

GALAXY TECH



Air cooled water chillers with R410A
With hermetic scroll compressors
Cooling capacity 342-872 kw

PST



PROCESS COOLING
SOLUTIONS



AIR CONDITIONING
SYSTEMS

Conditioning Your ambient,
maximising Your comfort.



The energy efficiency and the reliability.

Operation at partial loads corresponds to the largest portion of the working life of a unit dedicated to air conditioning applications: typically thermal loads vary widely both during the year and throughout each 24 hour period. The subdivision of the total cooling capacity over a large number of capacity steps, rendered possible thanks to the implementation of multi-scroll technology and environmentally friendly refrigerant R410A, ensure maximised performance at partial loads, resulting in seasonal energy savings of more than 16% with respect to conventional solutions. The multi-scroll configuration offers a lightweight solution, and permits the volume reduction of the storage tank with the associated dispersal of cooling energy, thus further reducing the static loading on the unit supports. Progressive stopping of the compressors and fans means that Galaxy Tech is extremely quiet in operation, rendering it ideal for installation in noise-sensitive surroundings.



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

Galaxy 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

- Reduced noise levels, thanks also to the availability of differing acoustic versions;
- High EER/COP levels, especially at partial loads;
- Ideal for large hydronic air conditioning installations in public and private surroundings;
- Allows start-up and operation in even the most severe conditions;
- Easy installation with direct access to the water connections and the applications of victaulic connections;
- Simple to install and maintain, easily accessible components;
- User friendly controller with multifunctional buttons and dynamic display icons.

Main options

- 1 or 2 pumps and water pressure gauge;
- Storage tank;
- Condenser coils designed for aggressive atmospheres;
- Metal mesh filters for condenser coil protection;
- High efficiency EC axial fans with inverter technology and integrated speed regulation; or fan speed controller
- Antifreeze heater on evaporator, pumps and tank;
- Antivibration dampers;
- Serial connection to supervisor systems;
- MTA xCONNECT supervision based on internal web pages;
- Modularity / web interconnection hub;
- Replicated remote user terminal;
- Soft starter: are installed on each compressor and allow a reduction from 10 to 20% (depending by the model) of the start-up current compared to the direct start;
- Victaulic connections;
- Simple remote control;
- Special execution with partial or total heat recovery exchangers;
- Special execution for water temperatures down to -10°C;

Standard features

- Multiple scroll compressors (4 to 8 depending on the model) connected in parallel (tandem or trio) on 2 or 4 independent refrigeration circuits;
- Shut-off valve and solenoid valve on the liquid line in each refrigeration circuit;
- xDRIVE is a microprocessor electronic controller with high computing capacity and user friendly graphic interface;
- Compressor suction and discharge valves;
- xDRIVE features the ModBUS-RTU communication protocol as standard, allowing connection with the most widely utilised Building Management Systems (BMS). It also features an Ethernet port as standard, with HTML supervision pages preloaded for connection to a company intranet or the Internet. The xDRIVE can manage in master/slave mode up to 8 units;
- Phase monitor against phase loss and phase reversal and checks the operating voltage limits;
- AC axial fans with die-cast aluminum blades, developed on the basis of bionic principles with progressive starting for condensing pressure control;
- Electronic expansion valve;
- High and low pressure transducer;
- Water differential pressure switch, air bleed valve and water drain valve;
- Factory tested and supplied with refrigerant charge and antifreeze oil;
- Environmentally friendly refrigerant R410A with zero ozone depletion potential;
- All the compressors are equipped with crankcase heaters.
- Compressor housings for acoustic insulation;
- Special execution with shell and tube evaporator.

Versions

- **Low ambient air temperature** - down to -20°C in cooling mode;

High energy efficiency versions:

- **HE** - High energy efficiency and basic acoustic configuration;
- **SHE** - High energy efficiency and low noise acoustic configuration.

Semi-graphic user terminal with multifunction keys and dynamic icons.



Pump section with or without storage tank.



