



# VEH

Immersed electrode humidifiers for air handling units (UTA)



## Flexibility

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



## Maximum efficiency

- Hydraulic unit in AHU
- No loss of load
- No condensate in the steam distribution systems
- Helps heat the room



## Germ-free steam

Self-extinguishing engineering plastic which prevents bacterial proliferation



## Installed directly in an AHU

No need for an electronics compartment or distribution piping



## 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.



Tank in self-extinguishing engineering plastic and in compliance with Method A and Method C of ISO 846



Microprocessor controller with LED user interface



Automatic draining system with 40 mm diameter



Connection for RS-485 protocol for remote control in MODBUS mode



Protects against flooding in the AHU



Mechanical parts designed to simplify use and maintenance

## Ideal for the following applications



Hospitals and clean rooms



Data centres



Residential and commercial environments

## Separate plumbing and control

The standout feature of the VEH series is that each model is made up of two separate units: a hydraulic unit in self-extinguishing engineering plastic 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 IP65 protection which requires no electronics compartment.



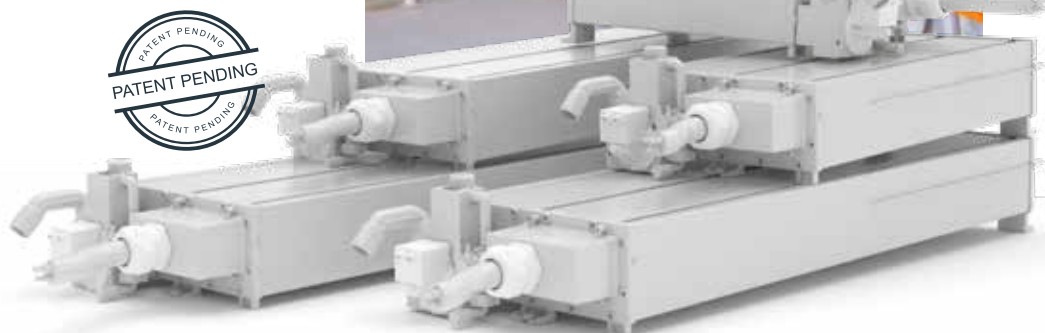
## Positioning enhances efficiency

Placing VEH humidifiers inside air handling units means energy savings: not only does the 100 °C steam help with heating, it is also produced exactly where it is needed, preventing the formation of condensate and the loss of load due to back pressure, which can occur when steam is conveyed from its point of production to its place of distribution. And when AHUs are installed outdoors, placing the humidifier inside means no protective casing is needed for it.



## OEM Series

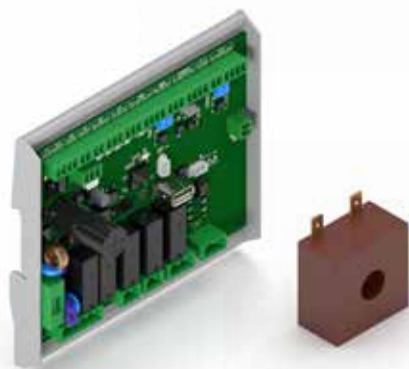
- Modular solution for AHU manufacturers consisting of 1 or 2 boilers which can be combined to reach the desired production capacity
- Independent configuration of power supply voltage
- Freedom for the OEM to define the electrical layout



## EHHKT and 0103349007

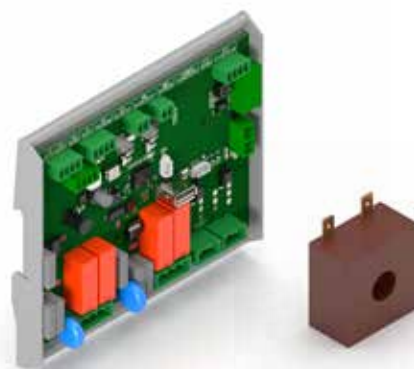
### Electronic controller and current transformer

- Controller kit with an open frame board which can be housed in the AHU electrical panel
- Suitable for all boiler sizes
- To be ordered separately



## EHHKX and 0103349007

Expansion board and current transformer to control an additional hydraulic unit



## EHKD models and technical features



EHKD	010 T4XS	010 T5XS	020 T4S	020 T5S	020 T4XS	020 T5XS	030 T4M	030 T5M	030 T4S	030 T5S
STEAM PRODUCTION										
Production capacity [kg/h]	10		20				30			
ELECTRICAL PROPERTIES										
Power consumption [kW]	7.5		15				22.5			
Power supply [Vac, Hz]	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60
Phases [n]	3									
Current per phase [A]	10,8	9,4	21,7	18,8	22	18,8	32,5	28,2	32	28,2
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 [µS*cm]	75...1250									
Inlet water hardness [°f]	5...50									
Inlet water pressure [MPa/bar]	0,02...1/0,2...10									
Minimum instantaneous flow rate of inlet water [l/min]	3,5									
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		/	
Depth 7 electrodes [mm]	/		/		635		/		785	
Weight [kg]	15		16,5		16,5		18,5		18,5	
Operating conditions [°C, RH]	1...40, max. 80% non-condensing									
Storage conditions [°C, RH]	-10...70, max. 95% non-condensing									
Level of protection of control unit	IP65									
Level of protection of hydraulic unit	IPX0									
REGULATION										
Type of controller	Built-in									
Command signal	ON-OFF, proportional 0...10 V, transducer 0...10 V/4...20 mA									
CONNECTIVITY										
RS-485 MODBUS	Built-in									

The list of accessories is available on our website [www.elsteam.it](http://www.elsteam.it)



