



# RECUPERATOR THE HEAT EXCHANGER

## ROTARY HEAT EXCHANGERS | R SERIES

**FULL**  
**ERP2018**  
**COMPLIANT**



### Applications



## R SERIES

**Recuperator** designs and manufactures plate and rotary heat exchangers, the “core” of any heat recovery system. The high efficiency allows a drastic reduction of energy consumption and air pollution.

*Incorporating heat recovery into new and retrofit projects is a duty of all of us in this environmentally aware age.*

### Range

- › Airflow up to 100'000 m<sup>3</sup>/h
- › High efficiency > 80%
- › Low pressure drops; suggested  $\Delta P$  150 Pa.

### Rotors Treatment

All the rotors have an aluminium based matrix.

#### Aluminium (AL)

The condensation wheel allows moisture transfer when, in winter conditions, the extract air falls below its dew temperature. It is the most economically advantageous solution to recover heat in most applications.

#### Hybrid (AT)

The hybrid enthalpic wheel allows the sensible and latent recovery due its hygroscopic matrix, that allows the moisture exchange between the supply and exhaust side.

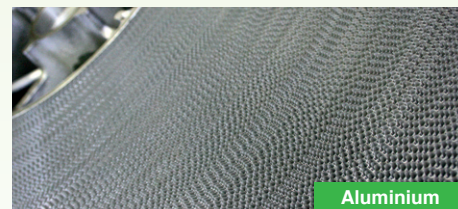
#### Sorption (AR, AZ)

The adsorbent silica gel treatment (AR) which is applied to the aluminium layer, this allows the recovery of the sensible and latent heat, reaching very high efficiency values, ensuring considerable energy savings. Also available in the version with hygroscopic coating based on molecular sieve 3Å (AZ), highly performing.

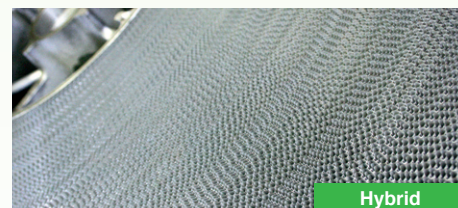
#### Epoxy anticorrosion (AC)

In environments with aggressive atmosphere, it is recommended that the aluminium is protected by a paint coating non-toxic based and epoxy corrosion resistant (AC version - GOLD).

### Rotors Treatment



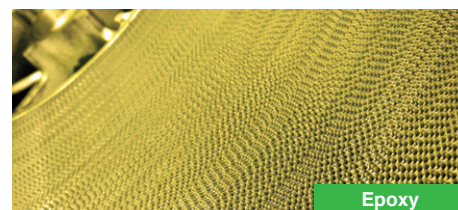
Aluminium



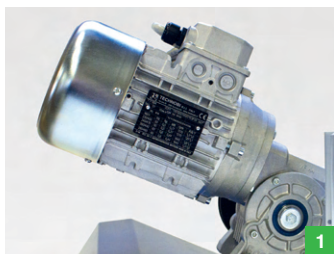
Hybrid



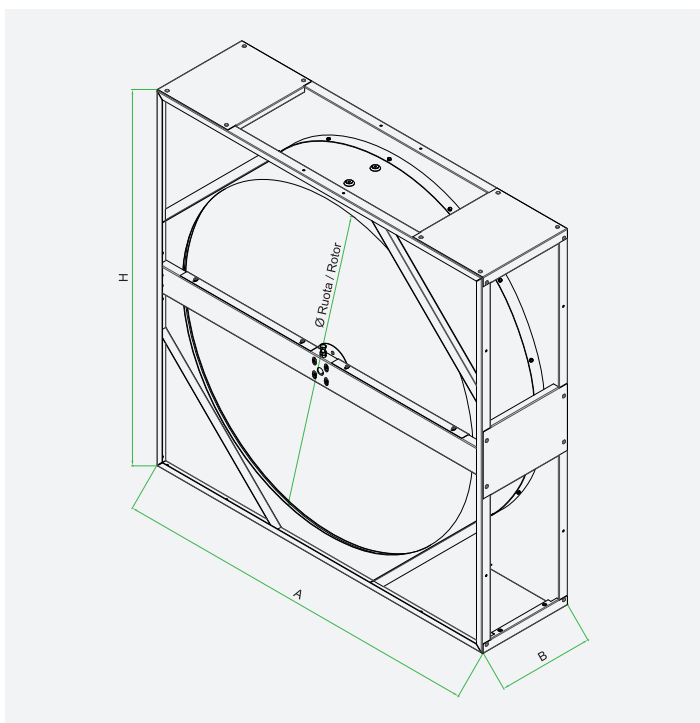
Sorption



Epoxy



**Driver - Speed rotation**  
Available with constant speed (3 x 380V) (1), or variable speed with speed regulator (1 x 240V). (2) (3)

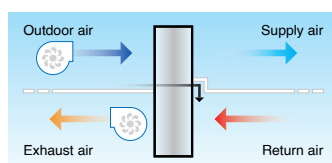
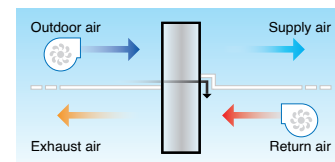
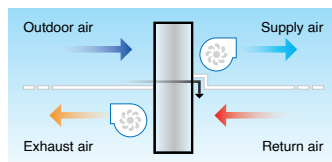


Type	Diameter Ø	Step Ø	HxA	B
	500 - 2500	50	Ø + 100	290
	2600 - 2900	50	Ø + 150	350
	2950 - 3550	50	Ø + 150	350
	3600 - 5000	50	Ø + 260	505

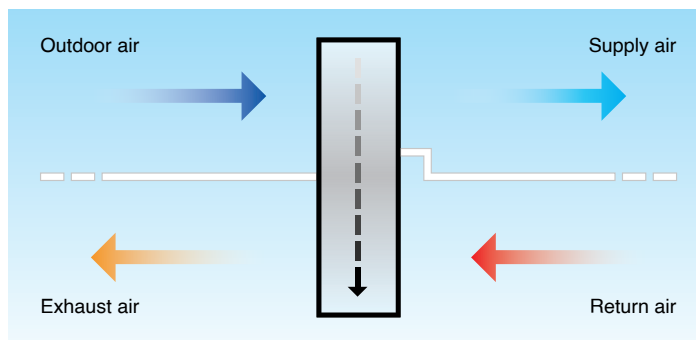
Spacing	Wave height
Fitto (N)	1.40
Intermedio (E)	1.55
Stretto (C)	1.70
Medio (M)	2.00
Largo (L)	2.70

**NB:** · Measurements in mm  
· The mix of fins spacings, models and materials, depend on the selection.

## Fans layout



## Definition



### OACF (outdoor correction factor)

The ratio between the flow of external air entering in the rotary heat exchanger and the supply air at the exit of the rotary heat exchanger.

OACF value 1.13 @ 250Pa Ø2000mm vf = 3m/s.

### EATR (exhaust air transfer ratio)

The part of extract air that mixes with the supply airflow.

Recuperator's value EATR @250Pa equal at 0.0% if included purging sector.



Recuperator S.p.A. reserves the right to introduce alterations in its production and computer programs due to improvements in its quality and without prior notice.

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