IRON EVO

Engineered for flexibility

Water-water heat pumps with R290 natural refrigerant, equipped with semi-hermetic reciprocating compressors and reversible hydraulic circuit.

R290

TECHNICAL BROCHURE / **EN**

enerblue

INSPIRED BY NATURE

IRON EVO

R290

GWP=3

INSTALLATION SECTORS
COMMERCIAL / INDUSTRIAL

62.5°
Max water temperature

The IRON EVO range of heat pumps is the culmination of Enerblue's extensive experience in the development of high-efficiency water/water solutions with R290 natural refrigerant. Designed to guarantee superior performance, IRON EVO expands the range to meet the requirements of the complex and high-profile plants typically used in the most prestigious installations.

Thanks to a design geared towards maximum installation versatility, IRON EVO is suitable for both indoor and outdoor installations, without the need for additional protection against the elements. This allows plenty of flexibility when it comes to siting, simplifies the design and installation phases, and reduces architectural and plant engineering constraints.

The IRON EVO series is available in three capacity control configurations: two-stage, inverter and full inverter, designed to guarantee optimum power modulation and high seasonal efficiency in all fields of application.

RANGE

Heating	(W7;W55) 52 ÷ 372 kW
Cooling	(W35;W7) 48 ÷ 336 kW

REVERSIBLE HYDRAULIC SIDE

SEMI-HERMETIC RECIPROCATING COMPRESSORS

Main characteristics

1

ATEX

ATEX-certified axial extraction fan, included in outdoor installation version.

2

ATEX

ATEX-certified duct-type mixed-flow extraction fan, supplied on request for indoor installation version.

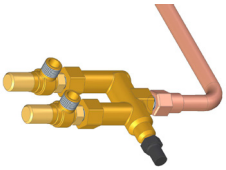
3

Models 50.1 to 120.1 and 80.2.2 to 200.2 are suitable for installation in an “occupied space”.

The remaining models are suitable for installation in a “machinery room”.

5 Compliant with Ecodesign Directive

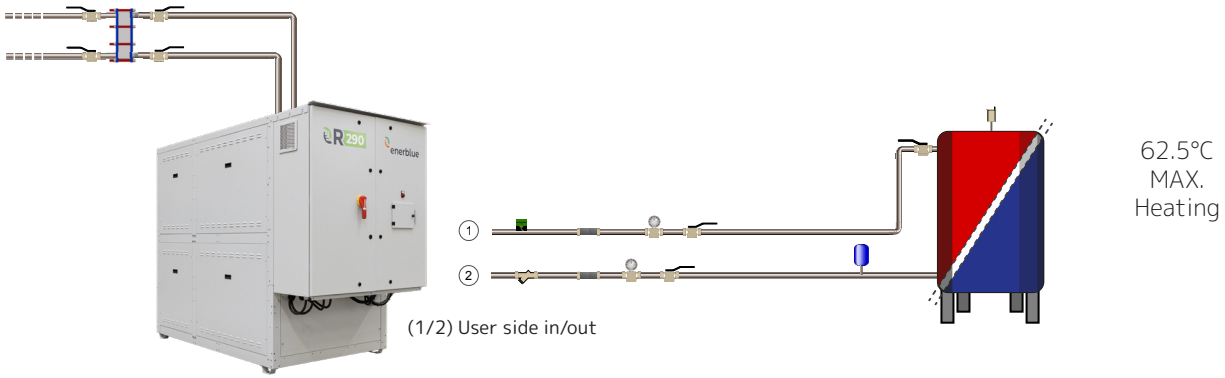
4



Dual refrigerant safety valve available on request.

