



AQUACIAT™ LD ILD

Water chillers
Heat pump



Unit with protection grille option

Compact and silent

Scroll compressors

High-efficiency brazed-plate heat exchanger

All-aluminium micro-channel condenser

Self-adjusting electronic control

Cooling capacity, LD: 40 to 160 kW

Cooling capacity, ILD: 40 to 150 kW

Heating capacity, ILD: 40 to 150 kW



Cooling only



Cooling and heating



Hydronic module



Heat recovery

R-32 

USE

The new generation of **AQUACIAT** high-efficiency air-to-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 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 CO₂ 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** 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, **AQUACIAT** units automatically adjust cooling capacity, anticipating variations in load and starting only the number of compressors needed to ensure optimum operation and energy efficiency.

Thanks to their exceptional thermodynamic performance, provided by radical selection of components, an electronic expansion valve as standard, and a specific control function, standard **AQUACIAT** 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** range guarantees the acoustic comfort of occupants and meets the most sensitive environmental requirements as is the case in Hotels, Offices and Hospitals.

USE

■ Quick, simple installation

With a wide variety of connection accessories and equipment, the **AQUACIAT** 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.



OFFICES



HOTELS



HEALTHCARE

GLOBAL SYSTEM SOLUTIONS



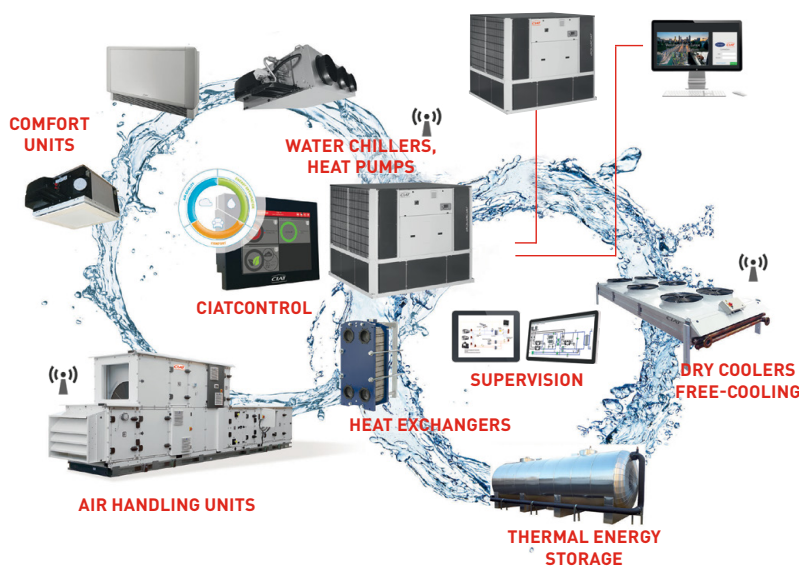
As an expert on customised HVAC solutions, CIAT works to improve the well-being of individuals in their living areas or places of work. Aware of the thermal, energy and air quality issues faced today by every sector of activity, CIAT has responded by developing global systems based on an adapted and efficient combination of products. The latest-generation **AQUACIAT** 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 **AQUACIAT** 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

■ AQUACIAT LD/ILD series

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

■ Operation at high outdoor temperatures (options)

In this configuration, the **AQUACIAT** unit is optimised to operate at outdoor temperatures of +46°C in cooling mode. In this case, the machine is equipped with high-flow variable-speed fans, enabling a wider range of application while preserving the noise level under nominal outdoor conditions.

■ XtraLow Noise Units (option)

In this configuration, the compressors of the **AQUACIAT** unit are covered with a soundproofing jacket, the control of the variable-speed fans ensures the lowest noise level in all circumstances while preserving energy performance.

■ All-season operation (options)

In this configuration, the **AQUACIAT** unit is equipped with variable-speed fans and configured for optimal operation down to outdoor temperatures of -20°C in cooling mode.

