



CLIMATE DESIGN

SBA HT

SWIMMING POOL DEHUMIDIFIERS FOR HIGH AMBIENT TEMPERATURE

R410A

Dehumidifying capacity from 20 l/24h to 187 l/24h
Air flow from 500 m³/h to 1500 m³/h



The dehumidifiers of the SBA HT series are high-performance devices specifically designed for use in swimming pools where it is necessary to control the humidity rate, in order to prevent condensation and to ensure excellent environmental comfort. They are suitable for small swimming pools or whirlpool baths where a high ambient temperature up to 42°C is maintained.

These units, thanks to oversized exchangers and suitable components, have an extended operating range. The development of the machine reduces the overall dimensions allowing the insertion even in narrow spaces. The series consists of 5 models and covers a capacity range from 30 to 140 l/24h.

Temperature and humidity probes are accessories supplied on request.

VERSIONS

- A** Version with cabinet
- P** Ductable units.

TECHNICAL DATA

SBA/A-P		036	056	076	116	156	163
Moisture removed at 35°C - 80%	l/24h	43,4	76,9	92,2	149,6	178,7	187,0
Moisture removed at 30°C - 80%	l/24h	35,5	60,7	72,1	124,4	141,0	148,2
Moisture removed at 30°C - 60%	l/24h	23,8	39,4	48,5	95,5	106,8	111,7
Moisture removed at 27°C - 60%	l/24h	20,6	33,8	40,3	82,8	93,5	97,2
Nominal input power ^{(1) (2)}	kW	0,5	0,7	0,9	1,3	1,8	2,2
Maximum input power ⁽²⁾	kW	0,7	1,0	1,1	2,2	2,7	2,7
Supplementary electric heater	kW	3,0	3,0	3,0	6,0	6,0	4,5
Maximum input current ⁽²⁾	A	3,1	4,5	4,8	8,7	12,1	5,8
Peak current	A	14,0	20,0	20,0	39,0	45,0	29,0
Hot water coil ⁽³⁾	kW	3,5	7,0	7,0	11,5	11,8	11,8
Air Flow	m³/h	500	650	650	1500	1500	1500
Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
Global warming potential (GWP)		2088	2088	2088	2088	2088	2088
Refrigerant charge	kg	0,30	0,50	0,52	1,00	1,20	1,20
Equivalent CO2 charge	t	0,63	1,04	1,09	2,09	2,51	2,51
Sound power ⁽⁴⁾	dB(A)	54	57	57	59	61	61
Sound pressure ⁽⁵⁾	dB(A)	47	50	50	52	54	54
Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3+N/50

Performances are calculated with low fan speed and are referred to the following conditions:

(1) Temperature 30°C; Humidity 80%.

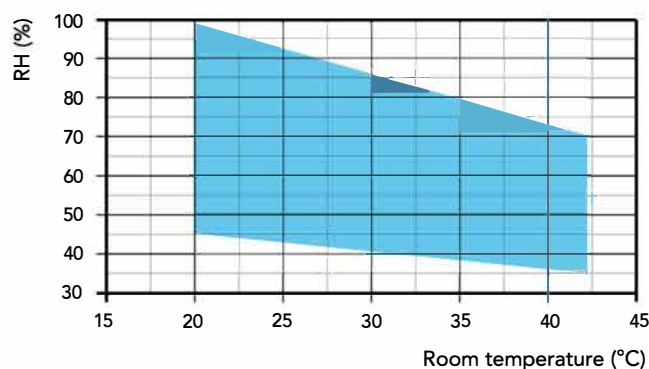
(2) Without electric heater.

(3) Room temperature 30°C; water temperature 80/70°C, at compressor OFF

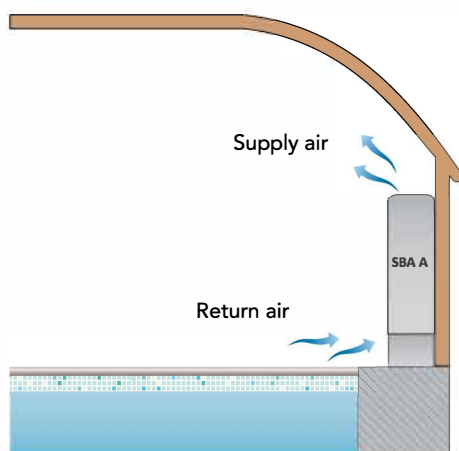
(4) Sound power level calculated according to ISO 9614.

