



AQUARIUS G



Water cooled reversible water chillers
with semi hermetic screw compressors.
Nominal cooling capacity 456 – 1934 kW
Nominal heating capacity 399 – 1721 kW *



Best performance and maximum reliability.

The water cooled reversible water chiller AQUARIUS G is the best solution for large process cooling applications when reliability and high performances are the main requirements.

The AQUARIUS G units are designed to meet market requirements in terms of versatility and energy efficiency using high quality components. The smart stepless cooling capacity regulation, electronic expansion valves and high efficiency heat exchangers with integrated heat recovery systems allow to increase the partial and full loads efficiency optimising the seasonal performances.

* Data referred to units fitted with heat pump option.



Cooling, conditioning, purifying.

Benefits

- Low GWP refrigerant R513A;
- Seasonal energy efficiency compliant with ErP Directive 2009/125/EC;
- High energy efficiency levels, especially at partial loads;
- Smart stepless cooling capacity regulation with self-adaptive control;
- High accuracy and adaptability in cooling capacity regulation;
- Single compressors minimum capacity step 25%;
- Heat exchangers with low water side pressure drops in order to reduce the pumping systems management costs;
- Integrated heat recovery systems [partial or total heat recovery];
- Condenser outlet water temperature up to 60 °C.

Standard features

- High efficiency screw compressors with smart stepless cooling capacity regulation optimised for R513A refrigerant;
- Check valve and shut-off valve on compressors discharge line;
- Compressors crankcase heater and phase monitor;
- Automatic circuit breakers for compressors;
- Electronic expansion valves;
- Single pass shell & tube heat exchangers optimised for R513A refrigerant;
- "Unloading" function that allows the start-up and operation of the units, even in conditions very different by the nominal ones;
- Programmable microprocessor electronic control with high computing capacity and user friendly interface, suitable for connectivity with RS485 Modbus protocol supervisor systems;
- Electrical cabinet protection rating IP54;
- Inspections and tests performed on all units;
- Non-freezing oil and refrigerant factory charged.

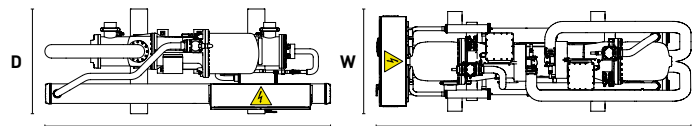
Options

- Soundproof compressors housing;
- Water side reversible heat pump configuration;
- MWT configuration, for low outlet water temperatures (down to -8 °C);
- Partial heat recovery - desuperheater (20% heat recovery);
- Total heat recovery (100% heat recovery);
- Shut-off valve on compressors suction line;
- Soft starter;
- Power factor correction capacitors (cosφ > 0,9).

Kits

- Pressure controlled or modulating condensing regulation valves;
- Flanged hydraulic connections (evaporators);
- Victaulic or flanged hydraulic connections (condensers and heat recovery);
- Antivibration mounts;
- Remote display;
- xWEB300D EVO to monitoring, control and register data, based on "WEB server" technology;
- Modularity kit, for master/slave system management (up to 7 units).

Product layout (top view)



Mod. 1401 ÷ 3201

Mod. 2802 ÷ 6402



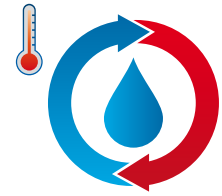
Latest-generation touch screen user terminal.



High efficiency screw compressors designed for R513A refrigerant gas.



Electronic expansion valve.



Integrated partial or total heat recovery systems.

