

WTG-QUANTOR GMBH

WTG-Quantor brands



Water Re-Cooler

QUANTOR PLUS



LIQUID CHILLERS/HEAT PUMPS

This new **QUANTOR PLUS** series is a further development of the Quantor series, which is operated with the environmentally friendly refrigerant R32 with low GWP (Global Warming Potential).

The newly developed copper-aluminium condenser significantly reduces the refrigerant charge of the chillers. Despite, the **Quantor PLUS** units with R32 achieve higher efficiency and higher cooling capacity than comparable systems with R410a under the same ambient conditions. In addition to that, an electronic expansion valve is now installed in the refrigeration circuit, improving efficiency also in partial load. This combination of a lower refrigerant load in general and the use of the highly efficient refrigerant gas R32 leads to a remarkable reduction of the negative impact on the environment.

The units of this new range are available with capacities from 63¹ kW to 244¹ kW. The units are designed only for an installation outdoors, suitable for operation at ambient temperatures from -10°C to +46°C. The rated cold-water temperature is between -10°C and +8°C, (warm water up to +60°C).

The **Quantor PLUS** units are therefore the solution for wine, beer and beverage producers who need cooling and heating (option) for temperature control and who value a safe, very efficient, environmentally friendly and future-oriented solution.

APPLICATIONS

The **QUANTOR PLUS** units cover the complete temperature range in all process steps and applications in beer-brewing, winemaking, and production of fermenting and/or cooling drinks:

- Cold maceration
- Fermentation control
- Beer-wort cooling
- Cooling for carbonation, in-line cooling solutions available
- Wine-stabilization (Glycol-water temperature down to -10°C possible)
- Warming-up cold-stored wine before bottling, in-line heating of wine solutions available
- Room temperature control by cooling or heating the air (with additional fan-equipment, see additional product range).

CHARACTERISTICS/ADVANTAGES

One of the big advantages of the **QUANTOR PLUS** range is the large variety of models, sizes and capacities that it offers to the user's choice:

- In total there are 18 sizes / units, with cooling capacities from 63 kW up to 244 kW¹
- All models are available as standard units (cooling only) or reversible units (cooling and heating / heat-pump)
- Q+672 - Q+2442 (63 - 244 kW)¹ equipped with one cooling circuit
- Q+1264 - Q+2384 (126 - 238 kW)¹ equipped with two independent cooling circuits for increased process safety
- Units with higher cooling capacities, with two or more independent cooling circuits, are also available with new, environmentally friendly cooling gases. Please contact us for more information.

In addition to that, the **QUANTOR PLUS** range is characterized by its modularity and thus by its individuality: To complete the extensive standard equipment we offer many features to the user's choice to perfectly adapt each unit to the particular application and also to the individual requirements at the customer's location.

WATER TEMPERATURE RANGE

from -10°C to +8°C (warm water up to +60°C)

AMBIENT TEMPERATURE RANGE

from -10°C to +46°C

SUITABLE FOR INDUSTRIES



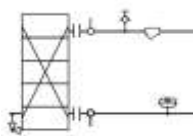
STANDARD FEATURES

- Stable construction from galvanised sheet metal with premium Polyester powder-coating with anti vibration mounts
- Hermetic Scroll compressors of the latest models
- Stainless steel pipes (water-side)
- Optimized condenser construction for efficient heat-transfer
- Gradual activation of the compressors allows higher efficiency by partial-load operation, and significantly positive values of the European seasonal energy efficiency ratio EER
- High efficiency (EER up to 4,1 and COP up to 3,42)^{1,2} and low power consumption
- Latest generation micro-processor control with supervision of all the relevant parameters
- Compressor encapsulated in noise-reduction compartment
- Stainless steel evaporator with integrated frost-protection heating element
- Low noise level
- Environmentally friendly refrigerant R32
- Fan speed control
- Victaulic connections included with the units.

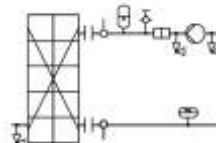
AVAILABLE OPTIONS

- A large variety of hydraulic options is available:
 - **Integrated Hydraulic module**
Pump (high or low-pressure pump), filtre, expansion vessel and flow switch
 - **Integrated Hydronic Basic module**
Pump (high or low-pressure pump), stainless steel buffer tank with heating bar (0,3kW), expansion vessel and flow switch
 - **Integrated Hydronic PLUS module**
Pump, stainless steel buffer tank with heating bar (0,3kW) as hydraulic flow-adaptation, expansion vessel and flow switch
- Coils protection grills
- Epoxy coating on the condenser
- Fan-motors with frequency converter
- Fans with stronger air-thrust (for cooling only units)
- Partial heat recovery (desuperheater)
- Total heat recovery
- Remote control
- By models from Q1132, additional noise-reduction is possible
- Soft-start for compressors
- Power Factor Correction
- Second pumps and / or frequency controlled pumps
- Further options are available, as well as additional models: units with screw compressors, units with Shell-and-Tube evaporator, etc.
Please contact us for more information.

