HWA1-A 0140÷0285

39 kW÷84 kW

Air cooled water chiller and heat pump units

Energy efficiency = A

VERSIONS

HWA1-A	Cooling only
HWA1-A/H	Air cooled water chiller and reversibile heat pump

TECHNICAL FEATURES

Air cooled liquid chillers and reversible heat pumps, with scroll compressors, axial fans with inverter control (except cooling only version), high performances plate heat exchanger, inverter circulating pump, connectable with Hi-Touch remote controller. Models widely used for replacing old units or to be installed on new systems.

- Hot-galvanised thick sheet metal frame.
- Bitzer scroll ermetic 3-phase compressor.
- Ziehl-Abegg axial fan type.
- Microchannel Dunan aluminium condensation coil (cooling only) and Louve with splitted circuits (heat pump version).
- Swep type evaporator from Sweden.
- Frontal electrical panel.
- Microprocessor with overheating control logic program.
- Refrigerant circuit manufactured according to the UNI EN 13134 directive.
- Water circuit in copper tubing.
- Standard equipped with control and protection devices.

Test produzione - *Production Test*

Montaggio - *Montaggio*

Bitzer compressor

Pompa di circolazione - *Circulating pump*

SSL
Super silenziamento - Supersilencing

SL
Silenziamento compressore - *Compressor Silencing*

Structure
With support frame, hot galvanized sheet, painted with polyurethane powder enamels at 180 ° C to ensure the best weather resistance.

Compressors
Bitzer three-phase hermetic compressors installed on rubber anti-vibrations, complete with integral protection modules with PT100 drowned in engine windings.

Fan
Special profile axial Ziehl-Abegg, directly connected to the external rotor motor with IP54 degree of protection, complete with overtemperature protection of the motor and grill.

Outdoor Heat Exchanger
For cooling only units, microcanal aluminum heat exchanger that guarantees:

- No galvanic corrosion (100% aluminum)
- Reduction of refrigerant charge (up to 70%)
- Long life even in very aggressive environments
- ΔP lower air side (up to 30%)
- Good refrigerant distribution thanks to the special 3-step design.

For the heat pump version: Aluminum finned pack changers with pitch type louver wedges and copper plated tubes with split circuits for maximum evaporative efficiency and undercooling circuit to increase refrigeration capacity.

Plant side Heat Exchanger
Plate type, Swep production, stainless steel plates AISI 316, braided type.

Electric panel
Includes: General disconnector with door lock, fuses, fan and pump compressor remote sensors, electronic board for the management of all Analogic Input and Output, Digital Input and Output.

Control System (Microprocessor)
The units are equipped with a microprocessor that adopts a logic program and regulates the overheating through an electronic thermostatic valve monitored by the pressure transducer signals and temperature sensors. The CPU also manages the following functions: water temperature control, antifreeze protection, high and low pressure protection, compressor timing adjustment, alarm management and alarm, operating LEDs. On request, the microprocessor can be connected to a BMS remote control system.

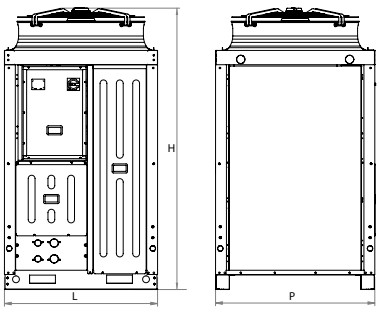
Refrigerant circuit
The refrigerant circuit was built according to the UNI EN 13134 standard for welding procedures. The refrigerant used is R410A. The basic refrigerant circuit includes: electronic expansion valve, liquid separator, liquid receiver, maintenance and control valves, pressure regulator according to PED regulation, pressure transducers for precise setting of evaporation and condensing pressures, High capacity drier filter. In addition to the heat pump versions: the 4-way switch valve, the VEE capacity extension solenoid valve and 4 switching valves to allow installation of any heat recuperators.

Hydraulic circuit
The copper pipe circuit includes: service valve and flow switch, antifreeze sensor installed on the water supply pipe to the plant, safety valve, drain cock, air vent valve and pressure gauge.

