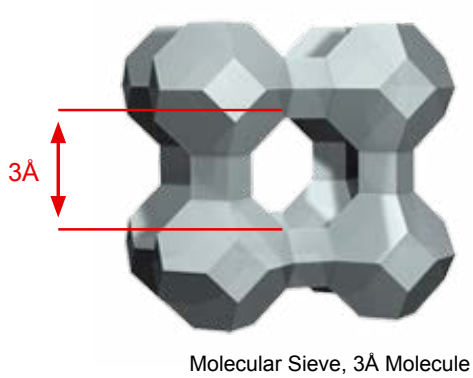
Sorption rotor Muonio (HM) Molecular Sieve (3Å)

Hoval Enventus

Hoval Enventus continuously develops its product range with special focus on humidity transfer. Intensive research in our own laboratory has given excellent results. Our HM sorption treatment has state of the art performance.

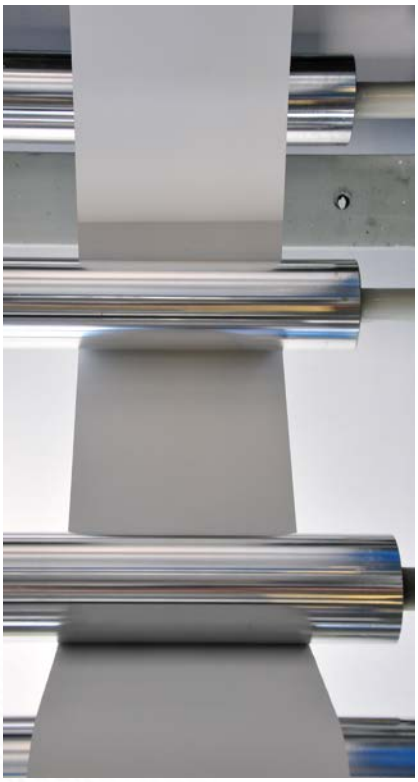


Molecular Sieve, 3Å Molecule

Benefits to our customers are:

- Direct investment pay off
- Lower investment cost in cooling capacity
- Lower energy consumption in cooling period
- Better indoor air quality
  – Minimum Carry Over
  – Increased humidity in winter season
- Lower investment and running costs for humidification
- Better performance for dry cooling systems
- Increase cooling capacity in existing systems
- 5-10 °C lower temperature for freezing protection

Our own developed production process with coating machine guarantees high quality on sorption treatment.



Foil coating machine

High humidity efficiency, up to 86%

Our Molecular 3Å Sieve (HM) sorption wheel Muonio, give exceptional high humidity transfer efficiencies. Sorption rotors are providing an excellent method to precool and dehumidify the fresh air before entering cooling coil.

Advantages with 3Å Molecular Sieve

The HM 3Å molecular sieve gives high selectivity for adsorbing water molecules (2.7Å in size)

- Performance of 3Å technology is proven in several international and independent studies
- It is recommended in cases where cross contamination needs to be minimized
- Minimized Carry Over of VOC's from exhaust air to supply air

Lower Investment costs in cooling capacity both in AHU's and cooling system

- The cooling capacity saving is 20 – 50%
- The required cooling capacity will decrease by 10- 25 kW/m3/s air flow compared to sensible energy recovery systems
- Smaller compressors, condensers or cooling towers or higher evaporation and lower condensing temperatures
- Smaller electrical connection costs and power consumption in cooling system
- Lower water flows to cooling coils and smaller pipe works and valves
- Savings in cooling equipment investments are higher than additional cost of sorption treatment of the rotor

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Lower investment cost in supply air humidification

- Supply air humidification equipment will be smaller, due to high rate of humidity recovery from the exhaust air

Lower running costs of ventilation, cooling and humidification

- Cooling recovery in summer time
- Humidity recovery in winter time

Better working conditions for dry cooling systems (chilled ceilings or beams)

- Efficient dehumidification of fresh air in extreme summer conditions due to almost constant humidity efficiency,
  lower need to increase water supply temperature to room units in extreme hot and humid outdoor conditions

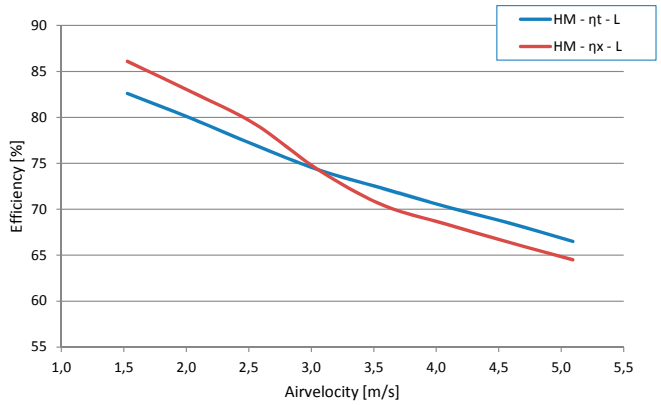
Better indoor air quality during winter

- High humidity recovery from exhaust air during winter season

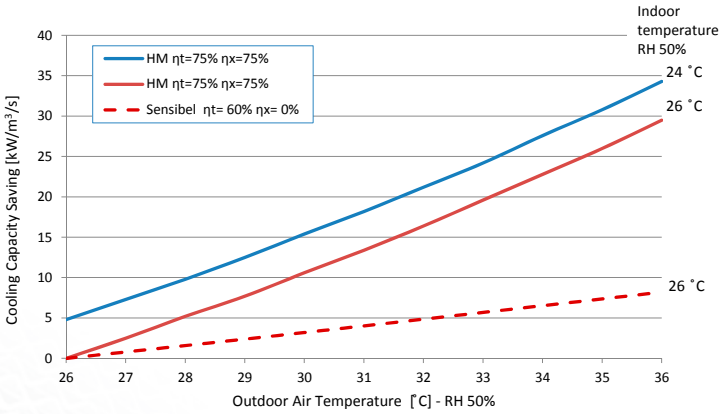
Lower risk for freezing

- The risk of freezing in extreme winter conditions is 5-10°C lower than for sensible rotors due to the fact that humidity is caught in molecules of the molecular sieve (not through condensation)

TEMPERATURE AND HUMIDITY EFFICIENCY



COOLING CAPACITY SAVING



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