



AIR CONDITIONING
SYSTEMS

TAURUS^{TECH}



Air cooled water chillers, heat pumps and condensing units
with hermetic scroll compressors and R410A refrigerant gas.

Cooling capacity 69,9 – 149,7 kW

Heating capacity 75,4 – 162,5 kW

Cooling capacity condensing units 76,4 – 164,6 kW



*Conditioning your ambient,
maximising your comfort.*



Cooling, conditioning, purifying.



TAURUS_{TECH}

Taurus Tech chillers and heat pumps represent the optimal solution for centralised hydronic conditioning of medium sized applications and with the wide range of accessories it is possible to satisfy the installation and start-up unit needs. The parametric microprocessor control, through an user friendly interface allows to modify the unit operating parameters in a simple way. In the heat pumps, the defrosting cycles are automatically and continuously manages with DDS logic (Dynamic Defrosting System) that, unlike commonly adopted solutions, operates only when effectively necessary, optimising defrosting duration and frequency, to the benefit of ambient comfort and operating economy.



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.

Dynamic Defrosting System

DDS (Dynamic Defrosting System) function in heat pumps dynamically manages defrost cycles according to environmental conditions and real operating needs. It allows to achieve a greater energy efficiency of the system and a greater ambient comfort in comparison with the conventional defrosting logics.

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.

EC fans

The EC electronic switching technology, thanks to a continuous and efficient regulation of the fans speed at partial loads, allows the reduction of noise levels together with a decrease of the consumption, increasing reliability and energy efficiency of the system.





Benefits

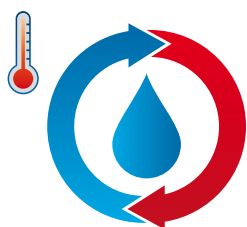
- Refrigerant R410A is an environmentally friendly fluid (zero ozone depletion potential) and provides high performances thanks its outstanding heat conductivity;
- 7 base models that perfectly match each specific system requirements;
- 3 acoustic versions (N, SN, SSN) with standard efficiency (Eurovent B/C Class);
- 2 acoustic versions (HE, SHE) with high efficiency (Eurovent A Class);
- Scroll compressors ensure high efficiency, excellent performance and elevated energy savings;
- Plug-in solution with integrated pump and tank allows a simple installation;
- Extended operating limits: Taurus Tech standardly accepts inlet water temperatures up to 25 °C and outlet water temperature down to 0 °C; HTaurus Tech working with ambient temperature up to 47 °C in cooling mode; outlet water temperature up to 55 °C and ambient temperature down to -10 °C in heating mode.
- Optimisation of performance also in heating mode thanks to hot gas injection and the DDS defrosting system;
- Comprehensive safety equipment, including phase monitor, pressure switches, differential pressure switch, crankcase heaters;
- Extensive range of accessories and kits, allow each unit to match the specific customer requirements.

Standard features

- Refrigerant R410A;
- Hermetic Scroll compressors in single circuit configuration;
- Stainless steel plate heat exchanger (all versions) or shell & tube evaporator (only TAT N, SN, SSN versions);
- AC Axial fans with die-cast aluminum blades, developed on the basis of bionic principles (N, SN, SSN versions);
- High efficiency EC axial fans with inverter technology (HE, SHE versions);
- Thermostatic expansion valve (N, SN, SSN versions);
- Electronic expansion valve (HE, SHE versions);
- Air-cooled condensers (copper tubes/aluminium fins) with longitudinal "V" formation;
- High and low refrigerant pressure switches;
- Refrigerant pressure gauges;
- Parametric microprocessor control IC208CX;
- IP54 protection class;
- Phase monitor against phase loss and phase reversal;
- Compressor crankcase heater.

Heat recovery

The integrated partial or total heat recovery systems are able to provide useful heat, that would otherwise be lost, for other purposes thus reducing the overall energy bill and CO₂ emissions.



IC208CX microprocessor control

Taurus Tech features a new advanced microprocessor control technology, with all models fitted with a unique IC208CX digital control. A comprehensive digital display keeps the user fully informed concerning the correct operation of the unit, warnings and alarms. IC208CX also allows remote control due to VICX620 LED display and semi-graphic LCD display VG1890.