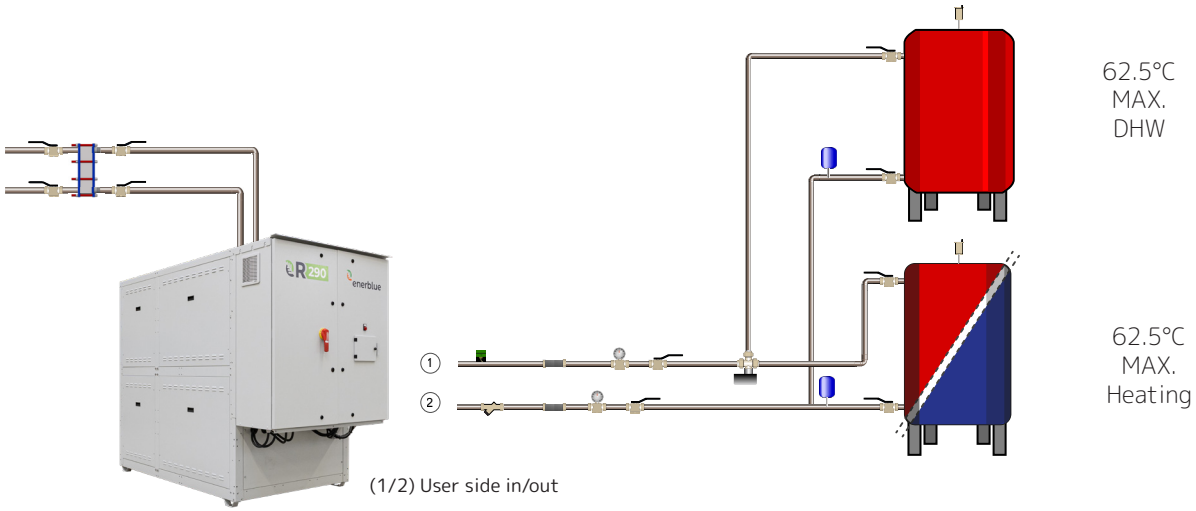
Available versions

Reversible heat pump for 2-pipe systems for cooling and heating up to 62.5°C.
Hydraulic side cycle inversion to be set up at installation.



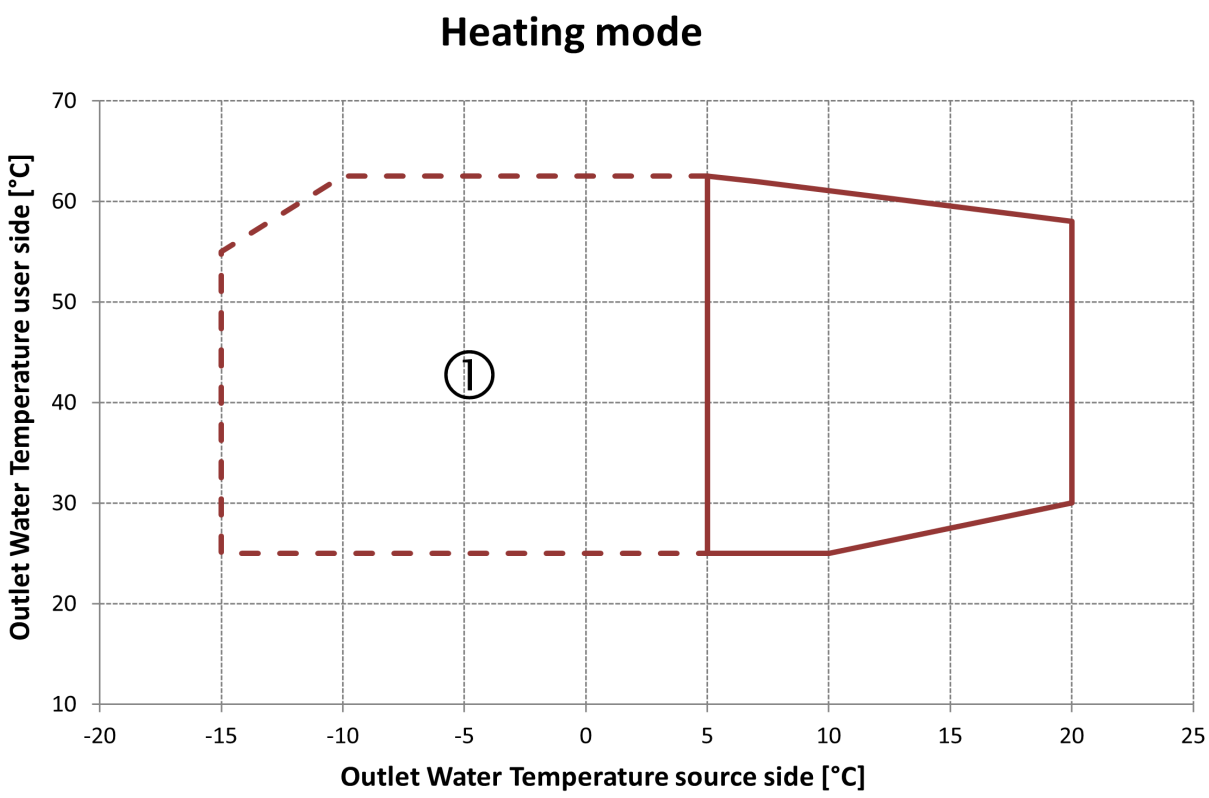
AUTOMATIC DOMESTIC HOT WATER MANAGEMENT

Automatic domestic hot water management via 3-way valve controlled directly by the controller.
Hydraulic side cycle inversion to be set up at installation.



