



CONDAIR HC

The efficient and economic high pressure humidification system



Humidification and Evaporative Cooling



Nozzles

For working at 70 bar spray pressure, HC nozzles have two different capacities, 2.7 l/h and 5.7 l/h.

Nozzle Pipes

Nozzle pipes are equipped with the necessary number of nozzles (system-specific). The individual nozzle pipes are divided into three different spray circuits, 1/7, 2/7 and 4/7.

Mist Diffuser (option)

An optional Condair mist diffuser can enhance the absorption efficiency of water mist and reduce the water mist condensation effectively.

Hygiene Function

The pump station consists of filter and UV light which ensure the good sanitary conditions. The system also flushes periodically when system is in standby. This can alleviate the bacteria accumulation in the water pipe effectively.

Slave Systems

Assuming the system data is within a defined range, up to three further HC systems may be connected to the piston pump via the high-pressure piping.

Pump

The oil-lubricated high pressure pump is directly mounted to the electric motor and reaches the capacity from 60 - 600 l/h at an operating pressure of 50 - 70 bar.

Pressure control

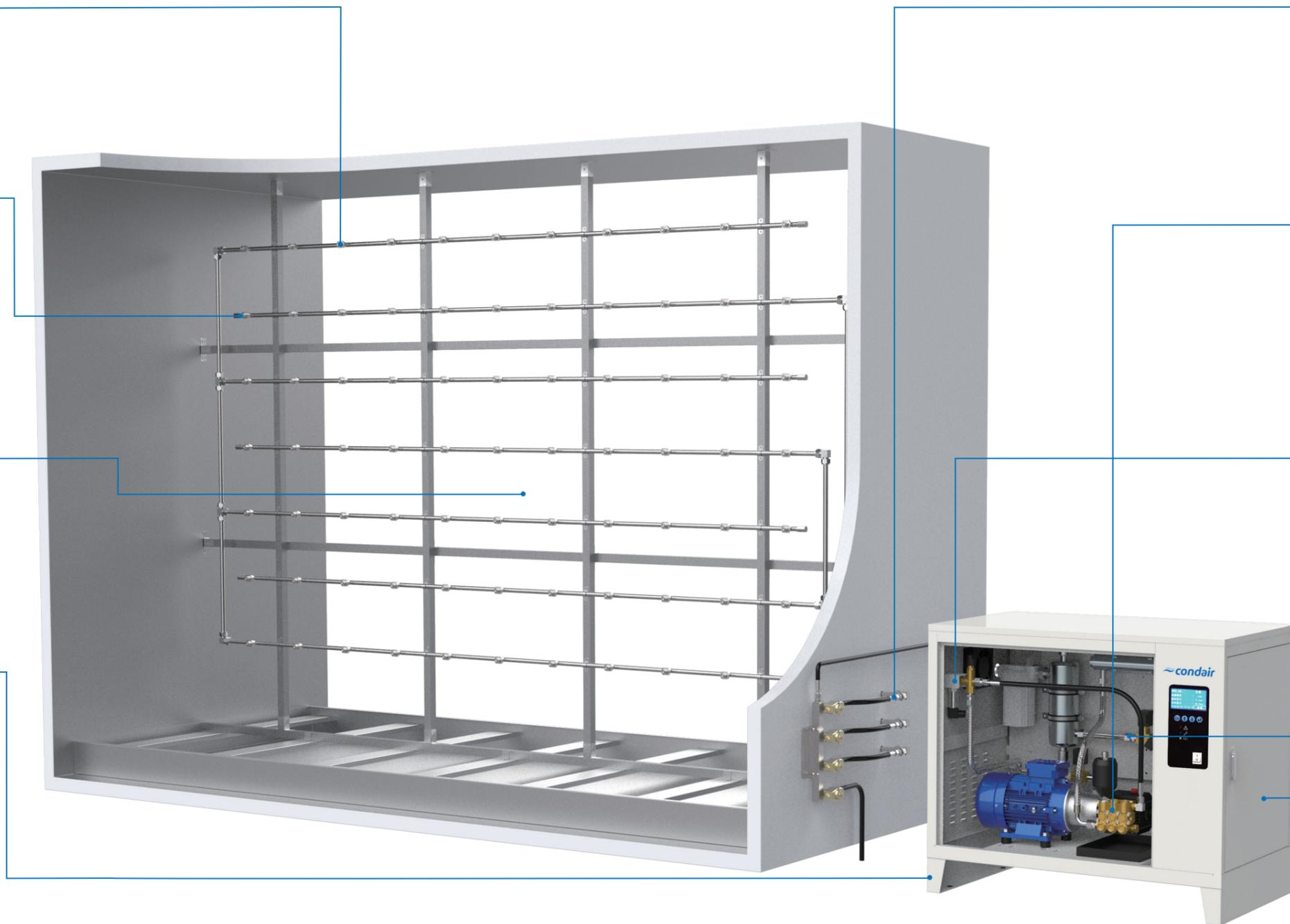
Pressure transmitters continuously monitor water inlet and water outlet side, which ensures the pressure is within acceptable range.

