

**MAXIMO PF:** Packaged air cooled liquid chillers with free-cooling system  
for indoor installation, equipped with scroll compressors and plug fan  
Cooling Capacity: 21,4 ÷ 277 kW  
Free-Cooling Capacity: 18,1 ÷ 176 kW



# maximo

## rcgroupairconditioning



### MAIN FEATURES

- Air cooled liquid chiller with free-cooling system.
- 29 models available, for a wide selection opportunity.
- Average step of 12,5kW.
- EER up to 2,82.
- ESEER up to 3,47.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- EC Plug fan.
- Single air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

### MAIN BENEFITS

- Units equipped with two scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Indirect free cooling system.
- High ESEER.
- EC Plug fan for a high efficiency.
- Availability of kit for the reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

### INDIRECT FREE COOLING SYSTEM

Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

### INDOOR INSTALLATION

The machines are designed for indoor installation and ducting for air suction and discharge. For outdoor installation the use of the dedicated optional kit is mandatory. The machine must be installed under a cover or anyway protected against atmospherics agent.

### WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: 4÷15°C  
Ambient temperature: -10÷45°C

### WORKING LIMITS IN FREE-COOLING MODE

Minimum chilled water outlet temperature: -15°C  
Minimum ambient temperature: -20°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.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

### CONDENSING COIL

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Sub-cooling circuit to allow a significant increase in cooling capacity.
- Frame in galvanized steel.

### FREE-COOLING COIL

- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

### FANS SECTION

- Centrifugal fans with backward curved blades, single suction and without scroll housings (Plug-fan).
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

### REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Thermostatic expansion valve up to model 85 P2 C3 D included.
- Electronic expansion valve from model 107 P2 C3 D included. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure. The electronic expansion valve exclude the installation of the electromagnetic valve on liquid line.
- Sight glass.
- Electromagnetic valve on liquid line. 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.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

### ELECTRICAL PANEL

In accordance with EN60204-1 norms complete with:

- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- 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.
  - 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**

MAXIMO PF	22 P1 S C1	24 P1 S C1	28 P1 S C1	32 P1 S C1	36 P1 S C1	42 P1 S C1	53 P1 S C2	67 P1 S C2	55 P2 S C2	55 P2 D C2	62 P2 S C2
SIZE											
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

MAXIMO PF	62 P2 D C2	71 P2 S C2	71 P2 D C2	85 P2 S C3	85 P2 D C3	107 P2 S C3	107 P2 D C4	135 P2 S C4	135 P2 D C4	170 P2 S C4	170 P2 D C4
SIZE											
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	●	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

## OPTIONAL ACCESSORIES

MAXIMO PF	195 P2 S C4	195 P2 D C4	220 P2 S C5	220 P2 D C5	250 P3 S C5	265 P4 D C5	290 P4 D C5
<b>SIZE</b>							
739 - Pumping group (1 pump)	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

