



TAE N MINI

Air-cooled industrial chillers.
Nominal cooling capacity 1,7 – 4,4 kW



R290



The natural choice for industry and our planet

Modern industries require technical solutions which ensure increased productivity, high precision, elevated product quality, reduced overall system costs and high environmental awareness.

TAE N Mini liquid chillers are designed specifically for industry, combining environmentally friendly natural refrigerant **R290** and Eurovent certified performance.

The innovative evaporator-in-tank configuration offers unique benefits to industrial users, maintaining fail-safe operation in all applications and conditions.

TAE N Mini is compact and easy to use and maintain; meticulous attention to every detail assures high reliability even in harsh environments, with minimum downtimes.

Extended operating limits ensure **TAE N Mini** always operates under even the most adverse and deviating conditions, allowing optimum operation at all times.

TAE N Mini: natural, ecological, industrial.



Cooling, conditioning, purifying.

THE BENCHMARK INDUSTRIAL CHILLER

Industrial chillers are required to operate faultlessly 24/7 under highly differing, and abruptly fluctuating, operating conditions; these conditions differ notably from one application to another, but the chiller must always maintain accurate temperature control.

Industry features rigorous environments, dirty process water and testing schedules; even a short period of imperfect operation, let stand a chiller shut-down, can cause disruptions, and

damaged goods, which can cost even millions a day.

Industrial process chillers improve production, accelerate manufacturing cycles, increase product quality and reduce wastages.

The cost of an industrial chiller is irrelevant compared with the potential cost if it does not always work perfectly. Industry requires purpose-built chillers, MTA offers the benchmark industrial chiller.

R290: THE NATURAL CHOICE FOR THE FUTURE

NATURAL > R290 is a totally natural refrigerant.

ECOLOGICAL > With a GWP of only 3 and an ODP of zero, R290 is the most ecological refrigerant and does not impact the environment.

EFFICIENT > R290 offers a higher COP versus traditional alternatives, being pure it has no glide.

ECONOMICAL > Applying R290 avoids carbon taxes and benefits from local national incentives.

SAFE & RELIABLE > R290 is non toxic and only mildly flammable; it has been applied for over 100 years and is fully tried and tested.

FUTURE PROOF > R290 is exempt from HFC phase-out programs, consequently your chiller is future proof.

R290
TRULY
INDUSTRIAL
TRULY
GREEN

MTA: MEETS THE APPLICATION

Each industrial application presents individual challenges. MTA's expertise, perfected during 40 years in industry, offers every user a unique solution to their personal needs, perfectly integrated into their process.

Industrial cooling encompasses the precise and continuous temperature control of highly differing production processes, manufacturing tools, finished products, warehousing and working environments.

MTA's application expertise covers welding, filtration, material working, machine tools, lasers, food, beverages & alcohol, plastics, paper & printing, chemical & pharma, medical & healthcare, energy, electronics & electrics, transport & automotive, materials, gas treatment, technical air conditioning and many other applications.

MTA offers the ideal solution, the know-how to apply it and the ability to support every need for many years to come.





BENEFITS

- **Completely natural refrigerant R290**, the most ecological solution.
- **Unique evaporator mounted within the tank** and designed for industry, ensuring reliable operation in even the most demanding industrial applications.
- **Non Ferrous hydraulic circuit**, allowing fluids aggressive to carbon steel to be treated and maintaining maximum quality and cleanliness of the process fluid.
- **Eurovent certified performances**, a unique feature for industrial chillers.
- **Reliable and robust**: TAE chillers keep working whatever the conditions, for years on end.
- **Extended operating limits**: liquid outlet temperatures from 0 °C up to +30 °C, ambient temperatures from +5 °C up to +45 °C.
- All TAE N Mini models are **ErP SEPR HT Tier 2** compliant.
- **Innovation which works**: rotary compressors, microchannel condensers, microprocessor control technology.
- **Simple installation and compact dimensions**, the robust structure with eyebolts allows easy movement of the unit.
- **Easy maintenance**: a rational component layout, simple refrigerant circuit and fully numbered electrics simplify verifications and maintenance, which can even be performed with the unit running.



