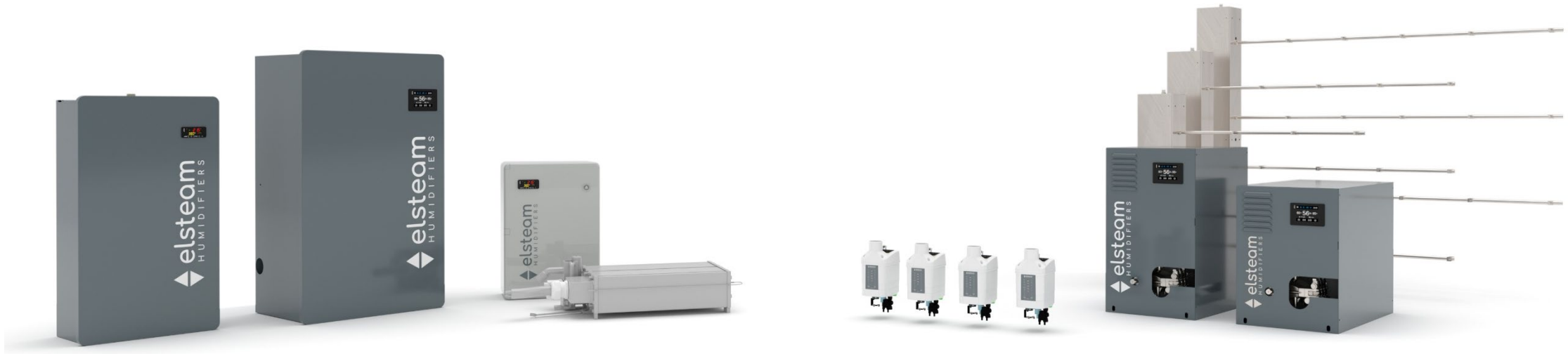elsteam

HUMIDIFIERS

Technology and precision in the new Elsteam product range

The Elsteam range

Isothermal Humidifiers

- Stand-alone immersed electrode humidifiers (EHKT/X - ZEPHYR)
- Immersed electrode humidifiers for AHUs (EHKD)
- Heater humidifiers for AHUs (REH)

Adiabatic Humidifiers

- High pressure humidifiers (EHPN)
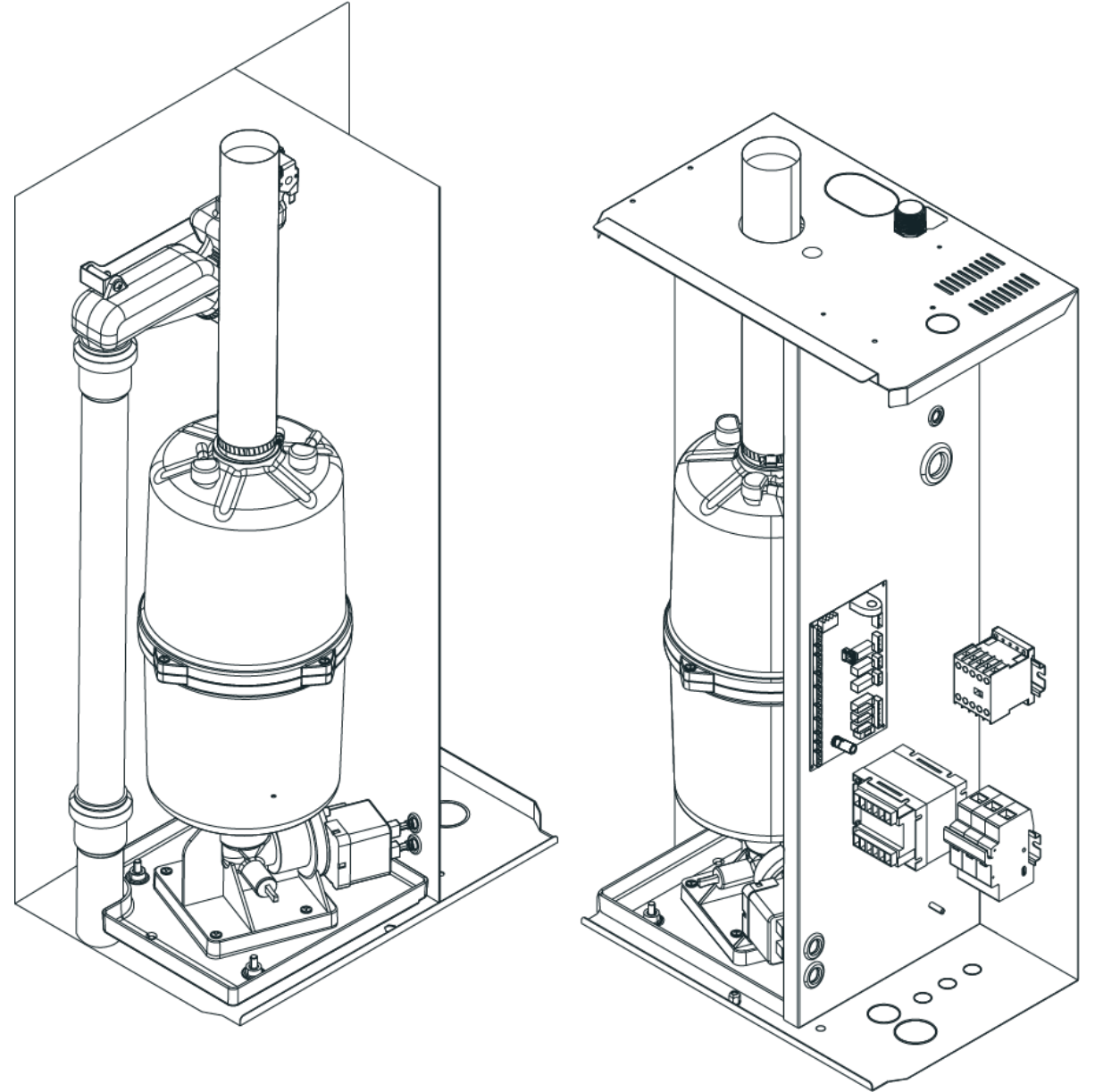- Ultrasonic humidifiers (EHUC - MISTRAL)

Zephyr

Stand-alone immersed electrode humidifiers

Zephyr

WASHABLE BOILER

20,000 h LIFECYCLE - PLASTIC WASTE REDUCED UP TO 5 TIMES

Boilers with suitable capacity for service life,
washable, max. 20,000 hours operating time
(long life cycle to keep plastic waste to a minimum)

Zephyr

- Humidity and temperature probe inputs (for wellness application with no additional functions).

- Power supply 230 V/400 V 50/60 Hz (compliant for use at 60 Hz).

- Water conductivity management.

- Enhanced water and energy efficiency: accurate water dilution for consistent, uniform operation.
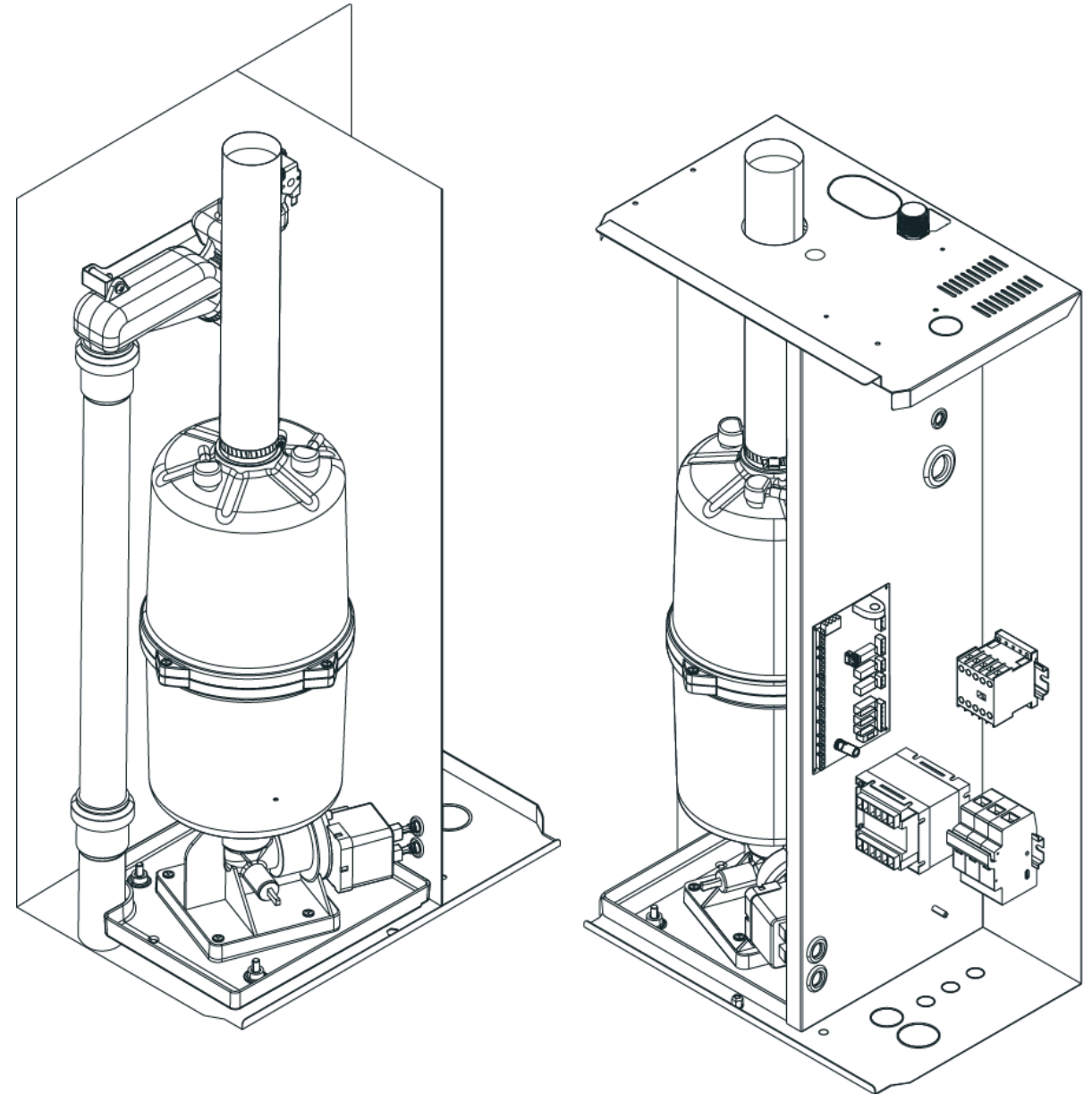
Zephyr

- Foam management.

