High
Efficiency
Solutions.

CAREL

humiSteam

the rational choice for any application

humiSteam
the range of immersed electrode humidifiers

perfect humidification for offices, homes, industrial facilities and steam baths

The humiSteam immersed electrode humidifier is the essence of CAREL's extensive experience in the field of steam humidification, and represents the most rational choice for a wide variety of applications: homes, offices, industrial facilities and steam baths. One of its main strengths is the fact that it operates on mains water, with the software able to adjust operation automatically based on the feedwater characteristics.
humiSteam is available in a wide range, comprising three versions:

- humiSteam "basic", humidifier with external controller or BMS, capacities from 1 to 65 kg/h;
- humiSteam "X-plus", with integrated controller, modulating limit probe and capacities from 1 to 130 kg/h;
- humiSteam "Wellness", specifically for steam baths, with the possibility of remote control, available in capacities up to 65 kg/h.

Cylinders per water with conductivity between 75 and 1250 µS/cm to ensure excellent performance at all times.
The cylinders are available in two versions:

- standard (disposable)
- openable for maintenance

Reliability

Cylinders with quick power connectors for easy, fast and risk-free maintenance

Easy operation

Backlit LCD for clear understanding of unit operating status and diagnostics

Hygiene

The water is drained automatically when the unit is inactive for a certain period of time, avoiding stagnation

Basic controller (Y)

The "basic" humidifiers come with:
- ON/OFF or proportional control (voltage or current) from external signal;
- flow-rate modulation: 20 - 100%;
- adjustable maximum capacity;
- cylinder operating hour counter;
- automatic drain due to inactivity to ensure hygiene;
- complete diagnostics with memory;
- large LCD with numbers and graphic icons for easy and intuitive use;
- types of signals: 0 to 10 V; 0 to 20 mA; 4 to 20 mA; NTC; 0 to 10 V; 2 to 10 V.

X-plus controller

The humiSteam "X" version humidifiers come with a built-in controller, featuring a graphic display and keypad for programming and managing operation. The following operating modes are available:
- ON/OFF with external humidistat;
- Proportional with external voltage or current signal;
- Proportional with external signal plus safety limitation using a probe in the duct;
- Modulating based on set point and humidity probe reading;
- Modulating based on point, humidity probe reading and limit probe reading in the duct;
- Modulating based on set point and outside temperature probe reading (e.g. steam baths);
- Control by BMS.

Continuous modulation of steam flow-rate from 20 to 100% of the maximum (10% - 100% on 90 and 130 kg/h models). humiSteam type "X" humidifiers accept the following external signals, selected on the keypad: voltage-free contact (humidistat), 0 to 1 V, 0 to 10 V, 2 to 10 V, 0 to 20 mA, 4 to 20 mA signals.

The humiSteam Wellness model for steam baths with "W" controller provides centralised management of:
- daily and weekly time bands;
- different temperature set points based on the time band;
- up to 3 actuators for distribution of essences, and 1 for the "disinfection" cycle;
- up to 2 fans and inside light.

In addition, the display-keypad can be detached from the humidifier and used as a remote control, to assist integration into OEM products.
In this case too, like the X-plus version, the controller is based on pCO technology, the CAREL family of programmable controllers
- easy operation thanks to the graphic display, with messages in various languages;
- temperature set point
- daily and weekly time bands, with variable set points;
- BMS connectivity via various types of LAN (e.g.: Modbus®, BACnet™, LON®);
- complete diagnostics with text messages, alarm log with time-stamping;
- automatic drain due to inactivity.

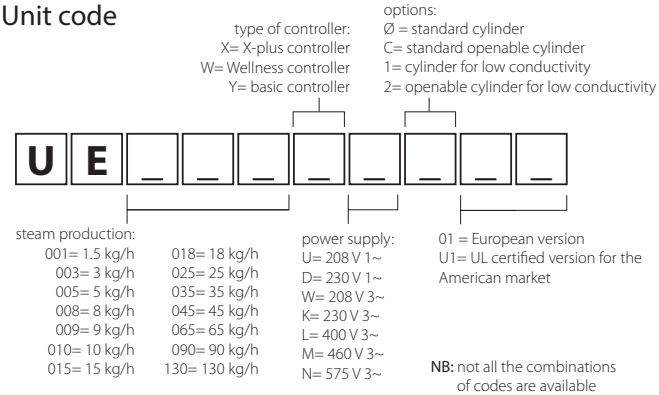
humiSteam uses mains water and manages water concentration and any entrainment of foam completely automatically, for maximum operational safety.

