

HERCULES

Condensation dehumidifiers for
industrial environments or pools

HHA/SHA 50÷200



TET
DRY AIR SOLUTIONS

UNIT DESCRIPTION

Series HHA/SHA dehumidifiers are high performance devices designed specifically for use in industrial environments and pools where it is necessary to control the humidity, preventing condensation phenomena and ensuring optimum environmental comfort. Suitable for small pools or hot tubs. It is planned to install these appliances in a technical room adjacent to the pool. The series consists of five models and covers a range of potential ranging from 49 to 190L/24h.

TECHNICAL DATA

MODEL	HHA/SHA	50	75	100	150	200
Performance						
Dehumidification capacity at 30°C 80% ⁽¹⁾	L/24h	49,0	73,0	95,0	155,0	190,0
Dehumidification capacity at 30°C 60% ⁽¹⁾	L/24h	39,0	56,7	77,4	118,3	146,7
Dehumidification capacity at 27°C 60% ⁽¹⁾	L/24h	34,9	50,1	69,1	104,4	129,5
Dehumidification capacity at 20°C 60% ⁽¹⁾	L/24h	25,6	35,4	50,7	75,7	92,5
Dehumidification capacity at 10°C 70% ⁽²⁾	L/24h	17,3	26,6	33,7	44,3	60,9
Fans						
Air flow	m ³ /h	500	800	1000	1400	1650
Available static pressure	Pa	50÷150	50÷150	50÷150	50÷150	50÷150
Refrigerant						
Type		R410a	R410a	R410a	R410a	R410a
Refrigerant charge	Kg	0,47	0,60	0,70	1,20	1,20
Global Warming Potential (GWP)		2088	2088	2088	2088	2088
Load equivalent CO ₂	t	0,98	1,25	1,46	2,51	2,51
Electrical characteristics						
Power Supply	Volt/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Total absorbed power at 30°C 80%	KW	0,97	1,29	1,76	2,07	2,74
Maximum absorbed power	KW	1,2	1,5	2,0	2,3	3,1
Maximum absorbed current ⁽³⁾	A	3,9	5,6	8,4	10,5	13,2
Starting current ⁽³⁾	A	19,1	20,1	38,4	44,7	63,7
Integrations for pool SHA version						
Supplementary electrical Heater	KW	3	3	3	6	6
Supplementary hot water coil ⁽⁵⁾	KW	3,5	7,5	8,5	13,0	14,0
Noise						
Sound pressure level ⁽⁴⁾	dB (A)	57	59	61	67	69
Sound power level ⁽⁴⁾	dB (A)	50	52	54	60	62

(1) Industrial version of HHA and pool SHA

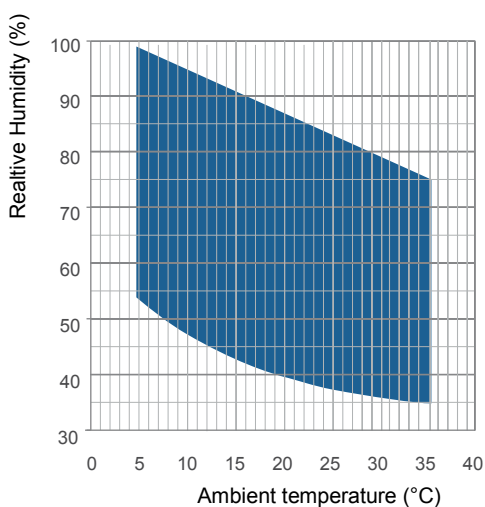
(2) Industrial version HHA

(3) No electrical resistance, only for, only for SHA swimming pool version

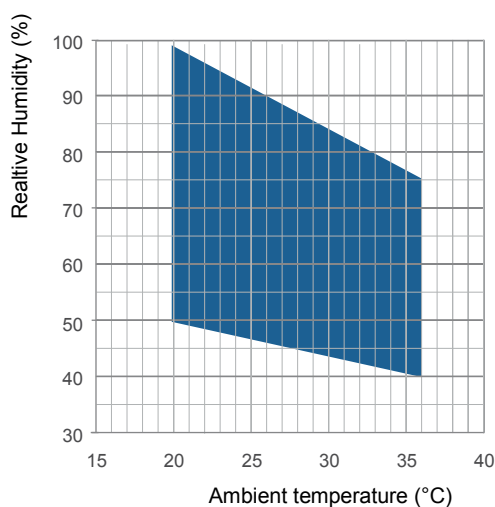
(4) Sound pressure level calculated in free field, 1 meter from unit, direction factor Q=2, according to ISO 9614

(5) Ambient temperature 30°C, water temperature 80°/70°C, compressor switched off

Operating Limits (HHA)



Operating Limits (SHA)



FRAME

All units are made of hot dip galvanized sheet and painted with polyurethane powders in oven at 180°C to ensure the best weather resistance. The carpentry is self-supporting with removable panels to facilitate the inspection and maintenance of the internal components. All screws and rivets are made of stainless steel. The color of the carpentry is RAL 9018.