- Predictive maintenance: operating time of critical components and boiler monitored; system query by user and automatic warnings.

- Supervision via BMS systems and EPoCA cloud platform (through EVIF25TW4X0001 interface).
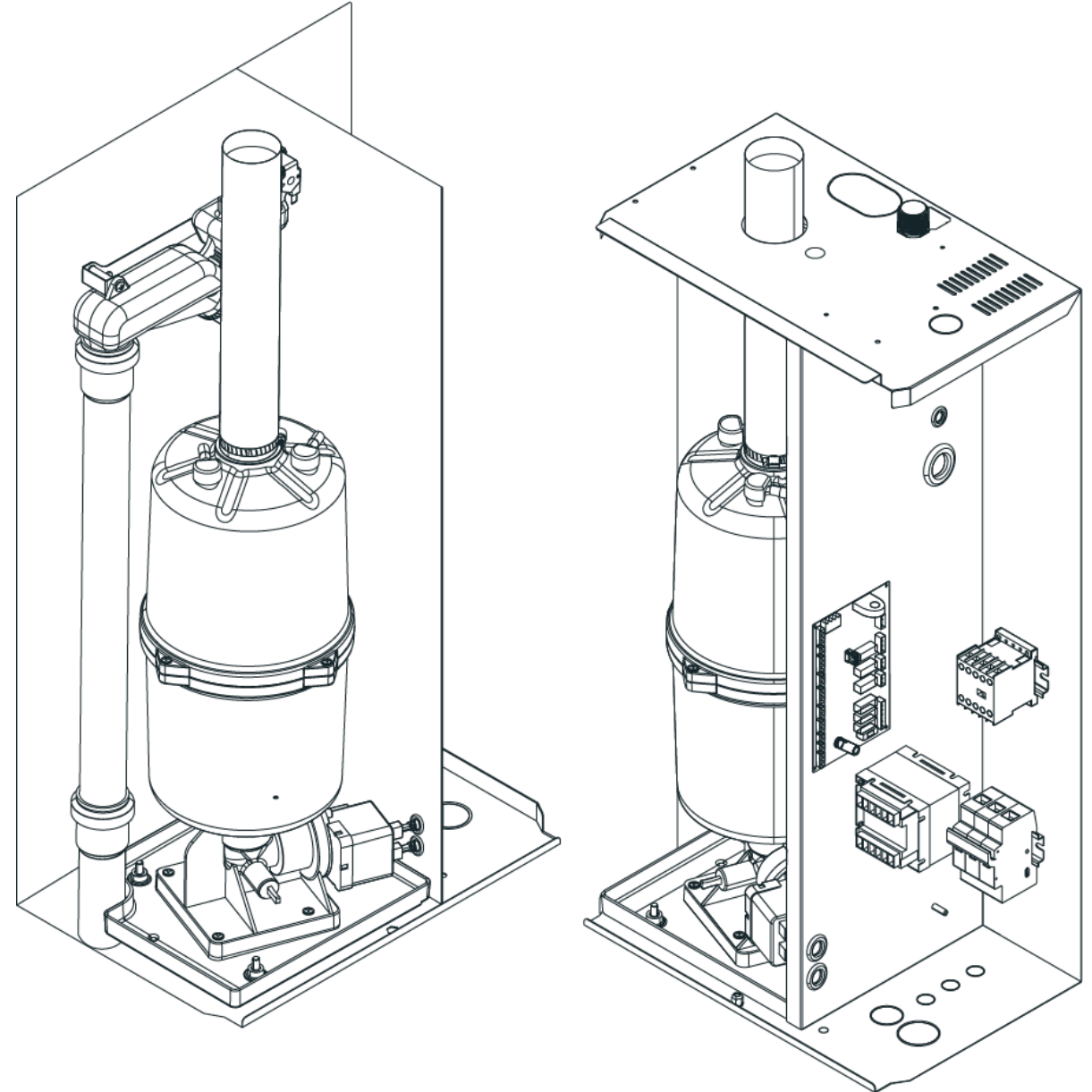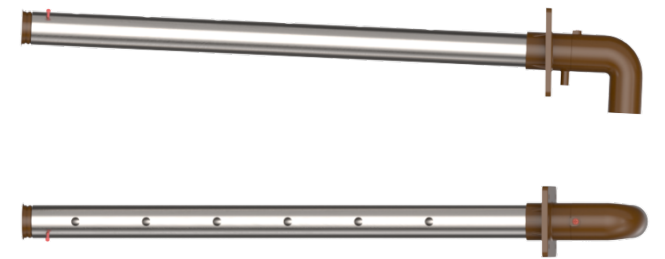
Zephyr

- Health and hygiene management:

  - Boiler emptied after periods of activity or inactivity.

- Wide range of accessories/parts:

  - Boilers for high and low inlet water conductivity.

  - Optional accessories to improve energy efficiency.

  - Steam distributors.

