



POWERCAT LX

Water chillers

Energy excellence !

Eurovent-certified

SEER up to 4,7, SEPR up to 6,2

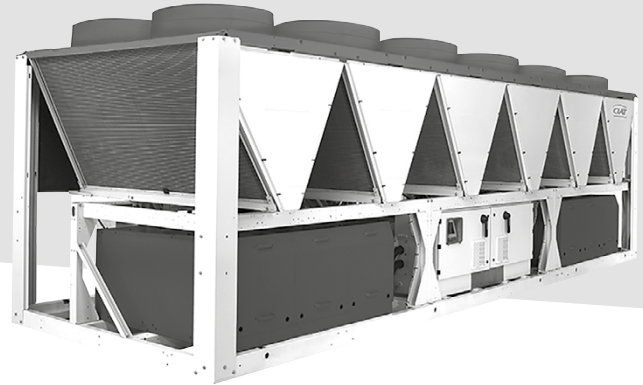
Operating range from -20 °C to +55 °C

Compact and silent

High-efficiency flooded shell and tube evaporator

Aluminium micro-channel condenser

Hydraulic module & heat recovery



Cooling capacity : 277 à 1512 kW



Cooling only



Hydraulic module



Heat recovery



USE

The latest generation of **POWERCAT** high-efficiency air-to-water water chillers are the perfect solution for all cooling applications in the Offices, Healthcare, Industry, Administration, Shopping Centres and Collective Housing markets.

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

POWERCAT is optimised to use ozone-friendly HFC R134a refrigerant.

This range guarantees compliance with the most demanding requirements for increased seasonal energy efficiency (SEER and SEPR) and CO₂ reduction to comply with the various applicable European directives and regulations.

RANGE

■ **POWERCAT series LX XE**



Premium cooling only version.

The product is optimised for part load applications and fulfils the provisions of the new Ecodesign regulation governing comfort and process applications, while also facilitating a return on investment. In this case, the machine is equipped with EC type variable-speed fans as standard, enabling the optimum part load efficiency to be achieved throughout the year

■ **POWERCAT series LX HE**



Cooling only version High seasonal energy efficiency.

The product is optimised for part load applications and fulfils the provisions of the new Ecodesign regulation governing comfort and process applications. In this case, the machine is equipped as standard with variable-speed fans with AC motor and external speed regulator, allowing for optimisation of the part load efficiency throughout the year.

DESCRIPTION

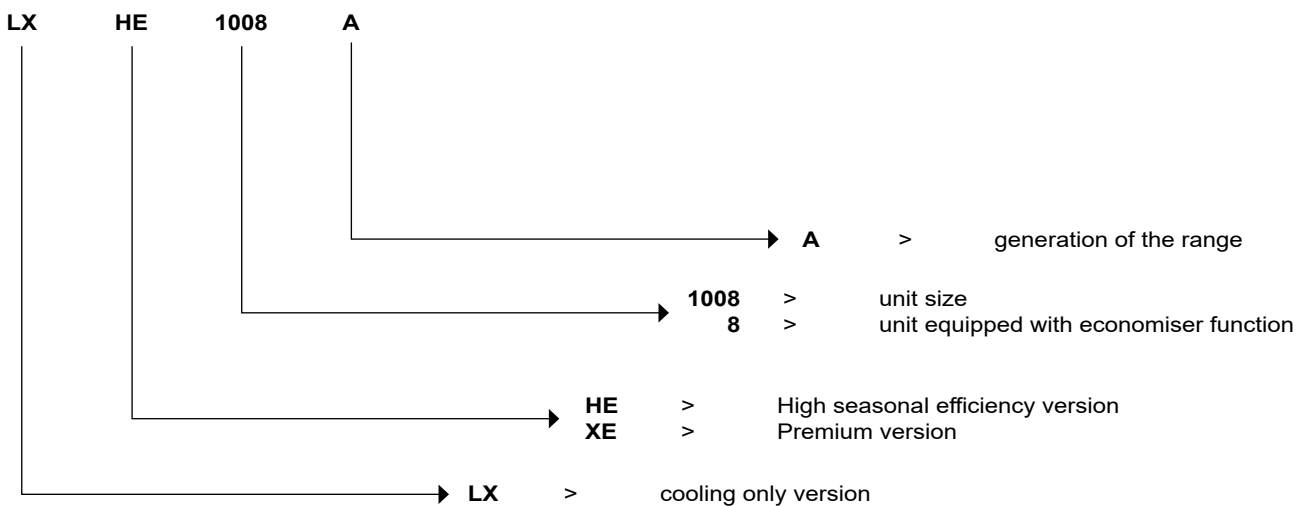
POWERCAT units are packaged machines supplied as standard with the following components:

- Twin-screw semi-hermetic compressors
- Flooded shell and tube type chilled-water evaporator
- Air-cooled exchanger, all-aluminium micro-channel coil with 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 POWERCAT range complies with the following EC directives and standards:

- Machinery directive 2006/42/EC.
- Electromagnetic compatibility directive 2014/30/EU.
- EMC immunity and emissions EN 61800-3 'C3'
- Low voltage directive 2014/35/EU.
- RoHS 2011/65/EU
- Pressure equipment directive (PED) 2014/68/EU
- Machinery directive EN 60-204 - 1
- Refrigeration systems and heat pumps EN 378-2
- Regulation (EU) no. 2016/2281 implementing directive 2009/125/EC with regard to Ecodesign requirements

DESCRIPTION



CONFIGURATION

HE	High Seasonal Efficiency
HE LN option	High Seasonal Efficiency Low Noise
HE XLN option	High Seasonal Efficiency Xtra Low Noise
HE SLN option	High Seasonal Efficiency Super Low Noise

XE	Premium
XE Option LN	Premium Low Noise
XE Option XLN	Premium Xtra Low Noise

DESCRIPTION OF THE MAIN COMPONENTS

■ Compressors

- Twin-screw semi-hermetic type
- 2 screws fitted on ball and roller bearings
- Continuous powerCTRL
- Built-in electric motor, cooled by intake gases
- Integral electronic protection of the motor against thermal and electrical overloads
- Monitoring of rotation direction, absence of phase, over and under voltage, and power supply failure
- Monitoring of lubrication under differential pressure
- Built-in oil filter
- Internal pressure surge valve and valve to prevent reverse rotation during shutdown phases
- Monitoring of maximum head pressure
- Oil separator with integrated silencer to reduce pulses from the discharged gas
- Star-delta start limiting the in-rush current

■ Shell and tube evaporator

- High performance glandless technology
- Copper tube bundle with internal and external grooves
- 19-mm thermal insulation
- Victaulic type coupling
- Maximum pressure, water side, of 10 bar **(21 bar as option)**

■ Condenser

- air-cooled exchanger, all-aluminium micro-channel coil
- propeller fans with composite blades offering an optimised profile, variable speed (HE and XE versions)
- motors – IP 54, class F

■ Refrigerating accessories

- Dehumidifier filters with rechargeable cartridges
- hygroscopic sight glasses
- electronic expansion valves
- service valves on the liquid line

■ 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 protection rating: IP 44 (IP 54 optional)
- A connection point without neutral for sizes 808 to 3028
- Two connection points without neutral for sizes 3428 to 4608 (one connection point optional)
- 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

■ Chassis

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

■ Connect Touch control module

- User interface with 4.3-inch touchscreen
- Intuitive, user - friendly navigation using icons
- Clear text display of information available in 9 languages (F-GBD- NL-E-I-P-RU +Chinese)



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
- i n-series staged powerCTRL system on the compressors according to the thermal requirements
- management of compressor short-cycle protection
- frost protection (exchanger heater option)
- phase reversal protection
- 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)
- 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.