- > *Industrial chiller with natural refrigerant.*
- > *Eurovent certified dedicated industrial chiller.*
- > *Chiller with evaporator-in-tank technology.*
- > *TAE: possibly the world's favourite industrial chiller.*

UNIQUE EVAPORATOR-IN-TANK

MTA's evaporator is a breakthrough in industrial applications, offering notable benefits and ensuring utmost peace of mind in even the most adverse and varying conditions.

INTEGRATED > Innovative evaporator mounted inside the tank: compact, increased tank size, stable liquid temperature.

INDUSTRIAL > Wide fin spacing resists water fouling: industrial and impure liquids pose no problems.

INGENIOUS > 0 °C to +30 °C water outlet, delta T up to 10 °C.

INVINCIBLE > Durable, long-lasting & dependable, many TAE units have been operating for well over 30 years.

INVALUABLE > Non-ferrous liquid circuit allows operation under all conditions and in even the most demanding industries.

INTELLECTUAL > Energy saving, low pressure drop, high water flows and minimal heat gain.



Standard features

- Refrigerant fluid R290 (GWP=3, ODP=0).
- Hermetic rotary compressors.
- High efficiency finned coil evaporator installed inside the storage tank, with copper tubes and aluminum fins.
- Polyethylene coolant storage tank fitted with drain valve, filling and overflow connections and a visual level indicator.
- Air-cooled aluminium microchannel condenser with protection coating and a removable metal mesh filter.
- Peripheral non-ferrous P3 pump (3 barg nominal available head pressure).
- Axial fan equipped with sickle-shaped galvanized sheet blades.
- Non ferrous atmospheric pressure hydraulic circuit with a 0-6 bar pressure gauge.
- Water by-pass for safe continuous operation.
- Hydraulic circuit compatible with glycol concentrations up to 30%.
- High pressure switch with manual reset (M05-M10).
- Easy to use parametric microprocessor control.
- Lamination device: capillary tube.
- AC power plug for simple electrical connection.
- Power supply: 230V/1Ph/50Hz.
- Electrical protection grade IP33.

Options

- Peripheral non-ferrous P5 pump (5 barg nominal available head pressure).
- Hydraulic sectioning system (M08-M10).
- Industrial multipole connector (M08-M10).
- Stainless steel frame.

Kits

- Hydraulic filter.
- Automatic hydraulic by-pass.
- Dynamic set point.
- Antivibration mounts.
- Wheels kit.

TAE N Mini		03	05	08	10
Nominal cooling capacity (1) ▼	kW	1,19	1,83	2,21	2,98
Total absorbed power (1) ▼	kW	0,43	0,66	0,81	1,10
EER (1) ▼	-	2,81	2,77	2,72	2,72
Nominal cooling capacity (2)	kW	1,71	2,68	3,23	4,37
Total absorbed power (2)	kW	0,35	0,59	0,73	1,01
EER (2)	-	4,86	4,54	4,43	4,33
SEPR HT (3) ▼	-	5,14	5,01	5,04	5,01
Power supply	V/Ph/Hz	230 ±10% / 1 - PE / 50			
Sound power level (4) ▼	dB(A)	74	75	75	75
Width	mm	486	486	486	486
Depth	mm	660	660	660	660
Height	mm	622	622	872	872
Operating weight without pump	kg	63	65	91	94
Operating weight with P3 pump (option)	kg	68	71	97	100
Storage tank volume	l	15	15	22	22
Evaporator water connections	Rp	1/2"	1/2"	1/2"	1/2"

Data declared according to EN 14511:2018. All data are referred to standard units without accessories/options which require electrical feeding source, without pump and in nominal working conditions. The listed sound pressure levels are related to base unit with P3 pump option.

- (1) Evaporator inlet/outlet water temperature 12/7 °C and external air temperature 35 °C. Total absorbed power of compressor and fan;
 (2) Evaporator inlet/outlet water temperature 20/15 °C and external air temperature 25 °C. Total absorbed power of compressor and fan;
 (3) Data declared in compliance with the European Regulation (EU) 2016/2281 with regards to EcoDesign requirements for cooling products and high temperature process chillers;
 (4) Sound power on the basis of measurements made in compliance with ISO 3744.

▼ 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 participates in the E.C.C. programme for LCP-HP. 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



EAC Declaration

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Cooling, conditioning, purifying.