DESCRIPTION

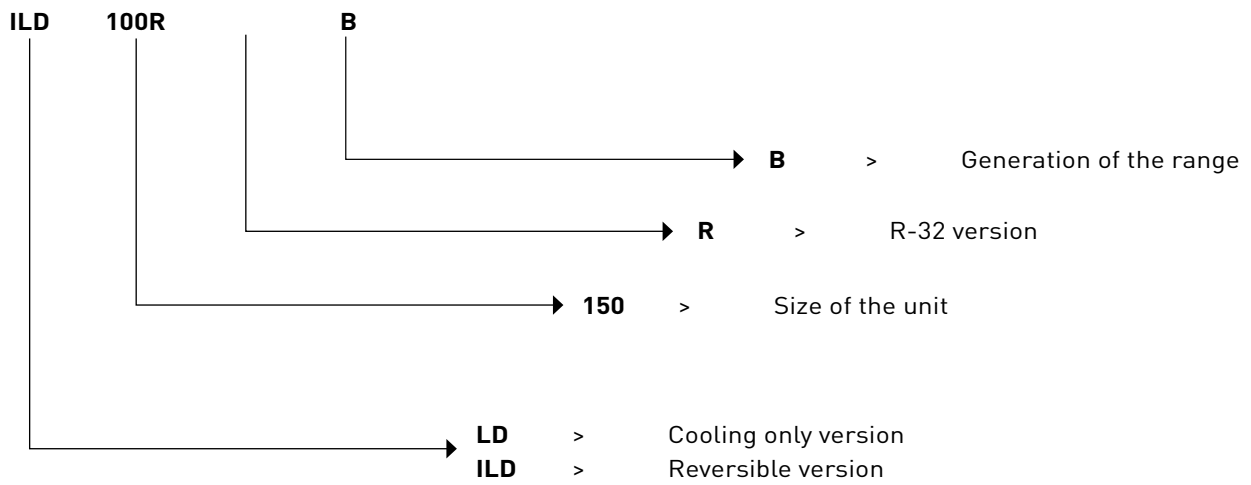
AQUACIAT units are packaged machines supplied as standard with the following components:

- 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:
 - 400V-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 **AQUACIAT** 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 (Comfort Chiller and High Temperature Process Chiller)
 - Regulation (EU) No. 2015/1095 implementing Directive 2009/125/EC with regard to ecodesign requirements (Low and Medium Temperature Process Chiller)

DESCRIPTION



CONFIGURATION

LD-ILD	Standard version
LD-ILD, XLN option	Xtra Low Noise version



DESCRIPTION OF THE MAIN COMPONENTS

■ Compressors

- Hermetic SCROLL type
- Electronic motor overheating protection
- Crankcase resistance (**AQUACIAT ILD**)
- Mounted on anti-vibration mounts

■ Water type heat exchanger

- Brazed-plate exchanger
- Condenser or evaporator mode exchanger on the reversible heat pump version
- Plate profile for high-performance optimisation
- 19-mm armaxflex thermal insulation
- Frost protection with heater

■ Air-cooled exchanger

- Air-cooled exchanger:
 - All-aluminium micro-channel coil, cooling only version
 - Copper tube coil with aluminium fins, reversible heat pump version
- Condenser or evaporator mode exchanger on the reversible heat pump version
- Propeller fans with composite blades offering an optimised profile, fixed-speed as standard or variable-speed as an option
- Motors – IP 54, class F

■ Refrigerant accessories

- Dehumidifier filters
- Hygroscopic sight glasses
- Electronic expansion valves
- Service valves on the liquid line
- 4-way cycle inversion valves in cooling/heating mode on the reversible heat pump version

■ Regulation and safety instruments

- Low and high pressure sensors
- Relief valves on the refrigerant circuit
- Water temperature control sensors
- Evaporator antifreeze sensor
- Factory-fitted evaporator water flow controller

