



THE VAPOBLOC ADVANTAGES AT A GLANCE

-  **MOISTURE TRANSFER IN WINTER**
Moisture is transferred through the special polymer membrane. The supply air is less dry and therefore provides for increased comfort.

 **DEHUMIDIFICATION DURING AIR CONDITIONING**
Realizes energy savings the refrigeration systems can be dimensioned much smaller.

 **HIGH HEAT TRANSFER**
Various sizes also allow optimum dimensioning for all ventilation units.

 **WATER VAPOR PERMEABLE MEMBRANE**
Allows only the transfer of water vapor molecules. Other media such as air, odors, germs and bacteria cannot pass through.
-  **OFFICIALLY CERTIFIED**
Performance and hygiene are regularly certified by neutral institutions.

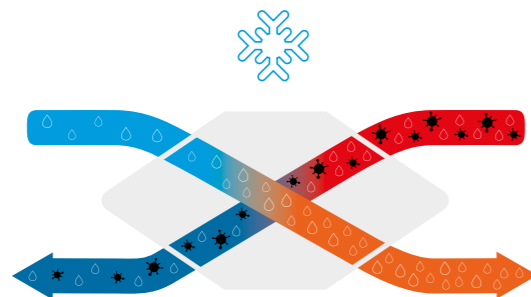
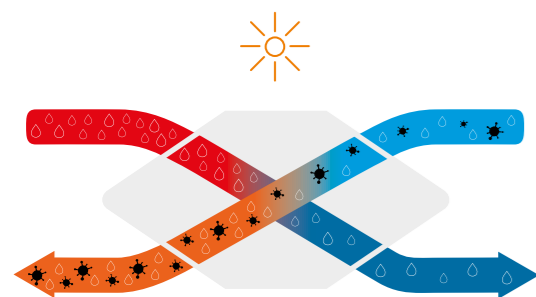
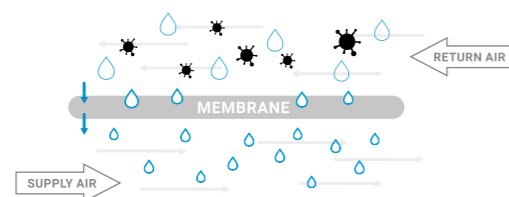
 **DOES NOT FREEZE**
Since a large part of the humidity is transferred to the supply air, there is normally hardly any condensate that can freeze.

 **SAVINGS IN HUMIDIFIER OUTPUT**
The humidifier can be smaller in size. The running costs for operation are considerably lower.

 **MINIMUM MAINTENANCE**
Vapobloc is easy to clean and has no wearing parts.

FUNCTIONAL PRINCIPLE

Water vapor diffuses through the membrane. In Winter the supply air is humidified, in cooling conditions dehumidified. Contaminants such as particulate, odors, germs and bacteria cannot pass through.



THE GREEN DEAL FOR FUTURE

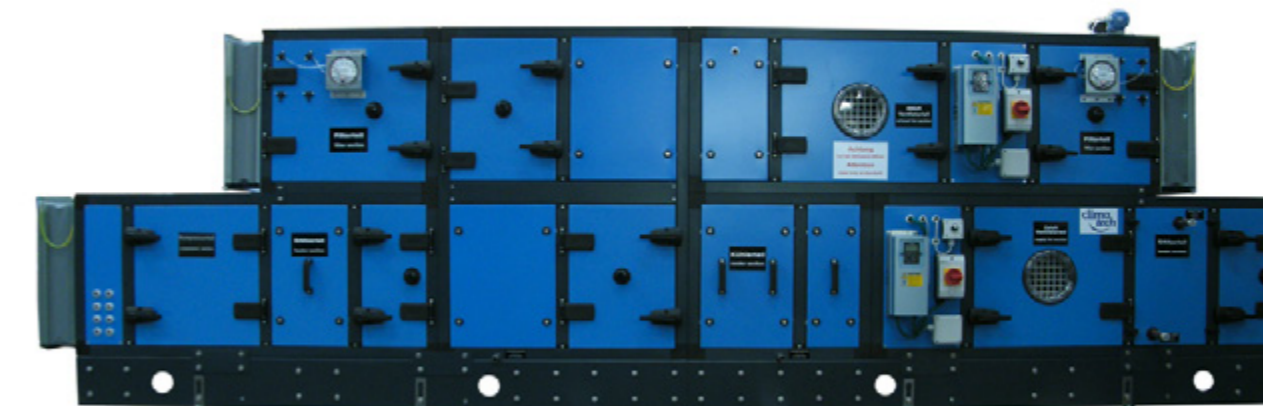
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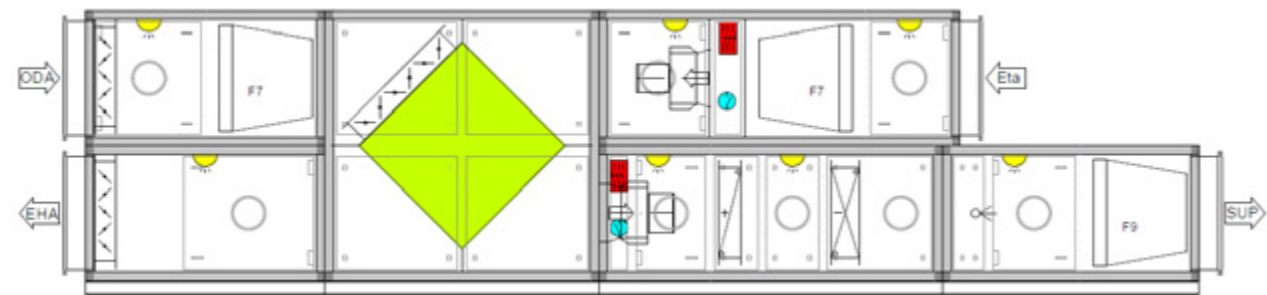
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multiCENT Energy Saver



