



## CONDAIR EL

Electrode boiler steam humidifier  
Easy maintenance with replaceable cylinders



Humidification and Evaporative Cooling

 **conda**ir

# Replaceable boiling cylinders make servicing simple

## Intelligent design for quick maintenance

Cylinders can be replaced in minutes ensuring reliable humidity control and minimal downtime.



Replaceable cylinders for quick and easy maintenance

Cleanable cylinders that can be reused multiple times

## Electrode plugs

Robust and touch protective electrode plugs for easy and safe cylinder change.

## Long lasting steam cylinder

Disposable steam cylinders last up to three times longer than other models due to advanced water conductivity management and staged electrode use.

## Pumped drain

Rapidly removes water with high mineral content and returns the humidifier to full output quickly, thus maintaining humidity control.



# CONDAIR EL

Electrode boiler steam humidifier



### Steam distribution options



Condair EL with steam hose for use in duct.



Condair EL with fan unit for direct room humidification.

### Large output from a single unit

The Condair EL is available with a single cylinder for outputs up to 45kg/hr and a double cylinder model for outputs of up to 90kg/hr. Up to four single units can be controlled on a master/slave configuration for outputs up to 180kg/hr.

### Touch screen control panel

Advanced user interface offers detailed operational control and diagnostic reporting. A USB connection allows performance data to be downloaded into Excel, as well as software updates to be loaded.

### Easy integration into Building Management Systems

Standard connection using Modbus RTU. Option required for LonWorks - Lon standards certified, BACnet MS/TP - master/slave or BACnet IP - BTL certified.

**Modbus®**



### Outdoor enclosure option

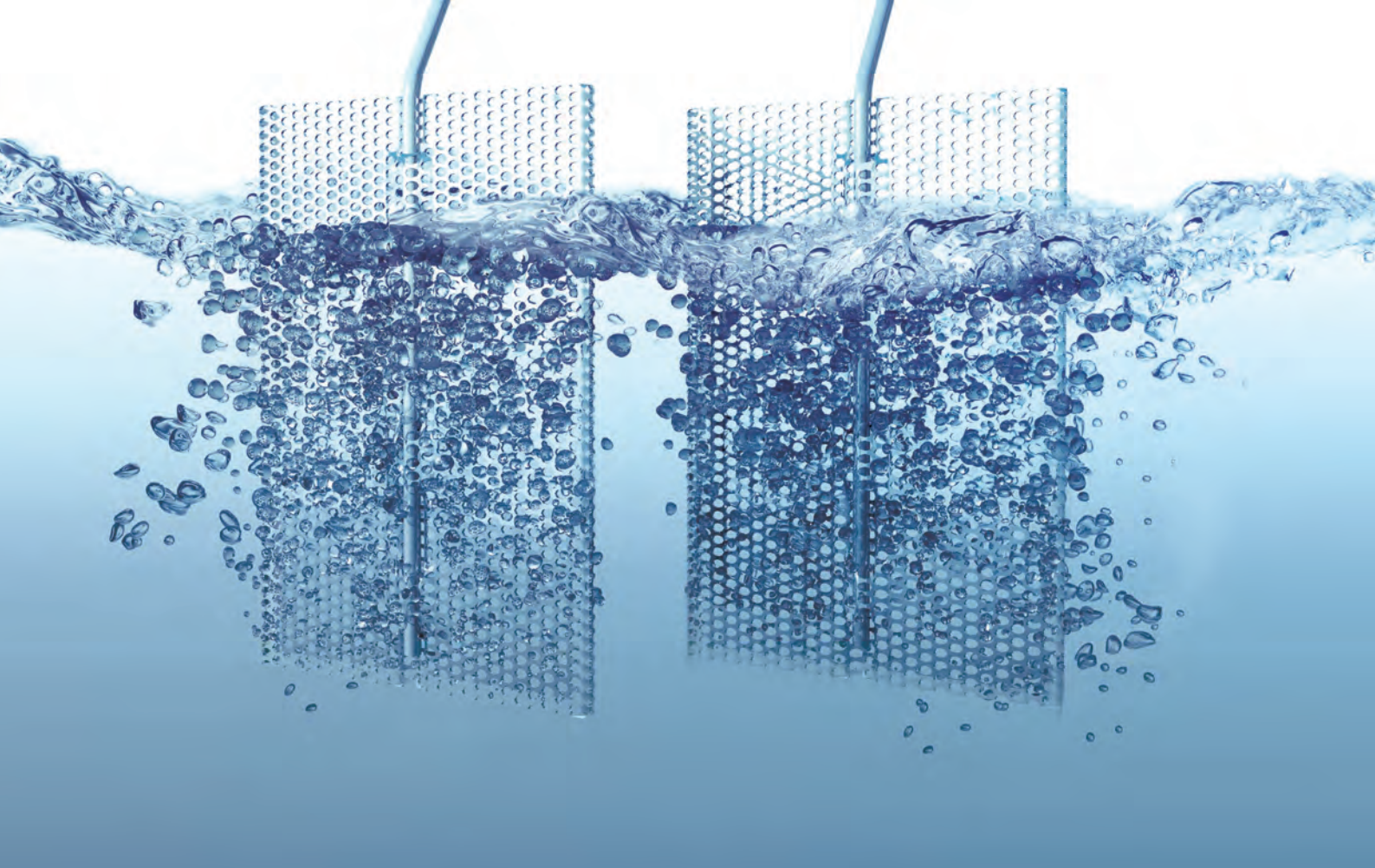
Very compact cabinet rated to IP55



The Condair EL electrode boiler steam humidifier provides hygienic steam for either in-duct or direct air humidification.

