

# Direct Room Humidifiers

In-Space Humidification Sensation





Humidification and Evaporative Cooling







printing electronics offices call centers produce textile woodworking data centers life sciences

### Condair Direct Room Series – when you need direct room humidification

Condair specializes in the design and production of superior humidification systems and cooling. Our future depends on our ability to understand the needs of all our customers. We create the most appropriate solutions to their specific needs in the most efficient way. To this end, we draw upon our extensive experience to develop an ever-growing range of products that will provide our customers with maximum reliability, minimum maintenance and a choice of energy sources.

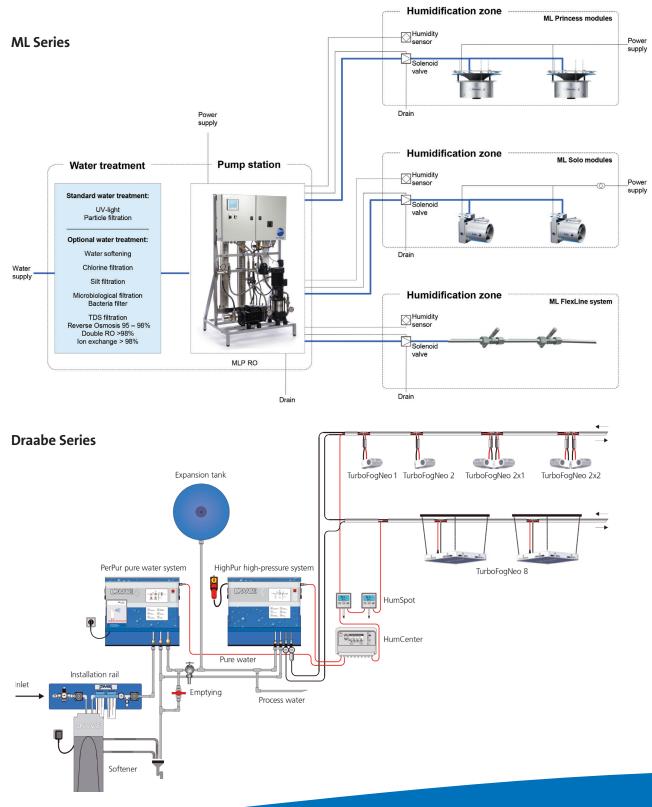
The Condair DR Series product line is no exception. Direct room humidification offers low operating costs, reduced cooling costs and requires minimal maintenance. Suitable for a wide range of applications – from production facilities to office environments – direct room humidifiers efficiently maintain consistent relative humidity levels.

#### Experts in your industry trust the Condair Direct Room Series to increase their profits - so should you.

Experts such as:

- Boeing
- Harley Davidson
- ۰ Keuri
- Honeywell
- Rock and Roll Hall of Fame
- The Green Planet Bio-Dome (Dubai)
- JABIL Flextronics
- 3M Corporation





# **ML Series Humidification Modules**

All ML Series humidification modules can be combined in one or more rooms or halls depending on space, room configuration, type of production and similar factors.

The ML Princess 2 is supplied in an elegant design and is recommended for humidification production areas within all industries. For applications in production areas with high ceilings as well as the horticulture sector, the ML Princess 3 is the ideal solution. ML Solo Series is used in applications with small moisture requirements such as the fruit and vegetable departments, or rooms with low ceilings.

The ML Flex System is used in the textile industry, for duct binding in rooms with high dust exposure, or for explosion-proof rooms. The system is ideal for adiabatic cooling of items, or in zones where a significant cooling effect is required.



