

ARIES *tech*

Air cooled water chillers and heat pumps
with R410A featuring hermetic scroll compressors.



pure energy



Aries*tech* chillers and heat pumps represent the ideal example of design aimed at energy savings in all operating conditions. The technical solutions implemented on Aries all contribute to the reduction in overall system operating costs and the protection of the environment. Aries*tech* features: 4 scroll compressors connected in parallel within two cooling circuits, offering the exact cooling output required by the system; exchanger on the utility side with dual cooling circuits and a single water circuit, allowing operation with higher evaporating temperatures; cooling circuits with separate aerodynamic sections, permitting progressive shutdown of the fans according to the instantaneous thermal load; heat pumps with hot gas injection and MTA's intelligent FDS (Frost Detecting System) defrosting logic, to optimise seasonal energy efficiencies in winter conditions.



Cooling, conditioning, purifying.

BENEFITS

- Reduced noise levels, thanks also to the availability of three differing acoustic versions;
- High EER/COP levels, especially at partial loads;
- Optimisation of performance also in heat pump mode thanks to hot gas injection and the innovative FDS defrosting system (min. ambient temperature -10 °C in heat pump mode);
- Allows start-up and operation in even the most severe conditions thanks to the unloading function;
- Simplified installation and easy access to all components;
- User friendly controller with multifunctional buttons and dynamic display icons.

MAIN OPTIONS

- Shell and tube evaporator (not available on HAST);
- Add-on external pumping unit with 1 or 2 pumps and water pressure gauge;
- Storage tank;
- Electronic thermostatic valve;
- Compressor shut-off valves on suction and discharge lines;
- Electronic fan speed control;
- Condenser coils designed for aggressive atmospheres;
- Antivibration dampers;
- Anti-freeze heaters on evaporator, pump and tank;
- Metal mesh filters for condenser coil protection;
- Replicated remote user terminal;
- Serial connection to supervisor system;
- MTA xWEB supervision based on internal web pages;
- Electric power supply different from standard.

STANDARD FEATURES

- 4 scroll compressors in parallel within two independent circuits;
- Single brazed stainless steel plate evaporator "dual-circuit";
- Heat pumps equipped with 2nd thermostatic valve for optimised performance in all operating conditions;
- Axial fans with progressive activation for optimised condensing pressure control, installed in two independent aerualic sections;
- RS485 ModBus interface for connection to supervisor systems;
- Ethernet connection featuring pre-programmed HTML supervision pages, allowing local or internet based visualization and modification of the operating parameters;
- Factory tested and supplied with refrigerant charge and antifreeze oil;
- IP54 electric protection rating;
- Environmentally friendly refrigerants with R410A zero ozone depletion potential.

VERSIONS

- Chiller;
- Heat pump;
- Low ambient air temperature version (down to -20 °C in cooling mode);
- High external air temperature; (H version);
- Version with desuperheaters;
- Versions with total heat recovery;
- Acoustic configurations: N standard, SN low noise, SSN very low noise.

Semigraphic user terminal with multifunctional buttons and dynamic display icons



Also available with shell and tube evaporator



Pump section with or without storage tank



MTA xCONNECT supervision systems



Model AST - HAST		070	080	090	100	110	120	130	140	
AST	Cooling capacity	kW	162	196	213	225	250	272	312	331
	Absorbed power	kW	58,1	66	70	76,9	90,4	105	107	118
	ESEER	-	3,84	4,15	4,29	4,32	4,12	4,15	4,07	4,10
	IPLV	-	4,08	4,53	4,58	4,58	4,49	4,46	4,38	4,36
	Max external air temperature vers. N	°C	45	46	46	46	45	44	46	45
Max external air temperature vers. H	°C	49	49	48	48	49	48	48	48	
HAST	Heating capacity	kW	179	214	230	243	276	317	339	374
	Absorbed power	kW	51,9	61,4	65,9	70,4	80,2	88,5	95,5	103
	Min. external air temperature	°C	-7	-7	-6	-6	-6	-8	-7	-8
Power supply	V/Ph/Hz	400±10%/3/50								
Circuit / Compressors	N°	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	
Sound pressure version N	dB(A)	65,6	64,6	64,6	64,6	64,6	64,6	65,3	65,3	
Sound pressure version SN	dB(A)	59,2	58,0	58,0	58,0	58,0	58,0	58,2	58,2	
Sound pressure version SSN	dB(A)	50,9	50,9	49,7	49,7	50,7	50,7	51,1	51,1	
Sound pressure version H	dB(A)	64,6	64,6	63,7	63,7	65,3	65,3	64,3	64,3	
Depth	mm	3418	3418	3418	3418	4518	4518	4518	4518	
Width	mm	2188	2188	2188	2188	2188	2188	2188	2188	
Height	mm	1989	1989	1989	1989	1989	1989	1989	1989	
Installed weight	Kg	1765	1941	2005	2068	2296	2319	2504	2599	

All data refers to standard units at the following nominal conditions:

Chiller: evaporator water inlet-outlet 12-7 °C, external air temperature 35 °C;

Heat pump: condenser water inlet-outlet 40-45 °C, external air temperature 7 °C dry bulb, 6 °C wet bulb.

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 and with circulation pump.

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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.



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