

Water chiller & heat pump

# CIAT

## The high-performance single unit solution now available with R-32

Compact and silent
Scroll compressors
High-efficiency brazed-plate heat exchangers
Self-adjusting electronic control

Cooling capacity: 170 to 940 kW Heating capacity: 160 to 520 kW







Hydraulic module



Heat recovery



R-32





### **U**SE

The new generation of **AQUACIATPOWER** high-efficiency airto-water heat pumps and water chillers offers an optimal solution for all heating and cooling applications used for the Healthcare, Office, and Hotel sectors.

These units are designed for outdoor installation and require no special protection against adverse weather conditions.

**AQUACIAT**POWER is optimised for R-32, the environmentally-responsible fluid with the lowest GWP.

This range guarantees compliance with the most demanding requirements for increased seasonal energy efficiency (SEER and SCOP) and  $\rm CO_2$  reduction to comply with the various applicable European directives and regulations.

#### Self-regulating operation to adapt to seasonal variations and requirements

With exceptional SEER and SCOP seasonal energy efficiency levels, the AQUACIAT POWER range offers the best technology combined with savings throughout the year.

Due to climatic variations and the different air-conditioning needs of tertiary buildings, most of the time water chillers and heat pumps run at partial load.

Equipped with multiple compressors, AQUACIATPOWER units automatically adjust cooling capacity, anticipating variations in load and starting only the number of compressors needed to ensure optimum operation and energy efficiency.

Optional variable-speed fan motors ensure even better results.

Thanks to their exceptional thermodynamic performance, provided by radical selection of components, an electronic expansion valve as standard, and a specific control function, standard AQUACIATPOWER units reach a high level of seasonal efficiency in cooling mode (SEER) and in heating mode (SCOP).

#### Acoustic comfort

With different levels of sound equipment available, the  $AQUACIAT^{POWER}$  range offers acoustic solutions to ensure the well-being of users.

The specifications of the AQUACIATPOWER range mean it is able to easily and economically meet all air conditioning applications in the hotel, office and healthcare sectors.

### Quick, simple installation

With a wide variety of connection accessories and equipment, the AQUACIATPOWER range is quick and simple to install.

The advanced controller functions and different communication protocols enable local control via CMS/BMS or remote control, providing building management with peace of mind.









Water chiller & heat pump

### **GLOBAL SYSTEM SOLUTIONS**

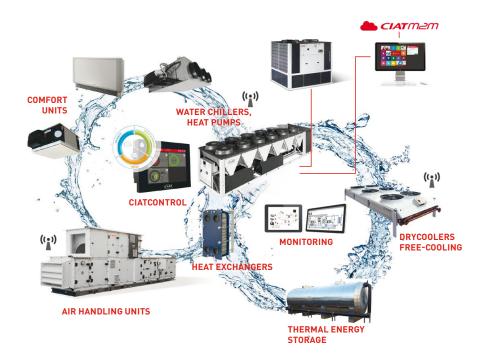
As an expert on customised HVAC solutions, CIAT works to improve the well-being of individuals in their living areas or places of work. Aware of the thermal, energy and air quality issues faced today by every sector of activity, CIAT has responded by developing global systems based on an adapted and efficient combination of products. The latest-generation AQUACIATPOWER with a low environmental footprint is part of our sustainable development process.

#### Global energy systems based on the water loop for heating, cooling and indoor air quality

To comply with today's thermal and environmental regulations, CIAT designs optimised water loop energy systems comprised of comfort units, heat pumps such as AQUACIATPOWER and dual-flow air handling units. As a renewable resource and a highly effective heat-transfer fluid, water not only represents an excellent alternative to direct expansion systems, it also meets F-Gas regulations in terms of confinement and limitation of refrigerants within buildings.

#### Benefits of the water loop

- More competitive: equipment that is more cost effective and requires less maintenance than direct expansion systems.
- Greater comfort: flexible, precise control of occupant comfort.
- Greater energy efficiency: the homogeneity and the thermal stability of water reduce the energy requirements for transferring heat.
- Environmentally sustainable: no refrigerant is required on the premises and only a small amount is used in the heat pump installed outside the building's occupied spaces.
- **Easy to install:** no refrigerant specialists are required during installation.
- Flexibility: a water loop energy system adapts easily to the configuration of buildings and the changes that may be made to spaces over time.



### RANGE

#### AQUACIATPOWER LD/ILD series

In the LD water chiller & ILD standard reversible heat pump versions, AQUACIAT POWER units are optimised to meet the most demanding technical and economic requirements.

### Units with nominal high energy performance (option)

In this configuration, the AQUACIAT POWER unit is optimised for full-load applications for which an optimum EER and COP value is required. In this case, the machine is equipped with high-speed fans enabling nominal efficiency and a broader application range.

#### Units equipped with variable-speed fans (option)

High seasonal energy efficiency version.

In this configuration, the AQUACIATPOWER unit is optimised for partial load applications for which an optimum SEER and SCOP value is required. In this case, the machine is equipped with variable-speed fans, optimising the partial load efficiency throughout the year.



Water chiller & heat pump

### **DESCRIPTION**

AQUACIAT POWER units are packaged machines supplied as standard with the following components:

- Hermetic SCROLL compressors
- Brazed-plate condenser or evaporator water type heat exchanger
- All-aluminium micro-channel condenser (LD) or evaporator air-cooled exchanger, copper tube coil with aluminium fins (ILD) and axial fan motor assembly
- Electrical power and remote control cabinet:
  - 400 V-3ph-50 Hz (+/-10%) mains power supply + earth
  - transformer fitted as standard on the machine for supplying the remote control circuit with 24 V
- Connect Touch electronic control module
- Casing for outdoor installation

The entire AQUACIATPOWER range complies with the following EC directives and standards:

- Machinery directive 2006/42/EC.
- Electromagnetic compatibility directive 2014/30/EC
- Safety of machinery: Electrical equipment of machines EN 60204-1
- EMC immunity and emissions EN 61800-3 'C3'
- Regulation (EC) No. 1907/2006 REACH

Pressure equipment directive (PED) 2014/68/EU

- Refrigerating systems and heat pumps EN 378-2
- Regulation (EU) No. 813/2013 implementing Directive 2009/125/EC with regard to ecodesign requirements (Heat pump)
- Regulation (EU) No. 2016/2281 implementing Directive 2009/125/EC with regard to ecodesign requirements (Chiller)

### CONFIGURATION

	Energy	versions
	High outdoor temperature option	Nominal high performance option
Acoustic versions	AQUACIATPOWER Standard (AC motor fans)	AQUACIATPOWER  Seasonal high-performance version (Optional AC motor fans + Inverter or EC motor fans)
	Low Noise option	Low Noise option
	XtraLow Noise option	XtraLow Noise option





Water chiller & heat pump

### **DESCRIPTION OF THE MAIN COMPONENTS**

#### Compressors

- Hermetic SCROLL type
- electronic motor overheating protection
- crankcase heater
- mounted on anti-vibration mounts

#### Water type heat exchanger

- asymmetrical brazed-plate heat exchanger
- plate patterns optimised for high efficiency
- 19 mm armaflex thermal insulation

#### Air-cooled exchanger

- Liquid chiller: air-cooled exchanger, all-aluminium, micro-channels
- Heat pump: air-cooled exchanger, copper tube coil, aluminium fins
- propeller fans with composite blades offering an optimised profile with fixed-speed or variable-speed according to the model, variablespeed option using frequency inverter or EC motor
- motors IP 54, class F

#### Refrigerating accessories

- Dehumidifier filters with rechargeable cartridges
- hygroscopic sight glasses
- electronic expansion valves
- service valves on the liquid line
- Four-way reverse cycle valve in cooling/heating mode

#### Control and safety instruments

- low and high pressure sensors
- safety valves on refrigerant circuit
- water temperature control sensors
- evaporator antifreeze protection sensor
- factory-fitted evaporator water flow controller