Main options

- Protection of the hydraulic group by means of panels or metallic mesh;
- Coils protection by means of filters or metallic mesh;
- Soft starter: are installed on each compressor and allow an average reduction of 30% of the start-up current compared to the direct start;
- Shut-off valves on suction side and discharge line of each pair of compressors;
- Total heat recovery (available for TAT only);
- Partial heat recovery (available for TAT and HTAT only);
- Electronic expansion valve (available for TAT only, versions N, SN, SSN);
- Shell & Tube evaporator (available for TAT only, versions N, SN, SSN);
- Pump options: P15, P2, double P15+P15 or P2+P2 with or without storage tank;
- Anti-freeze heater on heat exchangers and hydraulic kit (if present);
- High efficiency axial EC fans with inverter technology and integrated speed regulation (as optional N, SN, SSN versions; as standard HE, SHE versions);
- Condenser coils designed for aggressive atmosphere;
- -20 °C option: it allows the units to operate in cooling mode down to -20 °C ambient temperature;
- Anti-vibration mounts;
- Thermostatic valves kit for condensing units;
- Remote control kit: VICX620 display LED, VG1890 display LCD semi-graphic (max 150 m);
- Gateway Modbus/Trend Kit;
- Supervisor kits: RS485 ModBus, xWEB300D.

Versions

- **Taurus Tech** - cooling only version;
- **HTaurus Tech** - reversible heat pumps with outlet water temperature up to 55 °C;
- **MCTaurus Tech** - condensing units.

Standard energy efficiency versions:

- **N** - Standard energy efficiency and basic acoustic configuration;
- **SN** - Standard energy efficiency and low noise acoustic configuration;
- **SSN** - Standard energy efficiency and very low noise acoustic configuration; not available on model 065;

High energy efficiency versions:

- **HE** - High energy efficiency (Eurovent A Class) and basic acoustic configuration;
- **SHE** - High energy efficiency (Eurovent A Class) and low noise acoustic configuration.

Supervisor systems

Taurus 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.



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.





			Standard efficiency versions													
			N							SN						
			030	035	040	050	055	060	065	030	035	040	050	055	060	065
Taurus Tech cooling mode (1)	Cooling capacity	kW	72,5	81,0	97,1	111	122	140	154	70,1	79,2	93,2	107	118	135	151
	Total absorbed power	kW	26,3	27,7	33,7	39,3	42,4	47,9	53,3	25,5	27,0	33,5	38,0	41,3	47,2	53,7
	EER	-	2,76	2,92	2,88	2,82	2,88	2,93	2,88	2,75	2,93	2,78	2,82	2,86	2,86	2,81
	Energy efficiency class	-	C	B	C	C	C	B	C	C	B	C	C	C	C	C
	ESEER	-	3,64	3,78	3,85	3,61	3,68	3,82	3,87	3,97	4,10	4,00	3,93	3,93	4,06	4,09
	Water flow rate	m³/h	12,4	13,9	16,6	19,0	20,9	24,0	26,3	12,0	13,6	16,0	18,4	20,2	23,1	25,9
	Heat exchanger pressure drops	kPa	34	41	34	42	31	52	39	32	39	32	40	29	49	38
HTaurus Tech cooling mode (1)	Cooling capacity	kW	69,9	78,4	94,6	108	118	137	150	67,5	76,0	90,9	104	115	131	147
	Total absorbed power	kW	25,7	27,2	33,3	38,6	41,5	46,9	52,4	24,9	26,4	33,0	37,2	40,4	46,2	52,5
	EER	-	2,72	2,88	2,84	2,80	2,85	2,91	2,86	2,71	2,88	2,76	2,79	2,85	2,83	2,80
	Energy efficiency class	-	C	C	C	C	C	B	C	C	C	C	C	C	C	C
	ESEER	-	3,59	3,73	3,81	3,60	3,62	3,81	3,84	3,95	4,04	3,98	3,92	3,91	4,05	4,07
	Water flow rate	m³/h	12,0	13,4	16,2	18,5	20,3	23,4	25,7	11,6	13,0	15,6	17,8	19,7	22,4	25,2
	Heat exchanger pressure drops	kPa	31	39	33	36	35	45	34	29	37	31	34	33	42	33
HTaurus Tech heating mode (2)	Heating capacity	kW	75,5	84,5	104	116	129	147	163	70,5	81,2	98,0	111	125	139	156
	Total absorbed power	kW	25,5	27,5	32,8	38,0	42,4	46,6	52,1	23,5	25,5	30,7	35,1	39,4	43,6	49,1
	COP	-	2,96	3,08	3,18	3,04	3,05	3,15	3,12	3,00	3,19	3,19	3,15	3,18	3,19	3,18
	Energy efficiency class	-	C	B	B	B	B	B	B	B	B	B	B	B	B	B
	Water flow rate	m³/h	13,0	14,6	18,0	20,0	22,3	25,4	28,1	12,2	14,0	16,9	19,1	21,7	24,1	27,0
	Heat exchanger pressure drops	kPa	31	38	34	36	35	45	34	28	36	30	33	33	41	32
	MC / Taurus Tech (3)	Cooling capacity	kW	76,4	85,8	103	117	129	148	165	73,7	83,6	98,9	113	125	142
Total absorbed power		kW	25,6	27,0	33,1	38,3	41,5	46,8	52,4	24,8	26,3	32,9	39,2	40,4	46,1	52,9
EER		-	2,98	3,18	3,10	3,04	3,12	3,15	3,14	2,97	3,18	3,01	2,87	3,10	3,08	3,01
General data	Refrigerant	-	R410A							R410A						
	Compressors / Circuits	n°	2 / 1							2 / 1						
	Capacity control	-	0 -50 -100							0 -50 -100						
	Power supply	V/Ph/Hz	400 ± 10% / 3 - PE / 50							400 ± 10% / 3 - PE / 50						
	Protection class	-	IP54							IP54						
	Total installed power (4)	kW	33	36	44	51	56	61	70	32	34	42	48	53	58	67
Sound levels (5)	Sound power	dB(A)	87	87	87	90	90	89	90	83	82	82	84	84	84	84
	Sound pressure at 10 m	dB(A)	59	59	59	62	62	61	62	55	54	54	56	56	56	56
Dimensions and weights (6)	Width (W)	mm	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110	1110
	Depth (D)	mm	2507	2507	2507	3407	3407	3407	3407	2507	2507	2507	3407	3407	3407	3407
	Height (H)	mm	2140	2140	2140	2140	2140	2140	2140	2140	2140	2140	2140	2140	2140	2140
	Weight	kg	767	801	950	1162	1221	1261	1307	767	801	950	1162	1221	1261	1307
	Water connections	in	Rp 2"			Rp 2" 1/2				Rp 2"			Rp 2" 1/2			