TAEevo TECH



Air-cooled process chillers with scroll compressors.
Nominal cooling capacity 8 – 259 kW



The evolution of perfection.

Technological innovation, absolute reliability and customer satisfaction have been MTA's hallmarks in over 40 years in the industrial cooling market. The TAEevo Tech air cooled process chillers, specifically designed for use in industrial applications.

TAEevo 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 TAEevo Tech to be personalised to a variety of industrial applications.



Cooling, conditioning, purifying.

Benefits

- 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 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 / IP44 electrical protection rate makes TAEvo 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.

Main options

- P3, P5 pumps, open circuit single P3 pump (mod.031-1002), double pumps in standby P3+P3 or P5+P5 (mod. 201-1002); SP (without pump);
- Version with painted fins against corrosion;
- Axial fans with electronic speed control by phase cut-off (mod. 031-802); centrifugal fans (mod. 031-161); EC brushless axial fans with high head pressure (mod. 201-802); EC brushless axial fans (mod. 902-1002);
- Anti-freezing heaters (on tank and pumps);
- Soft starter option: factory fitted (mod. 381-1002);
- Automatic hydraulic bypass option factory fitted (mod. 031-602);
- Non Ferrous option (mod. 020-802).

Standard features

- Refrigerant R410A;
- Hermetic Scroll compressors;
- Electronic expansion valve (mod. 031-1002);
- High-efficiency finned coil evaporator with copper tubes and aluminum fins, installed inside the water storage tank;
- Axial fans with galvanized steel blades (mod. 020) and die cast aluminum/plastic crescent-shaped blades (mod. 031-1002);
- Oversized air-cooled condensers (copper tubes /aluminium fins). Air filter standard from mod. 031;
- Storage tank (design pressure 6 barg) complete with 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. 031-1002);
- Parametric microprocessor control IC208CX;
- Protection rating: IP54 (mod. 031-1002); IP44 (mod. 020);
- Phase monitor;
- Compressor crankcase heater.

Kits

- Flow rate regulation kit;
- Manual filling tank kit: suitable for hydraulic circuits at atmospheric pressure;
- Automatic filling kit: suitable for pressurized hydraulic circuits (up to 6 barg);
- Remote ON/OFF kit and remote control kit (max 150 m);
- Remote control kit VICX620 display LED, VG1890 display LCD (max 150 m);
- Adapter kit for remote control VICX620 and VG1890 (necessary for mod. 381-1002);
- Supervisor kits: RS485 ModBus, xWEB300D PRO;
- Automatic hydraulic bypass kit external (mod.020-602 and 902-1002);
- Modularity kit: up to 5 units in MASTER/SLAVE.

Versions

- Version for low environmental temperature -20 °C (mod. 031-1002);
- Dual frequency version: power supply 400V/3/50 Hz - 460V/3/60 Hz (mod. 020-161);
- UL version (020-1002): power supply 460/3/60Hz;
- Close temperature control version (mod. 020-351): extremely precise regulation of the outlet water temperature (hysteresis ± 0,5 °C).



IC208CX microprocessor controller.



Supervisor kits.



P3 (3 barg) and P5 (5 barg) pump, as optional.



Integrated high capacity water tank.