#### Electrical cabinet

- Electrical cabinet with IP54 protection rating (IP44 for the entire unit)
- A connection point without neutral
- front-mounted main safety switch with handle
- control circuit transformer
- 24 V control circuit
- fan and compressor motor circuit breaker
- fan and compressor motor contactors
- Connect Touch microprocessor-controlled electronic control module
- wire numbering
- marking of the main electrical components

#### Casing

Frame made from RAL 7035 light grey & RAL 7024 graphite grey painted panels



#### Connect Touch control module

- User interface with 4.3-inch touch screen
- Intuitive, user-friendly navigation using icons
- Clear text display of information available in 7 languages (FR-EN-DE-ES-I-PT-NL)



The electronic control module performs the following main functions:

- regulation of the chilled water temperature (at the return or at the outlet)
- regulation of the water temperature based on the outdoor temperature (water law)
- regulation for low temperature energy storage
- second setpoint management
- complete management of compressors with start-up sequence, timer and operating time balancing
- self-regulating and proactive functions with adjustment of the control to counter parameter drift
- in-series staged power control system on the compressors according to the thermal requirements
- management of compressor short-cycle protection
- frost protection (exchanger heater option)
- phase reversal protection
- optimised defrosting with free defrost function to optimise performance at partial load and the SCOP
- management of occupied/unoccupied modes (according to the time schedule)
- compressor and pump operating time balancing
- management of the machine operating limit according to outdoor temperature
- sound level reduction device (night mode according to the user programme) with limitation of compressor capacity and fan speed
- diagnosis of fault and operating statuses
- management of a fault memory allowing a log of the last 50 incidents to be accessed, with operating readings taken when the fault occurs
- Blackbox memory
- master/slave management of the two machines in parallel with operating time balancing and automatic changeover if a fault occurs on one machine
- weekly and hourly time schedule for the machine, including 16 periods of absence
- pump standby based on demand (energy saving)
- calculation of the water flow rate and operating pressure (hydraulic module version)
- electronic adjustment of the water pump speed and water flow rate (variable-speed pump option)
- display of all machine parameters (3 access levels, User/ Maintenance/Factory, password-protected): temperature, setpoints, pressures, water flow rate (hydraulic version), runtime.
- display of trend curves for the main values
- storage of maintenance manual, wiring diagram and spare parts list.
- innovative smart energy monitoring, providing users with smart data such as real-time electrical energy consumption and heating and cooling capacity, and instantaneous and average energy efficiency rates.



Water chiller & heat pump

### **DESCRIPTION OF THE MAIN COMPONENTS**

#### Remote management

Connect Touch is equipped as standard with an RS485 port and an ETHERNET (IP) connection, offering a range of options for remote management, monitoring and diagnostics.

Using the integrated Webserver, a simple internet connection uses the unit's IP address to access the Connect Touch interface on the PC, facilitating everyday management tasks and maintenance operations.

A range of communication protocols are available: MODBUS/ JBUS RTU (RS485) or TC/IP as standard, LONWORKS – BACNET IP as an option, enabling most CMS/BMS to be integrated

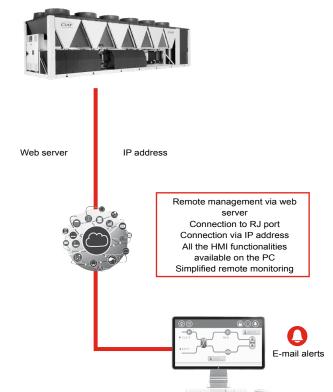
Several contacts are available as standard, enabling the machine to be controlled remotely by wired link:

- automatic operation control: when this contact is open, the machine stops
- heating/cooling operating mode selection
- setpoint 1/setpoint 2 selector: when this contact is closed, a second cooling setpoint is activated (energy storage or unoccupied mode, for example)
- Power limitation: closing the contact concerned allows the power or refrigerating consumption of the machine to be limited by stopping one or more compressors (this limit can be set with a parameter)
- fault reporting: this contact indicates the presence of a major fault which has caused one or both refrigerant circuits to stop
- operational status reporting indicates that the unit is in production mode.
- activation control for partial energy heat recovery unit using the desuperheater.
- switch control for the customer pump, external to the machine (on/off).

Contacts available as an option:

- setpoint adjustable via 4-20 mA signal: this input is used to adjust the setpoint in COOLING mode
- on/off control for a boiler
- 4-stage on/off management for additional heaters
- power limitation adjustable by 4-20 mA signal
- Second power limitation level
- Power indication: analogue output (0-10 V) providing an indication of the unit's load rate.

- user fault reporting, enables integration of a fault in the water loop
- general fault reporting: this contact indicates that the unit has stopped completely
- alert reporting: this contact indicates the presence of a minor fault which did not cause the refrigerant circuit in question to stop.
- End of storage signal: enables return to the second setpoint at the end of the storage cycle
- Schedule override: closing this contact cancels the time schedule.
- desuperheater activation control
- Desuperheater pump On/Off control.



#### Maintenance

Connect Touch has two maintenance reminder functions as standard, making users aware of the need to regularly perform maintenance operations and to guarantee the service life and performance of the unit. These two functions can be activated independently.

A reminder message appears on the unit's HMI screen, and stays there until it is acknowledged by the maintenance operator. The information and alert relating to these functions are available on the communication bus to be used on the CMS/BMS.

- the scheduled maintenance reminder: when activated, this function enables the period between two maintenance inspections to be set. This period may be set by the operator in either days, months or operating hours, depending on the application
- the compulsory F-GAS sealing test maintenance reminder: when activated, this function, which is the default factory setting, enables the period between two sealing tests to be selected, according to the unit's refrigerant charge, in compliance with the F-GAS regulations.



Water chiller & heat pump

### **DESCRIPTION OF THE MAIN COMPONENTS**

#### CIATM2M, the CIAT supervision solution

CIATM2M is a remote supervision solution dedicated to monitoring and controlling several CIAT machines in real time.

#### **Advantages**

- Access to the operating trend curves for analysis
- Improved energy performance
- Improved availability rate for the machines

#### **Features**

CIATM2M will send data in real time to the supervision website, www.ciatm2m.com.

The machine operating data can be accessed from any PC, smartphone or tablet.

Any event can configured to trigger a mail alert.

Parameters monitored:

- Overview
- Control panel for the controllers
- Events
- Temperature curves

Monthly and annual reports are available to analyse:

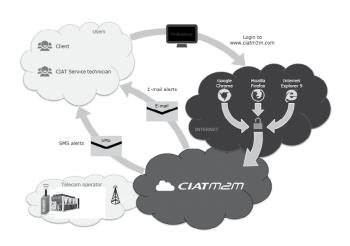
 The performance and operation of the machine Example: operating curves and time, number of compressor start-ups, events, preventive maintenance actions to be performed, etc.

Incidents such as a drift in the measurements on a temperature sensor, incorrectly set control parameters, or even incorrect settings between one compressor stage and another are immediately detected, and the corrective actions put in place.

#### **Equipment**

This kit can be used on both machines which are already in use (existing inventory), and on new machines which do not have sufficient space in their electrical cabinets.