■ Electrical cabinet

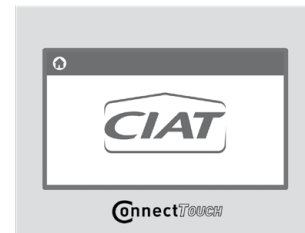
- Electrical cabinet with IP 44 protection rating
- A connection point without neutral
- Front-mounted main safety switch with handle
- Control circuit transformer
- 24 V control circuit
- Fan and compressor motor circuit breaker
- Fan and compressor motor contactors
- Connect Touch microprocessor-controlled electronic control module
- Wire numbering
- Marking of the main electrical components

■ Frame

Frame made from RAL7035 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 6 languages (F-GB-D-E-I-NL)



DESCRIPTION OF THE MAIN COMPONENTS

The electronic control module performs the following main functions:

- Regulation of the 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 runtime balancing
- Self-regulating and proactive functions with adjustment of the control to counter parameter drift
- Optimised defrosting with free defrost function to optimise performance at partial load and the SCOP
- In-series staged power control system on the compressors according to the thermal requirements
- Management of compressor short cycle protection
- Frost protection (exchanger heaters)
- Compressors phase reversal protection
- Management of occupied/unoccupied modes (according to the time schedule)
- Compressor and pump runtime balancing
- Management of the machine operation limit according to outdoor temperature
- Sound level reduction device (night mode according to the user programme) with limitation of compressor capacity and fan speed
- Diagnostics 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
- Lead/Lag management of the two machines in parallel with runtime 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.

■ 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.

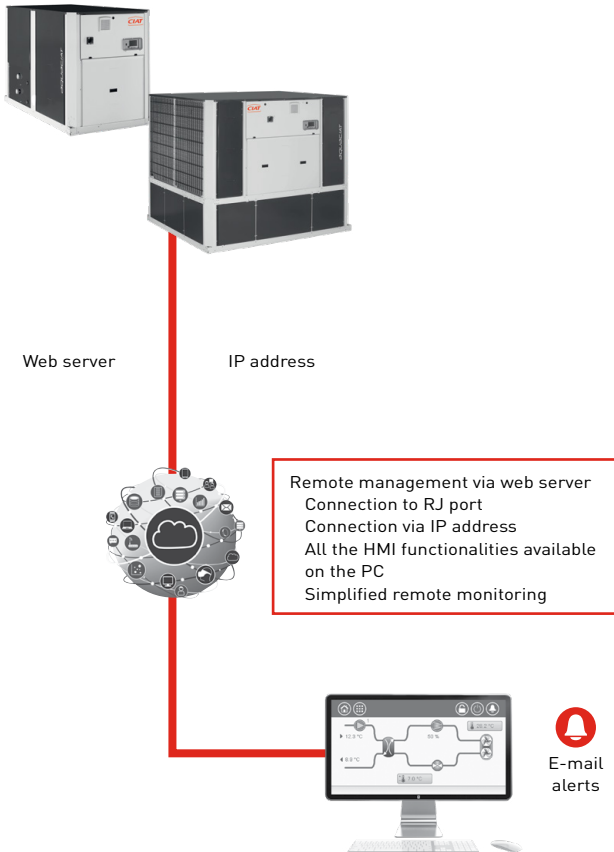
Several contacts are available as standard, enabling the machine to be controlled remotely by wired link:

- 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 recovery using the desuperheater
- Switch control for the customer pump, external to the machine (on/off).
- 0-10V output available for control of a variable flow pump (unit without hydronic module)

DESCRIPTION OF THE MAIN COMPONENTS

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.



■ 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, based on the unit's refrigerant charge, in compliance with the F-GAS regulations

■ SGR Ready

- Heat pump **AQUACIAT ILD** are SGR ready certified, standardized and secured label for integration on the smart electrical networks.



ENVIRONMENTAL RESPONSIBILITY

The **AQUACIAT** contributes to sustainable development via an environmentally responsible approach, aimed at balancing ecological and economic concerns. This enables it to meet the requirements of future European thermal regulations and to protect our environment for future generations.

