KEYTER



ZIRAN
Pro MAXIMA

23-222 kW 28-292 kW

semi-hermetic inverter · EC · heat recovery · HT

Frascold®

Air-to-water heat pumps suitable for cold climates | water production up to 77ºC

In reversible version, designed for residential or commercial applications.

New PRO Series: Optimized for the use of R290 refrigerant and **Full-Inverter technology**.

NATURAL R-290 PROPANE

Pro series

Adaptation and Environment

- Reduced charge of natural R290 refrigerant of A3 class, which is environmentally friendly with a low global warming potential (GWP=3) and high thermodynamic performance.
- High-temperature water production.
- The robust and reliable design integrates leak detection and an ATEX extraction fan for maximum safety.
- With careful insulation, they ensure proper equipment protection and noise reduction, achieving ultra-quiet operation.
- The units are equipped with intelligent control that ensures an optimal defrosting process.

Codification:

KWRH | | I V S4D

Series · Size · Power

Operating mode
I - Reversible heat pump

Version - Compressor Type
V - Inverter piston type compressors

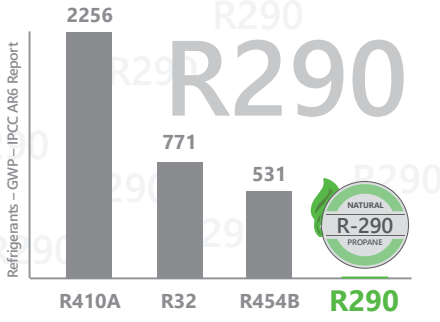
Hydraulic version
S - Standard equipment
P - Version with hydraulic group

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
D - R290

Energy Efficiency

- Compact Full-Inverter units equipped with FRASCOLD semi-hermetic inverter reciprocating compressors and high-quality EC fans, ensuring the best seasonal efficiency (SEER/SCOP).
- High-efficiency heat exchangers.
- These units have a wide operating range with high efficiency and extended operating limits, functioning **at full load down to -25ºC** outdoor temperature.



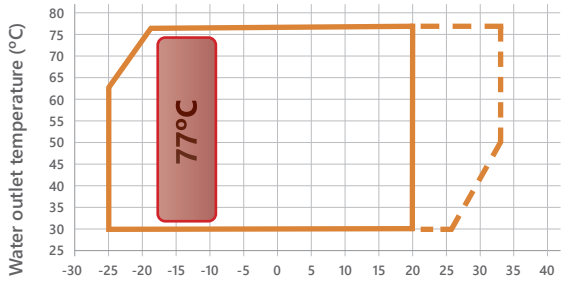
ziran pro maxima

decarbonization and the environment

Descarbonización

Wide operating range with high efficiency and extended operating limits, functioning down to -25ºC ambient temperature at full load.

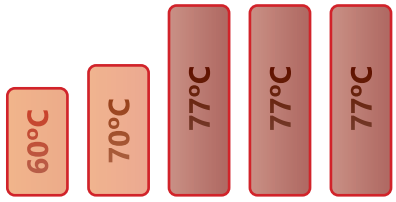
Heating mode (Compressor at 50Hz):



Orange zone: operation map of the unit at full load.

Year-round high-temperature water production for boiler replacement and carbon footprint reduction.

ZIRAN *Pro Maxima*



Extended range version KWRH 2070





Outside air (ºC WB)

KWRH SERIES

KWRH Series 1



KWRH Series 2



KWRH Series 3



KWRH Series 4



NATURAL
R-290
PROPANO

ziran pro maxima

energy efficiency and design

Energy Efficiency

Equipment with Inverter technology

Compact **Full-Inverter** units equipped with BITZER semi-hermetic inverter piston compressors, high-quality EC fans, and high-efficiency heat exchangers, ensuring very high seasonal performance (SEER/SCOP).

Inverter

High-efficiency and low-noise outdoor EC fans, with integrated curved nozzle.

