



# LWT | Air-Cooled Low Temperature Water Chillers

High efficiency reciprocating compressors, shell & tube evaporator, refrigerant R407F.  
Minimum outlet water temperature, with glycol: -20 °C.  
Cooling capacity: 52 - 167 kW



**LWT water chillers, the new range of flexible, energy-efficient chillers for refrigeration needs.**

Technological innovation, absolute reliability and respect for the ambient have been MTA's hallmarks in the industrial cooling market. The multiple applications in which MTA LWT chillers can be implemented range from direct cooling of frozen foods as fish and pasta, to the indirect cooling of dairy products, meats and also in ice rinks, laboratory applications, chemical-pharmaceutical process plants, anodizing / electroplating plants. The new LWT chillers are the cutting edge of cooling technology and have been specifically engineered for industrial applications requiring cooling fluids temperatures down to -20 °C. Placing efficiency and reliability as priority, this configuration includes shell and tube evaporators and the new state of the art semi-hermetic piston technology. In support of the European Union's legislation regarding the Fluorinated greenhouse gases, the LWT range utilises the more sustainable R407F instead of R404A.



Cooling, conditioning, purifying.

## Benefits

- The new refrigerant fluid R407F offers a reduced carbon footprint making LWT chillers compliant with the new F gas regulation (EC) N. 517/2014, that will restrict the use of HFCs with a GWP of 2500 and above (R404A) through the implementation of both new equipment bans and servicing and maintenance bans, starting from January 1st 2020;
- State of the art semi-hermetic piston technology feature CoreSense™ Diagnostics technology offering advanced compressor protection/diagnostics, and unique valve technology for an higher energy efficiency;
- Extended operating limits: Tw in max = -4 °C, Tw out min = -20 °C with glycol; Tamb max = +45 °C; Tamb min = -20 °C;
- IP54 electrical protection rate makes LWT chillers suitable for outdoor installation;
- Extensive range of accessories and kits, allow each unit to match the specific customer requirements;
- Comprehensive safety equipment, including phase monitor, HP pressure switches, antifreeze sensors, active control system of the compressor oil level.

## Main options & kits

- Desuperheater: it recovers about 20% of the rejection heat for the production of hot water;
- Soft starter;
- P2 pump;
- Remote control;
- Serial connection to supervision systems;
- MTA xCONNECT Supervision based on internal web pages.

Semigraphic user terminal with multifunctional buttons and dynamic display icons.



Electronic expansion valves.



State of the art semi-hermetic piston technology features CoreSense™ Diagnostics technology.



Innovative EC axial fans with permanent magnets and Integrated inverter speed control.



Reference model	-	AST 080	AST 130	GLT 120	GLT 135	GLT 150	GLT 180	GLT 195	GLT 225
Cooling capacity (N)	kW	53,4	73,0	92,4	112,1	126,4	138,3	148,4	167,2
Total absorbed power (N)	kW	42,8	57,1	75,5	86,9	97,8	105,7	118,8	129,9
Cooling capacity (SN)	kW	51,9	70,4	88,7	108,2	121,7	133,6	144,6	161,8
Total absorbed power (SN)	kW	39,4	51,6	68,2	80,2	91,3	99,4	108,5	119,8
Refrigerant fluid	-	R407F							
Min/Max external air temperature (N)	°C	-20 °C / +45 °C							
Min/Max external air temperature (SN)	°C	-20 °C / +42 °C							

Circuits	N°	2				3			
Compressors for each circuit	N°	1		2		2			
Power supply	V/Ph/Hz	400 ± 10% / 3 - PE / 50							
Sound power (N)	dB(A)	89,0	90,6	91,8	91,8	91,9	92,2	93,8	93,8
Sound power (SN)	dB(A)	83,5	84,7	85,8	85,8	86,1	87,2	88,2	88,2
Depth	mm	3495	4595	4530	4530	4530	4530	6510	6510
Width	mm	2188	2188	2190	2190	2190	2190	2190	2190
Height	mm	1989	1989	2425	2425	2425	2425	2425	2425
Evaporator water connections	inch	3" / 3"	3" / 3"	3" / 3"	3" / 3"	4" / 4"	4" / 4"	5" / 5"	5" / 5"

Evaporator water inlet/outlet temperature -15°/-20 °C, external air temperature +35 °C; ethylene glycol 50%.

## Standard features

- New refrigerant fluid R407F offers a reduced carbon footprint making LWT compliant with the new F gas regulation;
- Piston compressors: feature as standard suction and discharge valves; crankcase heater; oil pressure sensor; muffler; vibration damper; enclosure for an adequate acoustic insulation;
- High-efficiency shell & tube evaporator; optimized for R407F; single pass counter-current flow;
- Electronic expansion valve;
- TraxOil active control system of the compressor oil level with oil reservoir;
- CoreSense™ compressor diagnostic module;
- EC inverter controlled axial fans fans with permanent magnets and Integrated inverter speed control;
- Oversized air-cooled condensers with copper tubes and aluminum fins;
- Oil separator;
- Liquid receiver and liquid separator;
- High refrigerant pressure switches;
- High and low pressure transducer;
- Solenoid valve on the liquid line;
- Protection rating: IP54;
- xDRIVE microprocessor electronic controller features high computing capacity and user friendly graphic interface;
- xDRIVE features: ModBUS-RTU communication protocol; Ethernet port with HTML supervision pages preloaded; master/ slave mode up to 8 units;
- Phase monitor: it protects against phase loss, phase reversal and checks the operating voltage limits.

## Configuration

- **N:** standard version;
- **SN:** low noise version, -6 dB(A) sound power level.



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.

**M.T.A. S.p.A.**

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