HARIES TECH

ErP

Hydronic heat pumps with R410A refrigerant and hermetic scroll comressors.
Nominal cooling capacity 154 – 323 kW | Nominal heating capacity 168 – 359 kW

The evolution of industrial heat pumps.

The hydronic heat pumps HARIES Tech have evolved to fulfil the present and future needs of industrial process cooling. Preserving their versatility and reliability, the result of years of development, they already meet the seasonal energy performance requirements of the ErP Regulation EcoDesign. They are extremely customizable to guarantee an easy installation for any plant solution.
The HARIES Tech range is the example of targeted design, essential to obtain a reduced operating cost for cooling and heating in medium and large industrial systems, without excluding reliability and the environment protection.

MTA®
Cooling, conditioning, purifying.

Advantages

- HE version, Class A Eurovent heating mode;
- SHE and SSN version with super low noise levels;
- High efficiency performances at full load (EER and COP);
- Optimization of performance also in heat pump mode thanks to hot gas injection and the innovative Adaptive Defrost defrosting system;
- High value of SEPR efficiency, compliant with requirements of Regulation ERP EcoDesign;
- Wide operating limits for staring up and functioning even in the worst conditions;
- Wide range of options and kits for easy installation;
- Easy access to all components;
- Advanced electronic control with integrated web server.

Main options

- Plates or shell and tube evaporator;
- Single or double water pump with low or medium head pressure;
- Water accumulation tank;
- IN/OUT compressors' valves;
- High efficiency Brushless EC condenser fans;
- Antifreeze heaters for evaporator pump/s and tank;
- Metallic mesh filters for condenser coil protection;
- Soft starters to reduce by 20% the unit's starting current.

Standard features

- Environment friendly refrigerant R410A;
- 4 scroll compressors in parallel on two independent refrigerant circuits;
- Crankcase heater and phase-monitor;
- Plates stainless steel evaporator with 2 refrigerant circuits;
- Double electronic expansion valve;
- Axial fans, developed on the basis of bionic principles that allow to achieve high performance with low noise emissions;
- Electrical panel protection rating IP54;
- xDRIVE electronic microprocessor controller with high computing capacity and an easy to use graphical interface;
- Refrigerant charge, non-freezing oil and tests performed in the factory;
- Touch screen display for the microprocessor controller;
- Modbus RS485 serial output for connection to supervision systems;
- Ethernet port with HTML supervision pages preloaded for viewing and modifying the machine parameters to corporate or internet network.

Sales kit

- Antivibration mountings kit;
- Replicated remote user terminal kit;
- Simple remote control;
- Modularity Hub / web interconnection.

Versions

- HE - High energy efficiency and basic acoustic configuration;
- SHE - High energy efficiency and low noise acoustic configuration;
- SSN - Standard energy efficiency and very low noise acoustic configuration.

Latest-generation touch screen user terminal.

Also available with shell and tube evaporator.

Pump section with or without storage tank.

High efficiency EC inverter fans.

Models HAST		070			080			090			100			110			120			130			140		
Versions		**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**	**HE**	**SHE**	**SSN**
Nominal cooling capacity (1)	kW	154	150	146	178	172	167	190	185	187	199	194	196	227	221	222	258	249	243	290	279	270	323	309	293
Total absorbed power (1)	kW	56	56	56	63	64	64	67	67	65	72	72	70	83	83	79	89	90	90	104	106	108	117	121	127
EER (2)		2,74	2,67	2,59	2,82	2,69	2,59	2,84	2,76	2,88	2,78	2,68	2,80	2,74	2,67	2,82	2,88	2,78	2,69	2,8	2,64	2,51	2,75	2,54	2,29
SEPR (3)		4,53	4,76	4,80	4,73	4,92	5,02	4,70	4,93	5,16	4,62	4,85	5,10	4,58	4,82	5,16	4,75	4,78	5,01	4,82	4,99	5,09	4,87	4,83	4,78
Max external air temp. (4)	°C	49	47	44	49	46	44	49	46	47	49	46	47	49	47	48	50	48	46	49	46	43	47	44	41
Nominal heating capacity (5)	kW	168	164	160	194	189	185	210	205	205	220	214	215	249	242	247	283	275	270	315	306	300	359	347	338
Total absorbed power (5)	kW	57	55	53	65	62	60	69	66	65	72	70	69	84	80	77	92	88	84	103	99	96	115	111	107
COP (6)		2,93	2,99	3,05	2,99	3,04	3,08	3,05	3,10	3,15	3,04	3,07	3,13	2,96	3,02	3,19	3,09	3,15	3,20	3,06	3,10	3,14	3,13	3,14	3,15
Min external air temp. (7)	°C	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-10	-7	-7	-7	-8	-8	-8	-7	-7	-7	-10	-10	-10
Power supply	V/Ph/Hz	400 ± 10% / 3-PE / 50																							
Circuits / Compressors	N°	2/4																							
Sound power (8)	dB(A)	92,1	85,5	79,8	91,2	84,2	79,7	92,1	85,5	80,0	92,1	85,8	80,0	92,8	85,7	79,8	91,8	84,8	80,1	91,8	84,8	80,6	91,8	84,8	80,6
Sound pressure (9)	dB(A)	64,1	57,5	51,8	63,2	56,2	51,7	64,1	57,5	52,0	64,1	57,5	52,0	64,8	57,7	51,8	63,8	56,8	52,1	63,8	56,8	52,6	63,8	56,8	52,6
Depth	mm	3495			3495			4595			4595			4595			4595			4595			4595		
Width	mm	2188			2188			2188			2188			2188			2188			2188			2188		
Height	mm	2150			2150			2150			2150			2150			2150			2150			2150		
Installed weight	kg	1760			2005			2260			2355			2570			2768			3076			3271		

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) Data referred to the full load functioning and nominal conditions, external ambient temperature 35 °C and evaporator water temperature IN/OUT 12/7 °C;
(3) Data declared in compliance with the European Regulation (EU) 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers;
(4) Data declared referred to cooling mode and outlet water temperature 7 °C;
(5) Data referred to nominal conditions, con temperatura aria esterna 7°C , umidità relativa 87% e temperatura di condensazione 45 °C;
(6) Data referred to the full load functioning and nominal conditions, external ambient temperature 7 °C, relative humidity 87%, condenser IN/OUT 40/45 °C;
(7) Heating mode and outlet water temperature 45 °C;
(8) Determined on the basis of measurements taken in accordance with the standard ISO 3744;
(9) 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 andat 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 units with no options fitted.

ISO 9001 BUREAU VERITAS Certification

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.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

MTA participates in the E.C.C. programme for LCP-HP. Certified products are listed on: www.eurovent-certification.com
Certification applied to the units:
- Air/Water up to 600 kW
- Water/Water up to 1500 kW

EAC Declaration

M.T.A. S.p.A.
Viale Spagna, 8 - ZI
35020 Tribano (PD) - Italy
Tel. +39 049 9588611
Fax +39 049 9588612
info@mta-it.com
www.mta-it.com

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