



VEH Series

Immersion electrode humidifiers for air handling units (AHU)



Flexibility

Various sizes available, so it adapts easily to the size of the air handling unit



Maximum efficiency

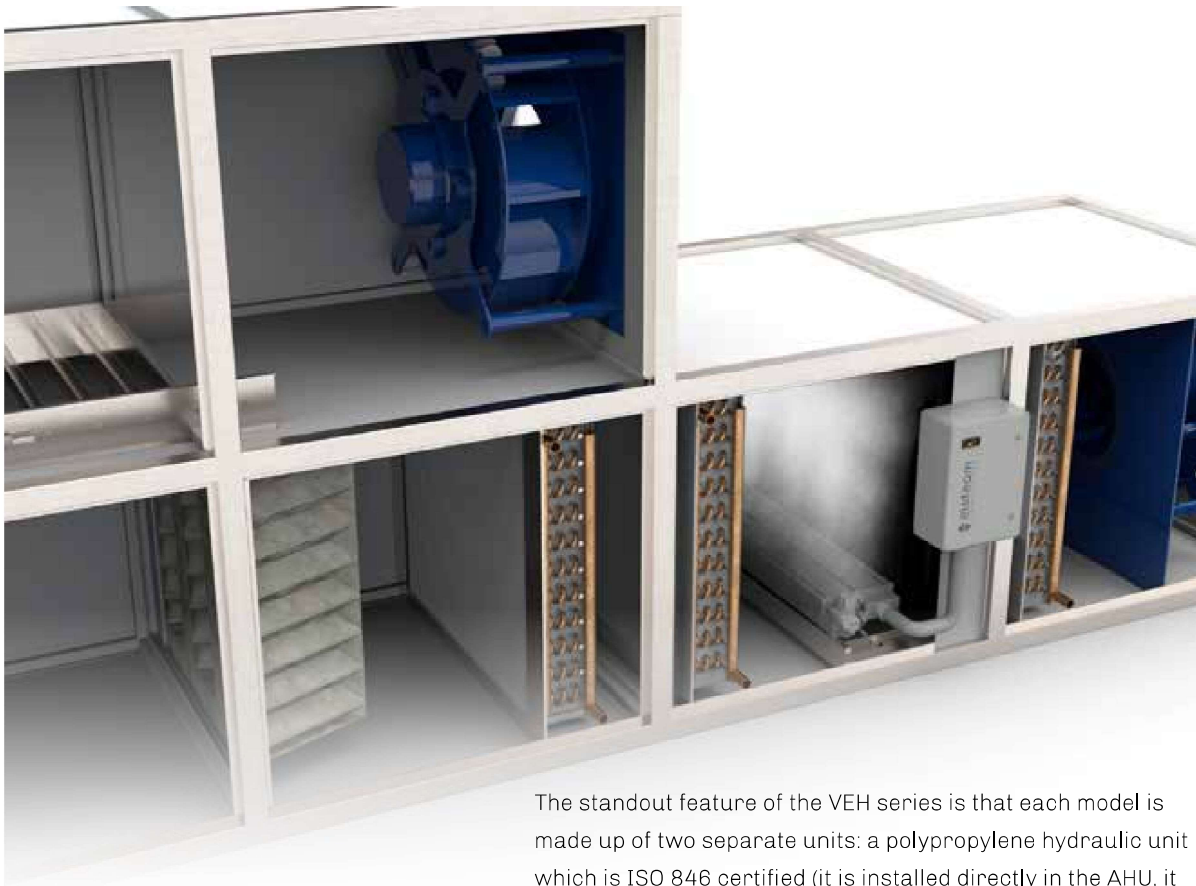
- Hydraulic unit installed in the AHU
- No loss of load
- No condensate in the distributor
- Helps heat the room



Germ-free steam

Isothermal humidification produces sterile steam

- Installed directly in the AHU: no need for an electronics compartment or distribution piping
- Automatic draining system with 40 mm diameter
- Protects against flooding in the AHU
- Mechanical parts designed to simplify use and maintenance
- Stainless steel electrodes
- Electrical panel separate from the hydraulic unit
- Microprocessor controller with LED user interface
- Connection for RS-485 protocol for remote control in MODBUS mode



The standout feature of the VEH series is that each model is made up of two separate units: a polypropylene hydraulic unit which is ISO 846 certified (it is installed directly in the AHU, it has no distribution piping for optimal steam release and helps heat the room) and an electrical control unit with IP55 protection which requires no electronics compartment.