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
- 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.
- switch control for the customer pump, external to the machine (on/off).

Contacts available as an option:

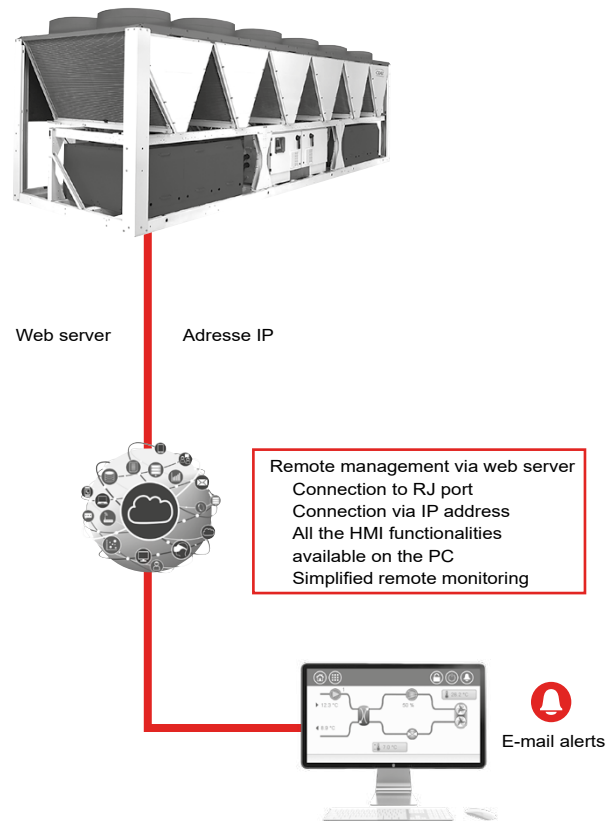
- setpoint adjustable via 4-20 mA signal: this input is used to adjust the setpoint in COOLING mode
- power limitation adjustable by 4-20 mA signal
- Second power limitation level
- Power indication: analogue output (0-10 V) providing an indication of the unit's load rate.
- user fault reporting, enables 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.

■ 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.

AVAILABLE OPTIONS

Options	Description	Advantages	LX HE/XE
Medium-temperature brine solution	Implementation of new algorithms of control and evaporator redesign to allow chilled brine solution production down to -12°C when ethylene glycol is used (-8°C with propylene glycol)	Covers specific applications such as ice storage and industrial processes	•
Low-temperature brine solution	Implementation of new algorithms of control and evaporator redesign to allow chilled brine solution production down to -15°C when ethylene glycol is used (-10°C with propylene glycol)	Covers specific applications such as ice storage and industrial processes	•
Light-brine solution, down to -3°C	Implementation of new algorithms of control to allow chilled brine solution production down to -3°C when ethylene glycol is used (0°C with propylene glycol)	Matches with most application requirements for ground-sourced heat pumps and fits with many industrial processes requirements	•
Unit equipped for air discharge ducting	Fans equipped with discharge connection flanges - maximum available pressure 60 Pa	Facilitates connections to the discharge ducts	•
Low Noise	Aesthetic and sound absorbing compressor enclosure	Noise level reduction	•
Xtra Low Noise	Acoustic compressor enclosure and low-speed fans	Noise emission reduction at reduced fan speed	•
Super Low Noise	Acoustic compressor enclosure, low-speed fans and enhanced sound insulation of main noise sources	Noise level reduction in sensitive environments	1308-4608
IP54 control box	Increased leak tightness of the unit	Protects the inside of the electrical box from dust, water and sand. As a rule, this option is recommended for installations located in polluted environments	•
Tropicalisation of the electrical box	Electrical box equipped with an electrical heater and a fan. Electrical connections on the compressors painted with a special varnish.	Grant safe operation in typical "tropical" climate. This option is recommended for all applications where humidity inside the electrical box can reach 80% at 40°C and unit can remain in stand-by for a long time under this conditions.	•
Protection grilles	Metal grilles on the 4 unit sides.	Improves protection against intrusion to the unit interior, and protects the coil and piping against impacts.	•
230 V electrical plug	230 V AC power supply source provided with plug socket and transformer (180 VA, 0.8 A)	Permits connection of a laptop or an electrical device during unit commissioning or servicing	•
Water exchanger frost protection	Electric resistance heater on the water exchanger and discharge valve	Water exchanger frost protection down to -20°C outside temperature	•
Evaporator & hydraulic module frost protection	Electric resistance heater on water exchanger, discharge valve and hydraulic module	Water exchanger and hydraulic module frost protection down to -20°C outside temperature	Sizes 808 to 1108
Total heat recovery	Unit equipped with additional heat exchanger in parallel with the condenser coils.	Production of free hot-water simultaneously with chilled water production	Sizes 808 to 3028
Evaporator with one pass less	Evaporator with one pass more on the water	Optimise chiller operation when the chilled water circuit is designed with low waterflows (high delta T evaporator inlet/outlet)	Sizes 808-3028
Master/slave operation	side	Optimised operation of two units connected in parallel operation with operating time equalisation	•
21 bar evaporator	Reinforced evaporator for extension of the maximum water-side service pressure to 21 bar (standard 10 bar)	Covers applications with a high water column evaporator side (typically high buildings)	•
Single power connection point	Unit power connection via one main supply connection	Quick and easy installation	Sizes 3428 to 4608
Evap. and pumps with aluminum jacket	Evaporator and pumps covered with an aluminum sheet for thermal insulation protection	Improved resistance to aggressive climate conditions	Sizes 0808-1108
Reversed evaporator water connections	Evaporator with reversed water inlet/outlet	Easy installation on sites with specific requirements	•
Service valve set	Liquid line valve (evaporator inlet), compressor suction and discharge line valves and economiser line valve	Allow isolation of various refrigerant circuit components for simplified service and maintenance	•
Evaporator with one pass more	Evaporator with one pass more on the water side	Optimise chiller operation when the chilled water circuit is designed with low waterflows (high delta T evaporator inlet/outlet)	•
Set point adjustment by 4-20mA signal	Connections to allow a 4-20mA signal input	Easy energy management, allow to adjust set point by a 4-20mA external signal	•
Lon gateway	Two-directional communication board complying with Lon Talk protocol	Connects the unit by communication bus to a building management system	•
HP single-pump hydraulic module	Complete hydraulic module equipped with water filter, relief valve, one high pressure pump and drain valve. For more details, refer to the dedicated chapter (expansion tank not included; option with built-in safety hydraulic components available).	Quick and easy installation (plug & play)	Sizes 808 to 1108