Enthalpy Recovery with VapoBloc Plate Exchanger



Using the VapoBloc in hygiene air handling units for supply/exhaust air, you can achieve:

- **up to 68% reduction on electrical power for steam humidifiers**, through moisture transfer in heating mode;
- **up to 25% reduction electric power for cooling energy**, by dehumidification in cooling mode.

The additional costs will be amortized in about 2 years!

Energy recovery with alu plate heat exchanger

Heating mode:

Supply air	2750 m ³ /h
Entering	-15 °C / 90% rH
Leaving	14.7 °C / 10% rH

Exhaust air	2750 m ³ /h
Entering	22 °C / 35% rH
Leaving	-1.8 °C / 99% rH

Recovered capacity	27 kW
Therm. efficiency dry/wet	72.5/80.2%

Cooling mode:

Entering	35 °C / 40% rH
Leaving	27.6 °C / 61% rH

Exhaust air	2750 m ³ /h
Entering	25 °C / 50% rH
Leaving	32.4 °C / 33% rH

Recovered capacity	6.8 kW
Therm. efficiency wet	73.5%

Steam humidifier after heater:

Supply air	2750 m ³ /h
Entering	22 °C / 6% rH
Leaving	35% rH
Humidification	16 kg/h
Electr. power cons.	14 kW

Cooling coil:

Supply air	2750 m ³ /h
Entering	27.6 °C / 61% rH
Leaving	17 °C / 93% rH
Total capacity	16.5 kW

Energy recovery with VapoBloc exchanger

Heating mode:

Supply air	2750 m ³ /h
Entering	-15 °C / 90% rH
Leaving	13.5 °C / 45% rH

Exhaust air	2750 m ³ /h
Entering	22 °C / 35% rH
Leaving	-6.1 °C / 99% rH

Recovered capacity	34 kW
Therm. efficiency dry/wet	76.9/69.4%

Cooling mode:

Entering	35 °C / 40% rH
Leaving	27.3 °C / 51% rH

Exhaust air	2750 m ³ /h
Entering	25 °C / 50% rH
Leaving	32.7 °C / 40% rH

Recovered capacity	13.3 kW
Therm. efficiency wet	77%

Steam humidifier after heater:

Supply air	2750 m ³ /h
Entering	22 °C / 26% rH
Leaving	99% rH
Humidification	5.2 kg/h
Electr. power cons.	4 kW

Cooling coil:

Supply air	2750 m ³ /h
Entering	27.3 °C / 51% rH
Leaving	17 °C / 87% rH
Total capacity	12.3 kW

Vapobloc

TRANSMIT MOISTURE. AND NO GERMS OR SMELLS.

Clean air is a precious commodity. And contributes significantly to people's health and well-being. However, we spend most of our lives in buildings.

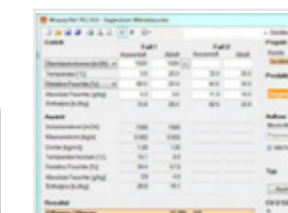
In the heating season this means: in rooms with dry heating air. For this reason, many suffer from a scratchy throat, burning eyes or dry skin.

When rooms are cooled by air-conditioning, the supply air must be dehumidified. This significantly increases the energy consumption.

The solution: an enthalpy plate exchanger - or in short: the Vapobloc! Its innovative membrane enriches the incoming warm air with moisture from the exhaust air or extract moisture from the air under hot or tropical conditions. Without transmitting odors, germs, spores and bacteria!

The Vapobloc has thus proven itself in all areas of application such as hospitals, schools, retirement homes or apartment buildings.

Certified by:



Certified planning tool

Winpoly calculates how efficiently all Poly-bloc products work together in a wide variety of conditions. And can be easily integrated into any ventilation unit software.

PERFECT CLIMATE, WHERE HUMIDITY AND PURITY COUNT:

Hospitals, schools, Kindergartens, office buildings, Retirement homes, Apartment buildings



Einsiedel Hospital, Einsiedeln - CH



Fehlmannmatte, Windisch - CH