Temperature control

Temperature switch continuously monitors the water temperature in the system.

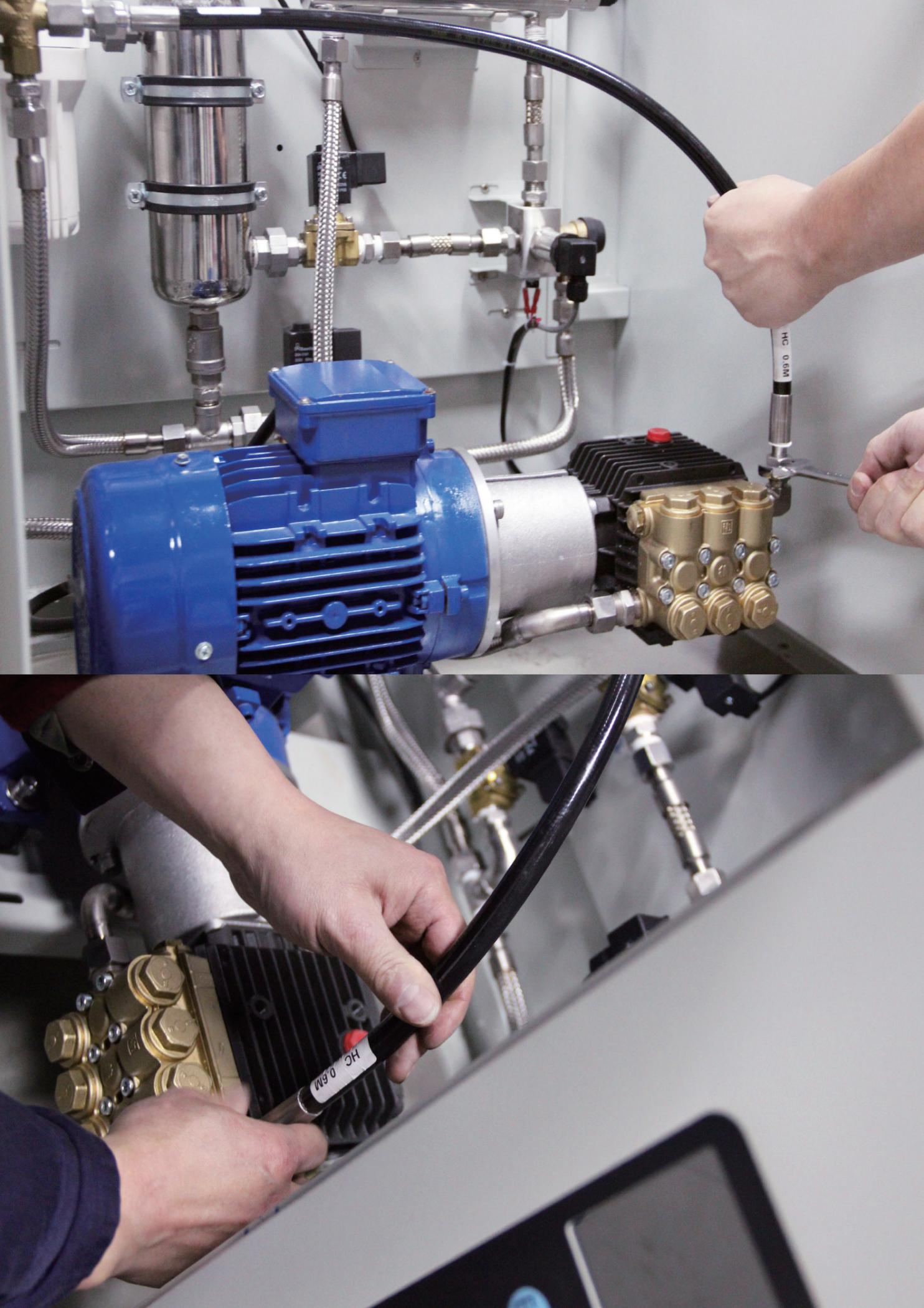
Electrical control

The control unit consists of the display and control unit, the power board and the connection terminals