

VEGA

Condensation dehumidifiers for
industrial environments or pools

HBA/SBA 50÷200



TET
DRY AIR SOLUTIONS

UNIT DESCRIPTION

Series SBA dehumidifier are expressly designed for use in swimming pools where humidity should be closely controlled in order to guarantee optimal comfort. This series comprises five models which cover a capacity range from 50 to 200L/24h.

SBA units are designed for easy maintenance and service, each part being readily accessible and, when required, easily replaceable thus reducing service and maintenance costs.

TECHNICAL DATA

MODEL	HBA/SBA	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	40,1	56,6	77,3	113,1	143,5
Dehumidification capacity at 27°C 60% ⁽¹⁾	L/24h	35,6	50,7	68,9	96,6	131,7
Dehumidification capacity at 20°C 60% ⁽¹⁾	L/24h	25,8	35,6	51,3	71,5	96,6
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	40	40	40	40	40
Refrigerant						
Type		R410a	R410a	R410a	R410a	R410a
Refrigerant charge	Kg	0,47	0,60	0,70	1,2	1,2
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	0,9	1,2	1,6	1,9	2,5
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 SBA version						
Supplementary electrical Heater	KW	3	3	3	6	6
Supplementary hot water coil ⁽⁵⁾	KW	3,5	7,0	7,0	11,5	11,8
Noise						
Sound pressure level ⁽⁴⁾	dB (A)	47	50	50	52	54
Sound power level ⁽⁴⁾	dB (A)	54	57	57	59	61

(1) Industrial version of HBA and pool SBA

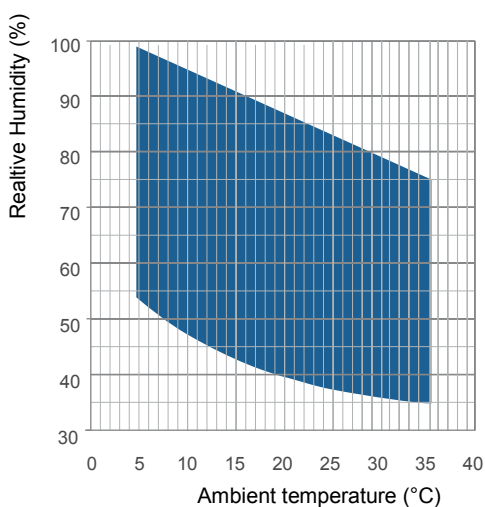
(2) Industrial version HBA

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

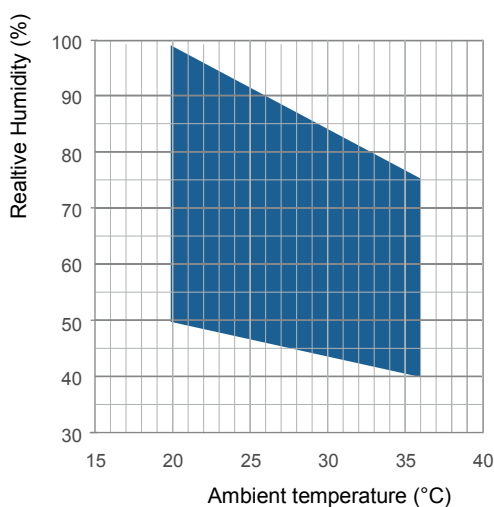
(4) Sound pressure level calculated in free field, 1 meter from unit, direction factor Q=2, according to ISO 9614

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

Operating Limits (HBA)



Operating Limits (SBA)



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 klaxon 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.

FANS

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 G2, according to EN 779:2002.

MICROPROCESSORS

All SBA 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 leds.

ELECTRIC ENCLOSURE

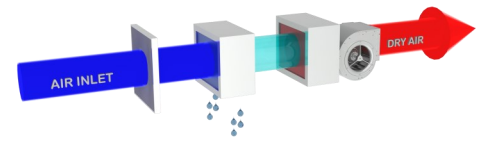
The electric switch board is made according to electromagnetic compatibility norms CEE 73/23 and 89/336. The accessibility to the board is possible after removing the front panel of the unit and the OFF positioning of the main switch. If the unit is endowed of cabinet, after its removal.