TAEvo Tech		020	031	051	081	101	121	161	201	251	301	351	381	401	402	502	602	702	802	902	1002	
50 Hz	Nominal cooling capacity (1) ▼	kW	5,66	9,01	13,06	21,97	26,73	34,54	37,83	43,32	48,56	57,74	65,13	78,87	87,66	87,65	102,27	112,97	132,7	154,66	173,71	195,21
	Total absorbed power (1) ▼	kW	2,26	3,45	5	8,04	9,67	12,73	14,6	16,44	19,99	21,67	27,64	27,86	32	33,21	38,26	43,96	49,27	57,13	65,13	70,59
	EER (1) ▼		2,51	2,62	2,61	2,73	2,77	2,71	2,59	2,63	2,43	2,66	2,36	2,83	2,74	2,64	2,67	2,57	2,69	2,71	2,67	2,77
	SEPR HT (2) ▼		5,04	5,09	5,23	5,07	5,02	5,03	5,04	5,38	5,34	5,1	5,13	5,26	5,17	5,32	5,53	5,37	5,31	5,59	5,37	5,46
	SEPR MT (3)		2,74	2,95	3,18	3,46	3,37	3,27	3,31	3,43	3,67	3,47	3,31	3,3	3,29	3,61	3,99	3,77	3,63	3,73	3,69	3,91
	Nominal cooling capacity (4)	kW	8,1	12,82	18,38	30,05	36,36	47,25	51,58	59,2	66,82	79,38	89,11	109,86	122	120,91	141,99	157,05	179,46	207,88	231,81	259,06
	Total absorbed power (4)	kW	1,9	2,96	4,34	7,23	8,58	11,38	12,95	14,84	17,92	19,11	24,45	24,44	28,89	30,16	34,41	39,19	43,05	50,43	57,62	62,73
	EER (4)		4,26	4,33	4,24	4,15	4,23	4,15	3,98	3,99	3,73	4,15	3,64	4,5	4,22	4,01	4,13	4,01	4,17	4,12	4,02	4,13
	Power supply	V/Ph/Hz	400±10% / 3-PE / 50																			
	Dual-Frequency	Nominal cooling capacity 60 Hz (1)	kW	6,53	10,27	14,43	24,43	30,45	39,94	43,61	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power 60 Hz (1)		kW	2,91	4,41	6,44	10,45	12,08	15,37	17,73	-	-	-	-	-	-	-	-	-	-	-	-	-
EER 60 Hz (1)			2,24	2,33	2,24	2,34	2,52	2,6	2,46	-	-	-	-	-	-	-	-	-	-	-	-	-
Nominal cooling capacity 60 Hz (4)		kW	9,32	14,59	20,27	33,42	41,62	54,48	59,19	-	-	-	-	-	-	-	-	-	-	-	-	-
Total absorbed power 60 Hz (4)		kW	2,5	3,82	5,64	9,45	10,79	13,85	15,85	-	-	-	-	-	-	-	-	-	-	-	-	-
EER 60 Hz (4)			3,73	3,81	3,6	3,54	3,86	3,93	3,73	-	-	-	-	-	-	-	-	-	-	-	-	-
Power supply		V/Ph/Hz	400±10% / 3-PE / 50 (460±10% / 3-PE / 60)																			
Sound power 50 Hz (5) ▼		db(A)	80,4	81,1	81,1	81,6	82,1	82,1	83,0	84,3	84,3	86,0	86,0	88,3	89,7	89,5	89,5	89,5	90,2	90,6	91,7	92,8
Width		mm	560	660	660	761	761	761	761	866	866	866	866	1150	1150	1255	1255	1255	1250	1250	1250	1250
Depth		mm	1284	1315	1315	1862	1862	1862	1862	2250	2250	2250	2250	2790	2790	3298	3298	3298	3535	3535	4655	4655
Height	mm	795	1373	1373	1437	1437	1437	1437	2054	2054	2054	2054	2090	2090	2119	2119	2119	2151	2151	2155	2155	
Working weight (6)	Kg	199	314	324	462	624	635	649	924	966	1018	1028	1366	1419	1666	1682	1726	2077	2114	2839	2936	
Tank volume	l	60	115	115	140	255	255	255	350	350	350	350	410	410	500	500	500	678	678	950	950	
Evaporator water connections	Rp-DN	3/4"	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"	DN100	DN100	

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, external air temperature 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 on the basis of measurements made in compliance with ISO 3744;
- (6) The weight refers to the 50 Hz version, without accessories/options.

The listed noise levels, weights and dimensions refer to base units with no options fitted.

▼ 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 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 up to 450 kW
- Water/Water up to 1500 kW



EAC Declaration

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TAE_{ev}in TECH MINI

Air-cooled industrial chillers.

Nominal cooling capacity 1,8 – 4,4 kW



R134a

R410A



New generation of compact liquid chillers for industrial processes.

Most of the industrial processes today has a growing need for competitive technical solutions suitable to ensure greater productivity, meeting the high quality requirements of the final product and environment friendly. The reliability, the compactness and flexibility of the cooling systems significantly reduce the operating costs and the environmental impact of the entire plant. The new generation of liquid chillers TAEevo Tech MINI has been specifically designed for process cooling water and antifreeze mixtures, ensuring superior reliability, minimum dimensions and high energy efficiency.