## TECHNICAL DATA MAXIMO PF

MAXIMO PF		22 P1 S C1	24 P1 S C1	28 P1 S C1	32 P1 S C1	36 P1 S C1	42 P1 S C1	53 P1 S C2	67 P1 S C2
STANDARD	SIZE								
Cooling capacity (1)	kW	21,4	23,9	27,9	31,6	35,2	39,6	51,4	64,4
Unit power input	kW	7,6	8,9	10,8	11,6	14,0	17,0	20,6	25,6
Free-Cooling capacity (2)	kW	18,1	19,5	22,9	26,0	28,2	29,9	42,3	52,1
Total water flow rate	m³/h	4,0	4,4	5,2	5,8	6,5	7,3	9,5	11,9
Total pressure drop	kPa	75	95	111	113	109	122	113	139
Compressors		scroll							
Quantity	n.	1	1	1	1	1	1	1	1
Capacity steps	n.	1	1	1	1	1	1	1	1
Centrifugal fans EC	n.	1	1	1	1	1	1	2	2
Total air flow	m³/h	6500	7000	8500	10000	11000	11500	16000	21000
External static pressure	Pa	50	50	50	50	50	50	50	50
Air circuits	n.	1	1	1	1	1	1	1	1
Refrigerant		R410A							
Total refrigerant charge (optional excluded)	kg	11,3	11,3	11,3	11,5	11,6	11,6	18	18,5
Gas circuits	n.	1	1	1	1	1	1	1	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	20,3	25,3	26,3	29,9	35,9	38,9	48,6	56,9
Unit starting current (LRA)	A	99,3	115,3	122,3	122,9	144,9	178,9	233,6	280,4
EER (1)	kW/kW	2,82	2,69	2,58	2,72	2,51	2,33	2,50	2,52
ESEER		3,24	3,10	3,01	3,21	2,92	2,66	2,90	3,04
Sound power level [Lw] (3)	dB(A)	87,3	88,9	93,0	92,1	94,5	95,5	95,0	97,2
Average sound pressure level [Lpm] (4)	dB(A)	70,7	72,3	76,4	75,5	77,9	78,9	77,8	76,4
Net weight	kg	450	460	460	470	470	480	750	790
Hydraulic connections									
Evaporator IN/OUT - ISO 7/1 - R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--
Partial heat recovery (6)									
Heating capacity	kW	7,4	8,2	9,6	10,9	12,1	13,6	17,7	22,2
Pumping group									
1 pump - 2 poles electric motor	kW	1,1	1,1	1,1	1,1	1,1	1,1	1,5	1,5
2 pump - 2 poles electric motor	kW	-	-	-	-	-	-	-	-
Water tank - volume	l	130	130	130	130	130	130	210	210
Cooling capacity (1)	kW	21,4	23,9	27,9	31,6	35,2	39,6	51,4	64,4
Unit power input	kW	7,2	8,4	10,2	10,9	13,3	16,1	19,6	24,3
Free-Cooling capacity (2)	kW	18,1	19,5	22,9	26,0	28,2	29,9	42,3	52,1
Total air flow	m³/h	6500	7000	8500	10000	11000	11500	16000	21000
External static pressure	Pa	50	50	50	50	50	50	50	50
EER (1)	kW/kW	2,82	2,69	2,58	2,72	2,51	2,33	2,50	2,52
Sound power level [Lw] (3)	dB(A)	87,1	88,7	92,8	92,1	94,1	96,0	94,6	96,4
Average sound pressure level [Lpm] (4)	dB(A)	70,5	72,1	76,2	75,5	77,5	79,4	77,4	75,9
Cooling capacity (1)	kW	20,8	23,2	27,0	30,6	34,0	38,2	50,0	62,6
Unit power input	kW	7,3	8,5	10,1	11,1	13,1	15,9	19,5	24,3
Free-Cooling capacity (2)	kW	17,9	19,4	22,7	25,7	28,0	29,6	41,9	51,7
Total air flow	m³/h	5525	5950	7225	8500	9350	9775	13600	17850
External static pressure	Pa	36	36	36	36	36	36	36	36
EER (1)	kW/kW	2,72	2,59	2,52	2,62	2,48	2,29	2,45	2,45
Sound power level [Lw] (3)	dB(A)	83,6	85,2	89,3	88,2	90,6	92,5	91,2	93,0
Average sound pressure level [Lpm] (4)	dB(A)	67,0	68,6	72,7	71,6	74,0	75,9	74,0	72,4
Cooling capacity (1)	kW	19,9	22,1	25,8	29,2	32,5	36,3	47,9	59,9
Unit power input	kW	7,6	8,8	10,4	11,6	13,2	16,2	20,1	25,1
Free-Cooling capacity (2)	kW	17,6	19,1	22,3	25,3	27,6	29,2	41,5	51,1
Total air flow	m³/h	4550	4900	5950	7000	7700	8050	11200	14700
External static pressure	Pa	25	25	25	25	25	25	25	25
EER (1)	kW/kW	2,51	2,39	2,35	2,40	2,34	2,14	2,29	2,28
Sound power level [Lw] (3)	dB(A)	80,4	82,0	86,1	83,6	87,4	89,3	88,2	90,1
Average sound pressure level [Lpm] (4)	dB(A)	63,8	65,4	69,5	67,1	70,8	72,7	71,0	69,2

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.

2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.