Cu-Al coils with polyurethane, Blygold, and Cu-Cu coatings

Stainless steel AISI 316L brazed plate heat exchanger



SIEMENS electronic control, programmable AQUAMATIX, and CLIMATIX HMI terminal



Electronic expansion valve

FRASCOLD semi-hermetic piston compressors with frequency INVERTER

Frascold®

Robust and safe design

- Robust and reliable outdoor design integrates leak detection and ATEX extraction fan for maximum safety.
- Compatible with optional sandwich panel with 20 mm thick rock wool insulation (M0).
- With careful insulation, it guarantees adequate equipment protection and noise level reduction, achieving ultra-silent operation.



Hydraulic components in open enclosure, unpanelled.

Optional paneling and insulation available.





Electrical panel in a sealed compartment with standard forced ventilation.

Units equipped with intelligent regulation that ensures an optimal defrosting process.

Refrigeration components separated in a closed compartment with easy accessibility via removable panels.

ziran pro maxima

range specification

		KWR
General characteristics		
Refrigerant	R290	✓
	Equipment with refrigerant charge	✓
	Leak detector	✓
	ATEX axial fan for refrigerant extraction	✓
	ATEX centrifugal fan for refrigerant extraction	●
	Indicator light in case of leakage	✓
Bodywork	Self-supporting chassis/cabinet in galvanized steel with a polyester powder coating cured in an oven	✓
	Customized color to suit the needs of the installation	●
	Enclosed compartment with panels for refrigeration components	✓
	Polypropylene insulation of the panels in the refrigeration compartment	●
	Enclosed compartment with 20 mm rock wool sandwich panels for refrigeration components	●
	Enclosed compartment with panels for hydraulic components	●
	Polypropylene insulation of the panels in the hydraulic compartment	●
	Enclosed compartment with 20 mm rock wool sandwich panels for hydraulic components	●
	Anti-vibration supplements	●
Compressors	BITZER piston technology with frequency inverter	✓
	Compressor anti-vibration mounts	✓
Expansion valves	Electronic expansion valves	✓
Fans		
Outdoor fans	EC axial fans with integrated curved nozzle	✓
	Condensing pressure control	✓
	High-performance EC axial fans	●
	EC plug-fan radial fans	●
Heat exchangers		
Coils	Cu tube and Al fin coils	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Propane-water heat exchanger, AISI 316L stainless steel plates, copper-welded and thermally insulated	✓
Energy		
Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●
	Pump in the condensation heat recovery circuit	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●

✓ Included as standard
● Optional
- Not applicable

ziran pro maxima

range specification

KEYTER

		KWR
Hydraulic		
Pumps (version P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓
	Single pump with high pressure available (15-20 mH_2O)	●
	Single pump, very high available pressure (25-30 mH_2O)	●
	Pump with variable speed drive	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●
	Electronic pump	●
	Electronic backup pump	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●
	Independent module with available buffer tank of 200 liters / 375 liters / 725 liters + electric heaters	●
Installation		
Protection grilles	Coil protection grille	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●
Control		
Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Differential switches	●
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓
	Energy meter	●
Electrical panel	Electrical panel insulated against refrigerant leaks	✓
	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

Hydraulic versions

Available in three versions depending on the hydraulic components included:

- **S Version** - Standard unit, without hydraulic group.
- **P Version** - Unit with hydraulic group, including hydraulic pump and without buffer tank.
- **H Version** - Unit with hydraulic group, including hydraulic pump and buffer tank.

