

WTG

Water-water chiller

Cooling capacity 246,6 ÷ 1959,4 kW



- **Extended operating range**
- **Possibility of selecting between heat exchangers with 1 or 2 passes on water side**



DESCRIPTION

Indoor unit producing chilled water equipped with magnetic levitation centrifugal compressors and shell & tube heat exchangers. The base, the structure and the panels are made of galvanized steel treated with polyester paint RAL 9003. The technological choices made always focus on maximum quality and efficiency, thereby achieving EER > 6 values (class A for Eurovent operating conditions).

EFFICIENCY

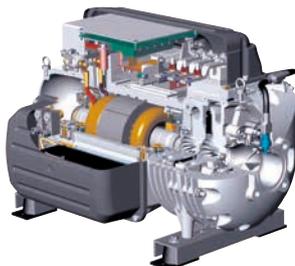
A High efficiency
U Very high efficiency
Both units can be silenced.

FEATURES

Two-stage, oil-free centrifugal compressor with latest-generation magnetic levitation

Oil-free operation without mechanical friction it is possible thanks to the use of magnetic levitation bearings that also ensure the total absence of vibration and low frequency noise. The compressor is equipped with an inverter for continuous load modulation by varying rpm (from 30% to 100%).

Built-in device to reduce starting current (only 6 Amps!)



Operating field

Water produced from 15 °C up to 50 °C on Condenser side and from 5 °C up to 25 °C on Evaporator side.

Flooded Evaporator

- Evaporator**
 - Low charge content
- Condenser**
 - With refrigerant on shell side and water on pipe side

Acoustic chiller enclosure (option)

in galvanised sheet metal of suitable thickness insulated on the inside with sound-proofing material.

CONTROL

Microprocessor adjustment, with 7", touch screen keyboard, which allows to navigate intuitively among the various screens, allowing to modify the operating parameters and graphically view the progress of some variables in real time and the adjustment includes complete management of the alarms and their log.

ACCESSORIES

- AER485P1:** RS-485 interface for supervising systems with MODBUS protocol. 1 accessory is provided for each unit control board.
- AERBAC-ONE:** Ethernet communication interface for Bacnet/IP and Modbus TCP/IP protocols, HTTPS protocol for web interface, encrypted communication protocols and access credential management in accordance with the latest standards. One accessory is provided for each unit control board.
- AERBACP:** Ethernet communication interface for Bacnet/IP and Modbus TCP/IP protocols. 1 accessory is provided for each unit control board.
- FL:** Flow switch.
- MULTICHILLER-EVO:** Control, switch-on and switch-off system of the single chillers where multiple units are installed in parallel (max. no. 9), always ensuring constant flow rate to the evaporators.
- AVX:** Spring anti-vibration supports.

ACCESSORIES COMPATIBILITY

Model	Ver	1310	1490	2310	2490	3310	3400	3490	4400	4490
AER485P1	A,U	•	•	•	•	•	•	•	•	•
AERBAC-ONE	A,U	•	•	•	•	•	•	•	•	•
AERBACP	A,U	•	•	•	•	•	•	•	•	•
FL	A,U	•	•	•	•	•	•	•	•	•
MULTICHILLER-EVO	A,U	•	•	•	•	•	•	•	•	•

- With the *MULTICHILLER_EVO* accessory, it is necessary to add *AER485P1* for each connected unit.

Antivibration

Ver	1310	1490	2310	2490	3310	3400	3490	4400	4490
A, U	AVX. (1)								

(1) Contact us.

CONFIGURATOR

Field	Description
1,2,3	WTG
4,5,6,7	Size 1310, 1490, 2310, 2490, 3310, 3400, 3490, 4400, 4490
8	Version
A	High efficiency
U	Very high efficiency
9	Exchanger
1	One pass on water side

Field	Description
2	Two passes on water side
10	Set-up
L	Silenced
°	Standard
11	Power supply
°	400V ~ 3 50Hz with circuit breakers on compressors and auxiliary circuit
12	Refrigerant gas
°	R1234ze

EXCHANGERS

Over-sized tube core exchangers ensure excellent performances at full and partial loads.

Flooded evaporator: with level adjustment through an electronic valve controlled by a level sensor.

Backflow condenser: with refrigerant on shell side and water on tube side.

- From size 1310 to 2490, heat exchangers have 2 passes on the water side

Starting from size WTG 3310, heat exchangers are available as versions with one or two passes on the water side, to meet any plant installation requirement. The dimensions of the two configurations ensure similar performances (same approach to heat exchangers). The difference is that the version with two passes on the water side due offers the convenience of water connections all on the same side, against a generally higher but nonetheless limited drop in pressure compared to the version with one pass on the water side.



