

NEPTUNE TECH

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

Cooling capacity 189-570 kW

heating capacity 230-667 kW

PST



PROCESS COOLING
SOLUTIONS



AIR CONDITIONING
SYSTEMS

Conditioning Your ambient,
maximising Your comfort.



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 PST'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.

Versions

- **NET** - Cooling only / Heat pump (with inversion on the water side);
- **NET Silent** - Low noise;
- **NET / ME** - Condenserless unit combinable with remote condenser.

Standard Features

- 2 to 6 hermetic scroll compressors, positioned in parallel in one or two circuits;
- Shell & tube evaporator and condenser;
- 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 only chiller);
- 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 ME units available on request.

Microprocessor controller with dual icon-based display.

Optimised performance thanks to multiscroll logic.

Ideal for air conditioning of civil, public and private buildings.



Model NET		060	070	080	090	100	110	120
Cooling capacity	(1) kW	189	215	239	264	290	338	382
Cooling capacity	(1) TR	54	61	68	75	82.5	96	109
Total absorbed power	kW	41	46.3	52.6	56.6	63.6	72.6	82
EER	-	4.61	4.64	4.54	4.66	4.56	4.66	4.66
EXCHANGERS								
Evaporator pressure drops	kPa	51	37	54	22	27	30	43
Water flow	m ³ /h	32.4	36.9	41	45.3	49.8	58	65.6
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	1/2			2/4			
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure basic	(2) dB(A)	57	57	58	58.5	58.5	59.5	60
Noise pressure silent	(2) dB(A)	51	51	52	52.5	52.5	53.5	54
SIZE AND WEIGHT								
Depth	mm	2900	2900	2900	2900	2900	2900	2900
Width	mm	1300	1300	1300	1300	1300	1300	1300
Height	mm	1800	1800	1800	1800	1800	1800	1800
Weight	kg	936	968	1000	1192	1192	1470	1657

Model NET		130	140	150	160	170	180
Cooling capacity	(1) kW	404	429	449.5	478	519.5	570
Cooling capacity	(1) TR	115	122	128	136	148	162
Total absorbed power	kW	87.3	92.6	98.7	105.2	114.1	123
EER	-	4.63	4.63	4.55	4.54	4.55	4.63
EXCHANGERS							
Evaporator pressure drops	kPa	48	34	37	38	45	47
Water flow	m ³ /h	69.3	73.6	77.2	82	89.2	97.8
GENERAL DATA							
Refrigerant	-	R410A					
Circuits / Compressors	N°	2/4			2/5	2/6	
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50					
Protection class	-	IP54					
NOISE LEVEL							
Noise pressure basic	(2) dB(A)	60	60	60.5	61	61.5	62
Noise pressure silent	(2) dB(A)	54	54	54.5	55	55.5	56
SIZE AND WEIGHT							
Depth	mm	2900	2900	2900	3400	3400	3700
Width	mm	1300	1300	1300	1300	1300	1300
Height	mm	1800	1800	1800	1800	1800	1800
Weight	kg	1669	1806	1818	1880	2023	2266

(1) Evaporator IN/OUT: 12/7°C ; condenser IN/OUT : 35/30°C;

(2) Sound pressure at 10 m: average value obtained in free field on a reflective surface at a distance of 10 m from the side of the condenser coils 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 chillers with no options fitted. (NB: dimensions for lower noise and/ or higher efficiency versions may differ.)

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📍 unit 1 ,Floor 1,NO 36, Moqaddas st,(11 West) South Shahr-dari Blvd

Gheysar Amin pour , Sq Saadat Abad, Tehran-Iran

☎ 021 26 27 37 10 📠 021 26 76 37 22

🌐 www.psthvac.com ✉ info@psthvac.com

