



## ERSR

### Heat recuperators with rotary heat exchanger. Air flow rates from 1.000 to 30.000 m<sup>3</sup>/h.

The units of the ERSR series have been designed to satisfy the requirements for thermo-hygrometric wellness and air change-over, typical of public ambiances.

The units are characterized by a high-efficiency rotary heat exchanger (with the possibility to obtain the hygroscopic treatment of the surface). The recuperation, thus obtained from the heat exchanger, allows to minimize the use of the air conditioning unit, giving as end-result an elevate saving in the cost management.

High economic savings are granted by the use of plug fans with electronic control motors (yp to 17) or with high-efficiency motors controlled by frequency inverter.

These units are fully "plug & play" ones, since they are equipped with electronic control and electrical panel. The special control software is able to maximize the use of the unit according to the energetic conditions.



## Versioni

**7 sizes** available for internal or external installation.

**2 versions:**

- - with rotary exchanger (T);
- - with rotary hygroscopic exchanger (H).

## Accessori

- **RSR** sezione/serranda di ricircolo
- **RBF** modulo batteria ad acqua fredda con valvola a 3 vie
- **RBC** modulo batteria ad acqua calda con valvola a 3 vie
- **RBP** modulo batteria fredda e post-riscaldamento ad acqua con valvole a 3 vie
- **RE** modulo batteria elettrica
- **VRC** vasca di raccolta condensa
- **MSS** modulo setti silenziosi
- **TDP** tetto di protezione

**Further accessories (ex: direct expansion coil module, dampers, anti-vibration dampers, etc.) are available on request.**

## Features

### Frame and panels

bearing frame and sandwich panels 50 mm thick in galvanized sheet inside and pre-painted galvanized steel sheet outside, insulation with injected polyurethane foam (density 50 kg/m<sup>3</sup>). Different type of panels are available on demand.

Base frame with continuous galvanized steel profiles. Sizes 07 and 09 come in a single block, while others are divided in sections. The inspection of the unit is possible on both sides.

### Filters:

on the fresh air and exhaust air side, standard with soft bags class F7 (according to EN 779). All filters are removable from the side and equipped with differential pressure switch in order to signal the filters' clogging

### High efficiency heat exchanger

rotary type (with hygroscopic treatment as option) and low pressure drop.

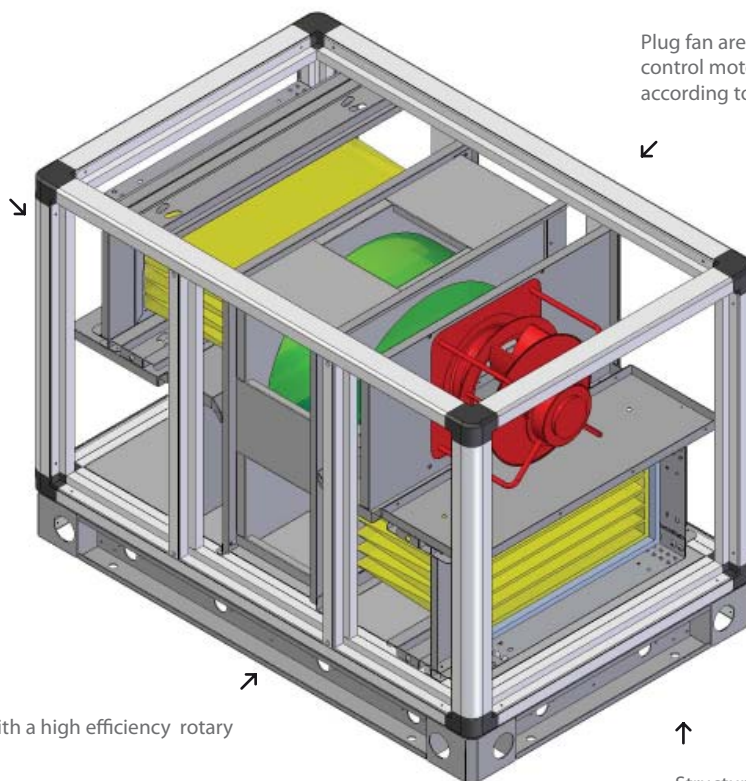
### Exhaust and supply fans

Equipped with high efficiency backward-curved blades plug fans. Electric motors are directly-coupled to the fans for sizes 07-17 and with inverter for sizes 21-24