PERFORMANCE SPECIFICATIONS

WTG - A

Size		1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 1										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	-	-	-	-	1049,5	1199,4	1409,4	1679,3 (2)	1955,0 (2)
Input power	kW	-	-	-	-	194,3	202,4	245,0	286,4	334,3
Cooling total input current	A	-	-	-	-	310,00	324,00	389,00	457,00	532,00
EER	W/W	-	-	-	-	5,40	5,93	5,75	5,86	5,85
Water flow rate system side	l/h	-	-	-	-	180.402	206.174	242.254	288.643	336.022
Pressure drop system side	kPa	-	-	-	-	24	32	27	29	28
Water flow rate source side	l/h	-	-	-	-	213.103	240.238	283.553	336.857	392.518
Pressure drop source side	kPa	-	-	-	-	23	23	24	27	19

(1) Date 14511:2022; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C

(2) Sizes 4400 and 4490 not included in the EUROVENT certification programme because Cooling capacity > 1500 kW

Size		1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 2										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	349,7	469,7	699,6	899,3	1049,3	1199,2	1409,2	1679,2 (2)	1958,5 (2)
Input power	kW	66,4	81,4	132,2	158,8	196,5	204,4	248,0	290,2	339,1
Cooling total input current	A	106,00	130,00	211,00	250,00	310,00	324,00	389,00	457,00	532,00
EER	W/W	5,27	5,77	5,29	5,66	5,34	5,87	5,68	5,79	5,78
Water flow rate system side	l/h	60.134	80.751	120.268	154.630	180.402	206.174	242.254	288.643	336.647
Pressure drop system side	kPa	24	14	22	50	45	49	40	44	46
Water flow rate source side	l/h	71.250	94.518	142.500	181.033	213.103	240.238	283.553	336.857	393.148
Pressure drop source side	kPa	23	18	23	32	33	32	42	47	39

(1) Date 14511:2022; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C

(2) Sizes 4400 and 4490 not included in the EUROVENT certification programme because Cooling capacity > 1500 kW

WTG - U

Size		1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 1										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	-	-	-	-	736,7	869,6	999,1	1159,6	1336,9
Input power	kW	-	-	-	-	120,2	140,2	153,5	186,2	211,9
Cooling total input current	A	-	-	-	-	205,00	233,00	254,00	311,00	349,00
EER	W/W	-	-	-	-	6,13	6,20	6,51	6,23	6,31
Water flow rate system side	l/h	-	-	-	-	126.626	149.476	171.729	199.301	229.777
Pressure drop system side	kPa	-	-	-	-	12	17	14	14	13
Water flow rate source side	l/h	-	-	-	-	147.066	173.222	197.868	230.962	265.867
Pressure drop source side	kPa	-	-	-	-	16	22	18	19	18

(1) Date 14511:2022; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C

Size		1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 2										
Cooling performance 12 °C / 7 °C (1)										
Cooling capacity	kW	246,4	334,3	492,9	669,8	736,6	869,5	999,1	1159,5	1342,8
Input power	kW	40,1	50,9	80,1	105,5	120,7	140,3	154,1	187,0	212,7
Cooling total input current	A	69,00	85,00	137,00	173,00	205,00	233,00	254,00	311,00	349,00
EER	W/W	6,15	6,57	6,16	6,35	6,10	6,20	6,48	6,20	6,31
Water flow rate system side	l/h	42.371	57.462	84.741	115.160	126.626	149.476	171.729	199.301	230.804
Pressure drop system side	kPa	12	7	11	28	22	26	20	21	22
Water flow rate source side	l/h	49.186	66.178	98.371	132.989	147.066	173.222	197.868	230.962	266.902
Pressure drop source side	kPa	11	9	11	17	16	16	20	22	18

(1) Date 14511:2022; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C

ENERGY INDICES (REG. 2016/2281 EU)

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 1											
SEER - 12/7 (EN14825: 2018)											
SEER	A	W/W	-	-	-	-	9,44	9,80	9,92	9,74	9,94
	U	W/W	-	-	-	-	9,82	10,35	11,12	10,46	10,95
Seasonal efficiency	A	%	-	-	-	-	374,50	388,80	393,60	386,40	394,40
	U	%	-	-	-	-	389,60	410,90	441,90	415,20	435,10
Water Regulation (1)	A,U	type	-	-	-	-	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW	FW/VO-FW
SEPR - (EN 14825: 2018)											
SEPR	A	W/W	-	-	-	-	10,15	11,89	11,60	11,62	11,51
	U	W/W	-	-	-	-	11,21	12,56	13,33	12,62	13,02
Water Regulation (1)	A,U	type	-	-	-	-	FW/FO-FW	FW/FO-FW	FW/FO-FW	FW/FO-FW	FW/FO-FW

(1) VW/VO - variable water flow rate/variable outlet temperature; FW/VO - fixed water flow rate/variable outlet temperature; VW/FO - variable water flow rate/fixed outlet temperature; FW/FO - fixed water flow rate/fixed outlet temperature.