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 chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

## TECHNICAL DATA MAXIMO PF

		55 P2	55 P2	62 P2	62 P2	71 P2	71 P2	85 P2	85 P2
	SIZE	S C2	D C2	S C2	D C2	S C2	D C2	S C3	D C3
<b>Cooling capacity (1)</b>	kW	54,1	54,2	60,7	60,9	68,4	68,3	80,5	80,1
Unit power input	kW	21,8	21,6	24,0	23,8	28,3	28,1	31,1	30,8
<b>Free-Cooling capacity (2)</b>	kW	45,7	45,7	50,6	50,6	55,6	55,5	67,1	67,0
Total water flow rate	m³/h	10,0	10,0	11,2	11,2	12,6	12,6	14,9	14,8
Total pressure drop	kPa	124	100	139	112	157	135	120	98
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
Centrifugal fans EC	n.	2	2	2	2	2	2	3	3
Total air flow	m³/h	18000	18000	20500	20500	23000	23000	25500	25500
External static pressure	Pa	50	50	50	50	50	50	50	50
Air circuits	n.	1	1	1	1	1	1	1	1
Refrigerant		R410A							
Total refrigerant charge (optional excluded)	kg	18,3	16	18,3	16	18,7	16,2	28,7	25,5
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	53,8	53,8	58,4	58,4	70,4	70,4	82,7	82,7
Unit starting current (LRA)	A	149,8	149,8	151,4	151,4	179,4	179,4	222,7	222,7
EER (1)	kW/kW	2,48	2,51	2,53	2,56	2,42	2,43	2,59	2,60
ESEER		3,35	3,08	3,40	2,90	2,89	3,16	3,08	3,42
Sound power level [Lw] (3)	dB(A)	93,6	93,6	87,5	87,5	89,8	89,8	94,4	94,4
Average sound pressure level [Lpm] (4)	dB(A)	76,4	70,3	70,3	80,0	72,6	72,6	76,5	76,5
Net weight	kg	740	740	810	810	820	820	1050	1050
Hydraulic connections									
Evaporator IN/OUT - ISO 7/1 - R	Ø mm	2"	2"	2"	2"	2"	2"	--	--
Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	76,1	76,1
Partial heat recovery (6)									
<b>Heating capacity</b>	kW	18,6	18,6	20,9	21,0	23,5	23,5	27,7	27,6
Pumping group									
1 pump - 2 poles electric motor	kW	1,5	1,5	1,5	1,5	1,5	1,5	3,0	3,0
2 pump - 2 poles electric motor	kW	-	-	-	-	-	-	3,0	3,0
Water tank - volume	l	210	210	210	210	210	210	360	360
<b>Cooling capacity (1)</b>	kW	54,1	54,2	60,7	60,9	68,4	68,3	80,5	80,1
Unit power input	kW	20,8	20,7	22,8	22,8	26,9	26,8	29,7	29,7
<b>Free-Cooling capacity (2)</b>	kW	45,7	45,7	50,6	50,6	55,6	55,5	67,1	67,0
Total air flow	m³/h	18000	18000	20500	20500	23000	23000	25500	25500
External static pressure	Pa	50	50	50	50	50	50	50	50
EER (1)	kW/kW	2,48	2,51	2,53	2,56	2,42	2,43	2,59	2,60
Sound power level [Lw] (3)	dB(A)	93,1	93,1	86,5	86,5	89,0	89,0	93,7	93,7
Average sound pressure level [Lpm] (4)	dB(A)	75,9	69,3	69,3	79,2	71,8	71,8	75,8	75,8
<b>Cooling capacity (1)</b>	kW	52,5	52,6	58,9	59,0	66,3	66,2	78,2	77,8
Unit power input	kW	20,6	20,5	22,5	22,6	26,2	26,1	29,6	29,5
<b>Free-Cooling capacity (2)</b>	kW	45,3	45,4	50,2	50,2	55,1	55,1	66,5	66,4
Total air flow	m³/h	15300	15300	17425	17425	19550	19550	21675	21675
External static pressure	Pa	36	36	36	36	36	36	36	36
EER (1)	kW/kW	2,43	2,46	2,49	2,50	2,41	2,42	2,54	2,54
Sound power level [Lw] (3)	dB(A)	89,6	89,6	83,1	83,1	85,5	85,5	90,3	90,3
Average sound pressure level [Lpm] (4)	dB(A)	72,4	65,9	65,9	75,8	68,3	68,3	72,4	72,4
<b>Cooling capacity (1)</b>	kW	50,2	50,3	56,3	56,4	63,3	63,2	74,9	74,5
Unit power input	kW	21,3	21,1	23,1	23,1	26,6	26,5	30,2	30,2
<b>Free-Cooling capacity (2)</b>	kW	44,8	44,8	49,6	49,6	54,4	54,4	65,8	65,7
Total air flow	m³/h	12600	12600	14350	14350	16100	16100	17850	17850
External static pressure	Pa	25	25	25	25	25	25	25	25
EER (1)	kW/kW	2,26	2,30	2,33	2,35	2,27	2,29	2,39	2,39
Sound power level [Lw] (3)	dB(A)	86,4	86,4	80,2	80,2	82,5	82,5	87,2	87,2
Average sound pressure level [Lpm] (4)	dB(A)	69,2	63,0	63,0	72,9	65,3	65,3	69,3	69,3

