RED
RED MAX

HIGH EFFICIENCY WATER/WATER AND GEOTHERMAL HEAT PUMPS

RESIDENTIAL
AND
COMMERCIAL
APPLICATIONS

High efficiency water/water and geothermal heat pumps.

Standard version in 20 sizes
Cooling capacity (W 30°C/W 7°C) 6 ÷ 85 kW // Heating capacity (W 10°C/W 45°C) 5 ÷ 120 kW

Red e Red MAX is a complete dedicated HP series machines which covers the range from 5 to 120 kW using the same refrigerant gas (R410A).

A CLASS

R410A

MULTIFUNCTIONAL

// MAIN POINTS

- Wide operating limits and power range
- Automatic management for domestic hot water
- DWS version available for all sizes (multifunctional units)
- Modularity and full accessibility
- LN version – low noise version
- Vibration damping system on three levels

The technical documentation can be improved all the times. Enerblue can update, time by time, all technical data in order to improve all necessary information for the customer.

// TECHNICAL DATA RED

UNIT SIZE			5M	7M	9M	10M	11M	14M	18M
COOLING									
Cooling (Gross values)									
Cooling capacity (W 30°C/W 18°C)	(4)	l/h	5,8	8,6	9,7	11,2	12,9	14,8	19,0
Total power input for cooling	(1), (4)	kPa	0,9	1,4	1,6	1,8	2,0	2,4	3,0
EER	(4)		6,15	6,40	6,12	6,13	6,32	6,18	6,32
Efficiency class			A	A	A	A	A	A	A
Cooling (EN 14511 values)									
Cooling capacity (W 30°C/W 18°C)	(4), (9)	kPa	5,7	8,6	9,6	11,1	12,8	14,6	18,8
EER	(4), (9)		5,30	5,59	5,44	5,48	5,56	5,55	5,69
Efficiency class			A	A	A	A	A	A	A
Cooling (Gross values)									
Cooling capacity (W 30°C/W 7°C)	(5)	kPa	4,0	6,0	7,1	7,9	9,2	10,7	13,6
Total power input for cooling	(1), (5)		1,0	1,4	1,6	1,8	2,1	2,4	3,0
EER	(5)	kPa	4,17	4,34	4,38	4,36	4,41	4,49	4,50
Efficiency class			D	C	C	C	C	C	C
Cooling (EN 14511 values)									
Cooling capacity (W 30°C/W 7°C)	(5), (9)	mm	3,9	6,0	7,0	7,9	9,1	10,7	13,5
EER	(5), (9)		3,84	4,02	4,08	4,09	4,09	4,20	4,24
Efficiency class			E	D	D	D	D	D	D
ESEER			3,76	3,81	3,75	3,82	3,73	3,62	3,64
HEATING									
Heating (Gross values)									
Heating capacity (W 10°C/W 35°C)	(2)	kW	5,5	8,0	9,3	10,5	12,0	14,1	18,0
Power input	(1), (2)	kW	0,9	1,4	1,6	1,8	2,1	2,4	3,0
COP	(2)		5,89	5,72	5,83	5,76	5,82	5,92	5,97
Efficiency class			A	A	A	A	A	A	A
Heating (EN 14511 values)									
Heating capacity (W 10°C/W 35°C)	(2), (9)	kW	5,5	7,9	9,3	10,4	11,9	14,0	17,9
COP	(2),	(9)	5,11	5,09	5,22	5,21	5,18	5,35	5,42
Efficiency class			A	A	A	A	A	A	A
Heating (Gross values)									
Heating capacity (W 10°C/W 45°C)	(3)	kW	5,3	7,6	9,0	10,1	11,5	13,5	17,1
Power input	(1), (3)	kW	1,2	1,8	2,1	2,4	2,6	3,0	3,8
COP	(3)		4,32	4,26	4,30	4,25	4,38	4,46	4,49
Efficiency class			B	B	B	B	B	A	A
Heating (EN 14511 values)									
Heating capacity (W 10°C/W 45°C)	(3), (9)	kW	5,2	7,5	9,0	10,0	11,4	13,4	17,0
COP	(3), (9)		3,93	3,93	3,99	3,97	4,04	4,16	4,20
Efficiency class			C	C	C	C	C	B	B
Compressor									
Quantity/Cooling circuits		n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Pump on the plant side									
Pump head rating	(6)	kPa	48	45	43	42	40	36	30
Heat exchanger pressure drop		kPa	28	25	24	23	29	25	25
Pump on the source side									
Pump head rating	(6)	kPa	38	35	33	32	30	59	54
Heat exchanger pressure drop		kPa	59	53	52	49	63	55	58
Noise levels									
Noise power level	(7)	dB(A)	49	49	50	50	50	53	53
Noise pressure level	(8)	dB(A)	44	44	45	45	45	48	48

