WATER WITH QUALITY

Hygienic Water Treatment for
Humidification Systems

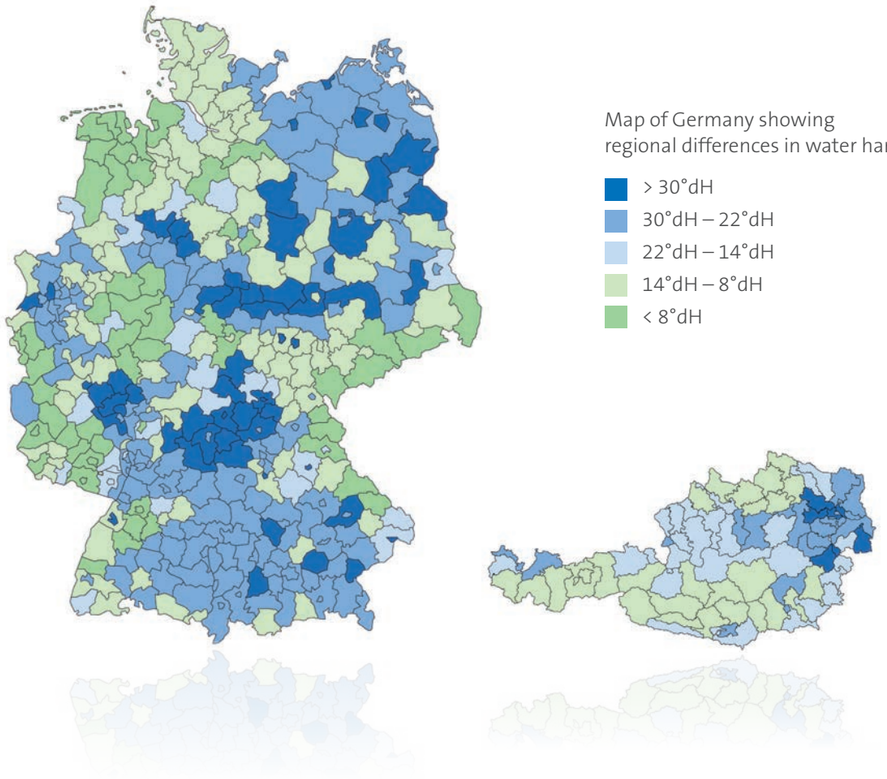
Humidification and evaporative cooling

condair

Soft water
using ion exchange

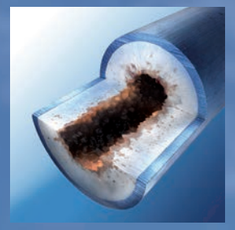
Water treatment with pendulum softeners
Condair Soft pendulum softeners produce soft water continuously and are used to supply reverse osmosis systems.

Mode of operation
Pendulum softeners work on the principle of ion exchange, so the hardness components calcium and magnesium are constantly removed from the water. Two softening reservoirs provide the soft water supply alternately and without interruption. Thus, Condair Soft systems are especially suited to consumers who need a lasting soft water inflow. An electronic control head provides fully automatic operation and self-regeneration of the ion exchanger. Regenerating salt is stored in an adjoining brine tank.



Map of Germany showing
regional differences in water hardness

- > 30°dH
- 30°dH – 22°dH
- 22°dH – 14°dH
- 14°dH – 8°dH
- < 8°dH



Protection against corrosion and limescale damage

Basis for hygienic operation

Reverse osmosis at the highest level

Advanced technology — reliable and powerful
Hygienically processed humidifying water is indispensable for adiabatic humidification. Germs and minerals contained in the water cause encrustations and can lead to health problems.

Condair reverse osmosis systems are designed specifically for the special requirements of hygienic humidification.

They are perfectly reliable, economical and hygienic, and therefore guarantee ideal humidifying water quality. The high-quality permeate is provided in an atmospherically sealed pressure reservoir made of stainless steel.

Contamination by corrosion and germ entry from the ambient air are therefore reliably excluded.