- 1 transportable cabinet
- 1 wall-mounted antenna

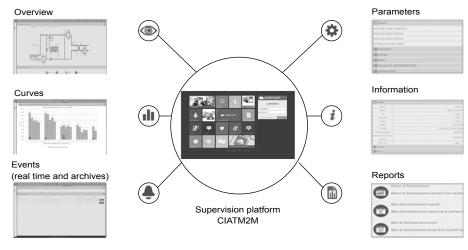


#### **CIATM2M kit contents**

- 1 GPRS/3G modem
- 1 SIM card
- 1 power supply (24 VDC)
- 1 power protection device
- 1 GSM antenna
- Rail mounting
- Enclosed casing to protect the equipment during transport
- Packing box for cable routing (bus, power supply, Ethernet)

#### Compatibility

Up to three machines per CIATM2M kit





Water chiller & heat pump

### **AVAILABLE OPTIONS**

Options	Description	Advantages	LD	ILD
Corrosion protection, traditional coils	Fins made of pre-treated aluminium (polyurethane and epoxy)	Improved corrosion resistance, recommended for moderate marine and urban environments	No	•
ow-temperature orine solution	Low temperature chilled water production down to -15 °C with ethylene glycol and -12 °C with propylene glycol.	Covers specific applications such as ice storage and industrial processes	•	•
XtraFan	Unit equipped with specific variable-speed fans: XtraFans (See specific chapter for maximum available static pressure according to size), each fan equipped with a connection flange and flexible sleeves		•	•
/ery low noise evel	Acoustic compressor enclosure and low-speed fans	Noise level reduction in sensitive environments	•	•
Jltra low noise evel	Acoustic compressor enclosure, low-speed fans and enhanced sound insulation of main noise sources	Noise level reduction in sensitive environments	•	•
High ambient emperature	Unit equipped with a higher speed fan	Unit operating range extended to higher ambient temperatures	•	•
Protection grilles	Metallic protection grilles	Coil protection against possible impact	•	•
Electronic starter per compressor	Electronic starter on each compressor	Reduced start-up current	•	•
Electronic starter per circuit	Electronic starter on each circuit	Economical solution for reduced start-up current	•	•
All year round cooling operation down to -20 °C	Fanspeed control via frequency converter	Stable unit operation when the outdoor air temperature is between 0 °C and -20 °C	•	•
Vater exchanger rost protection	Electric heater on the water exchanger and the water piping	Water exchanger module frost protection between 0 °C and -20 °C outside air temperature	•	•
Exchanger & nydraulic frost protection	Electrical heaters on the water type heat exchanger, water pipes, hydronic module and expansion tank	Water type heat exchanger and hydronic module frost protection down to an outdoor air temperature of -20 °C	•	•
Exchanger & nydraulic frost protection	Electrical heater on the water exchanger, water pipes, hydronic module and optional expansion tank & buffer tank	Water type heat exchanger and hydronic module frost protection down to an outdoor air temperature of -20 °C	•	•
Partial heat ecovery	Unit equipped with one desuperheater on each refrigerant circuit	Simultaneous production of free high temperature hot water and chilled water production (or hot water for heat pump)	•	•
Master/slave operation	Unit equipped with supplementary water outlet temperature sensor kit (to be field installed) allowing master/slave operation of two units connected in parallel	Optimised operation of two units connected in parallel operation with runtime balancing	•	•
Compressor suction and discharge valves	Shut-off valves on the common compressor suction and discharge pipes	Simplified maintenance. Possibility to store the refrigerant charge in the cooler or condenser side during servicing	•	•
HP evap. single- oump	Evaporator hydronic module equipped with high-pressure fixed-speed pump, drain valve, air vent and pressure sensors. For more details, refer to the dedicated chapter (expansion tank not included). Comp	Quick and easy installation (plug & play)	0602R-1400R	•
HP dual-pump hydronic module	Dual high-pressure water pump, water filter, electronic water flow control, pressure sensors. For more details, refer to the dedicated chapter (expansion tank not included; option with built-in hydraulic safety components available.)	Quick and easy installation (plug & play)	0602R-1400R	•
.P single-pump nydronic module	Single low-pressure water pump, water filter, electronic water flow control, pressure sensors. For more details, refer to the		0602R-1400R	•

• ALL MODELS
Refer to the selection tool to find out which options are not compatible.



Water chiller & heat pump

### **AVAILABLE OPTIONS**

Options	Description	Advantages	LD	ILD
LP dual-pump hydronic module	Dual low-pressure water pump, water filter, electronic water flow control, pressure sensors. For more details, refer to the dedicated chapter (expansion tank not included; option with built-in hydraulic safety components)	Quick and easy installation (plug & play)	0602R-1400R	•
HP evap. variable- speed single pump.	Evaporator hydraulic module equipped with high-pressure variable-speed pump, drain valve, air vent and pressure sensors. For more details, refer to the dedicated chapter (expansion tank not included);	Quick and easy installation (plug & play), significant reduction in pumping energy consumption level (more than two-thirds), precise water flow control, improved system reliability	•	•
HP VSD dual- pump hydronic mod.	Dual high-pressure water pump with variable speed drive (VSD), pressure transducers. Multiple possibilities of water flow control. For more information, refer to the dedicated chapter.	Quick and easy installation (plug & play), significant reduction in pumping energy consumption level (more than two-thirds), precise water flow control, improved system reliability	•	•
High nominal energy efficiency	Higher air flow through the condenser coils improving heat exchange efficiency on the condenser	Energy cost reduction and extended operating envelope (full load operation at higher air temperature)	•	•
High seasonal energy efficiency (VSD)	Unit equipped with variable-speed fans (VSD)	Enhances the unit seasonal energy efficiency performance and reduces the noise emission thanks to a smooth fan speed variation.	0602R-1400R	•
High seasonal energy efficiency (EC)	Variable-speed fans with EC motors	Enhances the unit seasonal energy efficiency performance and reduces the noise emission thanks to a smooth fan speed variation.	•	•
₋on gateway	Two-directional communication board complying with Lon Talk protocol	Connects the unit by communication bus to a building management system	•	•
Bacnet over IP	Two-directional high-speed communication using BACnet protocol over Ethernet network (IP)	Easy and high-speed connection by Ethernet line to a BMS. Allows access to multiple unit parameters	•	•
Energy Management Module	EMM Control board with additional inputs/ outputs. See Energy Management Module option chapter	Extended remote control capabilities (Setpoint reset, ice storage end, demand limits, boiler on/off command)	•	•
Contact for refrigerant leak detection	0-10 V signal to report any refrigerant leakage in the unit directly (the leak detector itself must be supplied by the customer)	Immediate customer notification of refrigerant losses to the atmosphere, allowing timely corrective actions	•	•
Compliance with Swiss regulations	Additional tests on the water type heat exchangers: supply of supplementary test certifications and certificates (supplementary documents linked to the Pressure Equipment Directive)	Compliance with Swiss regulations	•	•
Compliance with Russian egulations	EAC certification	Compliance with Russian regulations	•	•
Compliance with Australian regulations	Unit approved to Australian code	Compliance with Australian regulations	•	•
Coil defrost resistance heaters	Electric heaters under the coils and the condensate pans	Prevents frost formation on the coils; compulsory in heating mode if the outdoor temperature is below 0 °C	No	•
nsulation of the evap. in/out ref. ines	of the Thermal insulation of the evaporator inlet/		•	•
Protect2 anti- corrosion protection	Coating applied using a conversion process which modifies the surface of the aluminium producing a coating that is integral to the coil. Complete immersion in a bath to ensure MCHE coils by 2, recommended for use in		•	No

#### ALL MODELS

Refer to the selection tool to find out which options are not compatible.



