TWEevoTECH

ErP

R410A

Water-cooled process chillers with in-tank evaporator.
Nominal cooling capacity 12 – 192 kW

The benchmark process chiller.

Technological innovation, absolute reliability and customer satisfaction have been MTA's hallmarks in over 40 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.

MTA®

Benefits

- Heat exchangers with low water side pressure drops in order to save pumping costs;
- Reduced sound pressure level;
- The unique in-tank evaporator 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 TWEevo Tech models 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);
- 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 TWEevo 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.

Options

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

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;
- 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;
- Parametric microprocessor control IC208CX;
- Protection rating: IP54;
- Phase monitor;
- Compressor crankcase heater.

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; VGI890 display LCD (max 100 m);
- Supervisor kits: RS485 ModBus, xWEB300D PRO;
- Automatic hydraulic bypass kit external (mod. 031-602);
- Modularity kit: up to 5 units in MASTER/SLAVE.

IC208CX microprocessor controller.


High efficiency shell & tubes condensers optimized for R410A refrigerant gas. (mod. 201-802).


Standard Pump P3 (3 barg); optional P5 pump (5 barg). Also available double pumps P3+P3, P5+P5 (1 run/ 1 stand-by.


The integral yet removable high capacity water tank ensures very precise water temperature control.

TWEevo TECH		031	051	081	101	121	161	201	251	301	351	381	401	402	502	602	702	802
Nominal cooling capacity (1) ▼	kW	9,91	14,96	26,22	29,65	38,72	43,86	50,15	55,88	64,29	75,00	80,88	93,39	98,66	110,04	123,51	146,53	163,26
EER (1) ▼	-	4,19	4,25	4,23	4,23	4,22	4,18	3,81	3,73	3,80	3,72	3,78	3,67	3,78	3,70	3,60	3,72	3,73
SEPR HT (2) ▼	-	7,16	7,55	7,55	7,58	7,31	7,03	7,37	7,29	7,31	7,00	7,05	7,05	7,27	7,24	7,04	7,23	7,04
SEPR MT (3)	-	3,67	4,00	4,03	4,05	4,11	4,09	4,13	4,14	4,16	4,17	4,21	4,15	4,10	4,12	4,18	4,38	4,29
Nominal cooling capacity (4)	kW	12,22	17,20	30,54	36,39	48,03	51,37	59,39	64,34	78,26	88,19	109,69	119,20	122,11	134,63	153,65	175,49	198,91
EER (4)	-	4,35	3,99	4,09	4,25	4,13	4,08	3,66	3,43	3,93	3,67	4,43	4,23	3,72	3,68	3,75	4,09	3,95
Power supply	V/ph/Hz	400 ± 10% / 3-PE / 50																
Circuits / Compressors	n°	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 1	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	1 / 2	2 / 4	2 / 4	2 / 4	2 / 4	2 / 4
Refrigerant	-	R410A																
Sound Power (5)	dB(A)	68	76	70	76	78	78	78	79	81	82	83	86	82	83	84	86	87
Lenght	mm	1310	1310	1865	1865	1865	1865	2255	2255	2255	2255	2790	2790	3295	3295	3295	3550	3550
Width	mm	660	660	760	760	760	760	865	865	865	865	1150	1150	1255	1255	1255	1251	1251
Height	mm	1265	1265	1310	1310	1310	1310	1310	1930	1930	1930	1930	2020	2020	2050	2050	1870	1870
Operating weight (6)	kg	315	335	479	646	649	670	985	1067	1101	1105	1449	1523	1744	1823	1862	2337	2362
Tank volume	l	115	115	140	255	255	255	350	350	350	350	410	410	500	500	500	678	678
Evaporator water connections	Rp-DN	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''
Condenser water connections	Rp-DN	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''

Data declared according to UNI EN 14511, and they refer to units without 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 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, external air temperature 25 °C;

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

(6) Operating weight refers to the unit without options but is considering a P3 pump.

▼ Eurovent certified data.

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 partecipates 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 up to 600 kW
- Water/Water up to 1500 kW

www.mta-it.com