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.

2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.

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 chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

## TECHNICAL DATA MAXIMO PF

MAXIMO PF		107 P2 S C3	107 P2 D C3	135 P2 S C4	135 P2 D C4	170 P2 S C4	170 P2 D C4	195 P2 S C4	195 P2 D C4
<b>SIZE</b>									
<b>Cooling capacity (1)</b>	kW	<b>103,0</b>	<b>102,0</b>	<b>128,0</b>	<b>126,0</b>	<b>166,0</b>	<b>164,0</b>	<b>182,0</b>	<b>185,0</b>
Unit power input	kW	41,9	41,6	49,8	49,8	67,2	67,2	69,2	79,7
<b>Free-Cooling capacity (2)</b>	kW	<b>81,1</b>	<b>80,9</b>	<b>99,5</b>	<b>99,0</b>	<b>124,0</b>	<b>123,0</b>	<b>127,0</b>	<b>127,0</b>
Total water flow rate	m³/h	19,1	18,9	23,5	23,2	30,6	30,2	33,6	34,2
Total pressure drop	kPa	155	139	88	77	107	101	123	117
Compressors		scroll							
Quantity	n.	2	2	2	2	2	2	2	2
Capacity steps	n.	2	2	2	2	2	2	2	2
Centrifugal fans EC	n.	3	3	4	4	4	4	4	4
Total air flow	m³/h	32000	32000	40000	40000	52000	52000	52000	52000
External static pressure	Pa	50	50	50	50	50	50	50	50
Air circuits	n.	1	1	1	1	1	1	1	1
Refrigerant		R410A							
Total refrigerant charge (optional excluded)	kg	32	29,3	35,1	38,6	50,9	42,6	51,9	44
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	94,7	94,7	113,8	113,8	147,6	147,6	164,2	164,2
Unit starting current (LRA)	A	279,7	279,7	337,3	337,3	392,2	392,2	456,2	456,2
EER (1)	kW/kW	2,46	2,45	2,57	2,53	2,47	2,44	2,63	2,32
ESEER		2,88	3,15	3,03	3,47	2,90	3,21	2,78	3,44
Sound power level [Lw] (3)	dB(A)	99,2	99,2	92,7	92,7	96,2	96,2	96,2	96,2
Average sound pressure level [Lpm] (4)	dB(A)	81,3	81,3	74,1	74,1	77,6	77,6	77,6	77,6
Net weight	kg	1240	1240	1690	1690	1800	1780	1850	1820
Hydraulic connections									
Evaporator IN/OUT - ISO 7/1 - R	Ø	--	--	--	--	--	--	--	--
Evaporator IN/OUT - OD (5)	Ø mm	76,1	76,1	88,9	88,9	88,9	88,9	88,9	88,9
<b>Partial heat recovery (6)</b>									
<b>Heating capacity</b>	kW	<b>35,6</b>	<b>35,2</b>	<b>43,9</b>	<b>43,2</b>	<b>57,2</b>	<b>56,3</b>	<b>62,6</b>	<b>63,7</b>
Pumping group									
1 pump - 2 poles electric motor	kW	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
2 pump - 2 poles electric motor	kW	3,0	3,0	4,0	4,0	4,0	4,0	4,0	4,0
Water tank - volume	l	360	360	520	520	520	520	520	520
