

## ERSR

High-efficiency heat recovery  
high-efficiency with rotary recovery unit.  
Air flow rates from 1,000 to 30,000 m<sup>3</sup>/h.



- **MECHANICALLY CONTROLLED VENTILATION**
- **ROTARY HEAT RECOVERY UNIT**
- **RECOVERY OF UP TO 80% OF THE ENERGY OF THE EXPELLED AIR**
- **AIR PURIFICATION**

### Features

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 unit can be installed vertically only with sizes (**ERSR07÷09TV**)

**ERSR\_H** with a hygroscopic rotary recovery unit can be installed vertically only with sizes (**ERSR07÷09HV**)

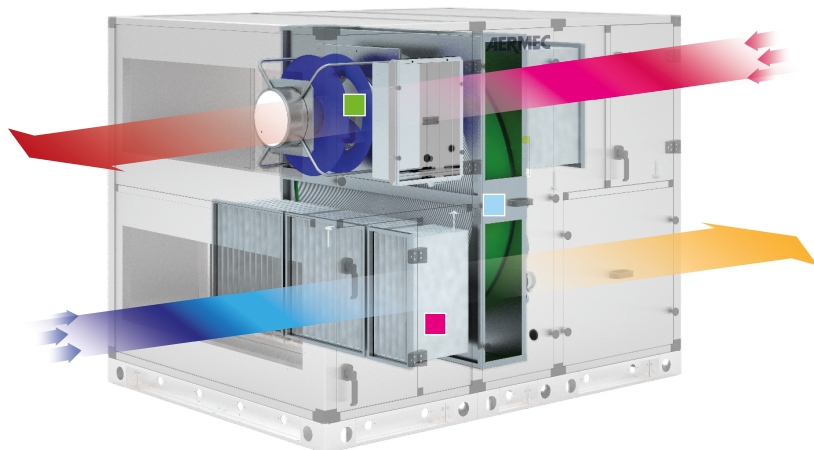
- Rotary heat recovery unit (with the option in hygroscopic material), high-efficiency and low pressure drops.
- Soft air bag F7 filters (flow and recovery) equipped with a standard differential pressure switch, which can be extracted from either side facilitate their periodic cleaning.
- Fans (intake 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/m<sup>3</sup>). 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



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

### 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.

## Accessories compatibility

ERSR	07	09	12	15	17	21	24
<b>UNIT ACCESSORIES</b>							
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	•	•	•	•	•	•	•
<b>MODULE ACCESSORIES</b>							
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
<b>MODULE ACCESSORIES WITH ROOF (for outdoor installations)</b>							
RBCT	RBC07T	RBC09T	RBC12T	RBC15T	RBC17T	RBC21T	RBC24T
RBFT	RBF07T	RBF09T	RBF12T	RBF15T	RBF17T	RBF21T	RBF24T
RBET	RBE07T	RBE09T	RBE12T	RBE15T	RBE17T	RBE21T	RBE24T
RBPT	RBP07T	RBP09T	RBP12T	RBP15T	RBP17T	RBP21T	RBP24T
MSST	MSS07T	MSS09T	MSS12T	MSS15T	MSS17T	MSS21T	MSS24T