The new evaporator with finned coil immersed in the tank is designed to ensure the maximum level of efficiency and is able to reduce ambient heat gain, ensuring an excellent stability of the temperature of the process fluid too. All the units are manufactured according to ISO 9001, 14001 and Eurovent accreditation standards, ensuring the highest levels of performance and quality.



Cooling, conditioning, purifying.

Benefits

- The unique evaporator-in-tank configuration has been specifically designed for process cooling applications. It allows high water flow rates with low pressure drops and ensures a reliable operation even in demanding applications;
- Hydraulic circuit Non Ferrous: it allows to treat even fluids aggressive to carbon steel, maintaining maximum quality and cleanliness of the process fluid;
- All the TAEvo TECH MINI models already meet the limits set by the ErP for SEPR HT (Tier 2 01/01/2021);
- Easy installation thanks to their compact dimensions. The robust structure with eyebolts allows lifting the unit by means of straps with hooks;
- Easy maintenance: the rational layout of the hydraulic components, the simplicity of the refrigerant circuit and the numbering of electric cables simplify the operations of checking and maintenance, which can also be performed with running unit;
- The disassembly of the condenser air filter for the periodic cleaning operations is facilitated thanks to the fastening system interlocking;
- Thanks to the dual frequency design, the M03 model is ready for 50 Hz and 60 Hz applications;
- Extended operating limits: temperature range of the fluid from 0 °C up to + 30 °C. Max ambient temperature up to + 45 °C; ambient temperature min. of +5 °C.

Options

- Close temperature control version (mod. M08-M10): this version offers extremely precise regulation of the outlet water temperature (hysteresis $\pm 0,5$ °C);
- LWT brine version: suitable for low outlet water temperature (mod. M08-M10): [Tw out min=-5 °C];
- P5 Pump (mod. M08-M10): peripheral non ferrous pump (5 barg head pressure);
- Tank level switch (mod. M08-M10);
- Multipole industrial connector (mod. M08-M10);
- Hydraulic disconnect system (mod. M08-M10);
- Stainless steel frame.

Standard features

- Refrigerant fluids (ODP=0) R134a (mod. M03) R410A (mod. M05-10);
- Hermetic rotary compressors;
- High efficiency finned coil evaporator Installed inside the storage tank and featuring copper tubes and aluminum fins;
- Water buffer tank in polyethylene equipped with a drain valve, a water filling and overflow connections and a visual level indicator;
- P3 Pump (mod. M03-M10): peripheral non ferrous pump (3 barg head pressure);
- Axial fans equipped with sickle-shaped galvanized steel sheet blades equipped with thermal protection and safety guard;
- Air-cooled condenser with copper tubes and aluminum fins with high efficiency. The heat exchanger is protected by metal air filters;
- Atmospheric pressure hydraulic circuit built with non-ferrous materials equipped with a pressure gauge 0-6 bar;
- Calibrated hydraulic bypass;
- All units can be used with mixtures of water and ethylene glycol/propylene up to 30%;
- High pressure switch with manual reset (mod. M05-M10);
- Pressure connections for checks and maintenance;
- Digital microprocessor XR60CX;
- Green/red light on the frontal panel to signal the existence/absence of alarms (mod. M08-10);
- Lamination device: capillary or calibrated orifice;
- Thermostatic expansion valve (Close temperature control version / Brine version);
- Power supply: 230/1/50-60Hz (M03); 230/1/50Hz (M05-10);
- Protection grade IP33.

Kits

- Water filter kit;
- Automatic hydraulic by-pass kit;
- Antivibration mountings kit;
- Dynamic set point kit;
- Wheels kit.



Hydraulic circuit Non Ferrous maintains maximum cleanliness of the process fluid.



Innovative finned coil evaporator with high efficiency.



TAEvo Tech MINI mod. 03 dual frequency 50/60 Hz.



XR60CX microprocessor controller features an integrated display with icons.

