



TWEevoTECH



Water-cooled process chillers with scroll compressors - R410A.
Nominal cooling capacity 12,4 – 191,7 kW



The evolution of perfection.

Technological innovation, absolute reliability and customer satisfaction have been MTA's hallmarks in over 35 years in the industrial cooling market. The TWEevo Tech water cooled process chillers are specifically designed for use in industrial applications. TWEevo Tech are compact units equipped, as standard, with an internal storage tank and pump, offering a tried and tested solution that has received worldwide acclaim. The innovative evaporator-intank configuration ensures reduced ambient heat gain and a steady temperature of the process fluids.

The use of components sourced from premium manufacturers and extensive factory testing of all units make for highest reliability levels, minimising the risks of unplanned stoppages and increasing productivity levels. An extensive range of accessories, coupled with operating limits among the most generous available on the market, allow TWEevo Tech to be personalised to a variety of industrial applications.



Cooling, conditioning, purifying.

Benefits

- Heat exchangers with low water side pressure drops in order to save pumping costs;
- Reduced sound pressure level;
- The unique evaporator-in-tank configuration has been specifically designed for process cooling applications. It allows high flow rates with low pressure drops and it is furthermore compatible with the presence of contaminated process fluids;
- Scroll compressors ensure high efficiency, excellent performance and elevated energy savings;
- Extended operating limits: Tw in max = +35 °C; Tw out min = -10 °C; Tamb max = +46 °C; Tamb min = -5 °C;
- All the TAEvo TECH models already meet the limits set by the ErP, for the indexes SEPR HT (Tier 2 01/01/2021) and SEPR MT (Tier 2 02/07/2018);
- R410A non ozone depleting refrigerant increase the performance thanks its outstanding heat conductivity;
- The oversized hydraulic tank is standard and is able to compensate for the imbalances caused by sudden changes in load demand from the user;
- IP54 electrical protection rate makes TWEvo Tech suitable for outdoor installation;
- Extensive range of accessories and kits, allow each unit to match the specific customer requirements;
- Cooling circuit suitable both for atmospheric and pressurized hydraulic circuits (up to 6 barg);
- Comprehensive safety equipment, including phase monitor pressure switches, antifreeze sensors, level sensors, crankcase heaters and an internal hydraulic bypass circuit.

Kits

- Manual filling tank kit: suitable for hydraulic circuits at atmospheric pressure;
- Automatic filling kit: suitable for pressurized hydraulic circuits (up to 6 barg);
- Remote control kit VICX620 display LED; VG1890 display LCD (max 150 m) mod. 031-351;
- Supervisor kits: RS485 ModBus, xWEB300D EVO;
- Automatic hydraulic bypass kit external (mod. 031-602);
- Modularity kit: up to 5 units in MASTER/SLAVE.

Standard features

- Refrigerant R410A;
- Hermetic Scroll compressors;
- High-efficiency finned coil evaporator with copper tubes and aluminum fins, installed inside the water storage tank;
- Electronic expansion valve (mod. 031-802);
- High efficiency plate condenser (mod. 031-161) and shell & tube condenser (mod. 201-802) optimized for R410A refrigerant gas;
- Storage tank (design pressure 6 barg) complete with pump, filling/drain valve, pressure gauge;
- Internal hydraulic bypass between the inlet and outlet connections;
- Electronic level sensor with water conductivity function;
- High and low refrigerant pressure switches;
- Refrigerant pressure gauges (mod. 031-802);
- Parametric microprocessor control IC208CX;
- Protection rating: IP54 (mod. 031-802); IP44 (mod. 015-020);
- Phase monitor;
- Compressor crankcase heater.

Options

- P3, P5 pumps, double pumps in stand-by P3+P3 or P5+P5 (mod. 201-802); SP (without pump);
- Condensing control option with servo-driven modulating valves or pressure control valves (TOWER/WELL);
- Differential hydraulic by-pass valve - evaporator side (Mod. 031-602);
- Anti-freezing heaters (on tank and pumps);
- Soft starter option: factory fitted (mod. 381-802).