Zephyr

ISO 846:2019
ISO
Method A - Method C
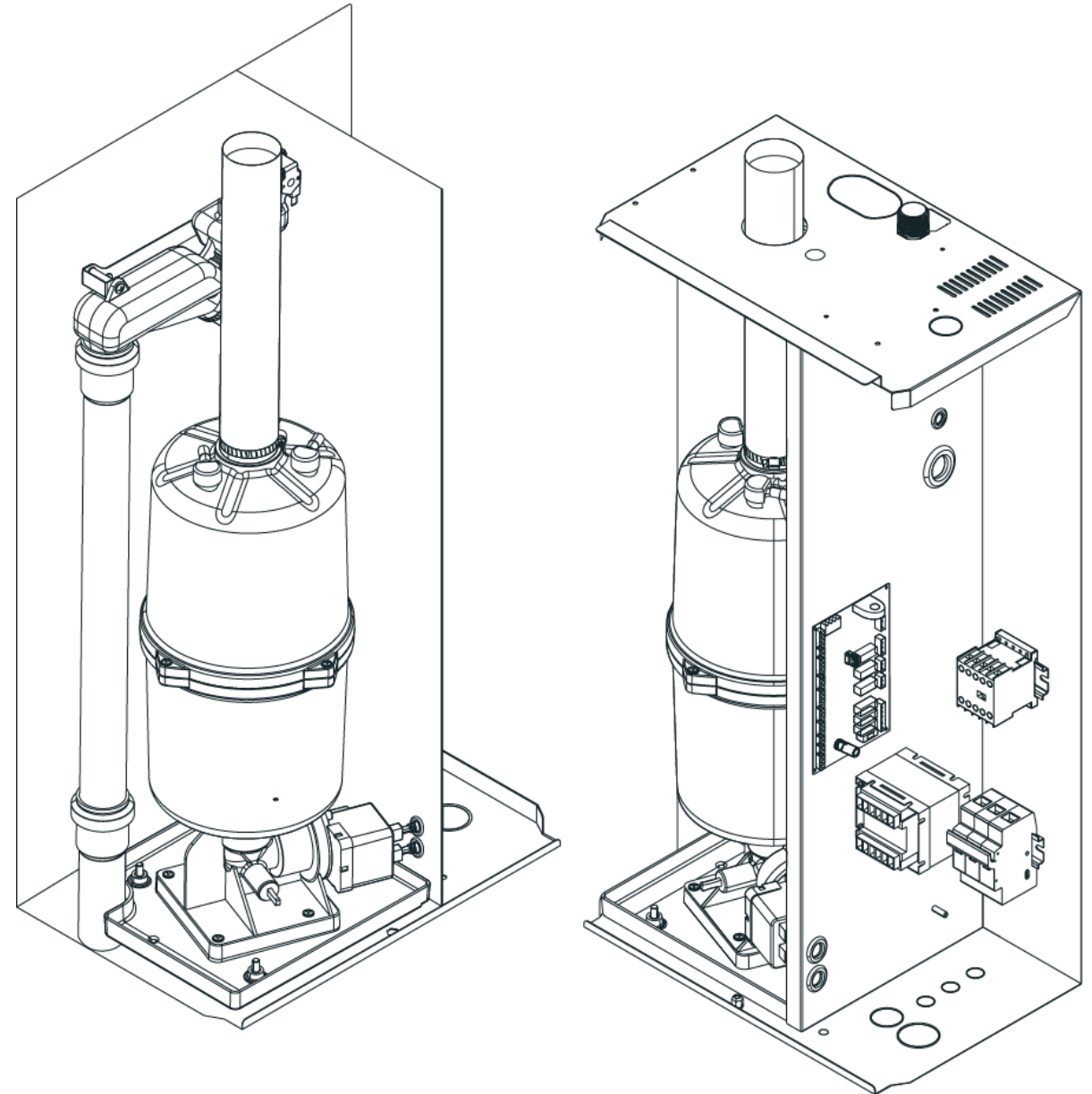
Steam distributors with components in plastic which complies with ISO 846 Method A and C, and insulated boilers, so air handling units can be certified in accordance with VDI 6022-1
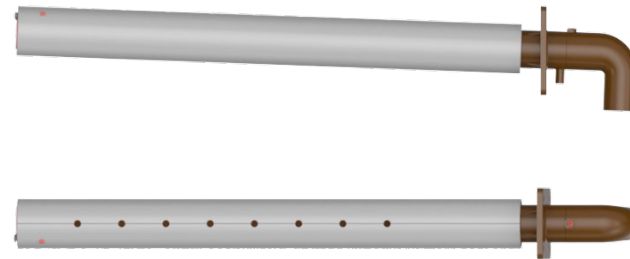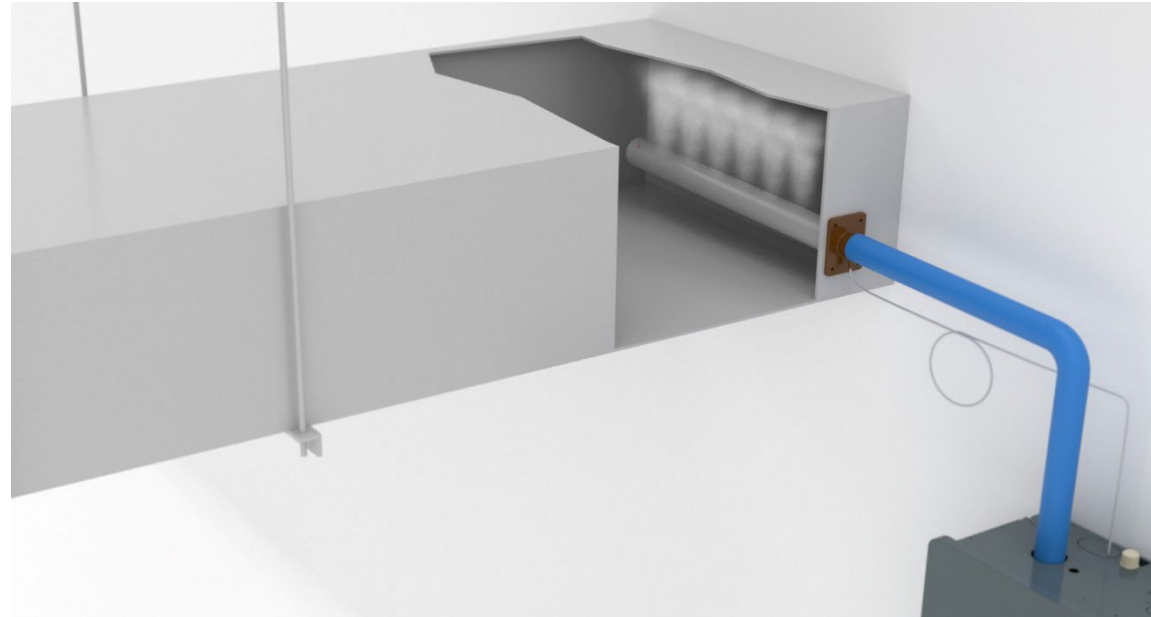
Zephyr Series

Zephyr Traditional (EHKT)

Zephyr Excellence (EHKX)

Zephyr Series

EHKT	EHKX
Capacity 3 - 60 kg/h.	Capacity 3 - 100 kg/h.
EV3K61 control interface: double LED display with 4 digits, icons and 4 keys.	Advanced control interface: 3.5'' TFT full touch-screen colour graphic display in IT/EN.
Slave management only.	Master and slave management.

Zephyr vs KT

- Extended range:
  - KT models were restricted to 3-60 kg/h and there was no 15 kg/h version; the Zephyr range now has a 15 kg/h version and has extended its range to 100 kg/h (EHKX).

- New microprocessor controller on a programmable platform; 2 user interfaces (EV3K or EPJC), connectivity (RS485 always available for Modbus, EHKX with an additional serial port), Wi-Fi option to access EPoCA.

- Regulation: ON/OFF operation, proportional 0-10 V (from external signal, regulator/humidistat), 0-10 V/4-20 mA/NTC humidity and temperature probes and proprietary EVCO version (KT required EV3411 to connect the probes, as it only received 0-10 V from an external regulator).

Zephyr vs KT

- MASTER SLAVE management (Master - EHKX model; Slave - EHKT models up to 4 units).

- SUSTAINABLE choice, cleanable boilers are standard (already in the KT series).

- Powerful, sturdy electric synchronous drainage pump. KT had a siphon with timed emptying of the whole tank, so the new benefits are:
  - Saves water;
  - Saves energy as a lot less hot water is discharged;
  - Optimised operation irrespective of inlet water conductivity (up to a max. of 1250 microS/cm);
  - Drainage with high flow rate and possibility of removing pieces of limescale still applicable, maintaining the advantages of the KT range over its competitors.

Zephyr vs KT

- Suitably sized boilers, so more time can be left between maintenance for 20 kg/h units upwards.

- Improved back pressure gap (KT was 100 mm H2O, now it is 160 mm H2O), with the possibility of modifying it with an optional kit (+/-60 mm H2O).

- Possibility of improving thermal insulation of boiler.

Zephyr vs KT

- 2 new ranges of linear steam distributors + new steam blower for room:
  - EHSDxxx is being replaced by EHSDxxxT, a stainless steel version with components in engineering plastic and **condensate drain**, extra-strong flange for connecting to the AHU, end plug which can be fixed at the end, self-extinguishing engineering plastic **compliant with ISO 846 Method A and C, so AHU manufacturers may obtain VDI6022-1 certification**. Option of 90° fitting to connect to steam piping, rotating.
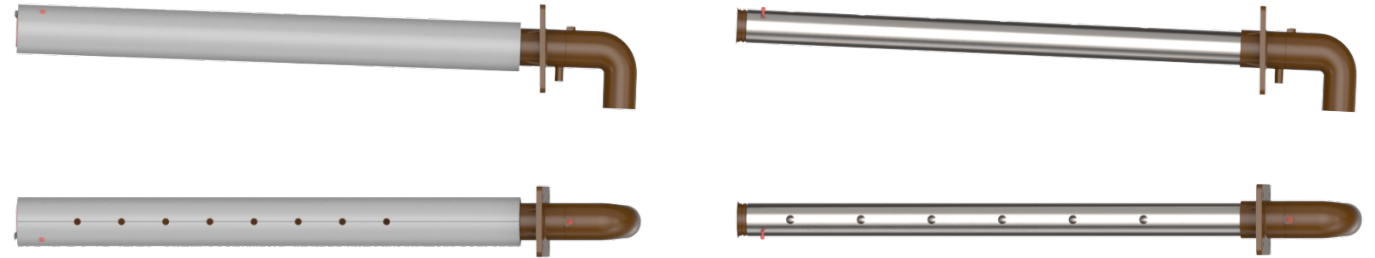
Zephyr vs KT

- 2 new ranges of linear steam distributors + new steam blower for room:
  - Introduction of a second EHSDxxxX range with the same components in engineering plastic and the same options; the main difference to EHSDxxxT is there are two pipes, one inside the other with an air chamber between them for enhanced insulation, in self-extinguishing engineering plastic compliant with ISO 846 Method A and C, so AHU manufacturers may obtain VDI6022-1 certification.

Zephyr vs KT

- 2 new ranges of linear steam distributors.

- New steam blower for room.

Zephyr vs KT

- A more comprehensive range of accessories and spare parts than the KT range.

- Product dimensions have been increased to improve the boiler's back pressure limits and life.