REFRIGERANT CIRCUIT

The refrigerant circuit is made by using international primary brands components and according to ISO 97/23 concerning welding procedures. The refrigerant gas used in these units is R410A. The refrigerant circuit includes: capillary tube, Schrader valves for maintenance and control, pressure safety device (according to PED regulation).

COMPRESSOR

The compressors are of the rotary type with crank resistance and thermal protection relay drowned in the electric windings. The compressors are installed on rubber vibration dampers. Compressor inspection is possible through the front panel of the unit which allows maintenance even with units in operation.

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 0,15 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 PVC drip tray and all evaporators are supplied with a temperature sensor used as automatic defrost probe.

FANS

The fans are made of galvanized steel, centrifugal type with forward blades. They are all balanced statically and dynamically. All the electric motors used are directly connected to the fans. They have 3 speeds with integrated thermal protection. The motors are all with IP 54 degree of protection.

AIR FILTER

It is made of synthetic filtering media, ondulated type, without electro-static charge; they are all removable for differential disposal. Efficiency class G2, according to EN 779:2002.

MICROPROCESSORS

All units are equipped with a microprocessor to control compressor timing, defrost cycles and alarms. A special bright LED display indicates the operating status of the unit and the presence of any faults.

ELECTRIC PANEL

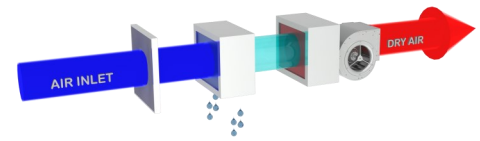
The electric panel is made in compliance with European regulations 73/23 and 89/336. Access to the power cabinet is possible by opening the front panel of the unit protected by a main gate switch. All units are installed as standard: Gateway door switches, magnetic circuit breakers for fan and compressor protection, fan relays, auxiliary circuit breaker, compressor relay. The panel is also equipped with a terminal block with clean 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 automatic reset, 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 R410A. 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.



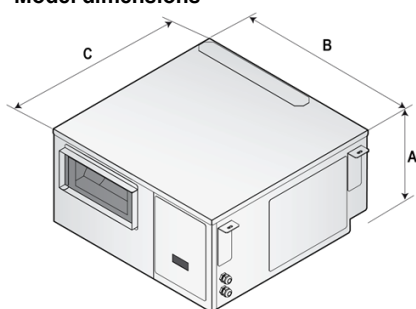
VERSION

HHA... Industrial version
SHA... swimming pool version

Model HHA		Code	50	75	100	150	200
Fans A.C. ≤ 150Pa			●	●	●	●	●
Defrosting hot gas			●	●	●	●	●
Thermostatic valve			●	●	●	●	●
Main power switch			●	●	●	●	●
Silent version		LS00	●	●	●	●	●
Flange of outlet		CANA	●	●	●	●	●
RS485 serial interface card		INSE	○	○	○	○	○
Built-in electronic sensor temperature and humidity		RGDD	○	○	○	○	○
Remote mechanical humidistat		HYGR	○	○	○	○	○
Remote control panel		PCRL	○	○	○	○	○
Fans E.C. high efficiency ≤ 300Pa		V1CE	○	○	○	○	○
Grid rails and counter-frame for canalized versions		KGBH	○	○	○	○	○
Model SHA		Code	50	75	100	150	200
Fans A.C. ≤ 150Pa			●	●	●	●	●
Thermostatic valve			●	●	●	●	●
Main power switch			●	●	●	●	●
Silent version		LS00	●	●	●	●	●
Cu-Ni Desuperheater		RP01	-	○	○	○	○
Hot water coil		HOWA	○	○	○	○	○
Kit electrical heaters 3KW		HOEL	○	○	○	○	○
Kit electrical heaters 6KW		HOEL	○	○	○	○	○
3-way modular valve kit installed		KIVM	○	○	○	○	○
RS485 serial interface card		INSE	○	○	○	○	○
Built-in electronic sensor temperature and humidity		RGDD	○	○	○	○	○
Remote mechanical humidistat		HYGR	○	○	○	○	○
Remote control panel		PCRL	○	○	○	○	○
Fans E.C. high efficiency ≤ 300Pa		V1CE	○	○	○	○	○
Grid rails and counter-frame for canalized versions		KGBH	○	○	○	○	○

● standard, ○ optional, – not available.

Model dimensions



Model	HHA/SHA	50	75	100	150	200
A	mm	360	460	460	530	530
B	mm	710	900	900	1050	1050
C	mm	700	980	980	1160	1160
Empty weight	Kg	63	95	122	131	140