<b>Cooling capacity (1)</b>	kW	<b>103,0</b>	<b>102,0</b>	<b>128,0</b>	<b>126,0</b>	<b>166,0</b>	<b>164,0</b>	<b>182,0</b>	<b>185,0</b>
Unit power input	kW	40,0	39,9	48,4	48,4	65,2	65,2	66,7	77,2
<b>Free-Cooling capacity (2)</b>	kW	<b>81,1</b>	<b>80,9</b>	<b>99,5</b>	<b>99,0</b>	<b>124,0</b>	<b>123,0</b>	<b>127,0</b>	<b>127,0</b>
Total air flow	m³/h	32000	32000	40000	40000	52000	52000	52000	52000
External static pressure	Pa	50	50	50	50	50	50	50	50
EER (1)	kW/kW	2,46	2,45	2,57	2,53	2,47	2,44	2,63	2,32
Sound power level [Lw] (3)	dB(A)	98,5	98,5	90,2	90,2	95,0	95,0	95,7	95,7
Average sound pressure level [Lpm] (4)	dB(A)	80,6	80,6	71,6	71,6	76,4	76,4	77,1	77,1
<b>Cooling capacity (1)</b>	kW	<b>101,0</b>	<b>99,4</b>	<b>124,0</b>	<b>122,0</b>	<b>161,0</b>	<b>159,0</b>	<b>176,0</b>	<b>179,0</b>
Unit power input	kW	39,2	39,2	48,4	48,3	63,7	63,7	65,3	76,3
<b>Free-Cooling capacity (2)</b>	kW	<b>80,6</b>	<b>80,3</b>	<b>98,6</b>	<b>98,1</b>	<b>123,0</b>	<b>122,0</b>	<b>126,0</b>	<b>126,0</b>
Total air flow	m³/h	27200	27200	34000	34000	44200	44200	44200	44200
External static pressure	Pa	36	36	36	36	36	36	36	36
EER (1)	kW/kW	2,46	2,44	2,49	2,46	2,45	2,43	2,61	2,28
Sound power level [Lw] (3)	dB(A)	95,1	95,1	87,8	87,8	91,9	91,9	92,6	92,6
Average sound pressure level [Lpm] (4)	dB(A)	77,2	77,2	69,2	69,2	73,3	73,3	74,0	74,0
<b>Cooling capacity (1)</b>	kW	<b>96,5</b>	<b>95,5</b>	<b>118,0</b>	<b>117,0</b>	<b>155,0</b>	<b>153,0</b>	<b>167,0</b>	<b>170,0</b>
Unit power input	kW	40,0	39,9	49,8	49,7	64,4	64,3	66,4	78,3
<b>Free-Cooling capacity (2)</b>	kW	<b>79,7</b>	<b>79,5</b>	<b>97,3</b>	<b>96,8</b>	<b>121,0</b>	<b>121,0</b>	<b>124,0</b>	<b>125,0</b>
Total air flow	m³/h	22400	22400	28000	28000	36400	36400	36400	36400
External static pressure	Pa	25	25	25	25	25	25	25	25
EER (1)	kW/kW	2,32	2,31	2,31	2,30	2,34	2,32	2,44	2,12
Sound power level [Lw] (3)	dB(A)	92,0	92,0	86,9	86,9	89,7	89,7	90,3	90,3
Average sound pressure level [Lpm] (4)	dB(A)	74,1	74,1	68,3	68,3	71,1	71,1	71,7	71,7

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.

2. Referred to chiller inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.

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 chiller water temperature 12/7°C, 35°C ambient temperature and hot water temperature 40/45°C.

