

## SDH

### Swimming pool dehumidifiers



Series SDH dehumidifier are expressly designed for use in swimming pools where humidity should be closely controlled in order to guarantee optimal comfort. These units are intended to be installed in a technical room close to the swimming pool. A centrifugal fan with high available static pressure allows unit connection to ductworks, both for air suction and discharge. This series comprises 2 basic models which cover a capacity range from 94 to 124 l/24h.

#### VERSION

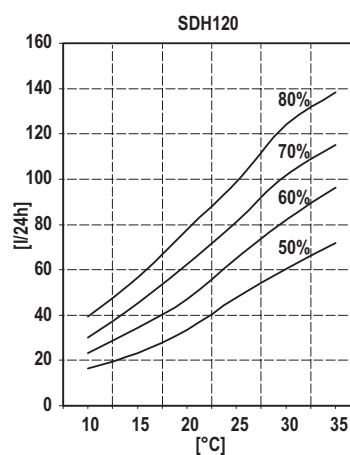
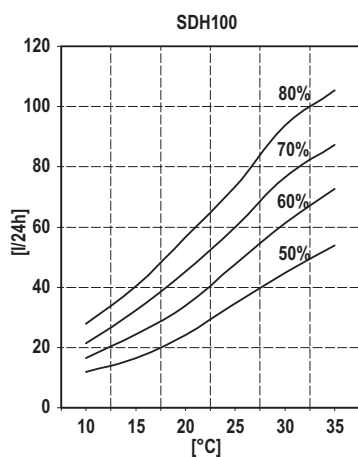
- The series includes 2 models with air flows from 1000 to 1200 m<sup>3</sup>/h.

#### ACCESSORIES

- Remote mechanical hygostat
- Remote mechanical hygostat + thermostat
- Partial heat recovery
- Hot water coil
- On/Off 3 way valve kit installed
- Electric heater kit ( 3kW, 4,5kW, 6kW)
- Low noise version ( with insulation of the compressor vane)

# SDH

Mod.		SDH100	SDH120
Moisture removed <sup>(1)</sup>	l/24h	93,7	124
Power input <sup>(1)</sup>	kW	1,7	2,2
Current input <sup>(1)</sup>	A	8,5	11,3
Partial heat recovery <sup>(2)</sup>	kW	1,35	1,35
Hot water coil <sup>(3)</sup>	kW	8,6	8,6
Air flow	m³/h	1000	1200
Available static pressure	Pa	200	200
Refrigerant		R407C	R407C
Sound pressure <sup>(4)</sup>	dB(A)	61	62
Temperature operating range	°C	5-35	5-35
Humidity operating range	%	50-99	50-99
Weight	Kg	133	147
Power Supply	V/Ph/Hz	230/1~/50	



<sup>1)</sup> Room temperature 30°C; relative humidity 80%.

<sup>2)</sup> Water temperature in / out 25-30°C.

<sup>3)</sup> Room temperature 32°C; water temperature 80/70°C.

<sup>4)</sup> At 1 mt from the unit in free field conditions according to ISO 3746.

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### FRAME

All SDH 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. All screws and rivets are 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: sight glass, filter drier, thermal expansion valve with external equalizer, Schrader valves for maintenance and control, pressure safety device (according to PED regulation).

### COMPRESSOR

The compressors are rotary with crankcase heater and thermal overload protection by a klixon embedded in the motor winding. The compressors are mounted on rubber vibration dampers and they can be supplied with sound attenuation jacket to reduce the noise emission (option). The inspection on the compressors is possible only through the unit front panel.

### CONDENSER AND EVAPORATOR

Condensers and evaporators are made of copper pipes and aluminium fins. All evaporators are painted with epoxy powders to prevent corrosion problem due to their use in aggressive environments. 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 heat exchangers guarantees a low air side pressure drop and then the use of low rotation (and low noise emission) fans. All units are supplied, standard, with a stainless steel drip tray and all evaporators are supplied with a temperature sensor used as automatic defrost probe.

### FAN

The fans are made of galvanized steel, centrifugal type, double inlet with forward curved blades. They are statically and dynamically balanced and supplied complete of the safety fan guard according to EN 294. They are mounted on the unit frame by interposition of rubber vibration dampers. The electric motors are 4 poles (about 1500 rpm), three-phase power supply. The motors are connected to the fans by pulleys and belts. The protection class of the motors is IP 54.

### AIR FILTER

It is made of synthetic filtering media, undulated type, without electro-static charge; they are all removable for differential disposal. Efficiency class G1, according to EN 779:2002.

### MICROPROCESSOR

All SDH units are supplied standard with microprocessor controls. The microprocessor controls the following functions: regulation of the water temperature, antifreeze protection, compressor timing, compressor automatic starting sequence, alarm reset, potential free contact for remote general alarm, alarms and operation led.

### 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 after removing the front panel of the unit and the OFF positioning of the main switch. The following components are also standard installed: main switch, magnetic-thermal switches (as a protection fans and compressors), control circuit automatic breakers, compressor contactors, fan contactors. The terminal board is supplied with voltage free contacts for remote ON-OFF and general alarm.

### CONTROL AND PROTECTION DEVICES

All units are supplied with the following control and protection devices: antifreeze protection sensor, 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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Remote mechanical hygrostat + thermostat	○	○
Partial heat recovery	○	○
Hot water coil	○	○
On/Off 3 way valve kit installed	○	○
Electric heater kit 3 kW (230/1~/50)	○	○
Electric heater kit 4,5 kW (230/1~/50)	○	○
Electric heater kit 6 kW (230/1~/50)	○	○
Low noise version with insulation of the compressor vane	○	○

● Standard, ○ Optional, – Not Available.