Optimisation of performance thanks to the multiscroll logic.



High efficiency EC axial fans with inverter technology.



Model GLT (HE)		120	140	160	170	180	200	220
Cooling capacity (1)	kW	352	396	438	477	522	565	617
Cooling capacity (1)	TR	100	113	124.5	136	148	161	175
Total absorbed power	kW	107.1	120.2	135.4	148	160.1	176.1	187.9
EER	-	3.29	3.29	3.23	3.22	3.26	3.21	3.28
Max external air temperature	°C	51	50	49	49	51	50	50
EXCHANGERS								
Evaporator pressure drops	kPa	23	29	32	36	42	55	57
Water flow	m ³ /h	60.4	68	75.2	81.9	89.6	97	105.9
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	2/4			2/5	2/6		
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure (2)	dB(A)	65	65	65	65	65	65	66
Noise power	dB(A)	97	97	97	97	98	98	99
SIZE AND WEIGHT								
Depth	mm	4490	4490	4490	5490	6490	6490	6490
Width	mm	2194	2194	2194	2194	2194	2194	2194
Height	mm	2670	2670	2670	2670	2670	2670	2670
Weight	kg	3802	3982	4006	4765	5523	5607	5865

Model GLT (HE)		230	240	260	280	300	320	-
Cooling capacity (1)	kW	634	654	735	792	826	872	-
Cooling capacity (1)	TR	180	186	209	225	235	248	-
Total absorbed power	kW	195.5	203.1	229.5	240.4	255.6	270.8	-
EER	-	3.24	3.22	3.20	3.29	3.23	3.22	-
Max external air temperature	°C	49	49	50	50	49	49	-
EXCHANGERS								
Evaporator pressure drops	kPa	60	60	55	61	43	29	-
Water flow	m ³ /h	108.8	112.3	126.2	135.9	141.8	149.7	-
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	2/6			4/8			
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure (2)	dB(A)	66	66	66	67	67	67	-
Noise power	dB(A)	99	99	99	100	100	100	-
SIZE AND WEIGHT								
Depth	mm	6490	6490	8490	8490	8490	8490	-
Width	mm	2194	2194	2194	2194	2194	2194	-
Height	mm	2670	2670	2670	2670	2670	2670	-
Weight	kg	5877	5889	7529	7865	8149	8173	-

(1) External ambient temperature: 35°C; evaporator IN/OUT: 7/12°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 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 chillers with no options fitted. (NB : dimensions for lower noise and/or higher efficiency versions may differ.)

Model GLT (SHE)		120	140	160	170	180	200	220
Cooling capacity (1)	kW	342	384	424	463	507	556	597
Cooling capacity (1)	TR	97	109	120.5	132	144	158	170
Total absorbed power	kW	106.6	120.5	137.5	148.6	159.9	172.6	189
EER	-	3.21	3.19	3.08	3.12	3.17	3.22	3.16
Max external air temperature	°C	49	47	46	46	49	48	47
EXCHANGERS								
Evaporator pressure drops	kPa	22	27	30	33	40	53	53
Water flow	m ³ /h	58.7	65.9	72.8	79.5	87	95.4	102.5
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	2/4			2/5		2/6	
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure (2)	dB(A)	57	57	57	57	57	57	58
Noise power	dB(A)	89	89	89	89	90	90	91
SIZE AND WEIGHT								
Depth	mm	4490	4490	4490	5490	6490	6490	6490
Width	mm	2194	2194	2194	2194	2194	2194	2194
Height	mm	2670	2670	2670	2670	2670	2670	2670
Weight	kg	3802	3982	4006	4765	5523	5841	5865