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 2											
SEER - 12/7 (EN14825: 2018)											
SEER	A	W/W	8,53	9,30	9,37	9,06	8,77	9,22	9,20	8,99	9,15
	U	W/W	9,35	10,29	9,66	10,12	9,59	9,96	10,61	9,96	10,39
Seasonal efficiency	A	%	338,10	369,10	371,90	359,20	347,90	365,90	364,90	356,70	362,90
	U	%	371,10	408,40	383,20	401,70	380,60	395,50	421,20	395,50	412,50
Water Regulation (1)	A,U	type	FW/VO-FW								
SEPR - (EN 14825: 2018)											
SEPR	A	W/W	9,99	11,89	9,96	11,14	9,87	11,54	11,20	11,19	11,07
	U	W/W	11,39	13,47	11,34	12,59	11,03	12,33	13,03	12,33	12,69
Water Regulation (1)	A,U	type	FW/FO-FW								

(1) VW/VO - variable water flow rate/variable outlet temperature; FW/VO - fixed water flow rate/variable outlet temperature; VW/FO - variable water flow rate/fixed outlet temperature; FW/FO - fixed water flow rate/fixed outlet temperature.

ELECTRIC DATA

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Electric data											
Maximum current (FLA)	A,U	A	150,0	217,0	300,0	434,0	450,0	651,0	651,0	868,0	868,0
Peak current (LRA)	A,U	A	6,0	6,0	156,0	223,0	306,0	440,0	440,0	657,0	657,0

GENERAL TECHNICAL DATA

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 1											
Compressor											
Type	A,U	type	-	-	-	-	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Number	A,U	no.	-	-	-	-	3	3	3	4	4
Circuits	A,U	no.	-	-	-	-	1	1	1	1	1
Refrigerant	A,U	type	-	-	-	-	R1234ze(E)	R1234ze(E)	R1234ze(E)	R1234ze(E)	R1234ze(E)
Potential global heating (GWP)	A,U		-	-	-	-	1,37	1,37	1,37	1,37	1,37

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 2											
Compressor											
Type	A,U	type	Centrifugal								
Number	A,U	no.	1	1	2	2	3	3	3	4	4
Circuits	A,U	no.	1	1	1	1	1	1	1	1	1
Refrigerant	A,U	type	R1234ze(E)								
Potential global heating (GWP)	A,U		1,37								

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 1											
System side heat exchanger											
Type	A,U	type	-	-	-	-	Shell and tube				
Number	A,U	no.	-	-	-	-	1	1	1	1	1
Source side heat exchanger											
Type	A,U	type	-	-	-	-	Shell and tube				
Number	A,U	no.	-	-	-	-	1	1	1	1	1

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 2											
System side heat exchanger											
Type	A,U	type	Shell and tube								
Number	A,U	no.	1	1	1	1	1	1	1	1	1
Source side heat exchanger											
Type	A,U	type	Shell and tube								
Number	A,U	no.	1	1	1	1	1	1	1	1	1

SOUND DATA

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Set-up: L											
Sound data calculated in cooling mode (1)											
Sound power level	A	dB(A)	-	-	-	87,0	-	-	-	90,0	-
	U	dB(A)	-	-	-	-	-	-	-	-	-

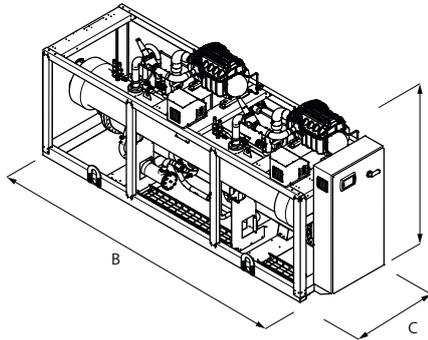
(1) Sound power calculated on the basis of measurements made in accordance with UNI EN ISO 9614-2, as required for Eurovent certification. Sound pressure (cold functioning) measured in free field, 10m away from the unit external surface (in compliance with UNI EN ISO 3744).

Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Set-up: °											
Sound data calculated in cooling mode (1)											
Sound power level	A	dB(A)	89,0	91,0	92,0	94,0	94,0	93,0	96,0	94,0	97,0
	U	dB(A)	86,0	88,0	89,0	91,0	91,0	93,0	93,0	94,0	94,0

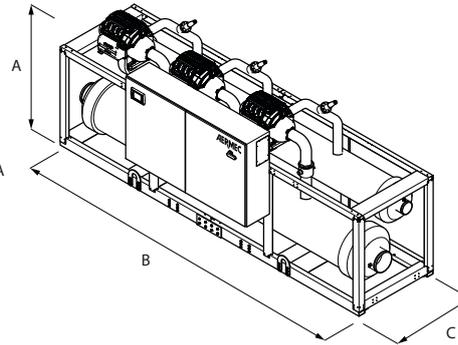
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DIMENSIONS

WTG 1310 - 2490



WTG 3310 - 4490



Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 1											
Dimensions and weights											
A	A,U	mm	-	-	-	-	2010	2010	2010	2280	2280
B	A,U	mm	-	-	-	-	4966	4966	4966	4966	4966
C	A,U	mm	-	-	-	-	1640	1640	1640	1732	1732
Size			1310	1490	2310	2490	3310	3400	3490	4400	4490
Exchanger: 2											
Dimensions and weights											
A	A,U	mm	1850	1970	2010	2280	2280	2280	2280	2280	2280
B	A,U	mm	3040	3040	3340	4390	3990	3990	4966	4966	4966
C	A,U	mm	1000	1240	1240	1332	1732	1836	1836	1836	1836

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