

# ORION

Chillers and heat pumps with centrifugal fans, and hermetic scroll compressors.



pure energy



Conditioning your ambient,  
maximising your comfort.



Cooling, conditioning, purifying.

## MAXIMIZING YOUR FLEXIBILITY

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.

The microprocessor control is Orion's little genius. Twin displays with an icon interface allow the User to reprogram the principal operating parameters, all this in absolute simplicity. FDS (Frost Detection System), unique to MTA, automatically manages the heat pump's defrosting cycles; contrary to typical solutions, this occurs only when effectively necessary, optimizing its operation to the advantage of User comfort and energy efficiency. The Adaptive Set Point, always active even in twin compressor models, modulates the on-off cycles in networks with low water contents.



Microprocessor controller with dual icon-based display.



Higher energy efficiency and quieter operation thanks to the use of scroll compressors.



Built-in pumping module with or without tank.



## STANDARD FEATURES

- R407C refrigerant;
- 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;
- 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;
- Main door lock disconnect switch;
- Condensate tray with threaded drain connection;
- Extensive factory tested.

## MAIN OPTIONS

- Layout without storage tank;
- High/medium pressure head pump;
- Kit for changing orientation of fans delivery port;
- Fans electronic speed control kit;
- Replicated wall-mounted remote control kit;
- Antivibration mounts kit;
- Polyurethane filters kit for the condensing coil;
- Condensing coil with anticorrosion treatment;
- Phase monitor kit;
- Serial communications module kit.

## TECHNICAL DATA

Model ON-HON		071	081	101	131	171	211	251	301	
Orion	Cooling capacity	kW	17.1	21.1	28.8	37.3	43.6	50.1	57.1	66.6
	Absorbed power	kW	5.9	6.6	9.1	11.9	13.4	15.9	17.7	21.0
	Available static pressure	Pa	110	117	131	130	153	181	202	205
	Max external air temp.	°C	46	47	47	46	48	47	46	47
HOrion	Cooling capacity	kW	16.1	20.7	28.1	36.3	41.6	48.4	54.8	63.2
	Absorbed power	kW	5.8	6.5	9.0	11.8	13.3	15.8	17.7	21.0
	Max external air temp.	°C	47	45	47	46	46	8.3	47	46
	Heating capacity	kW	19.8	23.5	31.2	42.1	49.2	57.1	63.7	74.7
	Absorbed power	kW	6.1	6.8	9.5	12.0	14.3	16.5	19.0	21.9
Min. external air temp.	°C	-8	-7	-7	-8	-8	-8	-7	-6	
Power supply	V/Ph/Hz	400±10%/3/50								
Noise	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	302	335	498	525	860	919	1063	1093	

- 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 1.2 m from ground.

[www.mta-it.com](http://www.mta-it.com)

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