NATURAL R-290 PROPANE

ziran pro maxima

R290 technical data

KWRH Model			**1030**			**1060**			**2070**		
HEAT PUMP VERSION (I)											
Cooling mode	Frecuency	Hz	35	50	70	35	50	70	35	50	70
	Nominal cooling capacity (1)	kW	23,4	33,0	40,9	35,6	49,8	60,6	46,3	67,2	82,2
		TR	6,5	9,5	11,5	10,0	14,0	17,0	13,0	19,0	23,5
		kBTU/h	78	114	138	120	168	204	156	228	282
	Absorbed power (2)	kW	9,0	12,9	18,4	14,5	21,2	30,9	18,1	26,0	37,8
	EER (3)	kW/kW	2,57	2,54	2,21	2,43	2,33	1,95	2,53	2,56	2,16
		BTU/(h*W)	8,82	8,74	7,60	8,35	8,01	6,69	8,70	8,80	7,41
Heating mode 30/35	Nominal heating capacity (7)	kW	34,3	42,5	54,5	53,2	64,7	75,6	71,7	91,8	113,9
	Absorbed power (2)	kW	7,5	9,9	14,3	11,6	16,1	22,5	14,9	21,1	30,4
	COP (3)	kW/kW	4,50	4,23	3,77	4,51	3,96	3,31	4,73	4,28	3,68
		BTU/(h*W)	15,54	14,61	13,03	15,61	13,72	11,46	16,39	14,85	12,79
	SCOP average (10) | SCOP warmer (13)	kWh/kWh		3.9 | 5.6			3.9 | 5.1			4.1 | 5.5	
	ηs,h average (10)(5) | ηs,h warmer (13)(5)	%		154.7% | 221.1%			153.4% | 202.7%			161.0% | 217.5%	
Heating mode 47/55	Nominal heating capacity (8)	kW	30,3	37,7	47,6	48,4	58,6	69,6	64,0	80,6	102,1
	Absorbed power (2)	kW	8,2	12,9	17,9	12,9	20,4	27,8	16,5	26,8	37,5
	COP (3)	kW/kW	3,66	2,90	2,65	3,73	2,86	2,49	3,86	2,99	2,71
		BTU/(h*W)	12,58	9,96	9,10	12,81	9,79	8,54	13,26	10,26	9,30
	SCOP average (11) | SCOP warmer (14)	kWh/kWh		3.6 | 4.4			3.4 | 4.1			3.5 | 4.4	
	ηs,h average (11)(5) | ηs,h warmer (14)(5)	%		142.5% | 171.1%			133.4% | 162.3%			135.3% | 171.0%	
Heating mode 55/65	Nominal heating capacity (9)	kW	28,4	34,9	43,7	45,8	55,1	66,4	59,7	74,3	96,5
	Absorbed power (2)	kW	8,4	14,1	20,1	13,3	22,4	31,4	16,9	29,2	41,6
	COP (3)	kW/kW	3,37	2,46	2,16	3,43	2,45	2,11	3,51	2,53	2,31
		BTU/(h*W)	11,55	8,42	7,41	11,77	8,39	7,22	12,03	8,68	7,90
	SCOP average (12) | SCOP warmer (15)	kWh/kWh		3.6 | 3.8			3.2 | 3.7			3.2 | 3.8	
	ηs,h average (12)(5) | ηs,h warmer (15)(5)	%		141.4% | 150.0%			126.7% | 143.9%			125.7% | 150.5%	
TECHNICAL SPECIFICATIONS											
Power supply							400 V / III / 50 Hz with neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2					R290/3				
	No. of circuits / compressors			1/1			1/1			1/1	
	No. of capacity stages			40-100%			40-100%			40-100%	
Hydraulic circuit	Heating water flow rate (16)	m^3/h	2,3	2,9	3,6	3,9	4,7	5,7	5,0	6,2	8,2
	Type of heat exchanger						brazed stainless steel plate heat exchanger				
	Ø hydraulic connection	(inch)		1 1/2''			2''			2''	
Outdoor fan	Outdoor air flow (summer)	m^3/h		19000			19000			38000	
	Outdoor air flow (winter)	m^3/h		21000			21000			35000	
	Number of fans			1			1			2	
	Ø and Type of fan	mm		800 EC-Z			800 EC-Z			800 EC-Z	
Equipment sound pressure (Lp 10) (7)		dB(A)	**49**	**56**	**61**	**53**	**60**	**65**	**54**	**60**	**66**
Weights (S version)	Empty weight	kg		983			1050			1255	

