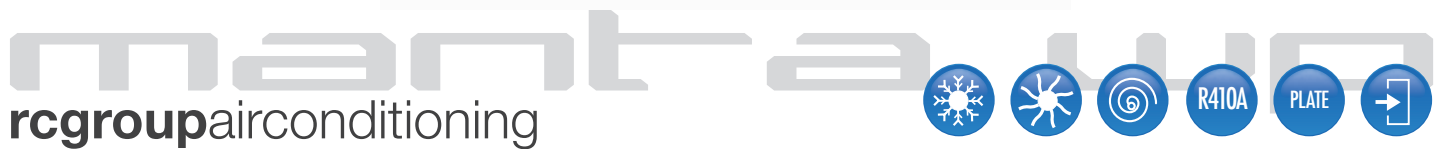


MANTA WP: Water / water heat pumps
for indoor installation, equipped with scroll compressors and plate heat exchangers
Inversion on hydraulic circuit.
Cooling Capacity: **28,0 ÷ 655,0 kW**
Heating Capacity: **35,1 ÷ 828,0 kW**



MAIN FEATURES

- Reversible heat pump.
- Inversion on hydraulic circuit.
- 32 models available, for a wide selection opportunity..
- Average step of 25kW.
- EER up to 4,29.
- COP up to 4,46.
- ESEER up to 5,33.
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS

- Units equipped with two, three scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- High ESEER.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION

The machines are designed for indoor installation.

REDUCED NOISE EMISSION

The machines are characterized by a low sound level guaranteed by the containing structure.

WORKING LIMITS IN COOLING MODE

Evaporator chilled water outlet temperature: -12÷20°C

Condenser outlet water temperature: 20÷60°C



MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
 - With single refrigerant circuit for S version machines.
 - With double refrigerant circuit for D version machines.
- Antic condensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.

CONDENSER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Antic condensate insulation made of polyurethane.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the 2-way motorized valve for the condensing control .

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Electronic expansion valve. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
The expansion valve is equipped with energy reserve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Electromagnetic valve on liquid line up to model T 150 P2 included. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Oil drainage and oil recovery systems.
- Refrigerant circuit with copper tubing with antic condensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation complete with:

- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Summer / Winter working mode selector.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
 - Voltage free contact for remote general alarm.
 - Main components hour-meter.
 - Clock card for alarms date and time displaying and storing.
 - Nonvolatile "Flash" memory for data storage.
 - Menu with protection password.
 - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers' threaded hydraulic connections are available up to a diameter of 3 " included, and correspond to ISO 228/1 – G M.
- The pipes' threaded hydraulic connections are available up to a diameter of 3 " included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

MANTA WP	T 27 P1	T 30 P1	T 33 P1	T 40 P1	T 40 P2	T 40 P2	T 48 P2	T 48 P2	T 54 P2	T 54 P2	T 60 P2
SIZE	S J4	S J4	S J4	S J4	S J7	D J7	S J7	D J7	S J7	D J7	S J7
172 - Rubber support (kit)	•	•	•	•	•	•	•	•	•	•	•
118 - Kit brine A	•	•	•	•	•	•	•	•	•	•	•
119 - Kit brine B	•	•	•	•	•	•	•	•	•	•	•
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Exhaustion heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	•	•	•	•	•	-	•	-	•	-	•
1002 - Condensing control with 2 way valve	•	•	•	•	•	•	•	•	•	•	•
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	•	•	•	•	•
Ambient temperature sensor	•	•	•	•	•	•	•	•	•	•	•
220 - Electronic expansion valve	•	•	•	•	•	•	•	•	•	•	•
923 - RC-Com MBUS/JBUS Serial board	•	•	•	•	•	•	•	•	•	•	•
926 - LON Serial board	•	•	•	•	•	•	•	•	•	•	•
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	•	•	•	•	•	•	•	•	•	•	•
932 - BACnet MS/TP Serial board	•	•	•	•	•	•	•	•	•	•	•
942 - Serial card for GSM Modem	•	•	•	•	•	•	•	•	•	•	•
943 - Data Logger	•	•	•	•	•	•	•	•	•	•	•
889 - Master plant SEQUENCER	•	•	•	•	•	•	•	•	•	•	•
962 - Kit modem GSM	•	•	•	•	•	•	•	•	•	•	•
957 - Plantwatch without modem	•	•	•	•	•	•	•	•	•	•	•
930 - Remote graphic terminal kit	•	•	•	•	•	•	•	•	•	•	•