Zephyr: availability

- Available:
  - EHKT/X003-040 from 01/02/2023 (lead time 3 wks)
  - EHKT/X060 and EHKX080/100 from 01/03/2023 (lead time 3 wks)
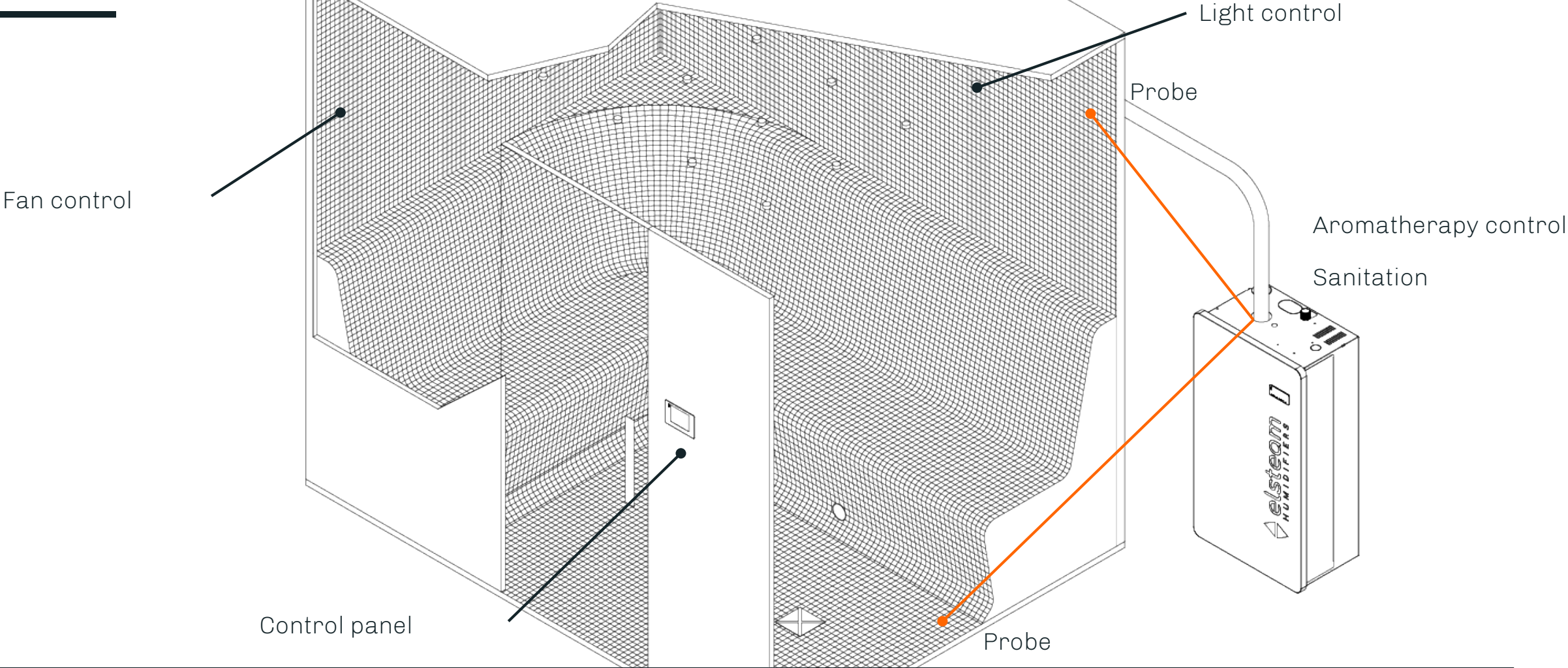 - Phase out KT with lead time

Zephyr Wellness

- Possible new developments/scouting for Zephyr in the wellness sector

Zephyr Wellness: Example

Light control

Probe

Aromatherapy control

Sanitation

Fan control

Control panel

Probe

Zephyr: Accessories

| STEAM DISTRIBUTORS	
EHSR015M2	steam blowers, 3-15 kg/h
EHSD 040…200	400 to 2000 mm linear steam distributor
EHSDW022	linear steam distributor with nozzles
EHSD 040X…200X	400 to 2000 mm steam blower with thermal efficiency
BOILERS	
EHBK005MXXX	boiler, 3-5 kg/h 1PH (standard, low and high conductivity)
EHBK005TXXX	boiler, 3-5 kg/h 3PH (standard, low and high conductivity)
EHBK015TXXX	boiler, 10-15 kg/h 3PH (standard, low and high conductivity)
EHBK040TXXX	boiler, 20-30-40 kg/h 3PH (standard, low and high conductivity)
EHBK050TXXX	boiler, 50 kg/h 3PH (low conductivity, EHBKT040Txx is suitable for standard and high conductivity)
EHBKISOLXXX	insulating jacket for boilers
REGULATIONS-SUPERVISION	
EV3411M7	single output electronic controller, power supply 230 Vac, multi-sensor analogue input
EVHTP520	temperature/humidity probe with range 5- 95% R.H. and -10 - 70 °C
EVHP523	4…20 mA humidity transducer with range 5-95% R.H.
EVHTP523	humidity and temperature transducer, power supply 8 … 28 Vdc, 2 x 4-20 mA provided signal
EVTPNW30F200	NTC probe
EVIF25TW4X0001	EVlinking Wi-Fi serial interface

EHKD

## Immersed electrode humidifiers for air handling units (AHU)
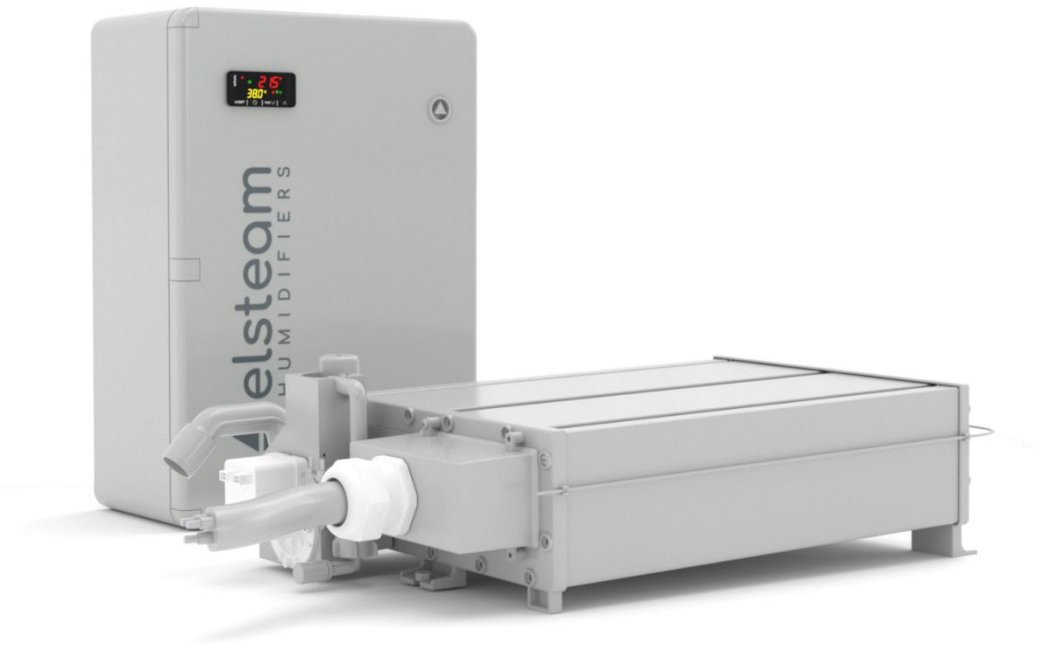
EHKD

- Capacity 10 - 100 kg/h.

- New electronic controller, double LED display with 4 digits, icons and 4 keys (EHKT-Zephyr).

- Water conductivity management.

- Accurate water dilution for consistent, uniform operation and water efficiency enhanced.