Water chiller & heat pump

### **AVAILABLE OPTIONS**

Options	Description	Advantages	LD	ILD
Protect4 anti- corrosion protection	Flexible, durable polyepoxide coating applied using an electro coating process to give micro-channel coils an anti-UV top layer. Minimal heat transfer variation, tested to withstand more than 6000 hours of constant neutral salt spray as per ASTM B117, improved impact resistance as per ASTM D2794	Protect4 Improved corrosion resistance of the MCHE coils by 4, recommended for use in corrosive environments	•	No
Flanged evaporator water connection kit	Victaulic piping connections with flanged joints	Easy installation	•	•
Compressor enclosure	Compressor enclosure	Improved aesthetics, compressor protection against external elements (dust, sand, water)	•	•
230 V electrical plug	230 VAC power source provided with plug socket and transformer (180 VA, 0.8 A)	Enables connection of a laptop or an electrical device during system start-up or maintenance	•	•
Expansion tank	6-bar expansion tank integrated in the hydronic module (requires hydronic module option)	Easy and fast installation (plug & play), & protection of closed water systems from excessive pressure	•	•
Screwed water connection sleeve kit	DSH connections with screw connection sleeves	Easy installation. Allows unit connection to a screw connector	•	•
Water buffer tank module	Integrate water buffer tank	Avoid short cycle on compressors and ensure a stable water in the loop	•	•
Anti-vibration mounts	Elastomer anti-vibration mounts to be placed under the unit (material classified as fire class B2 according to DIN 4102).	Isolate the unit from the building, prevent the transmission of vibrations and associated noise to the building. Must be used in conjunction with a flexible connection on the water side	•	•
Exchanger flexible sleeves	Flexible connections on the exchanger water side	Easy to install. Limits the transmission of vibrations to the water network	•	•
Exchanger water filter	Water filter	Prevents dust entering the water network	•	•
Free cooling mode drycooler management	Control and connections to a free cooling drycooler Opera or Vextra fitted with optional FC control box	Easy system management, control capabilities extended to a drycooler used in free cooling mode	•	•
Desuperheater flexible couplings	Flexible connections on the desuperheater water side	Easy to install. Limits the transmission of vibrations to the water network	•	•
Installation or application process outside Europe	Specific management of option compatibility	Permits non-standard option compatibility for HVAC application in the EU	•	No
Compliance with Moroccan regulations	Specific regulatory documentation	Compliance with Moroccan regulations	•	•

#### ALL MODELS

Refer to the selection tool to find out which options are not compatible.



Water chiller & heat pump

### **TECHNICAL CHARACTERISTICS - COOLING ONLY**



AQUACIATPOWER LD			0602R	0650R	0750R	0900R	1100R	1200R	1350R	1400R	1600R
Cooling											
Standard unit	Nominal capacity	kW	164	180	198	217	256	296	328	361	394
Full load performances* CA1	EER	kW/kW	3,05	3,24	3,04	3,02	2,81	2,96	2,86	2,94	2,86
	SEER <sub>12/7°C</sub> Comfort low temp.	kWh/kWh	4,29	4,61	4,52	4,47	4,35	4,69	4,66	4,65	5,09
	ηs cool <sub>12/7°C</sub>	%	169	181	178	176	171	185	183	183	201
Seasonal energy efficiency**	SEER <sub>23/18°C</sub> Comfort medium temp.	kWh/kWh	4,93	5,41	5,23	5,26	4,99	5,66	5,45	5,48	5,95
	SEPR <sub>12/7°C</sub> Process high temp.	kWh/kWh	5,27	5,42	5,34	5,19	5,14	5,44	5,47	5,60	6,34
SEPR <sub>-2/-8°C</sub> Process medium temp. kWh/kW						Aw	aiting d	ata			
	Capacité nominale	kW	172	187	206	227	270	311	346	380	416
high performance options CA1 Full load performances*	EER	kW/kW	3,20	3,36	3,21	3,16	3,03	3,15	3,09	3,14	3,09
	SEER <sub>12/7°C</sub> Comfort low temp.	kWh/kWh	4,63	4,99	4,89	4,92	4,78	5,25	5,08	5,19	5,11
	ηs cool <sub>12/7°C</sub>	%	182	196	193	194	188	207	200	205	201
Seasonal energy efficiency**	SEER <sub>23/18°C</sub> Comfort medium temp.	kWh/kWh	5,63	6,17	5,95	5,98	5,69	6,35	6,06	6,13	6,06
	SEPR <sub>12/7°C</sub> Process high temp.	kWh/kWh	6,30	6,62	6,43	6,13	5,97	6,30	6,24	6,36	6,31
	SEPR <sub>-2/-8°C</sub> Process medium temp.	kWh/kWh				Aw	aiting d	ata			
Part Load integrated values	IPLV.IP	Btu/Wh	17,40	17,71	17,33	17,64	17,44	18,02	17,98	17,88	19,04
Part Load integrated values	IPLV.SI	kW/kW	5,06	5,16	5,04	5,16	5,08	5,25	5,23	5,21	5,52
Sound levels											
Unit + High temperature op	tion/Nominal high performance										
Sound power <sup>(1)</sup>		dB(A)	91,0	91,5	91,5	92,0	92,0	93,0	93,0	93,5	93,5
Sound pressure at 10 m <sup>(2)</sup>		dB(A)	58,5	59,5	59,5	60,0	60,0	60,5	60,5	61,0	61,5
Standard unit											
Sound power <sup>(1)</sup>		dB(A)	88,5	89,0	89,0	89,5	89,5	90,5	90,5	91,0	91,0
Sound pressure at 10 m <sup>(2)</sup>		dB(A)	56,5	57,0	57,0	57,5	57,5	58,5	58,5	59,0	58,5
Unit + Very Low Noise option	on										
Sound power <sup>(1)</sup>		dB(A)	85,5	85,5	85,5	86,5	86,5	87,5	87,5	88,0	88,0
Sound pressure at 10 m <sup>(2)</sup>		dB(A)	53,0	53,5	53,5	54,5	54,5	55,5	55,5	55,5	56,0
Unit + Ultra Low Noise option	on										
Sound power <sup>(1)</sup>	dB(A)	83,5	83,5	83,5	84,5	84,5	85,5	85,5	86,0	86,0	
Sound pressure at 10 m <sup>(2)</sup>		dB(A)	51,5	51,5	51,5	52,5	52,5	53,5	53,5	53,5	53,5

In accordance with standard EN14511-3:2013.

\*\* In accordance with standard EN14825:2013, average climate

CA1 Cooling mode conditions: evaporator water inlet/outlet temperature 12 °C/7 °C, outdoor air temperature 35 °C, evaporator fouling

factor 0 m2. k/W

Πs cool<sub>12/7°C</sub> & SEER <sub>12/7°C</sub>

Values in bold comply with Ecodesign Regulation (EU) No. 2016/2281 for Comfort applications SEER <sub>23/18°C</sub>

Values in bold comply with Ecodesign Regulation (EU) No. 2016/2281 for Comfort applications

SEPR 12/7°C Values alculated in accordance with EN14825:2016
SEPR 12/7°C Values calculated in accordance with EN14825:2016
IPLV.IP Calculated as per AHRI standard 550-590.
IPLV.SI Calculated as per AHRI standard 551-591.

(1) In dB ref=10-12 W, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of

+/-3 dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

(2) In dB ref 20 μPa, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of

+/-3 dB(A). For information, calculated from the sound power level Lw(A).