• ALL MODELS

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

AVAILABLE OPTIONS

Options	Description	Advantages	LX HE/XE
HP dual-pump hydraulic module	Dual high pressure water pump, water filter, electronic water flow control, pressure transducers. For more details, refer to the dedicated chapter (expansion tank not included; option with built-in safety hydraulic components available)	Quick and easy installation (plug & play)	Sizes 808 to 1108
LP single-pump hydraulic module	Single 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 safety hydraulic components available)	Quick and easy installation (plug & play)	Sizes 808 to 1108
LP dual-pump hydraulic 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 safety hydraulic components available)	Quick and easy installation (plug & play)	Sizes 808 to 1108
Dual relief valves on 3-way valve	Three-way valve upstream of dual relief valves on the shell and tubes evaporator	Valve replacement and inspection facilitated without refrigerant loss. Conforms to European standard EN378/BGVD4	Sizes 808 to 3028
Compliance with Swiss regulations	Additional tests on the water heat exchangers: supply (additional of PED documents) supplementary certificates and test certifications	Compliance with Swiss regulations	•
Compliance with Russian regulations	EAC certification	Compliance with Russian regulations	•
Bacnet over IP	Bi-directional high-speed communication using BACnet protocol over Ethernet network (IP)	Easy, high-speed connection by Ethernet line to a building management system. Allows access to multiple unit parameters	•
Energy Management Module	Control board with additional inputs/outputs. See Contacts available in option on control description	Extended remote control capabilities (setpoint reset by 0-20 mA input, ice storage end, demand limits, boiler on/off command...)	•
7" user interface	Control supplied with a 7 inch colour touch screen user interface	Enhanced ease of use	•
Input contact for Refrigerant leak detection	0-10 V signal to report any refrigerant leakage in the unit directly on the controller (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 Australian regulations	Unit approved to Australian code	Compliance with Australian regulations	•
Insulation of the evap. in/ out ref. lines	Thermal insulation of the evaporator entering/leaving refrigerant lines with flexible, UV resistant insulation	Prevents condensation on the evaporator entering/ leaving refrigerant lines	•
MCHE anti-corrosion protection Protect2	Coating by 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 100% coverage. No heat transfer variation, salt spray resistance test for 4000 hours (ASTM B117)	Protect2 Improved corrosion resistance of the MCHE coils by 2, recommended for use in moderately corrosive environments	•
MCHE anti-corrosion protection Protect4	Extremely durable and flexible epoxy polymer coating applied on micro channel coils by electro coating process, final UV protective topcoat. Minimal heat transfer variation, tested 6000 hours constant neutral salt spray per ASTM B117, superior impact resistance per ASTM D2794	Protect4 Improved corrosion resistance of the MCHE coils by 4, recommended for use in corrosive environments	•
Evaporator with aluminium jacket	Evaporator covered with an aluminium sheet for thermal insulation protection	Improved resistance to aggressive climate conditions	•
Expansion tank	6 bar expansion tank integrated in the hydraulic module (requires hydraulic module option)	Easy and fast installation (plug & play), & protection of closed water systems from excessive pressure	Sizes 808 to 1108
Anti-vibration mounts	Elastomer anti-vibration mounts to be placed under the unit (material classified B2 fire class according to DIN 4102).	Isolate the unit from the building, avoid transmission of vibrations and associated noise to the building. Must be used in conjunction with a flexible connection on the water side	•
Free cooling drycooler management	Control & connections to a free cooling drycooler Opera or Vextra fitted with the FC control box option	Easy system management, extended control capabilities to a drycooler used in free cooling mode	•
Variable Water Flow control	Hydraulic control function package that permits control of the water flow rate based on different possible logics (at customer choice): constant ΔT , constant outlet pressure and fixed-speed control	When variable-speed pumps on the primary circuit, the VWF control modulates flow rate through the evaporator, minimising pump consumption while ensuring safe/optimised chiller operation	Sizes 808 to 1108

• ALL MODELS

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

TECHNICAL SPECIFICATIONS

POWERCIAT LX HE		0808	0908	1008	1108	1358	1528	1858	2008	2158		
Cooling												
LX HE standard Full load performances*	CA1	Nominal capacity	kW	277	300	322	392	444	494	623	676	730
		EER	kW/kW	3,15	3,12	3,08	3,18	3,11	3,08	3,22	3,28	3,10
LX HE with Xtra & Super Low Noise option Full load performances*	CA1	Nominal capacity	kW	271	293	313	384	432	478	607	659	709
		EER	kW/kW	3,13	3,08	3,00	3,16	3,03	2,93	3,13	3,20	2,97
LX HE standard Seasonal energy efficiency**		SEER _{12/7 °C} Comfort low temp.	kWh/kWh	4,47	4,46	4,40	4,33	4,56	4,55	4,55	4,62	4,56
		η _{s cool} _{12/7 °C}	%	176	175	173	170	179	179	182	179	179
		SEPR _{12/7 °C} Process high temp.	kWh/kWh	5,70	5,69	5,65	5,78	5,72	5,74	5,68	5,79	5,63
LX HE with medium-temperature brine solution option Seasonal energy efficiency**		SEPR _{-2/-8 °C} Process medium temp.***	kWh/kWh	2,72	3,02	3,18	2,81	3,51	3,56	3,65	3,67	3,44
LX HE with variable water flow control option Seasonal energy efficiency**		SEER _{12/7 °C} Comfort low temp.	kWh/kWh	4,47	4,47	4,43	4,49	-	-	-	-	-
		η _{s cool} _{12/7 °C}	%	176	176	174	177	-	-	-	-	-
		SEPR _{12/7 °C} Process high temp.	kWh/kWh	5,72	5,71	5,68	5,83	-	-	-	-	-
LX HE with low-temperature brine solution option Seasonal energy efficiency**		SEPR _{-2/-8 °C} Process medium temp.***	kWh/kWh	3,29	3,46	3,52	3,26	3,42	3,50	3,50	3,62	3,38
LX HE with Xtra & Super Low Noise option Seasonal energy efficiency**		SEER _{12/7 °C} Comfort low temp.	kWh/kWh	4,49	4,48	4,41	4,33	4,56	4,57	4,56	4,62	4,56
		η _{s cool} _{12/7 °C}	%	176	176	173	170	179	180	179	182	179
		SEPR _{12/7 °C} Process high temp.	kWh/kWh	5,82	5,88	5,79	5,57	5,70	5,79	5,92	5,93	5,79
LX HE with medium-temperature brine solution, Xtra & super low noise options Seasonal energy efficiency**		SEPR _{-2/-8 °C} Process medium temp.***	kWh/kWh	2,75	3,10	3,29	2,83	3,54	3,67	3,79	3,82	3,55
LX HE with variable water flow control option & Xtra & super low noise Seasonal energy efficiency**		SEER _{12/7 °C} Comfort low temp.	kWh/kWh	4,47	4,47	4,42	4,47	-	-	-	-	-
		η _{s cool} _{12/7 °C}	%	176	176	174	176	-	-	-	-	-
		SEPR _{12/7 °C} Process high temp.	kWh/kWh	5,84	5,91	5,82	5,61	-	-	-	-	-
LX HE with low-temperature brine solution, Xtra & super low noise options Seasonal energy efficiency**		SEPR _{-2/-8 °C} Process medium temp.***	kWh/kWh	3,35	3,58	3,71	3,38	3,64	3,61	3,63	3,78	3,50
Sound levels												
LX HE												
Sound power ⁽¹⁾		dB(A)	99	99	99	99	101	99	101	99	103	
Sound pressure at 10 m ⁽²⁾		dB(A)	67	67	67	67	69	67	68	66	70	
LX HE + Low Noise option												
Sound power ⁽¹⁾		dB(A)	93	93	94	95	95	95	97	96	97	
Sound pressure at 10 m ⁽²⁾		dB(A)	61	61	62	63	63	63	64	63	64	
LX HE + Xtra low noise option												
Sound power ⁽¹⁾		dB(A)	87	87	87	90	91	91	93	92	94	
Sound pressure at 10 m ⁽²⁾		dB(A)	55	55	55	58	59	59	60	59	61	
LX HE + Super low noise option												
Sound power ⁽¹⁾		dB(A)	-	-	-	-	89	89	91	90	91	
Sound pressure at 10 m ⁽²⁾		dB(A)	-	-	-	-	57	57	58	57	58	