Versions

- Non Ferrous Version (mod. 031-351);
- UL version: power supply 460/3/60HZ.



IC208CX microprocessor controller.



High efficiency shell & tubes condensers (mod. 201-802).



Pump P3 (3 barg) / P5 pump (5 barg, optional).



Integrated high capacity water tank.

TWEvo Tech		031	051	081	101	121	161	201	251	301	351	381	401	402	502	602	702	802	
Nominal cooling capacity (1)	kW	10,27	15,21	26,77	30,20	38,39	44,19	51,62	57,37	65,54	75,77	82,61	94,93	101,60	113,06	127,25	150,64	167,75	
Total absorbed power (1)	kW	2,37	3,53	6,24	7,05	9,12	10,46	12,98	14,75	17,25	20,49	21,73	25,69	25,74	29,30	34,18	39,18	43,65	
EER (1)		4,33	4,31	4,29	4,28	4,21	4,22	3,98	3,89	3,80	3,70	3,80	3,70	3,95	3,86	3,72	3,84	3,84	
SEPR HT (2)		7,39	7,65	7,43	7,42	7,12	7,09	7,54	7,43	7,09	7,01	7,05	7,05	7,45	7,38	7,04	7,45	7,23	
SEPR MT (3)		3,84	4,18	4,12	4,13	4,06	4,19	4,31	4,34	4,26	4,22	4,29	4,22	4,26	4,33	4,19	4,57	4,53	
Nominal cooling capacity (4)	kW	12,39	18,28	31,71	35,30	44,16	51,57	60,94	67,56	76,93	88,84	97,87	112,82	118,39	132,21	147,83	172,06	191,69	
Total absorbed power (4)	kW	2,66	4,09	6,99	7,91	10,29	11,84	14,68	16,70	19,60	23,24	24,71	29,31	29,20	33,22	38,89	44,19	49,27	
EER (4)		4,66	4,47	4,54	4,46	4,29	4,36	4,15	4,05	3,93	3,82	3,96	3,85	4,05	3,98	3,80	3,89	3,89	
Power supply	V/Ph/Hz	400±10% / 3-PE / 50																	
Sound pressure level (5)	dB(A)	40,0	48,3	42,4	48,0	49,5	50,2	50,0	51,0	52,6	54,2	55,0	58,0	53,6	55,1	56,4	57,5	58,5	
Width	mm	660	660	760	760	760	760	865	865	865	865	1150	1150	1255	1255	1255	1251	1251	
Depth	mm	1310	1310	1865	1865	1865	1865	2255	2255	2255	2255	2790	2790	3295	3295	3295	3550	3550	
Height	mm	1265	1265	1310	1310	1310	1310	1930	1930	1930	1930	2020	2020	2050	2050	2050	1870	1870	
Working weight	Kg	303	323	466	633	632	653	968	1050	1062	1066	1407	1481	1697	1744	1783	2260	2285	
Tank volume	l	115	115	140	255	255	255	350	350	350	350	410	410	500	500	500	678	678	
Condenser water connections	Rp	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	
Evaporator water connections	Rp	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	2 1/2"	3"	3"	

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) Evaporator water inlet/outlet temperature 12/7 °C, condenser water inlet/outlet temperature 30/35 °C;
 - (2) Data declared in compliance with the European Regulation [EU] 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers;
 - (3) Data declared in compliance with the European Regulation [EU] 2015/1095 with regard to ecodesign requirements for cooling products and medium temperature process chillers;
 - (4) Evaporator water inlet/outlet temperature 20/15 °C, condenser water inlet/outlet temperature 35/40 °C;
 - (5) Average value obtained in free field on a reflective surface at a distance of 10 m from the condensate side of the machine 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;
- 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



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