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

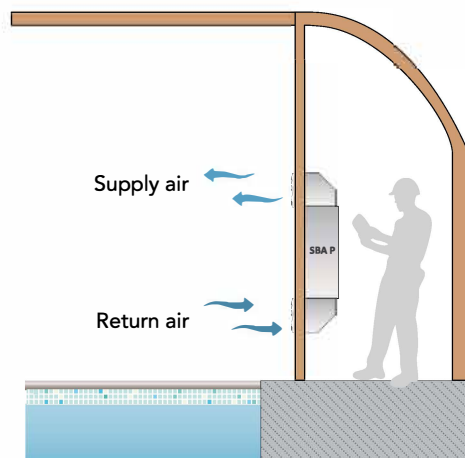
OPERATION LIMITS



Standard version (A)



Ducted version (P)



COMPONENTS

FRAME

All SBA 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 and to operate in aggressive environments. The frame is self-supporting with removable panels. A PVC drip tray is installed on all units. The colour of the unit is RAL 9010 both for the base and for the frontal panel.

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 rotative type, with thermal overload protection by a klixon embedded in the motor winding. The compressor is mounted on rubber vibration dampers and it is supplied, standard, with sound-proof cover to reduce noise emission. The inspection is possible through the frontal panel of the unit that allows the maintenance of the compressor.

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.

FAN

The fans are made of galvanized steel, centrifugal type. It is statically and dynamically balanced and supplied.

The electric motors are directly connected to the fan; they are all at 3 speeds, with integrated thermal protection. The protection class of the motors is IP 54.

AIR FILTER

It is made of synthetic filtering media, ondulated type, without electro-static charge; they are all removable for differential disposal. Efficiency class coarse 30%, according to UNI EN ISO 16890:2017.

MICROPROCESSOR

All units are supplied standard with microprocessor controls. The microprocessor controls the following functions: compressor timing, automatic defrost cycles, 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 2014/35 and 2014/30. The accessibility to the board is possible after removing the front panel of the unit and the OFF positioning of the main switch. If the unit is endowed of cabinet, after its removal.

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.

ACCESSORY DESCRIPTIONS

HYGR - Remote mechanical hygrostat

To be installed on the wall, it is supplied with a regulation knob and working range from 30% to 100% with precision of 3%.

HOEL - Electric heater

The electric heater kit is in aluminium and is used to integrate the unit heating capacity. The kit is composed of an on-off double safety thermostat without capacity steps.

HOWA - Hot water coil

The heat exchanger is 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.

INSE - Serial interface card RS485

This interface card enables the controller to communicate with other devices using Modbus protocol.

KGBH - Louver kit and case for ducted version

Air grille double row adjustable brushed aluminium fins, equipped for wall mounting with subframe.

KIVM - 3 way modulating valve kit

It is used to control the waterflow in the coil. The valve is directly controlled from the unit microprocessor.

LS00 - Low noise version

This version includes the complete acoustic insulation of the unit (compressor + heat exchangers vanes) with compressor jackets and insulating material made with high density media and the interposition of heavy bitumen layer.

PCRL - Remote control panel

This panel can be mounted up to 50m (maximum) from the unit and replicates all of the control functions. It is connected using a twin cable of 0.5 mm sq section.

RGDD - Humidity and Temperature electronic probe sensor

Built-in Electronic temperature and humidity probe.

PMBH - delivery and return plenum 90° (2 pieces)

To be used for "P" version to direct inlet/outlet air from/to swimming pool and vice versa. Galvanized steel made, coated with polyurethane powder to grant best resistance to weathering and operation in harsh environments.