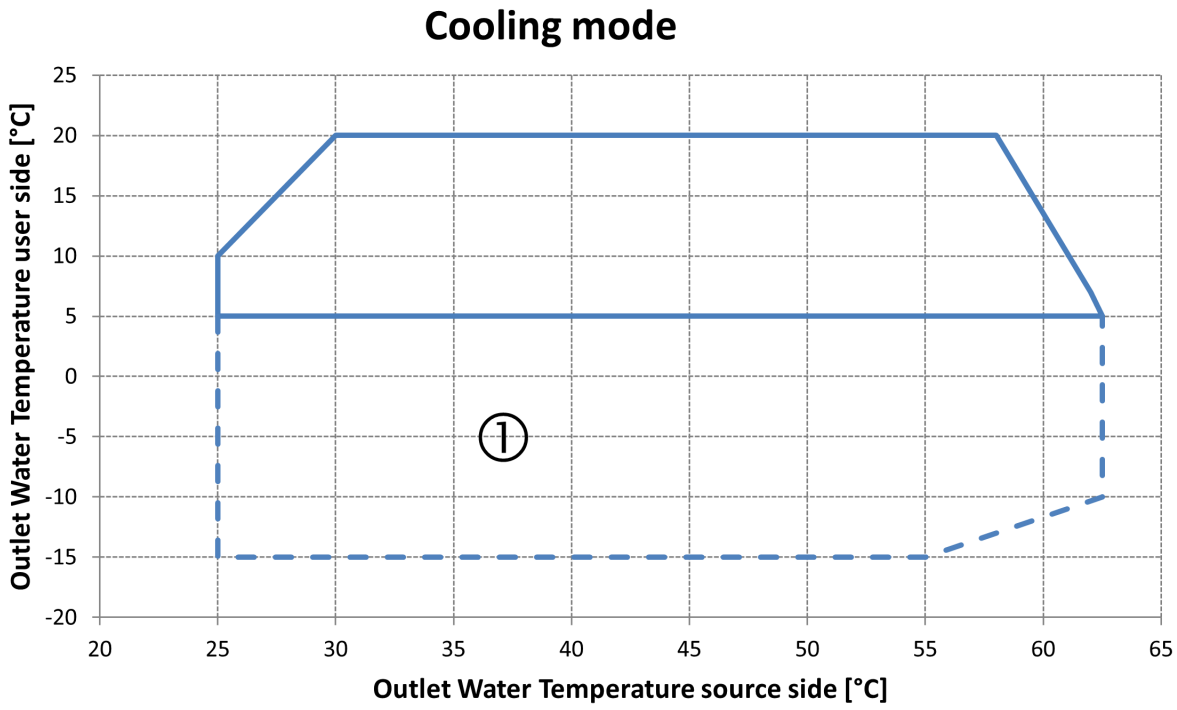
Operating limits

HEATING



Notes
- The temperature difference at the user-side exchanger must be between 3°C and 8°C
- ① Within these parameters the unit can only operate with glycol water on the evaporator side
- Operating outside the operating limits may trigger the safety devices or result in serious malfunctions

COOLING



Notes
- The temperature difference at the user-side exchanger must be between 3°C and 8°C
- ① Within these parameters the unit can only operate with glycol water on the evaporator side
- Operating outside the operating limits may trigger the safety devices or result in serious malfunctions

IRON EVO

Technical specifications

MODEL			50.1	60.1	80.1	100.1	120.1	140.1
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	52,4	65,0	80,6	113,0	123,0	143,0
Total absorbed power in heating	(1), (6)	kW	14,6	18,2	22,3	31,5	34,4	39,9
COP (Coefficient of performance)	(1), (6)		3,59	3,57	3,61	3,59	3,58	3,58
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,39	4,49	4,51	4,33	4,32	4,41
Seasonal Energy Efficiency h_s	(7)	%	167,3	171,7	172,3	165,0	164,7	168,3
Seasonal Efficiency class	(7), (9)		A+++	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	48,2	59,0	72,9	101,0	109,0	130,0
Total absorbed power in cooling	(2), (6)	kW	12,1	14,3	17,5	24,6	26,9	32,7
EER	(2), (6)		3,98	4,13	4,17	4,11	4,05	3,98
COMPRESSOR								
Type			Semi-hermetic reciprocating					
Quantity / cooling circuits		n° / n°	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Partialization stages		n°	2	2	2	2	2	2
Oil charge for circuit		kg	2,5	3,5	3,5	3,5	3,5	8,5
Refrigerant charge in circuit		kg	2,0	2,5	3,1	4,2	4,6	5,3
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	5,7	7,1	8,8	12,3	13,4	15,5
Pressure loss (W7/W55)	(1)	kPa	8,0	8,6	8,4	10,1	10,7	11,9
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	10,9	13,5	16,8	23,5	25,6	29,7
Pressure loss (W7/W55)	(1)	kPa	30,6	33,3	33,1	41,2	43,7	50,7
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	8,3	10,1	12,5	17,4	18,8	22,4
Pressure loss (W35/W7)	(2), (10)	kPa	19,9	21,3	20,8	25,6	26,9	32,4
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	10,4	12,6	15,6	21,7	23,5	28,0
Pressure loss (W35/W7)	(2), (10)	kPa	23,7	24,6	24,1	28,4	29,9	34,8
HYDRAULIC CONNECTIONS								
Connection			1" 1/2	1" 1/2	2"	2"1/2	2"1/2	2"1/2
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	77	77	77	78	78	78
Sound pressure	(4), (5)	dB(A)	60	60	60	61	61	61
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	75	75	75	75	75	75
Sound pressure	(4), (5)	dB(A)	58	58	58	59	59	59
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	1655	1655	1655	1655	1655	1655
Depth		mm	755	755	755	755	755	755
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg						

