



# RECUPERATOR THE HEAT EXCHANGER

## PLATE HEAT EXCHANGERS | B·BLUE



Applications



## B·BLUE

**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.

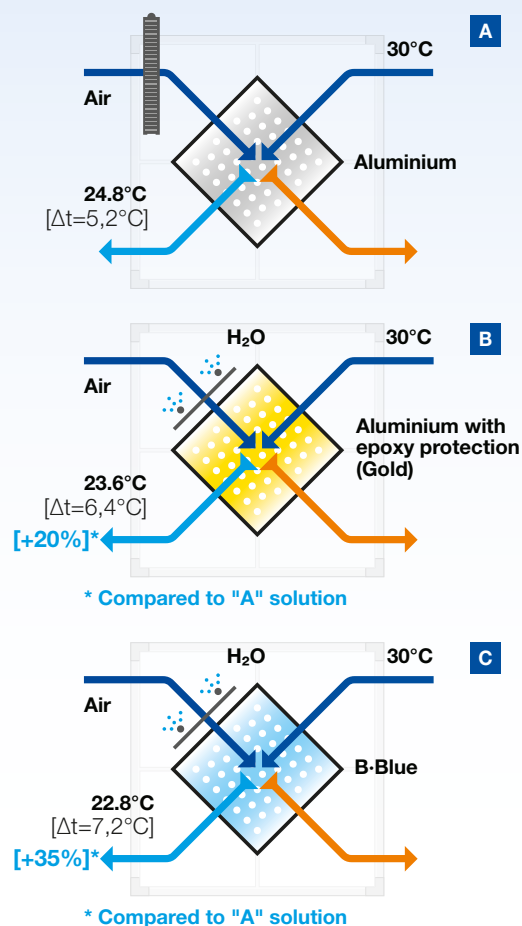
### B·Blue

To reduce the consumption of electricity for cooling, it's possible to integrate a plate heat exchanger in an indirect evaporative cooling system. Recuperator has developed a new hydrophilic aluminium coating that improves system efficiency and ensures high corrosion resistance. This covering can be applied for all the series A,B,F and E.

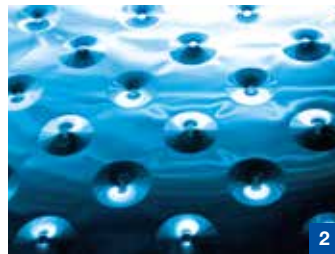
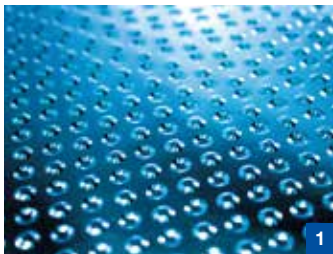
### Benefits

Research projects in conjunction with the University of Milan have proved that the water sprayed into the plate heat exchanger (B) increases the cooling capacity of the system by 20% more than a traditional humidification system at the inlet of the heat exchanger (A). The water sprayed inside the plate heat exchanger continues to evaporate, cooling the extract airflow during the entire crossing path. The common epoxy GOLD anticorrosion coating, can be replaced in favor of the innovative B·Blue. The B·Blue coating promotes the water distribution and retention on the plates, enhancing the wettability, achieving a further increase of the system efficiency up to 15% (C).

### Benefits of the B·BLUE covering

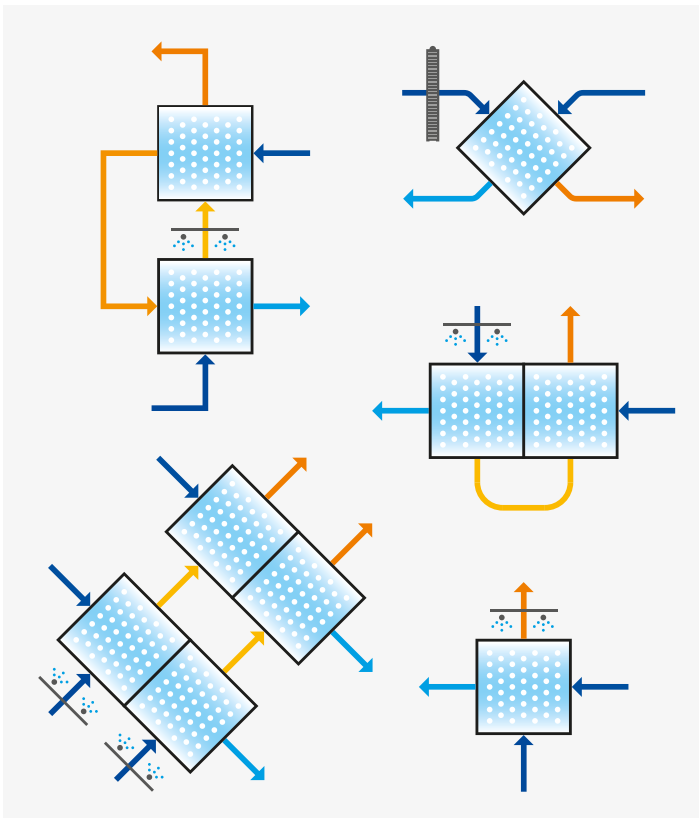


Designed for  
Indirect  
Evaporative  
Cooling  
Applications



#### Type of fins

- › Fins for the A series (1)
- › Fins for the B series (2)
- › Fins for the F series (3)



Recuperator used the numerous results of the studies conducted on the indirect evaporative cooling technology, in order to develop a DLL black box for the performance calculation of this solution. The user, through the interface of the Heart calculation program, is able to select the position of the nozzles, the recovery model and the thermo-hygrometric conditions, obtaining, in a single click, the calculation of the system cooling capacity.

For this application the water tightness of the plate heat exchanger is essential. Recuperator knows this and for this reason we have developed a process that guarantees this result. In addition, the tightness is certified through a dynamic test (watertight) at a high pressure difference.

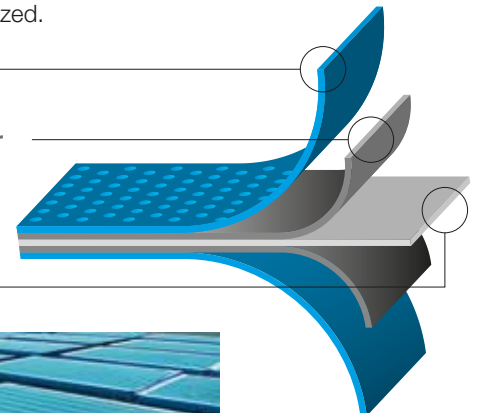


The B-Blue coating, in addition to increasing the IEC cooling capacity, guarantees greater corrosion resistance than traditional epoxy coatings. The enhanced resistance is due to the double layer that protects the aluminium foil. The primer and the hydrophilic-adsorption coating act as a barrier, protecting the aluminium during its use with any type of water, tap softened and demineralized.

#### B-Blue covering

#### Anticorrosion Primer

#### Aluminium Coil



(+) Free software is available.  
More information on [www.recuperator.eu](http://www.recuperator.eu)



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.



**Recuperator S.p.A.**  
via Valfurva, 13  
20027 Rescaldina  
Milano, Italy

Società unipersonale soggetta all'attività di direzione e coordinamento di Carel Industries S.p.A.

tel. +39 0331 185 31  
fax +39 0331 185 3000  
[recuperator@recuperator.eu](mailto:recuperator@recuperator.eu)  
[www.recuperator.eu](http://www.recuperator.eu)



member of CAREL group