



STEEL

NATURAL SOLUTIONS



enerblue

INSPIRED BY NATURE



STEEL



Water to water heat pumps with natural refrigerant gas R290. Extended working conditions and very high performances. Equipped with hermetic scroll compressors and plates heat exchangers. All the units are provided with an external electric safety board to manage all the installed safety devices and always ensure the maximum safety levels. STEEL heat pumps range is reversible on water side.

Low noise configuration is available as an option.

The machine is suitable for both internal and external (outdoor) installation.

Range

Heating capacity (W7;W55) 29 ÷ 84 kW

Cooling capacity (W35;W7) 25 ÷ 75 kW



Reversible
on water
side



Scroll
compressors

Highlights of the product



1



ATEX

The ATEX certified extraction fan managed by the safety electric board ensure the safety of the installation for the outdoor version. (Option)

2



ATEX

The ATEX certified ductable extraction fan managed by the safety electric board ensure the safety of the installation for the indoor version. (Option)

3

All the models in the STEEL range are suitable for indoor installation in occupied space or for outdoor installation.

4

Compliant with Ecodesign

TECHNICAL DATA

UNIT SIZE			27.2	32.2	40.2	45.4	55.4	65.4	80.4
Heating (EN 14511 values) (W7;W55)									
Nominal heating capacity (W7;W55)	(1), (7)	kW	28,8	33,4	41,7	48,0	58,4	67,1	83,8
Total Power input in heating mode	(1), (7)	kW	8,0	9,2	11,4	12,6	16,0	18,3	23,0
COP	(1), (7)		3,60	3,63	3,66	3,81	3,65	3,67	3,64
Energy Seasonal Index									
SCOP	(9)		4,30	4,46	4,51	4,57	4,44	4,55	4,54
Seasonal Energy Efficiency η_s	(9)	%	164,1	170,3	172,6	174,7	169,6	174,1	173,6
Seasonal Efficiency class	(9)		A+++	A+++	A+++	A+++	A+++	A+++	A+++ (5)
Cooling (EN 14511 values) (W35;W7)									
Nominal cooling capacity	(3), (7)	kW	25,6	29,8	37,2	43,8	52,2	59,7	74,7
Total Power input in cooling mode	(3), (7)	kW	5,9	6,6	8,3	9,5	11,9	13,2	16,5
EER	(3), (7)		4,34	4,52	4,48	4,61	4,39	4,52	4,53
Compressor									
Type			Scroll						
Quantity/Refrigerant circuits		n° / n°	2 / 1	2 / 1	2 / 1	4 / 2	4 / 2	4 / 2	4 / 2
Capacity steps		n°	2	2	2	4	4	4	4
Circuit refrigerant charge		kg	1,2	1,2	2,0	1,2	0,9	1,5	1,8
User Side exchanger Heating mode									
Type			Plate exchanger						
Water flow rate (W7/W55)	(1)	l/h	3127	3634	4531	5222	6351	7298	9116
Pressure drop (W7/W55)	(1)	kPa	11,2	10,9	14,3	7,5	10,6	9,2	8,7
Source Side exchanger Heating									
Type			Plate exchanger						
Water flow rate (W7/W55)	(1)	l/h	6002	7012	8756	10190	12200	14080	17580
Pressure drop (W7/W55)	(1)	kPa	42,9	42,5	43,8	20,8	28,6	36,8	47,6
User Side exchanger Chiller mode									
Type			Plate exchanger						
Water flow rate (W7/W55)	(3)	l/h	4407	5127	6409	7538	8980	10270	12860
Pressure drop (W7/W55)	(3)	kPa	25,2	24,8	25,6	12,4	16,9	21,4	27,8
Source Side exchanger Heating									
Type			Plate exchanger						
Water flow rate (W7/W55)	(3)	l/h	5424	6265	7818	9175	11030	12550	15700
Pressure drop (W7/W55)	(3)	kPa	32,2	30,9	40,5	22,1	30,5	26,0	24,8
Hydraulic connection									
Connection			1" 1/2	1" 1/2	1" 1/2	1" 1/2	2"	2"	2"

(1) Inlet-outlet Source water temperature 10-7°C , User water 47-55 °C

(3) Inlet-outlet Source water temperature 30-35°C , User water 12-7 °C

(4) Sound power level calculate in compliance with ISO 3744

(5) Sound pressure level calculate in compliance with ISO 3744

(7) Values calculate in compliance with EN 14511-2018

(8) Not subject to Regulation EU No. 811/2013, rated heat output > 70 kW

(9) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasbourg) User Application Medium temperature (55°C)
Outlet temperature Variable Bivalente Temp. -5°C

This datasheet gives the characteristic data of the basic and standard versions of the series; for details refer to the specific documentation