Model GLT (SHE)		230	240	260	280	300	320	-
Cooling capacity (1)	kW	613.5	633	726	770	803	848	-
Cooling capacity (1)	TR	174.5	180	206	219	228	241	-
Total absorbed power	kW	197.3	206.2	224.3	240.5	257.3	275.7	-
EER	-	3.11	3.07	3.24	3.20	3.12	3.08	-
Max external air temperature	°C	46	46	47	47	46	46	-
EXCHANGERS								
Evaporator pressure drops	kPa	56	57	59	58	40	26	-
Water flow	m ³ /h	105.3	108.6	124.6	132.2	137.8	145.6	-
GENERAL DATA								
Refrigerant	-	R410A						
Circuits / Compressors	N°	2/6			4/8			
Power supply	V/Ph/Hz	400 ± 10% / 3+N-PE / 50						
Protection class	-	IP54						
NOISE LEVEL								
Noise pressure (2)	dB(A)	58	58	58	59	59	59	-
Noise power	dB(A)	91	91	91	92	92	92	-
SIZE AND WEIGHT								
Depth	mm	6490	6490	8490	8490	8490	8490	-
Width	mm	2194	2194	2194	2194	2194	2194	-
Height	mm	2670	2670	2670	2670	2670	2670	-
Weight	kg	5877	5889	7840	7865	8149	8382	-

(1) External ambient temperature: 35°C; evaporator IN/OUT: 7/12°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 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 chillers with no options fitted . (NB : dimensions for lower noise and/or higher efficiency versions may differ .)

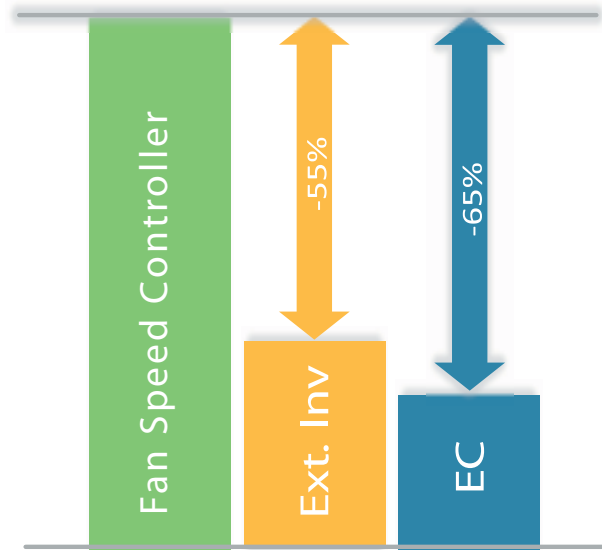
EC fans

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

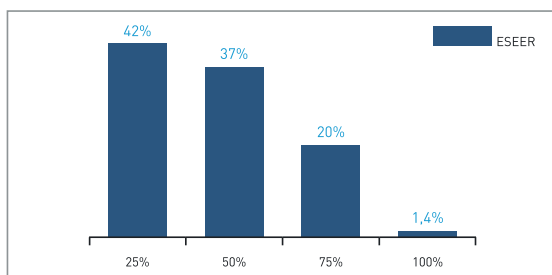
- Seasonal energy saving -20%;
- Pays off in few months;



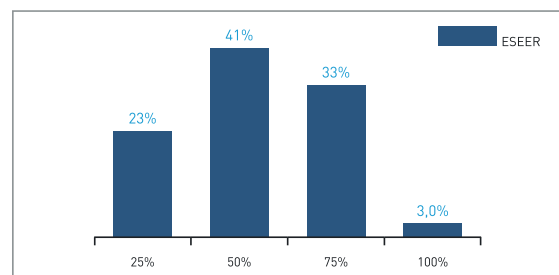
EC fans replace external electronic speed control option



-20%
Seasonal
energy saving



ESEER operating time percentages



ESEER energy weights

The continuous improvement of **PST** products can cause some variations in the information herein even without prior notice. Reproduction in whole or in part is forbidden.



📍 unit 1 ,Floor 1,NO 36, Moqaddas st,(11 West) South Shahr-dari Blvd

Gheysar Amin pour , Sq Saadat Abad, Tehran-Iran

☎ 021 26 27 37 10 📠 021 26 76 37 22

🌐 www.psthvac.com ✉ info@psthvac.com

