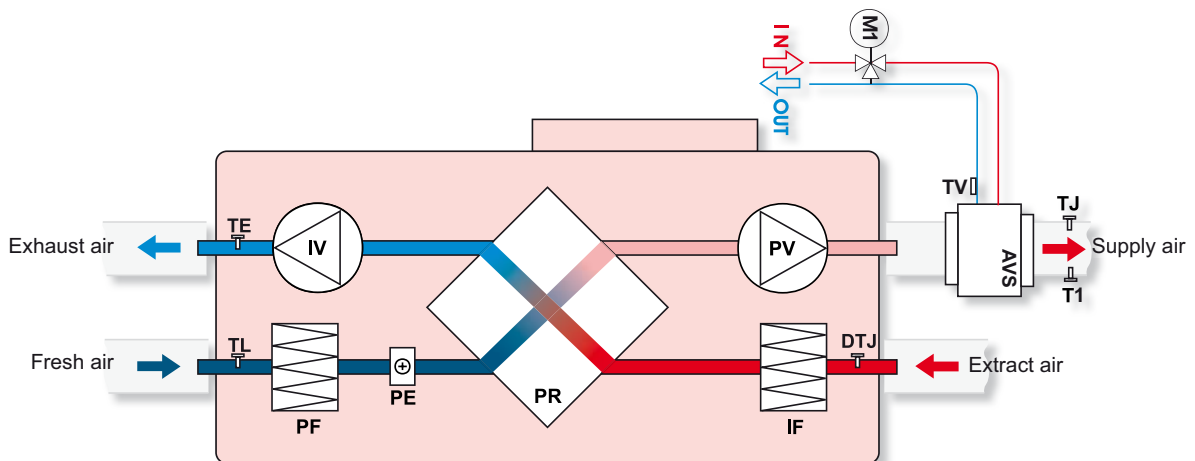
RIS 400PE 3.0; 700PE 3.0 (ceiling mounted) versions with electrical heater *



- | | |
|-----|---|
| IV | - exhaust air fan |
| PV | - supply air fan |
| PR | - plate heat exchanger |
| KE | - electrical heater |
| PE | - anti-freeze heater for 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 extract air |
| DTJ | - humidity + temperature sensor |

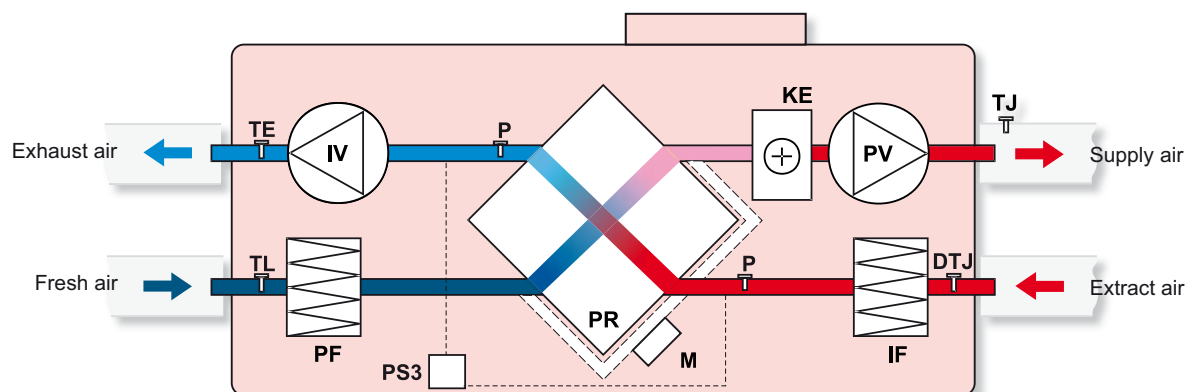
* - Summer cassette can be applied to RIS 400 PE 3.0; RIS 700 PE 3.0. Used for closing-up of plate heat exchanger during warm period of the year when heat recovery is of no benefit.

