

ARIES TECH



Air cooled water chillers and heat pumps with R410A
Featuring hermetic scroll compressors
Cooling capacity 164 - 340 kw
Heating capacity 167 - 343 kw

PST



PROCESS COOLING
SOLUTIONS



AIR CONDITIONING
SYSTEMS

Conditioning Your ambient,
maximising Your comfort.



The evolution of commercial chillers.

The air-cooled water chillers ARIES Tech have evolved to fulfil the present and future needs of commercial air conditioning systems. They are extremely customizable to guarantee an easy installation for any plant solution.

The ARIES Tech range is the example of targeted design, essential to obtain a reduced operating cost for air conditioning of medium and large residential or commercial spaces without excluding reliability the environment protection.



Respect of Environment

The eco-friendly refrigerant R410A (ODP=0) with outstanding heat conductivity, coupled with the low absorbed power level of the scroll compressors, reduce the environment impact, minimizing the energy waste. Recyclable and high quality materials ensure respect of environment, and reduces the carbon footprint.

Supervisor Systems

Aries Tech can be linked to various external Supervisor systems:

- RS485 serial connection to an external Supervisor system (MODBUS and other leading systems);
- xWEB300D Supervisor kit, operating via Internet;
- xWEB300D + modem GPRS for connection directly to a smartphone and tablet.

Electronic Expansion Valve

The electronic expansion valve allows an improvement of performance and an operating range wider than thermostatic expansion valves. The continuous calibrations system represents the best solution for all application characterized by several thermal load changes.

Factory Test

All models are individually tested in order to check correct operation, and also undergo refrigerant charge and leakage controls, and microprocessor and safety device setting verifications. Leading brand components are used throughout, ensuring long term reliability.

R410A



Benefits

- HE version, Class A ;
- SHE version with super low noise levels;
- High efficiency performances at full load (EER);
- 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

- Single or double water pump (one in stand-by) with low or medium head pressure;
- Water accumulation tank;
- High efficiency Brushless EC condenser fans; or fan speed controller
- Protection coating for condenser coils, suitable for installation in aggressive environments;
- Antifreeze heaters for evaporator pump/s and tank;
- Metallic mesh filters for condenser coil protection;
- Soft starters to reduce by 20% the units starting current.
- Electronic expansion valves;

Standard features

- Environment friendly refrigerant R410A;
- 4 scroll compressors in parallel on two independent refrigerant circuits;
- Crankcase heater and phase-monitor;
- Shell and tube evaporator;
- 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;
- 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;
- Serial connection to supervision systems;
- MTA xCONNECT Supervision based on internal web pages;
- Modularity Hub / web interconnection.
- IN/OUT compressors valves;

Sales kit

- Replicated remote user terminal kit;
- Modularity kit for xDRIVE;
- Condensers air filter kit;
- Antivibration mountings kit;
- Packaging kit for transportation by container.

Semigraphic user terminal with multifunctional buttons and dynamic display icons.



shell and tube evaporator (only for AST).



Pump section with or without storage tank.



High efficiency EC inverter fans.



Model AST (HE)		060	070	080	090	100	110	120
Cooling capacity (1)	kW	166	187.6	209.2	241.4	285.8	306.4	340
Cooling capacity (1)	TR	47	53	59.5	69	81	87	97
Totalabsorbed power	kW	52	58.8	64.1	72.7	84.8	93.2	107.6
EER	-	3.19	3.19	3.26	3.32	3.37	3.29	3.16
Max external air temperature	°C	52	50	50	52	51	50	49
EXCHANGERS								
Evaporator pressure drops	kPa	39	44	54	55	23	27	31
Water flow	m ³ /h	28.5	32.2	35.9	41.4	49.1	52.6	58.4
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	2/4						
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure (2)	dB(A)	60	60	61	61	62	63	63
Noise power	dB(A)	92	92	93	93	94	95	95
SIZE AND WEIGHT								
Depth	mm	3570	3570	3570	3570	4300	4300	4300
Width	mm	2192	2192	2192	2192	2192	2192	2192
Height	mm	2400	2400	2400	2400	2400	2400	2400
Weight	kg	1962	2016	2143	2642	2985	2985	3156

(1) Evaporator water inlet-outlet temperature 12-7°C , external air temperature 35°C.

(2) Sound pressure at 10 m: Average value obtained in free field on a reflective surface at a distance of 10 m from the side of the condenser coils and at a height of 1.6 m from the unit support base. Values with tolerance +/- 2. 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.

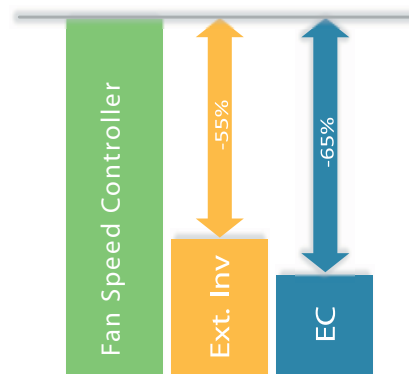
EC fans

Features

- Synchronous electric motors with permanent magnets;
- EC motors means: Electronically Commutated motors;
- Wide operating range: stepless rotation from 5% to 100%;
- High precision in condensation pressure control;
- Fast installation;

Benefits

- Seasonal energy saving -20%;
- Pays off in few months;



EC fans replace external electronic speed control option

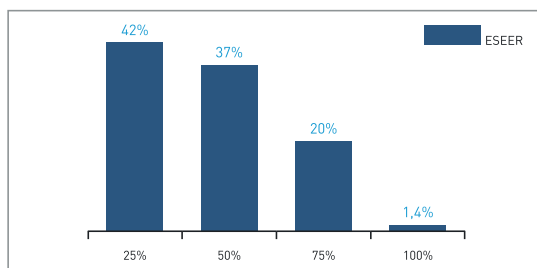


-20%
Seasonal
energy saving

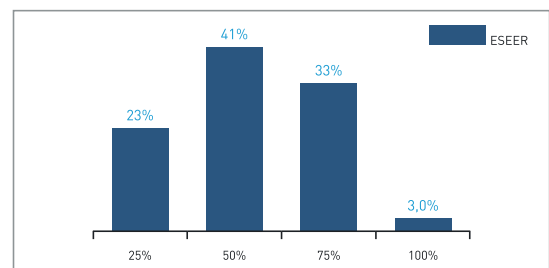
Model AST (SHE)		060	070	080	090	100	110	120
Cooling capacity (1)	kW	164	185.4	203.2	235.6	277.8	296.4	328
Cooling capacity (1)	TR	47	53	58	67	79	84	93
Total absorbed power	kW	50.5	57.4	64.7	71.7	84.7	93.7	109.2
EER	-	3.24	3.23	3.14	3.28	3.28	3.16	3.00
Max external air temperature	°C	49	48	46	50	48	47	45
EXCHANGERS								
Evaporator pressure drops	kPa	38	43	51	53	22	25	29
Water flow	m ³ /h	28.1	31.8	34.9	40.4	47.7	50.9	56.3
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	2/4						
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure (2)	dB(A)	52	52	53	54	55	55	56
Noise power	dB(A)	84	84	85	86	87	87	88
SIZE AND WEIGHT								
Depth	mm	3570	3570	3570	3570	4300	4300	4300
Width	mm	2192	2192	2192	2192	2192	2192	2192
Height	mm	2400	2400	2400	2400	2400	2400	2400
Weight	kg	2036	2091	2143	2642	2985	2985	3156

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ESEER operating time percentages



ESEER energy weights

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