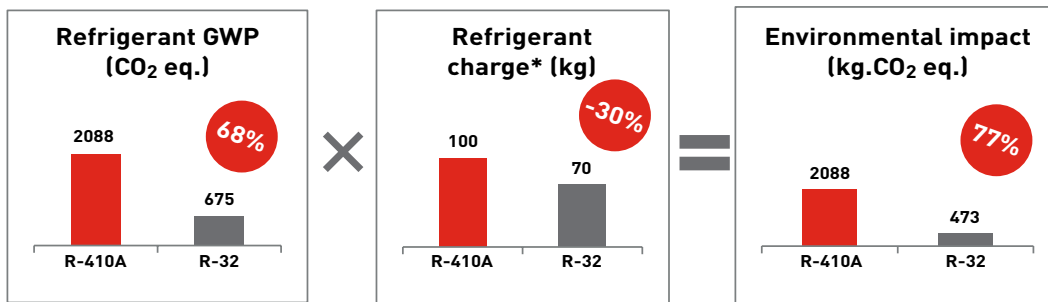
The impact of an air conditioning system on global warming of the planet is in large part caused by CO₂ emissions released into the atmosphere when the electricity required to power the unit is produced (indirect effect) and in small part by CO₂ emissions linked to uncontrolled emissions of refrigerant with global warming potential into the atmosphere (direct effect).

With **AQUACIAT**, it's a win-win situation: Its low charge of R-32 refrigerant with low GWP reduces the direct environmental impact by 80% while reducing the indirect environmental impact thanks to its high energy performance.

■ 77% reduction in the direct environmental impact (refrigerant)

This performance is the result of the high-quality components used, which have all been rigorously selected:

- R-32 refrigerant with low environmental impact (Ozone depletion potential =0, Global warming potential =675)
- Aluminium micro-channel coil on LD chiller versions with a 40% reduction in refrigerant charge compared to a conventional coil
- New generation of copper tube coil-aluminium fins on ILD heat pump versions with a 30% reduction in refrigerant charge compared to a conventional coil
- Asymmetrical brazed-plate heat exchanger (BPHE) with a reduction in the refrigerant charge compared to a shell and tube heat exchanger
- Systematic tightness check of units in leak detection cabinets at end of line production



In conclusion, the direct environmental impact potential of the AQUACIAT with R-32 refrigerant is reduced by 77% compared to the previous R-410A generation.

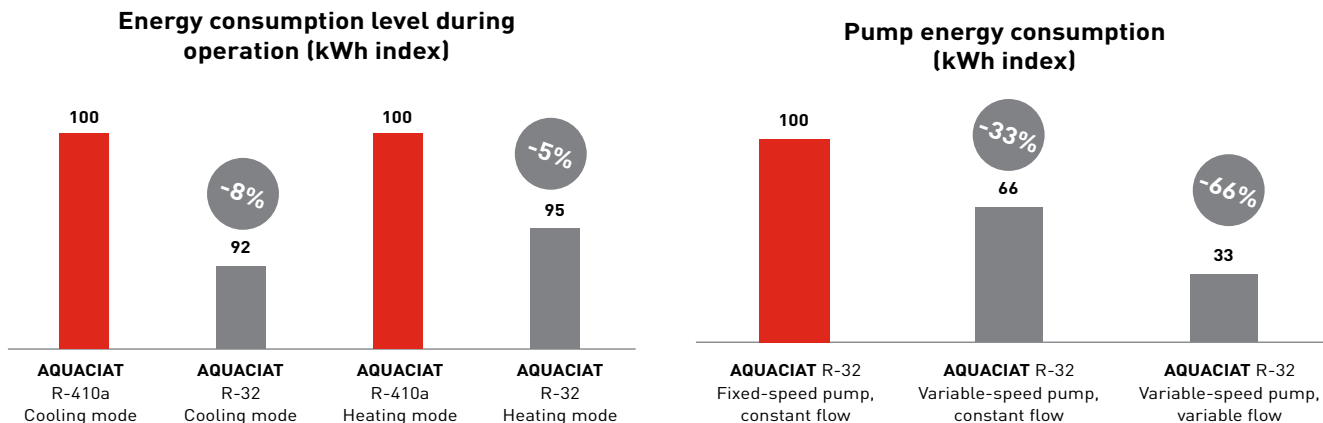
ENVIRONMENTAL RESPONSIBILITY

■ Reduced indirect environmental impact (Energy)

The high energy performance offered by **AQUACIAT R-32** enables energy consumption to be greatly reduced, thereby cutting energy bills for the user whilst reducing the unit's carbon footprint.