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

MODEL			80.2	100.2	120.2	140.2	150.2	170.2
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	80,2	104,0	129,0	145,0	155,0	177,0
Total absorbed power in heating	(1), (6)	kW	22,4	28,9	35,9	40,5	43,7	49,0
COP (Coefficient of performance)	(1), (6)		3,58	3,60	3,59	3,58	3,55	3,61
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,47	4,52	4,58	4,59	4,61	4,61
Seasonal Energy Efficiency h_s	(7)	%	171,3	172,9	175,4	175,7	176,5	176,5
Seasonal Efficiency class	(7), (9)		A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	73,5	96,3	117,0	132,0	143,0	159,0
Total absorbed power in cooling	(2), (6)	kW	18,6	24,0	28,3	31,9	34,6	38,2
EER	(2), (6)		3,95	4,01	4,13	4,14	4,13	4,16
COMPRESSOR								
Type			Semi-hermetic reciprocating					
Quantity / cooling circuits		n° / n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Partialization stages		n°	4	4	4	4	4	4
Oil charge for circuit		kg	2,5	2,5	3,5	3,5	3,5	3,5
Refrigerant charge in circuit		kg	2,1	2,6	3,2	3,2	3,3	3,7
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	l/h	8,7	11,3	14,0	15,8	16,9	19,3
Pressure loss (W7/W55)	(1)	kPa	6,3	6,8	7,2	7,3	8,0	8,5
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	l/h	16,6	21,6	26,7	30,0	32,0	36,8
Pressure loss (W7/W55)	(1)	kPa	26,5	18,0	20,1	25,4	28,1	27,8
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	l/h	12,6	16,6	20,1	22,7	24,5	27,3
Pressure loss (W35/W7)	(2), (10)	kPa	17,2	11,8	12,8	16,3	18,4	17,3
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	l/h	15,9	20,8	25,0	28,3	30,6	34,0
Pressure loss (W35/W7)	(2), (10)	kPa	18,8	20,5	20,7	20,9	23,6	24,0
HYDRAULIC CONNECTIONS								
Connection			2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	3"
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	80	80	80	80	80	80
Sound pressure	(4), (5)	dB(A)	63	63	63	63	63	63
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	78	78	78	78	78	78
Sound pressure	(4), (5)	dB(A)	61	61	61	61	61	61
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	2088	2088	2088	2088	2088	2088
Depth		mm	1209	1209	1209	1209	1209	1209
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg						

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

MODEL			200.2	240.2	270.2	300.2	330.2	350.2
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	221,0	263,0	284,0	315,0	342,0	372,0
Total absorbed power in heating	(1), (6)	kW	61,9	73,7	78,5	87,8	95,5	106,0
COP (Coefficient of performance)	(1), (6)		3,57	3,57	3,62	3,59	3,58	3,51
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,48	4,46	4,52	4,51	4,49	4,44
Seasonal Energy Efficiency h_s	(7)	%	171,1	170,2	173,0	172,5	171,7	169,6
Seasonal Efficiency class	(7), (9)		A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	198,0	237,0	258,0	287,0	311,0	336,0
Total absorbed power in cooling	(2), (6)	kW	48,8	59,3	64,5	71,6	78,3	86,2
EER	(2), (6)		4,06	4,00	4,00	4,01	3,97	3,90
COMPRESSOR								
Type			Semi-hermetic reciprocating					
Quantity / cooling circuits		n° / n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Partialization stages		n°	4	4	4	4	4	4
Oil charge for circuit		kg	3,5	3,5	8,5	8,5	8,5	8,5
Refrigerant charge in circuit		kg	4,7	6,1	6,3	7,2	7,5	7,5
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	24,0	28,6	30,9	34,3	37,2	40,4
Pressure loss (W7/W55)	(1)	kPa	9,4	10,9	11,4	12,0	11,9	13,5
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	45,7	54,5	59,2	65,5	71,0	76,7
Pressure loss (W7/W55)	(1)	kPa	30,6	36,0	36,9	43,8	52,0	58,7
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	34,1	40,7	44,4	49,4	53,5	57,8
Pressure loss (W35/W7)	(2), (10)	kPa	19,2	22,7	23,5	28,0	33,2	37,4
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	42,6	51,0	55,6	61,8	67,1	72,7
Pressure loss (W35/W7)	(2), (10)	kPa	26,8	31,2	33,2	35,0	34,5	39,1
HYDRAULIC CONNECTIONS								
Connection			3"	3"	4"	4"	4"	4"
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	81	81	81	81	81	81
Sound pressure	(4), (5)	dB(A)	64	64	64	64	64	64
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	79	79	79	79	79	79
Sound pressure	(4), (5)	dB(A)	62	62	62	62	62	62
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	2088	2088	2088	2088	2088	2088
Depth		mm	1209	1209	1209	1209	1209	1209
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg						

