

DH - DR

Standard Dehumidifiers



DH



DR



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DH dehumidifiers series are high-performances units especially designed for industrial or commercial purposes where humidity level should be controlled or water vapour condensation should be prevented. These units are particularly indicated for archives, ironing rooms, bookstores, cheese factories, underground rooms, cellars and industrial sites where high humidity level is present.

This series comprises 3 basic models which cover a capacity range from 75 to 124 l/24h. DH units are designed for easy maintenance and service, each part being readily accessible.

VERSIONS

- Standard version available in 3 different sizes
- **Hot gas defrost version (s):** Beside the components of the standard version, the unit is supplied with a solenoid valves set for the hot gas injection used to defrost the evaporator in case of severe working conditions. The hot gas injection allows a faster defrost time and this permits to use this unit in areas with lower temperatures (down to 1°C) compared to the standard version

ACCESSORIES

- **HYGR:** Integrated mechanical hygrostat.
- **HYGR:** Remote mechanical hygrostat.
- **INOX:** Stainless steel frame.
- **PM:** Available static pressure 200Pa.
- **TROL:** Floor trolley version.

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Models DH		75	75S	100	100S	120	120S
Moisture removed ⁽¹⁾	l/24h	75,1	75,1	93,7	93,7	124,0	124,0
Total power input ⁽¹⁾	kW	1,3	1,3	1,6	1,6	1,8	1,8
Max power input ⁽²⁾	kW	1,6	1,6	2,0	2,0	2,2	2,2
Max input current	A	5,9	5,9	6,8	6,8	7,4	7,4
Peak current	A	22,2	22,2	31,2	31,2	35,2	35,2
Air flow	m ³ /h	1000	1000	1000	1000	1200	1200
Refrigerant		R407C	R407C	R407C	R407C	R407C	R407C
Available static pressure	Pa	50	50	50	50	50	50
Sound Pressure ⁽³⁾	dB(A)	56	56	58	58	59	59
Temperature operating range	°C	15-35	1-35	15-35	1-35	15-35	1-35
Humidity operating range	%	50-99	50-99	50-99	50-99	50-99	50-99
Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50

Models DR		75	100	120
Moisture removed ⁽¹⁾	l/24h	75,1	93,7	124,0
Total power input ⁽¹⁾	kW	1,3	1,6	1,8
Max power input ⁽²⁾	kW	1,6	2,0	2,2
Max input current	A	5,9	6,8	7,4
Peak current	A	22,2	31,2	35,2
Air flow	m ³ /h	1000	1000	1200
Refrigerant		R407C	R407C	R407C
Available static pressure	Pa	50	50	50
Sound Pressure ⁽³⁾	dB(A)	56	58	59
Temperature operating range	°C	15-35	15-35	15-35
Humidity operating range	%	50-99	50-99	50-99
Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50

Performance refer to the following conditions:

(1) Room temperature 30°C; relative humidity 80%.

(2) Room temperature 35°C; relative humidity 80%.

(3) Sound pressure level measured at 1 mt from the unit in free field conditions according to ISO 9614.

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FRAME

All DH/DR units are made from hot-galvanised thick sheet metal, painted with polyurethane powder enamel at 180°C to ensure the best resistance against the atmospheric agents. The frame is self-supporting with removable panels.

The drip tray is present standard in all DH units and it's in stainless steel. The colour of the units is RAL 7035.

REFRIGERANT CIRCUIT

The refrigerant gas used in these units is R407C. The refrigerant circuit is made by using international primary brands components and according to ISO 97/23 concerning welding procedures.

The refrigerant circuit includes: filter drier, thermal expansion valve with external equalizer, Schrader valves for maintenance and control, pressure safety device (according to PED regulation).

COMPRESSOR

The compressor is rotative type with crankcase heater and thermal overload protection by a klixon embedded in the motor winding. It's mounted on rubber vibration dampers and, by request, it can be supplied with some jackets to reduce the noise (accessory).

CONDENSER AND EVAPORATOR

The condensers and evaporators are made of copper pipes and aluminium fins. The diameter of the copper pipes is 3/8" and the thickness of the aluminium fins is 0,1 mm. The tubes are mechanically expanded into the aluminium fins to improve the heat exchange factor. The geometry

of these condensers guarantees a low air side pressure drop and then the use of low rotation (and low noise emission) fans. All the units have a stainless steel drip tray. Besides this, each evaporator is supplied of a temperature probe used as automatic antifreeze probe.