The seasonal efficiency of the **AQUACIAT R-32** in cooling mode is 8% greater than that of the previous version with R-410A and 5% greater in heating mode.

In addition, the **AQUACIAT** unit with R-32 refrigerant can be equipped with a variable-speed pump with constant or variable water flow control to significantly reduce pumping energy costs.



This performance is the result of the high-quality components used, which have all been rigorously selected:

- R-32 refrigerant with high energy performance,
- New generation of scroll compressors optimised for R-32 refrigerant
- Asymmetrical brazed-plate heat exchanger with extremely low water-side pressure drops enabling a reduction in pump electricity consumption
- Optional variable-speed pump enabling automatic adjustment of the rated water flow rate (disposal of the control valve), during operation and during unit shut down periods.

To conclude, the AQUACIAT unit with R-32 refrigerant and variable-speed pump greatly reduces the indirect environmental impact compared to the previous generation R-410A.

■ EcoPassport®

The PEP ecopassport® programme provides an international reference framework for procedures enabling manufacturers to report the environmental specifications of their products in the form of an environmental claim known as a Product Environmental Profile (PEP).

The PEP ecopassport® programme guarantees that PEPs are correctly drawn up, verified and reported in line with the requirements of the ISO 14025 and IEC/PAS 62545 standards.

The Life Cycle Analysis (LCA) PEP is the environmental identity card for an item of equipment which details the environmental impacts of the product during its life cycle according to eight mandatory indicators:

1. Global Warming Potential
2. Impact on the ozone layer
3. Acidification of soil and water
4. Eutrophication of water
5. Photochemical ozone creation
6. Abiotic resource depletion
7. Fresh water consumption
8. Total use of primary energy during the life cycle



Products with certified environmental profiles are used to support methods to assess building sustainability such as BREEAM, LEED. BREEAM, LEED gives additional recognition for materials with robust environmental product declaration types using manufacturer data.

CIAT is the first HVAC manufacturer to provide the PEP for liquid chillers and heat pumps including not only the 8 mandatory indicators, but all 27 indicators.

The **AQUACIAT** PEP can be downloaded from the PEP ecopassport® website: <http://www.pep-ecopassport.org/fr/>



