



HP 90

Nominal thermal capacity 16 ÷ 130 kW

High efficiency water/water heat pumps
with CO₂ refrigerant



HP90

WATER-WATER



The ranges operate with refrigerant R744 and ensure a water production temperature up to 90°

Technical specifications of WATER/WATER unit

UNIT SIZE			18	26	48	70	100	150
Heating (EN 14511 values) (W7;W80)								
Nominal heating capacity	(1), (6)	kW	15,8	27,2	46,7	61,9	90,7	133,2
Total Power input	(1), (2), (6)	kW	4,6	7,5	12,9	17,2	25,8	37,4
COP	(1), (6)		3,43	3,64	3,64	3,60	3,52	3,56
Cooling (EN 14511 values) (W7;W80)								
Nominal cooling capacity	(1), (6)	kW	11,2	19,8	33,9	44,7	64,9	95,8
Compressor								
Type			Reciprocating					
Quantity/Refrigerant circuits		n° / n°	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Capacity steps		n°	-	-	-	-	-	-
Kind of oil			ZEROL RFL 68 EP					
Tipology			PAG (PoliAlchilenGlicole)					
Total oil charge		kg	1,3	2,5	2,5	2,5	2,5	2,5
Circuit refrigerant charge		kg	3,5	4,5	6,5	7,0	8,0	8,0
User Side exchanger								
Type			Plate exchanger					
Water flow rate	(1)	l/h	226	390	670	887	1.300	1.909
Pressure drop	(1)	kPa	8	17	23	24	16	14
Source Side exchanger								
Type			Plate exchanger					
Water flow rate	(1)	l/h	1.921	3.398	9.313	13.381	15.030	12.913
Pressure drop	(1)	kPa	34	45	57	27	50	42
Hydraulic module user side								
Type			EC motor circulation pump					
Nominal Power input of pump		W	72	90,0	90,0	90,0	90,0	90,0
Available pump pressure	(1)	kPa	59	73	69	67	72	72
Connection			1"	1"	1"	1"1/2"	1"1/2"	2"
Hydraulic module user side								
Nominal Power input of pump		W	75	190	500	1.100	1.100	1.100
Available pump pressure	(1)	kPa	50	54	17	130	96	87
Connection			1"	1"	1"	1"1/2"	1"1/2"	2"
Sound level LN version								
Sound power value	(3), (5)	dB(A)	68	70	71	78	78	81
Sound pressure value	(4), (5)	dB(A)	52	54	55	62	62	65
Basic unit size and weights								
Width		mm	1.200	1.200	1.200	1.400	1.400	1.400
Depth		mm	1.040	1.040	1.040	1.040	1.040	1.040
Height		mm	1.306	1.306	1.306	1.306	1.306	1.306
Delivery weight		kg	349	420	446	495	521	566
Operating weight		kg	362	425	459	500	566	574

(1) Source side inlet/outlet water temperatura, 12/7°C, User side inlet-outlet water 20-80 °C
 (2) Total power input is sum of compressors and power input of pump, according with EN 14511
 (3) Sound power level calculate in compliance with ISO 3744
 (4) Sound pressure level at 1 m calculate in compliance with ISO 3744
 (5) Sound level at the follow conditions: source side water 12/7°C, usere side water 20-80°C
 (6) Values calculate in compliance with EN 14511

Electrical data

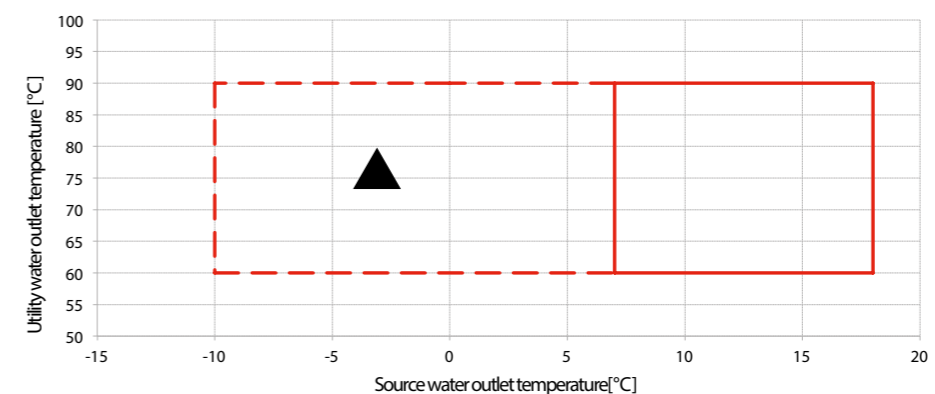
UNIT SIZE			18	26	48	70	100	150
Maximum absorbed power	(1),(3)	kW	5,2 (5,3)	7,4 (7,6)	14,4 (14,9)	16,8 (17,9)	28,2 (29,3)	42,0 (43,1)
Maximum starting current	(2),(3)	A	10,0 (10,6)	22,3 (23,6)	28,7 (32,2)	38,7 (41,1)	56,7 (59,1)	70,7 (73,1)
Full load current	(4)	A	44,1 (44,7)	109,4 (110,7)	135,4 (138,9)	177,7 (180,1)	245,7 (248,1)	290,7 (293,1)
User side pump nominal absorbed power		W	72	90	90	90	90	90
User side pump nominal absorbed current		A	0,7	0,7	0,7	0,7	0,7	0,7
User side Pump nominal adsorbed power		W	75	190	500	1.100	1.100	1.100
User side Pump nominal adsorbed current		A	0,60	1,30	3,46	2,39	2,39	2,39
Power supply		V/ph/Hz	400/3N~/50 ±5%					
Power supply		V/ph/Hz	230/1~/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).
 (3) Values in brackets refer to ST version units (units with pump on source side)
 (4) Maximum starting current calculated considering the bigger size compressor starting current plus the maximum absorbed power of the other electrical devices (pumps)

WATER/WATER unit operating limits

Operating limits for the production of water at high temperature

CHILLER AND HEAT PUMP



NOTES:

- > The water inlet temperature to the unit or HOT heat exchanger must range between +5°C and +30°C
- > The thermal drop in the COLD heat exchanger must range between 3 and 6 °C
- > Operating limits with glycolated water
- > Unit operation beyond the limits described above may cause malfunctioning and breakage of the unit itself.