Eurovent certified values



Water chiller & heat pump

### **TECHNICAL CHARACTERISTICS - COOLING ONLY**



AQUACIATPOWER LD		0602R	0650R	0750R	0900R	1100R	1200R	1350R	1400R	1600R
Dimensions					·					
Standard unit										
Length	mm	2410	2410	2410	2410	2410	3604	3604	3604	3604
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2324	2324	2324	2324	2324	2324	2324	2324	2324
Unit + water buffer tank module option	mm	3604	3604	3604	3604	3604	4798	4798	4798	4798
Length	mm	3604	3604	3604	3604	3604	4798	4798	4798	4798
Operating weight (3)										
Standard unit	kg	1349	1397	1397	1521	1556	1995	2049	2211	2269
Unit + Xtra Low Noise option	kg	1453	1501	1501	1656	1690	2153	2208	2394	2452
Unit + Xtra Low Noise + HP dual-pump hydraulic module option	kg	1588	1636	1636	1791	1837	2302	2403	2589	2646
Unit + Xtra Low Noise + HP dual-pump hydraulic module + Buffer tank module option	kg	2571	2619	2619	2774	2819	3288	3389	3575	3632
Compressors					Hermet	ic Scroll	48.3 r/s			
Circuit A		1	1	2	2	2	2	2	3	3
Circuit B		2	2	2	2	2	3	3	3	3
Number of power stages		3	3	4	4	4	5	5	6	6
Unit PED category		III	III	III	III	III	III	III	III	III
Refrigerant <sup>(4)</sup>						R32				
Circuit A	kg	6,40	9,70	9,70	11,40	11,80	12,50	13,30	18,10	18,90
Circuit A	tCO <sub>2</sub> e	4,3	6,5	6,5	7,7	8,0	8,4	9,0	12,2	12,8
Oliverit B	kg	11,40	11,40	11,40	11,40	11,80	17,50	18,30	18,10	18,90
Circuit B	tCO <sub>2</sub> e	7,7	7,7	7,7	7,7	8,0	11,8	12,4	12,2	12,8
Oil					·	POE				
Circuit A	I	6,6	6,6	13,2	13,2	13,2	13,2	13,2	19,8	19,8
Circuit B	I	13,2	13,2	13,2	13,2	13,2	19,8	19,8	19,8	19,8
Capacity control					Coı	nnect'To	uch			
Minimum capacity	%	33	33	25	25	25	20	20	17	17
Condenser			P	ll-alumi	nium mi	cro-chan	nel coils	(MCHE	()	
Fans				P	Axial with	rotating	j impelle	er		
Standard unit										
Quantity		3	3	4	4	4	5	5	6	6
Maximum total air flow	l/s	11790	11790	15720	15720	15720	19650	19650	23580	23580
Maximum rotation speed	r/s	12	12	12	12	12	12	12	12	12
Evaporator				Dua	l-circuit	olate hea	at excha	nger		
Water volume	I	15	15	15	19	27	27	35	44	44
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000
Hydraulic module (option)		Pump	, victaul		n filter, r					d air),
Pump		Се	ntrifugal		monoce ed), sing				ressure	(as
Expansion tank volume	I	50	50	50	50	50	80	80	80	80
Max. water-side operating pressure with hydraulic module	kPa	400	400	400	400	400	400	400	400	400
Hydraulic connections with/without hydraulic module					Vic	taulic® t	уре			
Connections	inches	3	3	3	3	4	4	4	4	4
External diameter	mm	88,9	88,9	88,9	88,9	114,3	114,3	114,3	114,3	114,3
Casing paint colour				Со	lour cod	e RAL 7	035 & 70	024		

<sup>(1)</sup> In dB ref=10-12 W, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of +/-3 dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

<sup>(2)</sup> In dB ref 20 µPa, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of +/-3 dB(A). For information, calculated from the sound power level Lw(A).

<sup>(3)</sup> Values are guidelines only. Refer to the unit name plate.



Water chiller & heat pump

### **TECHNICAL CHARACTERISTICS - COOLING ONLY**



AQUACIATPOWER LD			1750R	1800R	2000R	2200R	2400R	2650R	2800R	2950R	3200R	3500R
Cooling												
Standard unit	Nominal capacity	kW	428	458	523	587	646	689	743	765	836	889
Full load CA1 performances*	EER	kW/kW	2,93	2,85	2,85	2,94	2,93	2,83	2,85	2,81	2,77	2,66
	SEER <sub>12/7°C</sub> Comfort low temp.	kWh/kWh	5,37	5,30	5,21	5,13	5,35	5,20	5,43	5,30	5,22	5,07
0	ηs cool <sub>12/7°C</sub>	%	212	209	205	202	211	205	214	209	206	200
Seasonal energy efficiency**	SEER <sub>23/18°C</sub> Comfort medium temp.	kWh/kWh	6,25	6,12	6,25	6,25	6,59	6,33	6,69	6,46	6,34	6,07
oo.oo,	SEPR <sub>12/7°C</sub> Process high temp.	kWh/kWh	6,38	6,28	6,24	6,27	6,33	6,11	6,17	6,10	6,03	5,79
	SEPR <sub>-2/-8°C</sub> Process medium temp.	kWh/kWh				Awa	aiting c	lata				
Unit + Rated &	Nominal capacity	kW	450	484	552	617	678	727	782	807	882	943
Seasonal high performance options CA1 Full load performances*	EER	kW/kW	3,14	3,09	3,08	3,15	3,14	3,06	3,07	3,04	3,00	2,92
	SEER <sub>12/7°C</sub> Comfort low temp.	kWh/kWh	5,28	5,24	5,30	5,23	5,32	5,20	5,33	5,23	5,31	5,18
	ηs cool <sub>12/7°C</sub>	%	208	207	209	206	210	205	210	206	209	204
Seasonal energy efficiency**	SEER <sub>23/18°C</sub> Comfort medium temp.	kWh/kWh	6,33	6,23	6,32	6,39	6,51	6,28	6,54	6,38	6,56	6,32
omolonoy	SEPR <sub>12/7°C</sub> Process high temp.	kWh/kWh	6,41	6,32	6,27	6,27	6,33	6,14	6,26	6,18	6,07	5,88
	SEPR <sub>-2/-8°C</sub> Process medium temp.	kWh/kWh					Awaitir	ng data	l			
Part Load integrated values	IPLV.IP	Btu/Wh	19,55	19,38	19,31	19,86	19,72	19,31	19,79	19,65	19,38	18,97
Part Load integrated values	IPLV.SI	kW/kW	5,68	5,63	5,60	5,75	5,71	5,60	5,74	5,71	5,63	5,51
Sound levels												
Unit + High temperature	e option/Nominal high performance											
Sound power <sup>(1)</sup>		dB(A)	94,0	94,0	94,5	97,5	97,5	98,0	98,0	98,5	98,5	99,0
Sound pressure at 10 m <sup>(</sup>	2)	dB(A)	61,5	61,5	62,0	65,0	65,0	66,0	65,0	66,0	66,0	66,5
Standard unit												
Sound power <sup>(1)</sup>		dB(A)	91,5	91,5	92,0	96,5	96,5	97,0	97,0	97,5	97,5	98,0
Sound pressure at 10 m <sup>(</sup>	2)	dB(A)	59,5	59,0	60,0	64,0	64,0	64,5	65,0	65,0	65,0	65,5
Unit + Very Low Noise	option											
Sound power <sup>(1)</sup>		dB(A)	88,5	88,5	89,0	92,5	92,5	93,0	93,0	93,5	93,5	94,5
Sound pressure at 10 m <sup>(</sup>	2)	dB(A)	56,0	56,5	57,0	60,5	60,0	60,5	60,0	61,0	60,5	61,5
Unit + Ultra Low Noise	option										,	
Sound power <sup>(1)</sup>		dB(A)	86,5	86,5	87,0	90,0	90,0	90,5	90,5	90,5	90,5	91,0
Sound pressure at 10 m <sup>(</sup>	2)	dB(A)	54,5	54,0	55,0	57,5	57,5	58,0	58,0	57,5	58,0	58,5

In accordance with standard EN14511-3:2013.

In accordance with standard EN14825:2013, average climate

CA1 Cooling mode conditions: evaporator water inlet/outlet temperature 12 °C/7 °C, outdoor air temperature 35 °C, evaporator fouling

factor 0 m2, k/W

Values in bold comply with Ecodesign Regulation (EU) No. 2016/2281 for Comfort applications Values in bold comply with Ecodesign Regulation (EU) No. 2016/2281 for Comfort applications  $\eta s \; cool_{12/7^{\circ}C} \; \& \; SEER \; _{12/7^{\circ}C}$ SEER <sub>23/18</sub> °C

SEPR <sub>12/7</sub> °C Values calculated in accordance with EN14825:2016 SEPR -2/-8 °C Values calculated in accordance with EN14825:2016 IPLV.IP Calculated as per AHRI standard 550-590. IPLV.SI (1)

Calculated as per AHRI standard 551-591.

In dB ref=10-12 W, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of +/-3 dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.

