

ERSR

High-efficiency heat recovery with rotary recovery unit

Air flow rates 1000 ÷ 30000 m³/h

- Technology high efficiency
- Mechanically controlled ventilation
- Rotary heat recovery unit
- Recovery of up to 80% of the energy of the expelled air
- Air purification



The ERSR heat recovery units for indoor and outdoor installation are designed for commercial applications and are able to combine maximum environmental comfort with definite energy saving.

With modern systems, there is always the need to create forced ventilation, which, however, also involves expelling air-conditioned air, which thus leads to higher energy consumption.

But ERSR units are equipped with a rotary heat recovery unit (upon request, also hygroscopic rotary) that enables you to save more than 80% of the energy that would otherwise be lost with the expelled stale air.

These units can be integrated with fan coils and chillers, and can operate both in winter and summer.

VERSIONS

- ERSR_T** with a sensitive rotary recovery
ERSR_H with a hygroscopic rotary recovery

- Rotary heat recovery unit (with the option in hygroscopic material), high-efficiency and low pressure drops.
- Soft air bag F7 filters (flow and recovery) equipped with a standard differential pressure switch, which can be extracted from either side facilitate their periodic cleaning.
- Fans (intake and flow), Plug fan with back curved blades with a directly coupled, electronically controlled motor for sizes 07-17 and with an inverter for sizes 21-24.
- Support frame and sandwich panels, 50 mm thick, in galvanised sheet steel for internal surfaces and pre-painted externally, and with mineral wool insulation (density 40 kg/m³). Upon request, there are two different types of panelling. Base in galvanised sheet steel continuous profiles. Sizes 07 to 09 are monoblocs whilst the other sizes are divided into sections. The unit can be inspected from both sides.
- The unit is equipped with a power electric control board on the machine and adjustment purposely designed to reduce energy consumption. Equipped with a communication serial port on RS485 with MODBUS Master/Slave protocol

ACCESSORIES

- CAP:** Intake rainproof cover
BDL: Flow rainproof cover
FRR: Rectangular flange
GAR: Rectangular anti-vibration joint
HSR: Fresh air intake damper with servocontrol
RSR: Circulation damper module
HG4: Flat filters G4
TDP: Roof protection for basic unit in the case of outdoor installation
VRC: Condensate drip tray
VVR: Variable speed recovery unit
QP: Air quality probe (VOC)
KDP: Dehumidification and post-heating management kit
RBC: 3-way valve hot water coil module
RBF: 3-way valve cold water coil module
RBE: electric coil module
RBP: 3-way valve cold water and post-heating coil module
MSS: silencer baffles module

FEATURES

Quality of the air

Nowadays, the quality of air inside rooms is fundamental. The mechanically controlled ventilation system is not only indispensable from an energetic point of view, but also for the comfort of the rooms.

Harmful elements and smells in the air are eliminated by the efficient filtration system with bag filters (F7), which are easily extracted and regenerated.

High-efficiency air circulation thanks to plug-fans with electronically controlled motors or inverters, depending on the sizes

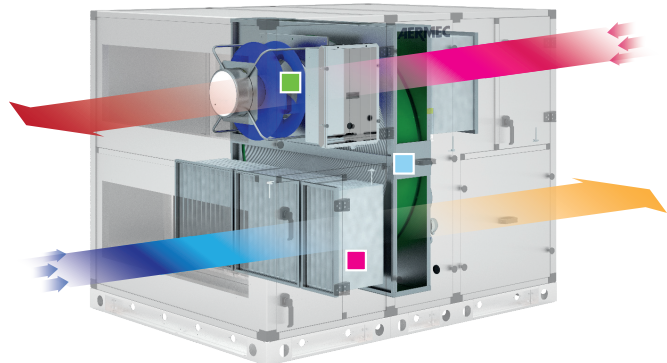
- It eliminates inefficiency, wear and maintenance of traditional fans with belt and pulley transmission
- They guarantee energy savings of up to 30% compared to traditional fans. The control lets you calibrate the fan's speed according to your requirements, thus optimising seasonal efficiency

High-efficiency recovery unit (80% of the energy of the expelled air)

Air heat recovery both in summer and winter, thanks to the rotary recovery unit (hygroscopic version also available). Air introduced into the room is always optimised, thanks to the heat exchange between the air recovery and outdoor fresh air.