for the power supply. The pump station is electrically wired at the factory.



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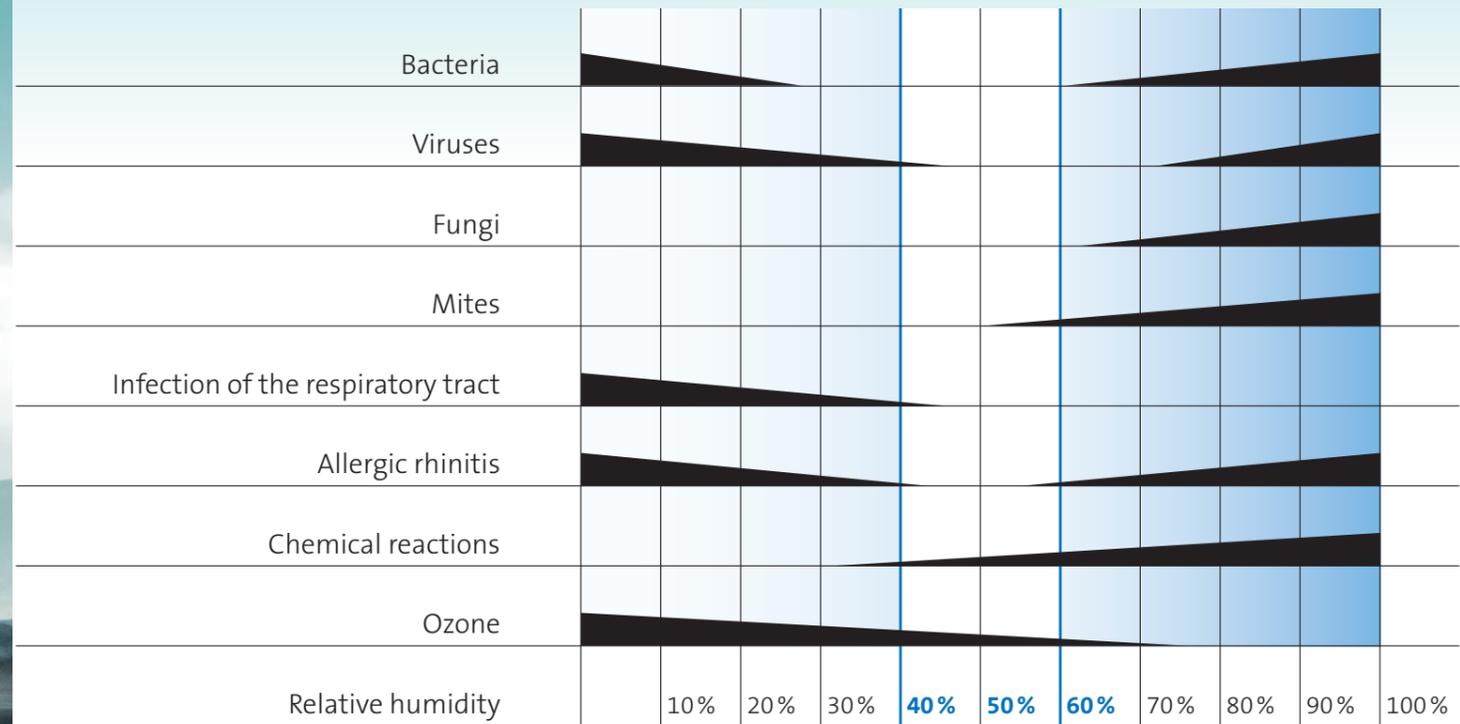
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Connection to clean water is important!

