



HARIES TECH



Hydronic heat pumps with R410A refrigerant and hermetic scroll compressors.

Nominal cooling capacity 148 - 310 kW

Nominal heating capacity 166 - 356 kW



The evolution of commercial heat pumps.

The hydronic heat pumps HARIESTech have evolved to fulfil the present and future needs of commercial air conditioning systems. 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 HARIESTech range is the example of targeted design, including the Adaptive Defrost logic, essential to obtain a reduced operating cost for air conditioning of medium and large residential or commercial spaces without excluding reliability and the environment protection.



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 SCOP efficiency, compliant with requirements of Regulation ERP EcoDesign;
- Wide operating limits for starting 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

- 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.

Acoustic configurations

- 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.

HAST Model	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	148,8	144,3	140,1	171,4	165,2	160,6	183,4	178,4	180,5	192,5	186,8	189,1	218,7	212,2	214,0	248,4	240,3	233,4	279,8	269,0	259,9	310,5	296,2	280,3
Total absorbed power [1]	kW	56,6	56,5	56,8	63,5	64,4	65,1	67,5	67,8	65,6	72,1	72,8	70,5	83,5	83,4	79,4	90,0	90,5	91,2	104,6	106,7	108,7	118,4	122,6	129,0
EER [2]		2,63	2,55	2,47	2,70	2,57	2,47	2,72	2,63	2,75	2,67	2,56	2,68	2,62	2,55	2,70	2,76	2,65	2,56	2,67	2,52	2,39	2,62	2,42	2,17
Max external air temp. [3]	°C	48	46	44	49	46	44	49	45	46	49	45	46	49	47	47	49	48	46	48	46	42	46	44	40
Nominal heating capacity [4]	kW	166,8	163,7	159,3	194,0	188,8	183,7	209,4	203,7	205,1	219,4	213,4	214,9	247,1	242,1	245,4	282,7	275,2	269,7	314,7	306,3	298,1	356,7	347,2	335,6
Total absorbed power [4]	kW	57,5	54,8	52,6	65,1	62,4	60,1	68,9	66,1	65,2	72,5	69,7	68,9	84,3	80,3	77,5	91,7	87,6	84,4	103,0	98,9	95,7	114,8	110,9	107,5
COP [5]		2,90	2,99	3,03	2,98	3,03	3,05	3,04	3,08	3,15	3,03	3,06	3,12	2,93	3,01	3,17	3,08	3,14	3,19	3,06	3,10	3,12	3,11	3,13	3,12
SCOP [6]		3,30	3,56	3,80	3,44	3,63	3,81	3,53	3,74	3,87	3,53	3,74	3,86	3,34	3,58	3,92	3,51	3,76	4,00	3,58	3,77	3,93	3,67	3,85	4,01
ErP efficiency class [6]		A+	A+	A+	A+	A+	A+	A+	A+	A++	A+	A+	A++	A+	A+	A++	A+	A+	A++	A+	A+	A++	A+	A++	A++
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 level [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 level [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 14511:2018. All data refers to standard units without accessories/options which require an electrical feeding source and in nominal working conditions. The listed noise levels, weights and dimensions refer to base chillers with no options/accessories fitted.

- (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 referred to cooling mode and outlet water temperature 7 °C;
- (4) Data referred to nominal conditions external ambient temperature 7 °C, relative humidity 87%, condensing temperature 45 °C;
- (5) Data referred to the full load functioning and nominal conditions, external ambient temperature 7 °C, relative humidity 87%, condenser IN/OUT 40/45 °C;
- (6) Data declared according to the European Regulation 813/2013 for heat pumps at low temperature (BT) in average climate conditions (Strasbourg) and variable outlet water temperature;
- (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 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 without accessories/options.



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 Certification applied to the units: - Air/Water up to 600 kW - Water/Water up to 1500 kW



EAC Declaration

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