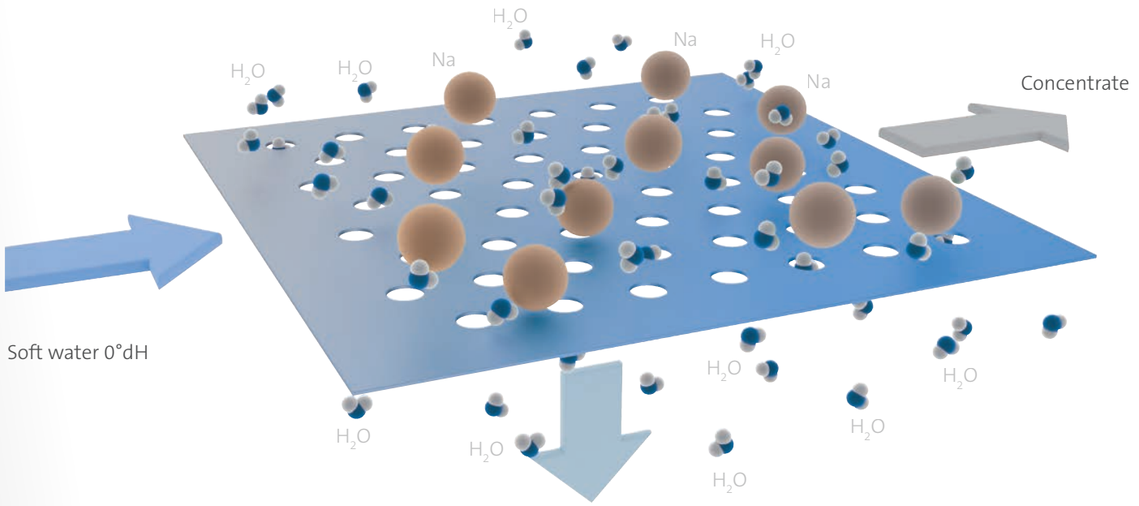
Hygienically clean water

Reverse osmosis by Condair produces permeate of high hygienic quality. The combination of advanced technology and quality materials means that valuable humidifying water is provided in an ideal way.

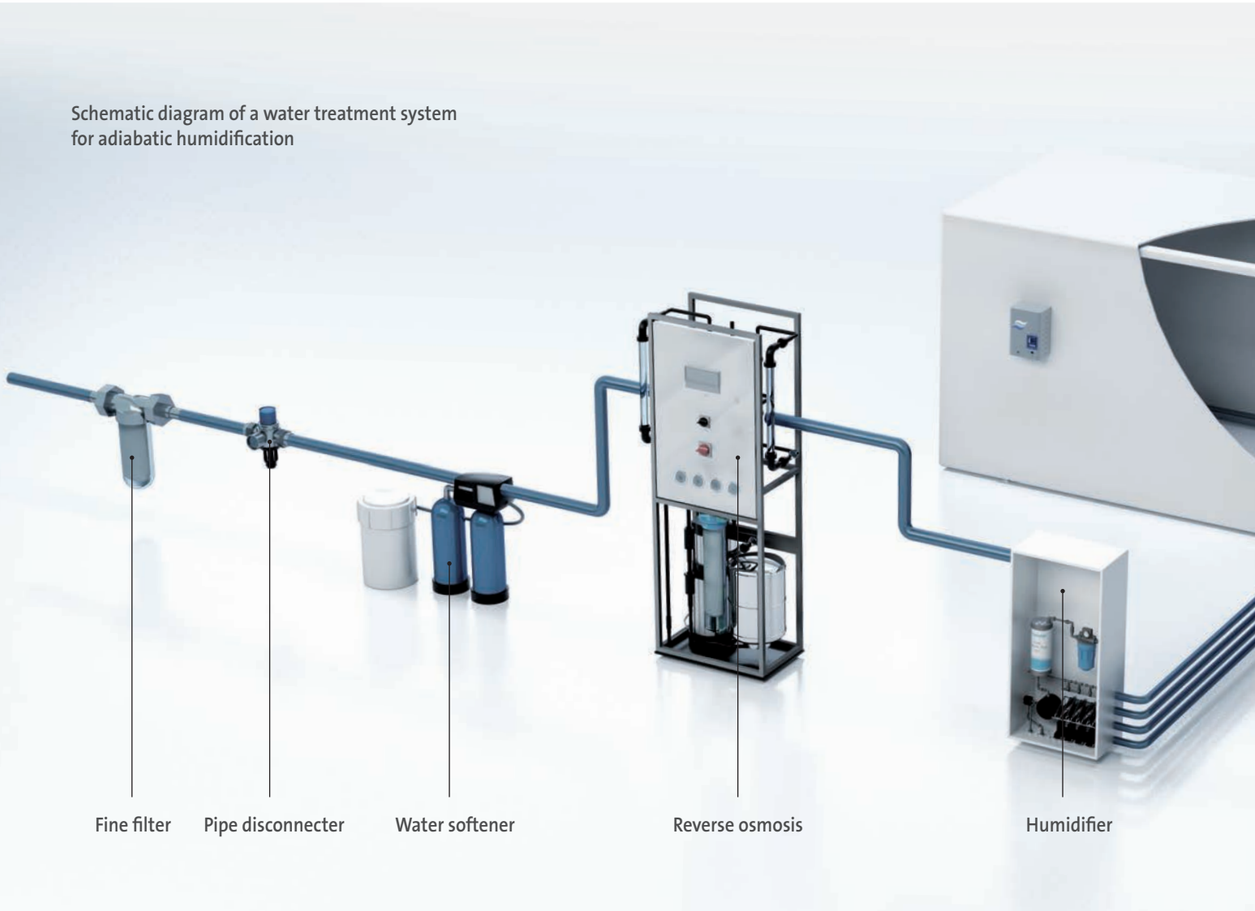
Ground-breaking process
The innovation of osmosis technology has not only initiated new developments but also raised the standard of water treatment. Above all, this technical solution only applies in the case of Condair reverse osmosis.