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

IRON EVO
Electrical data

MODEL			50.1	60.1	80.1	100.1	120.1	140.1
Maximum absorbed power	(1)	kW	16	20	24	35	38	43
Maximum absorbed current	(2)	A	30	36	45	59	65	78
Maximum breakaway current	(3)	A	142	142	182	203	226	319
Power supply		V/ph/Hz	400/3~/50 ±5%					

MODEL			80.2	100.2	120.2	140.2	150.2	170.2
Maximum absorbed power	(1)	kW	24	31	40	45	49	54
Maximum absorbed current	(2)	A	47	61	72	82	90	98
Maximum breakaway current	(3)	A	143	173	178	212	227	231
Power supply		V/ph/Hz	400/3~/50 ±5%					

MODEL			200.2	240.2	270.2	300.2	330.2	350.2
Maximum absorbed power	(1)	kW	70	82	86	97	104	116
Maximum absorbed current	(2)	A	118	138	156	176	190	207
Maximum breakaway current	(3)	A	262	320	397	469	504	512
Power supply		V/ph/Hz	400/3~/50 ±5%					

(1) Maximum electrical power consumption under maximum load conditions.
(2) Current at which the unit's internal safety devices are triggered. It is the maximum current absorbed by the unit. This value is never exceeded and must be used when sizing the line and the relative safety devices (see wiring diagram provided with the units).
(3) Maximum breakaway current calculated considering the compressor starting at maximum power and all other devices drawing maximum current

Notes
- Voltage imbalance: max 2%
- The standard supply voltage (see specific circuit diagram) must not vary by more than ±5%.
- The electrical data refers to the standard unit without options. Deviations are possible depending on the accessories installed.

IRONi EVO

Technical specifications

MODEL			80.2	100.2	120.2	140.2	150.2	170.2
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	82,8	104,0	125,0	137,0	154,0	177,0
Total absorbed power in heating	(1), (6)	kW	23,5	29,1	35,0	38,5	43,7	49,5
COP (Coefficient of performance)	(1), (6)		3,52	3,57	3,57	3,56	3,52	3,58
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,37	4,47	4,53	4,53	4,52	4,58
Seasonal Energy Efficiency h_s	(7)	%	166,9	171,0	173,2	173,1	172,7	175,1
Seasonal Efficiency class	(7), (9)		A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	75,2	95,4	114,0	129,0	140,0	159,0
Total absorbed power in cooling	(2), (6)	kW	19,4	24,2	28,4	32,1	34,5	38,7
EER	(2), (6)		3,88	3,94	4,01	4,02	4,06	4,11
COMPRESSOR								
Type			Reciprocating					
Quantity / cooling circuits		n° / n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Capacity control (min / max)		%	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100
Oil charge for circuit		kg	2,5	2,5	3,5	3,5	3,5	3,5
Refrigerant charge in circuit		kg	2,1	2,6	3,2	3,2	3,3	3,7
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	9,0	11,3	13,6	14,9	16,7	19,3
Pressure loss (W7/W55)	(1)	kPa	6,7	6,8	6,9	6,6	7,9	8,6
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	17,1	21,5	25,8	28,3	31,7	36,8
Pressure loss (W7/W55)	(1)	kPa	27,6	17,8	19,1	23,1	27,6	27,7
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	12,9	16,4	19,6	22,2	24,0	27,3
Pressure loss (W35/W7)	(2), (10)	kPa	17,8	11,6	12,3	15,8	17,8	17,3
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	16,3	20,7	24,6	27,8	30,0	34,1
Pressure loss (W35/W7)	(2), (10)	kPa	19,5	20,3	20,1	20,4	23,0	24,2
HYDRAULIC CONNECTIONS								
Connection			2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	3"
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	80	80	80	80	80	80
Sound pressure	(4), (5)	dB(A)	63	63	63	63	63	63
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	78	78	78	78	78	78
Sound pressure	(4), (5)	dB(A)	61	61	61	61	61	61
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	2088	2088	2088	2088	2088	2088
Depth		mm	1209	1209	1209	1209	1209	1209
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg	-	-	-	-	-	-

