

ORION

Air cooled water chillers with centrifugal fans and heat pumps, featuring hermetic scroll compressors.



PURE ENERGY



The ORION range of chillers and reversible heat pumps, featuring centrifugal fans, offer either single or, above 50 kW, tandem scroll compressors. Plate heat exchangers are applied and the pump and buffer tank are included within the package, to the benefit of installation and start-up.

Given that ORION is ideal within a multitude of architectural solutions care has been taken to offer complete flexibility without compromising performance. The fans allow both frontal and top air discharge, and the discharge direction can be modified within a matter of minutes, even on site, allowing modifications at any time. The variable speed belt/pulley configuration allows the static pressure and air flow to be adapted to the characteristics of the air ducting, eliminating noise and vibrations.



Cooling, conditioning, purifying.

BENEFITS

- High installation flexibility: direction of condensing air expulsion easily changed, even in site;
- Ideal for small hydronic air conditioning systems;
- Complete with storage tank and pump to facilitate installation and start-up operations;
- Designed for installation in confined spaces;
- High EER and COP values;
- Extended operating limits;
- Optimisation of heat pump defrosting cycles (HON) thanks to the exclusive Frost Detecting System;
- Self-adaptive temperature control logic SAC;
- Extremely quiet even without the use of sound-insulating devices;
- Easy to use thanks to an intuitive controller with dual icon-based display;
- Practical routine maintenance with easily accessible internal parts.

MAIN OPTIONS

- Layout without storage tank;
- High/low head pressure pump;
- Modified fan orientation;
- Inverter driven electronic fan speed regulation;
- Remote user interface;
- RS485 ModBus interface for connection to supervisor systems;
- xWEB300D for local or remote (GPRS) monitoring plus data filing based on WEB server technology;
- Antivibration dampers;
- Filters to protect the condenser coils;
- Condenser coils designed for aggressive atmospheres;
- Sound insulating compressor cover;
- Antifreeze heaters on evaporator, pump and tank;
- Differing fan pulleys.

STANDARD FEATURES

- Hermetic scroll compressors (tandem dual compressor from model 211);
- Integral hydronic kit complete with centrifugal pump, tank, expansion vessel, relief valve, filling/drain valve, pressure gauge, and manual bleed valve;
- Hydraulic threaded connections directly accessible from the exterior of the unit;
- Brazed stainless steel plate evaporator;
- Centrifugal fans with fanwheel having forward-curved blades, double suction and belt-drive transmission with variable pitch pulley;
- Microprocessor controller with dual icon-based display;
- Panelling with internal condensate proof insulation;
- Condensate tray with threaded drain connection;
- Refrigerant charge, non-freezing oil, and factory testing;
- IPX4 electric protection rating;
- Inspections and tests performed in factory as per all MTA products and components;
- Environmentally friendly refrigerant R407C with zero ozone depletion potential;
- Phase monitor against phase reversal;
- Compressor crankcase heater.

VERSIONS

- Chiller (ON);
- Heat pump (HON).

Microprocessor controller with dual icon-based display.



Higher efficiency and quieter operation thanks to scroll compressors.



Built-in pumping module with or without storage tank.



Condensing air expulsion easily changed, even in site.



	Model ON-HON		071	081	101	131	171	211	251	301
ON	Cooling capacity	kW	16,9	21,0	28,5	36,9	43,1	49,5	56,7	66,7
	Total absorbed power	kW	6,65	7,95	10,9	14,1	16,0	18,9	21,5	25,8
	Available static pressure	Pa	110	117	131	130	153	181	202	205
	ESEER	-	2,61	2,78	2,82	2,80	2,85	3,02	2,83	2,55
	Max external air temperature	°C	46	46	47	46	47	46	46	47
HON	Cooling capacity	kW	16,1	20,7	27,8	35,9	42,6	48,0	54,4	62,9
	Total absorbed power	kW	6,56	7,80	10,7	13,8	16,4	18,6	21,5	25,6
	Available static pressure	Pa	128	144	151	161	153	181	225	232
	ESEER	-	2,51	2,80	2,80	2,77	2,77	2,92	2,70	2,39
	Heating capacity	kW	20,0	23,8	31,2	42,2	49,3	57,5	64,0	74,9
	Total absorbed power	kW	6,92	8,03	11,1	14,1	16,9	19,4	22,8	26,6
Min. external air temperature	°C	-8	-6	-7	-8	-8	-8	-7	-6	
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50								
Circuit / Compressors	N°	1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	
Noise level	dB(A)	52,9	54,0	54,2	55,8	56,2	55,9	57,3	58,8	
Depth	mm	930	930	930	930	1081	1081	1081	1081	
Width	mm	1265	1265	1915	1915	2110	2110	2507	2507	
Height	mm	1444	1444	1444	1444	1900	1900	1900	1900	
Installed weight	Kg	225	258	350	377	672	731	877	907	

All data refers to standard units at the following nominal conditions:

Chiller: evaporator water inlet-outlet 12-7 °C, external air temperature 35 °C;

Heat pump: condenser water inlet-outlet 40-45 °C, external air temperature 7 °C dry bulb, 6 °C wet bulb.

Sound pressure level in hemispherical field at 10 m from condenser side and 1.6 m from ground with ducted air outlet. Values with tolerance ± 2 dB. The sound levels refer to operation of the unit under full load in nominal conditions and with circulation pump. The listed noise levels, weights and dimensions refer to base chillers with no options fitted.

Data declared according to UNI EN 14511:2011.



MTA participates in the E.C.C. programme for LCP-HP. Certified products are listed on www.eurovent-certification.com. Eurovent Certification applied to the units:
- Air/Water with cooling capacity up to 600 kW
- Water/Water up to 1500 kW

www.mta-it.com



MTA is ISO9001 certified, a sign of its commitment to complete customer satisfaction.



MTA products comply with European safety directives, as recognised by the CE symbol.

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