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7ºC (53.6/44.6ºF) and an outdoor air temperature of 35ºC (95ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(2) Nominal power input of compressors and outdoor fans.
(3) EER and COP calculated according to standard EN 14511-2022.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) ηs,c values in compliance with Ecodesign Regulation EU 2016/2281 for comfort applications. ηs,h values in compliance with Ecodesign Regulation EU 813/2013 for heat pump applications.
(6) Seasonal Energy Performance Ratio values for medium-temperature process chillers SEPR (-2/-8 °C), in compliance with Ecodesign Regulation EU 2015/1095.
(7) Nominal heating capacity for an inlet/outlet water temperature of 30/35ºC (86/95ºF) and an outdoor air temperature of 7ºC (44.6ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(8) Nominal heating capacity for an inlet/outlet water temperature of 47/55ºC (116.6/131ºF) and an outdoor air temperature of 7ºC (44.6ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(9) Nominal heating capacity for an inlet/outlet water temperature of 55/65ºC (131/149ºF) and an outdoor air temperature of 7ºC (44.6ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(10) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for low-temperature applications and average climate conditions.
(11) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for medium-temperature applications and average climate conditions.
(12) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for high-temperature applications and average climate conditions.
(13) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for low-temperature applications and warm climate conditions.
(14) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for medium-temperature applications and warm climate conditions.
(15) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for high-temperature applications and warm climate conditions.
(16) Nominal water flow rate for an inlet/outlet water temperature of 30/35ºC (86/95ºF) and an outdoor air temperature of 7ºC (44.6ºF).
(17) Sound pressure level in dB(A) in free-field conditions, at a distance of 10 m from the source and directivity 1.

ziran pro maxima

R290 technical data

KWRH Model			**2080**			**2100**			**3120**		
HEAT PUMP VERSION (I)											
Cooling mode	Frecuency	Hz	35	50	70	35	50	70	35	50	70
	Nominal cooling capacity (1)	kW	55,0	77,5	95,0	73,1	89,9	109,6	74,8	105,3	128,3
		TR	15,5	22,0	27,0	21,0	25,5	31,0	21,5	30,0	36,5
		kBTU/h	186	264	324	252	306	372	258	360	438
	Absorbed power (2)	kW	21,0	30,7	44,5	25,0	37,8	55,4	29,5	43,3	63,4
	EER (3)	kW/kW	2,61	2,51	2,12	2,90	2,36	1,96	2,52	2,41	2,01
		BTU/(h*W)	8,95	8,62	7,28	9,97	8,11	6,75	8,65	8,29	6,90
Heating mode 30/35	Nominal heating capacity (7)	kW	83,3	106,2	128,8	108,1	124,7	147,6	107,2	132,0	150,4
	Absorbed power (2)	kW	18,1	25,5	36,3	21,1	30,7	43,4	22,6	32,2	45,1
	COP (3)	kW/kW	4,53	4,09	3,48	5,01	3,97	3,34	4,69	4,05	3,30
		BTU/(h*W)	15,70	14,22	12,10	17,50	13,85	11,61	16,20	13,97	11,38
	SCOP average (10) | SCOP warmer (13)	kWh/kWh		4.0 | 5.3			4.1 | 5.5			4.1 | 5.3	
	ηs,h average (10)(5) | ηs,h warmer (13)(5)	%		157.3% | 209.2%			159.4% | 217.0%			161.2% | 208.8%	
Heating mode 47/55	Nominal heating capacity (8)	kW	74,8	93,7	116,6	96,8	111,0	136,1	99,0	120,8	143,9
	Absorbed power (2)	kW	19,9	32,0	44,5	23,3	38,4	53,0	24,4	39,7	54,2
	COP (3)	kW/kW	3,73	2,92	2,61	4,13	2,88	2,55	4,03	3,03	2,64
		BTU/(h*W)	12,81	10,00	8,95	14,19	9,88	8,76	13,82	10,39	9,06
	SCOP average (11) | SCOP warmer (14)	kWh/kWh		3.4 | 4.3			3.4 | 4.4			3.6 | 4.4	
	ηs,h average (11)(5) | ηs,h warmer (14)(5)	%		133.0% | 167.3%			134.1% | 173.7%			141.8% | 172.5%	
Heating mode 55/65	Nominal heating capacity (9)	kW	70,3	86,9	110,5	90,6	103,6	130,6	94,0	113,7	140,0
	Absorbed power (2)	kW	20,4	34,8	49,5	23,9	41,9	59,2	25,1	43,5	60,6
	COP (3)	kW/kW	3,43	2,49	2,22	3,77	2,47	2,20	3,72	2,61	2,30
		BTU/(h*W)	11,76	8,51	7,61	12,93	8,44	7,52	12,76	8,92	7,88
	SCOP average (12) | SCOP warmer (15)	kWh/kWh		3.1 | 3.8			3.2 | 3.9			3.4 | 4.0	
	ηs,h average (12)(5) | ηs,h warmer (15)(5)	%		123.0% | 148.0%			123.1% | 153.5%			133.2% | 155.1%	
TECHNICAL SPECIFICATIONS											
Power supply							400 V / III / 50 Hz with neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2					R290/3				
	No. of circuits / compressors			1/1			1/1			1/1	
	No. of capacity stages			40-100%			40-100%			40-100%	
Hydraulic circuit	Heating water flow rate (16)	m^3/h	5,9	7,3	9,4	7,5	8,7	11,1	7,8	9,4	11,7
	Type of heat exchanger						brazed stainless steel plate heat exchanger				
	Ø hydraulic connection	(inch)		1 1/2''			2''			DN80	
Outdoor fan	Outdoor air flow (summer)	m^3/h		38000			38000			38000	
	Outdoor air flow (winter)	m^3/h		39000			39000			39000	
	Number of fans			2			2			2	
	Ø and Type of fan	mm		800 EC-Z			800 EC-Z			800 EC-Z	
Equipment sound pressure (Lp 10) (7)		dB(A)	**56**	**62**	**68**	**58**	**64**	**70**	**56**	**63**	**68**
Weights (S version)	Empty weight	kg		1289			1360			1005	