Advanced technology and high-quality material
The quality of the permeate produced is reflected in the use of high-quality components. Advanced membrane modules guarantee the sustained release of the required permeate. The storage of a large volume of humidifying water — with risk of microbial contamination — is not required.

Functional principle: Reverse osmosis



Schematic diagram of a water treatment system for adiabatic humidification



Water treatment by Condair

Condair Soft 10

Small softening system
Pendulum softening system for the continuous production of soft water. Two exchanger containers that are directly integrated in the compact brine tank alternately provide an uninterrupted supply of soft water to downstream consumers. The regeneration is triggered automatically with a controlled volume of water. An electrical connection is not necessary.

Technical data

Softening capacity:	9.5 m^3x°dH
Operating temperature:	5–50°C
Nominal output:	0.4 m^3h
Dimensions:	
Width	522 mm
Height	470 mm
Depth	520 mm

Condair Soft 60-400

Water softening
Pendulum softening system for the continuous production of soft water.
Two exchangers operate alternately to ensure an uninterrupted supply of soft water to downstream consumers.
Compact design with a central control valve mounted on exchanger tanks, which controls the soft water production, regeneration cycles and the switchover between the resin tanks.
An adjacent brine tank for storing and regenerating salt reserves.

Technical data

Model	60	120	200	230	400	
Softening capacity:	60	120	200	320	400	m^3x°dH
Nominal output:	0.68	1.35	2.25	3.60	4.50	m^3h
Dimensions (with salt container):						
Width approx.	465	600	600	760	800	mm
Height approx.	1,096	1,125	1,577	1,577	1,862	mm
Depth approx.	740	740	840	840	1,050	mm

Condair AX 02

Compact reverse osmosis system
Compact reverse osmosis system for producing demineralized water.
The reverse osmosis system is intended for direct connection to the drinking water supply or an upstream Condair Soft softening system. Suitable for supplying RS and EL steam/air humidifiers and the RAV high-speed steam generator.

Technical data

Permeate output:	20 l/h
Water inlet pressure:	2–5 bar
Power consumption:	0.15 kW
Dimensions:	
Width	620 mm
Height	420 mm
Depth	330 mm

Condair AX 05

Compact reverse osmosis system
Compact reverse osmosis system for producing demineralized water. The reverse osmosis system is intended for direct connection to the drinking water supply or an upstream Condair Soft softening system. Suitable for supplying RS, EL and GS steam/air humidifiers, as well as the RAV high-speed steam generator and Condair ME evaporative cooler.

Technical data

Permeate output:	50 l/h
Water inlet pressure:	2–5 bar
Power consumption:	0.55 kW
Dimensions:	
Width	1,400 mm
Height	670 mm
Depth	430 mm

Condair AX 12, 20

Compact reverse osmosis system
Compact reverse osmosis system for producing demineralized water. The reverse osmosis system is intended for direct connection to the drinking water supply or an upstream Condair Soft softening system. Suitable for supplying RS, EL and GS steam/air humidifiers, as well as the RAV high-speed steam generator and Condair ME evaporative cooler.