(1) Total power absorbed by the compressors
(2) Ambient water user side input-output 30/35 ° C, input-output water temperature source side 10/7 ° C
(3) Temperature input-output water user side 40/45 ° C, input-output water temperature source side 10/7 ° C
(4) Temperature input-output water user side 23/18 ° C temperature source side water inlet-outlet 30/35 ° C
(5) Temperature input-output water user side 12/7 ° C temperature source side water inlet-outlet 30/35 ° C
(6) If provided by the configuration
(7) Noise power levels calculated according to ISO 3744, nominal conditions
(8) Noise pressure levels measured at 1 meter from the unit in free field, with a directivity factor Q=4
(9) Values according to EN 14511-3:2011

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// TECHNICAL DATA RED

UNIT SIZE			7	9	10	11	14	18	19	22	25	27	32	37
COOLING														
Cooling (Gross values)														
Cooling capacity (W 30°C/W 18°C)	(4)	l/h	8,5	10,3	11,3	12,8	14,9	18,9	21,2	23,9	27,1	30,6	34,8	41,3
Total power input for cooling	(1) (4)	kPa	1,4	1,6	1,7	2,1	2,3	2,9	3,3	4,1	4,7	5,1	5,7	6,4
EER	(4)		6,18	6,31	6,51	6,19	6,39	6,51	6,36	5,85	5,79	5,99	6,14	6,42
Efficiency class			A	A	A	A	A	A	A	A	A	A	A	A
Cooling (EN 14511 values)														
Cooling capacity (W 30°C/W 18°C)	(4) (9)	kPa	8,4	10,2	11,2	12,6	14,8	18,7	21,1	23,7	26,9	30,4	34,5	41,1
EER	(4) (9)		5,42	5,56	5,79	5,46	5,72	5,86	5,77	5,29	5,26	5,54	5,62	5,93
Efficiency class			A	A	A	A	A	A	A	A	A	A	A	A
Cooling (Gross values)														
Cooling capacity (W 30°C/W 7°C)	(5)	kPa	6,0	7,3	8,0	9,1	10,6	13,6	15,2	17,3	19,6	22,1	25,2	30,0
Total power input for cooling	(1) (5)		1,4	1,7	1,8	2,1	2,3	2,9	3,5	4,0	4,5	4,9	5,6	6,3
EER	(5)	kPa	4,37	4,35	4,51	4,41	4,56	4,61	4,40	4,34	4,37	4,51	4,54	4,78
Efficiency class			C	C	C	C	C	C	C	C	C	C	C	B
Cooling (EN 14511 values)														
Cooling capacity (W 30°C/W 7°C)	(5) (9)	mm	6,0	7,2	7,9	9,0	10,6	13,5	15,1	17,2	19,5	22,0	25,1	29,9
EER	(5) (9)		4,05	4,04	4,22	4,10	4,27	4,33	4,16	4,08	4,12	4,31	4,31	4,56
Efficiency class			D	D	D	D	C	C	D	D	D	C	C	C
ESEER			3,60	3,68	3,55	3,56	3,52	3,70	3,57	3,61	3,52	3,46	3.91	3.61
HEATING														
Heating (Gross values)														
Heating capacity (W 10°C/W 35°C)	(2)	kW	7,9	9,5	10,3	11,9	14,0	17,9	20,2	23,3	26,6	30,1	34,5	40,7