* In accordance with standard EN14511-3:2018.
 ** In accordance with standard EN14825:2016, average climate
 *** 30 % brine solution
 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
η_{s cool} _{12/7 °C} & SEER _{12/7 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Comfort application**
SEPR _{12/7 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Process application**
SEPR _{-2/-8 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2015/1095 for Process application**
 - Non applicable
 (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 +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.
 (2) In dB ref 20μPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power L_w(A).



Eurovent certified values

TECHNICAL SPECIFICATIONS

POWERCAT LX HE		0808	0908	1008	1108	1358	1528	1858	2008	2158
Dimensions										
LX HE										
Length	mm	3604	3604	3604	4798	4798	4798	7186	7186	7186
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽³⁾										
LX HE standard	kg	3081	3112	3132	3729	3791	3852	4878	5024	5282
LX HE Unit + Low noise option	kg	3349	3380	3400	4028	4090	4151	5209	5355	5613
Compressors		06T semi-hermetic screw, 50 r/s								
Circuit A		1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1
Refrigerant⁽³⁾		R134a								
Circuit A	kg	39	37	37	52	53	55	60	61	69
	tCO ₂ e	55,8	52,9	52,9	74,4	75,8	77,9	85,8	87,2	98,0
Circuit B	kg	40,0	38	39	40,0	40	37,0	61	64	61
	tCO ₂ e	57,2	54,3	55,8	57,2	57,2	52,9	87,2	91,5	86,5
Oil										
Circuit A	l	20,8	20,8	20,8	23,5	23,5	23,5	23,5	23,5	27,6
Circuit B	l	20,8	20,8	20,8	20,8	20,8	20,8	23,5	23,5	23,5
Capacity control		Connect Touch, electronic expansion valve (EXV)								
Minimum capacity	%	15	15	15	15	15	15	15	15	15
Air-cooled exchanger		Aluminium micro-channel coils (MCHE)								
Fans										
LX HE		Axial type, with rotating impeller, FLYING-BIRD 6								
Quantity		6	6	6	8	8	8	11	12	12
Maximum total air flow	l/s	28920	28920	28920	38560	38560	38560	53020	57840	57840
Maximum rotation speed	r/s	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7
LX HE Unit + Xtra Low Noise option										
Maximum total air flow	l/s	23580	23580	23580	31440	31440	31440	43230	47160	47160
Maximum rotation speed	r/s	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7
Exchanger		Flooded multi-pipe type								
Water volume	l	58	61	61	66	70	77	79	94	98
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000
Hydraulic 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	l	50	50	50	50	50	80			
Max. water-side operating pressure with hydraulic module	kPa	400	400	400	400	400	400			
Water connections with or without hydraulic module		Victaulic® type								
Connections	inch	5 or 4	5 or 4	5 or 4	5 or 4	5 or 4	5 or 4	5	6	6
External diameter ⁽⁴⁾	mm	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	141,3	168,3	168,3
Casing paintwork		Colour code RAL 7035 & RAL 7024								

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

(2) In dB ref 20µPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power Lw(A).