- Predictive maintenance: operating time of critical components and boiler monitored; system query by user and automatic warnings.
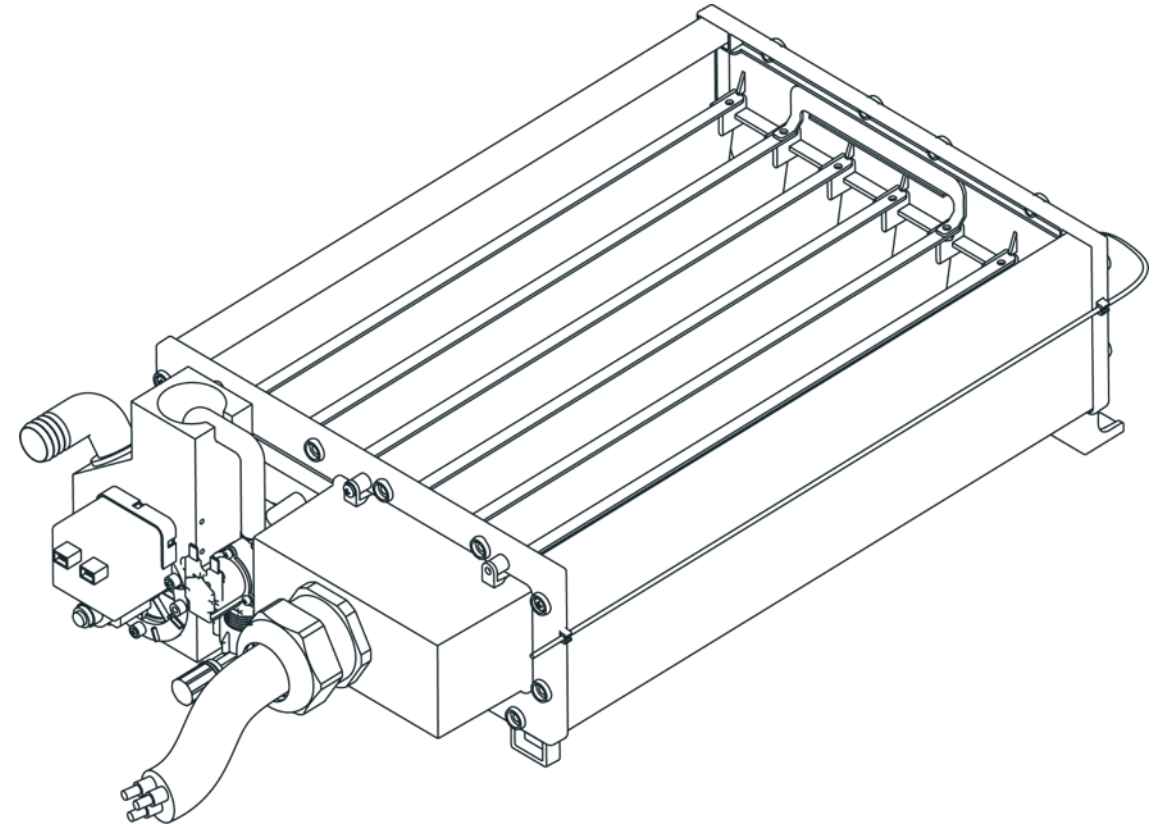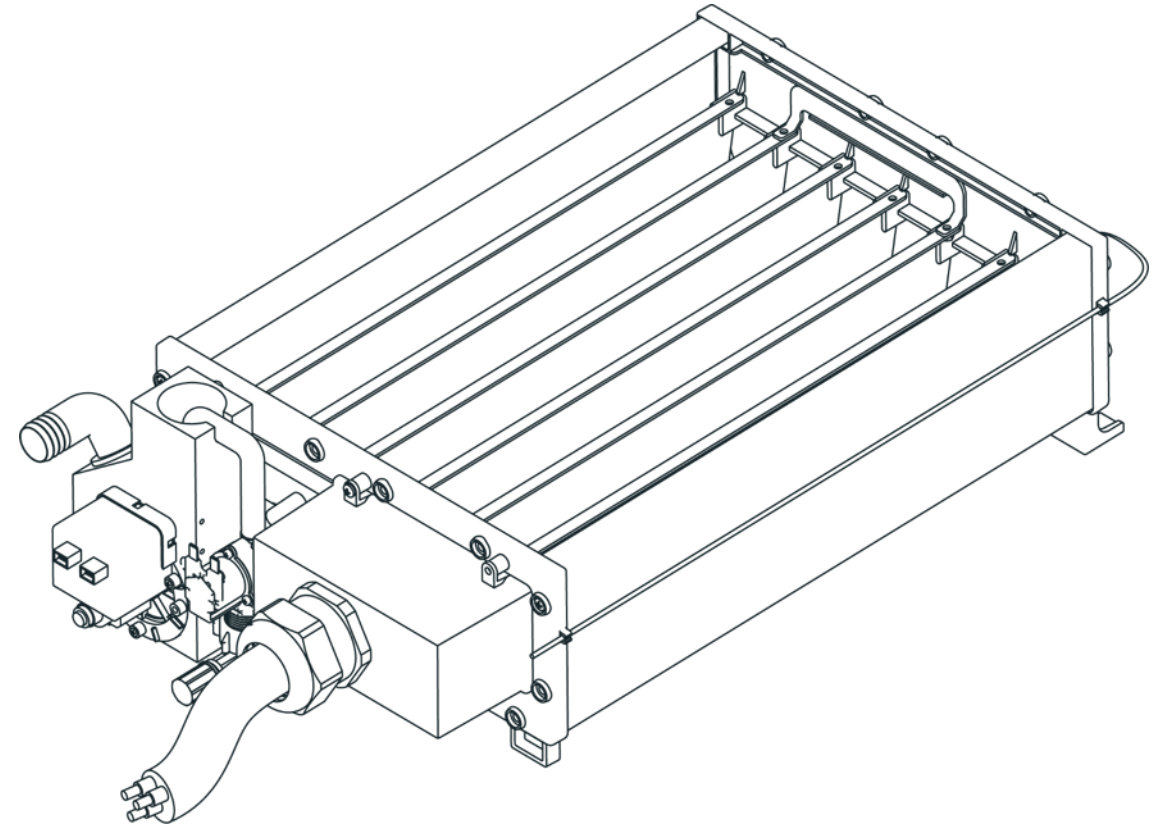
EHKD

- Supervision via BMS systems and EPoCA cloud platform (through EVIF25TW4X0001 interface).

- Health and hygiene management.

- Boiler emptied after periods of activity or inactivity.

- Extremely low installation and maintenance costs.

- Water level control system not mechanical, so no malfunctions caused by limescale.
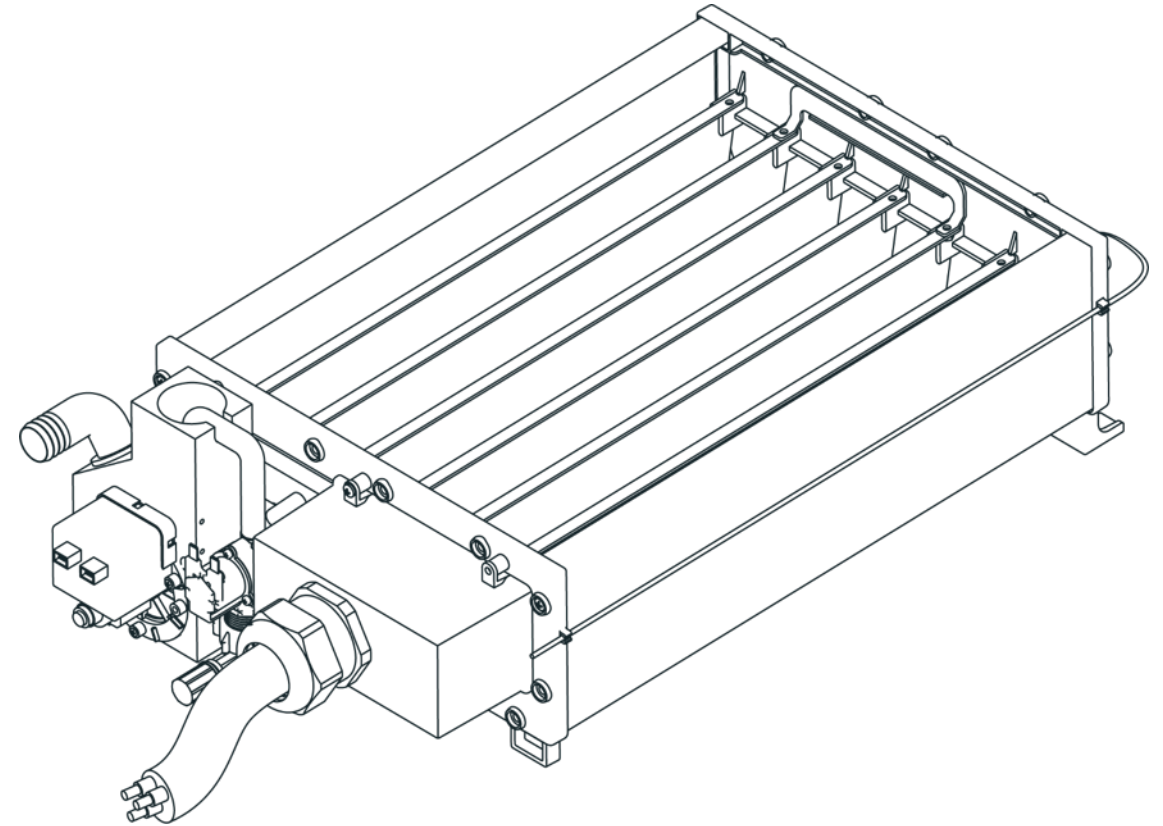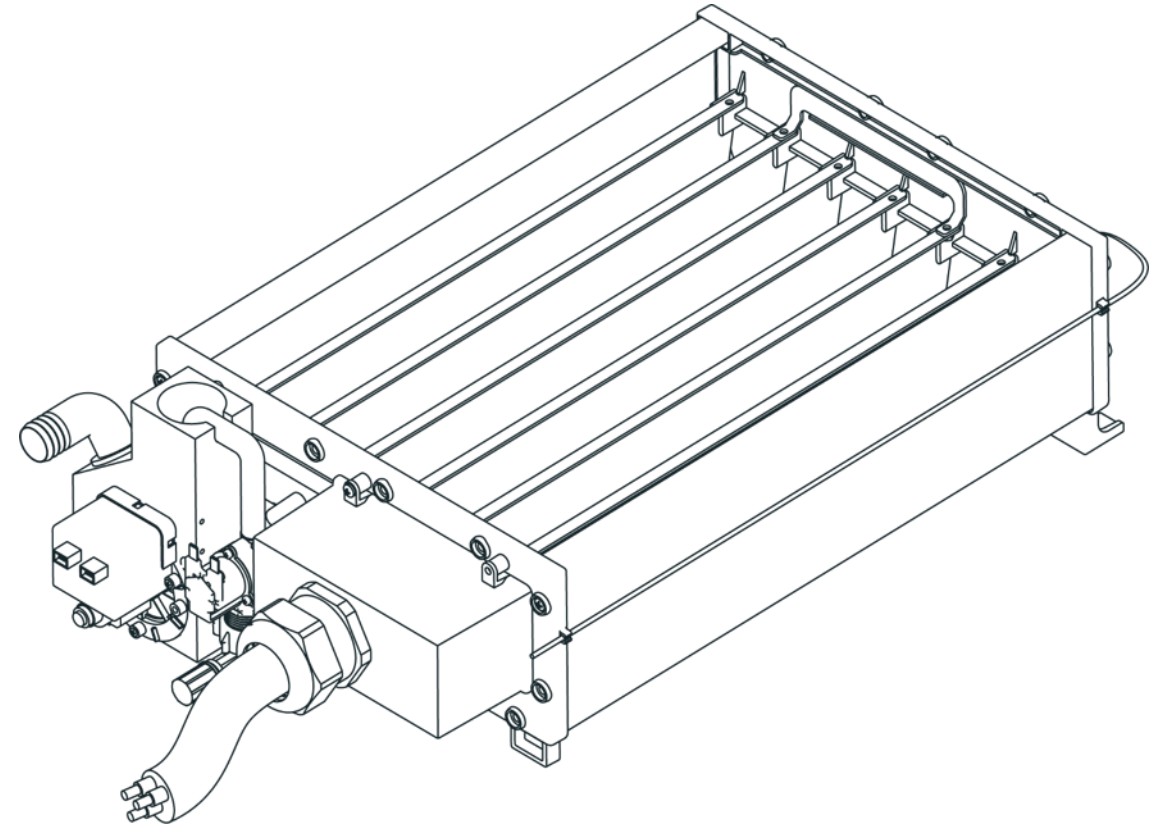
EHKD

- New drainage block with electric pump
  - Greater reliability
  - Greater control due to smart dilution discharge

- Improved production, electrical panel with IP54 protection in ABS.

