

# NEPTUNE TECH



Water-cooled water chillers featuring hermetic scroll compressors with R410A.

Nominal cooling capacity 293 – 750 kW



## Energy efficiency and easy of use.

The NEPTUNE Tech water cooled water chiller range is the specific solution for medium and large process cooling applications. 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 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 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;
- 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.

## 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;
- 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;
- Heating functioning mode with water side cycle reversion;
- Soft starter;
- Desuperheater (20% heat recovery);
- Total heat recovery (100% heat recovery);
- 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.



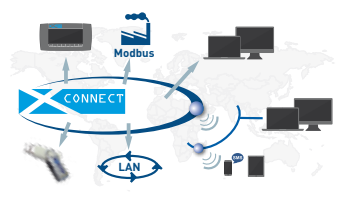
Microprocessor controller with dual icon-based display.



Optimised performance thanks to multiscroll logic.



Ideal for medium and large process cooling applications.



xCONNECT: a world of connectivity solutions.

Models NET		075	090	100	110	120	135	150	165	180
Nominal cooling capacity [1]	kW	232	289	307	342	385	428	474	532	593
Total absorbed power [1]	kW	52	68	70	81	91	97	102	118	134
EER [2]		4,48	4,27	4,42	4,21	4,24	4,39	4,63	4,49	4,44
SEER [3]		7,82	7,38	7,60	7,41	7,22	7,56	8,06	7,88	7,71
Nominal cooling capacity [4]	kW	293	365	387	431	487	541	599	672	750
Total absorbed power [4]	kW	53	70	72	84	94	101	105	122	137
EER [5]		5,51	5,23	5,39	5,13	5,19	5,38	5,68	5,50	5,46
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 power [6]	dB(A)	86,1	87,8	87,3	88,3	89	89,1	89,1	90	90,8
Sound pressure [7]	dB(A)	58,1	59,8	59,3	60,3	61,0	61,1	61,1	62,0	62,8
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

### Data declared according to UNI EN 14511:2013.

- (1) **Nominal cooling capacity and Nominal absorbed power:** data referred to nominal conditions, evaporator water temperature IN/OUT 12/7 °C and condenser water temperature IN/OUT 30/35 °C.
- (2) **EER:** data referred to the full load functioning: evaporator water temperature IN/OUT 12/7 °C and condenser water temperature IN/OUT 30/35 °C.
- (3) **SEPR:** data declared in compliance with the European Regulation (EU) 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers.
- (4) **Nominal cooling capacity and Nominal absorbed power:** data referred to nominal conditions, evaporator water temperature IN/OUT 20/15 °C and condenser water temperature IN/OUT 30/35 °C.
- (5) **EER:** data referred to the full load functioning: evaporator water temperature IN/OUT 20/15 °C and condenser water temperature IN/OUT 30/35 °C.
- (6) **Sound power:** determined on the basis of measurements taken in accordance with the standard ISO 3744.
- (7) **Sound pressure at 10 m:** average value obtained in free field on a reflective surface at a distance of 10 m from the external side of the electrical panel of machine and at a height of 1.6 m from the unit support base. 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 units with no options fitted.



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.



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)  
Certification applied to the units:  
- Air/Water up to 600 kW  
- Water/Water up to 1500 kW



EAC Declaration

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