



CONDAIR RO-A

Improved water quality for
efficient humidification



Humidification and Evaporative Cooling

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RO water for improved humidification

Reverse osmosis (RO) is an effective and economic way of removing minerals from water. The Condair RO-A has been developed specifically to provide operational, energy and maintenance benefits to Condair humidifiers.

By removing the minerals from a humidifier's supply water, the limescale that builds-up in the system is virtually eliminated. This results in a much lower level of required maintenance in all types of humidifier and reduced energy consumption in steam humidifiers. These cost savings can lead to a payback on the initial purchase of the Condair RO-A unit in around one year.

Steam humidifiers that run on mains water need to drain their boiling chambers occasionally to maintain a low mineral content and reduce limescale build-up. By using RO supply water, the steam humidifier's boiling

chamber does not require this regular drain. Therefore it uses less energy to maintain the water's temperature.

As the water temperature is consistent, the steam output is also consistent, thus improving humidity control. By using resistive steam humidifiers fed by RO water, $\pm 1\%RH$ control can be achieved.

Other benefits of using RO water with humidifiers include increasing the life of the evaporative pads in evaporative humidifiers and preventing dust carry-over in spray humidifiers.

Benefits

- Virtually eliminates scale build-up in humidifiers
- Reduces maintenance time and cost
- Reduces energy consumption
- Enables precise humidity control
- Extends humidifier life

Controls



A stand-alone, touch-screen controller, ideal for when the water treatment system is providing filtered water to multiple humidifiers.



The Condair RO-A can be controlled via any Condair humidifier incorporating the built-in touch-screen interface.



Models

Condair RO-A40 / RO-A100

A compact solution with a small footprint, one membrane and an integrated pressure tank.

Easily accessible water connections



10" 5 micron filter
Integrated pressure tank
One membrane

Condair RO-A200 / RO-A300

A compact solution with multiple membranes and an external pressure tank.

Easily accessible control connections



10" 5 micron filter
Multiple membranes



External pressure tank



Easy to remove cover, allowing full access to internal components.

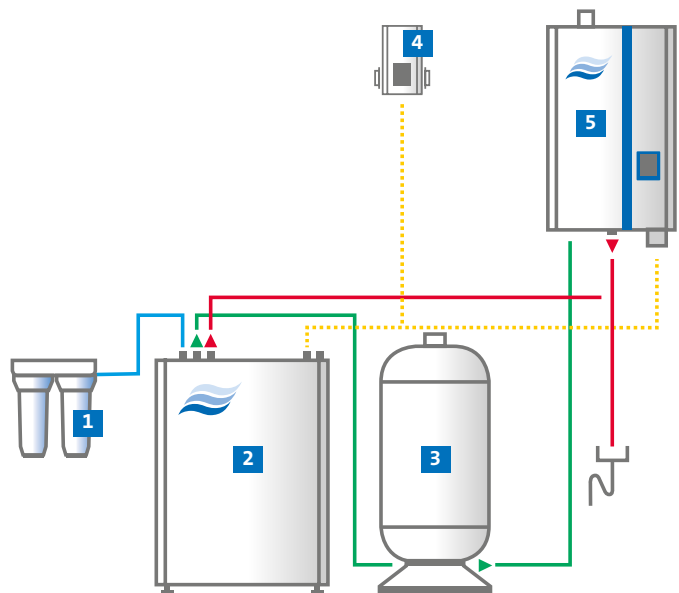
The Condair RO-A is a water filter designed specifically for use with humidifiers. It provides water at an ideal quality for humidification systems, while minimising waste water.

The filtration system has a typical dissolved solids rate of 95% and a recovery rate of 50% when used with hard water and 70% when used with softened water.

Four models are available with maximum outputs from 40 to 300 litres per hour. The unit comes complete with 3-stage pre-filtration to remove chlorine and non-dissolved solids down to 5 microns, to prolong the life of the RO membranes.

Typical system overview

- 1 5 micron pre-filter and chlorine pre-filter
- 2 Condair RO-A unit
- 3 External pressure tank (RO-A 200/300 only)
- 4 Stand-alone touch-screen controller (optional)
- 5 Condair humidifier with touch-screen controller (optional)



Technical data

Condair RO	A40	A100	A200	A300
Power consumption (W)	600	600	600	600
Permeate (L/h) @ 5 °C and 2 bar	40	100	200	300
Permeate (L/h) @ 15 °C and 2 bar	70	140	300	400
Max permeate flow/day (m ³ /d)	1.68	3.36	7.2	9.6
Recovery hard water	50%			
Recovery softened water	70%			
Inlet pressure (bar)	2–5			
Water temperature (°C)	5–25			
Rejection rate (min/max)	95% typical			
Power supply (V/Hz)	230/50			
Power consumption (W)	600			
Pre-filtration	1x 20" 5 micron filter, 1x 20" 5 micron filter, 1x 10" 5 micron filter			
Connection and dimension				
Inlet water	3/4"			
Permeate	3/4"			
Drain (hose fitting, mm)	9			
Condair RO-A Dimensions (H x D x W, mm)	750 x 480 x 570			
External pressure tank dimensions (H x D x W, mm)	950 x 450 x 450			
External pressure tank capacity (litres)	100			

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