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7ºC (53.6/44.6ºF) and an outdoor air temperature of 35ºC (95ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(2) Nominal power input of compressors and outdoor fans.
(3) EER and COP calculated according to standard EN 14511-2022.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) ηs,c values in compliance with Ecodesign Regulation EU 2016/2281 for comfort applications. ηs,h values in compliance with Ecodesign Regulation EU 813/2013 for heat pump applications.
(6) Seasonal Energy Performance Ratio values for medium-temperature process chillers SEPR (-2/-8 °C), in compliance with Ecodesign Regulation EU 2015/1095.
(7) Nominal heating capacity for an inlet/outlet water temperature of 30/35ºC (86/95ºF) and an outdoor air temperature of 7ºC (44.6ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(8) Nominal heating capacity for an inlet/outlet water temperature of 47/55ºC (116.6/131ºF) and an outdoor air temperature of 7ºC (44.6ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).

ziran pro maxima

R290 technical data

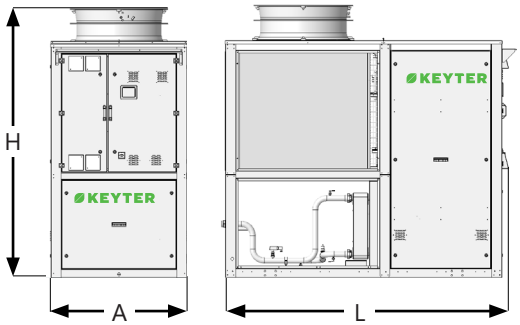
KWRH Model				**4140**			**4160**			**4200**	
HEAT PUMP VERSION (I)											
Cooling mode	Frecuency	Hz	35	50	70	35	50	70	35	50	70
	Nominal cooling capacity (1)	kW	94,3	136,5	166,1	113,5	159,6	194,4	150,5	183,9	221,8
		TR	27,0	39,0	47,0	32,5	45,5	55,5	43,0	52,5	63,0
		kBTU/h	324	468	564	390	546	666	516	630	756
	Absorbed power (2)	kW	36,5	52,4	76,0	42,3	61,9	89,8	50,4	76,3	111,3
	EER (3)	kW/kW	2,57	2,58	2,17	2,67	2,56	2,15	2,96	2,39	1,98
		BTU/(h*W)	8,82	8,88	7,46	9,16	8,80	7,39	10,19	8,22	6,80
Heating mode 30/35	Nominal heating capacity (7)	kW	142,3	184,2	224,0	166,4	213,7	254,9	215,2	250,0	291,2
	Absorbed power (2)	kW	30,5	44,1	63,6	36,7	52,6	74,7	42,8	63,5	89,2
	COP (3)	kW/kW	4,59	4,11	3,47	4,47	4,00	3,36	4,93	3,87	3,21
		BTU/(h*W)	15,89	14,26	12,03	15,49	13,86	11,64	17,16	13,43	11,15
	SCOP average (10) | SCOP warmer (13)	kWh/kWh		4.2 | 5.3			4.2 | 5.1			4.0 | 5.6	
	ηs,h average (10)(5) | ηs,h warmer (13)(5)	%		165.6% | 207.0%			164.0% | 202.7%			158.3% | 219.5%	
Heating mode 47/55	Nominal heating capacity (8)	kW	128,9	163,6	207,3	151,9	191,4	239,1	197,1	227,0	278,9
	Absorbed power (2)	kW	32,6	53,4	75,1	39,1	63,3	88,1	45,5	75,8	104,7
	COP (3)	kW/kW	3,93	3,05	2,75	3,86	3,01	2,70	4,29	2,98	2,65
		BTU/(h*W)	13,48	10,46	9,42	13,27	10,32	9,26	14,76	10,22	9,09
	SCOP average (11) | SCOP warmer (14)	kWh/kWh		3.7 | 4.4			3.6 | 4.3			3.7 | 4.8	
	ηs,h average (11)(5) | ηs,h warmer (14)(5)	%		144.0% | 172.3%			143.0% | 170.2%			144.4% | 187.5%	