## TECHNICAL DATA MAXIMO PF

		220 P2 S C5	220 P2 D C5	250 P3 S C5	265 P4 D C5	290 P4 D C5
<b>SIZE</b>						
<b>Cooling capacity (1)</b>	kW	210,0	214,0	240,0	253,0	277,0
Unit power input	kW	84,0	84,3	103,0	106,8	125,3
<b>Free-Cooling capacity (2)</b>	kW	163,0	163,0	171,0	173,0	176,0
Total water flow rate	m³/h	38,8	39,4	44,4	46,7	51,3
Total pressure drop	kPa	112	106	124	131	148
Compressors		scroll	scroll	scroll	scroll	scroll
Quantity	n.	2	2	3	4	4
Capacity steps	n.	2	2	3	4	4
Centrifugal fans EC	n.	5	5	5	5	5
Total air flow	m³/h	62500	62500	64000	64000	64000
External static pressure	Pa	50	50	50	50	50
Air circuits	n.	1	1	1	1	1
Refrigerant		R410A	R410A	R410A	R410A	R410A
Total refrigerant charge (optional excluded)	kg	83,1	102,2	83,7	113,3	113,2
Gas circuits	n.	1	2	1	2	2
Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Max unit operating current (FLA)	A	185	185	217,2	215	315,8
Unit starting current (LRA)	A	477,0	477,0	461,8	438,5	607,8
EER (1)	kW/kW	2,50	2,54	2,33	2,37	2,21
ESEER		3,02	3,28	3,42	3,39	3,36
Sound power level [Lw] (3)	dB(A)	96,8	96,8	97,2	97,3	97,3
Average sound pressure level [Lpm] (4)	dB(A)	77,6	77,6	77,9	78,0	78,0
Net weight	kg	2320	2330	2490	2670	2720
Hydraulic connections						
Evaporator IN/OUT - ISO 7/1 - R	Ø	--	--	--	--	--
Evaporator IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9
<b>OPTIONAL</b>						
Partial heat recovery (6)						
<b>Heating capacity</b>	kW	72,3	73,5	82,7	87,0	95,4
Pumping group						
1 pump - 2 poles electric motor	kW	5,5	5,5	5,5	5,5	5,5
2 pump - 2 poles electric motor	kW	7,5	7,5	7,5	7,5	7,5
Water tank - volume	l	720	720	720	720	720
<b>LNO KIT 100%</b>						
<b>Cooling capacity (1)</b>	kW	210,0	214,0	240,0	253,0	277,0
Unit power input	kW	81,5	81,8	99,7	103,0	121,0
<b>Free-Cooling capacity (2)</b>	kW	163,0	163,0	171,0	173,0	176,0
Total air flow	m³/h	62500	62500	64000	64000	64000
External static pressure	Pa	50	50	50	50	50
EER (1)	kW/kW	2,50	2,54	2,33	2,37	2,21
Sound power level [Lw] (3)	dB(A)	95,3	95,3	95,8	96,4	96,4
Average sound pressure level [Lpm] (4)	dB(A)	76,1	76,1	76,5	77,1	77,1
<b>LNO KIT 85%</b>						
<b>Cooling capacity (1)</b>	kW	204,0	207,0	232,0	244,0	266,0
Unit power input	kW	80,3	80,7	99,3	102,5	122,0
<b>Free-Cooling capacity (2)</b>	kW	161,0	162,0	169,0	171,0	175,0
Total air flow	m³/h	53125	53125	54400	54400	54400
External static pressure	Pa	36	36	36	36	36
EER (1)	kW/kW	2,47	2,49	2,27	2,31	2,11
Sound power level [Lw] (3)	dB(A)	92,4	92,4	92,8	93,3	93,3
Average sound pressure level [Lpm] (4)	dB(A)	73,1	73,1	73,5	74,0	74,0
<b>LNO KIT 70%</b>						
<b>Cooling capacity (1)</b>	kW	195,0	198,0	220,0	231,0	248,0
Unit power input	kW	82,2	82,7	102,5	105,5	127,5
<b>Free-Cooling capacity (2)</b>	kW	159,0	160,0	167,0	169,0	172,0
Total air flow	m³/h	43750	43750	44800	44800	44800
External static pressure	Pa	25	25	25	25	25
EER (1)	kW/kW	2,31	2,33	2,09	2,13	1,89
Sound power level [Lw] (3)	dB(A)	90,5	90,5	90,8	91,2	91,2
Average sound pressure level [Lpm] (4)	dB(A)	71,2	71,2	71,5	71,9	71,9

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
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 chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

## DIMENSIONS (mm)

SIZE C		
a	b	c
C1 1250	1010	1950
C2 1800	1180	2000
C3 2600	1340	2000
C4 3700	1490	2000
C5 4950	1500	2040