MANTA WP	T 60 P2	T 70 P2	T 70 P2	T 90 P2	T 90 P2	T 120 P2	T 120 P2	T 150 P2	T 150 P2	T 170 P4	T 175 P3
SIZE	D J7	S J7	D J7	S J7	D J7	S J7	D J7	S J8	D J8	D J8	S J8
172 - Rubber support (kit)	•	•	•	•	•	•	•	•	•	•	•
118 - Kit brine A	•	•	•	•	•	•	•	•	•	•	•
119 - Kit brine B	•	•	•	•	•	•	•	•	•	•	•
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	•	•	•	•	•	•	•	•
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	•	•	•	•	•	•	•	•
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	•	•	•	•	•	•	•	•
Exhaustion heat exchanger flexible joint with adapter for flange connection	-	-	-	•	•	•	•	•	•	•	•
450 - Desuperheater	-	•	-	•	-	•	-	•	•	•	•
1002 - Condensing control with 2 way valve	•	•	•	•	•	•	•	•	•	•	•
605 - Compr. power factor capacitor - 0,9	•	•	•	•	•	•	•	•	•	•	•
Ambient temperature sensor	•	•	•	•	•	•	•	•	•	•	•
220 - Electronic expansion valve	•	•	•	•	•	•	•	•	•	•	-
923 - RC-Com MBUS/JBUS Serial board	•	•	•	•	•	•	•	•	•	•	•
926 - LON Serial board	•	•	•	•	•	•	•	•	•	•	•
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	•	•	•	•	•	•	•	•	•	•	•
932 - BACnet MS/TP Serial board	•	•	•	•	•	•	•	•	•	•	•
942 - Serial card for GSM Modem	•	•	•	•	•	•	•	•	•	•	•
943 - Data Logger	•	•	•	•	•	•	•	•	•	•	•
889 - Master plant SEQUENCER	•	•	•	•	•	•	•	•	•	•	•
962 - Kit modem GSM	•	•	•	•	•	•	•	•	•	•	•
957 - Plantwatch without modem	•	•	•	•	•	•	•	•	•	•	•
930 - Remote graphic terminal kit	•	•	•	•	•	•	•	•	•	•	•

MANTA WP	T 190 P4	T 200 P2	T 200 P2	T 220 P3	T 240 P4	T 290 P3	T 300 P4	T 340 P4	T 380 P4	T 460 P6	T 570 P6
SIZE	D J9	S J9	D J9	S J9	D J9	S J9	D J9	D J10	D J10	D J10	D J10
172 - Rubber support (kit)	•	•	•	•	•	•	•	•	•	•	•
118 - Kit brine A	•	•	•	•	•	•	•	•	•	•	•
119 - Kit brine B	•	•	•	•	•	•	•	•	•	•	•
Plant heat exchanger flexible joint with adapter pipe (solder type)	•	•	•	•	•	•	•	•	•	•	•
Plant heat exchanger flexible joint with adapter for flange connection	•	•	•	•	•	•	•	•	•	•	•
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	•	•	•	•	•	•	•	•	•	•	•
Exhaustion heat exchanger flexible joint with adapter for flange connection	•	•	•	•	•	•	•	•	•	•	•
450 - Desuperheater	•	•	•	•	•	•	•	•	•	•	•
1002 - Condensing control with 2 way valve	•	•	•	•	•	•	•	•	•	•	•
605 - Compr. power factor capacitor - 0,9	•	•	•	•	•	•	•	•	•	•	•
Ambient temperature sensor	•	•	•	•	•	•	•	•	•	•	•
220 - Electronic expansion valve	-	-	-	-	-	-	-	-	-	-	-
923 - RC-Com MBUS/JBUS Serial board	•	•	•	•	•	•	•	•	•	•	•
926 - LON Serial board	•	•	•	•	•	•	•	•	•	•	•
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	•	•	•	•	•	•	•	•	•	•	•
932 - BACnet MS/TP Serial board	•	•	•	•	•	•	•	•	•	•	•
942 - Serial card for GSM Modem	•	•	•	•	•	•	•	•	•	•	•
943 - Data Logger	•	•	•	•	•	•	•	•	•	•	•
889 - Master plant SEQUENCER	•	•	•	•	•	•	•	•	•	•	•
962 - Kit modem GSM	•	•	•	•	•	•	•	•	•	•	•
957 - Plantwatch without modem	•	•	•	•	•	•	•	•	•	•	•
930 - Remote graphic terminal kit	•	•	•	•	•	•	•	•	•	•	•