FAN

The fan is centrifugal type. It's statically and dynamically balanced and supplied complete of the safety fan guard according to EN 294. It's mounted on the unit frame by interposition of rubber vibration dampers. The electric motor is at 4 poles (about 1500 rpm). Connected to the fan by belts and pulleys and it's equipped of an integrated thermal overload protection. The protection class of the motors is IP 54.

AIR FILTER

It's supplied standard with the unit. It's made of filtering material in synthetic fibre without electrostatic charge. It can be removed for differential disposal, class G3, according to EN 779:2002

MICROPROCESSOR

All DH / DR units are supplied standard with microprocessor controls. The microprocessor controls the following functions: compressor timing, automatic defrost cycles and alarms. An appropriate LCD display shows the operation mode of the unit, set point and alarms

ELECTRIC BOX

The electric switch board is made according to electromagnetic compatibility norms CEE 73/23 and 89/336. The accessibility

to the board is possible through the accessories panel. The following components are standard installed: compressors fuses, control circuit automatic breakers, compressor contactors. The terminal board is also supplied with voltage free contacts for remote ON-OFF.

CONTROL AND PROTECTION DEVICES

All units are supplied with the following control and protection devices: defrost thermostat, which signals to the microprocessor control that a defrost cycle is needed and controls its termination, high pressure switch with manual reset, low pressure switch with automatic reset, high pressure safety valve, compressor thermal overload protection, fans thermal overload protection.

TEST

All the units are fully assembled and wired at the factory, carefully evacuated and dried after leak tests under pressure and then charged with refrigerant R407C. They are all fully operational tested before shipment. They all conform to European Directives and are individually marked with the CE label and provided with Conformity Declaration.

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Versions DH	Code	DH75	DH75S	DH100	DH100S	DH120	DH120S
Integrated mechanical hygrostat	HYGR	○	○	○	○	○	○
Remote mechanical hygrostat	HYGR	○	○	○	○	○	○
Available static pressure 200 Pa	PM	○	○	○	○	○	○
Floor trolley version	TROL	○	○	○	○	○	○
Stainless steel frame	INOX	○	○	○	○	○	○

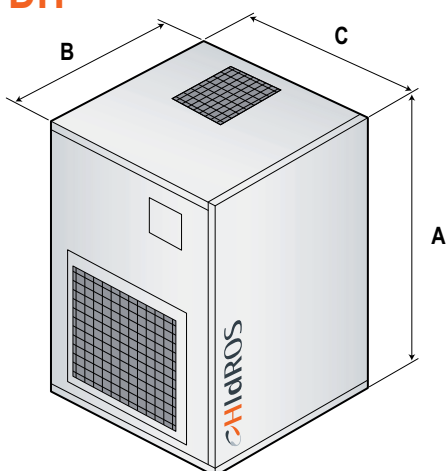
● Standard, ○ Optional, – Not available.

Versions DR	Code	DR75	DR100	DR120
Integrated mechanical hygrostat	HYGR	○	○	○
Remote mechanical hygrostat	HYGR	○	○	○

● Standard, ○ Optional, – Not available.

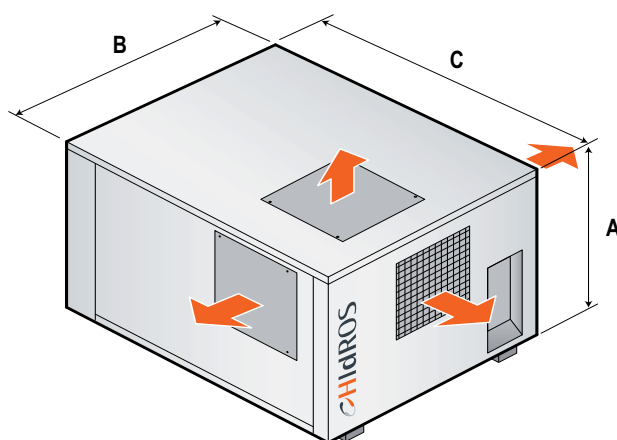
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Mod.	A (mm)	B (mm)	C (mm)	Kg
75	770	550	570	68
100	770	550	570	75
120	770	550	570	79

DR



Mod.	A (mm)	B (mm)	C (mm)	Kg
75	455	560	700	68
100	455	560	700	75
120	455	560	700	79