TAEvo Tech MINI		03		05	08	10
		50 Hz / 60 Hz				
Nominal Cooling capacity (1) ▼	kW	1,22 / 1,23		1,84	2,33	2,98
Total absorbed power (1) ▼	kW	0,46 / 0,55		0,70	0,89	1,17
Nominal power P3 pump optional (3 barg)	kW	0,18		0,37	0,37	0,37
EER (1) ▼	-	2,67 / 2,23		2,65	2,61	2,55
Nominal Cooling capacity (2)	kW	1,76 / 1,80		2,70	3,43	4,43
Total absorbed power (2)	kW	0,40 / 0,50		0,60	0,77	1,01
EER (2)	-	4,38 / 3,59		4,47	4,47	4,38
SEPR HT (3) ▼	-	5,05		5,10	5,12	5,00
Power supply	V/Ph/Hz	230 \pm 10% / 1 - PE / 50-60		230 \pm 10% / 1 - PE / 50		
Sound power level (4) ▼	db[A]	74 / 75		75	75	75
Width	mm	486		486	486	486
Depth	mm	660		660	660	660
Height	mm	623		623	876	876
Working weight without pump	kg	63		65	91	94
Working weight with P3 pump optional (3 barg)	kg	68		71	97	100
Tank volume	l	15		15	22	22
Evaporator water connections	Rp	1/2"		1/2"	1/2"	1/2"

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(1) Evaporator water inlet/outlet temperature 12/7 °C, external air temperature 35 °C, total absorbed power of the compressor and fan;

(2) Evaporator water inlet/outlet temperature 20/15 °C, external air temperature 25 °C, total absorbed power of the compressor and fan;

(3) Data declared in compliance with the European Regulation (EU) 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers;

(4) Sound power on the basis of measurements made in compliance with ISO 3744.

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



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Cooling, conditioning, purifying.



FC4TAE | FC4ALL

The modular free-cooler.

Cooling capacity 18 – 407 kW



Cooling, conditioning, purifying.

Energy saving

By choosing the FC₄TAE/FC₄ALL modular liquid cooler it is possible to notably reduce the power consumption compared to applications which use the water chiller only. Energy saving is immediately available when ambient conditions are suitable by applying on the FC₄TAE/FC₄ALL free-cooling module.

Short payback time

Thanks to the high energy savings, FC₄TAE/FC₄ALL modules provide excellent payback times compared with the initial. The selection software allows this to be simulated easily and accurately tailored to the specific application.

Applicable everywhere

This range allows you to integrate free-cooling technology both in new and existing systems and in combination with MTA chillers or those supplied by others. The FC₄TAE/FC₄ALL modules are fitted with all components necessary for use even where chillers are not installed as a stand alone solution.

Increased chiller life

Everytime the ambient conditions are suitable, the FC₄TAE/FC₄ALL module provides heat rejection while the chiller reduces its annual operating hours. The reduced wear on compressors and other components lengthens the operating life of the chillers.

Standard features

- 7 models with cooling power from 18 kW to 407 kW;
- Power supply 400/3/50 - 460/3/60;
- Parametric electronic control;
- Axial fans with on/off regulation;
- On/Off water valve for free-cooling mode regulation;
- IP54 electrical protection.

Available options

- Power supply 460/3/60 UL (only for FC₄TAE);
- Power supply 400/3/50 (only for FC₄ALL);
- Minimum air temperature -20 °C;
- EC Brushless axial fans;
- Protection coating for coil;
- Hydraulic connection kit between FC₄TAE module and MTA chiller;
- Remote control kit.

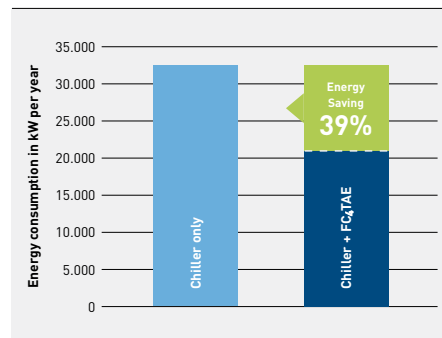
Energy saving calculation

Project data

Cooling power	53 kW
Cooled water temperature	15 °C
Water flow	9,11 m ³ /h
Existing chiller	TAEvo Tech 161
Working hours per day	16
Working days per week	5
Working weeks per year	45
Reference city	Berlin

Free-cooling suitable module:	FC₄TAE 161
Energy Saving	39%
Payback time:	18 months

Energy consumption comparison



See how much you can save

Scan the QR code for your tailor-made energy saving calculation!