Servicing is simple and quick through replacement of the steam cylinder when it becomes full of scale. The humidifier is rapidly returned to maintaining humidity control.

The steam cylinders of the Condair EL last up to three times longer than similar models due to advanced water quality management and staged electrode use. The unit is easy to install and its touch screen controller makes it simple to use.



Advanced water quality management extends cylinder life, whilst saving water and energy

## Long lasting, high performing steam cylinders

The Condair EL's steam cylinders last up to three times longer than other similar electrode boilers', reducing maintenance and the cost of consumables.

### Water conductivity management

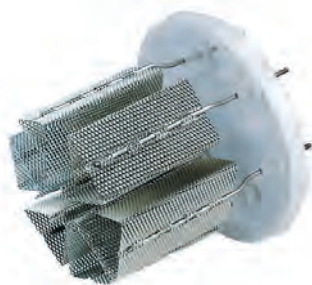
Conductivity levels in the steam cylinder are monitored to ensure the mineral concentration of the water remains at an optimal level.

When the conductivity of the water becomes too great, the precise volume of water needed to reduce the mineral level sufficiently is drained and replaced with fresh water. This differs from other electrode boiler humidifiers that use a timer controlled drain.

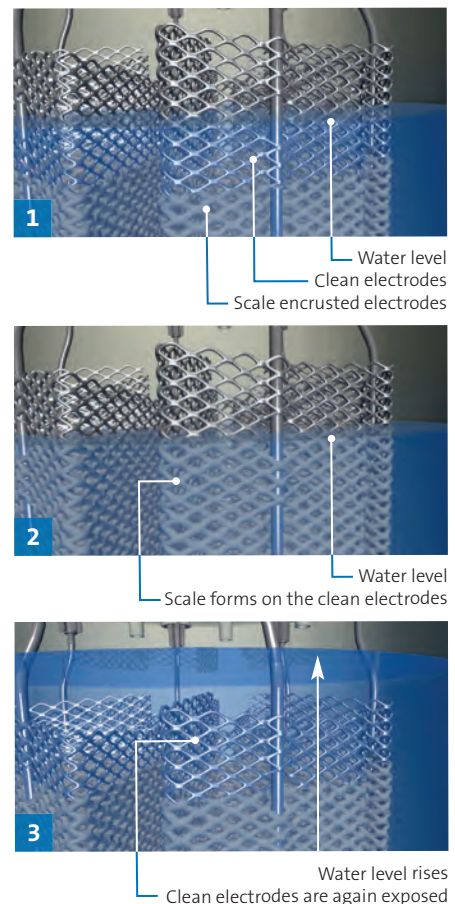
By intelligently monitoring conductivity, precisely controlling mineral levels and minimising water drainage, scale build-up is inhibited, extending the cylinder life, and water consumption is minimised, which in turn also reduces the energy needed to heat the fresh water.

### Staged electrode use

Only the lower sections of the electrodes are initially submerged in water. As they become encrusted in scale, the water level rises to submerge clean electrodes. This staged approach to water level control ensures optimal transfer of current to the water throughout the cylinder's long operational lifetime, without any drop in performance or efficiency.



The robust zinc coated steel elements provide a long operational life.





Replaceable steam cylinders ensure fast and simple maintenance and minimal downtime

## Benefits of electrode boiler technology

Electrode boilers are an economic, simple and reliable humidification system for in-duct or direct room humidification.

### **Easy to service**

The Condair EL informs the user when a cylinder is full of scale and needs replacing. This is a simple and quick process of draining the unit, removing the old cylinder and replacing it with a new one. This straightforward maintenance keeps downtime to a minimum and maintains humidity control.

### **Operates on mains water**

Electrode boiler humidifiers operate on mains water without any need for RO water treatment. This simplifies installation and reduces on-going water consumption.

### **Economic**

The Condair EL has an economic capital cost yet is an extremely dependable solution for hygienic steam humidification.



Touch screen controller for intuitive operational control and advanced reporting

## Control at your fingertips

The Condair EL incorporates the latest touch screen control panel, providing intuitive operation and extensive reporting information.

All operating parameters can be seen at a glance with on-screen features offering the user further information on operation and detailed troubleshooting suggestions.

A USB connection allows all performance data to be recorded and exported into Excel for advanced diagnostics. Upgrades to software can also easily be made via the USB port.

