

HWF

Water cooled heat pump reversible water side

Cooling capacity 629,5 ÷ 1528,2 kW
Heating capacity 697,7 ÷ 1680,7 kW

- **Optimised for high condenser temperatures**
for example: units operating in heating mode
- **Maximum condenser leaving water temperature: 60°C**
- **Standard electronic expansion valve which allows**



EUROVENT LCP

CHARACTERISTICS

- Two independent refrigerant circuits
- High efficiency, low noise screw compressors with modulating capacity control from 12,5 a 100% for each compressor)
- Shell and tube evaporator optimised for refrigerant R134a
- **Standard electronic expansion valve**
- Compact dimensions
- Suitable for use in heat pump mode with leaving water temperature up to 60 °C (with hydraulic system reversing) and with dry-cooler. **For heating mode operation the IS accessory, condenser isolating valves, is required.**

Versions

- HWF_°** Standard chillers
HWF_A High efficiency version

Operational limits

- condenser leaving water temperature up to 60 °C
- evaporator leaving liquid temperature down to -6 °C

Options available

- D** Partial heat recovery
T Total heat recovery
E Evaporating unit
L Low noise unit with compressor acoustical enclosures made from galvanised steel and high density sound absorbent material

Modulating capacity control microprocessor system

- Redundancy of the unit (one microprocessor per circuit)
- Leaving water temperature control with modulating capacity control (12.5-100% for each compressor) and dynamic display of the refrigeration capacity
- Condensing control based on pressure with 0-10 Vdc signal for controlling a modulating valve / variable speed pump
- Electrical panel with all cables numbered

- Current transformer as standard for each compressor
- “Always Working” function. In the case of critical conditions the unit will not stop but automatically adjusts operation
- Automatic set point compensation using analogue inputs 4-20 mA or 0-10 V or an external air sensor
- Auto-adaptive differential to ensure correct compressor operating timers
- PDC (Pull Down Control) system which prevents capacity loading when the water temperature quickly approaches the set point
- DL (Demand Limit) system permits current limiting of the unit during times of insufficient electrical power (load peaks or generator operation)
- Multilingual display panel

ACCESSORIES

AER485P1: RS-485 interface for supervision systems with MODBUS protocol.

AERNET: The device allows the control, the management and the remote monitoring of a Chiller with a PC, smartphone or tablet using Cloud connection. AERNET works as Master while every unit connected is configured as Slave (max. 6 unit); also, with a simple click is possible to save a log file with all the connected unit datas in the personal terminal for post analysis.

MULTICHILLER_EVO: Control system for multiple parallel installed constant flow chillers providing individual chiller on/off and control capability.

PRV3: Remote control of the chiller operating functions.

AVX: Spring anti-vibration mounts.

ACCESSORIES FACTORY FITTED ONLY

RIF: Power factor correction. Connected in parallel to the motor allowing about 10% reduction of input current.

AKW: ACOUSTIC KIT (only for Versions L): Allows further unit sound reduction using an optimised enclosure made from a high density ecological material.

IS: Condenser isolating valves. Mandatory accessory for units operating in heat pump mode. Factory fitted only.

ACCESSORIES COMPATIBILITY

Size	Vers	2512	2812	3212	3612	4212	4812	5612	6412
AER485P1		•(x2)	•(x2)	•(x2)	•(x2)	•(x2)	•(x2)	•(x2)	•(x2)
AERNET		•	•	•	•	•	•	•	•
MULTICHILLER_EVO		•	•	•	•	•	•	•	•
PRV3		•	•	•	•	•	•	•	•

AVX: Antivibration

Size	2512	2812	3212	3612	4212	4812	5612	6412
Ver								
°	AVX673	AVX673	AVX673	AVX674	AVX674	AVX674	AVX675	AVX675
° L	AVX673	AVX673	AVX674	AVX674	AVX674	AVX674	AVX675	AVX675

Size	2512	2812	3212	3612	4212	4812	5612	6412
Ver								
A	AVX673	AVX673	AVX674	AVX675	AVX675	AVX675	AVX676	AVX676
A L	AVX674	AVX674	AVX675	AVX675	AVX675	AVX675	AVX676	AVX676

Power factor correction

Size	2512	2812	3212	3612	4212	4812	5612	6412
Version	RIFHWF2512	RIFHWF2812	RIFHWF3212	RIFHWF3612	RIFHWF4212	RIFHWF4812	RIFHWF5612	RIFHWF6412

A grey background indicates the accessory must be assembled in the factory

Acoustic kit

Size	2512	2812	3212	3612	4212	4812	5612	6412
AKW	(1)	•	•	•	•	•	•	•

(1) The accessory is only available for the low noise version "L"

A grey background indicates the accessory must be assembled in the factory

Isolating kit

Size	2512	2812	3212	3612	4212	4812	5612	6412
IS1	(2)	°/A	°/A	°	°	°	°	°
IS2	(2)			A	A	A	A	°
IS3	(2)						A	A

(2) For heating mode operation the IS accessory, condenser isolating valves, is required

