

ORANGE MAX ORANGE HT MAX

HIGH EFFICIENCY AIR-WATER HEAT PUMPS
WITH AXIAL FANS WITH A SINGLE SCROLL COMPRESSOR



Dedicated heat pumps new series with Scroll compressors, with and without liquid injection.

/HT version in 5 sizes

Cooling capacity (A35;W7) 37 ÷ 90 kW // Heating capacity (A7;W45) 42 ÷ 77 kW

Standard version in 5 sizes

Cooling capacity (A35;W7) 40 ÷ 88 kW // Heating capacity (A7;W45) 44 ÷ 75 kW

Orange MAX e HT MAX is a complete dedicated HP series machines which covers the range from 6 to 78 kW using the same refrigerant gas (R410A) with double compressors.



A CLASS



R410A



MULTIFUNCTIONAL



SUPER SILENT



HORIZONTAL AIR
DISCHARGE

// MAIN POINTS

- > Wide operating limits and power range
- > Automatic management for domestic hot water
- > DWS version available for all sizes (multifunctional units)
- > Smarter defrosting management
- > Modularity and full accessibility
- > SLN version - super silent
- > OD version - Horizontal discharge

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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 ORANGE MAX

UNIT SIZE			52	62	72	82	92
HEATING							
Heating (Gross values) (A7;W35)							
Nominal heating capacity	(1)	kW	44,8	50,6	60,3	68,8	76,1
Heating power input	(1) (2)	kW	10,9	12,1	13,9	16,3	17,9
COP	(1)		4,11	4,17	4,35	4,23	4,25
Efficiency class in heating floor			A	A	A	A	A
Heating (EN 14511) (A7;W35)							
Nominal heating capacity	(1)	kW	45,1	50,9	60,6	69,2	76,5
COP	(1)		4,04	4,10	4,27	4,16	4,18
Efficiency class in heating floor			B	A	A	A	A
Heating (Gross values) (A7;W45)							
Nominal heating capacity	(3)	kW	42,6	48,3	57,1	65,0	71,8
Heating absorbed power	(3) (2)	kW	13,1	14,9	17,2	20,0	21,8
COP	(3)		3,25	3,25	3,31	3,25	3,29
Efficiency class			A	A	A	A	A
Heating (EN 14511) (A7;W45)							
Nominal heating capacity	(3)	kW	42,9	48,6	57,4	65,4	72,2
COP	(3)		3,21	3,21	3,27	3,21	3,25
Efficiency class			A	A	A	A	A
COOLING							
Cooling (Gross values) (A35;W18)							
Nominal cooling capacity	(4)	kW	52,1	61,6	70,2	80,5	88,0
Cooling power input	(4) (2)	kW	14,8	16,5	20,0	22,0	25,3
EER	(4)		3,52	3,73	3,52	3,65	3,48
Efficiency class in heating floor			C	B	C	B	D
Cooling (EN 14511 values) (A35;W18)							
Nominal cooling capacity	(4)	kW	51,8	61,3	69,9	80,1	87,6
EER	(4)		3,44	3,65	3,44	3,58	3,41
Efficiency class in heating floor			D	C	D	C	D
Cooling (Gross values) (A35;W7)							
Nominal cooling capacity	(5)	kW	38,9	46,2	52,8	60,0	66,0
Cooling power input	(5),(2)	kW	13,6	15,1	18,4	20,5	23,2
EER	(5)		2,85	3,05	2,87	2,93	2,85
ESEER			4,08	4,39	4,37	4,54	4,39
Efficiency class			C	B	C	B	C
Cooling (EN 14511 values) (A35;W7)							
Nominal cooling capacity	(5)	kW	38,6	46,0	52,5	59,7	65,6
EER	(5)		2,78	2,98	2,81	2,87	2,79
Efficiency class			C	B	C	C	C

