



# Diphusair Resistance

Steam humidifier

- Proven versatility and reliability
- Unique control configuration
- Compatible with all types of water
- Guaranteed quality and energy efficiency

**fisair**  
air humidity control 





## Autonomous control and stabilization of air humidity

# Versatility and flexibility for humidified areas

The DR series humidifier is a compact, frame-type unit with a stainless-steel clean steam drum generator, without the need for plastic cylinders. It is compatible with all types of tap or treated water (e.g. softened, deionised and reverse osmosis) and has numerous dispersion system options. Installation is quite simple: fix the frame easily and make the simple electricity and water connections..

### EASY TO MAINTAIN



- The removable housing allows easy access to the stainless-steel drum and electrical connections.
- The self-draining configuration minimize maintenanc.
- The optimised design and constant thermal expansion/contraction means there is continuous removal and no build-up of minerals on the heaters.
- The user-adjustable defoaming setting means that the foam with minerals is eliminated.
- Draining and rinsing, managed by the controller, removes precipitated minerals from the stainless-steel drum.

# Adaptable for every area of application

- Compact in size to fit into small spaces, with attractive cabinet for finished-space applications.
- Disperses steam into AHU, ductwork or open spaces.
- Optimal access to components saves space as well as on installation and service times.
- Modular operation available up to 16 units (740 kg/h).



clinics and hospitals



commercial buildings



galleries and museums

**Guaranteed quality and energy efficiency**

## Best humidification accuracy



- Unique resistances design to achieve the best performance.
- Capacities between 2,7 and 46 kg/h. Communication of up to 16 units, increasing the capacity to 740 kg/h.
- Solid State Relay (SSR) control giving one of the best accuracies on the market with  $\pm 3\%$  RH.



### ADVANTAGES

- Compatible with all types of tap or treated water (e.g. softened, deionised and reverse osmosis).
- Water level controlled electronically to ensure safe and reliable operation.
- A single compact size (length 614 mm x width 409 mm x height 472 mm) for the entire range of capacities (2,7 to 46 kg/h).
- Its accuracy is a reality.
- The automatic control for filling, defoaming, draining and rinsing the stainless-steel drum minimises maintenance and keeps hygiene.
- Surely one of the most affordable humidification systems, buy - install - maintain.

## DR series fan pack or steam blower



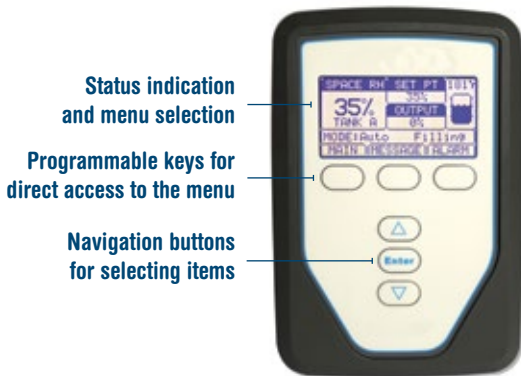
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For use in humidified spaces, a steam blower is available for steam dispersion in open spaces and is used when there is no associated AHU.



## Total control with the DR series controller

### SERIES CONTROLLER INTERFACE WITH KEYPAD/ DISPLAY



### DR SERIES WEB INTERFACE



## High Quality controller

DE controller provides the standard control features above, plus:

**Accurate, responsive RH control** with PID tuning for maximum performance.

The **Auxiliary temperature sensor** for monitoring air temperature, e.g. in a duct, and providing temperature compensation to prevent condensation.

The **Modular humidifier control** for controlling up to 16 humidifiers in stages with a single controller, in “master-slave” protocol.

**Web interface** provides the capability to set up, view, and adjust humidifier functions via Ethernet, either directly or remotely through a network.

**USB port** allows firmware updates and data backup and restore.

**Modbus, BACnet** (standard protocols) or **LonTalk** (optional).

**Real-time clock** allows time-stamped alarm and message tracking.

**Programmable outputs** allow remote signalling and device activation.

**Data logging** allows controller data to be downloaded to a PC for viewing and analysis.

**Enhanced diagnostics** include:

- **Test outputs** function using keypad/display or Web interface to verify component operation.
- **Test humidifier** function using simulated demand to validate performance.



## Fisair selection tool

- The Fisair Selection Tool, for the Diphusair Resistance, it is the only selection tool of its on the market. The tool enables the selection of the best solution for each specific project and application.
- It is straightforward, simple and highly intuitive to use, enabling the selection of several units for one or more projects in a few short minutes and printout in a single document.

- It provides the technical drawings and makes it possible for the manufacturers of air-handling units to understand the exact nature of the space they need for the installation of the Diphusair Resistance.
- Available for free to all our preferential clients, and it is available in DLL format for manufacturers.

### Description and advantages:





## Diphusair Resistance technical data

Type	DR-08	DR-16
Steam capacity [kg/h]	8.2	16.3
Main Supply (CE Market)	400V/III/50Hz	400V/III/50Hz
Nominal power [kW]	6	12
Consumption [A] 400V	13,0 (*)	17,3
Control voltage	24V, 50/60Hz	
Steam outlet (Hose connection)	Hose connection DN40 (Ø38,1mm)	
Shipping Weight [kg]	40	42
Operational weight [kg]	55	63
Dimensions [mm] Length x Width x Height	614 x 409 x 472	
Water supply requirements	1/4" (DN08) / Pressure: 175-550 kPa / All types of tap or treated water (e.g. softened, deionised and reverse osmosis).	
Water drain requirements	3/4" (DN20) / Tubing able to withstand 100°C	

(\*) To establish the cable section, the highest consumption is shown due to an imbalance in the heater phase connection.



## Diphusair Resistance technical data

Type	DR-29	DR-34	DR-46
Steam capacity [kg/h]	28.6	34	46.3
Main Supply (CE Market)	400V/III/50Hz		
Nominal power [kW]	21	25	34
Consumption [A] 400V	30,3 (*)	36,1 (*)	49,1 (*)
Control voltage	24V, 50/60Hz		
Steam outlet (Hose connection)	Hose connection DN50 (Ø50,8mm)		
Shipping Weight [kg]	43		46
Operational weight [kg]	69		71
Dimensions [mm] Length x Width x Height	614 x 409 x 472		
Water supply requirements	1/4" (DN08) / Pressure: 175-550 kPa / All types of tap or treated water (e.g. softened, deionised and reverse osmosis).		
Water drain requirements	3/4" (DN20) / Tubing able to withstand 100°C		

(\*) These models don't have the fan pack or steam blower option.

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