TECHNICAL CHARACTERISTICS - REVERSIBLE HEAT PUMP

AQUACIAT ILD			360R	390R	450R	520R	600R	
Standard unit								
Heating Full load performances*	HA1	Nominal capacity	kW	93,3	107	119	137	123
		COP	kW/kW	3,80	3,80	3,80	3,80	3,03
	HA2	Nominal capacity	kW	91,7	105	118	135	150
		COP	kW/kW	3,10	3,09	3,09	3,08	3,00
Seasonal energy efficiency**	HA1	SCOP _{30/35°C}	kWh/kWh	3,61	3,56	3,79	3,76	3,78
		ns heat _{30/35°C}	%	141	139	149	147	148
		P _{rated}	kW	60	68	87	100	109
Cooling Full load performances*	CA1	Nominal capacity	kW	87,0	99,9	114	132	147
		EER	kW/kW	2,88	2,84	2,93	2,85	2,66
	Seasonal energy efficiency**		SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,48	4,86	4,88	4,20
SEPR _{12/7°C} Process high temp.			kWh/kWh	5,82	5,82	5,89	5,48	5,24
Unit with Heating Optimized option								
Heating Full load performances*	HA1	Nominal capacity	kW	94,4	108	120	137	123
		COP	kW/kW	3,94	3,87	3,88	3,90	3,13
	HA2	Nominal capacity	kW	92,9	106	119	136	151
		COP	kW/kW	3,25	3,18	3,18	3,20	3,15
Seasonal energy efficiency**	HA1	SCOP _{30/35°C}	kWh/kWh	3,77	3,71	3,95	3,98	4,00
		ns heat _{30/35°C}	%	148	145	155	156	157
		P _{rated}	kW	60	69	88	100	109
Cooling Full load performances*	CA1	Nominal capacity	kW	83,4	96,0	110	127	143
		EER	kW/kW	2,77	2,74	2,83	2,76	2,58
Seasonal energy efficiency**		SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,29	4,63	4,66	4,10	4,02
		SEPR _{12/7°C} Process high temp.	kWh/kWh	5,52	5,49	5,58	5,33	5,16
Sound levels								
Standard unit and High outdoor temperature option								
Sound power ⁽¹⁾			dB(A)	92,0	92,0	92,0	92,5	92,0
Sound pressure at 10 m ⁽²⁾			dB(A)	60,5	60,5	60,5	61,0	60,5
Sound power ECODESIGN SCOPC conditions			dB(A)	84,5	82,0	82,5	90,0	90,0
Unit + Xtra Low Noise option								
Sound power ⁽¹⁾			dB(A)	83,5	83,5	83,5	83,5	83,5
Sound pressure at 10 m ⁽²⁾			dB(A)	52,0	52,0	51,5	52,0	51,5
Sound power ECODESIGN SCOPC conditions			dB(A)	82,0	80,0	81,0	86,0	85,0

* In accordance with standard EN14511-3:2022.
 ** In accordance with EN14825:2022, average climatic conditions
 HA1 Heating mode conditions: Water type heat exchanger water inlet/outlet temperature 30°C/35°C, outdoor air temperature tdb/twb = 7°C db/6°C wb, evaporator fouling factor 0 m². k/W
 HA2 Heating mode conditions: Water type heat exchanger water inlet/outlet temperature 40°C/45°C, outdoor air temperature tdb/twb = 7°C db/6°C wb, evaporator fouling factor 0 m². k/W
 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
ns heat_{30/35°C} & SCOP_{30/35°C} Values in bold comply with Ecodesign Regulation (EU) No. 813/2013 for Heating applications
SEER_{12/7°C} & SEPR_{12/7°C} Applicable Ecodesign regulation (EU) No. 2016/2281
 (1) in dB ref=10⁻¹² W, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3 dB(A)). Measured in accordance with ISO 9614-1.
 (2) In dB ref 20 µPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 (with an associated uncertainty of +/-3 dB(A)). For information, calculated from the sound power Lw(A).



Eurovent certified values

CARRIER participates in the ECP programme for LCP-HP Check ongoing validity of certificate: www.eurovent-certification.com