Power input		kW	1,4	1,7	1,8	2,1	2,3	2,9	3,4	4,0	4,5	4,9	5,5	6,3
COP	(2)		5,73	5,71	5,82	5,79	6,02	6,10	5,91	5,78	5,86	6,13	6,22	6,51
Efficiency class			A	A	A	A	A	A	A	A	A	A	A	A
Heating (EN 14511 values)														
Heating capacity (W 10°C/W 35°C)	(2) (9)	kW	7,8	9,4	10,2	11,8	13,9	17,8	20,1	23,1	26,5	29,9	34,3	40,5
COP	(2) (9)		5,10	5,12	5,27	5,17	5,43	5,52	5,41	5,24	5,32	5,66	5,68	5,99
Efficiency class			A	A	A	A	A	A	A	A	A	A	A	A
Heating (Gross values)														
Heating capacity (W 10°C/W 45°C)	(3)	kW	7,6	9,1	9,9	11,3	13,3	17,1	19,3	22,2	25,5	28,6	32,9	38,7
Power input	(1) (3)	kW	1,8	2,1	2,3	2,6	3,0	3,8	4,3	5,0	5,7	6,0	6,9	7,9
COP	(3)		4,28	4,25	4,34	4,40	4,50	4,53	4,53	4,43	4,47	4,75	4,79	4,92
Efficiency class			B	B	B	B	A	A	A	B	A	A	A	A
Heating (EN 14511 values)														
Heating capacity (W 10°C/W 45°C)	(3) (9)	kW	7,5	9,0	9,8	11,3	13,2	17,0	19,2	22,1	25,3	28,5	32,7	38,5
COP	(3) (9)		3,95	3,94	4,05	4,06	4,20	4,24	4,25	4,13	4,18	4,49	4,49	4,64
Efficiency class			C	C	C	C	B	B	B	C	B	A	A	A
Compressor														
Quantity/Cooling circuits		n°/n°	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Pump on the plant side														
Pump head rating	(6)	kPa	45	43	43	40	37	30	26	56	50	46	37	76
Heat exchanger pressure drop		kPa	25	25	22	28	24	25	23	30	30	23	30	24
Pump on the source side														
Pump head rating	(6)	kPa	35	33	33	30	59	54	51	46	40	112	93	66
Heat exchanger pressure drop		kPa	53	53	48	61	55	58	55	71	73	51	67	62
Noise levels														
Noise power level	(7)	dB(A)	49	50	50	50	53	53	54	56	58	58	60	60
Noise pressure level	(8)	dB(A)	44	45	45	45	48	48	49	51	53	53	55	55

(1) Total power absorbed by the compressors
(2) Ambient water user side input-output 30/35 ° C, input-output water temperature source side 10/7 ° C
(3) Temperature input-output water user side 40/45 ° C, input-output water temperature source side 10/7 ° C
(4) Temperature input-output water user side 23/18 ° C temperature source side water inlet-outlet 30/35 ° C
(5) Temperature input-output water user side 12/7 ° C temperature source side water inlet-outlet 30/35 ° C
(6) If provided by the configuration
(7) Noise power levels calculated according to ISO 3744, nominal conditions
(8) Noise pressure levels measured at 1 meter from the unit in free field, with a directivity factor Q=4
(9) Values according to EN 14511-3:2011