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- (1) External air temperature 7°C DB, 6°C WB; condenser input-output temperature 30-35°C
- (2) The total power is given by the sum of the power absorbed by the compressors and by the fans
- (3) External air temperature 7°C DB, 6°C WB; condenser input-output temperature 40-45°C
- (4) External air temperature 35°C; input water-evaporator output temperature 12-7°C
- (5) External air temperature 35°C; input water-evaporator output temperature 23-18°C

// TECHNICAL DATA ORANGE MAX

UNIT SIZE			52	62	72	82	92
Compressor							
Type			Scroll	Scroll	Scroll	Scroll	Scroll
Quantity		n°	2	2	2	2	2
Refrigerant circuits		n°	1	1	1	1	1
Capacity steps		%	0-50-100%	0-50-100%	0-50-100%	0-50-100%	0-50-100%
Total oil charge		kg	3,6	6,8	6,8	6,8	6,8
Total refrigerant charge		kg	15	18	20	24	26
Fans							
Type			Axial	Axial	Axial	Axial	Axial
Quantity		n°	1	1	1	1	1
Air flow		m3/s	4,722	5,139	5,139	5,833	5,833
Air flow		m3/h	17000	18500	18500	21000	21000
User side exchanger							
Type			Plate	Plate	Plate	Plate	Plate
Quantity		n°	1	1	1	1	1
Water content		l	5,2	6,5	7,8	9,1	10,4
Water flow rate (A7;W35)	(1)	l/h	7756	8753	10421	11900	13156
Pressure drop Water (A7;W35)		kPa	33	34	35	35	36
Hydraulic module							
Pump model			P1	P1	P1	P1	P1
Useful pump head		kPa	162	158	152	145	140
Noise							
Sound power level	(2)	dB(A)	83	83	84	85	85
Noise pressure level	(3)	dB(A)	55	55	56	57	57
Noise LN (Low Noise) version							
Sound power level	(2)	dB(A)	81	81	82	83	83
Noise pressure level	(3)	dB(A)	53	53	54	55	55
Noise SLN (Super Low Noise) version							
Sound power level	(2)	dB(A)	78	78	79	-	-
Noise pressure level	(3)	dB(A)	50	50	51	-	-
Dimensions and weight standard unit							
Height		mm	1403	1403	1403	1403	1403
Length		mm	1791	1791	1791	1791	1791
Depth		mm	2390	2390	2390	2390	2390
Weight		kg	575	592	602	620	631

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(1) External air temperature 7°C DB, 6°C WB; condenser input-output temperature 30-35°C
 (2) Lw: sound power values in free field calculated in compliance with ISO 3744. Chiller working conditions (A35;W7)
 (3) Lp: sound pressure levels detected at 10 m from the fan side unit, not channelled in free field, in compliance with ISO 3744. Chiller working conditions (A35;W7)

