



OWB SERIES

AIR-COOLED WATER CHILLERS WITH AXIAL FANS AND SCROLL COMPRESSORS

142 to 574 kW

cooling capacity

2 1/2" to 3"

water connections diameter

R410A

refrigerant

DESCRIPTION

The OWB range consists of Air cooled water chillers with axial fans for outdoor installation. The OWB family comprises of 12 basic models with cooling capacities ranging from 140 to 570 kW. This allows flexibility of the unit selection, its accessories and the final installation operating conditions.

OWB units are particularly suitable for installations where continuous chilled water production is required even for applications in low external ambient temperatures. In this case, it is necessary to use the option of EC condenser fans.

The optional free-cooling feature, available in the 160-280 kW models, allows the free cooling of the water using a coil cooled by the ambient air.



APPLICATIONS

- Continuous chilled water production
- Applications in low external ambient temperatures

REFRIGERANT CIRCUIT

The cooling circuit is manufactured by skilled technicians using quality materials and brazing procedures that comply with Directive 97/22/EC. This applies to all models and includes the following components (except those listed above): dehydrating filter, sight glass and humidity indicators, high and low pressure manostats (fixed setting), the high and low pressure gauges, pressure taps for checks and maintenance, evaporation and condensation pressure transducers, refrigerant temperature probes and air / water probes.

For the models from OWB270 to OWB570, the evaporator has a double refrigerant circuit and a single water circuit. Compared to solutions with independent evaporators, this configuration is particularly effective for partial load applications.

HYDRAULIC CIRCUIT

The hydraulic circuit consists of an internal evaporator and pipework. It features a differential pressure monostat that protects the evaporator in the event of a loss of water flow.



Model OWB		140	160	190	220	270	300	320	380	420	450	510	570
Cooling capacity ⁽¹⁾	[kW]	142,37	166,11	193,06	224,25	270,55	293,84	318,38	386,82	423,69	458,07	526,44	574,08
Compressors power input ⁽¹⁾	[kW]	31,93	43,53	38,45	50,98	52,67	62,54	74,26	73,30	87,75	103,02	105,15	122,70
Total power input ^{(1) (2)}	[kW]	36,05	47,65	44,63	57,16	60,91	70,78	82,50	85,66	100,11	115,38	121,63	139,18
Total absorbed current ^{(1) (2)}	[A]	59,90	76,72	74,60	94,16	103,14	117,93	134,65	140,93	164,73	189,89	212,16	232,79
EER (pump excluded) ⁽¹⁾	---	3,95	3,49	4,33	3,92	4,44	4,15	3,86	4,52	4,23	3,97	4,33	4,12
Water flow ⁽¹⁾	[l/h]	24.488	28.570	33.207	37.571	46.535	50.541	54.761	66.532	72.874	78.789	90.547	98.742
Pressure drop ⁽¹⁾	[kPa]	55	73	51	67	53	62	71	51	60	70	67	79
Maximum power input (total) ^{(2) (3)}	[kW]	54,4	65,2	69,4	82,2	85,8	97,0	113,6	134,5	149,6	164,5	188,0	202,0
Total absorbed current ^{(2) (3)}	[A]	88,1	103,8	112,6	133,3	139,5	156,5	181,6	215,2	241,0	266,6	311,5	332,6
Starting current ^{(2) (3)}	[A]	257,8	265,7	349,0	359,3	318,4	333,2	352,0	377,1	473,5	492,6	508,2	555,0
Fan power	[kW]	20,6	2,06	2,06	2,06	2,06	2,06	2,06	2,06	2,06	2,06	2,06	2,06
Fan current	[A]	3,80	3,80	3,80	3,80	3,80	3,80	3,80	3,80	3,80	3,80	3,80	3,80
Number of fans	[#]	2	2	3	3	4	4	4	6	6	6	6	6
Power supply	[V/Ph/hz]	400/3/50											
IP protection class	-	IP54											
Refrigerant	---	R410A											
Compressor type	---	Scroll											
Evaporator type	---	Brazed plates											
Condenser type	---	Microchannel											
N° of compressors	[#]	2	2	2	2	4	4	4	4	4	4	4	4
N° of refrigerant circuits	[#]	1	1	1	1	2	2	2	2	2	2	2	2
Air flow	[m³/h]	44.000	44.000	66.000	66.000	88.000	88.000	88.000	132.000	88.000	132.000	176.000	176.000
Sound pressure level ⁽⁴⁾	[dB(A)]	58,0	56,6	58,0	58,0	60,5	60,5	59,5	59,5	60,5	60,5	59,5	61,5
Water connections diameter	[inch]	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	3"	3"	3"	3"	3"	3"
Width	[mm]	1.104	1.104	1.104	1.104	2.204	2.204	2.204	2.204	2.204	2.204	2.204	2.204
Depth	[mm]	3.004	3.004	4.002	4.002	3.004	3.004	3.004	4.004	4.004	4.004	5.004	5.004
Height	[mm]	1.977	1.977	1.977	1.977	1.977	1.977	1.977	1.977	1.977	1.977	1.977	1.977
Weight	[kg]	1.170	1.180	1.290	1.300	1.810	1.830	1.850	2.250	2.270	2.290	2.650	2.650
Tank capacity - Option	[dm³]	470	470	470	470	600	600	600	600	600	600	600	600
Expansion vessel capacity - Option	[dm³]	18	18	18	18	18	18	18	18	18	18	18	18
P2 Pump power input - Option	[kW]	3,75	3,75	3,75	3,75	5,10	5,10	5,10	6,70	6,70	6,70	9,10	9,10
P2 Pump absorbed current - Option	[A]	6,50	6,50	6,50	6,50	9,20	9,20	9,20	11,80	11,80	11,80	15,70	15,70
P3 Pump power input - Option	[kW]	6,70	6,70	6,70	6,70	9,10	9,10	9,10	9,10	9,10	9,10	13,10	13,10
P3 Pump absorbed current - Option	[A]	11,80	11,80	11,80	11,80	15,70	15,70	15,70	15,70	15,70	15,70	22,00	22,00
P5 Pump power input - Option	[kW]	11,00	11,00	11,00	11,00	16,58	16,58	16,58	17,50	17,50	17,50	13,10	13,10
P5 Pump absorbed current - Option	[A]	18,80	18,80	18,80	18,80	27,20	27,20	27,20	30,00	30,00	30,00	22,00	30,00

(1) Data referred to: water temp. in/out: 20/15 °C – Ambient air temp. 25 °C – (2) Data referred to unit without pump – (3) Data related to most heavy condition allowed by safety devices – (4) Referred at 10 m and at an height of 1,5 m in free field.