EasyLine™ AHU

Humidification systems

Airtec®

Productive Enviroment

- Turning Waste to Value

Airtec® generate climate for productivity by protecting raw material, people and processes against dehydration, electrostatic discharge, heat and air borne dust.

Every hour spend, every raw material consumed, every machine used should provide supreme output and unfailing quality.

Our efforts, skills and intentions are devoted to achieving Productive Environment, turning waste to value.
Respectfully we challenge what is, to explore what could be.

Adiabatic cooling / Air humidity

Evaporating 1 liter of water in a high pressure air humidification system will consume 0,629 kWh heat from the ambient air. During the heating season it is essential that the heat supply can compensate for the energy loss.

During the cooling season the system can generate 629 watts cooling consuming only 6 watts power.

Electrostatic discharge (EDS), dehydration, airborne dust and excessive heat can cause a multitude of different productive and quality issues. Maintaining a balanced humidity with an adiabatic high pressure system from Airtec will reduce EDS, dehydration and airborne dust, but it will also provide a powerfull cooling generator.

ISO accredited
– A full circle perspective

- Quality - ISO 9001
- Environment - ISO 14001
- Hygienic - ISO 22000

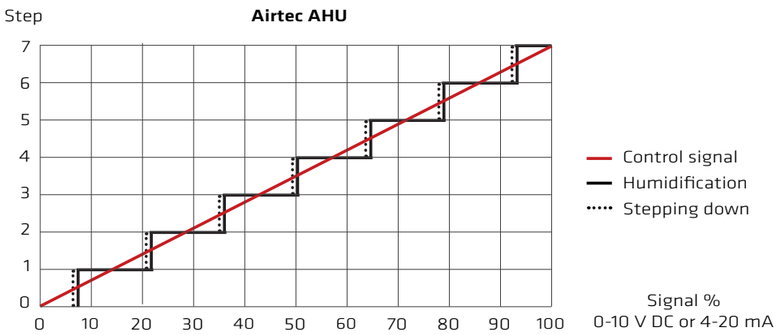
For almost 30 years we have continuously aimed to improve our performance.

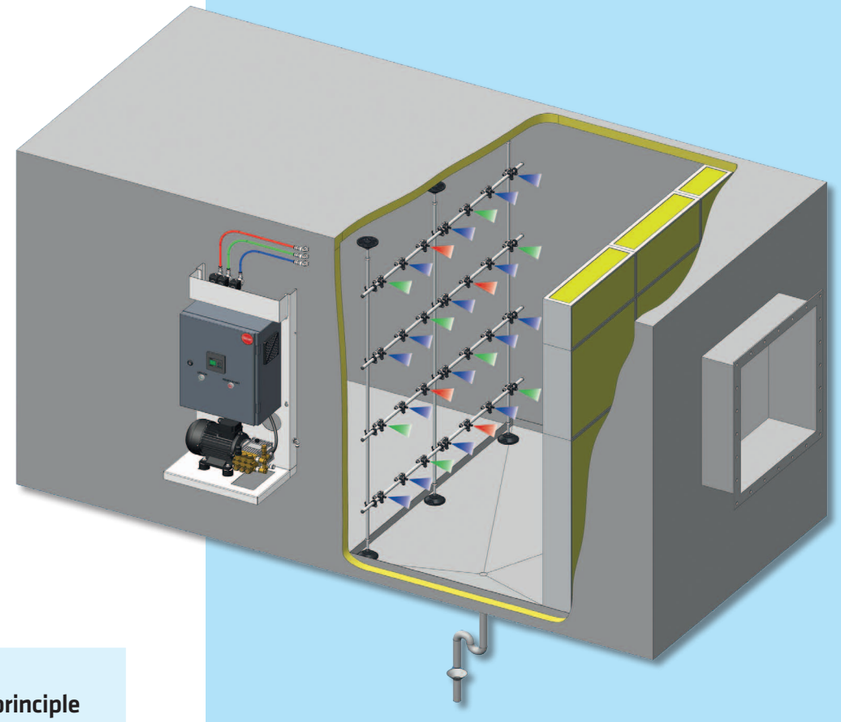
DANAK Reg.nr. 9001 & 6001
Quality & Environmental system according to DS/EN ISO 9001 DS/EN ISO 14001 by Det Norske Veritas, Danmark A/S Certification Dept.

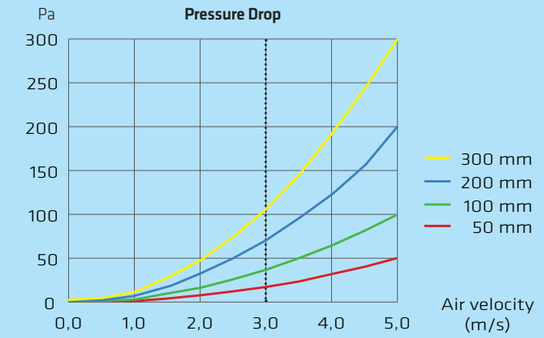
NORWEGIAN ACCREDITATION QUAL 002

ISO 22000 CERTIFIED COMPANY

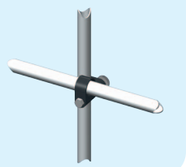
30 °C at 15 % RH

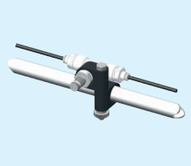


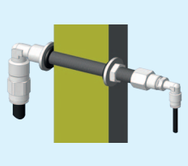




21 °C at 50 % RH







Easy handling easy setup

Easy handling plays a part in keeping the investment cost effective. HydroFlex supports that philosophy.