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

MODEL			200.2	240.2	270.2	300.2	330.2	350.2
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	215,0	259,0	283,0	313,0	341,0	371,0
Total absorbed power in heating	(1), (6)	kW	60,6	73,2	79,3	88,6	96,7	106,0
COP (Coefficient of performance)	(1), (6)		3,55	3,54	3,57	3,53	3,53	3,50
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,50	4,43	4,47	4,47	4,45	4,37
Seasonal Energy Efficiency h_s	(7)	%	171,9	169,1	170,6	170,7	169,8	166,7
Seasonal Efficiency class	(7), (9)		A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	192,0	232,0	252,0	281,0	307,0	335,0
Total absorbed power in cooling	(2), (6)	kW	47,6	58,3	63,6	71,0	78,3	86,8
EER	(2), (6)		4,03	3,98	3,96	3,96	3,92	3,86
COMPRESSOR								
Type			Reciprocating					
Quantity / cooling circuits		n° / n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Capacity control (min / max)		n°	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100
Oil charge for circuit		kg	3,5	3,5	8,5	8,5	8,5	8,5
Refrigerant charge in circuit		kg	4,7	6,1	6,3	7,2	7,5	7,5
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	23,3	28,2	30,8	34,0	37,1	40,3
Pressure loss (W7/W55)	(1)	kPa	9,0	10,7	11,4	11,9	11,8	13,4
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	44,3	53,5	58,6	64,5	70,5	76,4
Pressure loss (W7/W55)	(1)	kPa	29,2	35,0	36,4	42,8	51,5	58,3
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	33,0	39,9	43,4	48,4	52,8	57,5
Pressure loss (W35/W7)	(2), (10)	kPa	18,3	22,1	22,7	27,2	32,6	37,2
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	41,3	50,1	54,5	60,7	66,4	72,6
Pressure loss (W35/W7)	(2), (10)	kPa	25,6	30,4	32,2	34,1	34,0	39,0
HYDRAULIC CONNECTIONS								
Connection			3"	3"	4"	4"	4"	4"
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	81	81	81	81	81	81
Sound pressure	(4), (5)	dB(A)	64	64	64	64	64	64
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	79	79	79	79	79	79
Sound pressure	(4), (5)	dB(A)	62	62	62	62	62	62
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	2088	2088	2088	2088	2088	2088
Depth		mm	1209	1209	1209	1209	1209	1209
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg	-	-	-	-	-	-

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10)Data referring to the base unit (water side reversible)
(11)According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

IRONi EVO
Electrical data

MODEL			80.2	100.2	120.2	140.2	150.2	170.2
Maximum absorbed power	(1)	kW	22	27	33	37	43	48
Maximum absorbed current	(2)	A	57	79	86	101	108	116
Maximum breakaway current	(3)	A	142	176	180	217	230	238
Power supply		V/ph/Hz	400/3~/50 ±5%					

MODEL			200.2	240.2	270.2	300.2	330.2	350.2
Maximum absorbed power	(1)	kW	60	72	77	82	90	103
Maximum absorbed current	(2)	A	135	166	178	204	241	253
Maximum breakaway current	(3)	A	263	323	391	465	502	514
Power supply		V/ph/Hz	400/3~/50 ±5%					

(1) Maximum electrical power consumption under maximum load conditions.
(2) Current at which the unit's internal safety devices are triggered. It is the maximum current absorbed by the unit. This value is never exceeded and must be used when sizing the line and the relative safety devices (see wiring diagram provided with the units).
(3) Maximum breakaway current calculated considering the compressor starting at maximum power and all other devices drawing maximum current

Notes
- Voltage imbalance: max 2%
- The standard supply voltage (see specific circuit diagram) must not vary by more than ±5%.
- The electrical data refers to the standard unit without options. Deviations are possible depending on the accessories installed.

IRONi EVO FULL INVERTER

Technical specifications

MODEL			50.1	60.1	80.1	100.1	120.1	140.1
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	52,0	60,7	79,7	106,0	120,0	147,0
Total absorbed power in heating	(1), (6)	kW	14,8	17,2	22,2	30,0	33,9	42,1
COP (Coefficient of performance)	(1), (6)		3,51	3,53	3,59	3,53	3,54	3,49
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,32	4,34	4,49	4,47	4,36	4,31
Seasonal Energy Efficiency h_s	(7)	%	164,7	165,5	171,5	170,8	166,2	164,3
Seasonal Efficiency class	(7), (9)		A+++	A+++	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	47,3	55,8	71,3	95,3	107,0	130,0
Total absorbed power in cooling	(2), (6)	kW	12,3	14,4	17,4	23,4	26,8	33,0
EER	(2), (6)		3,85	3,88	4,10	4,07	3,99	3,94
COMPRESSOR								
Type			Reciprocating					
Quantity / cooling circuits		n° / n°	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1
Capacity control (min / max)		n°	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100
Oil charge for circuit		kg	2,5	3,5	3,5	3,5	3,5	8,5
Refrigerant charge in circuit		kg	2,0	2,5	3,1	4,2	4,6	5,3
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	5,7	6,6	8,7	11,6	13,1	16,0
Pressure loss (W7/W55)	(1)	kPa	7,9	7,7	8,3	9,2	10,3	12,5
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	10,7	12,5	16,5	22,0	24,9	30,4
Pressure loss (W7/W55)	(1)	kPa	29,9	29,7	32,4	37,3	41,7	52,5
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	8,1	9,6	12,3	16,4	18,4	22,3
Pressure loss (W35/W7)	(2), (10)	kPa	19,4	19,5	20,1	23,4	26,1	32,3
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	10,3	12,1	15,3	20,5	23,1	28,0
Pressure loss (W35/W7)	(2), (10)	kPa	23,3	23,1	23,4	26,0	29,2	34,8
HYDRAULIC CONNECTIONS								
Connection			1" 1/2	1" 1/2	2"	2" 1/2	2" 1/2	2" 1/2
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	77	77	77	78	78	78
Sound pressure	(4), (5)	dB(A)	60	60	60	61	61	61
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	75	75	75	76	76	76
Sound pressure	(4), (5)	dB(A)	58	58	58	59	59	59
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	1655	1655	1655	1655	1655	1655
Depth		mm	755	755	755	755	755	755
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg	-	-	-	-	-	-