• available accessory; - not available accessory

TECHNICAL DATA MANTA WP

MANTA WP		T 27 P1	T 30 P1	T 33 P1	T 40 P1	T 40 P2	T 40 P2	T 48 P2	T 48 P2	
SIZE		S J4	S J4	S J4	S J4	S J7	D J7	S J7	D J7	
STANDARD	Summer working mode - Cooling capacity (1) kW	28,0	31,7	35,7	40,3	47,0	46,8	55,4	55,6	
	Unit power input	kW	7,0	7,9	9,1	10,7	12,3	11,8	14,1	13,5
	Evaporator water flow rate	m³/h	4,8	5,5	6,1	6,9	8,1	8,0	9,5	9,5
	Evaporator pressure drop	kPa	55	56	51	37	46	28	47	29
	Condenser water flow rate	m³/h	5,9	6,7	7,6	8,7	10,1	10,1	11,9	11,8
	Condenser pressure drop	kPa	69	63	65	47	57	38	57	38
	Winter working mode - Heating capacity (2) kW	35,1	39,6	44,8	51,3	59,8	59,5	69,9	70,2	
	Unit power input	kW	8,7	9,7	11,1	13,1	15,3	14,7	17,7	17,0
	Evaporator water flow rate	m³/h	4,6	5,3	5,9	6,7	7,8	7,8	9,1	9,2
	Evaporator pressure drop	kPa	52	53	48	35	43	26	44	27
	Condenser water flow rate	m³/h	4,8	5,5	6,1	6,9	8,1	8,0	9,5	9,5
	Condenser pressure drop	kPa	49	49	43	30	37	25	38	26
	Compressors	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	2	2	2	2
	Capacity steps	n.	1	1	1	1	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	2,9	2,9	3,0	3,9	4,2	5,0	4,3	5,7
	Gas circuits	n.	1	1	1	1	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	22	25	31	34	42	42	44	44
	Unit starting current (LRA)	A	118	118	140	173	132	132	140	140
	EER (1)	kW/kW	3,98	4,03	3,93	3,77	3,83	3,95	3,93	4,11
	COP (2)	kW/kW	4,05	4,10	4,04	3,91	3,92	4,05	3,96	4,12
	ESEER		4,07	4,12	4,02	4,27	4,18	4,36	4,68	4,36
	Sound power level [Lw] (3)	dB(A)	65,4	66,4	67,4	68,8	68,9	68,9	68,9	68,9
Average sound pressure level [Lpm] (4)	dB(A)	50,0	51,0	52,0	53,0	53,0	53,0	53,0	53,0	
Net weight	kg	258	260	270	281	440	450	444	455	
Hydraulic connections										
Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	
Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--	
OPT	Partial heat recovery (6)									
	Heating capacity	kW	4,2	4,8	5,4	6,0	7,1	--	8,3	--