// TECHNICAL DATA ORANGE HT MAX

UNIT SIZE			50	60	70	80	90
HEATING							
Heating (Gross values) (A7;W35)							
Nominal heating capacity	(1)	kW	40,2	48,9	54,8	67,7	74,0
Heating power input	(1) (2)	kW	9,7	11,5	13,3	16,1	17,8
COP	(1)		4,14	4,26	4,12	4,19	4,15
Efficiency class in heating floor			A	A	A	A	A
Heating (EN 14511) (A7;W35)							
Nominal heating capacity	(1)	kW	40,4	49,2	55,1	68,0	74,4
COP	(1)		4,07	4,18	4,05	4,13	4,09
Efficiency class in heating floor			A	A	A	A	A
Heating (Gross values) (A7;W45)							
Nominal heating capacity	(3)	kW	41,5	49,9	56,0	69,2	75,6
Heating absorbed power	(3) (2)	kW	12,2	14,4	16,8	20,0	22,0
COP	(3)		3,41	3,46	3,33	3,46	3,44
Efficiency class			A	A	A	A	A
Heating (EN 14511) (A7;W45)							
Nominal heating capacity	(3)	kW	41,7	50,2	56,3	69,5	76,0
COP	(3)		3,37	3,41	3,30	3,42	3,40
Efficiency class			A	A	A	A	A
COOLING							
Cooling (Gross values) (A35;W18)							
Nominal cooling capacity	(4)	kW	48,3	55,2	68,6	79,0	90,2
Cooling power input	(4) (2)	kW	13,1	15,4	19,2	21,2	25,1
EER	(4)		3,69	3,59	3,57	3,73	3,59
Efficiency class in heating floor			B	C	C	B	C
Cooling (EN 14511 values) (A35;W18)							
Nominal cooling capacity	(4)	kW	48,1	54,9	68,3	78,7	89,8
EER	(4)		3,62	3,51	3,50	3,65	3,52
Efficiency class in heating floor			C	C	C	B	C
Cooling (Gross values) (A35;W7)							
Nominal cooling capacity	(5)	kW	37,6	43,1	53,5	61,3	70,0
Cooling power input	(5) (2)	kW	12,5	14,5	18,0	20,5	23,5
EER	(5)		3,00	2,96	2,98	3,00	2,98
ESEER			4,33	4,13	4,45	4,50	4,49
Efficiency class			B	B	B	B	B
Cooling (EN 14511 values) (A35;W7)							
Nominal cooling capacity	(5)	kW	37,4	42,8	53,2	61,0	69,6
EER	(5)		2,93	2,89	2,92	2,93	2,92
Efficiency class			B	C	B	B	B

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- (1) External air temperature 7°C DB, 6°C WB; condenser input-output temperature 30-35°C
- (2) The total power is given by the sum of the power absorbed by the compressors and by the fans
- (3) External air temperature 7°C DB, 6°C WB; condenser input-output temperature 40-45°C
- (4) External air temperature 35°C; input water-evaporator output temperature 12-7°C
- (5) External air temperature 35°C; input water-evaporator output temperature 23-18°C

// TECHNICAL DATA ORANGE HT MAX

UNIT SIZE			50	60	70	80	90
Compressor							
Type			Scroll	Scroll	Scroll	Scroll	Scroll
Quantity		n°	2	2	2	2	2
Refrigerant circuits		n°	1	1	1	1	1
Capacity steps		%	0-50-100%	0-50-100%	0-50-100%	0-50-100%	0-50-100%
Total oil charge		kg	3,8	6,8	6,8	6,8	6,8
Total refrigerant charge		kg	14	18	19	23	25
Fans							
Type			Axial	Axial	Axial	Axial	Axial
Quantity		n°	1	1	1	1	1
Air flow		m ³ /s	4,722	5,139	5,139	5,833	5,833
Air flow		m ³ /h	17000	18500	18500	21000	21000
User side exchanger							
Type			Plate	Plate	Plate	Plate	Plate
Quantity		n°	1	1	1	1	1
Water content		l	5,2	6,5	7,8	9,1	10,4
Water flow rate (A7;W35)	(1)	l/h	6948	8461	9475	11694	12794
Pressure drop Water (A7;W35)		kPa	30	33	31	35	34
Hydraulic module							
Pump model			P1	P1	P1	P1	P1
Useful pump head		kPa	167	160	159	146	142
Noise							
Sound power level	(2)	dB(A)	83	83	84	85	85
Noise pressure level	(3)	dB(A)	55	55	56	57	57
Noise LN (Low Noise) version							
Sound power level	(2)	dB(A)	81	81	82	83	83
Noise pressure level	(3)	dB(A)	53	53	54	55	55
Noise SLN (Super Low Noise) version							
Sound power level	(2)	dB(A)	78	78	79	-	-
Noise pressure level	(3)	dB(A)	50	50	51	-	-
Dimensions and weight standard unit							
Height		mm	1403	1403	1403	1403	1403
Length		mm	1791	1791	1791	1791	1791
Depth		mm	2390	2390	2390	2390	2390
Weight		kg	575	592	602	620	631