State of the art electronic control

Naturally, all these technological advantages are controlled by state of the art heat regulation, thus ensuring maximum energy savings in every condition of use.



- Air expelled
- Air recovery from the room
- Outdoor fresh air
- Air introduced into the room

ACCESSORIES COMPATIBILITY

Size	07	09	12	15	17	21	24
UNIT ACCESSORIES							
CAP	CAP07	CAP09	CAP12	CAP15	CAP17	CAP21	CAP24
BDL	BDL07	BDL09	BDL12	BDL15	BDL17	BDL21	BDL24
FRR	FRR09	FRR09	FRR12	FRR15	FRR17	FRR21	FRR24
GAR	GAR07	GAR09	GAR12	GAR15	GAR17	GAR21	GAR24
HSR	HSR07	HSR09	HSR12	HSR15	HSR17	HSR21	HSR24
RSR	-	-	HSR12	RSR15	RSR17	RSR21	RSR24
HG4	HG407	HG409	HG412	HG415	HG417	HG421	HG424
TDP	TDP07	TDP09	TDP12	TDP15	TDP17	TDP21	TDP24
VRC	VRC07	VRC09	VRC12	VRC15	VRC17	VRC21	VRC24
VVR	VVR07	VVR09	VVR12	VVR15	VVR17	VVR21	VVR24
QP	•	•	•	•	•	•	•
KDP	•	•	•	•	•	•	•
MODULE ACCESSORIES							
RBC	RBC07	RBC09	RBC12	RBC15	RBC17	RBC21	RBC24
RBF	RBF07	RBF09	RBF12	RBF15	RBF17	RBF21	RBF24
RBE	RBE07	RBE09	RBE12	RBE15	RBE17	RBE21	RBE24
RBP	RBP07	RBP09	RBP12	RBP15	RBP17	RBP21	RBP24
MSS	MSS07	MSS09	MSS12	MSS15	MSS17	MSS21	MSS24
MODULE ACCESSORIES WITH ROOF (for outdoor installations)							
RBC7T	RBC07T	RBC09T	RBC12T	RBC15T	RBC17T	RBC21T	RBC24T
RBF7T	RBF07T	RBF09T	RBF12T	RBF15T	RBF17T	RBF21T	RBF24T
RBE7T	RBE07T	RBE09T	RBE12T	RBE15T	RBE17T	RBE21T	RBE24T
RBP7T	RBP07T	RBP09T	RBP12T	RBP15T	RBP17T	RBP21T	RBP24T
MSS7T	MSS07T	MSS09T	MSS12T	MSS15T	MSS17T	MSS21T	MSS24T