In dB ref 20  $\mu$ Pa, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of +/-3 dB(A). For information, calculated from the sound power level Lw(A). (2)



Eurovent certified values



Water chiller & heat pump

### **TECHNICAL CHARACTERISTICS - COOLING ONLY**



AQUACIATPOWER LD		1750R	1800R	2000R	2200R	2400R	2650R	2800R	2950R	3200R	3500R
Dimensions											
Standard unit											
Length	mm	4798	4798	4798	5992	5992	5992	5992	7186	7186	7186
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2324	2324	2324	2324	2324	2324	2324	2324	2324	2324
Unit + water buffer tank module option	mm	5992	5992	5992	7186	7186	7186	7186	8380	8380	8380
Length	mm	5992	5992	5992	7186	7186	7186	7186	8380	8380	8380
Operating weight (3)											
Standard unit	kg	2697	2722	2927	3265	3511	3511	4042	4042	4291	4291
Unit + Xtra Low Noise option	kg	2904	2930	3158	3434	3703	3703	4260	4260	4535	4535
Unit + Xtra Low Noise + HP dual-pump hydraulic module option	kg	3138	3164	3430	3743	4013	4013	4650	4650	4925	4925
Unit + Xtra Low Noise + HP dual-pump hydraulic module + Buffer tank module option	kg	4131	4156	4421	4750	5020	5020	5671	5671	5946	5946
Compressors	1				Her	netic So	croll 48.	3 r/s		1	
Circuit A		3	3	4	2	3	3	3	3	4	4
Circuit B		4	4	4	3	3	3	4	4	4	4
Number of power stages		7	7	8	5	6	6	7	7	8	8
Unit PED category		IV	IV	IV	Ш	III	III	IV	IV	IV	IV
Refrigerant <sup>(4)</sup>						R	32				
Circuit A	kg	19,20	19,50	25,00	21,70	26,70	26,70	27,40	27,40	32,40	32,40
Circuit A	tCO <sub>2</sub> e	13,0	13,2	16,9	14,6	18,0	18,0	18,5	18,5	21,9	21,9
	kg	24,10	24,50	25,00	26,70	26,70	26,70	32,40	32,40	32,40	32,40
Circuit B	tCO <sub>2</sub> e	16,3	16,5	16,9	18,0	18,0	18,0	21,9	21,9	21,9	21,9
Oil						P(	DE				
Circuit A	I	19,8	19,8	26,4	13,2	19,8	19,8	19,8	19,8	26,4	26,4
Circuit B	ı	26,4	26,4	26,4	19,8	19,8	19,8	26,4	26,4	26,4	26,4
Capacity control		İ				Connec	t'Touch				
Minimum capacity	%	14	14	13	20	17	17	14	14	13	13
Condenser				All-alu	ıminium	micro-d	channel	coils (N	(CHE)		
Fans					Axial	with rot	ating im	peller			
Standard unit										-	-
Quantity		7	7	8	9	10	10	11	11	12	12
Maximum total air flow	I/s	27510	27510	31440	35370	39300	39300	43230	43230	47160	47160
Maximum rotation speed	r/s	12	12	12	12	12	12	12	12	12	12
Evaporator				С	ual-circ	uit plate	heat e	xchange	er		
Water volume	ı	44	47	53	73	73	73	84	84	84	84
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Hydraulic module (option)		Pui	np, vict					drain va tank (c		ter and a	air),
Pump		Centrifugal pump, monocell, 48.3 r/s, low or high single or dual (as required							essure	(as requ	uired),
Expansion tank volume	1	80	80	80	80	80	80	80	80	80	80
Max. water-side operating pressure with hydraulic module	kPa	400	400	400	400	400	400	400	400	400	400
Hydraulic connections with/without hydraulic mode	ule					Victauli	c® type				
Connections	inches	4	4	4	5	5	5	5	5	5	5
External diameter	mm	114,3	114,3	114,3	139,7	139,7	139,7	139,7	139,7	139,7	139,7
Casing paint colour					Colour	code RA	AL 7035	& 7024		•	

<sup>(1)</sup> In dB ref=10-12 W, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of +/-3 dB(A). Measured in

accordance with ISO 9614-1 and certified by Eurovent.

In dB ref 20 µPa, (A) weighting. Declared dual-number noise emission value in accordance with ISO 4871 with an uncertainty of +/-3 dB(A). For information, calculated from the sound power level Lw(A).
(3) Values are guidelines only. Refer to the unit name plate.



Water chiller & heat pump

### **ELECTRICAL DATA**

### Basic unit (excluding pump)

	0602R	0650R	0750R	0900R	1100R	1200R	1350R	1400R	1600R	1750R
V-ph-Hz					400-	3-50				
V					360	-440				
				24 V v	via interr	al transf	ormer			
kW	71,6	77,2	86,8	95,4	114,6	128,9	143,3	157,5	172,5	186,9
		·	`		·		·	`		
	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83
		*	,	*	*		*	•	*	
Α	95,7	104,1	116,5	127,6	152,4	171,9	190,5	210	225	243,9
Α	123,9	134,4	151,0	165,2	198,4	223,1	248,0	272,7	294,0	318,1
		·	`		·		·	•		
Α	135,6	145,8	161,8	180,8	212,8	242	266	295,2	315,6	344,2
1		•	•		•	-	•			
Α	299,8	347,0	363,6	341,1	411,0	435,7	460,6	485,3	510,2	534,9
Α	256,8	295,0	311,6	298,1	359,0	383,7	408,6	433,3	458,2	482,9
	kW  A  A  A	V-ph-Hz V kW 71,6 0,83 A 95,7 A 123,9 A 135,6 A 299,8	V-ph-Hz V  kW 71,6 77,2  0,83 0,83  A 95,7 104,1  A 123,9 134,4  A 135,6 145,8  A 299,8 347,0	V-ph-Hz  V  kW 71,6 77,2 86,8  0,83 0,83 0,83  A 95,7 104,1 116,5  A 123,9 134,4 151,0  A 135,6 145,8 161,8  A 299,8 347,0 363,6	V-ph-Hz V  kW 71,6 77,2 86,8 95,4  0,83 0,83 0,83 0,83  A 95,7 104,1 116,5 127,6  A 123,9 134,4 151,0 165,2  A 135,6 145,8 161,8 180,8  A 299,8 347,0 363,6 341,1	V-ph-Hz	V-ph-Hz  V-ph-Hz  V-ph-Hz  V  360-440  24 V via internal transf  kW  71,6  77,2  86,8  95,4  114,6  128,9  0,83  0,83  0,83  0,83  0,83  0,83  0,83  0,83  0,83  0,83  A  95,7  104,1  116,5  127,6  152,4  171,9  A  123,9  134,4  151,0  165,2  198,4  223,1  A  135,6  145,8  161,8  180,8  212,8  242  A  299,8  347,0  363,6  341,1  411,0  435,7	V-ph-Hz	V-ph-Hz  V-ph-Hz  V-ph-Hz  V 360-440  24 V via internal transformer  kW 71,6 77,2 86,8 95,4 114,6 128,9 143,3 157,5  0,83 0,83 0,83 0,83 0,83 0,83 0,83 0,83	V-ph-Hz  V-ph-Hz  V-ph-Hz  V 360-440  24 V via internal transformer  kW 71,6 77,2 86,8 95,4 114,6 128,9 143,3 157,5 172,5  0,83 0,83 0,83 0,83 0,83 0,83 0,83 0,83

AQUACIATPOWER LD		1800R	2000R	2200R	2400R	2650R	2800R	2950R	3200R	3500R
Power circuit supply										
Nominal voltage	V-ph-Hz					400-3-50				
Voltage range	V					360-440				
Control circuit supply					24 V via i	nternal tra	ansforme	7		
Maximum operating input power <sup>(1) or (2)</sup>										
Circuit A&B	kW	201,3	230,0	247,6	272,9	296,3	317,8	329,5	362,6	393,8
Power factor at maximum power <sup>(1) or (2)</sup>				•	•		`	*	•	
Standard unit power factor		0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83
Nominal unit current draw <sup>(4)</sup>										
Standard unit	Α	262,5	300	319,9	357,4	382,6	415,9	428,5	474,4	508
Maximum operating current draw (Un)(1) or (2)										
Standard unit	Α	343,0	392,0	426,9	472,0	511,0	549,6	569,1	627,2	679,2
Maximum current (Un-10%)(1) or (2)							`			
Standard unit	Α	368,2	420,8	454,4	508	544	591,6	609,6	675,2	723,2
Maximum start-up current (Un) (2) + (3)							1	•		
Standard unit	Α	559,8	609,4	762,8	815,0	847,5	893,2	906,2	971,4	1016,9
Unit + Electronic starter option	Α	507,8	557,4	680,2	732,4	764,9	810,6	823,6	888,8	934,3

<sup>(1)</sup> Values at the unit's permanent maximum operating condition (as shown on the unit's nameplate).

