# Hygienic.

The hygiene concept deliberately does away with biocide and chemical disinfectants. Only demineralized water \* without additives gets into the air you breathe.

The systems contain no porous or water storing components. Standing water is effectively eliminated and when stopped, the system is automatically emptied and checked at regular cycles in compliance with VDI 6022.

In the HPS and LPS models only inert materials come into contact with the humidification water and thanks to their material properties ensure hygienically safe and flawless humidification - a basic prerequisite in air conditioning.

#### Conserving resources.

HygroMatik's adiabatic humidification systems The HPS and LPS comply with German standards provide high humidification performance and low energy consumption. Thanks to their high efficiency trian and Swiss standards and European Standard and exact controllability, the systems provide a particularly efficient use of the demineralized water \* employed.

Humidification with demineralized water \* prevents the Directives and the recognized state of the scaling and guarantees low maintenance requirements.

HygroMatik systems means fast amortization and long service life by using high quality components.

VDI 6022, 3803 and DIN 1946, the equivalent Aus-DIN EN 13779.

Certified

A recognized, independent testing laboratory has examined and confirmed conformity with art technology (VDE Test Report No. 802300-3980-0001/85569 for HPS, and VDE Test Report No. 802300-3980-002/141937 for LPS). The HPS and LPS are CE-certified and hold the hygiene conformity certificate for air conditioning and hospitals.



iechnical Data HPS					
Туре		250	500		
Power rating	[kW]	0.94	1.6		
Water capacity (75 bar)	[l/h]	46 - 260	90 - 520		
Current connection	[A]	4.0	6.7		
Voltage connection	[V/ph/Hz]	230/1/50			
Control signal *	[V/mA]	0 - 10 / 4 - 20			
Dimensions Vortex modules	[mm]	150 x 150			
Number of nozzles		6 - 39	18 – 104		
Absorbtion distance (optimum)	[m]	0.9			
Overall installation length, min.	[m]	1.5			
Flow rate	[m/s]	0.9 – 2.8			
Pressure drop in duct	[Pa]	80 at 2.0 m/s air velocity			

#### Technical Data LPS

45	72	110	
/] 0.15	0.16	0.18	
] 4 – 56	10 - 90	20 – 130	
1.9	2.1	2.7	
oh/Hz]	230/1/50		
mA]	0 - 10 / 4 - 20		
n]	150 x 150		
15	22	32	
	0.9		
	1.5		
s]	0.9 – 2.8		
]	80 at 2.0 m/s air velocity		
	45       /]     0.15       ]     4 - 56       ]     1.9       ph/Hz]     1.9       ph/Hz]     15       mA]     15       s]     1.9	45       72 $J$ 0.15       0.16 $J$ $4-56$ $10-90$ $J$ $1.9$ $2.1$ $Dh/Hz$ $230/1/50$ $0-10/4-20$ mA] $0-150 \times 150$ mA] $150 \times 150$ mA] $0.16$ $Dh/Hz$ $0.9$ mA] $0.9$ $15$ $0.9$ $15$ $0.9 - 2.8$ $S$ $0.9 - 2.8$	

\* Other control signals on request Subject to technical amendments without notice

\* Residual conductivity 5-20 µS/cm







# HPS and LPS

Adiabatic High and Low Pressure Systems



## Humidifying and Cooling.



#### Adiabatic.

The adiabatic HPS and LPS, high and low pressure nozzle systems by HygroMatik, humidify the air in air conditioning and ventilation systems with demineralized water and offer very high humidification with particularly low energy consumption and high control accuracy.

High and low pressure atomization makes for an optimum spray pattern with minimum energy consumption. The evaporation of the fine mist cools the air adiabatically. When cooling exhaust air in the summer, this can save up to 1/3 of the cooling capacity in the design of your cooling coil.

### Dry.

High-precision, stainless steel nozzles produce a very fine mist which is rapidly absorbed into the air in the humidification chamber. With their varying spray angles and the production of optimal droplet sizes, they ensure almost completely dry walls in the humidification chamber.

Furthermore, the Vortex wall assembled from specially developed Vortex modules mixes air and water mist effectively and over a very short absorption distance. The rapid and efficient absorption takes place with virtually no loss of water - yet another saving. Due to its optimal efficiency, the system provides extremely short absorption distances.





#### Perfectly adjustable and safe.

Thanks to their modular construction, the HPS and LPS systems are suitable for any air duct. The high-quality control system offers the most precise control of proportional humidification. Continuous monitoring of all system components and functions ensures maximum operating safety. It goes without saying that operating and fault signals are integrated into your central building control system.





#### High Pressure Nozzle System



HPS



- LPS Humidification capacity from 4-110 | • Up to 80 % efficiency • The water lubricated pump runs cleanly and safely without oil and provides maintenance-free operation for up to 2 years or 8,500 operation hours – depending on what comes first • Small and compact Low noise

- Humidification capacity from 46-500 l • Up to 18% higher efficiency at a humidification capacity of 46-130 l • Up to 98% efficiency • Graphic display shows all messages and operating data • Easy menu navigation for setting relevant operating parameters • Leakage protection by means of level regulation in the water pan Pump temperature monitoring Water sampling tap



LPS

#### Equipment features at a glance

#### Features common to both models

- The systems are easy to install. The straightforward set-up provides easy and timesaving installation and commissioning for the technician
- The systems are also ideal for retrofitting in air conditioning ducts and scrubber chambers
- Low power consumption combined with extremely low maintenance requirements