

# NEPTUNE *tech*

Water cooled water chillers, heat pumps and condenserless units featuring hermetic scroll compressors.



pure ENERGY

NEPTUNE*tech* offers the optimal combination of energy efficiency, ease of use and superior quality.

The application of up to 6 scroll compressors within up to 2 independent circuits ensures peace of mind together with excellent partial load energy savings and lowest noise levels.

Energy savings can be further enhanced by opting for total heat recovery or the desuperheater configuration.

Neptune *tech's* compact configuration allows it to even pass through a domestic door, further simplifying installation.

The robust industrial design featuring renowned components, unloading function and wide operating limits combine to offer guaranteed operation in all conditions.



Cooling, conditioning, purifying.

## BENEFITS

- Up to 6 compressors offer high efficiency and reliability;
- High energy efficiency levels, especially at partial loads;
- Extremely compact, even passes through a domestic door;
- Operates with water outlet temperatures from 0 °C to 25 °C;
- Unloading function allowing operation even in extreme conditions;
- Self Adapting Control (SAC) with dynamic set point, for increased precision with low thermal inertias;
- Robust design with high quality components from renowned suppliers, fruit of MTA's industrial background;
- Eurovent certified performance;
- Reduced noise levels, thanks also to the availability of two differing acoustic versions;
- Flexibility of use, sized for operation with either tower or well water;
- Energy efficient total heat recovery and desuperheater options;
- Easy installation and access to all components;
- Allows both inlet and outlet water control, with a PID control logic;
- Generous ambient limits (-10 °C to +45 °C);
- Easy to use intuitive controller with dual icon display.

## VERSIONS

- Standard;
- Low noise;
- ME - Condenserless unit combinable with remote condenser;
- Heat pump with inversion on the water side.

## STANDARD FEATURES

- 3 to 6 hermetic scroll compressors, positioned in parallel in one or two circuits;
- Brazed stainless steel plate evaporators and condensers;
- Shut-off valve and solenoid valve on the liquid line;
- Extensive inspections and tests performed on all units;
- Factory charged with non-freezing oil and refrigerant (except ME);
- IP54 electrical protection rating;
- Environmentally friendly refrigerant R410A with zero ozone depletion potential;
- All the scroll compressors are equipped with crankcase heaters as standard;
- All the units are delivered with a phase monitor which provides protection against phase loss and phase reversal.

## MAIN OPTIONS

- Noise reducing compressor housing;
- Modulating condensing pressure control valves;
- Antivibration dampers;
- Soft starter;
- Desuperheater (20% heat recovery);
- Total heat recovery (100% heat recovery);
- Shell & tube evaporator (on request);
- Antifreeze heater for exchangers;
- Remote user interface;
- RS485 MODBUS interface for connection to supervisor systems;
- xWEB300D remote supervision, allowing local or remote monitoring via web server or GPRS;
- Matching cooling towers or dry coolers available on request;
- Remote condensers for integration with unit available on request (ME).

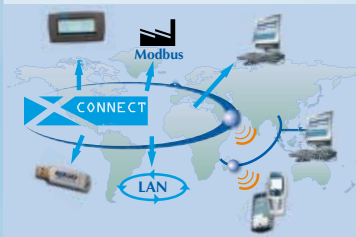
Microprocessor controller with dual icon-based display.



Optimised performance thanks to multiscroll logic.



xCONNECT: a world of connectivity solutions.



Easy access to all internal components.



Model NET - NET/ME		075	090	100	110	120	135	150	165	180	
<b>Tower water</b>											
NET	Cooling capacity	kW	237	280	313	338	373	420	469	517	560
	Total absorbed power	kW	56	65	75	82	88	101	114	121	131
	ESEER	-	5,35	5,43	5,22	5,21	5,36	5,32	5,36	5,49	5,54
<b>Well water</b>											
NET	Cooling capacity	kW	251	297	332	360	396	446	498	551	598
	Total absorbed power	kW	48	57	65	72	75	87	98	104	111
HEAT PUMP	Heating capacity	kW	278	328	370	400	437	495	555	607	657
	Total absorbed power	kW	68	79	91	99	105	121	136	146	156
<b>Condenserless unit</b>											
/ME	Cooling capacity	kW	224	264	297	324	352	398	445	487	527
	Total absorbed power	kW	60	70	80	87	94	107	121	131	141
Power supply	V/Ph/Hz	400 ± 10% / 3 - PE / 50									
Circuits / Compressors	N°	1/3	1/3	2/4	2/4	2/4	2/5	2/6	2/6	2/6	
Sound press. level (standard)	dB(A)	58,1	59,8	59,3	60,3	61,0	61,1	61,1	62,0	62,8	
Sound press. level (comp. housing)	dB(A)	51,1	52,8	52,4	53,3	54,0	54,1	54,1	55,0	55,8	
Depth	mm	2010	2010	2610	2610	2610	3705	3705	3705	3705	
Width	mm	800	800	800	800	800	800	800	800	800	
Height	mm	1830	1830	1830	1830	1830	1830	1830	1830	1830	
Installed weight	Kg	993	1161	1332	1440	1549	1729	1867	2061	2211	

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

**Tower water:** evaporator water inlet/outlet temperature 12-7 °C, condenser water inlet/outlet temperature 30-35 °C.

**Well water:** evaporator water inlet/outlet temperature 12-7 °C, condenser water inlet/outlet temperature 15-30 °C.

**Heat pump:** condenser water inlet/outlet temperature 40-45 °C; evaporator water inlet/outlet temperature 12-7 °C.

**Condenserless unit:** evaporator water inlet/outlet temperature 12-7 °C; condensing temperature 45 °C.

Sound pressure level in hemispherical field at 10 m from operating side and 1,6 m from ground. Values with tolerance ± 2 dB.

The sound levels refer to unit operation under full load in nominal conditions.

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](http://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 (N.A. on ME)

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

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Cooling, conditioning, purifying.



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.