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(1) External air temperature 7°C DB, 6°C WB; condenser input-output temperature 30-35°C
 (2) Lw: sound power values in free field calculated in compliance with ISO 3744. Chiller working conditions (A35;W7)
 (3) Lp: Sound pressure levels refer to 10 meters from unit in free field compliant to ISO 3744. Chiller working conditions (A35;W7)

// ELECTRICAL DATA ORANGE MAX

UNIT SIZE			52	62	72	82	92
Maximum absorbed power	(1)	kW	18,8	22,1	25,4	28,7	31,0
Maximum absorbed power with pump	(1)	kW	20,3	23,5	26,8	30,1	32,4
Maximum absorbed current	(2)	A	36,3	45,9	47,9	53,9	65,9
Maximum absorbed current with pump	(2)	A	39,0	48,6	50,6	56,6	68,6
Maximum current at peak	(3)	A	121	136	144	147	175
Maximum current at peak with soft-starter	(3)	A	73	82	86	88	105
Maximum current at peak with pump	(3)	A	124	139	147	150	178
Maximum current at peak with pump and soft-starter		A	74	83	88	90	107
Fan nominal power		kW	1,7	1,7	1,7	1,7	1,7
Fan nominal current		A	3,9	3,9	3,9	3,9	3,9
Pump motor nominal power		kW	1,43	1,43	1,43	1,43	1,43
Pump motor nominal current		A	2,7	2,7	2,7	2,7	2,7
Electric power supply		V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Optional power supply		V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

// ELECTRICAL DATA ORANGE HT MAX

UNIT SIZE			50	60	70	80	90
Maximum absorbed power	(1)	kW	20,2	23,8	27,7	32,4	38,1
Maximum absorbed power with pump	(1)	kW	21,6	25,2	29,1	33,8	39,5
Maximum absorbed current	(2)	A	35,9	41,1	45,9	55,9	74,7
Maximum absorbed current with pump	(2)	A	38,6	43,8	48,6	58,6	77,4
Maximum current at peak	(3)	A	121	151	143	170	213
Maximum current at peak with soft-starter	(3)	A	81	101	96	114	143
Maximum current at peak with pump	(3)	A	124	153	146	173	216
Maximum current at peak with pump and soft-starter		A	83	103	98	116	145
Fan nominal power		kW	1,7	1,7	1,7	1,7	1,7
Fan nominal current		A	3,9	3,9	3,9	3,9	3,9
Pump motor nominal power		kW	1,4	1,4	1,4	1,4	1,4
Pump motor nominal current		A	2,7	2,7	2,7	2,7	2,7
Electric power supply		V/ph/Hz	400/3~/50	400/3~/50	400/3~/50	400/3~/50	400/3~/50
Optional power supply		V/ph/Hz	230/1~/50	230/1~/50	230/1~/50	230/1~/50	230/1~/50