Visit our website and discover the energy saved with FC₄TAE/FC₄ALL modules, calculated for your specific application.

freecoolingcalculation.mta-it.info

Water flow [m ³ /h]	Model	Cooling power* [kW]	Absorbed power [kW]	Water circuit pressure drops [kPa]	Dimensions			Installed weight [kg]	Water Connections [Rp]
					W	D	H		
3,4	FC ₄ TAE 051	18,3	0,5	48,0	760	983	1360	160	Rp 1"
8,3	FC ₄ TAE 161	44,4	1,4	47,0	760	1517	1360	220	Rp 1 1/2"
14,1	FC ₄ TAE 351	75,2	2,1	41,0	866	2225	1460	355	Rp 2"
25,0	FC ₄ TAE 602	133,0	3,2	43,0	1410	2926	2190	695	Rp 2 1/2"
34,6	FC ₄ TAE 802	184,2	3,2	24,0	1410	2926	2190	890	Rp 3"
49,9	FC ₄ ALL 300	265,8	4,8	55,0	1410	3660	2190	1020	DN 100 [4"]
76,3	FC ₄ ALL 450	406,7	9,6	75,0	2190	3660	2190	1325	DN 125 [5"]

(* Operating conditions: water temperature in/out 15/10 °C, ethylene glycol 30%, ambient temperature 0 °C; power supply 400V/3Ph/50Hz.



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.



EAC Declaration

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Cooling, conditioning, purifying.



ARIES TECH

Air cooled water chillers featuring hermetic scroll compressors.
Nominal cooling capacity 232 – 1334 kW.



The process cooling 2.0

The air-cooled water chillers ARIES Tech 2 are designed to fulfil the present and future needs of process cooling applications. Their versatility, reliability and extended operating limits allow to satisfy every type of process.

Developed to meet the seasonal efficiency performances required of the ERP EcoDesign Regulation, they are extremely customizable to guarantee an easy installation for any plant solution. The ARIES Tech 2 range is the example of targeted design, essential to obtain a reduced operating cost for air process cooling application without excluding reliability and environment protection.



Cooling, conditioning, purifying.

Benefits

- Seasonal energy efficiency compliant with ErP EcoDesign regulations for SEPR HT (basic version) and SEPR MT (MWT version);
- 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.

Options

- Low water temperature version (down to -10 °C outlet water temperature);
- Low ambient temperature version (down to -20 °C);
- Stainless steel shell and tube evaporator;
- Single or twin water pump with low or medium head pressure;
- Water accumulation tank;
- IN/OUT compressors valves;
- High efficiency EC brushless fans (base equipment for SSN version);
- Total heat recovery;
- Protection coating for condenser coils, suitable for installation in aggressive environments;
- Microchannels condenser coils;
- Antifreeze heaters for heat exchangers and hydraulic module (if included);
- Metallic mesh filters for condenser coils protection;
- Soundproof jacket or housing for compressors (for HE configuration);
- Soft start for compressors to reduce by 20% the unit's inrush current.

Standard Features

- Refrigerant R410A;
- 4, 6 or 9 scroll compressors on two or three independent refrigerant circuits;
- Crankcase heater compressor and phase-monitor;
- Victaulic hydraulic connections kit (supplied as standard with each unit);
- Electronic expansion valve;
- Axial fans configured with protective grilles and sickled bladed with die-cast aluminium airfoil profiled;
- Electrical cabinet protection rating IP54;
- Refrigerant charge, non-freezing oil and tests performed in the factory;
- Electronic microprocessor controller with high computing capacity and an easy to use graphical interface;
- Modbus RS485 serial output for connection to supervision systems;
- Master/slave configuration manageable between 2 units.

Kits

- Antivibration mounting;
- Metallic mesh filters kit for condenser coils protection;
- Replicated remote user terminal kit;
- Supervision system xWEB300D PRO;
- Modularity kit for xDRIVE (master/slave from 3 to 8 units).

Acoustic configurations

- HE - basic acoustic configuration;
- SHE - low noise acoustic configuration;
- SSN - very low noise acoustic configuration.