Guidelines to ensure your system stays clean and prevent the growth of Legionella:

- Condair HC must be connected to a clean, potable mains water supply.
- Carry out a risk assessment of the water system and implement an appropriate monitoring and control program.
- Initiate procedures for checking the UV system, cleaning tanks, changing filters, disinfection, etc.
- Arrange a service contract to suit your company.
- Avoid water temperatures which favor the growth of Legionella.
- Refrain from closing nozzles or sections, unless there is leakage or a fault.
- Disinfect the high-pressure system at least once a year and every time maintenance or repairs have been carried out.
- Have water samples taken and tested for harmful bacteria at least once a year.
- Have follow-up measurements done until the system is clean if bacteria have been detected in the system.



Scofield/Sterling Diagram

Work as a master-slave system!

Condair HC can be configured as a master-slave system, depending on the number of AHU(s) on-site. Assuming the HC system data is within a defined

range, up to 3 further HC slaves may be connected to the piston pump via the high-pressure piping.



Up to three slave controllers

Humidification

The right humidity makes a decisive contribution in a variety of situations encountered in day-to-day life – in the business environment as well as in private premises. The importance

of humidity is so significant that clear directives exist in many countries for the operation and maintenance of humidification systems. It is scientifically proven that a real sense

of well-being can only be achieved in a narrowly defined humidity range between 40 – 60 %.

Scofield/Sterling Diagram:

The illustration presents correlations relevant for health protection at different room humidity levels. The risk posed by undesired microorganisms and the occurrence of specific

symptoms of illness are minimal within the optimal range between 40 and 60 % relative humidity. Newest studies also confirm that transmissions

of viruses through particulate matter (e.g. through coughing) are significantly reduced at levels above 40% relative humidity.

Technical specifications/ambient conditions

Humidifier unit			
Specification of filter before humidifier	min. F7		
Air velocity, range of use	0.5 ... 4.0 m/s		
Pump station (control and piston pump)			
Dimensions of pump station (Width x Height x Depth)	900 x 800 x 545 mm		
Weight of pump station	80 kg		
Piston pump motor supply voltage	380...400V/3N~/50...60Hz		
Nominal output and current consumption of piston pump motor	Pump capacity	Nominal output	Current consumption
	60 l/h	1.10 kW	2.15 A
	200 l/h	1.50 kW	2.90 A
	400 l/h	1.50 kW	2.90 A
	600 l/h	3.00 kW	5.70 A
Working pressure of piston pump (Standard)	50-70 bar		
Admissible supply water temperature before piston pump	5...25 ° C		
Admissible water type	Tap water, RO water		
Control signals	0...10 VDC, 0...20 mA, 4...20 mA, on/o°		
Control accuracy	up to ± 4 %rh		
Slave station			
Dimensions of slave station (Width x Height x Depth)	400 x 410 x 110 mm		
Weight of slave station	5 kg		
Control supply voltage	220V/1N~/50...60Hz		
Control signal	0 ...10 VDC, 0...20 mA, 4...20 mA, on/o°		
Control accuracy	up to ± 4 %rh		
Droplet separator (optional)			
Material	PVC, stainless steel, nylon		