

### HIGH TEMPERATURE HEAT PUMP SYSTEM



## MIDYLINE

CWW/Y/BH

Heat Pump

WATER COOLED HEAT PUMPS FOR HOT WATER PRODUCTION AT VERY HIGH TEMPERATURE WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.



The units are designed to produce hot water at very high temperature, in compliance with the most stringent directives on energy efficiency and respect for the environment. In addition to this, their flexibly interacts with all technological plant solutions defined for every type of building, be it residential, commercial or industrial. These units are ideal for indoor installation and, equipped with a self-contained structure, they can reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier. Thanks to the high construction standard and the precise regulation system, the units are able to guarantee a very high efficiency both at the nominal operating point and in partial load conditions. These characteristics are visible on the machine's working range which is among the most extensive on the market with the production of hot water leaving the condenser up to 80 ° C with evaporator water outlet temperatures up to 40 ° C.

The units are compliant to the ErP Regulation.

### FEATURES

- Self-supporting galvanized steel frame protected with additional protection achieved via polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Condenser AISI 316 stainless steel braze welded plates type with one circuit on the refrigerant side and one on the water side in 162-P÷602-P models; with two independent circuits on the refrigerant side and one on the water side in 804-P÷1204-P models, complete with water differential pressure switch.
- Evaporator AISI 316 stainless steel braze welded plates type with one circuit on the refrigerant side and one on the water side in 162-P÷602-P models; with two independent circuits on the refrigerant side and one on the water side in 804-P÷1204-P models, complete with water differential pressure switch.
- Electronic expansion valve.
- Electronic high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, thermal protection relays for compressors, interface relay and terminals for external connections.
- Microprocessor control and regulation system.

### ACCESSORIES

#### FACTORY FITTED ACCESSORIES

IM	Automatic circuit breakers
SL	Unit silencing
RFM	Cooling circuit shut-off valve on discharge line
RFL	Cooling circuit shut-off valve on liquid line
PV3E	3-Way electronic pressostatic valve for evaporation control
PV3C	3-Way electronic pressostatic valve for cold start
FI	Antifreeze heater for evaporator and condenser
SS	Soft start
IS	Modbus RTU protocol, RS485 serial interface
IST	Modbus TCP/IP protocol, Ethernet port
ISB	BACnet MSTP protocol, RS485 serial interface

ISBT	BACnet TCP/IP protocol, Ethernet port
ISL	LonWorks protocol, FTT-10 serial interface
ISS	SNMP protocol, Ethernet port
IAV	Remote set-point, 0-10 V signal
IAA	Remote set-point, 4-20 mA signal
IAS	Remote signal for second set-point activation
IDL	Demand limit from digital input
IVE	0-10 V signal for the management of the 3-Way electronic pressostatic valve for evaporation control
IVC	0-10 V signal for the management of the 3-Way electronic pressostatic valve for cold start

#### LOOSE ACCESSORIES

MN	High and low pressure gauges
CR	Remote control panel
AG	Rubber shock absorbers
AM	Spring shock absorbers

### HIGH TEMPERATURE HEAT PUMP SYSTEM

MODEL			162-P	182-P	202-P	262-P	302-P	402-P	522-P	602-P	804-P	1044-P	1204-P	
Heating	Heating capacity (1)	kW	77.0	87.3	101	126	147	192	238	293	368	459	550	
	Absorbed power (1)	kW	18.3	19.7	23.0	29.6	34.9	46.5	57.7	70.3	92.8	114	142	
	COP (1)		4.21	4.43	4.39	4.26	4.21	4.13	4.12	4.17	3.97	4.03	3.87	
Heating (EN14511)	Heating capacity (1)	kW	77.2	87.5	101	126	147	193	239	294	369	460	552	
	Absorbed power (1)	kW	18.8	20.2	23.6	30.3	35.7	47.5	58.7	71.5	94.7	116	146	
	COP (1)		4.11	4.33	4.29	4.17	4.12	4.05	4.06	4.11	3.89	3.95	3.79	
	SCOP (2)		4.53	4.71	4.69	4.70	4.52	4.56	4.57	4.60	4.50	4.56	4.50	
	Energy Efficiency (2)	%	173	180	180	180	173	174	175	176	172	174	172	
	Energy Class (3)		A+++	A+++	A+++	A+++	---	---	---	---	---	---	---	
Compressor	Quantity	n°	2	2	2	2	2	2	2	2	4	4	4	
	Type		Scroll											
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2									4		
Condenser	Water flow	l/s	2.30	2.61	3.02	3.76	4.39	5.73	7.11	8.75	10.99	13.71	16.42	
	Pressure drops	kPa	14	15	17	17	17	18	14	15	21	22	30	
	Water connections	DN	65	65	65	65	65	65	80	80	80	80	80	
Evaporator	Water flow	l/s	2.80	3.23	3.73	4.61	5.36	6.95	8.61	10.64	13.15	16.48	19.49	
	Pressure drops	kPa	29	27	24	25	21	27	20	19	39	43	42	
	Water connections	DN	65	65	65	65	65	65	80	80	80	80	80	
Electrical characteristics	Power supply	V/Ph/Hz	400/3/50											
	Max. running current	A	33	35	41	54	69	86	106	126	172	211	252	
	Max. starting current	A	111	129	139	167	208	268	325	373	354	430	499	
Sound pressure	STD version (4)	dB(A)	61	61	62	63	65	65	67	69	71	71	72	
	With SL accessory (4)	dB(A)	58	58	59	60	62	62	64	66	68	68	69	
Weights	Transport weight	Kg	407	415	433	448	464	765	890	974	1301	1426	1528	
	Operating weight	Kg	420	430	450	470	490	800	940	1040	1380	1500	1610	

DIMENSIONS			162-P	182-P	202-P	262-P	302-P	402-P	522-P	602-P	804-P	1044-P	1204-P
L	STD	mm	1200	1200	1200	1200	1200	2285	2285	2285	2500	2500	2500
W	STD	mm	680	680	680	680	680	680	680	680	800	800	800
H	STD	mm	1520	1520	1520	1520	1520	1520	1520	1520	1900	1900	1900

### CLEARANCE AREA

CWW/Y/BH 162-P÷1204-P

500 | 500 | 800 | 500



### NOTES

1. Heated water from 70 to 78 °C, water temperature at the evaporator from 45 to 40 °C.
2. Seasonal energy efficiency of heating at medium temperature with average climatic conditions. According to EU Regulation n. 813/2013.
3. Seasonal energy efficiency class of heating at medium temperature with average climatic conditions. According to EU Regulation n. 811/2013.
4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

Electrical board side