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// TECHNICAL DATA RED MAX

UNIT SIZE			43	50	55	63	74	84	95	111
COOLING										
Cooling (Gross values)										
Cooling capacity (W 30°C/W 18°C)	(4)	l/h	45,0	52,0	57,4	66,6	78,5	89,9	100,4	116,0
Total power input for cooling	(1) (4)	kPa	8,2	9,4	10,4	11,4	13,1	14,8	16,9	20,3
EER	(4)		5,49	5,56	5,53	5,83	5,97	6,06	5,93	5,72
Efficiency class			A	A	A	A	A	A	A	A
Cooling (EN 14511 values)										
Cooling capacity (W 30°C/W 18°C)	(4) (9)	kPa	44,7	51,7	57,1	66,3	78,1	89,6	100,0	115,6
EER	(4) (9)		5,14	5,21	5,17	5,47	5,61	5,72	5,61	5,44
Efficiency class			A	A	A	A	A	A	A	A
Cooling (Gross values)										
Cooling capacity (W 30°C/W 7°C)	(5)	kPa	32,7	37,7	41,9	48,5	57,3	65,6	73,0	84,8
Total power input for cooling	(1) (5)		8,0	9,0	9,9	11,2	12,8	14,5	16,2	19,7
EER	(5)	kPa	4,09	4,20	4,24	4,33	4,48	4,52	4,51	4,30
Efficiency class			D	D	D	C	C	C	C	C
Cooling (EN 14511 values)										
Cooling capacity (W 30°C/W 7°C)	(5) (9)	mm	32,6	37,6	41,8	48,3	57,1	65,4	72,8	84,6
EER	(5) (9)		3,93	4,04	4,07	4,17	4,31	4,37	4,36	4,17
Efficiency class			D	D	D	D	C	C	C	D
ESEER			3.53	3.52	3.52	3.75	3.9	4.0	3.68	3.88
HEATING										
Heating (Gross values)										
Heating capacity (W 10°C/W 35°C)	(2)	[kW]	46,7	53,9	58,8	68,7	80,9	92,0	102,9	120,4
Power input	(1) (2)	[kW]	7,8	8,8	9,7	10,9	12,4	14,0	15,9	19,3
COP	(2)		6,00	6,15	6,08	6,32	6,51	6,55	6,48	6,24
Efficiency class			A	A	A	A	A	A	A	A
Heating (EN 14511 values)										
Heating capacity (W 10°C/W 35°C)	(2) (9)	kW	46,4	53,7	58,6	68,4	80,5	91,7	102,4	120,0
COP	(2) (9)		5,57	5,71	5,65	5,89	6,07	6,15	6,08	5,89
Efficiency class			A	A	A	A	A	A	A	A
Heating (Gross values)										
Heating capacity (W 10°C/W 45°C)	(3)	[kW]	44,1	51,0	56,0	65,3	76,6	87,2	97,5	114,4
Power input	(1) (3)	[kW]	10,2	11,6	11,9	13,7	15,9	17,7	19,7	23,7
COP	(3)		4,31	4,39	4,69	4,76	4,82	4,93	4,95	4,83
Efficiency class			B	B	A	A	A	A	A	A
Heating (EN 14511 values)										
Heating capacity (W 10°C/W 45°C)	(3) (9)	kW	43,9	50,7	55,7	65,0	76,3	86,8	97,1	114,1
COP	(3) (9)		4,11	4,19	4,45	4,53	4,58	4,70	4,72	4,63
Efficiency class			C	B	B	A	A	A	A	A
Compressor										
Quantity/Cooling circuits		n°/n°	2/1	2/1	2/1	2/1	2/1	2/1	2/1	2/1
Pump on the plant side										
Pump head rating	(6)	kPa	43	91	76	160	152	144	133	110
Heat exchanger pressure drop		kPa	28	28	25	28	30	27	29	27
Pump on the source side										
Pump head rating	(6)	kPa	33	81	66	110	142	134	123	100
Heat exchanger pressure drop		kPa	56	58	69	57	59	53	54	58
Noise levels										
Noise power level	(7)	dB(A)	63	63	64	64	64	65	65	65
Noise pressure level	(8)	dB(A)	58	58	59	59	59	60	60	60

(1) Total power absorbed by the compressors
(2) Ambient water user side input-output 30/35 ° C, input-output water temperature source side 10/7 ° C
(3) Temperature input-output water user side 40/45 ° C, input-output water temperature source side 10/7 ° C
(4) Temperature input-output water user side 23/18 ° C temperature source side water inlet-outlet 30/35 ° C
(5) Temperature input-output water user side 12/7 ° C temperature source side water inlet-outlet 30/35 ° C
(6) If provided by the configuration
(7) Noise power levels calculated according to ISO 3744, nominal conditions
(8) Noise pressure levels measured at 1 meter from the unit in free field, with a directivity factor Q=4
(9) Values according to EN 14511-3:2011