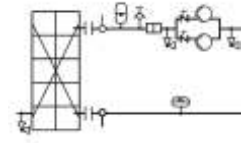
HYDRAULIC OPTIONS



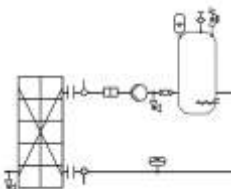
Base version (without additional features)



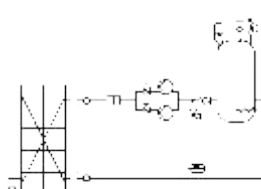
Hydraulic Module (1 pump, LP/HP)



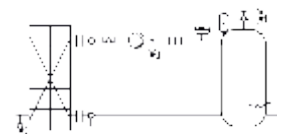
Hydraulic Module (2 pumps, LP/HP)



Hydronic Basic module (1 pump, LP/HP)



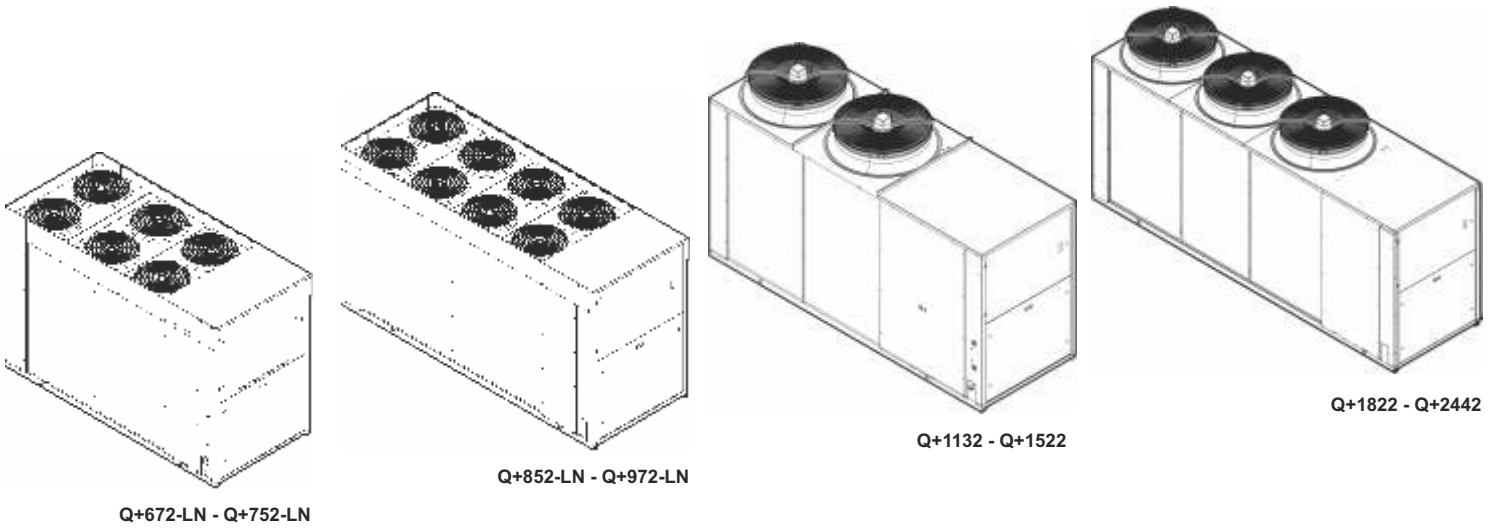
Hydronic Basic module (2 pumps, LP/HP)



Hydronic PLUS module

MODELS

Q+672 - Q+2442 - Units with 1 cooling circuit



TECHNICAL DATA

Q+672 - Q+2442 - Units with 1 cooling circuit

All QUANTOR PLUS units are equipped with:
 - Scroll Compressor
 - Electric connection 400V/3PhN/50Hz - varying voltage levels on request
 - Axial fan