A grey background indicates the accessory must be assembled in the factory

■ Attention: For D - T - E version - please contact us

CONFIGURATOR

Field	Description
1,2,3	HWF
4,5,6,7	Size 2512-2812-3212-3612-4212-4812-5612-6412
8	Model ° Optimised for high condensing temperature
9	Version ° Standard A High efficiency
10	Equipment ° Standard L Low noise
11	Heat recovery ° Without recovery D With Desuperheater T With total recovery ⁽¹⁾

(1) Options T are not compatible with option "E"

(2) 500V/3/50Hz available only size 2512-2812

Field	Description
12	Evaporator ° Standard E Evaporating unit
13	Power supply ° 400V/3/50Hz with fuses 8 400V/3/50Hz with circuit breakers 5 500V/3/50Hz with fuses ⁽²⁾ 9 500V/3/50Hz with circuit breakers ⁽²⁾

PERFORMANCE SPECIFICATIONS

HWF - °

Size		2512	2812	3212	3612	4212	4812	5612	6412
Power supply		400V/3/50Hz							
Cooling performance 12 °C / 7 °C⁽¹⁾									
Cooling capacity	kW	629,5	715,3	845,3	948,3	1094,3	1260,2	1420,1	1518,1
Input power	kW	130,1	148,1	173,6	195,4	225,0	259,6	294,4	214,4
Cooling total input current	A	226	255	286	314	378	426	488	530
EER		4,84	4,83	4,87	4,85	4,86	4,85	4,82	4,83
Water flow rate system side	l/h	108241	123017	145352	163049	188133	216654	244144	260981
Pressure drop system side	kPa	41	56	53	44	41	60	65	72
Water flow rate source side	l/h	129991	147681	174306	195762	225816	259827	293127	313224
Pressure drop source side	kPa	16	16	17	15	17	23	18	18
Heating performance 40 °C / 45 °C⁽²⁾									
Heating capacity	kW	697,7	792,6	935,2	1050,6	1211,8	1394,0	1573,0	1680,7
Input power	kW	157,4	180,2	211,0	236,6	271,9	315,8	358,7	384,1
Heating total input current	A	269	303	340	374	450	507	580	630
COP		4,43	4,40	4,43	4,44	4,46	4,41	4,39	4,38
Water flow rate system side	l/h	121208	137688	162463	182522	210527	242177	273304	292010
Pressure drop system side	kPa	14	14	15	13	15	20	16	16
Water flow rate source side	l/h	158554	180198	212916	238838	275582	317360	357628	382292
Pressure drop source side	kPa	88	120	114	94	88	129	139	154

Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

HWF - A

Size		2512	2812	3212	3612	4212	4812	5612	6412
Power supply		400V/3/50Hz							
Cooling performance 12 °C / 7 °C⁽¹⁾									
Cooling capacity	kW	644,4	732,3	857,3	968,3	1111,2	1252,3	1438,2	1528,2
Input power	kW	128,7	147,2	172,2	193,0	222,3	249,4	287,4	306,7
Cooling total input current	A	221	249	278	306	367	408	471,0	514
EER		5,01	4,98	4,98	5,02	5,00	5,02	5,00	4,98
Water flow rate system side	l/h	110818	125938	147414	166485	191054	215280	247237	262700
Pressure drop system side	kPa	44	60	57	41	59	40	42	50
Water flow rate source side	l/h	131931	149967	175561	198238	227443	256303	294435	312982
Pressure drop source side	kPa	65	66	68	66	67	72	77	76
Heating performance 40 °C / 45 °C⁽²⁾									
Heating capacity	kW	706,7	803,4	940,4	1061,8	1218,1	1372,6	1576,8	1676,3
Input power	kW	155,1	178,4	208,4	232,1	269,2	299,6	345,3	369,6
Heating total input current	A	263	296	331	364	437	485	560	611
COP		4,56	4,50	4,51	4,57	4,52	4,58	4,57	4,54
Water flow rate system side	l/h	122715	139500	163314	184400	211554	238401	273893	291181
Pressure drop system side	kPa	56	57	59	57	58	62	67	66
Water flow rate source side	l/h	162329	184476	215935	243871	279861	315346	362158	384809
Pressure drop source side	kPa	94	129	122	88	127	86	90	107

(1) Date 14511:2018; Water user side 12 °C / 7 °C; Water source side 30 °C / 35 °C
(2) Date 14511:2018; Water user side 40 °C / 45 °C; Water source side 10 °C / 7 °C