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.



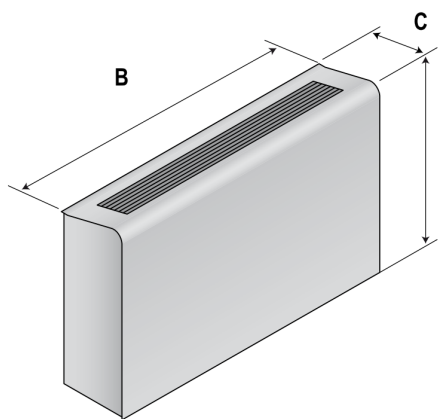
VERSION

HBA.../A	Industrial version with overhead cover
HBA.../P	Canalizable industrial version
SBA.../A	Swimming pool version with overhead cover
SBA.../P	Canalizable swimming pool version

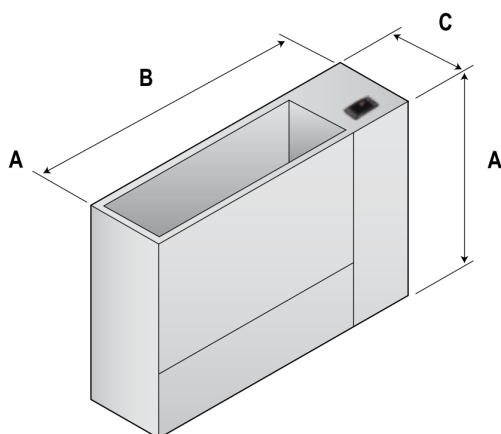
Model HBA		Code	50	75	100	150	200
Fans A.C. ≤ 40Pa			●	●	●	●	●
Defrosting hot gas			●	●	●	●	●
Thermostatic valve			●	●	●	●	●
Silent version		LS00	●	●	●	●	●
Main switch			●	●	●	●	●
RS485 serial interface card		INSE	○	○	○	○	○
Built-in electronic sensor temperature and humidity		RGDD	○	○	○	○	○
Remote mechanical humidistat		HYGR	○	○	○	○	○
Plenum delivery and reset at 90° (2 pcs) per version /P		PMBH	○	○	○	○	○
Grid rails and counter-frame for canalized versions /P		KGBH	○	○	○	○	○
Support feet for version /A		ZOCC	○	○	○	○	○
Remote control panel		PCRL	○	○	○	○	○
Model SBA		Code	50	75	100	150	200
Silent version		LS00	●	●	●	●	●
Hot water coil		HOWA	○	○	○	○	○
Kit electrical heater		HOEL	○	○	○	○	○
3-way valve on / off valve kit installed		KIVM	○	○	○	○	○
RS485 serial interface card		INSE	○	○	○	○	○
Built-in electronic sensor temperature and humidity		RGDD	○	○	○	○	○
Remote mechanical humidistat		HYGR	○	○	○	○	○
Plenum delivery and reset at 90° (2 pcs) per version /P		PMBH	○	○	○	○	○
Grid rails and counter-frame for canalized versions /P		KGBH	○	○	○	○	○
Support feet for version /A		ZOCC	○	○	○	○	○
Remote control panel		PCRL	○	○	○	○	○

● standard, ○ optional, – not available.

Model dimensions /A



Model dimensions /P



Model	/A	50	75	100	150	200
A	mm	750	750	750	836	836
B	mm	750	1060	1060	1310	1310
C	mm	260	260	260	310	310
Empty weight	Kg	50	64	68	99	102
Model	/P	50	75	100	150	200
A	mm	680	680	680	770	770
B	mm	250	250	250	300	300
C	mm	706	1006	1006	1255	1255
Empty weight	Kg	41	57	61	82	87