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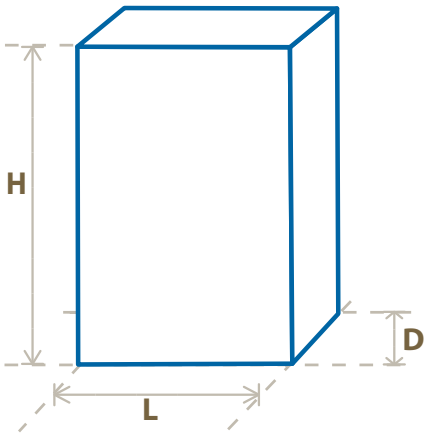
// BASIC VERSION TECHNICAL DATA

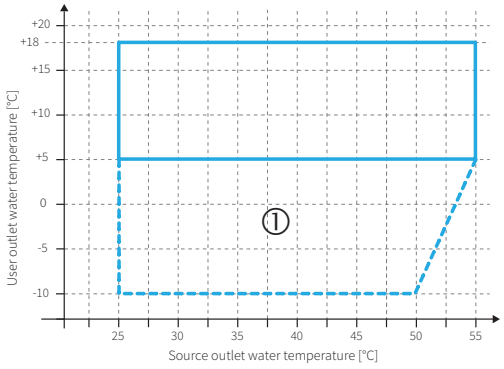


BASIC VERSION E 1P				5M÷18M 7÷25	27÷37	43÷111
L	Length		mm	640	890	1.200
D	Depth		mm	640	760	1.040
H	Height		mm	1.235	1.235	1.305
W	Operating weight	(1)	kg	179÷230	251÷259	280÷410

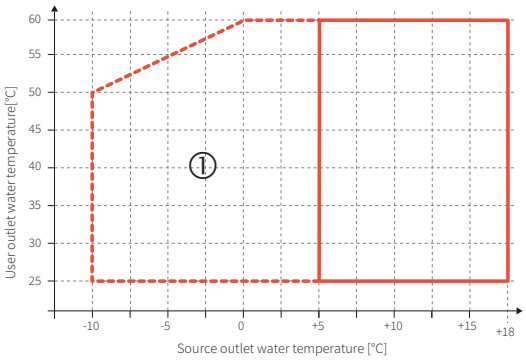
(1) The weight is only indicative and may vary depending on the unit outfit

// OPERATING LIMITS

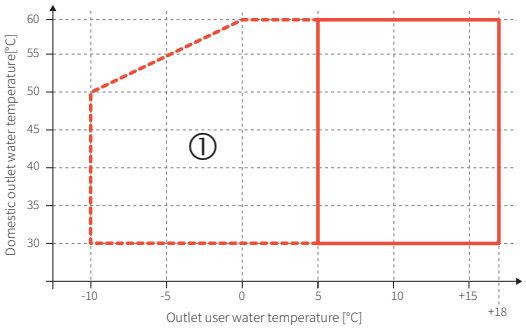
COOLING



HEATING



TOTAL RECOVERY



The heat exchanger maximum allowed temperature rise is of 5 °C

①: within this range the unit can operate only with glycol solution on evaporator side

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// ELECTRICAL DATA

UNIT SIZE			5M	7M	9M	10M	11M	14M	18M
Maximum absorbed power	(1)	kW	1.9	2.6	3.2	3.5	3.9	4.5	5.8
Maximum absorbed current	(2)	A	10.0	12.8	16.0	17.1	22.0	26.0	31.0
Maximum input current	(3)	A	44 (26)	60 (36)	67 (40)	67 (40)	98 (59)	128 (77)	116 (69)

