B·Blue IN THE FIELD

250.000 m²
2.7 million ft²
Aluminium surface
This is the equivalent of 35 football fields.

10 milion m³/h
5.8 million ft³/h
Flow rate
This is the equivalent of 4000 hot air balloons.

50 MW
Energy Saving
This is the equivalent of 4000 km (2500 mi) of train travel.

100 t
Aluminium weight
This is the equivalent of 78 cars.

More information about B·Blue production for Data Center in the last period.

Solutions for Data Center applications

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RECUPERATOR THE HEAT EXCHANGER
Data centers are quickly increasing in number and size, so much so that in one year the total electricity used for cooling the Data Centre Equipment can reach approximately 0.5% of the world’s electricity consumption.

Many research programs are focused on the reduction of the primary electrical energy used for Data Centre cooling, for example, research into indirect and adiabatic evaporative cooling which is the most promising cooling technology. In fact, nowadays, the indoor data center temperature has increased, which also increases the free cooling working hours.

**B·Blue** is the heart of this system, the air-to-air plate heat exchanger designed for indirect and adiabatic evaporative cooling application in the Data Centre environment.

### Technical Characteristics:
- Crossflow, wide range of sizes
- More than 70,000 m³/h (41000 CFM)
- More than 73% efficiency
- Low pressure drop
- With or without by-pass and damper
- Minimal maintenance

### Main Options:
- AC - Coated Aluminium
- TV - Coated Casing
- SC - Super Tightness

### Warranty
- 5 Years

### B·Blue is manufactured from aluminum which gives several advantages: A) it can resist ice formation due to its elastic properties, B) it is antibacterial and antifungal, C) it can be washed with high water pressure without damage and high reliability over time.

In the adiabatic process different water types can be used: natural mains water, softened or demineralized.

Thanks to its special **B·Blue** coating, it can resist most aggressive water for years. This unique coating has the function to protect while also increasing the system performance.

### Water Cost

<table>
<thead>
<tr>
<th>Water Type</th>
<th>Cost</th>
<th>Maintenance</th>
<th>Heat Exchanger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mains</td>
<td>Cheapest</td>
<td>It is better to use bigger nozzle and to check and clean very often the rack.</td>
<td>Aluminum plate could be used. Side plate with epoxy protection.</td>
</tr>
<tr>
<td>Softened</td>
<td>Average</td>
<td>With softened water some dust can settle on the plate. Maintenance should be made often.</td>
<td>Protection on the aluminum plate it is needed as epoxy protection on the side plate.</td>
</tr>
<tr>
<td>Deionized</td>
<td>Higher price. Could be 5 times higher than the mains water</td>
<td>Lowest maintenance</td>
<td>Deionized water is acid. Aluminum protection it is needed to avoid the fretting.</td>
</tr>
</tbody>
</table>

**B·Blue** has all the features needed for data center application. The special fin has been developed to increase the distribution of the water on its surface during the adiabatic process.

The distribution and the shape of the turbulent geometry allow the water to be distributed over the entire plate. The blue color of the recuperator is due to the color of the special coating that has the ability to enhance the wettability of the plate.

It has been tested and developed in the university laboratories to increase the water film formation and to enhance the retention of the water on the surface, which gives added advantages: the gain in the cooling capacity and the reduction in water consumption.