



CONDAIR RO-A

Improved water quality for higher efficiency in humidification



Humidification and Evaporative Cooling

 **condair**

CONDAIR RO-A: HIGHLY EFFICIENT SCALE AND MINERAL MANAGEMENT

Reverse osmosis (RO) is an effective and economic way of removing minerals from water. 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 as well as in reduced energy consumption in steam humidifiers. 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.

The Condair RO-A has been developed specifically to provide operational, energy and maintenance benefits to Condair and other humidifiers. By using RO-A supply water, the steam humidifier's boiling chamber does not require a 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-A water $\pm 1\%RH$ control can be achieved.

Other benefits of using RO-A water with humidifiers include increasing the life of the evaporative pads in evaporative humidifiers and preventing dust carryover in spray humidifiers. The striking cost savings due to lower maintenance costs, reduced power consumption and extended life cycle of the humidifier lead to a payback on the initial purchase of the RO-A unit in around one year.

System characteristics

- Reduction of scale and other minerals down to 1-3%
- Optimized for applications with resistive and gas fired steam humidifiers
- Ready for integration in comprehensive ventilation and air conditioning systems
- Maximal flexibility – complete standalone device or separate components for the configuration of complex individual solutions
- Perfect integration in systems with Condair RS/GS humidifiers
- Easy operation in systems with other humidifiers
- Touch screen display

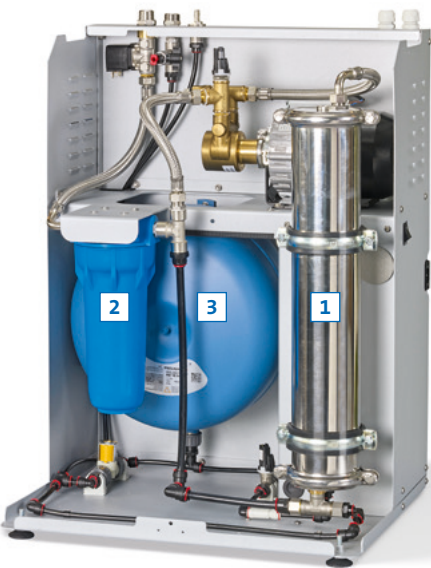
Main benefits

- Virtually eliminates scale build-up in humidifiers
- High water efficiency: 50% recovery rate
- Reduces time as well as costs for maintenance
- Reduces energy consumption
- Enables precise humidity control
- Extends life cycle of humidifiers

UNITS AND CONTROLS

Condair RO-A40 Condair RO-A100

Compact solution with small footprint
One membrane
Integrated pressure tank



- 1 One membrane
- 2 1x10" micro filter
- 3 Integrated pressure tank

Condair RO-A200 Condair RO-A300

Compact solution with small footprint
RO-A200 with two membranes
RO-A300 with three membranes
External pressure tank