Data declared according to UNI EN 14511:2011.

(1) **Cooling mode:** external ambient temperature: 35 °C; evaporator IN/OUT: 12/7 °C;

(2) **Heating mode:** external ambient temperature 7 °C; relative humidity 87%; condenser IN/OUT: 40/45 °C;

(3) **Condensing units:** external ambient temperature 35 °C; evaporating temperature 5 °C;

(4) Maximum absorbed power refers to the units in the basic configuration, in the operating limits conditions;

(5) **Sound power:** determined on the basis of measurements taken in accordance with the standard ISO 3744. **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;

(6) Dimensions and operating weights are referred to Taurus Tech cooling only version without options.



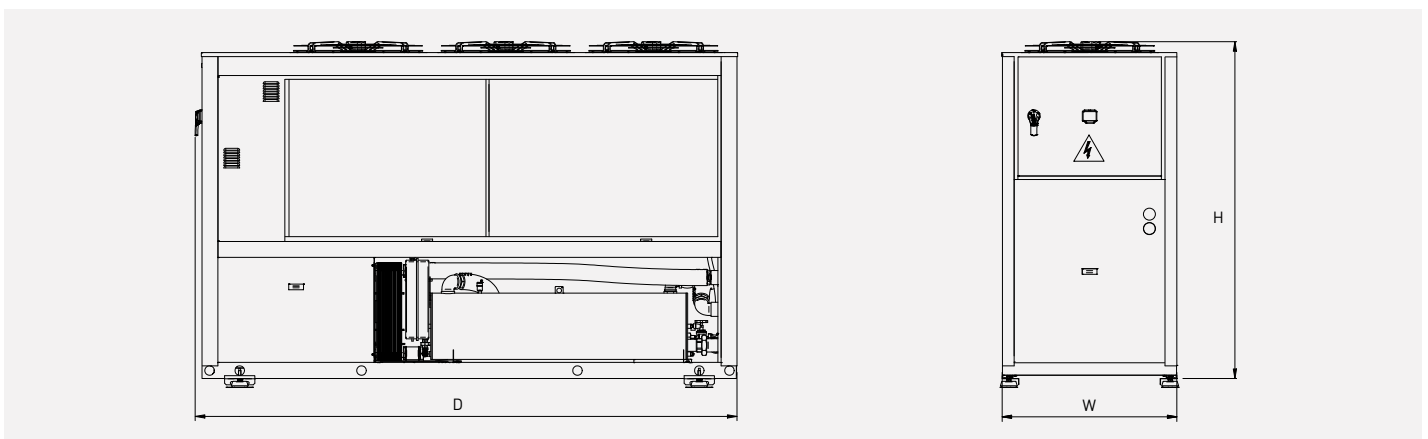
SSN					
030	035	040	050	055	060
70,0	77,1	90,1	105	116	134
23,7	25,3	31,9	35,3	39,0	44,7
2,96	3,05	2,83	2,98	2,97	2,99
B	B	C	B	B	B
4,16	4,14	4,02	4,00	3,97	4,15
12,0	13,2	15,4	18,0	19,8	23,0
31	37	30	38	28	48
67,2	73,1	87,0	100	111	128
24,3	25,8	32,3	36,0	39,6	45,3
2,76	2,84	2,70	2,78	2,79	2,84
C	C	D	C	C	C
3,89	3,83	3,80	3,71	3,70	3,89
11,5	12,5	14,9	17,1	19,0	22,0
29	34	28	32	31	41
73,6	81,7	98,7	112	127	140
23,7	25,7	31,0	35,4	39,7	43,9
3,11	3,18	3,18	3,18	3,19	3,19
B	B	B	B	B	B
12,7	14,1	17,1	19,4	21,9	24,2
34	36	31	34	34	41
75,6	85,2	100	111	124	144
22,8	24,3	31,1	36,0	37,7	43,3
3,32	3,50	3,21	3,09	3,28	3,33

