

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 and IPLV 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 4,4;
- Precise control of water temperature and adaptation to user demands thanks to continuous capacity control of the compressors (from 25 to 12,5 % of maximum loads in units with respectively 2 and 4 compressors);
- 20 different basic models to match the specific requirements of the installation;
- Facility to choose between three different sound insulation configurations;
- High efficiency version with the majority of models in energy efficiency Class A;
- Quietest acoustic configurations on the market;
- Allows start-up and operation in even the most severe conditions;
- Maximum ease of access to all components and coils for routine cleaning operations.

MAIN OPTIONS

- Electronic expansion valves;
- Electronic fan speed control;
- Filters to protect the condenser coils;
- Refrigerant-water exchangers protected with antifreeze heaters;
- Condenser coils with anticorrosion treatment;
- Replicated remote user terminal or simple remote control;
- Antivibration mounts;
- Protocols for supervision systems;
- Special applications with partial or total heat recovery exchangers;
- Special applications for water temperatures down to -10 °C;
- Special very high efficiency applications.

STANDARD FEATURES

- R134a ecological refrigerant with zero ozone depletion potential;
- Microprocessor controller;
- 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.

VERSIONS

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

Semi-graphic backlit terminal



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 | 322 | 342 | 362 | 394 | 423 | 480 | 526 | 568 | 611 | 673 | 721 | 771 | 831 | 873 | 934 | 987 | 1014 | 1048 | 1155 | 1241 |
| Absorbed power | kW | 114 | 123 | 131 | 134 | 145 | 159 | 180 | 191 | 202 | 221 | 239 | 260 | 280 | 291 | 306 | 322 | 340 | 358 | 385 | 407 |
| ESEER | - | 3,58 | 3,72 | 3,78 | 3,80 | 3,85 | 3,92 | 3,62 | 3,95 | 4,06 | 3,95 | 3,95 | 3,84 | 3,93 | 4,01 | 4,17 | 4,06 | 3,87 | 3,66 | 4,01 | 4,17 |
| IPLV | - | 3,79 | 3,94 | 4,00 | 4,02 | 4,08 | 4,13 | 3,83 | 4,18 | 4,28 | 4,12 | 4,13 | 3,98 | 4,09 | 4,18 | 4,34 | 4,22 | 4,00 | 3,77 | 4,15 | 4,31 |
| 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 | V/Ph/Hz | 400±10%/3/50 | | | | | | | | | | | | | | | | | | | |
|----------------------------|---------|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| Circuit / 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 version 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 version 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 version 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 version 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 |
| 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.



Eurovent Certification

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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.