RIS 400PW 3.0; 700PW 3.0 (ceiling mounted) versions with water heater



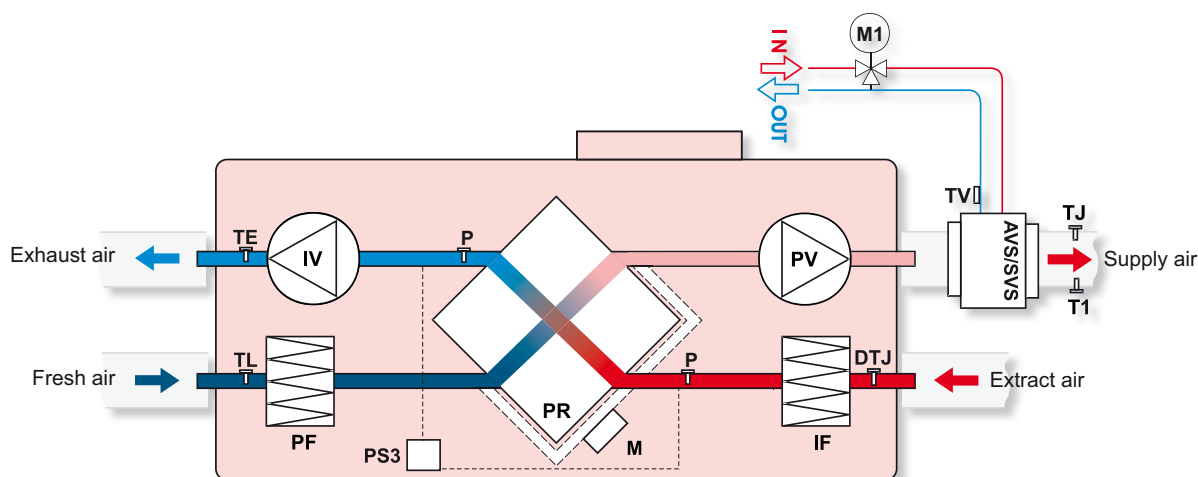
- | | | | |
|-----|---|-----|--|
| AVS | - optionally supplied water heater | TJ | - temperature sensor for supply air |
| IV | - exhaust air fan | TL | - temperature sensor for fresh air |
| PV | - supply air fan | TE | - temperature sensor for extract air |
| PR | - plate heat exchanger | DTJ | - humidity + temperature sensor |
| PE | - anti-freeze heater for heat exchanger | M1 | - optionally supplied mixing valve and motor |
| PF | - filter for supply air (class M5) | TV | - optionally supplied antifrost sensor |
| IF | - filter for extract air (class M5) | T1 | - optionally supplied antifrost thermostat |

RIS 1000PE 3.0; 1500PE 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 M5) |
| IF | - filter for extract air (class M5) |
| TJ | - temperature sensor for supply air |
| TL | - temperature sensor for fresh air |
| TE | - temperature sensor for extract air |
| DTJ | - humidity + temperature sensor |
| M | - actuator of by-pass damper |
| PS3 | - heat exchanger antifrost pressure switch |
| P | - heat exchanger pressure switch |

RIS 1000PW 3.0; 1500PW 3.0 (ceiling mounted) versions with water heater



- | | | | |
|---------|--------------------------------------|-----|--|
| AVS/SVS | - optionally supplied water heater | DTJ | - humidity + temperature sensor |
| IV | - exhaust air fan | M | - actuator of by-pass damper |
| PV | - supply air fan | M1 | - optionally supplied mixing valve and motor |
| PR | - plate heat exchanger | PS3 | - heat exchanger antifrost pressure switch |
| PF | - filter for supply air (class M5) | TV | - optionally antifrost sensor |
| IF | - filter for extract air (class M5) | T1 | - optionally antifrost thermostat |
| TJ | - temperature sensor for supply air | P | - heat exchanger pressure switch |
| TL | - temperature sensor for fresh air | | |
| TE | - temperature sensor for extract air | | |