

# PHOENIX PLUS



Air cooled water chillers featuring semi-hermetic twin screw compressors with R-1234ze.

Nominal cooling capacity 242 – 875 kW

LOW GWP VERSION  
HFO R-1234ze

+6 R-1234ze  
%EER

+4 SEER  
%

<1 GWP

18 ATMOSPHERIC  
LIFETIME  
DAYS



The perfect combination  
of cooling capacity, comfort  
and low GWP level.

The low GWP version PHOENIX Plus range has been specifically designed to optimize the benefits of refrigerant R-1234ze; their maximum advantage is achieved also in those installations where the chiller operates below its design load conditions for most of the year. Thanks to unique technical solutions and Smart Step-less regulation according to the exact effective cooling load requested by the system, PHOENIX Plus achieves SEER and SEPR HT seasonal efficiency ratio compliant with the ErP regulation, as well as very high nominal load EER ratios.



Cooling, conditioning, purifying.

## Benefits

- Refrigerant R-1234ze with GWP value =1\*;
- High energy efficiency for low energy consumption;
- High seasonal energy efficiency (SEER and SEPR HT);
- The controller provides maximum flexibility to adapt to any operating condition, thanks to the Smart Stepless algorithm specifically developed by MTA;
- High reliability and continuity of operation (up to 4 screw compressors and "Smart Stepless" algorithm);
- Wide operating range;
- Comprehensive safety equipment, including automatic leakage detection system and forced ventilation for compressors' housing, phase monitor, pressure switches, differential pressure switch, crankcase heaters, compressors operating envelope and double sensor for oil level control;
- Wide range of accessories and kits for custom solutions.

## Main options

- Condenser coils with anticorrosion treatment;
- Soft starter;
- Antivibration dampers;
- Antifreeze heater;
- Metal mesh filters for condenser coil protection;
- Compressor housings;
- Replicated remote user terminal;
- Serial connection to supervision systems;
- MTA xCONNECT Supervision based on internal web pages;
- Modularity / web interconnection hub.

## Standard features

- Environmentally friendly R-1234ze refrigerant;
- High efficiency screw compressors with stepless regulation optimized for R-1234ze refrigerant gas;
- High efficiency EC axial fans with inverter technology and integrated speed regulation;
- Compressor crankcase heater;
- Air-cooled condensers (copper tubes/aluminium fins) with transverse "V" formation;
- Check valve on compressor discharge and shut-off valves on discharge and suction lines;
- Electronic expansion valves;
- Single pass shell & tubes evaporator optimized for R-1234ze refrigerant gas;
- The electrical panel is made up of IP54 cabinet with forced ventilation, inside which are installed contactors and circuit breakers; the protection from the phase loss and from the phase reversal is assured by the phase monitor device;
- xDRIVE controller programmed with software specifically developed by MTA; high computing capacity and user friendly graphic interface; connectivity and supervision via Ethernet, USB, RS485 Modbus.

Model PNP HE		160	180	200	220	250	265	280	310
Nominal cooling capacity (1)	kW	242	263	302	344	369	404	435	473
Total absorbed power (1)	kW	83,3	94,1	108,1	122,1	129,0	142,1	155,1	168,4
EER (1)		2,90	2,80	2,80	2,82	2,86	2,84	2,80	2,81
SEER (2)		4,10	3,89	3,88	4,27	4,43	4,38	4,32	4,34
SEPR HT (2)		5,02	4,87	4,88	5,12	5,25	5,25	5,18	5,10
Power supply	V/Ph/Hz	400 ± 10% / 3-PE / 50							
Circuits / Compressors	N°	2/2							3/3
Sound pressure (3)	dB(A)	68,9	68,9	70,1	71,0	71,0	70,9	70,8	72,5
Depth	mm	4530	4530	4530	4530	4530	4530	4530	6510
Width	mm	2190	2190	2190	2190	2190	2190	2190	2190
Height	mm	2360	2360	2360	2360	2360	2360	2360	2360
Installed weight	kg	3480	3740	3840	4080	4210	4340	4470	5970

Model PNP HE		330	390	405	420	440	500	530	560
Nominal cooling capacity (1)	kW	510	576	614	658	695	730	803	875
Total absorbed power (1)	kW	182,0	205,1	218,7	232,9	244,2	256,6	283,4	309,8
EER (1)		2,80	2,81	2,81	2,83	2,85	2,85	2,83	2,82
SEER (2)		4,34	4,40	4,39	4,43	4,43	4,50	4,47	4,49
SEPR HT (2)		5,11	5,16	5,17	5,24	5,17	5,23	5,21	5,23
Power supply	V/Ph/Hz	400 ± 10% / 3-PE / 50							
Circuits / Compressors	N°	3/3				4/4			
Sound pressure (3)	dB(A)	72,8	72,7	72,6	72,5	74,0	74,0	73,9	73,8
Depth	mm	6510	6510	6510	6510	8490	8490	8490	8490
Width	mm	2190	2190	2190	2190	2190	2190	2190	2190
Height	mm	2360	2360	2360	2360	2360	2360	2360	2360
Installed weight	kg	6040	6350	6490	6750	8240	8470	8770	9200

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

- (1) Data referred to nominal conditions, external ambient temperature 35 °C and evaporator water temperature IN/OUT 12/7 °C;
- (2) **SEER/SEPR HT**: data declared in compliance with the European Regulation (EU) 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers;
- (3) 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 chillers with no options fitted.

This document contains preliminary data for information only. For final data please contact M.T.A. Sales Dept.



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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