


PRIMA.E/PC

 Refrigerant
R290 | GWP=3

 Scroll
compressor

 Axial fan

 Braze plate
heat exchanger

004 ↔ 043 d

Air cooled water chillers



Solution

B - Base
I - Integrated

Version

ST - Standard
LN - Low noise

Equipment

AS - Standard equipment

Cooling Capacity 4,7 - 44,9 kW

Heating capacity 4,8 - 45,5 kW

Housing	Base and panels made of painted galvanised steel; panels mounted on aluminium profiles to ensure total weathering resistance. Panels are internally lined to reduce the noise level (LN Accessories only).
Compressor	Hermetic scroll compressor ATEX certified, with spirals orbiting specially designed and optimized for use with the selected refrigerant. The compressor is complete with dedicated oil for Propane and has a fully hermetic design, safe for flammable refrigerants. The compressor is fitted on rubber antivibration mounts in order to reduce vibration to the structure. The electrical terminals of the motor are placed in a dedicated box realized with IP65 protection.
Fan	Low speed, axial-flow fans fitted with accident-prevention protective grille; directly coupled motor with built-in thermal cutout and IP 54 protection degree; aerodynamic housing and wing profile blades increase efficiency and decrease noise level. The grille on the air-inlet side reduces the noise emissions and minimizes disturbing low frequency tones. (LN Accessory only)
Air heat exchanger	Finned coil made with copper pipes and aluminium fins offering a high exchange surface area.
Water heat exchanger	Braze plate-type heat exchanger, stainless steel AISI 316 made. The heat exchanger design provides high thermal exchange and high performance results, furthermore it guarantees small dimensions and easy installation and maintenance. Heat exchangers that work at low temperature are thermally insulated with closed-cell neoprene anti-condensate material. Air vent valve included.
Electrical board	Each unit is equipped with electric panel, built, wired and fully tested at the factory. Wiring numeration and optimized layout facilitate troubleshooting. The installed components are identified by nameplates to better identify the application and the type of action. Switchboard is completely made according to standards IEC 204-1/EN60204-1 and it is complete with contactor and protection for compressor and fans, main isolator switch and door interlock safety device. To ensure higher level of security the panel is hung outside the unit, on one side of the machine.
Control	The microprocessor controls the unit capacity by timing the compressors and checks the operating alarms with the possibility to connect to BMS.
Refrigerant circuit	Filter drier, moisture-liquid sight glass, solenoid valve, intercepting valve on the liquid line, HP and LP pressure switches, cycle reversing valve, gas separator and liquid receiver, thermostatic expansion valve. Solenoid valves and pressure switches are ATEX certified.
Additional safety device	To ensure high-safety-level the unit is equipped with a special gas detector for flammable gases, ATEX certified and with external dedicated power supply. The sensor is provided with three alarm levels, respectively set at 5%, 10% and 20% of Lower Flammability Limit (LFL). These alarms, managed by microprocessor, activate LED status indicator.
Water circuit	(Integrated): Water pressure gauge, safety valve, centrifugal pump suitable for glycol solutions up to 20%, manual air venting valve, water tank.

NOTE: in the integrated version of Propane chillers water pump is supplied separately from the machine; the price includes not only the pump itself but also the electrical control unit installed in the electrical panel of the chiller.

ACCESSORIES

- Spring vibration isolation
- Rubber vibration isolation
- Modulating fan speed condensing control
- EC condensing Fans
- Max and min voltage relay
- Refrigerant gauges (standard)
- Electromechanical flow switch
- Additional stand-by water pump
- Wall mounted remote control panel
- ModBus® (RS 485) interface