Technical data

Permeate output:	120, 200 l/h
Water inlet pressure:	2–5 bar
Power consumption:	0.55 kW
Dimensions:	
Width	1,400 mm
Height	670 mm
Depth	430 mm

Condair AX 30

Compact reverse osmosis system
Compact reverse osmosis system for producing demineralized water. The reverse osmosis system is intended for direct connection to the drinking water supply or an upstream Condair Soft softening system. Suitable for supplying RS, EL and GS steam/air humidifiers, as well as the RAV high-speed steam generator and Condair ME evaporative cooler.

Technical data

Permeate output:	300 l/h
Water inlet pressure:	2–4 bar
Power consumption:	0.55 kW
Dimensions:	
Width	1,400 mm
Height	670 mm
Depth	430 mm

Condair AX 50

Compact reverse osmosis system
Compact reverse osmosis system for producing demineralized water. The reverse osmosis system is intended for direct connection to the drinking water supply or an upstream Condair Soft softening system. Suitable for supplying RS, EL and GS steam/air humidifiers, as well as the RAV high-speed steam generator and Condair ME evaporative cooler.

Technical data

Permeate output:	500 l/h
Water inlet pressure:	2–4 bar
Power consumption:	0.55 kW
Dimensions:	
Width	1,400 mm
Height	670 mm
Depth	430 mm

Condair RC

Rainwater collection
The Condair RC is specially designed to microbiologically prepare rainwater in such a way that it can be used for adiabatic exhaust air cooling.

Variant: CONDAIR RC-U
The microbiological treatment is carried out by means of a UV reactor.

Variant: CONDAIR RC-C
Here, the continuous addition of chlorine dioxide ensures a sustainable microbial reduction of the supply water with a deposit effect.

Technical data

Model: RC-U1000/RC-C1000	
Provision:	1.0 m³
Reservoir:	2.0 m³
Model: RC-U2000/RC-C2000	
Provision:	2.0 m³
Reservoir:	4.0 m³

Condair AT

Reverse osmosis system
Condair AT reverse osmosis systems were designed specifically for the special requirements of adiabatic humidification technology. They are perfectly reliable, economical and hygienic, and therefore guarantee ideal humidifying water quality. The high-quality permeate is provided in an atmospherically sealed pressure reservoir made of stainless steel.

Technical data

Permeate output:	60–1,500 l/h
Water inlet pressure:	2–5 bar
Power consumption:	0.6–4.0 kW
Dimensions:	
Width	600 mm
Height	1,680 mm
Depth	600 mm

Condair AT2 dynamic

Reverse osmosis system (for an RLT system)
The highest efficiency and lowest water use are based on the use of advanced technology and microprocessor controllers.
The frequency-controlled pump enables electrical energy to be optimally utilized over the entire output range. Rinsing times and quantities of rinse water can be further reduced. The water balance of the Condair AT2 surpasses conventional systems by far.

Technical data

Permeate output:	75–1,250 l/h
Water inlet pressure:	2–5 bar
Power consumption:	0.6–1.5 kW
Dimensions:	
Width	650 mm
Height	1,800 mm
Depth	650 mm

Condair AT2 static

Reverse osmosis system (for several RLT systems)
The highest efficiency and lowest water use are based on the use of advanced technology and microprocessor controllers.
The frequency-controlled pump enables electrical energy to be optimally utilized over the entire output range. Rinsing times and quantities of rinse water can be further reduced. The water balance of the Condair AT2 surpasses conventional systems by far.

Technical data

Permeate output:	75–1,250 l/h
Water inlet pressure:	2–5 bar
Power consumption:	0.6–1.5 kW
Dimensions:	
Width	650 mm
Height	1,800 mm
Depth	650 mm

Clearly organized membrane keyboard with visual text display

Controlled pump with EFF1 efficiency rating

High power savings

Hygienic Stainless steel pressure reservoir

Water yield up to 80%

High-quality membrane stainless steel pipes

Quantity of rinse water greatly reduced

Water treatment system

CONDAIR AT2

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