| CHILLERS | QUANTOR PLUS | | Q+672 | Q+752 | Q+852 | Q+972 | Q+1132 | Q+1242 | Q+1412 | Q+1522 | Q+1822 | Q+2032 | Q+2262 | Q+2442 |
|------------------------------|-------------------------------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Cooling capacity ¹ | kW | | 63,1 | 69,2 | 80,2 | 94,1 | 112,5 | 124,4 | 138,7 | 152,3 | 179,4 | 198,9 | 223,8 |
| Input power ¹ | kW | | 16,4 | 18,9 | 20,5 | 24,3 | 27,5 | 30,9 | 35,5 | 40,3 | 44,8 | 50,0 | 58,6 | 67,4 |
| EER ¹ | W/W | | 3,84 | 3,68 | 3,91 | 3,87 | 4,1 | 4,03 | 3,91 | 3,77 | 4,0 | 3,98 | 3,82 | 3,62 |
| Water flow rate ¹ | l/h | | 10.870 | 12.010 | 13.800 | 16.590 | 19.380 | 21.430 | 23.900 | 26.210 | 30.880 | 34.240 | 38.530 | 42.000 |

| HEAT-PUMPS | QUANTOR PLUS-R | | Q+672-R | Q+752-R | Q+852-R | Q+972-R | Q+1132-R | Q+1242-R | Q+1412-R | Q+1522-R | Q+1822-R | Q+2032-R | Q+2262-R | Q+2442-R |
|-------------------------------|-------------------------------|----|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| | Cooling capacity ¹ | kW | | 59,5 | 65,9 | 76,4 | 89,0 | 103,2 | 114,3 | 130,6 | 143,0 | 170,8 | 189,8 | 213,7 |
| Input power ¹ | kW | | 16,9 | 19,6 | 21,5 | 25,2 | 29,0 | 32,5 | 35,2 | 40,3 | 43,9 | 50,1 | 58,1 | 66,3 |
| Heating capacity ² | kW | | 58,8 | 65,4 | 76,6 | 88,8 | 103,0 | 113,7 | 126,6 | 138,9 | 163,3 | 181,1 | 200,6 | 219,9 |
| Input power ² | kW | | 17,2 | 19,7 | 22,5 | 26,5 | 31,0 | 33,8 | 37,4 | 41,5 | 49,1 | 55,3 | 60,9 | 67,5 |
| EER ¹ | W/W | | 3,51 | 3,36 | 3,55 | 3,53 | 3,56 | 3,52 | 3,71 | 3,55 | 3,89 | 3,79 | 3,68 | 3,53 |
| COP ² | W/W | | 3,42 | 3,32 | 3,4 | 3,35 | 3,32 | 3,36 | 3,37 | 3,35 | 3,3 | 3,27 | 3,29 | 3,26 |
| Water flow rate ¹ | l/h | | 10.240 | 11.350 | 13.160 | 15.330 | 17.770 | 19.680 | 22.490 | 24.620 | 29.390 | 32.670 | 36.790 | 40.350 |

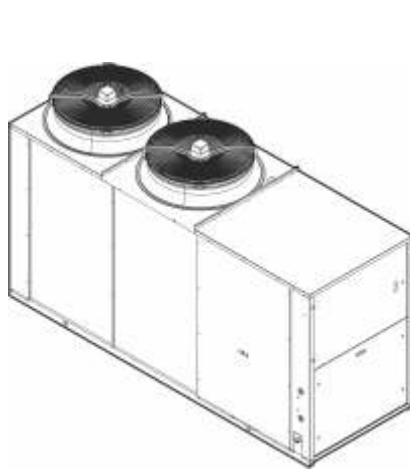
| CHILLERS HEAT-PUMPS | Compressors | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
|------------------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | Circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Fans | n° | 6 | 6 | 8 | 8 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 |
| | Sound power ^{1,3} | dB(A) | 73,6 | 74,1 | 74,9 | 75,1 | 87,2 | 87,5 | 87,7 | 87,9 | 89,4 | 89,5 | 90 | 90 | 90,1 |
| | Hydraulic connections | Ø | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ |
| | Height | mm | 1.650 | 1.660 | 1.660 | 1.660 | 1.910 | 1.910 | 1.910 | 1.910 | 1.900 | 1.900 | 1.900 | 1.900 | 1.900 |
| | Width | mm | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 |
| | Length | mm | 2.820 | 3.320 | 3.320 | 3.320 | 3.570 | 3.570 | 3.570 | 3.570 | 3.570 | 4.370 | 4.370 | 4.370 | 4.370 |
| | Weight (when empty) ⁴ | kg | 907 | 1.005 | 1.024 | 1.075 | 1.088 | 1.111 | 1.166 | 1.167 | 1.411 | 1.573 | 1.596 | 1.608 | 1.608 |
| | Buffer tank capacity ⁵ | l | 300 | 300 | 300 | 300 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 |

1 Nominal cooling capacities based on 28°C and liquid inlet/outlet temperature 12/7°C
 2 Nominal heating capacities based on 7°C and liquid inlet/outlet temperature 40/45°C
 3 The value of sound power is measured in accordance with standard 9614-2