MANTA WP		T 54 P2	T 54 P2	T 60 P2	T 60 P2	T 70 P2	T 70 P2	T 90 P2	T 90 P2	
SIZE		S J7	D J7	S J7	D J7	S J7	D J7	S J7	D J7	
STANDARD	Summer working mode - Cooling capacity (1) kW	63,8	63,0	69,1	69,5	80,9	83,0	106,0	105,0	
	Unit power input	kW	16,0	15,3	18,1	17,4	21,6	20,2	27,4	26,5
	Evaporator water flow rate	m³/h	10,9	10,8	11,9	11,9	13,9	14,3	18,2	18,1
	Evaporator pressure drop	kPa	50	28	44	28	50	29	46	29
	Condenser water flow rate	m³/h	13,6	13,4	14,9	14,9	17,5	17,7	22,8	22,7
	Condenser pressure drop	kPa	60	37	52	37	60	37	52	36
	Winter working mode - Heating capacity (2) kW	80,0	78,9	87,5	87,8	103,0	99,2	135,0	134,0	
	Unit power input	kW	20,1	19,2	22,3	21,6	26,4	25,1	33,8	32,6
	Evaporator water flow rate	m³/h	10,5	10,4	11,4	11,5	13,4	14,3	17,6	17,5
	Evaporator pressure drop	kPa	46	26	41	27	47	25	43	27
	Condenser water flow rate	m³/h	10,9	10,8	11,9	11,9	13,9	12,9	18,2	18,1
	Condenser pressure drop	kPa	40	25	34	25	39	24	35	24
	Compressors	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,7	5,7	5,8	5,7	6,6	8,1	8,7	10,4
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	50	50	62	62	68	68	80	80
	Unit starting current (LRA)	A	143	143	171	171	207	207	265	265
	EER (1)	kW/kW	3,98	4,12	3,82	3,99	3,74	4,10	3,87	3,96
	COP (2)	kW/kW	3,99	4,11	3,92	4,06	3,90	3,95	4,00	4,11
	ESEER		4,48	4,32	4,39	4,25	5,06	4,24	4,51	4,29
	Sound power level [Lw] (3)	dB(A)	69,9	69,9	70,9	70,9	71,9	71,9	76,9	76,9
Average sound pressure level [Lpm] (4)	dB(A)	54,0	54,0	55,0	55,0	56,0	56,0	61,0	61,0	
Net weight	kg	455	468	460	485	465	495	715	760	
Hydraulic connections										
Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	2"	2"	2"	2"	2"	2"	--	--	
Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	76,1	76,1	
OPT	Partial heat recovery (6)									
	Heating capacity	kW	9,5	--	10,3	--	12,1	--	15,9	--

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to hot water outlet temperature at 45°C and chilled water temperature 15/10°C according to Eurovent standard.
3. Sound power level [Lw] according to ISO EN 9614 - 2
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

TECHNICAL DATA MANTA WP

MANTA WP		T 120 P2	T 120 P2	T 150 P2	T 150 P2	T 170 P4	T 175 P3	T 190 P4	T 200 P2	
SIZE		S J7	D J7	S J8	D J8	D J8	S J8	D J9	S J9	
STANDARD	Summer working mode - Cooling capacity (1) kW	132,0	132,0	172,0	170,0	200,0	195,0	228,0	222,0	
	Unit power input	kW	34,5	33,8	43,4	43,1	48,2	51,3	53,1	55,5
	Evaporator water flow rate	m³/h	22,7	22,6	29,5	29,2	34,3	33,5	39,2	38,1
	Evaporator pressure drop	kPa	48	38	46	42	42	56	34	46
	Condenser water flow rate	m³/h	28,6	28,4	37,0	36,6	42,6	42,2	48,4	47,6
	Condenser pressure drop	kPa	53	47	45	47	70	78	42	61
	Winter working mode - Heating capacity (2) kW	169,0	177,0	217,0	216,0	250,0	249,0	277,0	279,0	
	Unit power input	kW	42,4	39,7	53,7	53,2	59,0	62,9	65,5	66,9
	Evaporator water flow rate	m³/h	21,9	23,8	28,3	28,3	33,2	33,5	36,7	36,8
	Evaporator pressure drop	kPa	45	36	44	40	39	51	30	43
	Condenser water flow rate	m³/h	22,7	22,6	29,5	29,2	34,3	32,4	39,2	38,1
	Condenser pressure drop	kPa	34	28	30	32	44	53	33	41
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	4	3	4	2
	Capacity steps	n.	2	2	2	2	2	3	4	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	10,7	12,7	12,4	17,0	17,8	16,0	23,9	22,4
	Gas circuits	n.	1	2	1	2	2	1	2	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	97	97	131	131	148	146	160	164
	Unit starting current (LRA)	A	321	321	375	375	333	369	345	466
	EER (1)	kW/kW	3,83	3,90	3,96	3,94	4,15	3,80	4,29	4,00
	COP (2)	kW/kW	3,99	4,46	4,04	4,06	4,24	3,96	4,23	4,17
	ESEER		4,07	4,50	4,14	4,65	5,33	5,37	5,04	4,47
	Sound power level [Lw] (3)	dB(A)	80,1	80,1	81,0	81,0	81,0	82,8	81,0	81,0
Average sound pressure level [Lpm] (4)	dB(A)	64,0	64,0	64,0	64,0	64,0	65,8	64,0	64,0	
Net weight	kg	775	788	1022	1030	1130	1152	1315	1085	
Hydraulic connections										
Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--	
Evaporator IN/OUT - OD (5)	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	88,9	88,9	
OPT	Partial heat recovery (6)									
	Heating capacity	kW	19,9	--	25,7	25,7	30,1	29,4	33,2	33,3