| AQG2 Model | | 1401 | 1601 | 1801 | 2101 | 2401 | 2801 | 3201 | 2802 | 3202 | 3402 | 3602 | 3902 | 4202 | 4502 | 4802 | 5202 | 5602 | 6402 | |
|----------------------------------|---------|-------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|
| Nominal cooling capacity [1] | kW | 456 | 520 | 612 | 717 | 804 | 905 | 1000 | 932 | 1109 | 1183 | 1241 | 1361 | 1492 | 1571 | 1650 | 1742 | 1803 | 1934 | |
| Total absorbed power [1] | kW | 82 | 92 | 106 | 119 | 134 | 149 | 163 | 163 | 185 | 200 | 215 | 231 | 240 | 255 | 270 | 288 | 303 | 333 | |
| EER [2] | | 5,57 | 5,65 | 5,77 | 6,02 | 6,00 | 6,07 | 6,12 | 5,72 | 5,98 | 5,91 | 5,78 | 5,89 | 6,21 | 6,16 | 6,11 | 6,06 | 5,96 | 5,80 | |
| Nominal cooling capacity [3] | kW | 351 | 400 | 471 | 550 | 619 | 693 | 767 | 724 | 860 | 916 | 965 | 1053 | 1148 | 1212 | 1275 | 1343 | 1392 | 1499 | |
| Total absorbed power [3] | kW | 74 | 85 | 97 | 111 | 125 | 139 | 153 | 148 | 171 | 183 | 195 | 211 | 224 | 237 | 251 | 267 | 281 | 310 | |
| EER [4] | | 4,73 | 4,69 | 4,87 | 4,95 | 4,95 | 4,98 | 5,03 | 4,89 | 5,03 | 5,00 | 4,94 | 4,99 | 5,13 | 5,10 | 5,07 | 5,03 | 4,95 | 4,84 | |
| SEPR HT [5] | | 8,34 | 7,63 | 8,25 | 8,15 | 8,18 | 8,97 | 9,09 | 8,64 | 8,19 | 8,25 | 8,44 | 8,29 | 8,44 | 8,42 | 8,49 | 8,46 | 8,88 | 8,70 | |
| Nominal heating capacity [6] [7] | kW | 399 | 461 | 538 | 628 | 708 | 789 | 871 | 825 | 980 | 1044 | 1103 | 1199 | 1302 | 1377 | 1453 | 1529 | 1589 | 1721 | |
| Total absorbed power [6] [7] | kW | 88 | 103 | 116 | 134 | 151 | 167 | 182 | 176 | 206 | 220 | 234 | 253 | 269 | 286 | 303 | 320 | 336 | 369 | |
| COP [6] [8] | | 4,54 | 4,50 | 4,64 | 4,70 | 4,70 | 4,73 | 4,77 | 4,68 | 4,76 | 4,75 | 4,72 | 4,74 | 4,84 | 4,82 | 4,80 | 4,78 | 4,73 | 4,67 | |
| SCOP [9] | | 5,09 | 4,99 | 5,20 | 5,25 | 5,27 | 5,32 | 5,39 | 5,24 | 5,29 | 5,28 | 5,21 | 5,31 | 5,46 | 5,59 | 5,39 | 5,32 | 5,25 | 5,11 | |
| Power supply | V/Ph/Hz | 400±10%/3 - PE/50 | | | | | | | | | | | | | | | | | | |
| Circuits / Compressors | N° | 1/1 | | | | | | 2/2 | | | | | | | | | | | | |
| Sound power [10] | dB(A) | 93 | 94 | 94 | 95 | 95 | 96 | 97 | 96 | 97 | 97 | 97 | 97 | 97 | 98 | 98 | 98 | 99 | 99 | 100 |
| Sound pressure [11] | dB(A) | 65 | 66 | 66 | 67 | 67 | 68 | 69 | 68 | 69 | 69 | 69 | 69 | 70 | 70 | 70 | 71 | 71 | 72 | |
| Width [W] | mm | 3752 | 3747 | 3807 | 3807 | 3995 | 3995 | 3995 | 1390 | 1390 | 1390 | 1390 | 1390 | 1390 | 1390 | 1390 | 1390 | 1390 | 1390 | |
| Depth [D] | mm | 1460 | 1460 | 1460 | 1460 | 1460 | 1460 | 1460 | 4966 | 4966 | 4920 | 4979 | 4982 | 4982 | 4982 | 4982 | 5030 | 5030 | 5032 | |
| Height | mm | 1645 | 1645 | 1735 | 1735 | 1820 | 1820 | 1820 | 2165 | 2165 | 2165 | 2165 | 2278 | 2278 | 2278 | 2278 | 2278 | 2278 | 2278 | |
| Installed weight | Kg | 2154 | 2363 | 2695 | 2781 | 3143 | 3288 | 3338 | 4294 | 4572 | 4878 | 5185 | 5736 | 5802 | 5881 | 5961 | 6143 | 6295 | 6399 | |

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, evaporator water temperature IN/OUT 20/15 °C and condenser water temperature IN/OUT 30/35 °C;
- (2) Data referred to the full load functioning: evaporator water temperature IN/OUT 20/15 °C and condenser water temperature IN/OUT 30/35 °C;
- (3) Data referred to nominal conditions, evaporator water temperature IN/OUT 12/7 °C and condenser water temperature IN/OUT 30/35 °C;
- (4) Data referred to the full load functioning: evaporator water temperature IN/OUT 12/7 °C and condenser water temperature IN/OUT 30/35 °C;
- (5) Data declared in compliance with the European Regulation (EU) 2016/2281 for high temperature process chillers;
- (6) Data referred to units fitted with heat pump option;
- (7) Data referred to nominal conditions, evaporator water temperature IN/OUT 12/7 °C and condenser water temperature IN/OUT 40/45 °C;
- (8) Data referred to the full load functioning: evaporator water temperature IN/OUT 12/7 °C and condenser water temperature IN/OUT 40/45 °C;
- (9) Indicative data calculated in compliance with the European Regulation (EU) 813/2013 for low temperature heat pumps and referred to units fitted with heat pump option;
- (10) Calculated in accordance with the standard ISO 3744;
- (11) Average value obtained in free field on a reflective surface at the distance of 10 m by the external side of the electrical cabinet of the unit and at height of 1.6 m by the unit foothold. Considered tolerances ±2 dB. The sound levels are referred to the full load operations in nominal working conditions.



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

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

Business Office
Viale Spagna, 8 - ZI
35020 Tribano (PD) - Italy
Tel. +39 049 9588611
Fax +39 049 9588612
info@mta-it.com
www.mta-it.com



Cooling, conditioning, purifying.