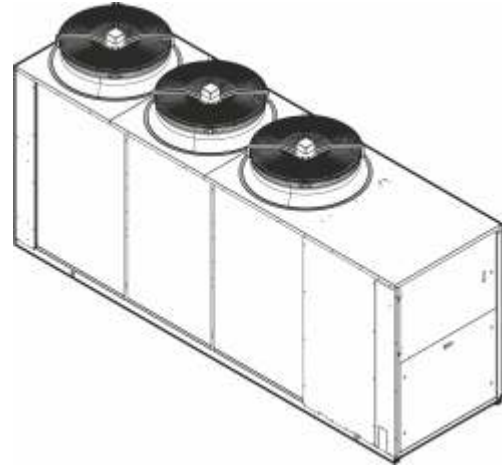
4 Unit total weight may vary according to chosen options
 5 Tank volume by Hydronic versions

MODELS

Q+1264 - Q+2384 - Units with 2 cooling circuits



Q+1264 - Q+1434



Q+1654 - Q+2384

TECHNICAL DATA

Q+1264 - Q+2384- Units with 2 cooling circuits

All QUANTOR PLUS units are equipped with:
 - Scroll Compressor
 - Electric connection 400V/3PhN/50Hz - varying voltage levels on request
 - Axial fan

| CHILLERS | QUANTOR PLUS | | Q+1264 | Q+1434 | Q+1654 | Q+1924 | Q+2174 | Q+2384 |
|------------------------------|-------------------------------|----|--------|--------|--------|--------|--------|--------|
| | Cooling capacity ¹ | kW | | 126,2 | 140,7 | 160,9 | 190,0 | 214,4 |
| Input power ¹ | kW | | 33,3 | 38,7 | 42,3 | 49,6 | 57,5 | 65,5 |
| EER ¹ | W/W | | 3,79 | 3,64 | 3,81 | 3,83 | 3,73 | 3,63 |
| Water flow rate ¹ | l/h | | 21.730 | 24.220 | 27.700 | 32.710 | 36.900 | 40.970 |

| HEAT-PUMPS | QUANTOR PLUS-R | | Q+1264-R | Q+1434-R | Q+1654-R | Q+1924-R | Q+2174-R | Q+2384-R |
|-------------------------------|-------------------------------|----|----------|----------|----------|----------|----------|----------|
| | Cooling capacity ¹ | kW | | 123,1 | 136,9 | 156,1 | 183,3 | 206,5 |
| Input power ¹ | kW | | 32,8 | 38,2 | 42,9 | 50,0 | 56,9 | 64,4 |
| Heating capacity ² | kW | | 119,7 | 133,9 | 155,5 | 175,3 | 195,0 | 213,7 |
| Input power ² | kW | | 35,6 | 40,4 | 47,0 | 53,3 | 57,8 | 62,7 |
| EER ¹ | W/W | | 3,75 | 3,59 | 3,64 | 3,67 | 3,63 | 3,59 |
| COP ² | W/W | | 3,36 | 3,31 | 3,31 | 3,29 | 3,37 | 3,41 |
| Water flow rate ¹ | l/h | | 19.400 | 23.560 | 26.870 | 31.550 | 35.540 | 39.750 |

| CHILLERS WÄRMEPUMPEN | | | Q+1264 | Q+1434 | Q+1654 | Q+1924 | Q+2174 | Q+2384 |
|-----------------------------------|-------------|----|--------|--------|--------|--------|--------|--------|
| | Compressors | n° | | 4 | 4 | 4 | 4 | 4 |
| Circuits | n° | | 2 | 2 | 2 | 2 | 2 | 2 |
| Fans | n° | | 2 | 2 | 3 | 3 | 3 | 3 |
| Sound power ^{1,3} | dB(A) | | 86,5 | 87,1 | 88,8 | 88,8 | 90,1 | 90,0 |
| Hydraulic connections | Ø | | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ | 2"½ |
| Height | mm | | 1.910 | 1.910 | 1.900 | 1.900 | 1.900 | 1.900 |
| Width | mm | | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 | 1.100 |
| Length | mm | | 3.570 | 3.570 | 4.370 | 4.370 | 4.370 | 4.370 |
| Weight (when empty) ⁴ | kg | | 1.275 | 1.351 | 1.461 | 1.563 | 1.626 | 1.670 |
| Buffer tank capacity ⁵ | l | | 400 | 400 | 400 | 400 | 400 | 400 |

1 Nominal cooling capacities based on 28°C and liquid inlet/outlet temperature 12/7°C
 2 Nominal heating capacities based on 7°C and liquid inlet/outlet temperature 40/45°C
 3 The value of sound power is measured in accordance with standard 9614-2

4 Unit total weight may vary according to chosen options
 5 Tank volume by Hydronic versions

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