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

(4) Depends on the number of passes on the evaporator



Eurovent certified values

TECHNICAL SPECIFICATIONS

POWERCAT LX HE			2308	2528	2628	3028	3428	3828	4008	4408	4608	
Cooling												
LX HE standard Full load performances*	CA1	Nominal capacity	kW	782	825	899	983	1143	1262	1330	1441	1512
		EER	kW/kW	3,10	3,08	3,12	3,17	3,22	3,19	3,16	3,05	3,07
LX HE with Xtra & Super Low Noise option Full load performances*	CA1	Nominal capacity	kW	757	795	878	969	1113	1226	1290	1392	1464
		EER	kW/kW	2,93	2,89	2,99	3,03	3,11	3,05	2,98	2,82	2,89
LX HE standard Seasonal energy efficiency**	SEER 12/7 °C Comfort low temp.		kWh/kWh	4,55	4,56	4,56	4,60	4,58	4,61	4,55	4,55	4,55
	ηs cool 12/7 °C		%	179	179	179	181	180	181	179	179	179
	SEPR 12/7 °C Process high temp.		kWh/kWh	NA	5,55	5,54	5,83	5,76	5,71	5,68	5,56	NA
LX HE with medium-temperature brine solution option Seasonal energy efficiency**	SEPR -2/-8 °C Process medium temp.***		kWh/kWh	3,35	3,53	3,44	3,55	3,52	3,47	3,60	3,63	NA
	SEER 12/7 °C Comfort low temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
LX HE with variable water flow control option Seasonal energy efficiency**	ηs cool 12/7 °C		%	-	-	-	-	-	-	-	-	-
	SEPR 12/7 °C Process high temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
	SEPR -2/-8 °C Process medium temp.***		kWh/kWh	3,34	3,47	3,39	3,47	3,29	2,63	3,45	3,53	NA
LX HE with Xtra & Super Low Noise option Seasonal energy efficiency**	SEER 12/7 °C Comfort low temp.		kWh/kWh	4,58	4,56	4,57	4,56	4,60	4,62	4,59	4,56	4,55
	ηs cool 12/7 °C		%	180	179	180	179	181	182	181	179	179
	SEPR 12/7 °C Process high temp.		kWh/kWh	5,72	5,80	5,76	5,88	5,90	5,81	5,71	5,68	5,52
LX HE with medium-temperature brine solution, Xtra & super low noise options Seasonal energy efficiency**	SEPR -2/-8 °C Process medium temp.***		kWh/kWh	3,57	3,66	3,55	3,78	3,61	3,31	3,22	3,27	3,28
	SEER 12/7 °C Comfort low temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
LX HE with variable water flow control option & Xtra & super low noise Seasonal energy efficiency**	ηs cool 12/7 °C		%	-	-	-	-	-	-	-	-	-
	SEPR 12/7 °C Process high temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
	SEPR -2/-8 °C Process medium temp.***		kWh/kWh	3,55	3,59	3,47	3,70	3,58	3,44	3,67	3,67	3,45
Sound levels												
LX HE												
Sound power ⁽¹⁾			dB(A)	103	101	104	102	103	102	104	104	104
Sound pressure at 10 m ⁽²⁾			dB(A)	70	68	71	69	70	69	71	71	71
LX HE + Low Noise option												
Sound power ⁽¹⁾			dB(A)	98	97	99	98	98	98	100	99	99
Sound pressure at 10 m ⁽²⁾			dB(A)	65	64	66	65	65	65	67	66	66
LX HE + Xtra low noise option												
Sound power ⁽¹⁾			dB(A)	94	94	95	94	94	94	99	95	96
Sound pressure at 10 m ⁽²⁾			dB(A)	61	61	62	61	61	61	66	62	63
LX HE + Super low noise option												
Sound power ⁽¹⁾			dB(A)	92	91	93	92	93	93	97	94	95
Sound pressure at 10 m ⁽²⁾			dB(A)	59	58	60	59	60	60	64	61	62

* In accordance with standard EN14511-3:2018.
 ** In accordance with standard EN14825:2016, average climate
 *** 30 % brine solution
 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
ηs cool 12/7 °C & SEER 12/7 °C **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Comfort application**
SEPR 12/7 °C **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Process application**
SEPR -2/-8 °C **Bold values compliant to Ecodesign Regulation (EU) No. 2015/1095 for Process application**
 NA Not authorised for the specific application for the CEE market
 - Non applicable
 (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 +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.
 (2) In dB ref 20µPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power Lw(A).



Eurovent certified values

TECHNICAL SPECIFICATIONS

POWERCAT LX HE		2308	2528	2628	3028	3428	3828	4008	4408	4608
Dimensions										
LX HE										
Length	mm	7186	7186	8380	9574	11962	11962	11962	11962	13157
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽³⁾										
LX HE standard	kg	5594	5643	6262	6772	8061	8202	8793	8868	9218
LX HE Unit + Low noise option	kg	5925	5974	6593	7103	8435	8576	9167	9242	9592
Compressors										
06T semi-hermetic screw, 50 r/s										
Circuit A		1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1
Refrigerant⁽³⁾										
R134a										
Circuit A	kg	69	69	72	79	82	84	115	121	124
	tCO _{2e}	98,7	98,7	103,0	113,0	117,3	120,1	164,5	173,0	177,3
Circuit B	kg	67	67	74	83	118	130	121	127	130
	tCO _{2e}	95,8	95,8	105,8	118,7	168,7	185,9	173,0	181,6	185,9
Oil										
Circuit A	l	27,6	27,6	27,6	27,6	27,6	27,6	36,0	36,0	36,0
Circuit B	l	23,5	23,5	27,6	27,6	36,0	36,0	36,0	36,0	36,0
Capacity control										
Connect Touch, electronic expansion valve (EXV)										
Minimum capacity	%	15	15	15	15	15	15	15	15	15
Air-cooled exchanger										
Aluminium micro-channel coils (MCHE)										
Fans										
Axial type, with rotating impeller, FLYING-BIRD 6										
LX HE										
Quantity		12	12	14	16	20	20	20	20	22
Maximum total air flow	l/s	57840	57840	67480	77120	96400	96400	96400	96400	106040
Maximum rotation speed	r/s	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7
LX HE Unit + Xtra Low Noise option										
Maximum total air flow	l/s	47160	47160	55020	62880	78600	78600	78600	78600	86460
Maximum rotation speed	r/s	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7
Exchanger										
Flooded multi-pipe type										
Water volume	l	119	119	130	140	164	174	180	189	189
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000
Water connections with or without hydraulic module										
Victaulic® type										
Connections	inch	6	6	6	8	6	6	6	6	6
External diameter	mm	168,3	168,3	168,3	219,1	168,3	168,3	168,3	168,3	168,3
Casing paintwork										
Colour code RAL 7035 & RAL 7024										

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

(2) In dB ref 20µPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power L_w(A).

