

Tender specification

Adiabatic ultrasonic humidifier **humiSonic direct**

Thanks to ultrasonic technology the advantages of adiabatic humidification can also be used for medium to small applications. The **humiSonic direct** can save up to 90 % electrical energy compared to a conventional steam humidifier. Due to the adiabatic effect, the ambient air is also cooled simultaneously during humidification, so that heat loads are balanced and mechanical cooling can be reduced.

The ultrasonic humidifier has a water tank on the bottom of which there are piezoelectric transducers.

The surface of the transducer vibrates at a frequency of 1.7 million oscillations per second. The resulting cavity formation due to the inertia of the water leads to its atomisation. The water aerosol is carried to the outside with the air flow, whereby the extremely small droplet size of approx. 1µm ensures fast absorption in the ambient air.

The **humiSonic direct** is a plug-and-play solution that only requires a water inlet and outlet (outer diameter 8mm) and a 230V power supply. Neither a switch cabinet nor other components are required for operation. Without the optionally available display, the target humidity can be set in the specified gradations of 30, 40, 50 or 60%RH by means of dip switches on the mainboard.

The compact design of the **humiSonic direct** with internal control and integrated humidity sensor facilitates installation and retrofitting in a wide range of rooms as a stand-alone humidifier. At the same time, each ultrasonic humidifier offers optimum integration into tailor-made more complex humidification solutions thanks to the already integrated connection options (Modbus, separate display, master-slave operation, external sensor, external control signal, collective fault).

Thanks to the standard compatibility with the Modbus protocol, **humiSonic direct** can communicate with the building management system and be integrated into the ventilation system accordingly. Furthermore, the **humiSonic direct** can also be controlled via Modbus. This is particularly advantageous if several units are to be controlled.

In order to be able to cover larger humidification capacities, **humiSonic direct** offers the option of a master-slave connection. One master and up to three slaves can be connected together.

The **humiSonic direct** regulates the humidification output extremely precisely on the basis of the control signal and atomises the water without delay. In combination with a suitable external humidity sensor or an external higher-level control system, precision of up to ± 1 % is achieved.

Hygienically safe:

- All water-conducting components are made of stainless steel
- Operation with pure, fully demineralised water minimises deposits
- Avoidance of standing water by automatic emptying at the end of the humidification cycle via internal valve
- Automatic emptying of the tank in case of power failure
- Periodic cleaning cycles in case of system inactivity

With the integrated interface card, any **humiSonic direct** can be connected directly to an optional display for quick and intuitive configuration. Control via an external controller or self-sufficient operation on an active sensor is also possible.

The piezo elements guarantee a full-load operating time of 10,000 hours (correspondingly longer at partial load) when operated with demineralised water in the conductivity range of 3-80 μ S/cm.

humiSonic direct is available in four sizes with a corresponding humidification capacity of 2, 4, 6 and 8 kg/h.