 <sup>(2)</sup> Values at the unit's maximum operating condition (as shown on the unit's nameplate).
 (3) Maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor.
 (4) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12 °C/7 °C, outdoor air temperature = 35 °C.



Water chiller & heat pump

### **ELECTRICAL DATA**

### Basic unit (excluding pump)

AQUACIATPOWER ILD		0602R	0700R	0800R	0900R	1000R	1150R	1250R	1400R	1500R	1600R	1750R	2000R
Power circuit supply													
Nominal voltage V	-ph-Hz						400-	3-50					
Voltage range	V						360	-440					
Control circuit supply						24 V vi	a interr	al trans	former				
Maximum operating input power <sup>(1) or (2)</sup>													
Circuit A&B	kW	74,6	84,2	99,4	109,0	118,6	138,7	148,3	168,3	177,9	193,2	207,6	237,2
Power factor at maximum power <sup>(1) or (2)</sup>				,	,	,							
Standard unit power factor		0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83	0,83
Nominal unit current draw <sup>(4)</sup>													
Standard unit	Α	100,8	113,2	134,4	146,8	159,2	186,6	199,0	226,4	238,8	260,0	278,6	318,4
Maximum operating current draw (Un)(1) or (2)													
Standard unit	Α	129,0	145,6	172,0	188,6	205,2	239,9	256,5	291,2	307,8	334,2	359,1	410,4
Maximum current (Un-10%) <sup>(1) or (2)</sup>													
Standard unit	Α	140,7	156,7	187,6	203,6	219,6	258,5	274,5	313,4	329,4	360,3	384,3	439,2
Maximum start-up current (Un) (2) + (3)													
Standard unit	Α	299,8	353,1	341,1	394,4	411	444	460,6	493,6	510,2	534,9	559,8	609,4
Unit + Electronic starter option	Α	256,8	301,1	298,1	342,4	359	392	408,6	441,6	458,2	482,9	507,8	557,4

<sup>(1)</sup> Values at the unit's permanent maximum operating condition (as shown on the unit's nameplate).

<sup>(2)</sup> Values at the unit's maximum operating condition (as shown on the unit's nameplate).

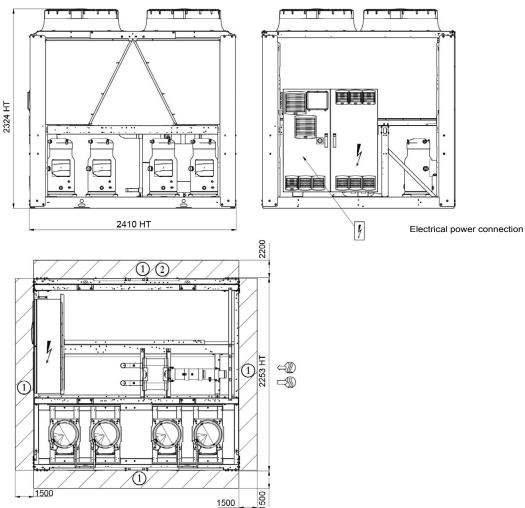
<sup>(3)</sup> Maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor.
(4) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12 °C/7 °C, outdoor air temperature = 35 °C.



Water chiller & heat pump

### **DIMENSIONS**

### AQUACIATPOWER LD 602R to 1100R/ILD 602R to 1000R Without buffer tank



**Key** All dimensions in mm

- (1) Clearance required for maintenance and air flow
- 2 Clearance recommended for coil removal
- ₩ Water inlet
- ₩ Water outlet
- Air outlet, do not obstruct
- Electrical cabinet

### Notes:

Non-contractual drawings.

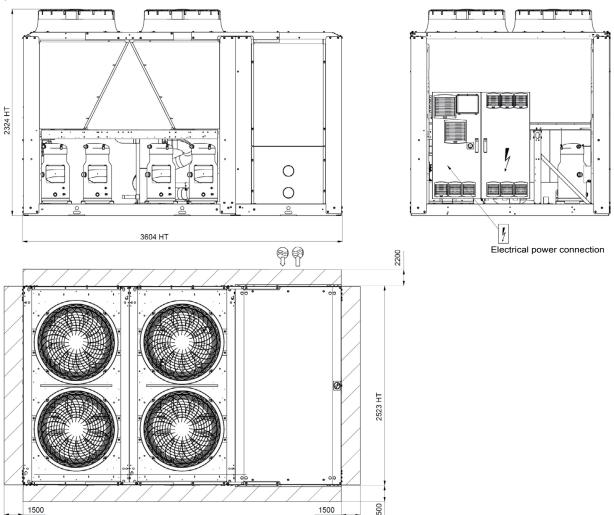
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.



Water chiller & heat pump

### **DIMENSIONS**

### AQUACIATPOWER LD 602R to 1100R/ILD 602R to 1000R With buffer tank



**Key** All dimensions in mm

- 1 Clearance required for maintenance and air flow
- (2) Clearance recommended for coil removal
- **➡** Water inlet
- **₩** Water outlet
- ⟩
  ⟩
  ⟩
  Air outlet, do not obstruct
- Electrical cabinet

#### Notes:

Non-contractual drawings.

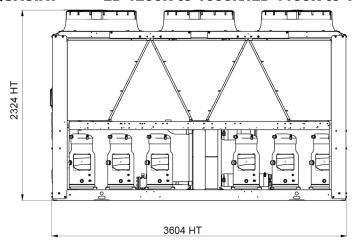
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.

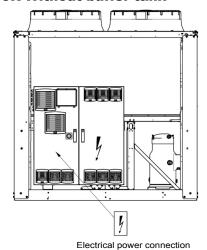


Water chiller & heat pump

### **DIMENSIONS**

### AQUACIATPOWER LD 1200R to 1600R/ILD 1150R to 1500R Without buffer tank





(1)(2)1 1500 1500

**Key** All dimensions in mm

- 1 Clearance required for maintenance and air flow
- 2 Clearance recommended for coil removal

**₩** Water inlet

₩ Water outlet

Air outlet, do not obstruct

Electrical cabinet

#### Notes:

Non-contractual drawings.

When designing a system, refer to the certified dimensional drawings provided with the unit or available on request. Please refer to the certified dimensional drawings for the

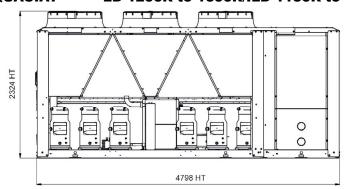
positioning of the fixing points, weight distribution points and centre of gravity coordinates.

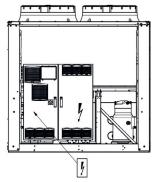


Water chiller & heat pump

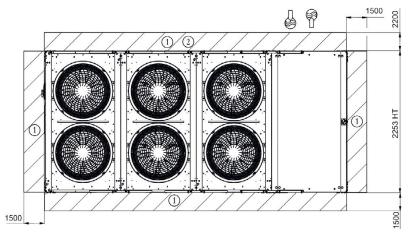
### **DIMENSIONS**

### AQUACIATPOWER LD 1200R to 1600R/ILD 1150R to 1500R With buffer tank





Electrical power connection



**Key** All dimensions in mm

(1) Clearance required for maintenance and air flow

2 Clearance recommended for coil removal

₩ Water inlet

₩ Water outlet

Air outlet, do not obstruct

Electrical cabinet

#### Notes:

Non-contractual drawings.