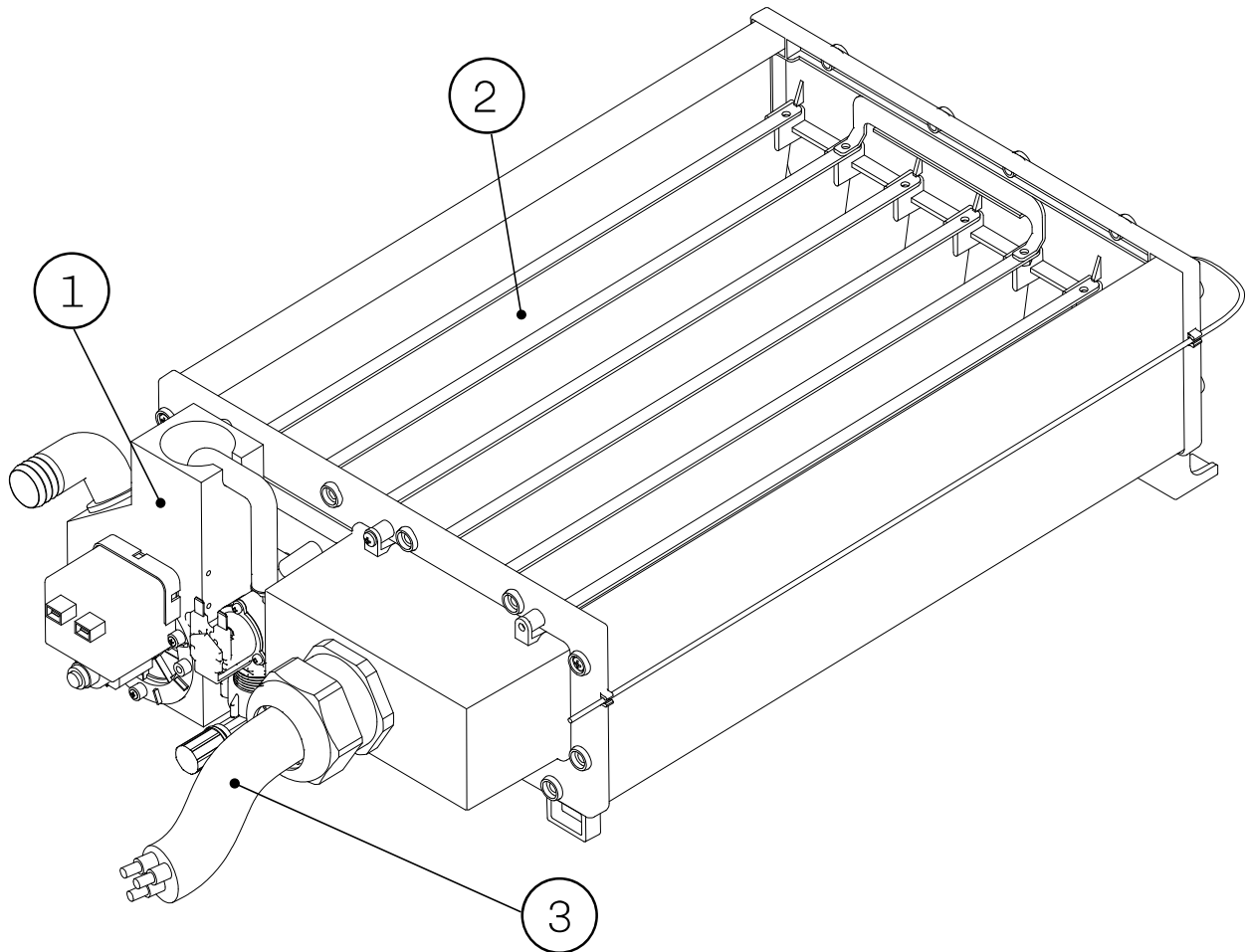
Choose the most suitable version for your AHU



Models are available with 4 or 7 electrodes of different depths and steam production capacity that goes from 10 to 100 kg/h, making the VEH series easy to adapt to the size of the AHU.

A range of accessories is available to customise the size and accessibility of the hydraulic unit.