HWF - °E

Size		2512	2812	3212	3612	4212	4812	5612	6412
Cooling performance 12 °C / 7 °C⁽¹⁾									
Cooling capacity	kW	540,0	615,0	726,0	816,0	947,0	1070,0	1225,0	1311,0
Input power	kW	141,0	161,0	189,0	212,0	246,0	278,0	318,0	340,0
Cooling total input current	A	247	278	315	345	416	465	532	579
EER		3,83	3,82	3,84	3,85	3,85	3,85	3,85	3,86
Water flow rate system side	l/h	92778	105664	124735	140198	162705	183838	210469	225245
Pressure drop system side	kPa	30	42	39	32	31	44	49	54

(1) Acqua lato utenza 12 °C / 7 °C; Temperatura di condensazione 45 °C

HWF - AE

Size		2512	2812	3212	3612	4212	4812	5612	6412
Cooling performance 12 °C / 7 °C⁽¹⁾									
Cooling capacity	kW	577,0	657,0	779,0	873,0	1012,0	1143,0	1263,0	1362,0
Input power	kW	143,0	162,0	191,0	214,0	248,0	280,0	320,0	342,0
Cooling total input current	A	249	281	318	348	418	467	534	581
EER		4,03	4,06	4,08	4,08	4,08	4,08	3,95	3,98
Water flow rate system side	l/h	99135	112880	133841	149991	173873	196380	216998	234007
Pressure drop system side	kPa	35	48	33	33	49	34	32	39

(1) Water user side 12 °C / 7 °C; Condensing temperature 45 °C

ENERGY DATA

Size			2512	2812	3212	3612	4212	4812	5612	6412
Cooling capacity with low leaving water temp (UE n° 2016/2281)										
SEER	°	W/W	5,88	5,90	5,92	5,94	5,91	5,94	5,96	5,97
	A	W/W	5,99	5,97	6,00	6,05	6,01	6,06	6,09	6,06
η _{sc}	°	%	227,3	227,8	228,9	229,7	228,2	229,7	230,4	230,8
	A	%	231,6	230,7	231,9	233,8	232,2	234,4	235,7	234,3

ELECTRIC DATA

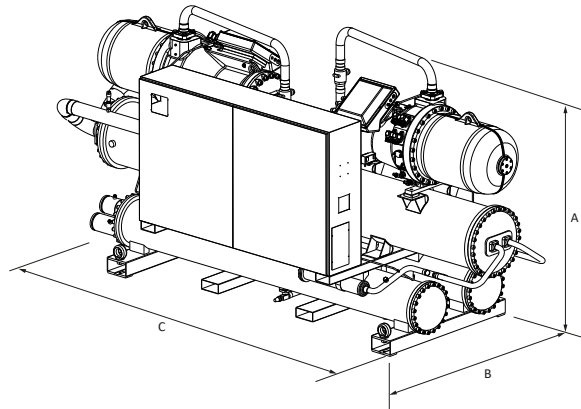
Size			2512	2812	3212	3612	4212	4812	5612	6412
Electric data										
Maximum current (FLA)		A	370	418	468	516	612	690	776	846
Peak current (LRA)		A	545	613	670	723	892	995	1193	1340

GENERAL TECHNICAL DATA

Size	Version		2512	2812	3212	3612	4212	4812	5612	6412
Compressors										
		Type	Screw							
Compressors / Circuit		n°/n°	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2
Refrigerant		Type	R134a							
System side heat exchanger										
Exchanger		Type/n°	Shell and tube/1							
Connections (in/out)	°	Ø	6"	6"	6"	8"	8"	8"	8"	8"
Connections (in/out)	A	Ø	8"	8"	8"	10"	10"	10"	10"	10"
Source side heat exchanger										
Exchanger		Type/n°	Shell and tube/2							
Connections (in/out)	°	Ø	5"	5"	5"	5"	5"	5"	6"	6"
Connections (in/out)	A	Ø	4"	4"	5"	5"	5"	5"	6"	6"
Sound data ⁽¹⁾										
Sound power		dB(A)	94	94	94	94	95	96	97	98
Sound pressure		dB(A)	62	62	62	62	63	64	65	66

(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).

DIMENSIONS



Size	Version		2512	2812	3212	3612	4212	4812	5612	6412
Dimensions and weights										
A	°	mm	2100	2100	2050	2120	2140	2140	2210	2210
B	°	mm	1470	1470	1470	1520	1550	1550	1600	1600
C	°	mm	3690	3690	4030	4030	4370	4370	4610	4760
Peso	°	Kg	3570	3650	4470	4750	5100	5200	6110	6310

Size			2512	2812	3212	3612	4212	4812	5612	6412
Dimensions and weights										
A	A	mm	2180	2180	2190	2340	2340	2340	2380	2380
B	A	mm	1470	1470	1537	1695	1695	1695	1700	1700
C	A	mm	4330	4330	4330	4370	4550	4550	4800	4800
Peso	A	Kg	4080	4140	5470	5950	6290	6460	7310	7410

Attention: For D - T - E version - please contact us

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Aermec S.p.A.

Via Roma, 996 - 37040 Bevilacqua (VR) - Italia
Tel. 0442633111 - Telefax 044293577
www.aermec.com