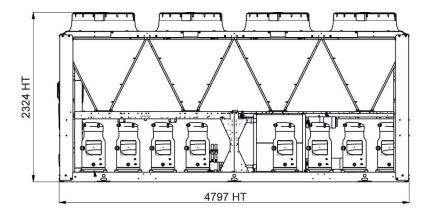
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.

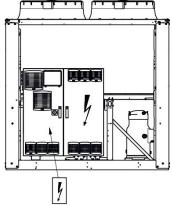


Water chiller & heat pump

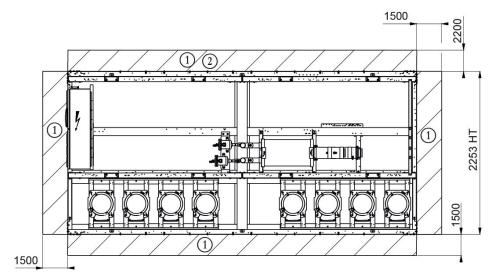
### **DIMENSIONS**

### AQUACIATPOWER LD 1750R to 2000R/ILD 1600R to 2000R Without buffer tank





Electrical power connection



#### Key

All dimensions in mm

① Clearance required for maintenance and air flow

2 Clearance recommended for coil removal

**₩** Water inlet

₩ Water outlet

 $\rangle\rangle\rangle$  Air outlet, do not obstruct

Flectrical cabinet

#### Notes:

Non-contractual drawings.

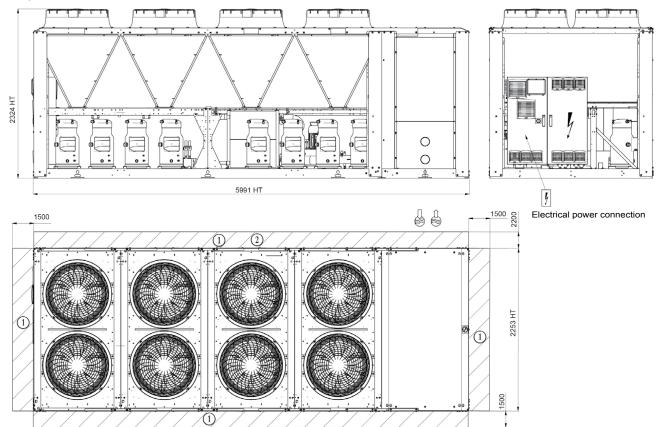
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.



Water chiller & heat pump

### **DIMENSIONS**

#### AQUACIATPOWER LD 1750R to 2000R/ILD 1600R to 2000R With buffer tank



### Key

All dimensions in mm

- 1 Clearance required for maintenance and air flow
- 2 Clearance recommended for coil removal
- **₩** Water inlet
- ₩ Water outlet
- $\rangle\rangle\rangle$  Air outlet, do not obstruct
- Flectrical cabinet

#### Notes:

Non-contractual drawings.

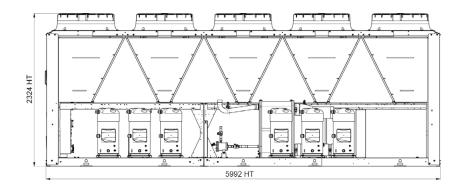
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.

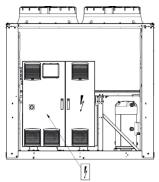


Water chiller & heat pump

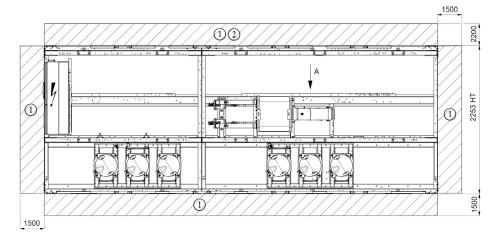
### **DIMENSIONS**

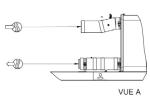
### AQUACIATPOWER LD 2200R to 2650R Without buffer tank





Main hydraulic connection





**Key** All dimensions in mm

1 Clearance required for maintenance and air flow

2 Clearance recommended for coil removal

₩ Water inlet

₩ Water outlet

Air outlet, do not obstruct

4 Electrical cabinet

#### Notes:

Non-contractual drawings.

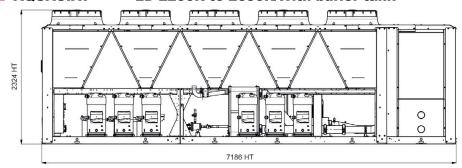
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.

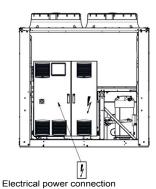


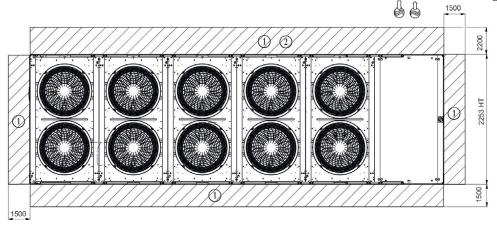
Water chiller & heat pump

### **DIMENSIONS**

### AQUACIATPOWER LD 2200R to 2650R/With buffer tank







#### Key

All dimensions in mm

- Clearance required for maintenance and air flow
- 2 Clearance recommended for coil removal
- **₩** Water inlet
- ₩ Water outlet
- ⟩
  ⟩
  ⟩
  Air outlet, do not obstruct
- Flectrical cabinet

#### Notes:

Non-contractual drawings.

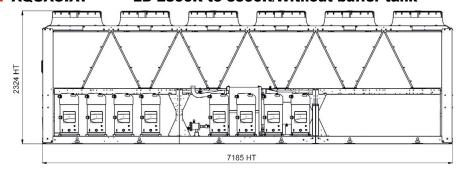
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.

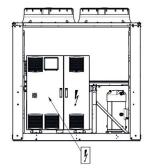


Water chiller & heat pump

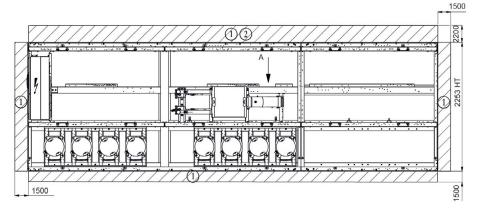
### **DIMENSIONS**

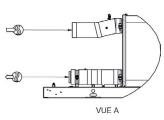
### AQUACIATPOWER LD 2800R to 3500R/Without buffer tank





Electrical power connection





**Key** All dimensions in mm

1 Clearance required for maintenance and air flow

2 Clearance recommended for coil removal

**₩** Water inlet

₩ Water outlet

Air outlet, do not obstruct

Electrical cabinet

#### Notes:

Non-contractual drawings.

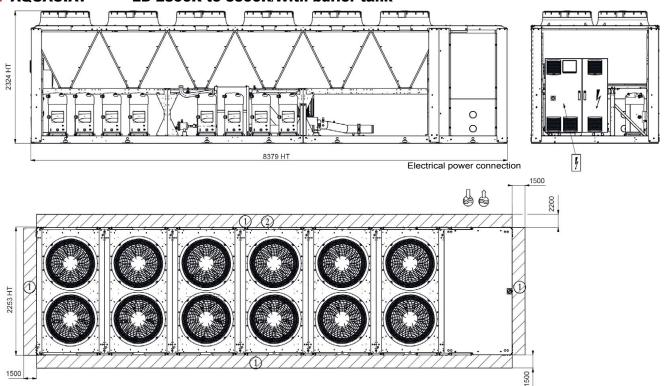
When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.



Water chiller & heat pump

### **DIMENSIONS**

### AQUACIATPOWER LD 2800R to 3500R/With buffer tank



#### Key

All dimensions in mm

- 1 Clearance required for maintenance and air flow
- 2 Clearance recommended for coil removal
- **₩** Water inlet
- ₩ Water outlet
- ??? Air outlet, do not obstruct
- Flectrical cabinet

#### Notes:

Non-contractual drawings.

When designing a system, refer to the certified dimensional drawings provided with the unit or available on request.