Heating mode 55/65	Nominal heating capacity (9)	kW	121,2	151,8	198,3	143,4	178,4	230,6	185,8	213,2	272,3
	Absorbed power (2)	kW	33,3	57,9	82,8	39,9	68,7	97,2	46,6	82,3	115,7
	COP (3)	kW/kW	3,63	2,61	2,39	3,58	2,59	2,36	3,97	2,58	2,35
		BTU/(h*W)	12,44	8,94	8,18	12,27	8,86	8,09	13,60	8,84	8,03
	SCOP average (12) | SCOP warmer (15)	kWh/kWh		3.4 | 4.0			3.4 | 3.9			3.5 | 4.3	
	ηs,h average (12)(5) | ηs,h warmer (15)(5)	%		134.0% | 155.0%			132.3% | 153.8%			137.7% | 170.1%	
TECHNICAL SPECIFICATIONS											
Power supply							400 V / III / 50 Hz with neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2					R290/3				
	No. of circuits / compressors			2/2			2/2			2/2	
	No. of capacity stages			20-100%			20-100%			20-100%	
Hydraulic circuit	Heating water flow rate (16)	m^3/h	10,0	12,4	16,4	11,8	14,9	19,1	15,0	17,7	22,7
	Type of heat exchanger						brazed stainless steel plate heat exchanger				
	Ø hydraulic connection	(inch)		DN80			DN80			DN80	
Outdoor fan	Outdoor air flow (summer)	m^3/h		76000			76000			76000	
	Outdoor air flow (winter)	m^3/h		70000			78000			78000	
	Number of fans			4			4			4	
	Ø and Type of fan	mm		800 EC-Z			800 EC-Z			800 EC-Z	
Equipment sound pressure (Lp 10) (7)		dB(A)	**57**	**63**	**69**	**59**	**65**	**71**	**61**	**67**	**73**
Weights (S version)	Empty weight	kg		2359			2408			2551	

(9) Nominal heating capacity for an inlet/outlet water temperature of 55/65ºC (131/149ºF) and an outdoor air temperature of 7ºC (44.6ºF). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(10) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for low-temperature applications and average climate conditions.
(11) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for medium-temperature applications and average climate conditions.
(12) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for high-temperature applications and average climate conditions.
(13) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for low-temperature applications and warm climate conditions.
(14) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for medium-temperature applications and warm climate conditions.
(15) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for high-temperature applications and warm climate conditions.
(16) Nominal water flow rate for an inlet/outlet water temperature of 30/35ºC (86/95ºF) and an outdoor air temperature of 7ºC (44.6ºF).
(17) Sound pressure level in dB(A) in free-field conditions, at a distance of 10 m from the source and directivity 1.