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

(4) Depends on the number of passes on the evaporator



Eurovent certified values

TECHNICAL SPECIFICATIONS

POWERCAT LX XE			0808	0908	1008	1108	1358	1528	1858	2008	2158	
Cooling												
LX XE standard Full load performances*	CA1	Nominal capacity	kW	277	301	323	392	445	500	623	677	730
		EER	kW/kW	3,21	3,18	3,14	3,23	3,16	3,23	3,27	3,34	3,14
LX XE with Xtra Low Noise option Full load performances*	CA1	Nominal capacity	kW	271	293	313	384	432	486	607	659	709
		EER	kW/kW	3,17	3,11	3,03	3,20	3,05	3,13	3,16	3,23	2,99
LX XE standard Seasonal energy efficiency**	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	4,66	4,64	4,55	4,50	4,62	4,67	4,66	4,77	4,61
	η_s cool_{12/7 °C}		%	183	183	179	177	182	184	183	188	181
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	6,12	6,16	6,11	6,06	6,01	6,13	NA	6,18	5,81
LX XE with medium-temperature brine solution option Seasonal energy efficiency**	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	2,86	3,26	3,39	2,97	3,67	3,80	3,84	4,02	3,61
	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	4,59	4,57	4,52	4,61	-	-	-	-	-
LX XE with variable water flow control option Seasonal energy efficiency**	η_s cool_{12/7 °C}		%	180	180	178	181	-	-	-	-	-
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	6,13	6,18	6,15	6,10	-	-	-	-	-
	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	3,51	3,72	3,78	3,64	3,62	3,72	3,68	3,96	3,55
LX XE with low-temperature brine solution option Seasonal energy efficiency**	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	4,67	4,67	4,56	4,49	4,59	4,64	4,65	4,78	4,60
	η_s cool_{12/7 °C}		%	184	184	179	176	181	183	183	188	181
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	6,09	6,18	6,08	5,88	5,90	6,11	6,07	6,23	5,85
LX XE with medium-temperature brine solution, Xtra low noise options Seasonal energy efficiency**	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	2,85	3,25	3,42	2,94	3,64	3,70	3,93	3,97	3,64
	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	4,59	4,59	4,51	4,58	-	-	-	-	-
LX XE with variable water flow control option & Xtra low noise Seasonal energy efficiency**	η_s cool_{12/7 °C}		%	181	181	177	180	-	-	-	-	-
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	6,11	6,20	6,11	5,91	-	-	-	-	-
	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	3,47	3,74	3,89	3,52	3,75	3,79	3,77	3,93	3,59
Sound levels												
LX XE												
Sound power ⁽¹⁾		dB(A)		99	99	99	99	101	99	101	99	103
Sound pressure at 10 m ⁽²⁾		dB(A)		67	67	67	67	69	67	68	67	70
LX XE + low noise option												
Sound power ⁽¹⁾		dB(A)		93	93	94	95	95	95	97	96	97
Sound pressure at 10 m ⁽²⁾		dB(A)		61	61	62	63	63	63	65	63	64
LX XE + Xtra low noise option												
Sound power ⁽¹⁾		dB(A)		87	87	87	90	91	91	93	92	94
Sound pressure at 10 m ⁽²⁾		dB(A)		55	55	55	58	59	59	60	59	61
LX HE + Super low noise option												
Sound power ⁽¹⁾		dB(A)		-	-	-	-	89	89	91	90	91
Sound pressure at 10 m ⁽²⁾		dB(A)		-	-	-	-	56	56	57	56	58

* In accordance with standard EN14511-3:2018.
 ** In accordance with standard EN14825:2016, average climate
 *** 30 % brine solution
 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
η_s cool_{12/7 °C} & SEER_{12/7 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Comfort application**
SEPR_{12/7 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Process application**
SEPR_{-2/-8 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2015/1095 for Process application**
 NA Not authorised for the specific application for the CEE market
 - Non applicable
 (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 +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.
 (2) In dB ref 20μPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power L_w(A).



Eurovent certified values

TECHNICAL SPECIFICATIONS

POWERCAT LX XE		0808	0908	1008	1108	1358	1528	1858	2008	2158
Dimensions										
Standard unit										
Length	mm	3604	3604	3604	4798	4798	5992	7186	7186	7186
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽³⁾										
LX XE standard	kg	3040	3071	3090	3683	3746	4091	4807	4941	5208
LX XE + low noise option	kg	3308	3339	3358	3982	4045	4390	5138	5272	5539
Compressors		06T semi-hermetic screw, 50 r/s								
Circuit A		1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1
Refrigerant⁽³⁾		R134a								
Circuit A	kg	39	37	37	52	53	59	60	61	69
	tCO _{2e}	55,8	52,9	52,9	74,4	75,8	83,7	85,8	87,2	98,0
Circuit B	kg	40	38	39	40	40	36	61	64	61
	tCO _{2e}	57,2	54,3	55,8	57,2	57,2	51,5	87,2	91,5	86,5
Oil										
Circuit A	l	20,8	20,8	20,8	23,5	23,5	23,5	23,5	23,5	27,6
Circuit B	l	20,8	20,8	20,8	20,8	20,8	20,8	23,5	23,5	23,5
Capacity control		Connect Touch, electronic expansion valve (EXV)								
Minimum capacity	%	15	15	15	15	15	15	15	15	15
Air-cooled exchanger		Aluminium micro-channel coils (MCHE)								
Fans										
LX XE		Axial type, with rotating impeller								
Quantity		6	6	6	8	8	9	11	12	12
Maximum total air flow	l/s	28920	28920	28920	38560	38560	43380	53020	57840	57840
Maximum rotation speed	r/s	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7
LX XE + Xtra low noise option										
Maximum total air flow	l/s	23580	23580	23580	31440	31440	35370	43230	47160	47160
Maximum rotation speed	r/s	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7
Exchanger		Flooded multi-pipe type								
Water volume	l	58	61	61	66	70	77	79	94	98
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000
Hydraulic 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	l	50	50	50	50	50	80			
Max. water-side operating pressure with hydraulic module	kPa	400	400	400	400	400	400			
Water connections with or without hydraulic module		Victaulic® type								
Connections	inch	5 or 4	5 or 4	5 or 4	5 or 4	5 or 4	5 or 4	5	6	6
External diameter	mm	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	114,3 or 141,3	141,3	168,3	168,3
Casing paintwork		Colour code RAL 7035 & RAL 7024								

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

TECHNICAL SPECIFICATIONS

POWERCAT LX XE			2308	2528	2628	3028	3428	3828	4008	4408	4608	
Cooling												
LX XE standard Full load performances*	CA1	Nominal capacity	kW	782	837	899	982	1143	1262	1330	1441	1512
		EER	kW/kW	3,13	3,27	3,15	3,21	3,28	3,24	3,20	3,08	3,11
LX XE with Xtra Low Noise option Full load performances*	CA1	Nominal capacity	kW	757	813	872	969	1113	1227	1290	1391	1466
		EER	kW/kW	2,95	3,13	2,98	3,06	3,16	3,06	3,01	2,84	2,91
LX XE standard Seasonal energy efficiency**	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	4,58	4,68	4,61	4,69	4,70	4,72	4,62	4,63	4,62
	η_s cool_{12/7 °C}		%	180	184	181	185	185	186	182	182	182
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	5,69	5,96	5,84	5,83	5,90	5,87	5,99	5,65	6,16
LX XE with medium-temperature brine solution option Seasonal energy efficiency**	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	3,63	3,83	3,67	3,66	3,77	3,66	3,70	3,72	3,24
	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
LX XE with variable water flow control option Seasonal energy efficiency**	η_s cool_{12/7 °C}		%	-	-	-	-	-	-	-	-	-
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	3,61	3,75	3,64	3,58	3,45	3,73	3,59	3,69	3,42
LX XE with Xtra Low Noise option Seasonal energy efficiency**	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	4,57	4,66	4,58	4,67	4,68	4,70	4,57	4,56	4,56
	η_s cool_{12/7 °C}		%	180	183	180	184	184	185	180	179	179
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	5,85	5,97	5,87	5,91	6,17	6,12	5,98	5,77	5,98
LX XE with medium-temperature brine solution, Xtra low noise options Seasonal energy efficiency**	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	3,68	3,75	3,65	3,72	3,55	3,49	3,41	3,45	3,46
	SEER_{12/7 °C} Comfort low temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
LX XE with variable water flow control option & Xtra low noise Seasonal energy efficiency**	η_s cool_{12/7 °C}		%	-	-	-	-	-	-	-	-	-
	SEPR_{12/7 °C} Process high temp.		kWh/kWh	-	-	-	-	-	-	-	-	-
	SEPR_{-2/-8 °C} Process medium temp.***		kWh/kWh	3,67	3,69	3,64	3,65	3,69	3,70	3,93	3,87	3,50
Sound levels												
LX XE												
Sound power ⁽¹⁾		dB(A)		103	101	104	102	103	102	104	104	104
Sound pressure at 10 m ⁽²⁾		dB(A)		70	68	71	69	70	69	71	71	71
LX XE + low noise option												
Sound power ⁽¹⁾		dB(A)		98	97	99	98	98	98	100	99	99
Sound pressure at 10 m ⁽²⁾		dB(A)		65	64	66	65	65	65	67	66	66
LX XE + Xtra low noise option												
Sound power ⁽¹⁾		dB(A)		94	94	95	94	94	94	99	95	96
Sound pressure at 10 m ⁽²⁾		dB(A)		61	61	62	61	61	61	66	62	63
LX HE + Super low noise option												
Sound power ⁽¹⁾		dB(A)		92	91	93	92	93	93	97	94	95
Sound pressure at 10 m ⁽²⁾		dB(A)		59	58	60	59	60	60	64	61	62