- 1 Membranes
- 2 1x10" micro filter
- 3 External pressure tank

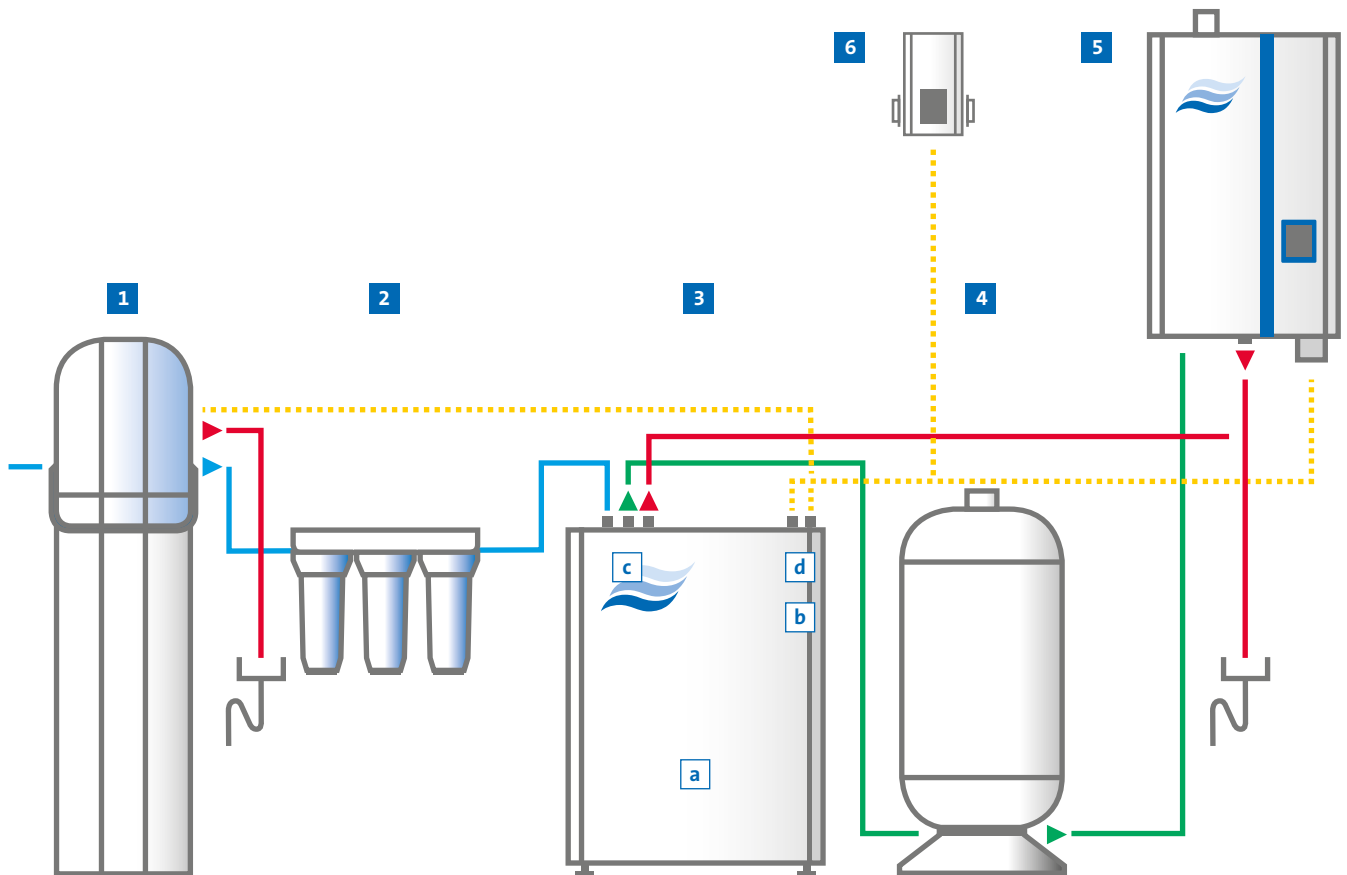


If used independently without our steam humidifier Condair RS (resistive humidifier) or GS (gas-fired humidifier): Condair RO-A with own touch screen control panel



Condair RO-A as watertreatment for the Condair RS (resistive humidifier) or GS (gas-fired humidifier): The Condair RS/GS touch screen control panel controls also the Condair RO-A

COMPONENTS AND OPTIONS



- 1** Water softener (optional)
- 2** Pre-filters 3x20" (optional)
- 3** RO-A Unit with strict separation of electronic and hydraulic parts
- a** Housing (optional) with easy access for maintenance
- b** Rocker switch
(allows to turn off the RO-A independently from the humidifier)
- c** Easy accessible water connections on top of the unit
- d** Electrical connections on the right side to connect the RO-A with the external control unit or with a Condair RS/GS humidifier

- 4** External pressure tank
- 5** Condair RS/GS humidifier with touch screen control panel
- 6** Control unit for use in combination with other humidifiers



- a** Housing (optional) with easy access for maintenance

SPECIFICATION

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 (m³/d)	1.68	3.36	7.2	9.6
Recovery hard water	50			
Recovery softened water	70			
Inlet pressure	2–5			
Water temperature	5–25			
Desalination rate (min/max)	97/99			
Power supply (V/Hz)	230/50			
Power consumption (W)	600			
Connection and dimension				
Inlet water	3/4"			
Permeate	3/4"			
Drain (hose fitting, mm)	9			
Dimensions (H x D x W)	750 x 480 x 570			

Additional options and functions	
Pre filtration	1x10" micro filter
Display	Touch display
Optional	
Pre filtration	3x20"
Operation and fault indicator	1x Operation, 1x Alarm
BMS connection	
Housing	
Water softener	