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

MODEL			80.2	100.2	120.2	140.2	150.2	170.2
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	85,2	103,0	120,0	135,0	153,0	178,0
Total absorbed power in heating	(1), (6)	kW	24,7	29,3	34,0	38,3	43,7	50,0
COP (Coefficient of performance)	(1), (6)		3,45	3,52	3,53	3,52	3,50	3,56
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,31	4,40	4,42	4,41	4,46	4,53
Seasonal Energy Efficiency h_s	(7)	%	164,5	168,1	168,9	168,5	170,3	173,1
Seasonal Efficiency class	(7), (9)		A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	76,3	94,6	111,0	124,0	138,0	159,0
Total absorbed power in cooling	(2), (6)	kW	20,1	24,4	28,5	31,8	34,4	39,2
EER	(2), (6)		3,80	3,88	3,89	3,90	4,01	4,06
COMPRESSOR								
Type			Reciprocating					
Quantity / cooling circuits		n° / n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Capacity control (min / max)		n°	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100
Oil charge for circuit		kg	2,5	2,5	3,5	3,5	3,5	3,5
Refrigerant charge in circuit		kg	2,1	2,6	3,2	3,2	3,3	3,7
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	9,3	11,2	13,1	14,6	16,6	19,4
Pressure loss (W7/W55)	(1)	kPa	6,9	6,7	6,5	6,5	7,8	8,6
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	17,4	21,2	24,8	27,7	31,3	36,9
Pressure loss (W7/W55)	(1)	kPa	28,4	17,5	17,9	22,4	27,2	27,8
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	13,1	16,3	19,1	21,4	23,8	27,3
Pressure loss (W35/W7)	(2), (10)	kPa	18,2	11,5	11,9	14,9	17,5	17,3
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	16,6	20,5	24,1	26,9	29,8	34,1
Pressure loss (W35/W7)	(2), (10)	kPa	20,1	20,1	19,5	19,4	22,7	24,2
HYDRAULIC CONNECTIONS								
Connection			2" 1/2	2" 1/2	2" 1/2	2" 1/2	2" 1/2	3"
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	80	80	80	80	80	80
Sound pressure	(4), (5)	dB(A)	63	63	63	63	63	63
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	78	78	78	78	78	78
Sound pressure	(4), (5)	dB(A)	61	61	61	61	61	61
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	2088	2088	2088	2088	2088	2088
Depth		mm	1209	1209	1209	1209	1209	1209
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg						