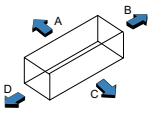
HWA1-A		0140	0147	0260	0272	0285
Potenza frigorifera / Cooling capacity (1)	kW	39,31	46,28	59,74	72,55	84,72
Potenza assorbita / Power input (1)	kW	12,48	14,93	19,27	24,68	29,21
EER. (1)	W/W	3,15	3,10	3,10	2,94	2,90
SEER (5)	W/W	3,80	3,80	3,94	3,98	4,07
Potenza frigorifera / Cooling capacity (2)	kW	44,60	51,04	70,41	89,24	100,59
Potenza assorbita / Power input (2)	kW	11,90	14,59	19,21	24,26	29,44
EER (2)	W/W	3,75	3,50	3,66	3,68	3,42
Alimentazione / Power supply		400V/3P+N+T/50Hz				
Potenza massima assorbita / Max. power input	kW	17	21,5	28	35	43
Corrente allo spunto / Max inrush current	A	93	202	162	184	240
Corrente massima assorbita / Max running current	A	28	38	45	56	71
Compressore Bitzer / Bitzer compressor	n°	1		2		
Ventilatore / Fan	n°	1				
Potenza assorbita nom./max.	kW	1,8	2,2	2,3	2,5	2,3
Portata d'aria nominale / Nominal air flow	m^3/s	4,03	4,58	6,11	6,67	7,92
Refrigerante / Refrigerant R410A	kg	10,8	11,1	15,9	16,2	16,2
Portata acqua / Water flow (2)	L/s	1,88	2,21	2,85	3,47	4,05
Prevalenza utile / Pump head (2)	kPa	75,7	73,4	64,5	73,4	64,7
Potenza massima pompa / Max. pump power	kW	1,1	1,1	1,1	1,3	1,3
Corrente massima assorbita pompa	A	2,4	2,4	2,4	2,6	2,6
Attacchi idraulici / Water connections	inch	2"F				
Pressione sonora versioni / Sound ressure versions (7)	dB(A)	51	52	52,5	53,5	54
Peso di trasporto / Transport weight / Poids de transport	kg	355	365	511	537	547
Peso in esercizio / Operation weight / Poids en exercice	kg	350	360	455	480	495

(1) Raffreddamento: temperatura aria esterna 35°C; temperatura acqua ing./usc. 12/7°C.
(2) Raffreddamento: temperatura aria esterna 35°C; temperatura acqua ing./usc. 23/18°C.
(5) Raffreddamento: temperatura acqua ing./usc. 12/7°C uscita variabile
(7) Livello di pressione sonora ottenuto da misurazioni interne effettuate in campo libero a 10 m dall'unità, secondo norma ISO 3744.

(1) Cooling: outdoor air temperature 35 ° C; Temperature water in./out. 12/7 ° C.
(2) Cooling: outdoor air temperature 35 ° C; Temperature water in./out. 23/18 ° C.
(5) Cooling: water temperature / 12/7 ° C variable output
(7) Sound pressure level measured in free field conditions at 10 m from the unit, according to ISO 3744.



Dimensioni / Dimensions		0140	0147	0260	0272	0285
L	mm	1125	1125	1125	1125	1125
P	mm	1170	1170	1170	1170	1170
H	mm	2040	2040	2070	2070	2070