### Electronic control:

the unit can be equipped with an electric and control panel inside in order to reduce the energy consumptions. Serial port for communication on RS485 with MODBUS Master/Slave protocols .

Series soft septa filters class F7



Plug fan are equipped with electric control motor or with inverter according to the size

The unit is equipped with a high efficiency rotary heat exchanger

Structure with an aluminum frame and sandwich panels with a thickness of 50 mm

## Main technical data

ERSR		07	09	12	15	17	21	24
Version		T	T	T	T	T	T	T
Nominal supply and exhaust air flows	m <sup>3</sup> /h	1.100	1.950	3.700	5.950	7.800	12.200	16.100
Maximum supply and exhaust static available pressure	Pa	420	660	1.100	1.120	1.040	1.440	1.530
Nominal total input power <sup>1</sup>	kW	0,33	0,48	1,06	1,69	2,13	3,49	3,85
Maximum supply and exhaust air flows	m <sup>3</sup> /h	2.000	4.370	5.880	10.650	14.800	24.750	31.350
Maximum total input power	kW	0,82	2,04	6,09	8,78	10,2	22,4	30,4
Total recovered capacity <sup>2</sup>	kW	10,7	19	36	57,9	75,9	118	156
Total recovered sensible capacity <sup>2</sup>	kW	7,4	13,1	24,9	40,1	52,5	82,1	108
Winter exchanger efficiency <sup>2</sup>	%	80	80	80	80	80	80	80
Total recovered cooling capacity <sup>3</sup>	kW	2,8	4,9	9,3	14,9	19,5	30,5	40,3
Potenza frigorifera sens. recuperata <sup>3</sup>	kW	2,7	4,7	9	14,4	18,9	29,6	39
Summer exchanger efficiency <sup>3</sup>	%	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
Power supply	V-Ph-Hz	400 - 3+N - 50						
<b>RBC warm water coil</b>								
Heating capacity <sup>4</sup>	kW	9,5	16,9	27,4	46,7	60,1	95,8	130,4
Water flow <sup>4</sup>	m <sup>3</sup> /h	0,8	1,4	2,3	4,0	5,2	8,4	11,3
Water pressure drop <sup>4</sup>	kPa	9	8	8	7	11	16	20
<b>RBF Cold water coil</b>								
Total cooling capacity <sup>5</sup>	kW	10,5	19,5	34,7	59,8	80,0	127,4	171,3
Sensible capacity <sup>5</sup>	kW	4,1	7,6	13,9	23,9	32,0	51,0	68,5
Water flow <sup>5</sup>	m <sup>3</sup> /h	1,6	2,9	6,0	10,3	13,7	21,9	29,5
Water pressure drop <sup>5</sup>	kPa	15	8	7	23	33	34	3,2

1. Under the conditions of air flow and rated pressure of 100 Pa external static.

**Riscaldamento**

2. Performances referred to: fresh air volume same as exhaust air volume; fresh air inlet temperature -5°C, 80% RH; room air temperature 20°C, 50% RH.