BMS connectivity is included as standard with Modbus RTU, BACnet IP and BACnet MSTP master or slave mode. Optionally BACnet IP certified, MSTP certified or LonWorks certified can be installed.

**Modbus®**



Operational status, fault and maintenance data is recorded via USB and can be analysed in Excel.



Comprehensive range of accessories and options

## Condair EL options

### Drain water cooler

To reduce the temperature of the drain water to below 60°C, waste water is mixed with fresh water.

### Mounting rack

Adjustable mounting rack for easy installation on-site at different heights.

### Cleanable cylinder

Scale can be emptied and the cylinder reused multiple times.

### Humidity sensors and hygrometers

Full range of in-duct and in-room systems to connect to the internal PI controller.

### Pressure compensation set

Allows operation with up to 10,000 Pa duct pressures.



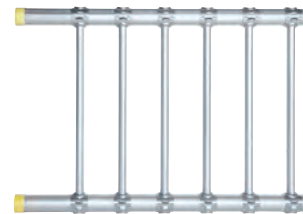
### Fan unit

For direct room humidification of up to 45kg/h. The fan unit can be located directly on top of the humidifier or remotely.



### Outdoor enclosure

IP55 rated cabinet with very small footprint and handles for lifting into position.



### Short evaporation steam manifold

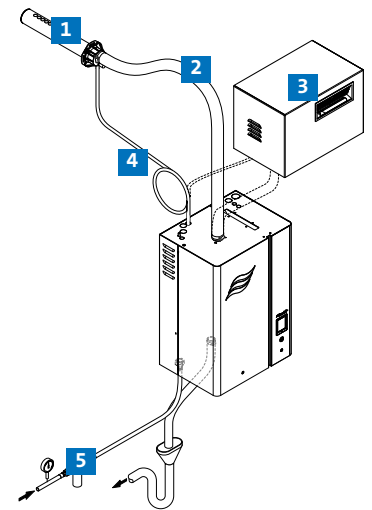
The Optisorp steam manifold offers very short evaporation distances in AHUs.

## Typical system overview

- Replaceable steam cylinder
- Internal PI humidity controller
- Remote indication board
- Analog output for signalling actual steam capacity
- Touch screen control panel
- Self-diagnostic system
- Real-time clock
- BMS connectivity - Modbus RTU

## Accessories

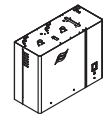
- 1 Steam distribution system for duct installation
- 2 Steam distribution hose
- 3 Ventilation unit for direct room humidification
- 4 Condensate hose
- 5 Filter valve



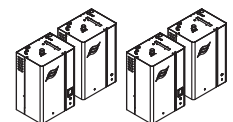
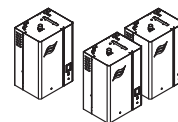
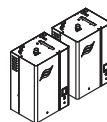
## Options

- IP55 rated outdoor enclosure
- Condair OptiSorp steam distribution system
- Pressure compensation set up to 10,000 Pa
- Humidity sensors and hygrometers
- Condair online remote diagnostics
- BMS connectivity - LonWorks - Lon standards certified, BACnet MS/TP (master/slave) or BACnet IP - BTL certified

## Technical data



Housing sizes		Small				Medium						Large				
Product reference		EL 5	EL 8	EL 10	EL 15	EL 20	EL 24	EL 30	EL 35	EL 40	EL 45	EL 50	EL 60	EL 70	EL 80	EL 90
Dimensions WxHxD	mm	420 x 670 x 370				530 x 780 x 406						1,000 x 780 x 406				
Operating weight	kg	40.0				66.0						132.0				
Heating voltage		Maximum steam output														
400V 3Ph 50-60Hz	kg/h	5.0	8.0	10.0	15.0	20.0	24.0	30.0	35.0	40.0	45.0	50.0	60.0	70.0	80.0	90.0
230V 1Ph 50-60Hz	kg/h	5.0	8.0	10.0	-	-	-	-	-	-	-	-	-	-	-	-
Control voltage		230V 1Ph 50-60Hz														
Conformity		CE, VDE														



Housing sizes		2x Medium Master-Slave					3x Medium Master-Slave			4x Medium Master-Slave		
Product reference		EL 50	EL 60	EL 70	EL 80	EL 90	EL 105	EL 120	EL 135	EL 152	EL 160	EL 180
Dimensions WxHxD	mm	2x 530 x 780 x 406					3x 530 x 780 x 406			4x 530 x 780 x 406		
Operating weight	kg	132.0					198.0			264.0		
Heating voltage		Maximum steam output										
400V 3Ph 50-60Hz	kg/h	2x 25.0	2x 30.0	2x 35.0	2x 40.0	2x 45.0	3x 35.0	3x 40.0	3x 45.0	4x 38.0	4x 40.0	4x 45.0
230V 1Ph 50-60Hz	kg/h	-	-	-	-	-	-	-	-	-	-	-
Control voltage		230V 1Ph 50-60Hz										
Conformity		CE, VDE										