The flexible hose and sliplock fitting system provides a solution that requires no special tools or extensive training. The brackets and additional kit required to perform installations and maintenance is

- Safe, easy and flexible.

The double evaporation principle
- short absorption distance

An optimized adiabatic humidification solution for AHU should accurately reach set point with a minimum of water waste and power consumption. All of this with a distance less than 1 meter. That's our success criteria.

- Frequency inverted pump provides adjusted water flow
- 50 bars pressure provides a finely atomized water mist.
- Binary modulating water flow adapts to present requirement
- The evaporative droplet separator provide a large evaporative area

Precision settings

The system software is designed to utilize the binary system to modulate the water flow in 7 stages, each stage representing 14 % capacity.

3 operation valves individually representing 14, 28 and 58% capacity provides the opportunity to supply an adapted water flow in 7 different combinations.

Case story

- 20 degrees Celsius inlet air
- 1,43 m/sec air velocity
- 700 mm distance from nozzle to separator
- 75 % RH humidity after chamber
- 16 degrees Celsius outlet air
- Efficiency level 95 to 100 %
- Accuracy level +/- 1 %

Hygienically optimized

Maintaining low water temperatures, preventing stagnant or recycled water, eliminating biological soil and providing adapted water flow
– What goes in, goes out.

- Reverse Osmosis process provides pure water for the humidification system.
- The hygienic rinse system initiate a rinse cycles.
- The frequency inverted solution eliminates water by pass.
- The water supplied to the AHU is also evaporated. Waste water is led to drain.

Evaporative droplet separator

The modulating nozzles system will supply the required water quantity to the air stream. The water particles not evaporated in this first stage will be collected to the evaporative droplet separator and evaporated at the second stage.

It will ensure an efficiency level of up to 95 % in the velocity range from 1 to 3 m/sec.

Productive Environment

– with Airtec® benefits

BMS compatible and Scada

The system is equipped with an Ethernet access that provides the opportunity to monitor the system remotely through an integrated BMS system or Scada interface.

- MySQL
- TCP/ip.

EasyLine™ AHU at a glance

Flow range l/h, from/to	5/200	4/600	24/800	84/1200
Power supply	230 V + PE 13 Amp			3x400V + N + PE 16 Amp
Frequency inverter kW	1,1	1,1	1,5	3,0
Double pump control	No			
Ventilator supply	13 Amp available			
Temperatur range °C	1-35			
Control signal	0 - 10 V DC or 4 - 20 mA			
On/Off control	Yes			
Binary modulation	2 x 7 steps			
Thermal pump control	Yes			
Flow control	Yes			
Operating hours	Yes			
Solenoid valve clicks	Yes			
Low water pressure alarm	Yes			
Ethernet connection	Yes			
Remote controlling	Scada and BMS via MySQL or TCP/IP			
Data log	Yes			
External alarm signal in	Yes			
Alarm signal out, potential free	Yes			
Hygienic rinse system	Yes			
Noice level , dB (A)	< 70			
Display basic value settings	Yes			
Maintanance menu	Password protected			
Maintenance indicator	Yes			
Dimensions: Width, mm Heights, mm Depth, mm	530 1020 360			
Weight kg	50	50	58	65
Protection class	IP 52			

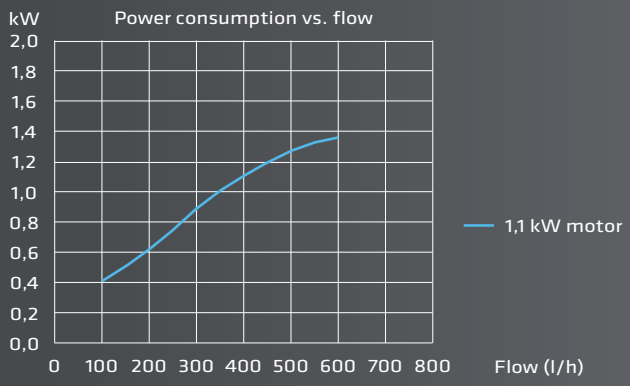
Frequency inverted water flow

– Minimum energy consumption

A pressure transmitter and a frequency inverter maintain operation pressure at 50 bars pressure at any given flow. The result is minimum energy consumption, max pump life and reliable pressure performance.

Aligning operation and output will counteract recycled water and unnecessary heat.

Flow range from 4 to 600 liter per hour, standard – Optionally from 24 to 800 or 88 to 1200 liter.



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