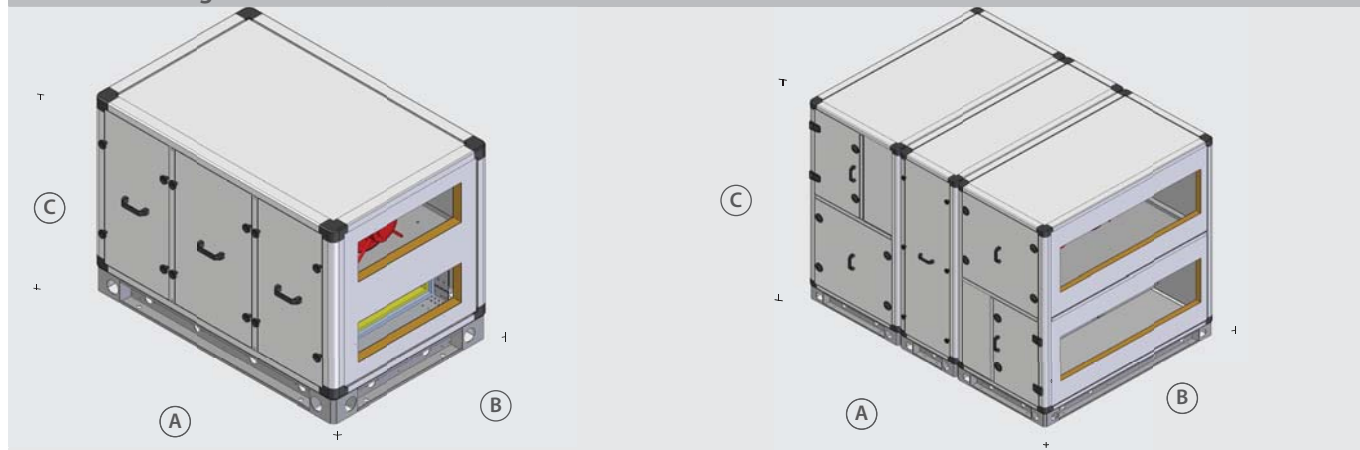
**Riscaldamento**

3. Performances referred to: fresh air volume same as exhaust air volume; fresh air inlet temperature 35°C, 50% RH; room air temperature 26°C, 50% RH.

4. Coil inlet water temperature 70°C; difference in temperature inlet-outlet from the coil 10°C. Fresh air inlet temperature -5°C, 80% RH; room air temperature 20°C, 50% RH.

5. Supply fan (not ducted) sound pressure level with static useful pressure equal to 0 Pa.

## technical drawings



ERSR 07-09

ERSR 12-24

## Sizes and weights

Modello ERSR		07	09	12	15	17	21	24
Length A	mm	1.375	1.535	2.045	2.365	2.365	3.005	3.005
Width B	mm	895	1.005	1.375	1.695	1.855	2.335	2.665
Height (with base fame H=120mm)	mm	965	1.285	1.445	1.765	2.085	2.405	2.725
Weight	kg	240	340	570	820	1.010	1.610	1.980

Dimensions and weights of the base unit.

ERSR	07	09	12	15	17	21	24
<b>UNIT ACCESSORIES</b>							
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
<b>MODULES ACCESSORIES</b>							
RBC	RBC07	RBC09	RBC12	RBC15	RBC17	RBC21	RBC24
RBF	RBF07	RBF09	RBF12	RBF15	RBF17	RBF21	RBF24
RE	RE0706	RE0909	RE1218	RE1524	RE1730	RE2148	RE2463
RBP	RBP07	RBP09	RBP12	RBP15	RBP17	RBP21	RBP24
MSS	MSS07	MSS09	MSS12	MSS15	MSS17	MSS21	MSS24
<b>MODULES WITH ROOF</b>							
RBCT	RBC07T	RBC09T	RBC12T	RBC15T	RBC17T	RBC21T	RBC24T
RBFT	RBF07T	RBF09T	RBF12T	RBF15T	RBF17T	RBF21T	RBF24T
RET	RE0706T	RE0909T	RE1218T	RE1524T	RE1730T	RE2148T	RE2463T
RBPT	RBP07T	RBP09T	RBP12T	RBP15T	RBP17T	RBP21T	RBP24T
MSST	MSS07T	MSS09T	MSS12T	MSS15T	MSS17T	MSS21T	MSS24T