MANTA WP		T 200 P2	T 220 P3	T 240 P4	T 290 P3	T 300 P4	T 340 P4	T 380 P4	T 460 P6	T 570 P6	
SIZE		D J9	S J9	D J9	S J9	D J9	D J10	D J10	D J10	D J10	
STANDARD	Summer working mode - Cooling capacity (1) kW	224,0	265,0	270,0	331,0	339,0	394,0	436,0	523,0	655,0	
	Unit power input	kW	55,7	65,0	68,4	83,0	87,4	99,7	111,5	128,8	169,3
	Evaporator water flow rate	m³/h	38,4	45,5	46,3	56,8	58,2	67,5	74,8	89,8	112,0
	Evaporator pressure drop	kPa	52	52	61	49	70	70	64	63	85
	Condenser water flow rate	m³/h	47,9	56,6	57,9	71,1	73,0	84,5	93,8	112,0	141,0
	Condenser pressure drop	kPa	70	68	81	60	89	86	74	64	83
	Winter working mode - Heating capacity (2) kW	280,0	334,0	342,0	417,0	431,0	497,0	550,0	660,0	828,0	
	Unit power input	kW	67,0	79,9	83,4	100,0	107,8	121,2	134,1	158,7	203,9
	Evaporator water flow rate	m³/h	37,0	44,1	44,9	54,9	56,3	65,3	72,2	87,1	109,0
	Evaporator pressure drop	kPa	49	49	58	46	66	66	60	59	79
	Condenser water flow rate	m³/h	38,4	45,5	46,3	56,8	58,2	67,5	74,8	89,8	112,0
	Condenser pressure drop	kPa	47	46	54	40	59	57	49	43	55
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	3	4	3	4	4	4	6	6
	Capacity steps	n.	2	3	4	3	4	4	4	6	6
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	22,8	23,1	24,7	30,3	31,6	31,1	48,1	49,5	62,4
	Gas circuits	n.	2	1	2	1	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	164	197	246	194	262	295	328	393	492
	Unit starting current (LRA)	A	466	441	584	418	507	597	630	637	794
	EER (1)	kW/kW	4,02	4,08	3,95	3,99	3,88	3,95	3,91	4,06	3,87
	COP (2)	kW/kW	4,18	4,18	4,10	4,17	4,00	4,10	4,10	4,16	4,06
	ESEER		4,73	5,32	4,82	5,28	4,71	4,82	4,88	5,13	4,89
	Sound power level [Lw] (3)	dB(A)	81,0	82,8	84,1	82,8	84,1	84,5	84,5	86,3	86,3
Average sound pressure level [Lpm] (4)	dB(A)	64,0	65,8	67,0	65,8	67,0	67,0	67,0	68,8	68,8	
Net weight	kg	1115	1302	1545	1403	1590	1665	1775	2270	2300	
Hydraulic connections											
Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--	--	
Evaporator IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9	
OPT	Partial heat recovery (6)										
	Heating capacity	kW	33,6	40,0	40,7	49,8	51,1	59,2	65,5	79,0	98,5

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to hot water outlet temperature at 45°C and chilled water temperature 15/10°C according to Eurovent standard.
3. Sound power level [Lw] according to ISO EN 9614 - 2
4. Average sound pressure level [Lp_m] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE J	a	b	c
J4	1000	650	1400
J7	1200	750	1700
J8	1800	1200	1740
J9	1800	1200	1740
J10	1800	1800	1740