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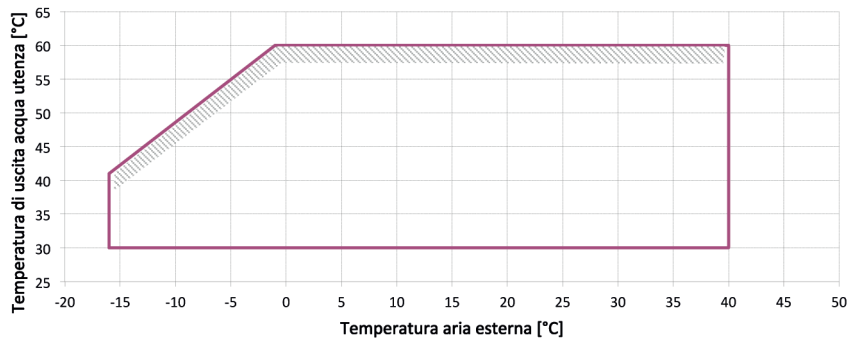
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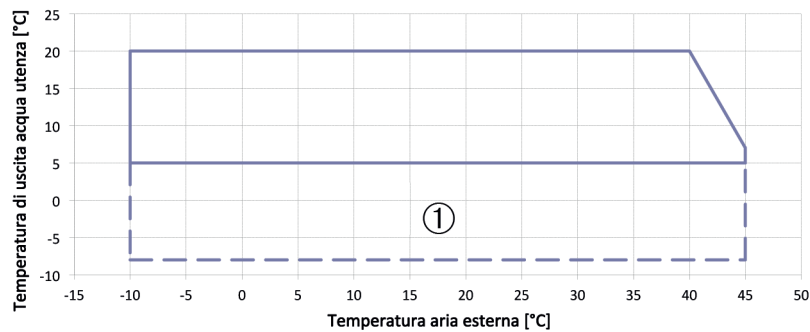
- 1) Electric power that must be available from the electric network for the unit to work.
- 2) Current at which the units' internal protections intervene. It is the maximum current absorbed by the unit. This value must never be exceeded and must be taken into account when sizing the line and the relative protection devices (see the wiring diagram supplied with the units).
- 3) The values between brackets refer to the ST version units with the maximum number of pumps available (with or without storage tank).

// OPERATION LIMITS ORANGE MAX

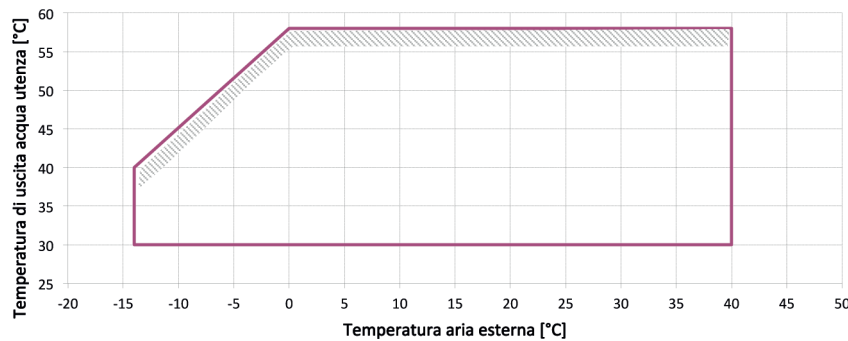
HEATING



COOLING



RECOVERY



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NOTES

- > The thermal gradient to the utility side exchanger must be between 3°C and 6°C
- > ①: the unit can only operate in this area with evaporator side glycol water
- > Heating mode: Inlet water temperature cannot be lower than 25°C
- > When the unit works out of the operating limits pay attention to the allarms caused from incorrect working conditions



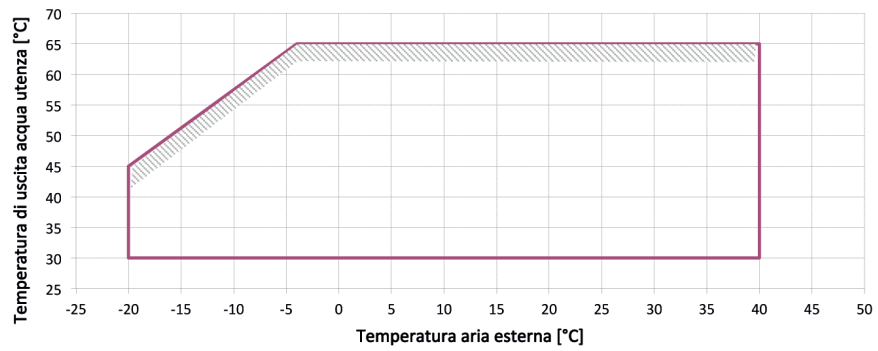
The unit can work within this operating limits for a limited time