* In accordance with standard EN14511-3:2018.
 ** In accordance with standard EN14825:2016, average climate
 *** 30 % brine solution
 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
η_s cool_{12/7 °C} & SEER_{12/7 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Comfort application**
SEPR_{12/7 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2016/2281 for Process application**
SEPR_{-2/-8 °C} **Bold values compliant to Ecodesign Regulation (EU) No. 2015/1095 for Process application**
 - Non applicable
 (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 +/-3dB(A). Measured in accordance with ISO 9614-1 and certified by Eurovent.
 (2) In dB ref 20μPa, 'A' weighted. Declared dual-number noise emission values in accordance with ISO 4871 with an associated uncertainty of +/-3dB(A). For information, calculated from the sound power Lw(A).
 NA Not authorised for the specific application for the CEE market



Eurovent certified values

TECHNICAL SPECIFICATIONS

POWERCAT LX XE		2308	2528	2628	3028	3428	3828	4008	4408	4608
Dimensions										
Standard unit										
Length	mm	7186	8380	8380	9574	11962	11962	11962	11962	13157
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽³⁾										
LX XE standard	kg	5520	5889	6172	6668	7945	8082	8698	8773	9087
LX XE + low noise option	kg	5851	6220	6503	6999	8319	8456	9072	9147	9461
Compressors										
06T semi-hermetic screw, 50 r/s										
Circuit A		1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1
Refrigerant⁽³⁾										
R134a										
Circuit A	kg	69	75	72	79	82	84	115	121	124
	tCO _{2e}	98,7	107,3	103,0	113,0	117,3	120,1	164,5	173,0	177,3
Circuit B	kg	67	67	74	83	118	130	121	127	130
	tCO _{2e}	95,8	95,8	105,8	118,7	168,7	185,9	173,0	181,6	185,9
Oil										
Circuit A	l	27,6	27,6	27,6	27,6	27,6	27,6	36,0	36,0	36,0
Circuit B	l	23,5	23,5	27,6	27,6	36,0	36,0	36,0	36,0	36,0
Capacity control										
Connect Touch, electronic expansion valve (EXV)										
Minimum capacity	%	15	15	15	15	15	15	15	15	15
Air-cooled exchanger										
Aluminium micro-channel coils (MCHE)										
Fans										
Axial type, with rotating impeller, FLYING-BIRD 6										
LX XE										
Quantity		12	14	14	16	20	20	20	20	22
Maximum total air flow	l/s	57840	67480	67480	77120	96400	96400	96400	96400	106040
Maximum rotation speed	r/s	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7
LX XE + Xtra low noise option										
Maximum total air flow	l/s	47160	55020	55020	62880	78600	78600	78600	78600	86460
Maximum rotation speed	r/s	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7
Exchanger										
Flooded multi-pipe type										
Water volume	l	119	119	130	140	164	174	180	189	189
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000
Water connections with or without hydraulic module										
Victaulic® type										
Connections	inch	6	6	6	8	6	6	6	6	6
External diameter	mm	168,3	168,3	168,3	219,1	168,3	168,3	168,3	168,3	168,3
Casing paintwork										
Colour code RAL 7035 & RAL 7024										

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

TECHNICAL SPECIFICATIONS

Basic unit (excluding pump)

POWERCAT LX HE	0808	0908	1008	1108	1358	1528	1858	2008	2158	2308	2528	2628	3028	
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⁾ - LX HE														
Standard unit	kW	127	138	148	174	194	212	260	280	310	329	359	381	446
Unit + Xtra / Super Low Noise option	kW	122	132	143	166	186	205	250	269	300	318	349	369	432
Power factor at maximum power⁽²⁾ - LX HE														
Displacement Power Factor (Cos Phi)		0,90	0,90	0,89	0,90	0,90	0,90	0,90	0,90	0,89	0,89	0,89	0,88	0,89
Displacement Power Factor (Cos Phi) unit + Xtra / Super Low noise option		0,90	0,90	0,89	0,90	0,90	0,90	0,90	0,90	0,89	0,89	0,89	0,88	0,89
Nominal unit current draw⁽³⁾ - LX HE														
Standard unit	A	148	164	180	207	238	259	320	345	396	417	433	495	533
Unit + Xtra / Super Low Noise option	A	138	154	170	195	226	247	304	326	377	398	414	473	509
Maximum operating current draw (Un)⁽¹⁾ - LX HE														
Standard unit	A	204	222	240	279	312	342	417	449	504	534	580	625	723
Unit + Xtra / Super Low Noise option	A	195	213	231	267	300	330	401	432	487	517	563	605	700
Maximum current (Un-10 %)⁽²⁾ - LX HE														
Standard unit	A	216	235	254	295	330	362	441	475	534	566	615	663	767
Unit + Xtra / Super Low Noise option	A	207	226	245	283	318	350	425	458	517	549	598	643	744
Start-up current⁽³⁾ + ⁽⁴⁾ - LX HE														
Standard unit	A	246	246	262	379	480	480	539	564	738	759	759	839	858
Unit + Xtra / Super Low Noise option	A	241	241	257	374	475	475	531	555	730	751	751	828	846
Maximum start-up current (Un)⁽²⁾ + ⁽⁴⁾ - LX HE														
Standard unit	A	275	293	293	408	511	511	618	618	783	813	813	906	955
Unit + Xtra / Super Low Noise option	A	270	288	288	403	506	506	610	609	775	805	805	895	943

(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 inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

(a) When the machines are equipped with two power supplies, circuit 1 is intended to supply refrigerant circuit A and circuit 2 supplies refrigerant circuit B. For units LX 3428 to 4608: circuit 1 supplies circuit A, circuit 2 supplies circuit B