TECHNICAL CHARACTERISTICS - REVERSIBLE HEAT PUMP

AQUACIAT ILD		360R	390R	450R	520R	600R
Dimensions						
Standard unit						
Length	mm	2275	2275	2275	2275	2275
Width	mm	2125	2125	2125	2125	2125
Height	mm	1330	1330	1330	1330	1330
Unit height (XtraFan option)	mm	1372	1372	1372	1372	1372
Unit height (optional buffer tank)	mm	1931	1931	1931	1931	1931
Unit height (XtraFan + buffer tank option)	mm	1973	1973	1973	1973	1973
Operating weight ⁽³⁾						
Standard unit						
Unit + single high pressure pump option	kg	779	838	891	1021	1025
Unit + dual high pressure pump option	kg	805	864	923	1054	1058
Unit + single high pressure pump and buffer tank options	kg	1197	1256	1309	1439	1443
Unit + dual high pressure pump and buffer tank options	kg	1223	1282	1341	1472	1476
Compressors						
Hermetic Scroll 48,3 r/s						
Circuit A		2	3	3	2	2
Circuit B		-	-	-	2	2
No. of control stages		2	3	3	4	4
Refrigerant⁽³⁾						
R-32 / A2L/ PRP= 675 in accordance with AR4						
Circuit A	kg	15,20	15,70	19,63	8,95	9,15
	tCO _{2e}	10,3	10,6	13,3	6,0	6,2
Circuit B	kg	-	-	-	8,95	9,15
	tCO _{2e}	-	-	-	6,0	6,2
Oil charge						
Circuit A	l	7	11	11	7	7
Circuit B	l	-	-	-	7	7
Capacity control						
Connect' Touch						
Minimum capacity	%	50	33	33	25	25
PED category						
III						
Condenser						
Grooved copper tubes and aluminium fins						
Fans						
Axial with rotating impeller						
Standard unit						
Quantity		2	2	2	2	2
Maximum total air flow	l/s	10904	10904	10904	11226	11226
Maximum rotation speed	rps	16	16	16	16	16
Evaporator						
Direct expansion brazed-plate heat exchanger						
Water volume	l	7	8	10	13	14
Max. water-side operating pressure without hydronic module	kPa	1000	1000	1000	1000	1000
Hydronic module (option)						
Pump, Victaulic screen filter, relief valve, water and air vent valve, pressure sensors						
Pump		Centrifugal pump, monocell, 48,3 r/s, low- or high pressure (as required), single or dual (as required)				
Expansion vessel volume (option) ⁽⁴⁾	l	12	35	35	35	35
Buffer tank volume (optional)	l	208	208	208	208	208
Max. water-side operating pressure with hydronic module	kPa	400	400	400	400	400
Water connections with or without hydronic module						
Victaulic® type						
Connections	inches	2	2	2	2	2
External diameter	mm	60	60	60	60	60
Casing paint colour						
Colour code RAL 7035 & 7024						

(3) Values are guidelines only. Refer to the unit name plate.

(4) When delivered, the standard pre-infiltration of the tank is not necessarily the optimal value of the system. To permit changing the water volume, change the inflation pressure to a pressure that is close to the static head of the system. Fill the system with water (purging the air) to a pressure value that is 10 to 20kPa higher than the pressure in the tank

ELECTRICAL SPECIFICATIONS

AQUACIAT LD/ILD	150R	180R	200R	202R	240R	260R	300R	360R	390R	450R	520R	600R		
Power circuit supply														
Nominal voltage	V-ph-Hz		400-3-50											
Voltage range	V		360-440											
Control circuit supply														
24 V via internal transformer														
Maximum operating input power^{(1) or (2)}														
Circuit A&B	kW		19	21	24	24	28	31	36	41	48	55	63	71
Power factor at maximum power^{(1) or (2)}														
Displacement Power Factor (Cos Phi), standard unit			0,81	0,82	0,82	0,82	0,84	0,84	0,85	0,82	0,84	0,85	0,84	0,85
Nominal unit current draw⁽⁴⁾														
Standard unit	A		26	29	35	35	36	46	52	59	71	81	91	104
Maximum operating current draw (Un)^{(1) or (2)}														
Standard unit	A		34	37	42	42	48	54	60	72	84	93	108	121
Maximum current (Un-10%)^{(1) or (2)}														
Standard unit	A		37	39	44	44	51	58	65	77	89	99	115	129
Maximum start-up current (Un) ^{(2) + (3)}														
Standard unit	A		116	118	165	165	169	177	191	238	206	223	231	251

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

(2) 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.

■ Short circuit current withstand capability (TN system⁽¹⁾)

