



H CYGNUS TECH



Heat pumps featuring hermetic rotary or scroll compressors with R410A.
Nominal cooling capacity 6 – 54 kW
Nominal heating capacity 7 – 65 kW



Intended for residential and commercial air conditioning.

Low noise operation of technical systems is essential for continuously occupied premises such as homes, offices and light-commercial buildings, where air conditioning units are usually placed in close proximity to the users. In order to satisfy the specific comfort requirements of these type of premises, without compromising performance in all operating conditions, MTA recommends the HCYgnus Tech series of reversible heat pumps with environmentally friendly refrigerant R410A. The already very low noise levels have been further reduced by installing electronic fan speed controls, which run at lower speeds as cooling or heating demands decrease. Seasonal efficiency levels are even more evident in heat pump operation, with clear benefits in terms of climatic comfort, thanks to the integral storage tank and Frost Deteting System (FDS), designed to detect the quantity of ice accumulating on the external coil, so that defrost cycles are performed only when appropriate, thereby minimising the power consumption.



Cooling, conditioning, purifying.

Benefits

- Extremely low noise levels;
- Ideally suited to small and medium hydronic cooling systems;
- Extended operating limits;
- Optimisation of heat pump defrosting cycles thanks to the exclusive Frost Detecting System (FDS) (Minimum ambient temperature in heat pump mode = down to -10 °C);
- Designed for installation in confined spaces;
- Easy to use controller with icon-based dual display;
- Easy access to all internal components.

Kits

- Condensate collection tray with hose connection (models 020-071);
- Replicated remote user display;
- Serial card RS485 Modbus;
- Supervision system xWEB300D EVO;
- Soft starter;
- Condenser air filters;
- Antivibration mountings.

Standard Features

- Refrigerant R410A;
- Hermetic rotary compressor (mod.020), hermetic scroll compressor (mod.031-171) and double hermetic scroll compressor (mod.211-301);
- Crankcase heater compressor;
- Integrated hydronic module with pump, tank, expansion vessel, safety valve, filling/ drain valve, pressure gauge and automatic bleed valve;
- Hydraulic threaded connections directly accessible from the exterior of the unit;
- Brazed stainless steel plate evaporator;
- Axial fans with electronic speed control;
- Heat pumps with 2nd thermostatic valve for performance optimisation in all operating conditions (mod.131-301);
- Electrical panel protection grade IPX4;
- Phase monitor;
- Factory charged with refrigerant and non-freezing oil;
- Inspections and tests performed in factory as for all MTA products and components.

Options

- Configuration with storage tank;
- Medium/low head pressure pump (depending on model);
- Double pump (1 run/1 stand-by) (mod.081-301);
- Anti-freeze heater on evaporator, pump and tank (if included).



Microprocessor controller with dual icon-based display.



Higher energy efficiency and quieter operation thanks to the use of scroll compressors.



Built-in pumping module with or without storage tank.



Remote control.

Models HCY		020	031	051	071	081	101	131	171	211	251	301	
Nominal cooling capacity (1)	kW	5,63	8,91	12,35	16,80	17,92	23,91	30,48	35,06	42,11	48,42	53,65	
Total absorbed power (1)	kW	2,27	3,29	2,31	6,81	6,96	9,19	12,03	13,23	16,40	18,28	21,43	
EER (2)		2,48	2,71	2,13	2,47	2,58	2,60	2,53	2,65	2,57	2,65	2,50	
Max external air temperature (3)	°C	45	45	45	45	46	46	45	45	46	46	46	
Nominal heating capacity (4)	kW	6,87	10,60	15,00	19,00	21,98	28,86	36,72	42,18	51,25	57,88	64,95	
Total absorbed power (4)	kW	2,11	3,46	4,95	6,25	7,30	9,41	11,94	13,37	16,97	19,21	21,91	
COP (5)		3,26	3,06	3,03	3,04	3,01	3,07	3,08	3,15	3,02	3,01	2,96	
SCOP (6)		3,37	3,25	3,30	3,24	3,24	3,31	3,30	3,43	3,57	3,64	3,62	
ErP efficiency class (6)		A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	A+	
Min external air temperature (7)	°C	-7	-9	-7	-7	-7	-7	-7	-8	-7	-7	-7	
Power supply	V/Ph/Hz	230±10%/1/50					400 ± 10% / 3+N-PE / 50						
Circuits / Compressors	N°	1/1					1/2						
Sound power (8)	dB(A)	69,9	70,0	76,7	77,8	75,8	77,6	80,7	82,7	82,9	83,3	82,8	
Sound pressure (9)	dB(A)	41,9	42,0	48,7	49,8	47,8	49,6	52,7	54,7	54,9	55,3	54,8	
Depth	mm	426	580	580	580	1995	1995	2104	2104	2504	2504	2504	
Width	mm	961	1404	1404	1404	809	809	1112	1112	1112	1112	1112	
Height	mm	985	1293	1293	1293	1173	1173	1477	1477	1518	1518	1518	
Installed weight	Kg	89	157	166	175	252	275	367	406	516	548	551	

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.

- (1) Nominal cooling capacity and nominal absorbed power: data referred to nominal conditions, external ambient temperature 35 °C and evaporator water temperature IN/OUT 12/7 °C;
- (2) EER: 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) Maximum external air temperature: data declared referred to cooling mode and outlet water temperature 7 °C;
- (4) Nominal heating capacity and nominal absorbed power: data referred to nominal conditions external ambient temperature 7 °C, relative humidity 87%, condenser IN/OUT 40/45 °C;
- (5) COP: 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) SCOP: 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) Minimum external air temperature: data declared with: heating mode and outlet water temperature 45 °C;
- (8) Sound power: determined on the basis of measurements taken in accordance with the standard ISO 3744;
- (9) Sound pressure at 10 m: 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 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; The listed noise levels, weights and dimensions refer to base units with no options fitted.



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-HR. 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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