Spazi minimi - Minimum clearances

A	Pannello Frontale / Frontal Panel	mm	800
B		mm	800
C		mm	1000
D		mm	800

HWA1-A/H		0140	0147	0260	0272	0285
Potenza frigorifera / Cooling capacity (1)	kW	38,60	45,61	58,63	72,70	81,46
Potenza assorbita / Power input (1)	kW	13,00	15,67	19,94	25,07	29,52
EER. (1)	W/W	2,97	2,91	2,94	2,90	2,76
Potenza frigorifera / Cooling capacity (2)	kW	42,77	50,00	68,58	82,89	96,39
Potenza assorbita / Power input (2)	kW	12,13	14,88	19,60	24,74	30,03
EER (2)	W/W	3,52	3,36	3,50	3,35	3,21
Potenza termica / Heating capacity (3)	kW	42,07	47,76	62,98	78,62	86,01
Potenza assorbita / Power input (3)	kW	12,81	14,77	18,82	24,42	28,54
COP (3)	W/W	3,28	3,23	3,35	3,22	3,01
Potenza termica / Heating capacity (4)	kW	43,49	48,21	64,09	80,93	88,65
Potenza assorbita / Power input (4)	kW	10,75	12,30	15,65	20,00	22,18
COP (4)	W/W	4,05	3,92	4,10	4,05	3,90
SCOP (6)	W/W	3,43	3,33	3,88	3,84	3,70
Efficienza energetica / Energy efficiency / Efficacité énergétique		A+	A+	A++	A++	A+
Alimentazione / Power supply		400V/3P+N+T/50Hz				
Potenza massima assorbita / Max. power input	kW	17	21,5	28	35	43
Corrente allo spunto / Max inrush current	A	93	202	162	184	240
Corrente massima assorbita / Max running current	A	28	38	45	56	71
Compressore Bitzer / Bitzer compressor	n°	1			2	
Ventilatore / Fan	n°	1				
Potenza assorbita nom./max.	kW	1,36 / 1,93	1,66 / 1,93	1,76 / 2,55	2,24 / 2,55	2,24 / 2,55
Portata d'aria nominale / Nominal air flow	m^3/s	4,3	5,1	6,8	7,8	7,9
Refrigerante / Refrigerant R410A	kg	10,8	11,1	15,9	16,2	16,2
Portata acqua / Water flow (2)	L/s	1,88	2,21	2,85	3,47	4,05
Prevalenza utile / Pump head (2)	kPa	75,7	73,4	64,5	73,4	64,7
Potenza massima pompa / Max. pump power	kW	1,1	1,1	1,1	1,3	1,3
Corrente massima assorbita pompa	A	2,4	2,4	2,4	2,6	2,6
Attacchi idraulici / Water connections	inch	2"F				
Pressione sonora versioni / Sound ressure versions (7)	dB(A)	53	54	54,5	55,5	56
Peso di trasporto / Transport weight / Poids de transport	kg	395	415	461	487	502
Peso in esercizio / Operation weight / Poids en exercice	kg	390	410	505	530	540

(1) Raffreddamento: temperatura aria esterna 35°C; temperatura acqua ing./usc. 12/7°C.
(2) Raffreddamento: temperatura aria esterna 35°C; temperatura acqua ing./usc. 23/18°C.
(3) Riscaldamento: temperatura aria esterna 7°C b.s. 6°C b.u.; temp.acqua ing./usc. 40/45°C.
(4) Riscaldamento: temperatura aria esterna 7°C b.s. 6°C b.u.; temp.acqua ing./usc. 30/35°C.
(5) Raffreddamento: temperatura acqua ing./usc. 12/7°C uscita variabile
(6) Riscaldamento: condizioni climatiche medie; Tbiv=-7°C; temp.acqua ing./usc. 30/35°C uscita variabile
(7) Livello di pressione sonora ottenuto da misurazioni interne effettuate in campo libero a 10 m dall'unità, secondo norma ISO 3744.

(1) Cooling: outdoor air temperature 35 ° C; Temperature water in./out. 12/7 ° C.
(2) Cooling: outdoor air temperature 35 ° C; Temperature water in./out. 23/18 ° C.
(3) Heating: outside air temperature 7 ° C b.s. 6 ° C b.u .; Water temp./out. 40/45 ° C.
(4) Heating: outside air temperature 7 ° C b.s. 6 ° C b.u .; Water temp./out. 30/35 ° C.
(5) Cooling: water temperature / 12/7 ° C variable output
(6) Heating: medium climatic conditions; Tbiv = -7 ° C; Water temp./out. 30/35 ° C variable output
(7) Sound pressure level measured in free field conditions at 10 m from the unit, according to ISO 3744.

FITTED ACCESSORIES

CT Control pressure on-off up to 0 ° C
MPI Complete protection module for each compressor
HP-LP High and low pressure transducers with display values
IS Serial interface RS 485
VEV Thermostatic electronics+by-pass solenoid valve for low temperature water and/or air
AC-FAN-Y-Δ 2-speed Y-Δ fans, only for cold-only versions (0140÷0272)
AC-FAN On-off fan with pressure regulation
EC-FAN1 EC inverter fan, modulating up to -15°C air (standard on 0285 cooling only and 0272, 0285 heat pump)
PS Single circulating pump with high pump head
SL Standard silencing
SSL Super silencing with EC fan and condensing control down to -15 °C
TR2 Batteries with anti-corrosion and anti-condensation treatment
RP Metallic guards for condenser
KA1 Antifreeze kit (only heat pump version)
GI Plant Management Module to implement additional features on control.
DSFR Sequence control device, phase failure + Minimum and Maximum voltage relay
Plug-in WiFi WiFi module to connect the unit to a local WiFi network

LOOSE ACCESSORIES

AG Rubber shock absorbers
Hi-T Hi-touch controller
RFC Remote fancoil control (Hi-T control required)
i-CR Remote wall controller