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

MODEL			200.2	240.2	270.2	300.2	330.2	350.2
HEATING (EN 14511 VALUES) (W7;W55)								
Rated heating power	(1), (6)	kW	209,0	255,0	282,0	310,0	340,0	371,0
Total absorbed power in heating	(1), (6)	kW	59,2	72,7	80,0	89,5	97,9	107,0
COP (Coefficient of performance)	(1), (6)		3,53	3,51	3,53	3,46	3,47	3,47
SEASONAL ENERGY INDEX								
SCOP (Seasonal coefficient of performance)	(7)		4,53	4,41	4,41	4,41	4,39	4,31
Seasonal Energy Efficiency h_s	(7)	%	173,1	168,2	168,3	168,3	167,4	164,2
Seasonal Efficiency class	(7), (9)		A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)	A+++ (*)
COOLING (EN 14511 VALUES) (W35;W7)								
Rated cooling power	(2), (6)	kW	186,0	226,0	247,0	276,0	303,0	333,0
Total absorbed power in cooling	(2), (6)	kW	46,4	57,3	62,8	70,4	78,4	87,5
EER	(2), (6)		4,01	3,94	3,93	3,92	3,86	3,81
COMPRESSOR								
Type			Reciprocating					
Quantity / cooling circuits		n° / n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
Capacity control (min / max)		n°	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100	25 / 100
Oil charge for circuit		kg	3,5	3,5	8,5	8,5	8,5	8,5
Refrigerant charge in circuit		kg	4,7	6,1	6,3	7,2	7,5	7,5
USER SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	22,7	27,7	30,6	33,7	36,9	40,3
Pressure loss (W7/W55)	(1)	kPa	8,7	10,4	11,3	11,7	11,7	13,4
SOURCE SIDE EXCHANGER HEATING MODE								
Type			Plate exchanger					
Water flow rate (W7/W55)	(1)	m3/h	43,0	52,5	58,0	63,6	69,7	76,0
Pressure loss (W7/W55)	(1)	kPa	27,8	34,1	35,9	41,9	50,6	58,0
USER SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	32,0	38,8	42,5	47,4	52,2	57,3
Pressure loss (W35/W7)	(2), (10)	kPa	17,5	21,1	22,0	26,3	32,0	36,9
SOURCE SIDE EXCHANGER CHILLER MODE								
Type			Plate exchanger					
Water flow rate (W35/W7)	(2), (10)	m3/h	40,1	48,8	53,5	59,7	65,8	72,4
Pressure loss (W35/W7)	(2), (10)	kPa	24,5	29,2	31,2	33,1	33,5	38,9
HYDRAULIC CONNECTIONS								
Connection			3"	3"	4"	4"	4"	4"
NOISE LEVEL STD VERSION								
Sound power	(3), (5)	dB(A)	81	81	81	81	81	81
Sound pressure	(4), (5)	dB(A)	64	64	64	64	64	64
NOISE LEVEL LN VERSION								
Sound power	(3), (5)	dB(A)	79	79	79	79	79	79
Sound pressure	(4), (5)	dB(A)	62	62	62	62	62	62
BASIC UNIT DIMENSIONS AND WEIGHT								
Width		mm	2088	2088	2088	2088	2088	2088
Depth		mm	1209	1209	1209	1209	1209	1209
Height		mm	1812	1812	1812	1812	1812	1812
Shipping weight		kg	-	-	-	-	-	-

(1) Inlet-outlet water temperature source side 10-7°C, water user side 47-55°C
(2) Inlet-outlet water temperature source side 30-35°C, water user side 12-7°C
(3) Sound power level calculated as per ISO 3744
(4) Sound pressure levels refer to 10 metres from unit in free field
(5) Sound levels refer to conditions: heat pump running, source water 10-7°C, user water 47-55°C
(6) Values conforming to standard EN 14511-3:2022
(7) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average(Strasburg) User Application Medium temperature (55°C) Outlet temperature Variable
(8) In accordance with EN 14511 Evaporator water inlet-outlet temperature 10-7°C and DHW condenser 47-55°C
(9) Units marked with (*) are not subject to UE Regulation N. 811/2013 (nominal heating capacity > 70 kW)
(10) Data referring to the base unit (water side reversible)
(11) According to European Regulation n° 813/2013 and EN14511 - EN14825 for Climat Average (Strasburg) User Application Fan coil (7°C) Outlet temperature Variable

IRONi EVO FULL INVERTER
Electrical data

MODEL			50.1	60.1	80.1	100.1	120.1	140.1
Maximum absorbed power	(1)	kW	11,2	13,1	18,5	24,9	27,9	34,0
Maximum absorbed current	(2)	A	34	38	48	60	66	73
Maximum breakaway current	(3)	A	34	38	48	60	66	73
Power supply		V/ph/Hz	400/3~/50 ±5%					

MODEL			80.2	100.2	120.2	140.2	150.2	170.2
Maximum absorbed power	(1)	kW	19,7	22,5	26,2	29,4	37,0	41,4
Maximum absorbed current	(2)	A	46	68	76	90	96	112
Maximum breakaway current	(3)	A	46	68	76	90	96	112
Power supply		V/ph/Hz	400/3~/50 ±5%					

MODEL			200.2	240.2	270.2	300.2	330.2	350.2
Maximum absorbed power	(1)	kW	49,9	62,7	68,0	68,0	75,4	90,2
Maximum absorbed current	(2)	A	120	145	145	168	186	210
Maximum breakaway current	(3)	A	120	145	145	168	186	210
Power supply		V/ph/Hz	400/3~/50 ±5%					

(1) Maximum electrical power consumption under maximum load conditions.
(2) Current at which the unit's internal safety devices are triggered. It is the maximum current absorbed by the unit. This value is never exceeded and must be used when sizing the line and the relative safety devices (see wiring diagram provided with the units).
(3) Maximum breakaway current calculated considering the compressor starting at maximum power and all other devices drawing maximum current

Notes
- Voltage imbalance: max 2%
- The standard supply voltage (see specific circuit diagram) must not vary by more than ±5%.
- The electrical data refers to the standard unit without options. Deviations are possible depending on the accessories installed.

ENERBLUE SRL

35020 Candiana
Padova - ITALIA
T. +39 042 630 2051
F. +39 042 684 0000
info@enerblue.it

www.enerblue.it
CCFG000004 - 00