PRIMA.E/PC		Available from Q3/2018								Available from Q3/2018							
		004	006	008	009	011	013	016	019	022	026	032	022 d	026 d	032 d	037 d	043 d
COOLING																	
Cooling capacity (1)	kW	4,7	6,2	7,8	9,2	11,3	13,2	16,5	19,8	22,5	28,1	33,5	22,6	26,4	33,1	38,7	44,9
Cooling capacity (1) (EN 14511 VALUE)	kW	4,6	6,1	7,7	9,1	11,2	13,1	16,3	19,6	22,3	27,8	33,1	22,5	26,2	32,9	38,5	44,6
Total compressors power input (1)	kW	1,4	2,1	2,5	2,9	3,7	4,2	5,2	5,9	7,2	8,9	10,6	7,3	8,3	10,4	11,9	14,3
EER - Energy Efficiency Ratio	-	3,03	2,61	2,81	2,92	2,86	2,67	2,78	3,07	2,9	2,97	2,97	2,88	2,98	2,98	2,98	2,86
Saved CO2 equivalent Ton (*)	Ton	1.230	1.720	2.160	2.540	3.120	3.640	4.570	5.480	6.200	7.780	9.270	6.235	7.280	9.290	10.890	12.630
HEATING																	
Heating capacity (2)	kW	4,8	6,3	7,8	9,5	11,4	13,5	16,6	20,1	22,7	28,5	34,1	22,9	26,6	33,5	39,5	45,5
Heating capacity (2) (EN 14511 VALUE)	kW	4,9	6,4	7,9	9,6	11,6	13,6	16,8	20,3	22,9	28,7	34,3	23,1	26,8	33,8	39,7	45,7
Total compressors power input (2)	kW	1,4	2,1	2,5	3,1	3,7	4,3	5,3	6,1	7,3	9,2	10,9	7,5	8,5	10,7	12,3	14,7
COP - Coefficient Of Performance	-	3,10	2,65	2,81	2,84	2,89	2,68	2,75	3,02	2,89	2,92	2,94	2,85	2,94	2,95	2,95	2,83
REFRIGERANT CIRCUIT																	
Refrigerant	-	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290	R290
Independent gas circuit	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Compressors type	-	Hermetic scroll															
Compressors quantity	n°	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
Fans type	-	Axial (AC)															
Fans quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2
Total air flow	m3/h	2.900	3.650	3.650	4.900	4.900	5.300	5.300	8.600	8.600	8.250	11.500	8.600	8.250	11.500	17.200	23.000
Fans power input (1)	kW	0,15	0,28	0,28	0,25	0,25	0,74	0,74	0,55	0,55	0,56	0,69	0,55	0,56	0,69	1,1	1,38
Evaporator water flow (1)	m3/h	0,8	1,1	1,3	1,6	1,9	2,3	2,8	3,4	3,9	4,8	5,8	3,9	4,5	5,7	6,7	7,7
Evaporator pressure drop (1)	kPa	41	35	53	34	49	33	50	27	33	33	45	23	27	40	28	34
HYDRONIC KIT - 100 kPa useful head (option)																	
Buffer tank capacity	L	30	30	30	30	30	30	30	60	60	60	60	60	60	60	150	150
Pump type	-	Centrifugal															
Pump motor nominal power	kW	0,37	0,37	0,37	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55	0,55	0,55	0,55	0,9	0,9
Electrical Data																	
Power supply	V/ph/Hz+T	400/3/50 + 230/1/50 (for gas detector)															
Maximum power input without pump	kW	1,9	2,7	3,2	3,7	4,5	5,6	6,8	8,0	9,0	11,3	13,7	9,0	10,3	13,1	16,0	18,6
Locked rotor current – LRA without pump	A	26,4	32,6	46,6	64,7	64,7	75,4	103,4	120,0	132,9	160,7	187,9	75,8	87,5	120,2	140,4	156,4
Maximum absorbed current - FLA without pump	A	4,5	5,8	7,4	8,9	10,8	13,2	17,3	20,1	22,2	26,5	31,3	21,9	25,3	34,1	40,6	45,7
Noise levels (3)																	
Total sound pressure (3) - ST Version	dB(A)	53	54	54	55	55	56	56	55	55	55	57	56	56	57	57	57
Total sound pressure (3) - LN Version	dB(A)	49	50	50	51	51	52	52	51	51	51	53	52	52	53	53	53
DIMENSIONS AND WEIGHT - Base Solution																	
Length (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155
Shipping weight	Kg	205	210	225	275	280	290	300	530	540	545	560	620	630	645	825	840
DIMENSIONS AND WEIGHT - Integrated Solution																	
Length (L)	mm	1.230	1.230	1.230	1.380	1.380	1.380	1.380	1.680	1.680	1.680	1.680	1.680	1.680	1.680	2.330	2.330
Depth (P)	mm	650	650	650	800	800	800	800	990	990	990	990	990	990	990	990	990
Height (H)	mm	1.320	1.320	1.320	1.785	1.785	1.785	1.785	2.055	2.055	2.055	2.075	2.055	2.055	2.075	2.155	2.155
Shipping weight	Kg	265	275	300	360	365	385	400	700	715	720	730	800	815	840	1.070	1.090

Reference conditions:

- (1) Condenser air intake temperature = 35°C - Evaporator water temperature IN/OUT = 12/7°C - Fluid: pure water - Condensing coil: Cu/Al
- (2) Evaporator air 7°C U.R. 85% - Condenser water IN/OUT 40/45°C Fluid: pure water - Condensing coil: Cu/Al
- (3) Sound pressure level (average) at 10 m, unit in a free field on a reflective surface
- (*) CO2 equivalent tons saved to the Environment compared to the choice of an EUROKLIMAT unit with similar cooling capacity and HFC refrigerant

Compliance with "Eco-Design"

The units comply with the European Directive 2009/125/EU, the Commission Regulation (EU) 2016/2281 and with the Harmonized Directives. The relevant information related to each model (eg.: **SEER_{on}**, **Rated cooling capacity**, **Seasonal space cooling energy efficiency**, ...) are published on our website www.euroklimat.it