- Easy operation: large user-friendly graphic LCD with detailed information.
- Patented AFS (Anti Foaming System): measures and manages foam to prevent droplets being carried with the steam.
- Performance: quick start-up and wide range of feedwater conductivity.
- Reliability: modulating limit probe for maximum safety in AHU/duct

Features	UE001*	UE003*	UE005*	UE008	UE009*	UE010*	UE015*	UE018*	UE025*	UE035*	UE045*	UE065*	UE090*	UE130*
General														
Rated steam production (kg/h)	1,5	3	5	8	9	10	15	18	25	35	45	65	90	130
Power consumption (kW)	1,12	2,25	3,75	6,00	6,75	7,50	11,25	13,5	18,75	26,25	33,75	48,75	67,5	97,5
Power supply (other voltages upon request) • 200, 208-230 Vac -15/10%, 50/60 Hz single-phase • 200, 208, 230 Vac -15/10%, 50/60 Hz three-phase • 400, 460, 575 Vac -15/10%, 50/60 Hz, three-phase	•	• • •	• • •	• •	•	• •	• •	• •	• •	• •	• •	• •	• •	• •
Steam connection (mm)	Ø 22/30		Ø 30						Ø 40			Ø 2x40		Ø 4x40
Outlet pressure limits (Pa)	-600 to 1500		-600 to 1300		-600 to 1350				-600 to 2000					
Number of boilers/cylinders	1													2
Operating conditions	1T40 °C, 10 to 90% RH non-condensing													
Storage conditions	-10T70 °C, 5 to 95% RH non-condensing													
Ingress protection	IP20													
Feedwater														
Connection	3/4"G male													
Temperature limits (°C)	1T40													
Water pressure limits (MPa - bar)	0.1 to 0.8 - 1 to 8													
Instant flow-rate (l/m)	0.6	0.6	0.6	0.6	1.1	1.1	1.1	1.1	5.85	5.85	5.85	7	14	14
Total hardness (°fH) (*)	10 to 40													
Conductivity limits (µS/cm) (*)	75 to 1250													
Water drain														
Connection	Ø 40													
Temperature (°C)	≤100													
Instant flow-rate (l/m)	9								22				44	
Blower														
Number	1											2		
Type	VSDU0A*								VRDXL*					
Power supply (Vac)	24								230					
Rated power (W)	37								35					
Rated air flow-rate (m3/h)	192								650					
Network														
Integrated network connection	UEX*, UEY* and UEW*: Modbus®, CAREL													
Optional network connection (Gateway or card)	UEX*, UEY* and UEW*: BACnet™, LON®, Ethernet®, RS232 + GSM (optional)													
Controller	UEY* / UEX* / UEW*												UEX*	

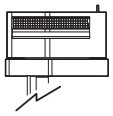
• standard; (*) for UE 25, 35, 45 kg/h models manufactured before October 2003 or with serial number less than 501,000, use the "Y" connector.

Unit code



NB: not all the combinations of codes are available

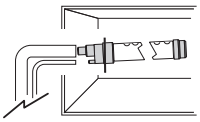
room applications



VSDU0A0001 & VRDXL0000: steam blower

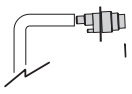
VSDBAS0001: remote installation support for VSDU0A

duct applications



DP*: linear steam distributor (inlet Ø 22 mm, Ø 30 mm, Ø 40 mm)

steam bath applications



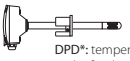
SDP*: plastic nozzle up to 18 kg/h steam

Probes

DPW*: temperature and humidity probe for civil environments

DPP*: temperature and humidity probe for industrial environments

ASET*: temperature and humidity probe for steam baths



DPD*: temperature and humidity probe for ducts

NTC*: temperature probe for UEW

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