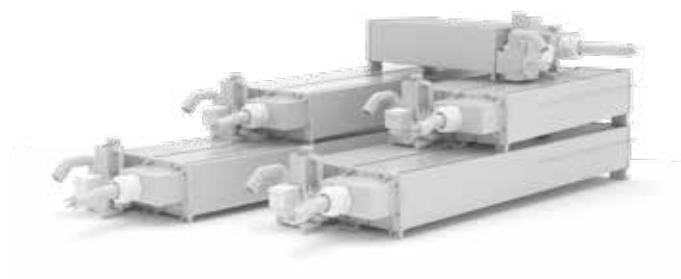
## EHKD models and technical features



EHKD	040 T4L	040 T5L	040 T4S	040 T5S	060 T4XL	060 T5XL	060 T4M	060 T5M	080 T4L	080 T5L	100 T4XL	100 T5XL
STEAM PRODUCTION												
Production capacity [kg/h]	40				60				80		100	
ELECTRICAL PROPERTIES												
Power consumption [kW]	30				45				60		75	
Power supply [Vac, Hz]	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60	400, 50/60	460, 50/60
Phases [n]	3											
Current per phase [A]	43,3	37,7	40	37,7	65	56,5	65	56,5	87	75,3	108,2	94,1
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 [µS*cm]	75...1250											
Inlet water hardness [°f]	5...50											
Inlet water pressure [MPa/bar]	0,02...1/0,2...10											
Minimum instantaneous flow rate of inlet water [l/min]	5,5	3,5		5,5		3,5		5,5				
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]	1185	/		1385		/		/		/		
Depth 7 electrodes [mm]	/	785		/		985		1185		1385		
Weight [kg]	21,5	21,5		25		24,5		27,5		30		
Operating conditions [°C, RH]	1...40, max. 80% non-condensing											
Storage conditions [°C, RH]	-10...70, max. 95% non-condensing											
Level of protection of control unit	IP65											
Level of protection of hydraulic unit	IPX0											
REGULATION												
Type of controller	Built-in											
Command signal	ON-OFF, proportional 0...10 V, transducer 0...10 V/4...20 mA											
CONNECTIVITY												
RS-485 MODBUS	Built-in											

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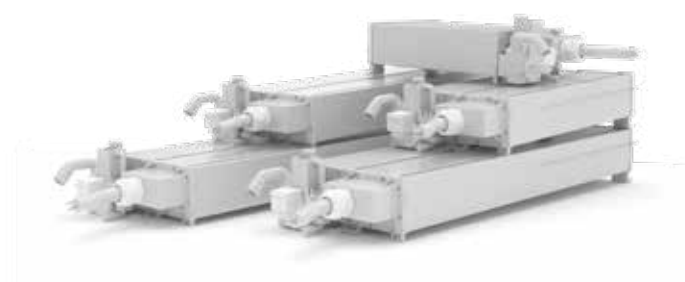
## EHKOD models and technical features



EHKOD	010T0XS	020T0S	020T0XS	030T0M	030T0S
STEAM PRODUCTION					
Production capacity [kg/h]	10	20		30	
ELECTRICAL PROPERTIES					
Power consumption [kW]	7.5	15		22.5	
Power supply [Vac, Hz]	400/460 (configurable), 50/60				
Phases [n]	3				
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 [μS*cm]	75...1250				
Inlet water hardness [°f]	5...50				
Inlet water pressure [MPa/bar]	0.02...1/0.2...10				
Minimum instantaneous flow rate of inlet water [l/min]	3.5				
Inlet water connection	M 3/4" GAS				
Water drain external diameter [mm]	40				
GENERAL CHARACTERISTICS					
Hydraulic unit dimensions [mm]	330x167				
Depth 4 electrodes [mm]	635	785	/	985	/
Depth 7 electrodes [mm]	/	/	635	/	785
Weight hydraulic unit [kg]	8.5	10	10	12	12
Operating conditions [°C, RH]	1...40, max. 80% non-condensing				
Storage conditions [°C, RH]	-10...70, max. 95% non-condensing				
Level of protection of hydraulic unit	IPX0				
REGULATION					
Type of controller	Built-in				
Command signal	ON-OFF, proportional 0...10 V, transducer 0...10 V/4...20 mA				
CONNECTIVITY					
RS-485 MODBUS	Built-in				

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## EHKOD models and technical features



EHKOD	040T0L	040T0S	060T0XL	060T0M	080T0L	100T0XL
STEAM PRODUCTION						
Production capacity [kg/h]	40		60		80	100
ELECTRICAL PROPERTIES						
Power consumption [kW]	30		45		60	75
Power supply [Vac, Hz]	400/460 (configurable), 50/60					
Phases [n]	3					
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 [μS*cm]	75...1250					
Inlet water hardness [°f]	5...50					
Inlet water pressure [MPa/bar]	0.02...1/0.2...10					
Minimum instantaneous flow rate of inlet water [l/min]	5.5	3.5	5.5	3.5	5.5	
Inlet water connection	M 3/4" GAS					
Water drain external diameter [mm]	40					
GENERAL CHARACTERISTICS						
Hydraulic unit dimensions [mm]	330x167					
Depth 4 electrodes [mm]	1185	/	1385	/	/	/
Depth 7 electrodes [mm]	/	785	/	985	1185	1385
Weight hydraulic unit [kg]	15	15	17.5	17	19.5	21.5
Operating conditions [°C, RH]	1...40, max. 80% non-condensing					
Storage conditions [°C, RH]	-10...70, max. 95% non-condensing					
Level of protection of hydraulic unit	IPX0					
REGULATION						
Type of controller	Built-in					
Command signal	ON-OFF, proportional 0...10 V, transducer 0...10 V/4...20 mA					
CONNECTIVITY						
RS-485 MODBUS	Built-in					

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