

PHOENIX^{plus}

Air cooled water chillers
featuring double screw semihermetic compressors.



PURE ENERGY



The Phoenix^{plus} range of chillers has been specifically designed to optimize the benefits of refrigerant R134a; their maximum advantage is achieved in those installations where the chiller operates below its design load conditions for most of the year.

Thanks to unique technical solutions and continuous compressor regulation according to the exact effective cooling load requested by the system, Phoenix^{plus} achieves market leading ESEER seasonal performance ratios, as well as nominal load EER ratios which are well above the minimum limit of the Class A energy efficiency category.



Cooling, conditioning, purifying.

BENEFITS

- ESEER seasonal performance index up to beyond 4,4;
- Precise water temperature control and adaptation to user needs thanks to continuous compressor capacity control from 25% (2 compressors) or 12,5% (4 compressors) of maximum load;
- 20 different basic models to match the specific requirements of the installation;
- SN, SSN and SHE versions feature compressors housed in acoustically insulated metal compartments clad with sound absorbing material, combined with reduced fan speeds, anti-vibration dampers and mufflers;
- Maximum ease of access to all components and coils for routine cleaning operations;
- User friendly controller with multifunctional buttons and dynamic display icons.

MAIN OPTIONS

- Electronic thermostatic expansion valves;
- Electronic fan speed control;
- Condenser coils with anticorrosion treatment;
- Replicated remote user terminal;
- Antivibration dampers;
- Serial connection to supervision systems;
- MTA xCONNECT Supervision based on internal web pages;
- Modularity / web interconnection hub;
- Special applications with partial or total heat recovery;
- Special applications for water temperatures down to -10 °C;
- Special very high efficiency applications;
- Compressor automatic circuit breakers;
- Antifreeze heater;
- Metal mesh filters for condenser coil protection;
- Compressor housings;
- Simple remote control;
- Compressor crankcase heater.

STANDARD FEATURES

- Environmentally friendly refrigerant R134a with zero ozone depletion potential;
- xDRIVE is a microprocessor electronic controller with high computing capacity and user friendly graphic interface;
- Semi-hermetic dual screw compressors expressly developed for use with R134a;
- Tube core evaporator expressly designed for use with R134a;
- "Victaulic" hydraulic connections;
- Condensers with transverse "V" formation and subcooling section;
- Check valve on compressor discharge and shut-off valves on discharge and suction lines;
- Shut-off valve and solenoid valve on the liquid line;
- Limitation of peak current by means of part-winding device;
- Muffler and flexible hoses on compressor suction and discharge (SSN version);
- Refrigerant charge, non-freezing oil, and factory testing;
- IP54 electric protection rating;
- Inspections and tests performed in factory as per all MTA products and components;
- Compressor crankcase heater;
- All the units are equipped with a phase monitor which provides protection against phase loss and phase reversal and checks the operating voltage limits.

VERSIONS

- Chiller;
- Version for -20 °C external air temperature;
- Acoustic & high efficiency configurations:
 - N (standard);
 - SN (low noise);
 - SSN (very low noise).
 - HE (high efficiency);
 - SHE (low noise high efficiency).

Semigraphic user interface with multifunctional buttons and dynamic display icons



Electronic thermostatic expansion valves



Maximum accessibility to compressors



Tube core evaporator expressly designed for use with R134a



Model PNP		160	170	180	190	200	220	250	265	280	310	330	360	390	405	420	440	470	500	530	560
Cooling capacity	kW	305	324	343	373	401	455	498	538	578	639	684	731	787	827	884	934	961	993	1094	1175
Total absorbed power	kW	125	133	142	148	160	175	196	209	221	244	263	285	307	319	336	356	372	391	422	447
ESEER (N)	-	3,31	3,45	3,50	3,54	3,60	3,65	3,35	3,64	3,73	3,67	3,67	3,54	3,61	3,67	3,79	3,68	3,58	3,38	3,66	3,79
ESEER (HE)	-	3,62	3,71	3,71	3,77	3,90	3,76	3,66	3,93	4,01	3,91	3,91	3,81	3,89	3,95	4,02	3,95	3,85	3,66	3,96	4,02
ESEER (SHE)	-	3,51	3,59	3,60	3,66	3,78	3,65	3,54	3,80	3,87	3,79	3,79	3,68	3,76	3,82	3,93	3,78	3,72	3,53	3,81	3,84
Max external air temp. vers. N	°C	44	44	44	44	44	46	44	44	44	46	46	44	44	44	44	45	44	44	44	44
Max external air temp. vers. HE	°C	49	49	49	49	49	49	49	50	50	49	49	49	49	50	50	48	48	47	46	44
Power supply		400 ± 10% / 3 - PE / 50																			
Circuits / Compressors	N°	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3	4/4	4/4	4/4	4/4	4/4
Sound pressure level (N)	dB(A)	68,9	68,9	68,9	70,1	70,1	71,0	71,1	71,0	70,9	72,4	72,7	72,8	72,8	72,7	72,6	74,0	74,1	74,1	74,0	73,9
Sound pressure level (SN)	dB(A)	61,4	61,4	61,4	62,3	62,3	63,0	62,9	62,9	63,0	64,7	64,8	64,7	64,6	64,6	64,6	66,0	66,0	65,9	65,9	65,9
Sound pressure level (SSN)	dB(A)	55,1	55,0	55,0	56,2	56,1	57,0	56,8	56,9	56,9	58,2	58,8	58,7	58,6	58,6	58,6	61,2	61,1	61,1	61,1	61,1
Sound pressure level (HE)	dB(A)	70,2	70,0	69,9	71,6	71,5	72,7	72,6	72,4	72,2	73,7	74,4	74,4	74,2	74,1	73,9	75,3	75,2	75,2	75,0	74,9
Sound pressure level (SHE)	dB(A)	63,1	63,0	62,8	64,3	64,2	65,2	64,9	64,7	64,5	66,3	67,0	66,8	66,5	66,4	66,3	67,8	67,6	67,5	67,3	67,2
Depth	mm	4530	4530	4530	4530	4530	4530	4530	4530	4530	6510	6510	6510	6510	6510	6510	8490	8490	8490	8490	8490
Width	mm	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190	2190
Height	mm	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360	2360
Installed weight	Kg	3467	3509	3554	4137	4288	4702	4866	4949	5033	6511	6907	7286	7391	7472	7627	9085	9306	9349	9833	10000

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

Chiller: evaporator water inlet-outlet 12-7 °C, external air temperature 35 °C.

Sound pressure level in hemispherical field at 10 m from condenser side and 1.6 m from ground. Values with tolerance ± 2 dB.

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

The listed weights and dimensions refer to base chillers with no options fitted (NB: dimensions for lower noise and/or higher efficiency versions may differ). 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. Eurovent Certification applied to the units:
 - Air/Water with cooling capacity up to 600 kW
 - Water/Water up to 1500 kW

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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.