

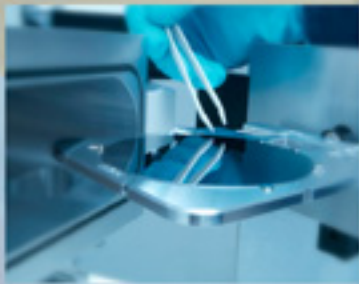


HUMIDIFICATION  
THE HYBRID AIR HUMIDIFIER WITH  
MULTI-STAGE HYGIENE CONCEPT.  
EFFICIENT. SAFE. AND CERTIFIED

CONDAIR DUAL2



 **condair**



## Key benefits

### Why Condair Dual2?

#### **Consistent.**

Long-time monitoring shows that the HygienePlus concept with regulated silver ionization has met the highest hygiene requirements for years.

#### **Aerosol-free.**

The multi-stage (hybrid) humidification system consists of precise molecular nozzles and the patented post-evaporation unit. This means: complete aerosol separation and fully hygienic humidification.

#### **Cost-saving.**

Nozzle arrangement, post-evaporation unit and a more intelligent control unit optimize the amount of waste water. This will considerably reduce operating costs.

#### **Minimum costs**

In order to atomize the humidification water, the Condair Dual2 needs low nozzle pressure which means that energy requirements will be minimal. In addition, the post-evaporation elements ensure high efficiency and reduce operating costs.

#### **Pure, humidified air**

The Condair Dual2 assumes part of your responsibility for hygienic production, storage and living conditions: Its atomizer generates a homogeneous spray mist that starts to evaporate straight away. The ceramic elements absorb the remaining water mist and evaporate it nearly completely. Thus only aerosol-free and hygienic air enters the rooms.

#### **An intelligent device**

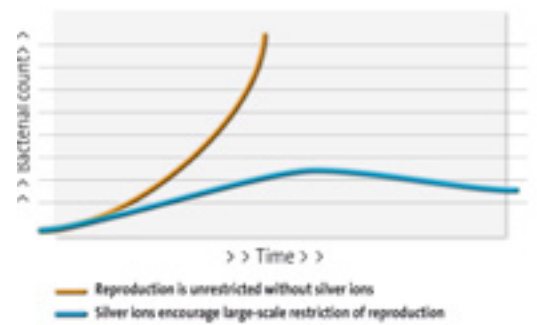
The central unit ensures safety and reliability. It regulates purging and discharge processes during start-up and shut-down of the system and monitors ionization, the amount of water to be evaporated and periodic purging during operation. All this saves you a lot of time and effort.

# Condair Dual2

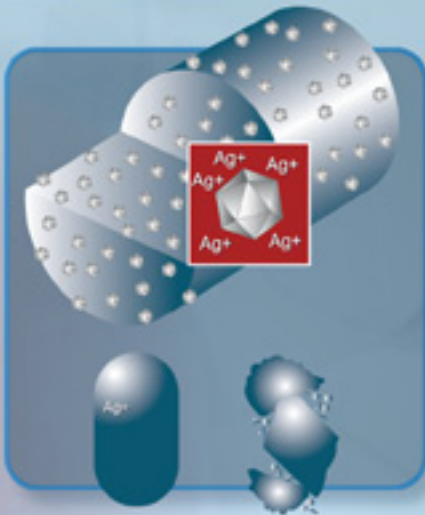
HUMIDIFICATION



silver ionization







**HygienePlus: Efficient germ neutralization with silver**

The proven HygienePlus process with regulated and demand-controlled silver ionization ensures hygienic conditions in the humidifying system.

Silver ions penetrate the cell structure of bacteria, block their respiration and metabolism and prevent the unchecked spread of micro-organisms.



**Electronic "brain" for maximum hygiene**

The central unit reliably monitors your Condair Dual2. It is accommodated in a protective cabinet housing. Its tasks are the following: Regulation of silver ionization in accordance with demand to ensure optimum water quality, minimizing waste water, purging of the central unit and the supply piping and optional discharge of the spraying circuits while preventing purging water from entering the humidifying circuit.



**Excellent performance with low pressure**

Only two to ten bar pressure are required for the molecular atomizer nozzles to dissolve the humidifying water in a mist of minute droplets. The nozzles are arranged in a stainless steel mesh grid in such a way that the mist starts to evaporate rapidly and the humidity is optimally distributed in the duct. Low pressure and rapid evaporation – this means high efficiency at minimum energy consumption.



## Droplet-free post-evaporation      Tested and approved

After a short “flight distance“ the water mist hits the post-evaporation elements made of special ceramics and arranged in a brick-like manner. This is also where the remainder of the humidifying water evaporates.

Thus the air flowing through the system is humidified in a hygienic way – and without aerosols, making optimum use of the valuable humidifying water.

The Fresenius Institute constantly performs micro-biological tests of several Condair Dual2 systems in operation. The results are convincing: The Condair Dual2 has received the SGS Fresenius Hygiene Certificate and has also been awarded for optimum hygiene and equipment safety by the Parent Organisation of the Employers’ Associations for Printing and Paper in Germany (BGDP).

# CONDAIR DUAL2



## Design and equipment

The Condair Dual2 will be designed to suit requirements in your plant. In addition, you may equip it with different optional facilities to adapt it more exactly to your needs.

	Standard	Option
Plant-specific design	●	
Alpha-numerical display	●	
Maintenance counter	●	
Silver ionization	●	
Monitoring of supply water intake	●	
Fresenius Hygiene Certificate	●	
3-stage control	●	
7-stage control		●
Protective cabinet including spray circuit discharge		●
BGDP Certificate		●
Remote printing		●
RS 235 or RS 485 interface with Modbus protocol		●
e-LINKS (BACnet/Lon Works) Building Management System		●

## Technical data

Length humidification section in m	1.2
Humidifier output in l/h	to 1'000
Power supply pump in VAC/1, 50..60 Hz	230
Working pressure pump in bar	7
Power consumption pump in kW	max. 0.35
Water supply pressure in bar	2..10
Water conductivity osmosis (uS/cm)	0.5..15
Control signals	0..20 VDC, 0..10 VDC, 0..8.25 VDC, 1..5 VDC, 0..5 VDC, 0..1 VDC, 0..20 mA, 4..20 mA
Control accuracy typ.	3 stages: up to +/- 10% r.h, 7 stages: up to +/- 4% r.h
Required filter prior to humidifier	min F7 (EU7)
Admissible air speed (m/sec)	0.5..4.0
Standards and guidelines	VDI 6022/3803, Ö-Norm H6021, SWKI 2003-5
Certificates	<ul style="list-style-type: none"> <li>Hygiene Certificate Fresenius-Institute Baumuster-Prüfung des ILH, Berlin</li> <li>„Optimized air humidifier“ Berufsgenossenschaft Druck und Papierverarbeitung Deutschland</li> </ul>