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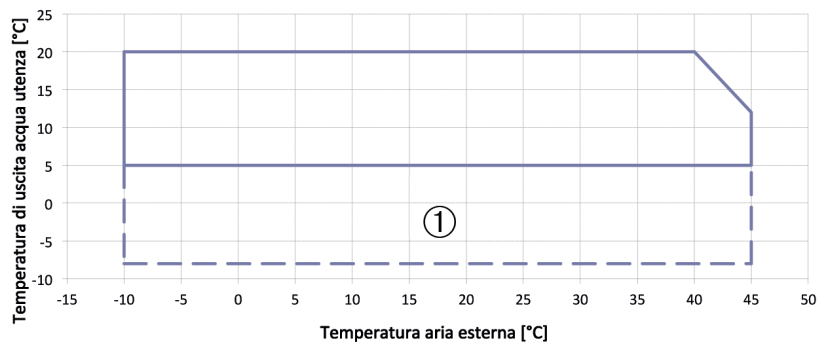
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// OPERATION LIMITS ORANGE HT MAX

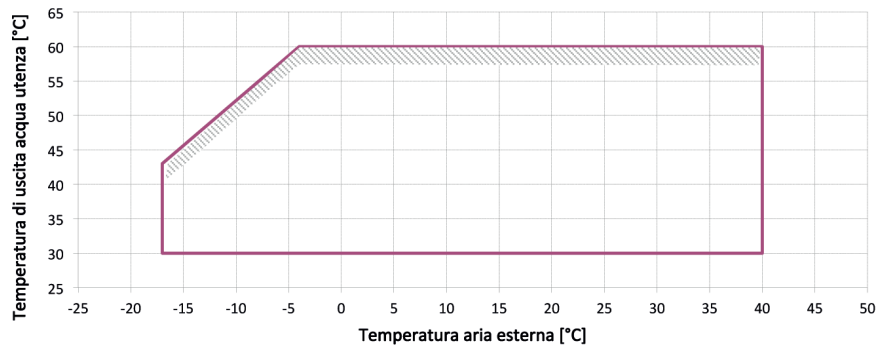
HEATING



COOLING



RECOVERY



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NOTES

- > The thermal gradient to the utility side exchanger must be between 3°C and 6°C
- > ①: the unit can only operate in this area with evaporator side glycol water
- > heating mode: Inlet water temperature cannot be lower than 25°C
- > When the unit works out of the operating limits pay attention to the allarms caused from incorrect working conditions



The unit can work within this operating limits for a limited time

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// NOISE LEVELS ORANGE MAX

UNIT SIZE	Standard Version		/LN Version		/SLN Version	
	Total [dB(A)]		Total [dB(A)]		Total [dB(A)]	
	Lw	Lp	Lw	Lp	Lw	Lp
52	83	55	81	53	78	50
62	83	55	81	53	78	50
72	84	56	82	54	79	51
82	85	57	83	55	-	-
92	85	57	83	55	-	-

// NOISE LEVELS ORANGE HT MAX

UNIT SIZE	Standard Version		/LN Version		/SLN Version	
	Total [dB(A)]		Total [dB(A)]		Total [dB(A)]	
	Lw	Lp	Lw	Lp	Lw	Lp
50	83	55	81	53	78	50
60	83	55	81	53	78	50
70	84	56	82	54	79	51
80	85	57	83	55	-	-
90	85	57	83	55	-	-

Lw: sound power values in free field calculated in compliance with ISO 3744. Chiller working conditions (A35;W7)

Lp: sound pressure levels detected at 10 m from the fan side unit, not channelled in free field, in compliance with ISO 3744. Chiller working conditions (A35;W7)

DESCRIPTION /LN VERSION

The unit is provided with the following accessories:

- > Insulated Compressor box with low sound emission

DESCRIPTION /SLN VERSION

The unit is provided with the following accessories:

- > Insulated Compressor box with low sound emission .
- > Oversized condensing coils
- > EC Fan (Electronic type with High efficiency performance)
- > FANS with LOW NOISE setting

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