TECHNICAL DATA

Size		07	09	12	15	17	21	24
Power supply	V/ph/Hz	400V/3N/50-60Hz						
Type of ventilation units	*	UVNR (Unit ventilation not residential)						
Heat recovery								
Type heat recovery system	* type/n°	Rotary / 1						
Heating efficiency dry	*(1) %	79,0	78,9	78,3	78,8	78,9	78,5	78,7
Total recovered heating capacity (EN308)	(2) kW	5,8	10,3	19,4	31,4	41,3	64,3	85,0
Heating efficiency for renovation	(3) kW	11,4	20,1	37,8	61,3	80,5	125,1	165,7
Total recovered heating capacity	(7) kW	2,6	4,7	8,8	14,2	18,7	29,1	38,5
Summer efficiency heat recovery	(7) %	77	74	76,2	76,7	76,8	76,4	76,7
Air flow rate supply/extract	* m³/s	0,31	0,54	1,03	1,65	2,17	3,39	4,47
	m³/h	1100	1950	3700	5950	7800	12200	16100
Fans								
Driving	*	Analog signal of EC fan						
Fans	type/n°	EC/2	EC/2	EC/2	EC/2	EC/2	AC/2	AC/2
Supplied electrical power consumption	kW	0,27	0,48	0,85	1,31	1,90	2,20	2,80
Recovered electrical power consumption	kW	0,27	0,48	0,86	1,30	1,90	2,20	2,80
Total input electric power	* kW	0,69	1,20	2,20	3,50	4,90	6,10	7,80
Total input electric power	(4) kW	0,84	2,04	6,10	8,78	10,20	22,37	30,37
Max total input current	(4) A	1,8	5,0	11,0	16,1	19,5	40,6	60,0
SFP int	* W/(m³/s)	1061	994	927	733	669	778	759
SFP int_lim 2018	W/(m³/s)	1141	1106	1033	942	887	886	887
Filters face velocity	* m/s	1,8	1,9	1,8	1,8	1,8	1,6	1,7
Nominal external pressure Δp	Pa	100	100	100	100	100	100	100
Useful static supply pressure	Pa	360	520	1000	1100	900	1440	1500
Useful static recovery pressure	Pa	360	520	1000	1100	900	1440	1500
Supplied internal pressure drop Δp	* Pa	269	262	276	222	216	240	241
Recovered internal pressure drop Δp	* Pa	272	265	280	225	219	243	244
Fans static efficiency	*(5) %	64,5	65,5	62,8	64,1	67,2	64,7	65,8
Internal leakage	(6) %	<3						
External leakage	(6)	0,2	0,2	0,1	0,1	0,1	0,1	0,1
Filters								
Expelled air filter energy class		D	D	D	D	D	D	D
External air filter energy class		D	D	D	D	D	D	D
Sound data								
Sound power level	* dB(A)	66	67	75	77	78	78	79

* Information in compliance with Annex V of regulation EU no. 1253/2014

SFP Specific Fan Power

(1) Relation between the inlet air heating gain and the expulsion air heating loss, both relating to the outside temperature, measured in dry reference conditions, with balanced mass flow and an internal/external air heating difference of 20K, excluding the heating gain generated by the fan motors and the internal leakage.

(2) Expelled air: Tbs=25°C; Tbu<14°C. Fresh air: Tbs=5°C

(3) Expelled air: Tbs=20°C; 50% UR. Fresh air: Tbs=-10°C; 90% UR.

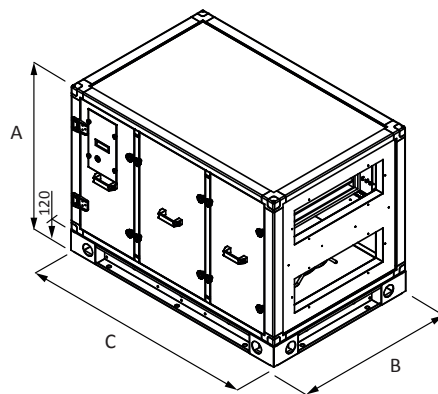
(4) Standard version without accessories

(5) According to regulation EU 327/2011

(6) External leakage test performed at +400 Pa and -400 Pa; internal leakage test performed at 250 Pa

(7) Expelled air: tbs=26°C; 50% UR. Fresh air: Tbs=35°C; 50% UR.

DIMENSIONS



Horizontal installation

Size		07	09	12	15	17	21	24
Dimensions and weights								
A	mm	965	1285	1445	1765	2085	2405	2725
B	mm	895	1005	1375	1695	1855	2335	2665
C	mm	1375	1535	2045	2365	2365	3005	3005
Weights	kg	240	340	570	820	1010	1610	1980

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