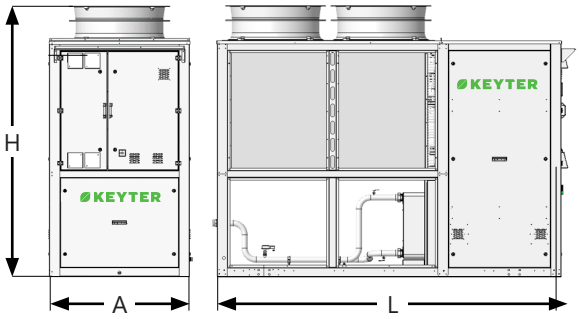
ziran pro maxima

dimensions

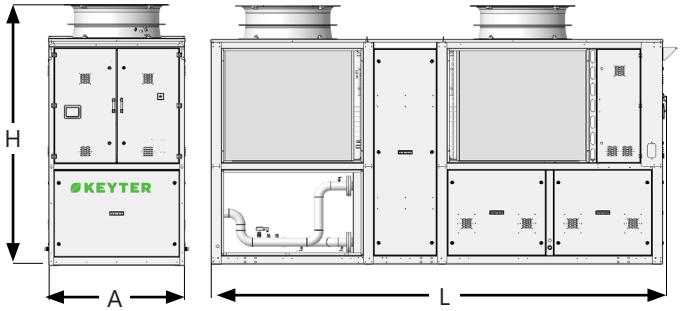
Serie 1 S/P/H



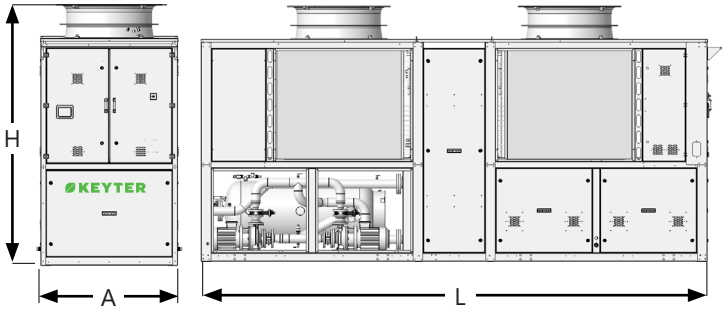
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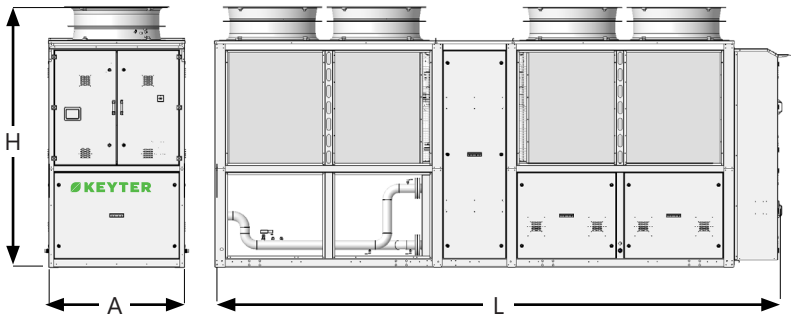
Serie 3 S/P



Serie 3 H



Serie 4 S/P/H



Dimensions S and P Versions		Serie 1	Serie 2	Serie 3		Serie 4
Chassis		S/P/H	S/P/H	S/P	H	S/P/H
L	(mm)	3240	2420	3515	4940	5350
A	(mm)	1300	1100	1100	1300	1300
H	(mm)	2550	2345	2020	2550	2550