- Easy to install inside the condensate tank of an air handling unit.

- Wider range of accessories

- Available from April 2023.

EHKD

- Product literature and manual available in 5 languages.

- A bi-lingual instruction sheet is included in the packaging.

- A manual is not provided but can be downloaded using the QR code on the product label, packaging and instruction sheet.

EHKD: accessories

| INSTALLATION	
16020018	stainless steel condensate collection tray 490x690x70 mm
16020019	stainless steel condensate collection tray 490x950x70 mm
16020020	stainless steel condensate collection tray 490x1350x70 mm
16020018	stainless steel condensate collection tray 490x690x70 mm
VEHK07	VEH hydraulic unit removal flange kit
VEHK08	D40 drainage unit kit
VEHK16	5 m power cable kit for running from electrical panel to hydraulic module VEH10-20-30-40
VEHK17	5 m power cable kit for running from electrical panel to hydraulic module VEH60-80-100
VEHK26	Hydraulic connections feedthrough kit
VEHK30	Filling/discharge unit kit external to AHU
REGULATIONS-SUPERVISION	
EV3411M7	single output electronic controller, power supply 230 Vac, multi-sensor analogue input
EVHTP520	temperature/humidity probe with range 5- 95% R.H. and -10 - 70 °C
EVHP523	4...20 mA humidity transducer with range 5-95% R.H.
EVHTP523	humidity and temperature transducer, power supply 8 ... 28 Vdc, 2 x 4-20 mA provided signal
EVTPNW30F200	NTC probe
EVIF25TW4X0001	EVlinking Wi-Fi serial interface

Mistral
Compact, low capacity ultrasonic
humidifier

Mistral

- Water level control is capacitive and not with float
  - NO risk of limescale build-up, a common occurrence with traditional level sensors.

- Small footprint.

- Tank in SAFE (self-extinguishing) and HYGIENIC engineering plastic (ISO 846 compliant).

- Power supply 110 V-230 V 50/60 Hz (compliant for UL certification)

- Greater energy savings compared to the most common heater humidifiers (100 W vs 750 W per kg/h).

- Fan with IP55 protection and high, adjustable flow and prevalence.
- Tank discharges during periods of inactivity.
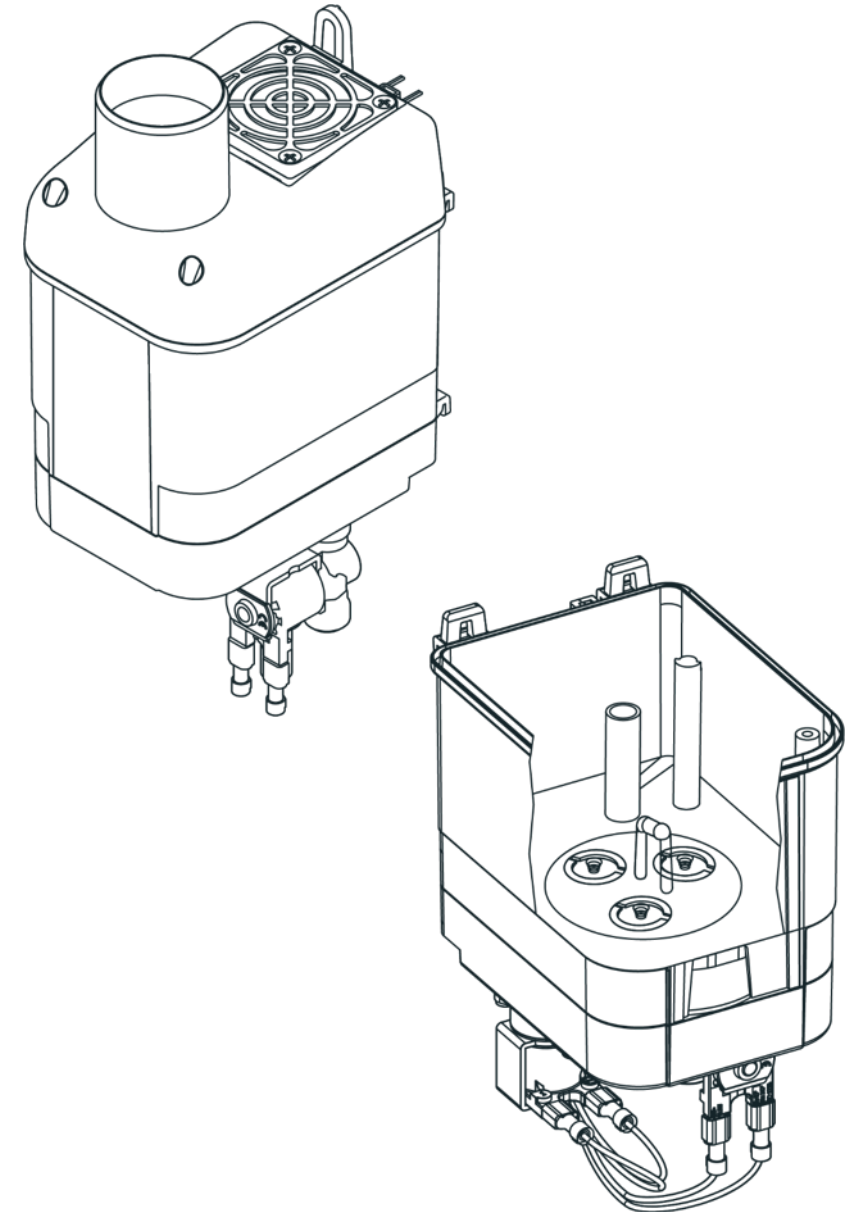
Mistral

- Parallel operation to increase capacity (without the need for optional interfaces).

- Management of up to 4 units in Master-Slave mode using advanced interface (EPColor-J) available from second quarter of 2023.

- Connectivity with BMS systems.