R410A					
2 / 1					
0 - 50 - 100					
400 ± 10% / 3 - PE / 50					
IP54					
31	33	41	47	52	57
80	79	79	81	81	80
52	51	51	53	53	52
1110	1110	1110	1110	1110	1110
2507	2507	2507	3407	3407	3407
2140	2140	2140	2140	2140	2140
792	825	974	1197	1256	1297
Rp 2"			Rp 2" 1/2		

Hig efficiency versions													
HE							SHE						
030	035	040	050	055	060	065	030	035	040	050	055	060	065
67,1	73,2	86,1	102	110	125	138	63,9	70,2	82,6	96,9	105	121	135
21,1	23,1	27,3	32,2	34,6	39,5	44,5	20,0	22,1	26,5	30,5	33,0	38,2	43,5
3,18	3,17	3,15	3,16	3,18	3,16	3,10	3,19	3,18	3,12	3,18	3,19	3,17	3,10
A	A	A	A	A	A	A	A	A	A	A	A	A	A
4,16	4,10	4,13	4,11	3,99	4,10	4,14	4,28	4,26	4,23	4,22	4,11	4,25	4,21
11,5	12,5	14,8	17,4	18,8	21,4	23,7	11,0	12,0	14,2	16,6	18,0	20,8	23,1
35	33	33	36	33	35	35	32	30	31	33	30	33	34
66,6	72,6	85,5	101	108	123	138	63,5	69,6	82,5	95,5	104	119	135
21,1	23,1	27,4	32,2	34,5	39,4	44,5	20,1	22,1	26,5	30,6	33,0	38,2	43,6
3,15	3,14	3,12	3,13	3,14	3,13	3,10	3,16	3,14	3,11	3,13	3,14	3,12	3,10
A	A	A	A	A	A	A	A	A	A	A	A	A	A
4,10	4,05	4,07	4,05	3,90	4,03	4,12	4,25	4,21	4,22	4,15	4,05	4,17	4,20
11,4	12,4	14,6	17,3	18,6	21,1	23,7	10,9	11,9	14,1	16,4	17,8	20,4	23,2
34	32	33	35	32	34	35	31	30	31	32	29	32	34
71,7	78,0	91,6	105	118	130	145	70,1	76,7	88,4	102	114	128	141
22,3	24,3	27,9	32,7	36,3	40,3	44,5	20,7	22,7	26,3	30,3	33,9	38,0	42,1
3,22	3,21	3,28	3,21	3,25	3,23	3,25	3,38	3,37	3,36	3,37	3,37	3,36	3,35
A	A	A	A	A	A	A	A	A	A	A	A	A	A
12,4	13,5	15,8	18,1	20,4	22,5	25,0	12,1	13,3	15,3	17,6	19,8	22,0	24,4
34	32	32	33	32	33	33	33	31	30	31	30	31	32

R410A						
2 / 1						
0 - 50 - 100						
400 ± 10% / 3 - PE / 50						
IP54						
30	33	38	45	51	56	61
87	87	86	90	89	88	88
59	59	58	62	61	60	60
1110	1110	1110	1110	1110	1110	1110
2507	2507	2507	3407	3407	3407	3407
2140	2140	2140	2140	2140	2140	2140
792	825	904	1127	1236	1277	1287
Rp 2"			Rp 2" 1/2			

R410A						
2 / 1						
0 - 50 - 100						
400 ± 10% / 3 - PE / 50						
IP54						
28	31	35	42	47	52	57
81	81	80	84	83	83	83
53	53	52	56	55	55	55
1110	1110	1110	1110	1110	1110	1110
2507	2507	2507	3407	3407	3407	3407
2140	2140	2140	2140	2140	2140	2140
792	825	904	1127	1236	1277	1287
Rp 2"			Rp 2" 1/2			





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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.



MTA participates in the E.C.C. programme for LCP-HP. Certified products are listed on: www.eurovent-certification.com. Eurovent Certification applied to the units:
- Air/Water with cooling capacity up to 600 kW
- Water/Water up to 1500 kW



Certificazione GOST



Cooling, conditioning, purifying.