

# NEPTUNE

NEPTUNE - ME/NEPTUNE

Water-cooled chillers with heat pump function and evaporating units with scroll compressors



## Cooling for all your needs

The Neptune series of chillers, heat pumps and evaporating units are offered in a vast array of models, versions and configurations to provide the optimal solution to the complex application requirements as regards the interior climate control of large civil, public, commercial and private facilities.

The multiscroll logic, adopted throughout the range, offers maximised COP levels at partial load conditions, ie. those conditions which account for the largest portion of the working life of an air conditioning unit.

Special attention has been paid to overall unit dimensions, given that Neptune is invariably destined to be installed in technical rooms, which frequently suffer from limited space and access restrictions.



Cooling, conditioning, purifying.

## BENEFITS

- High EER/COP levels, especially at partial loads;
- Reduced noise levels, thanks also to the availability of two differing acoustic versions;
- 90 models: cooling only, heat pump, partial recovery, total recovery and evaporating unit, in standard and low noise versions;
- Reduced dimensions;
- Flexibility of use, sized for operation with either tower or well water;
- Allows start-up and operation in even the most severe conditions thanks to the unloading function;
- Easy installation and complete access to all internal components;
- Easy to use thanks to an intuitive controller with dual icon display;
- Compatible with the latest BMS supervision and interface systems.

## VERSIONS

- Chiller;
- Heat pump with cycle inversion on the hydraulic side;
- Evaporating unit with in/out shut-off valves, designed for use with a remote condenser;
- Desuperheater, for recovery of approximately 20% of rejection heat;
- Recovery condensers (50% or 100% recovery of rejected heat).



Microprocessor controller with dual icon-based display



Optimised performance thanks to multiscroll logic



Ideal for air conditioning of civil, public and private buildings



## MAIN OPTIONS

- Condensing pressure control valve;
- Antivibration dampers;
- Duplicated remote control kit;
- RS485 MODBUS interface kit for connection to supervisor systems;
- X-WEB300 remote supervision, allowing local or remote monitoring via a web server or a GSM cell phone;
- Matching cooling towers or dry coolers available on request.

## STANDARD CHARACTERISTICS

- 3 to 6 hermetic scroll compressors, positioned in parallel in one or two circuits;
- Brazed stainless steel plate evaporators and condensers;
- Designed for outdoor operation (IP54 protection rating);
- Shut-off valve and solenoid valve on the liquid line;
- Individually factory tested, charged with refrigerant and antifreeze oil, ready for operation;
- Refrigerant R407C (R22 on request).

## TECHNICAL DATA

Model NE-/ME		075	090	100	110	120	135	150	165	180	
NE	<b>Tower water</b>										
	Cooling capacity	kW	232.4	267.5	319.2	343.5	364.5	414.7	472.7	510.6	543.0
	Absorbed power	kW	55.2	67.5	73.8	81.6	91.2	102.0	110.8	121.3	135.5
	<b>Well water</b>										
	Cooling capacity	kW	246.3	284.1	338.3	364.5	388.0	440.8	501.3	541.7	578.4
	Absorbed power	kW	47.7	59.5	63.7	71.2	80.2	88.9	95.7	105.8	119.3
	ESEER	-	5.68	5.09	5.85	5.61	5.09	5.50	5.63	5.46	5.09
	I.P.L.V.	-	5.74	5.12	6.02	5.72	5.23	5.55	5.80	5.63	5.22
/ME	Cooling capacity	kW	231.6	261.3	315.5	335.2	355.0	408.5	463.3	492.4	522.6
	Absorbed power	kW	54.9	69.1	73.3	82.8	92.4	101.0	109.7	124.0	138.3
	Power supply	V/Ph/Hz	400±10%/3/50								
	Sound pressure level (Standard)	dB(A)	60.3	61.5	61.5	62.2	62.8	62.8	62.4	63.3	63.7
	Sound pressure level (comp. housing)	dB(A)	53.2	54.5	54.5	55.2	55.8	55.8	55.4	56.3	56.7
	Depth	mm	2151	2151	2751	2751	2751	3951	3951	3951	3951
	Width	mm	802	802	802	802	802	802	802	802	802
	Height	mm	1800	1930	1867	1867	1867	1800	1800	1930	1930
	Installed weight	Kg	1004	1191	1359	1474	1589	1753	1891	2116	2274

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 tower:** evaporator water inlet/outlet temperature 12-7 °C, condenser water inlet/outlet temperature 20-30 °C.

**Evaporating unit:** evaporator water inlet/outlet temperature 12-7 °C; condensing temperature (DEW) 45 °C.

Maximum condenser water outlet temperature at nominal conditions 50 °C.

Maximum condensing temperature for evaporating unit at nominal conditions 64 °C.

ESSER calculated according to EECCAC; IPLV calculated according to ARI Standard 550/590-2003.

Sound pressure level in free field at 10 m from electrical panel side and 1.6 m from ground.

Heating capacity = Cooling capacity + Absorbed power.

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

**M.T.A. S.p.A.**

Viale Spagna, 8 - ZI  
35020 Tribano (PD) - Italy  
Tel. +39 049 9588611  
Fax +39 049 9588604

[info@mta-it.com](mailto:info@mta-it.com)



Cooling, conditioning, purifying.