- Remote management and monitoring via the Internet using the EPoCA cloud platform.
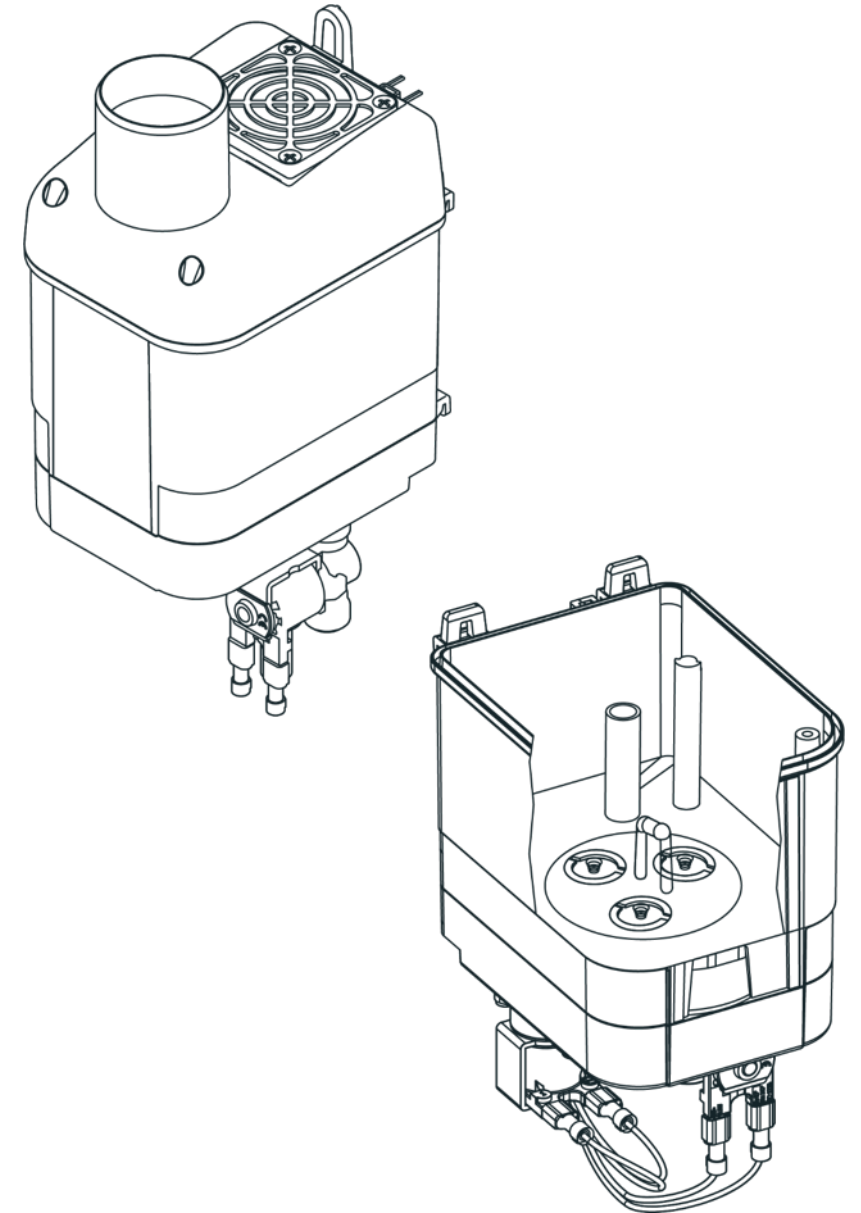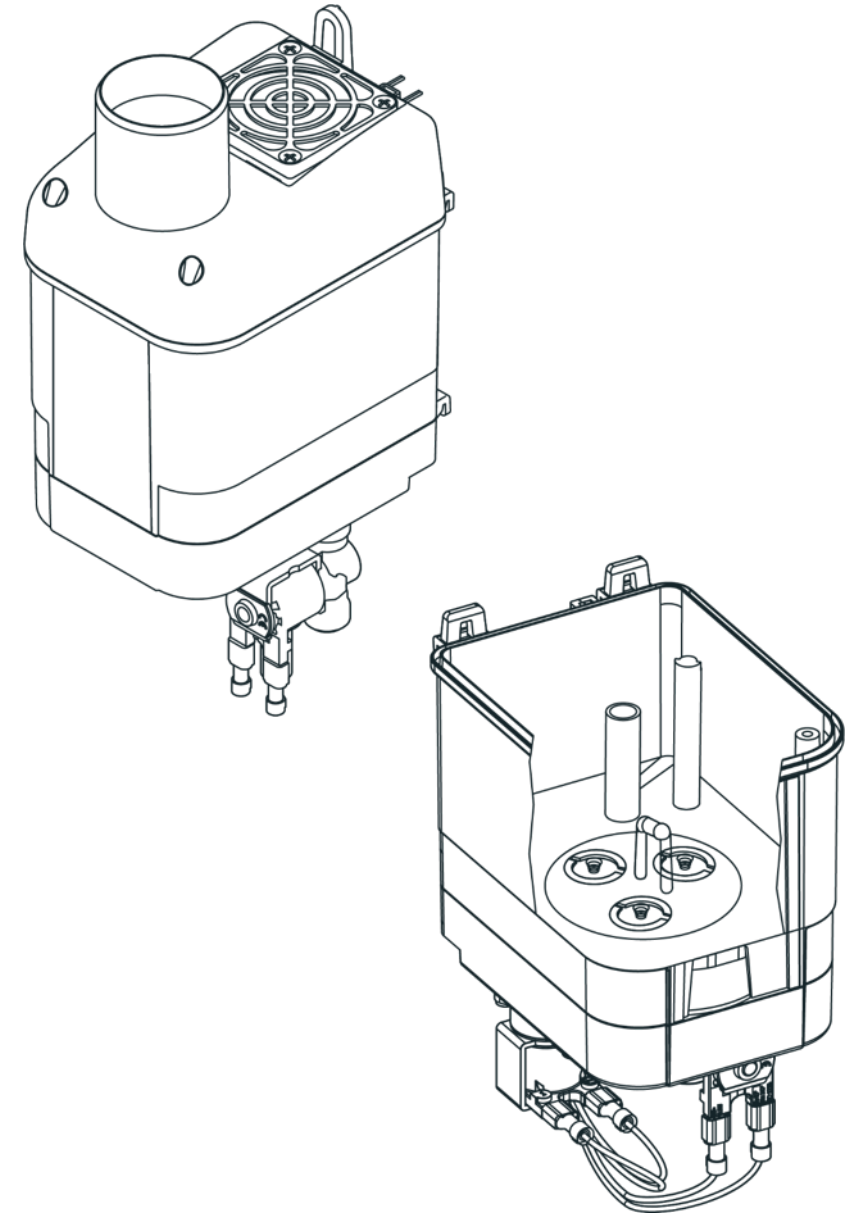
Mistral

- Predictive maintenance: operating time of critical components and MIST MAKER monitored and absorbed currents checked; system query by user and automatic warnings.

- Complete range of accessories, sensors, installation systems and demineralizer.

- Health and hygiene management.

- Boiler emptied after periods of inactivity.
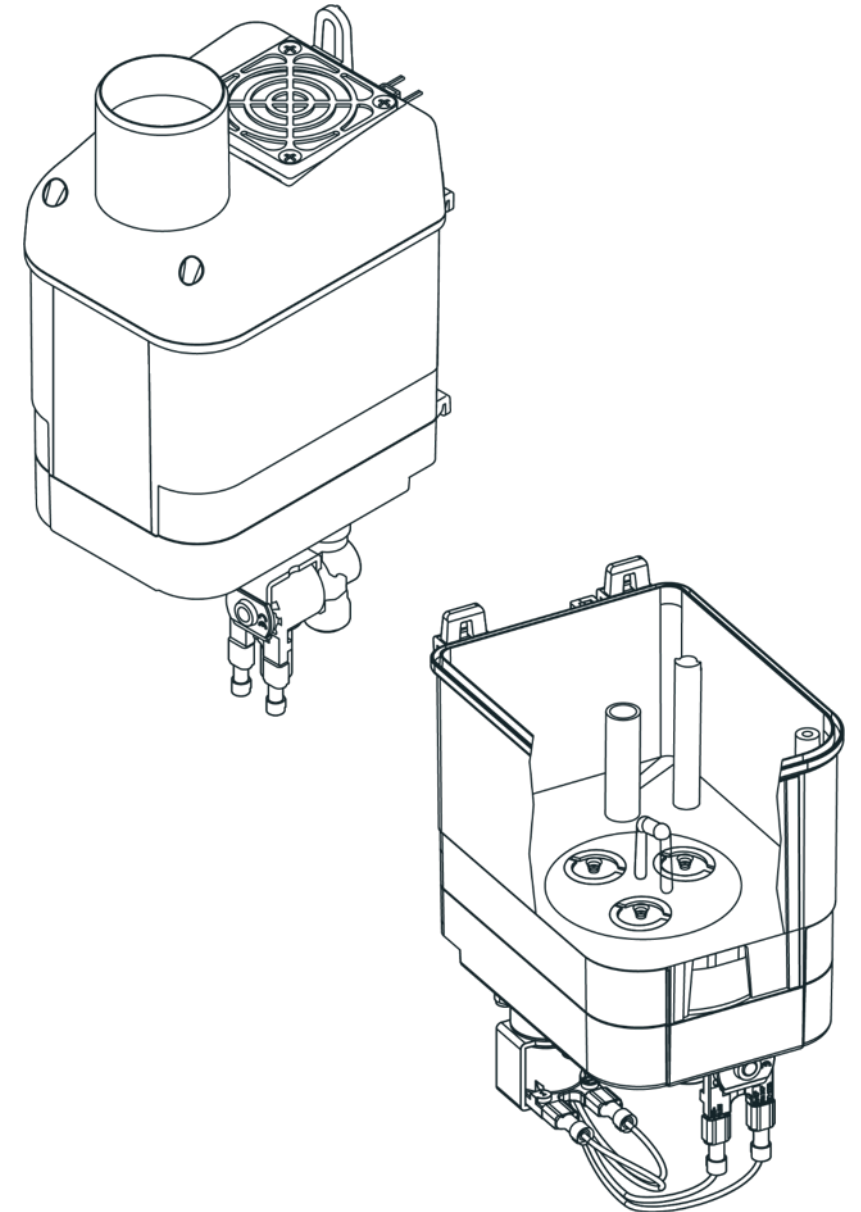
Mistral

- Available:
    - One unit, lead time 1 week;
    - 10-20 units, lead time 2 weeks;
    - 20+ units, lead time TBA.

- Product literature and manual available in 5 languages.

- A bi-lingual instruction sheet is included in the packaging.

- A manual is not provided but can be downloaded using the QR code on the product label, packaging and instruction sheet.

Mistral: accessories

| REGULATIONS-SUPERVISION	
EV3K61XLESRB	remote user interface 74x32 mm, 4 touch keys, two-line LED display, power supply 24 Vdc
EVHTP520	temperature/humidity probe with range 5- 95% R.H. and -10 - 70 °C
EVHP523	4...20 mA humidity transducer with range 5-95% R.H.
EVHTP523	humidity and temperature transducer, power supply 8 ... 28 Vdc, 2 x 4-20 mA provided signal
EVIF25TW4X0001	EVlinking Wi-Fi serial interface
INSTALLATION - STEAM DISTRIBUTION	
EHRO012	reverse osmosis water demineralisation system which produces 12 litres an hour
UHFK02	linear steam distributor kit with different direction piping bends
EHUK009	intake kit for EHUC001M2
31000043	transparent inlet tube diameter 8 mm (per metre)
EHUK007	metal support for wall mounting
EHUK008	metal box for wall mounting (allows power supply to be fixed)

EHPN

High pressure humidifiers

Compliance with hygienic
requirements (used materials/
accessibility/cleanability) acc. to:

- VDI 6022-1
- VDI 3803-1
- SWKI VA 105-01
- ÖNORM H 6021

www.tuev-sued.de/climate

TÜV SUD
Hygiene

EHPN

- Capacity 60 l/h - 840 l/h

- VDI6022-1 certificate (Update: 2nd quarter 2023)

- Electronic controller on programmable platform with ergonomic and intuitive 3.5'' TFT full touch-screen colour graphic display.