UNIT SIZE			7	9	10	11	14	18	19	22	25	27	32	37
Maximum absorbed power	(1)	kW	2.7	3.2	3.3	3.8	4.4	5.6	6.1	7.3	8.3	9.1	10.1	11.9
Maximum absorbed current	(2)	A	4.7	6.0	6.5	7.0	8.0	10.3	11.8	15.0	15.0	16.0	21.0	22.0
Maximum input current	(3)	A	28 (17)	38 (23)	38 (23)	46 (28)	43 (26)	52 (31)	64 (38)	75 (45)	101 (61)	95 (57)	111 (67)	118 (71)

UNIT SIZE			43	50	55	63	74	84	95	111
Maximum absorbed power	(1)	kW	14.6	16.6	18.2	20.2	23.8	27.0	29.2	33.8
Maximum absorbed current	(2)	A	30.0	30.0	32.0	42.0	44.0	50.0	62.0	68.0
Maximum input current	(3)	A	90 (61)	116 (76)	111 (73)	132 (88)	140 (93)	143 (96)	171 (115)	208 (138)

PUMPS (4)		5M	7M÷7	9M÷9	10M÷10	11M÷11	14M÷14	18M÷18	19	22	25	27
Pump on the source side		P1	P1	P1	P1	P1	P2	P2	P2	P2	P2	P3
Nominal power	kW	0,08	0,08	0,08	0,08	0,08	0,2	0,2	0,2	0,2	0,2	3,38
Nominal current	A	0,6	0,6	0,6	0,6	0,6	1,5	1,5	1,5	1,5	1,5	3,38
Pump on the plant side		P1	P1	P1	P1	P1	P1	P1	P1	P2	P2	P2
Nominal power	kW	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,2	0,2	0,2
Nominal current	A	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	1,5	1,5	1,5
Pump on the domestic water side		P1	P1	P1	P1	P1	P1	P1	P1	P2	P2	P2
Nominal power	kW	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,2	0,2	0,2
Nominal current	A	0,6	0,6	0,6	0,6	0,6	0,6	0,6	0,6	1,5	1,5	1,5

PUMPS (4)		32	37	43	50	55	63	74	84	95	111
Pump on the source side		P3	P3	P3	P4	P4	P5	P5	P5	P5	P5
Nominal power	kW	0,78	0,78	0,78	0,82	0,82	1,35	1,35	1,35	1,35	1,35
Nominal current	A	3,38	3,38	3,38	1,6	1,6	2,5	2,5	2,5	2,5	2,5
Pump on the plant side		P2	P3	P3	P4	P4	P5	P5	P5	P5	P5
Nominal power	kW	0,2	0,78	0,78	0,82	0,82	1,35	1,35	1,35	1,35	1,35
Nominal current	A	1,5	3,38	3,38	1,6	1,6	2,5	2,5	2,5	2,5	2,5
Pump on the domestic water side		P2	P3	P3	P4	P4	P5	P5	P5	P5	P5
Nominal power	kW	0,2	0,78	0,78	0,82	0,82	1,35	1,35	1,35	1,35	1,35
Nominal current	A	1,5	3,38	3,38	1,6	1,6	2,5	2,5	2,5	2,5	2,5

ELECTRICAL POWER SUPPLY		5M	7M	9M	10M	11M	14M	18M	7	9	10	11	14	18
Standard power supply	V/ph/Hz	230/1~/50							400/3N~/50					

ELECTRICAL POWER SUPPLY		19	22	25	27	32	37	43	50	55	63	74	84	95	111
Standard power supply	V/ph/Hz	400/3N~/50						400/3~/50							

The indicated data is valid for unit with standard power supply
(1) Electrical power that must be supplied by the mains to power the unit
(2) Internal breakers tripping current. This value is never exceeded and must be used to size the line and its protections (refe rto the electric diagram supplied with the unit).
(3) The maximum peak of the current is calculated considering the compressor start and the maximum power absorbed by all the other devices. The value between parenthesis refers to the units equipped with soft-starter (optional).
(4) To be asked for when ordering

The technical documentation can be improved all the times. Enerblue can update, time by time, all technical data in order to improve all necessary information for the customer.