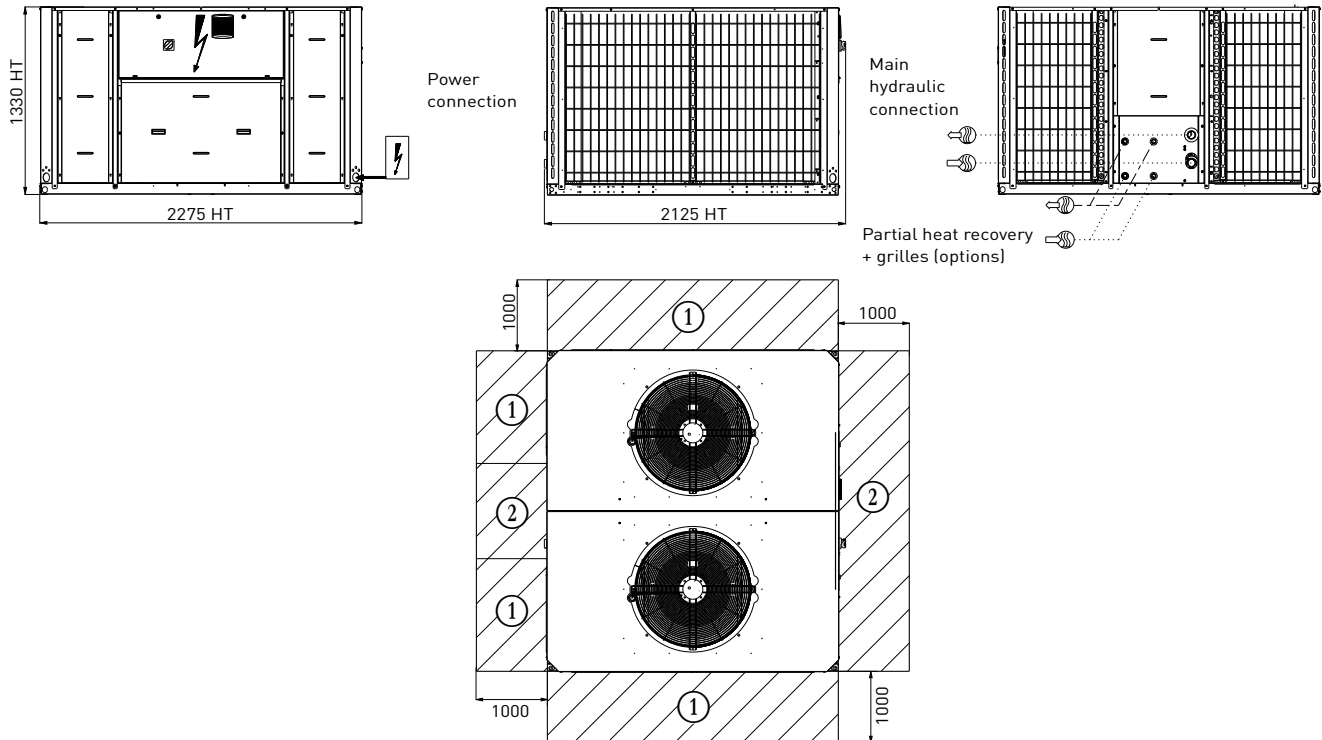
AQUACIAT LD/ILD	150R	180R	200R	202R	240R	260R	300R	360R	390R	450R	520R	600R		
Rated short-circuit withstand currents														
Short time (1s) assigned current - I _{cw}	kA eff		3,36	3,36	3,36	3,36	3,36	3,36	5,62	5,62	5,62	5,62	5,62	5,62
Allowable peak assigned current - I _{pk}	kA pk		20	20	20	20	20	20	15	20	20	15	20	15
Value with upstream protection														
Conditional short circuit assigned current I _{cc}	kA eff		40	40	40	40	40	40	40	40	40	30	30	30
Associated protection	Circuit breaker/Schneider													
Associated protection	NS 100H	NS 100H	NS 100H	NS 100H	NS 100H	NS 100H	NS 100H	NS 100H	NS 100H	NS 100H	NS 160H	NS 160H	NS 250H	NS 250H

(1) If another current limitation protection device is used, its time-current and thermal constraint (I²t) trip characteristics must be at least equivalent to those of the recommended protection.

Note: The short-circuit stability current values given above are suitable for the TN system.

DIMENSIONS

■ AQUACIAT LD-ILD 360R to 600R 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.

Refer to the certified dimensional drawings for:

- The location of the fixing points,
- The weight distribution,
- The centre of gravity coordinates,
- Details of the XtraFan and return air frame option connections.