AST2 Versions	065			075			090			105			115			140		
	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN	HE	SHE	SSN
Nominal cooling capacity (1)	kW			kW			kW			kW			kW			kW		
Total absorbed power (1)	kW			kW			kW			kW			kW			kW		
EER (2)	kW			kW			kW			kW			kW			kW		
SEPR HT (3) ▼	kW			kW			kW			kW			kW			kW		
Max external air temperature (4)	°C			°C			°C			°C			°C			°C		
Power supply	V/Ph/Hz			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50		
Circuits / Compressors	N°			2/4			2/4			2/4			2/4			2/4		
Sound power (5) ▼	dB(A)			dB(A)			dB(A)			dB(A)			dB(A)			dB(A)		
Sound pressure (6)	dB(A)			dB(A)			dB(A)			dB(A)			dB(A)			dB(A)		
Width	mm			mm			mm			mm			mm			mm		
Depth	mm			mm			mm			mm			mm			mm		
Height	mm			mm			mm			mm			mm			mm		
Installed weight	kg			kg			kg			kg			kg			kg		
AST2 Versions	150			160			170			190			210			240		
Nominal cooling capacity (1)	kW			kW			kW			kW			kW			kW		
Total absorbed power (1)	kW			kW			kW			kW			kW			kW		
EER (2)	kW			kW			kW			kW			kW			kW		
SEPR HT (3) ▼	kW			kW			kW			kW			kW			kW		
Max external air temperature (4)	°C			°C			°C			°C			°C			°C		
Power supply	V/Ph/Hz			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50		
Circuits / Compressors	N°			2/6			2/6			2/6			2/6			2/6		
Sound power (5) ▼	dB(A)			dB(A)			dB(A)			dB(A)			dB(A)			dB(A)		
Sound pressure (6)	dB(A)			dB(A)			dB(A)			dB(A)			dB(A)			dB(A)		
Width	mm			mm			mm			mm			mm			mm		
Depth	mm			mm			mm			mm			mm			mm		
Height	mm			mm			mm			mm			mm			mm		
Installed weight	kg			kg			kg			kg			kg			kg		
AST2 Versions	270			300			330			360								
Nominal cooling capacity (1)	kW			kW			kW			kW			kW			kW		
Total absorbed power (1)	kW			kW			kW			kW			kW			kW		
EER (2)	kW			kW			kW			kW			kW			kW		
SEPR HT (3) ▼	kW			kW			kW			kW			kW			kW		
Max external air temperature (4)	°C			°C			°C			°C			°C			°C		
Power supply	V/Ph/Hz			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50			400 ± 10% / 3-PE / 50		
Circuits / Compressors	N°			2/6			3/9			3/9			3/9			3/9		
Sound power (5) ▼	dB(A)			dB(A)			dB(A)			dB(A)			dB(A)			dB(A)		
Sound pressure (6)	dB(A)			dB(A)			dB(A)			dB(A)			dB(A)			dB(A)		
Width	mm			mm			mm			mm			mm			mm		
Depth	mm			mm			mm			mm			mm			mm		
Height	mm			mm			mm			mm			mm			mm		
Installed weight	kg			kg			kg			kg			kg			kg		

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. The listed noise levels, weights and dimensions refer to base units with no options fitted.

- (1) Data referred to nominal conditions, external ambient temperature 25 °C and evaporator water temperature IN/OUT 20/15 °C;
- (2) Data referred to the full load functioning and nominal conditions, external ambient temperature 25 °C and evaporator water temperature IN/OUT 20/15 °C;
- (3) Data declared in compliance with the European Regulation (EU) 2016/2281 with regard to ecodesign requirements for cooling products and high temperature process chillers;
- (4) Data declared referred to cooling mode and outlet water temperature 15 °C;
- (5) Determined on the basis of measurements taken in accordance with the standard ISO 3744;
- (6) Average value obtained in free field on a reflective surface at a distance of 10 m from the external side of the electrical panel of machine and at 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.

▼ Eurovent certified data. The performances are Eurovent certified with reference to nominal conditions: external air temperature 35 °C and evaporator IN/OUT water temperature 12/7 °C For air/water units the performances are Eurovent certified for nominal cooling capacity up to 600 kW.



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



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