ACCESSORIES

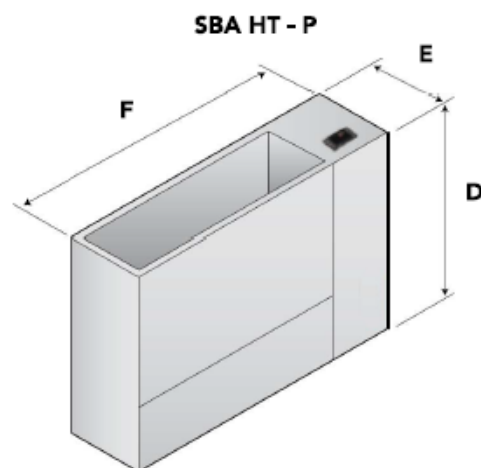
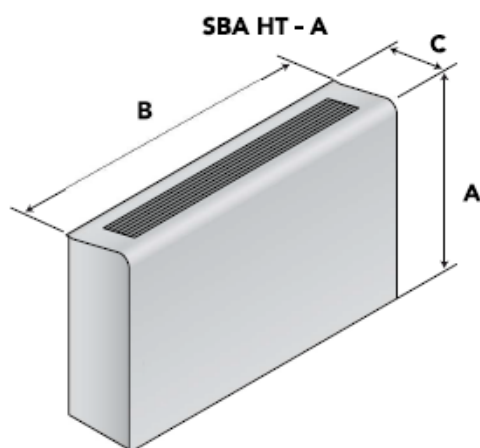
SBA HT

SBA HT - A		36/A	56/A	76/A	116/A	156/A	163/A
Built-in electronic control with display		●	●	●	●	●	●
Low noise version	LS00	●	●	●	●	●	●
Hot water coil	HOWA	○	○	○	○	○	○
Electric heater kit 3 kW	HOEL	○	○	○	–	–	–
Electric heater kit 4,5 kW	HOEL	–	–	–	–	–	○
Electric heater kit 6 kW	HOEL	–	–	–	○	○	–
Humidity / Temperature electronic probe sensor	RGDD	○	○	○	○	○	○
Remote mechanical hygostat	HYGR	○	○	○	○	○	○
On/Off 3 way valve kit installed	KIVM	○	○	○	○	○	○
Delivery and return plenum 90° (2 pieces)	PMBH	–	–	–	–	–	–
Louver kit and case for ducted version	KGBH	–	–	–	–	–	–
Feet	ZOCC	○	○	○	○	○	○
Remote control Panel	PCRL	○	○	○	○	○	○
Serial interface card RS485	INSE	○	○	○	○	○	○

● Standard, ○ Optional, – Not available.

SBA HT - P		36/P	56/P	76/P	116/P	156/P	163/P
Built-in electronic control with display		●	●	●	●	●	●
Low noise version	LS00	●	●	●	●	●	●
Hot water coil	HOWA	○	○	○	○	○	○
Electric heater kit 3 kW	HOEL	○	○	○	–	–	–
Electric heater kit 4,5 kW	HOEL	–	–	–	–	–	○
Electric heater kit 6 kW	HOEL	–	–	–	○	○	–
Humidity / Temperature electronic probe sensor	RGDD	○	○	○	○	○	○
Remote mechanical hygostat	HYGR	○	○	○	○	○	○
On/Off 3 way valve kit installed	KIVM	○	○	○	○	○	○
Delivery and return plenum 90° (2 pieces)	PMBH	○	○	○	○	○	○
Louver kit and case for ducted version	KGBH	○	○	○	○	○	○
Feet	ZOCC	–	–	–	–	–	–
Remote control Panel	PCRL	○	○	○	○	○	○
Serial interface card RS485	INSE	○	○	○	○	○	○

● Standard, ○ Optional, – Not available.



Mod.	A (mm)	B (mm)	C (mm)	kg
36	750	760	260	4
56-76	750	1060	260	63
116-156-163	836	1310	310	99

Mod.	D (mm)	E (mm)	F (mm)	kg
36	680	250	706	38
56-76	680	250	1006	56
116-156-163	770	300	1255	83



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