SPECIFICATION	ML PRINCESS 2	ML PRINCESS 3	ML SOLO 1	ML SOLO 2	ML FLEX SYSTEM
Nozzles	8 stainless steel nozzles	12 stainless steel nozzles	One stainless steel nozzle with adjustable vaporization angles	Two stainless steel nozzles with adjustable vaporization angles	Customized nozzle and stainless steel pipe system with two stainless steel nozzle designs for full evaporation
Capacity – Ibs/hr (kg/hr)	Up to 80 (36) with full evaporation	Up to 120 (54) with full evaporation	5.5 (2.5) - 10 (4.5)	11 (5) - 20 (9)	5.5 (2.5) - 10 (4.5) per nozzle
Built-in Distribution Fan	Even humidification at 55 dBa and 100W	Even humidification at 59 dBa and 160W	Low noise for even humidification at 34 dBa	Low noise for even humidification at 37 dBa	N/A
Ceiling Heights – ft (m)	As low as 12 (3.6)	23 (7) or higher	As low as 8 (2.4)	As low as 8 (2.4)	24 (7.3) or higher
Mount	Ceiling or wall	Ceiling or wall	Ceiling or wall	Ceiling or wall	Suspended, ceiling, or wall
Recommended Use	Humidification and cooling in large manufacturing and production areas in all industries	Humidification and cooling in large manufacturing and production areas in all industries with high ceilings	Small work areas and offices	Small work areas and offices	High racking, explosion- proof and very dusty environments. Customized array construction for induct or plenum spaces.

## **Pump Station**



#### Why Choose the HP or ML Series?

- Modular design to fit many air handling units (AHU) and zones or spaces
- Connect 1 HP pump to numerous AHU's and zones saving on total costs
- Extremely low energy consumption when compared to steam humidifiers (save 90% of total energy)
- The best high pressure nozzle system out there. Nozzles atomize water into micro-fine particles. Anti-drip nozzles and many different size nozzles (3.3, 5.5, 10 or 13.2 lbs/hr)

## ML High Pressure Pump Station and Control: Standard Components

- Consistent high pressure 1000 psi for fine atomization
- High-clean water filtration
- Temperature and pressure pump safety protection
- Water meter
- Hour meter
- UV sterilization of water
- Siemens PLC humidity zone controllers with auto flush feature
- Corrosion resistant materials
- Water lubricated stainless steel Danfoss pump (very low maintenance)
- Turn-key assembly on self-contained single skid frame
- Available capacity from 264 to 6,600 lbs/hr (120 3,000 kg/hr)
- True n+1 (or n+2, even n+3) redundancy available for entire systems or pumps
- Directly coupled motor to pump never belt driven no belts to change

#### Integrated Reverse Osmosis Systems and more

- Ultra-clean demineralized water filtration
- 5 micron sediment pre-filter
- Processes normal tap water
- Ultra-clean demineralized water filtration
- Fully compatible with ML high pressure systems
- Nozzle clogging protection
- Clean In Place (CIP) add-on available to periodically dose the water with sanitizing agent. For ultra low bacteria count and keeping the system hygienic.
- Electrical conductivity sensors to measure water hardness and mineral quantity
- Modular add-ons to allow for deionized (DI) water production and CO2 dosing

# Draabe Series Humidification Modules

Draabe Series humidification solutions are for applications with both high or low humidification requirements. The Draabe direct room humidification system can be individually positioned and, in combination with the integrated water treatment unit, is easy to maintain and a completely hygienic solution.