UNIT SIZE			27.2	32.2	40.2	45.4	55.4	65.4	80.4
Sound level STD version									
Sound power value	(4), (1)	dB(A)	71	71	71	72	72	72	72
Sound pressure value	(5), (1)	dB(A)	55	55	55	56	56	56	56
Sound level LN version									
Sound power value	(4), (1)	dB(A)	69	69	69	70	70	70	70
Sound pressure value	(5), (1)	dB(A)	53	53	53	54	54	54	54
Basic unit size and weights									
Width		mm	1400	1400	1400	1400	1400	1400	1400
Depth		mm	790	790	790	790	790	790	790
Height		mm	1300	1300	1300	1300	1300	1300	1300

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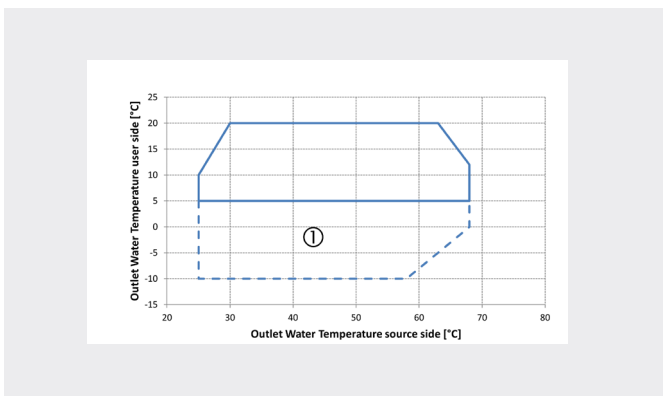
ELECTRICAL DATA

UNIT SIZE			27.2	32.2	40.2	45.4	55.4	65.4	80.4
Maximum absorbed power	(1)	kW	9,8	11,5	14,4	15,5	19,7	23,0	28,9
Maximum starting current	(2)	A	72,8	84,0	114,0	84,5	90,3	104,0	138,0
Full load current	(4)	A	17,6	20,0	23,9	27,4	35,1	40,0	47,8
Power supply		V/ph/Hz	400/3/50 ±5%	400/3/50 ±5%	400/3/50 ±5%	400/3/50 ±5%	400/3/50 ±5%	400/3/50 ±5%	400/3/50 ±5%

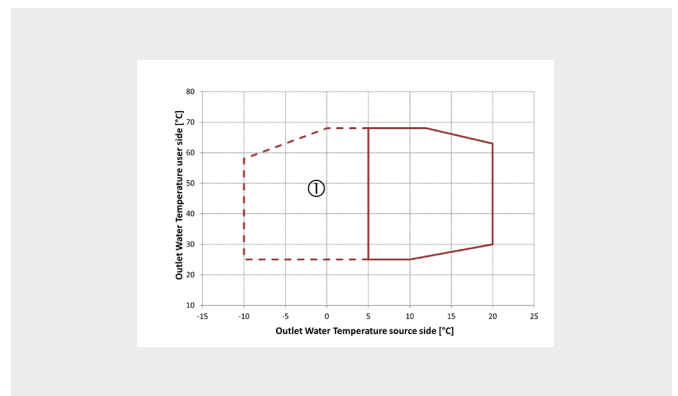
- (1) Mains power supply to allow unit operation
- (2) Maximum current before safety cut-outs stop the unit. This value is never exceeded and must be used to size the electrical supply cables and relevant safety devices (refer to electrical wiring diagram supplied with the unit).
- (4) Maximum starting current calculated considering the bigger size compressor starting current plus the maximum absorbed power of the other electrical devices (pumps, ..)

OPERATING LIMITS

COOLING



HEATING



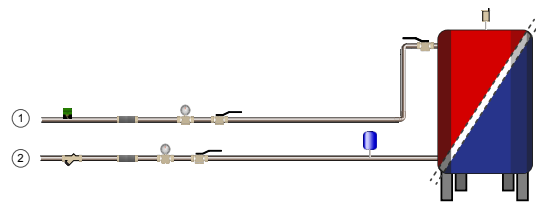
- Notes
- The maximum thermal drop in the user side exchange must be 7 °C
 - ① In this area the unit can only work with evaporator side glycoled water

AVAILABLE VERSIONS

STANDARD

Reversible heat pump for 2-pipe-systems for cooling and heating up to 68°C.

WATER
temperature limits

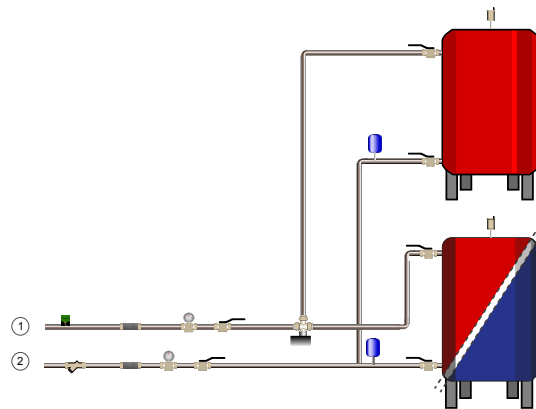


68°C
MAX heating

(1/2) In/out user side

AUTOMATIC MANAGEMENT OF SANITARY WATER

Automatic management of sanitary water trough 3 way valve managed directly by the controller.



68°C
MAX DHW

68°C
MAX heating

(1/2) In/out user side



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