Hydraulic unit



1. Manifold group Water charge/discharge

2. Electrodes

3. Power cable from the electrical panel to the hydraulic unit

Ideal for the following applications

Hospitals and clean rooms

Steam produced by boiling water is germ-free because when water is heated to such a high temperature, a lot of the contaminants which are potentially harmful to our health are eliminated. Isothermal humidifiers are therefore suitable for use in sterile environments such as hospital wards, treatment rooms, operating theatres and laboratories which have precise temperature and humidity requirements. The control accuracy of steam humidification ensures compliance with the strict regulations which determine the values healthcare facilities must respect.



Data centres



The energy efficiency of data centres is greatly affected by temperature and relative humidity and parameters to ensure efficient performance were established in 2008 by ASHRAE (American Society of Heating, Refrigerating and Air Conditioning) and the European association ETSI (European Telecommunications Standards Institute) with standard ETSI EN 300 019-1-3. Correct air humidification in data centres is also important to prevent short circuits which can damage the sensitive electronic equipment: electrostatic discharge is more frequent when the air is very dry because humidity is a natural conductor, earthing any potential static charge.

Residential and commercial environments

Comfort in our homes depends largely on creating the ideal climate, which science has established as being 20-24° C for temperature and 40-60 % for relative humidity. In winter in particular, when buildings are heated, the level of relative humidity can fall drastically. Skin and mucous membranes can become dry, allergies and respiratory tract infections are more likely to develop and unwanted microorganisms like bacteria and viruses can proliferate. Dry air can also affect our perception of the temperature (lower than it really is in winter), make us feel tired and cause a drop in concentration. Maintaining the right level of humidity is therefore crucial to ensure personal health and wellbeing, in the workplace too.



Models available and technical features

Models		VEH 10XS	VEH 20S	VEH 20XS	VEH 30M	VEH 30S	VEH 40L	VEH 40S	VEH 60XL	VEH 60M	VEH 80L	VEH 100XL
STEAM PRODUCTION												
Production capacity	[kg/h]	10	20		30		40		60		80	100
ELECTRICAL PROPERTIES												
Power consumption	[kW]	7.5	15		22.5		30		45		60	75
Power supply	[VAC, Hz]	400, 50/60										
Phases	[n]	3										
Current per phase	[A]	11	22		32		43		65		87	108
WATER PROPERTIES												
Inlet water quality		Complies with microbiological standards for drinking water established by regulations in force where installed. Partially demineralised water may be used										
Inlet water conductivity	$\mu\text{S}\cdot\text{cm}$	75...1250										
Inlet water hardness	°f	5...50										
Inlet water pressure	[MPa/ bar]	0.02...1/0.2...10										
Inlet water connection		M 3/4" GAS										
Water drain external diameter	[mm]	40										
GENERAL CHARACTERISTICS												
Control unit dimensions	[mm]	350x500x210										
Hydraulic unit dimensions	[mm]	330x167										
Depth 4 electrodes	[mm]	635	785	/	985	/	1185	/	1385	/	/	/
Depth 7 electrodes	[mm]	/	/	635	/	785	/	785	/	985	1185	1385
Weight (hydraulic unit)	[kg]	15	18	18	20	20	24	24	26	26	31	33
Degree of protection of hydraulic unit		IP00										
Degree of protection of electrical panel		IP55										
REGULATION												
Type of controller		Built-in or remote										
Command signal		Built-in:	4...20 mA									
		Remote:	Proportional (0...10 V), ON-OFF or (0...10 V / 4...20 mA)									

Accessories

FLEXIBLE HOSES TO LOAD WATER	
0031000048	flexible hose ¾ " GAS female which feeds water from the mains to the water load solenoid valve
CONDENSATE COLLECTION TRAYS	
0016020018	stainless steel condensate collection tray 490x690x70 mm
0016020019	stainless steel condensate collection tray 490x950x70 mm
0016020020	stainless steel condensate collection tray 490x1350x70 mm
REGULATIONS	
EV3411M7	single output electronic controller, power supply 230 VAC, multi-sensor analogue input
PROBES	
EVHP523	humidity transducer, power supply 8 ... 28 VDC, 1 x 4-20 mA provided signal
EVHTP523	humidity and temperature transducer, power supply 8 ... 28 VDC, 2 x 4-20 mA provided signal
EVTNW30F200	NTC probe, thermoplastic cable, 2 wires, 3 m length, 5 x 20 mm overmoulded bulb, IP68 protection