- Electronic controller on programmable platform with EV3K interface on distribution rack.

- Multi-rack management with option of connecting a max. of 3 AHUs.

- Predictive maintenance: operating time of critical components and pump monitored; system query by user and automatic warnings
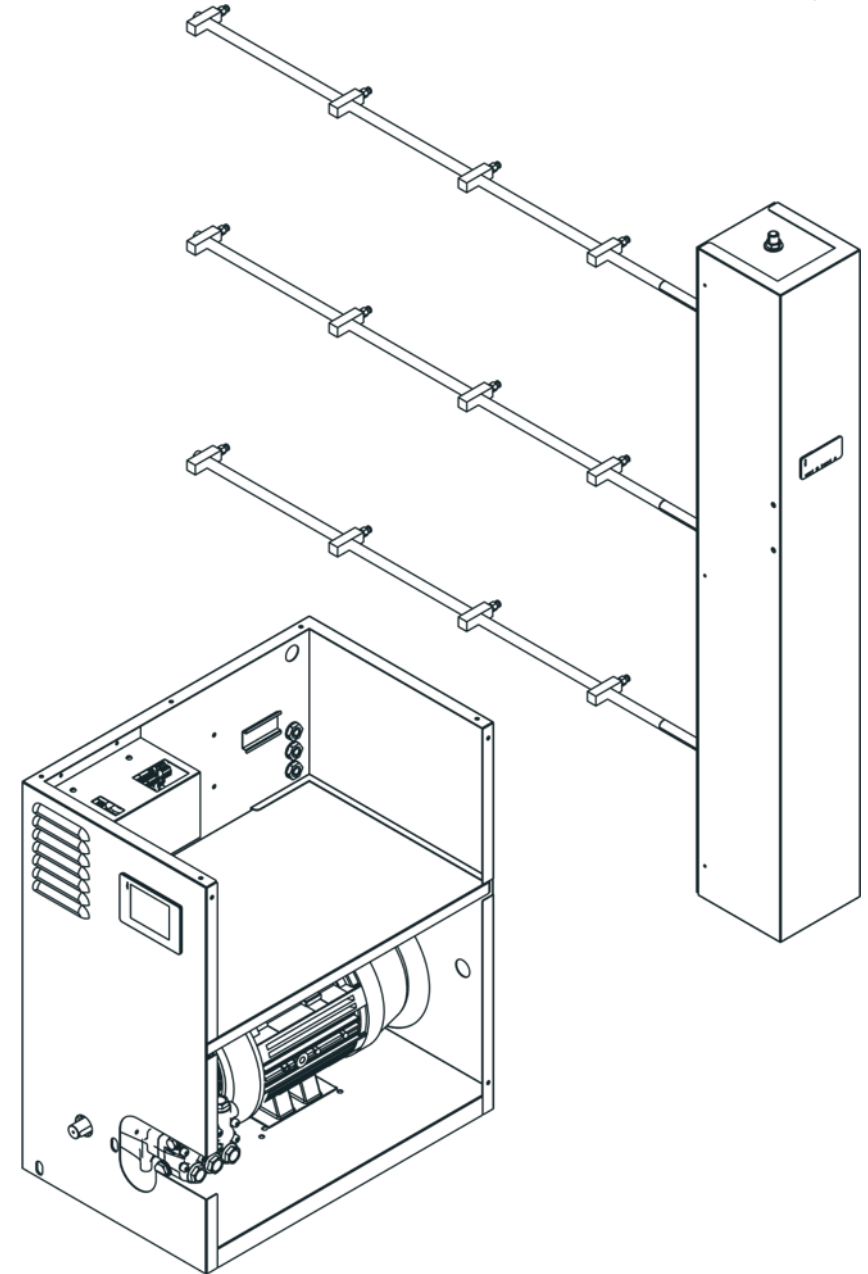
EHPN

- Supervision via BMS systems and EPoCA cloud platform.

- New type of rack and multi-branch management (4 with basic control and up to 7 with expansion; programmable control from HW Zephyr).

- Possibility of increasing the lines of nozzles and improving proportionality.

- Lead time: 3 wks up to 5 units.
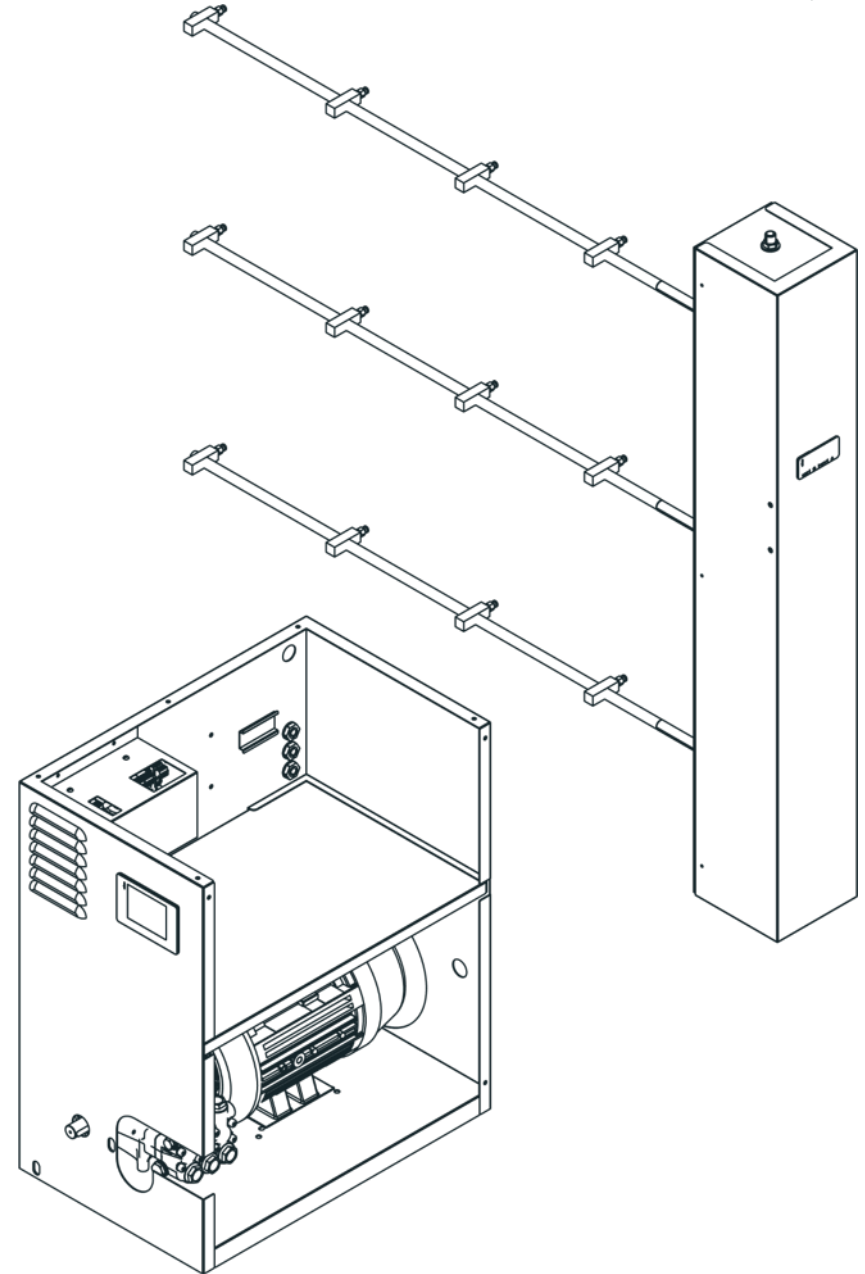
EHPN: accessories

INSTALLATION - STEAM DISTRIBUTION	
EHPNxxRACKxxx	distribution rack according to required capacity
EHPNDROPXX	mist eliminator, various sizes.
0017020016	flexible hose 3/8 " GAS female that connects the unit/rack (per metre) on request (lead time 4 wks).
EHPNK03/04/05/06/07	unit/rack water inlet hose in engineering plastic, length 2 m-15 m (lead time 2 days).
EHPNK13/14/15/16/17	stainless steel unit/rack water inlet hose, length 2 m-15 m (lead time 4 wks).
EHRO200	200 l/h reverse osmosis system
EHRO300	300 l/h reverse osmosis system
EHRO400	400 l/h reverse osmosis system
REGULATIONS-SUPERVISION	
EV3411M7	single output electronic controller, power supply 230 Vac, multi-sensor analogue input
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
EVTPNW30F200	NTC probe, thermoplastic cable, 2 wires, 3 m length, 5 x 20 mm overmoulded bulb, IP68 protection
EVIF25TW4X001	EVlinking Wi-Fi serial interface

elsteam
H U M I D I F I E R S

Visit our site for more information
www.elsteam.it