TurboFog Neo1



TurboFog Neo 2x2



TurboFog Neo8

SPECIFICATION	NANOFOG	TURBOFOG NEO1	TURBOFOG NEO	TURBOFOG NEO2X1	TURBOFOG NEO2X2	TURBOFOG NEO8
Nozzles	Single atomizer with one stainless steel nozzle	Single atomizer with one stainless steel nozzle	Single atomizer with two stainless steel nozzles	Dual atomizer with two stainless steel nozzles	Dual atomizer with four stainless steel nozzles	Single atomizer with eight stainless steel nozzles
Capacity – Ibs/hr (kg/hr)	Up to 7 (3)	Up to 8 (3.5)	Up to 17 (7.7)	Up to 17 (7.7)	Up to 35 (15.8)	Up to 70 (31.7)
Built-in Distribution Fan	Virtually silent operation	34 dBa	37 dBa	37 dBa	37 dBa	55 dBa
Ceiling Heights – ft (m)	As low as 8 (2.4)	As low as 8 (2.4)	As low as 12 (3.6)	As low as 12 (3.6)	As low as 16 (4.9)	As low as 18 (5.5)
Mount	Wall moun	Ceiling				
Recommended Use	Small work ar	eas and offices	Low ceiling work areas and small operations environments		Production work areas and operations environments	Production work areas with higher ceilings

#### **Compressed Air Humidifier**

#### Series AF-22

- Built in set point and humidity sensor(Internal +/- 3% RH)
- Capacity: 22 lbs/hr
- Easy to install Ideal for retrofits
- User friendly control interface
- Standard UV-light sterilization
- Water quality: Tap water (Reverse Osmosis optional but recommended)
- Regular automatic flushing
- Suitable for woodworking, textile and printing applications



# Pump Systems

#### High Pressure Pump System



### HighPur

- Consistent 1000 psi operation for fine atomization
- UV-C water sterilization
- 100% evaporation of feed water
- Automatic self-flushing with cyclical exchange of water in stand-by mode
- Electronic safety check with pump monitor and inlet/outlet pressure monitoring
- Fully integrated small unit design
- Capacity of up to 660 lbs/hr (300 kg/hr) per box



### DuoPur

- 2 in 1 system: high pressure + reverse osmosis water treatment
- Compact, space-saving system
- No deposits in pipes or nozzles
- 100% germ-free through extensive hygiene functions
- Micro-fine pure water atomization through a pulsating hydraulic flow
- Very energy efficient
- Full-service approach

#### **Reverse Osmosis System**



### PerPur

- Demineralization of standard tap water
- Up to 80% high yield efficiency
- Pure water hygiene with automatic flushing function
- Optimization of consumables
- Capacity of up to 660 lbs/hr (300 kg/hr) per box

#### **Demineralization System**



### SynPur

- Ultra-clean deionized water for critical applications
- Cyclical flushing function with additional UV-C sterilization
- Capacity of up to 660 lbs/hr (300 kg/hr) per box

Treffer Compact Water Syste

#### TrePur

- 3 in 1 system: high pressure + reverse osmosis water treatment + conductivity sensing/CO2 dosing
- Compact, space-saving system
- Complete demineralization for sensitive applications
- 100 % germ-free through extensive hygiene functions
- Micro-fine pure water atomization through a pulsating hydraulic flow
- Very energy efficient
- Full-service approach

## Service

Having your humidification equipment serviced regularly will ensure reliability, maximize performance, prolong life and improve moisture stability.

Condair has the expertise to provide complete service for the life of your humidification system. From initial design and engineering through comprehensive installation, startup and on-going maintenance, Condair has you covered. We provide:

- Complete on-site training on the operation and maintenance of your equipment
- Comprehensive preventive maintenance program
- BQ bacteria testing on-site to ensure optimum water quality
- Installation and repair service by factory trained technicians

Condair knows your equipment the best. Contact us first for all of your service and support needs.

# Ultra Hygienic Systems

Rest assured that your direct room system will operate at peak hygienic conditions, backed by the most rigorous certification for hygiene and safety.

Condair is not only the leader in humidification, but is also the leader in hygiene. Trust Condair to ensure perfect safety and hygiene with reverse osmosis (RO) filters, micron filters, ultra-violet (UV) disinfection, automatic line flush and purging, BQ testing, disinfection, routine preventative maintenance, and the best certification for hygiene.

We can provide:



As the leading manufacturer of commercial/industrial humidification systems for more than 70 years, Condair has the technology and application expertise to meet the needs of any application.

Contact us today and ensure you have the best humidification solution for your application.

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