## Technical data

<b>Mod. ERSR</b>		<b>07T</b>	<b>09T</b>	<b>12T</b>	<b>15T</b>	<b>17T</b>	<b>21T</b>	<b>24T</b>
Nominal air flow and recovery flow rate	m <sup>3</sup> /h	1.100	1.950	3.700	5.950	7.800	12.200	16.100
Maximum air flow and recovery static pressure available	Pa	420	660	1.100	1.120	1.040	1.440	1.530
Total nominal input power	(1) kW	0,33	0,48	1,06	1,69	2,13	3,49	3,85
Maximum air flow and recovery flow rate	m <sup>3</sup> /h	2.000	4.370	5.880	10.650	14.800	24.750	31.350
Total maximum input power	kW	0,84	2,04	6,09	8,78	10,18	22,37	30,37
Total heating capacity recovered	kW	10,7	19	36	57,9	75,9	118	156
Recovered sens. heating capacity	kW	7,4	13,1	24,9	40,1	52,5	82,1	108
Winter recovery unit efficiency	%	80	80	80	80	80	80	80
Total recovered cooling capacity	kW	2,8	4,9	9,3	14,9	19,5	30,5	40,3
Recovered sens. cooling capacity	kW	2,7	4,7	9	14,4	18,9	29,6	39
Summer recovery unit efficiency	%	80	80	80	80	80	80	80
Total number of fans	n°	2	2	2	2	2	4	4
Sound power level	dB(A)	65,6	67	75,3	76,7	78	78	79
Unit power supply	V/h/Hz	400V/3N/50Hz						
<b>RBC Hot water coil</b>								
Heating capacity	(2) kW	9,5	16,9	27,4	46,7	60,1	95,8	130,4
Water flow rate	(2) m <sup>3</sup> /h	0,8	1,4	2,3	4	5,2	8,4	11,3
Water side pressure drop	(2) kPa	9	8	8	7	11	16	20
<b>RBF Cold water coil</b>								
Total cooling capacity	(3) kW	10,5	19,5	34,7	59,8	80	127,4	171,3
Sensitive cooling capacity	(3) kW	4,1	7,6	13,9	23,9	32	51	68,5
Water flow rate	(3) m <sup>3</sup> /h	1,6	2,9	6	10,3	13,7	21,9	29,5
Water side pressure drop	(3) kPa	15	8	7	23	33	34	3,2

**For the performance of the H version, contact the head office.**

### Heating

Fresh air flow rate equal to the air expulsion flow rate; Outdoor air temperature (in) -5°C 80% r.h.; Room temperature 20°C, 50% r.h.

### Cooling mode

Fresh air flow rate equal to the air expulsion flow rate; Outdoor air temperature (in) 35°C 50% r.h.; Room temperature 26°C, 50% r.h.

(1) With nominal air flow rates and useful pressure of 100Pa.

(2) Coil water inlet temperature 70°C; Coil inlet-outlet temperature difference 10°C; Coil air intake temperature 15°C;

Water pressure drops not included with a 3-way valve (standard).

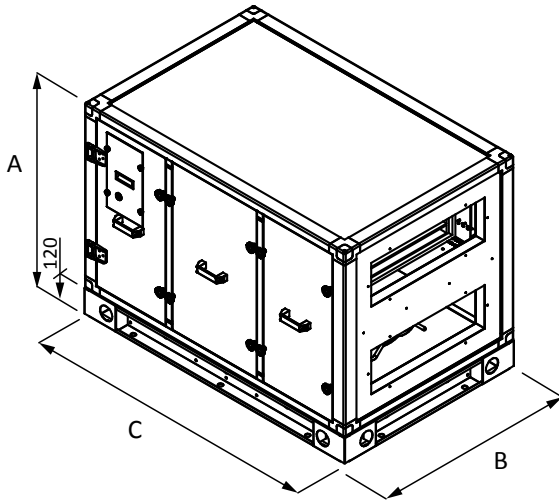
(3) Coil water inlet temperature 7°C; Coil inlet-outlet temperature difference 5°C; Coil air intake temperature 28°C, 75% RH;

Water pressure drops not inclusive with a 3-way valve (standard).

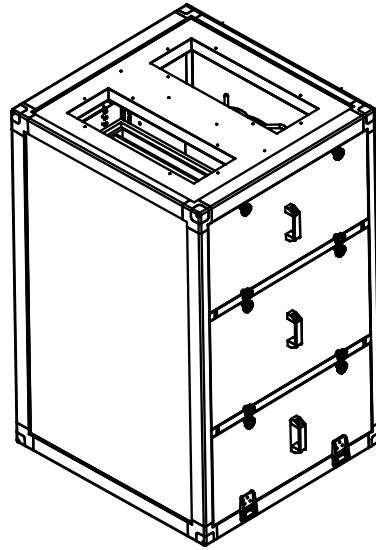
Sound power level of the flow fan not ducted with useful static pressure equivalent to 0 Pa.

## Dimensional data (mm)

### Horizontal installation



### Vertical installation only for ERSR07 and 09



ERSR			07	09	12	15	17	21	24
Height	A	mm	965	1285	1445	1765	2085	2405	2725
Width	B	mm	895	1005	1375	1695	1855	2335	2665
Depth	C	mm	1375	1535	2045	2365	2365	3005	3005
Weight		kg	240	340	570	820	1010	1610	1980