TECHNICAL SPECIFICATIONS

POWERCAT LX HE		3428	3828	4008	4408	4608
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⁾ - LX HE						
Standard unit						
Circuit 1 ^(a)	kW	194	223	264	284	307
Circuit 2 ^(a)	kW	284	308	282	305	307
Single power connection point option	kW	478	532	546	588	614
Unit with Xtra & Super Low Noise option						
Circuit 1 ^(a)	kW	187	216	255	274	297
Circuit 2 ^(a)	kW	275	298	273	296	297
Single power connection point option	kW	461	514	528	570	594
Power factor at maximum power⁽¹⁾ - LX HE						
Standard unit						
Displacement Power Factor (Cos Phi)		0,89	0,89	0,89	0,89	0,89
Unit + Xtra & Super low noise option						
Displacement Power Factor (Cos Phi)		0,89	0,89	0,89	0,89	0,89
Nominal unit current draw⁽²⁾ - LX HE						
Standard unit						
Circuit 1 ^(a)	A	251	267	334	347	382
Circuit 2 ^(a)	A	350	386	347	379	382
Single power connection point option	A	601	652	681	726	764
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	239	255	319	332	366
Circuit 2 ^(a)	A	334	367	332	364	366
Single power connection point option	A	572	621	650	695	731
Maximum operating current draw (Un)⁽¹⁾ - LX HE						
Standard unit						
Circuit 1 ^(a)	A	316	362	430	460	498
Circuit 2 ^(a)	A	463	500	460	495	498
Single power connection point option	A	778	862	889	954	995
Unit with Xtra & Super Low Noise option						
Circuit 1 ^(a)	A	304	350	415	445	482
Circuit 2 ^(a)	A	447	483	445	480	482
Single power connection point option	A	751	833	860	925	963
Maximum current (Un-10 %)⁽¹⁾ - LX HE						
Standard unit						
Circuit 1 ^(a)	A	335	384	466	498	529
Circuit 2 ^(a)	A	501	531	498	526	529
Single power connection point option	A	835	915	963	1023	1057
Unit with Xtra & Super Low Noise option						
Circuit 1 ^(a)	A	323	372	451	483	513
Circuit 2 ^(a)	A	485	514	483	511	513
Single power connection point option	A	808	886	934	994	1025

(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).

(a) When the machines are equipped with two power supplies, circuit 1 is intended to supply refrigerant circuit A and circuit 2 supplies refrigerant circuit B.
For units LX 3428 to 4608: circuit 1 supplies circuit A, circuit 2 supplies circuit B.

TECHNICAL SPECIFICATIONS

POWERCAT LX HE		3428	3828	4008	4408	4608
Start-up current⁽³⁾ - LX HE						
Standard unit						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	687	702	729	744	744
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	671	684	714	729	727
Maximum start-up current (Un)⁽²⁾ - LX HE						
Standard unit						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	802	820	844	862	862
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	786	802	829	847	845

(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.

(a) When the machines are equipped with two power supplies, circuit 1 is intended to supply refrigerant circuit A and circuit 2 supplies refrigerant circuit B.
For units LX 3428 to 4608: circuit 1 supplies circuit A, circuit 2 supplies circuit B.

TECHNICAL SPECIFICATIONS

POWERCAT LX XE		0808	0908	1008	1108	1358	1528	1858	2008	2158	2308	2528	2628	3028
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⁾														
Standard unit	kW	126	137	147	172	192	210	257	278	308	327	357	375	440
Unit + Xtra / Super Low Noise option	kW	124	135	145	170	189	208	254	274	304	323	353	371	434
Power factor at maximum power⁽²⁾														
Displacement Power Factor (Cos Phi)+		0,90	0,89	0,89	0,90	0,89	0,89	0,90	0,90	0,89	0,89	0,89	0,88	0,89
Displacement Power Factor (Cos Phi) unit + Xtra / Super Low noise option		0,90	0,89	0,89	0,90	0,89	0,89	0,90	0,90	0,89	0,89	0,89	0,88	0,89
Nominal operating current draw⁽³⁾														
Circuit 1 ^(a)	A	145	161	177	203	234	255	315	339	390	411	427	483	521
Unit + Xtra / Super Low Noise option	A	142	158	174	199	230	251	310	333	384	405	420	476	512
Maximum operating current draw (Un)⁽¹⁾														
Circuit 1 ^(a)	A	203	221	239	277	310	340	414	447	502	532	578	617	715
Unit + Xtra / Super Low Noise option	A	200	218	236	273	306	336	409	441	496	526	571	610	706
Maximum current (Un-10 %)⁽²⁾														
Circuit 1 ^(a)	A	215	234	253	293	328	360	438	473	532	564	613	655	759
Unit + Xtra / Super Low Noise option	A	212	231	250	289	324	356	433	467	526	558	606	648	750
Start-up current^{(3) + (4)}														
Circuit 1 ^(a)	A	181	174	190	314	408	408	408	432	626	632	632	660	652
Unit + Xtra / Super Low Noise option	A	179	172	188	312	405	406	405	428	622	628	628	656	646
Maximum start-up current (Un)^{(2) + (3)}														
Circuit 1 ^(a)	A	210	221	221	343	439	439	487	486	671	686	686	727	749
Unit + Xtra / Super Low Noise option	A	208	219	219	341	436	437	484	482	667	682	682	723	743

(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 inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

(a) When the machines are equipped with two power supplies, circuit 1 is intended to supply refrigerant circuit A and circuit 2 supplies refrigerant circuit B. For units LX 3428 to 4608: circuit 1 supplies circuit A, circuit 2 supplies circuit B.

TECHNICAL SPECIFICATIONS

POWERCAT LX XE		3428	3828	4008	4408	4608
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)}						
Standard unit						
Circuit 1 ^(a)	kW	191	220	262	282	304
Circuit 2 ^(a)	kW	279	304	280	303	304
Single power connection point option	kW	469	525	542	584	609
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	kW	188	217	258	278	301
Circuit 2 ^(a)	kW	276	301	277	300	301
Single power connection point option	kW	463	518	535	578	602
Power factor at maximum power^{(1) or (2)}						
Standard unit						
Displacement Power Factor (Cos Phi)		0,88	0,89	0,88	0,89	0,89
Unit + Xtra & Super low noise option						
Displacement Power Factor (Cos Phi) unit + Xtra & Super Low noise option		0,88	0,89	0,88	0,89	0,89
Nominal operating current draw⁽³⁾						
Standard unit						
Circuit 1 ^(a)	A	245	261	330	343	377
Circuit 2 ^(a)	A	340	377	343	375	377
Single power connection point option	A	584	638	672	717	754
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	240	256	324	337	372
Circuit 2 ^(a)	A	334	371	337	369	372
Single power connection point option	A	574	627	661	706	743
Maximum operating current draw (Un)^{(1) or (2)}						
Standard unit						
Circuit 1 ^(a)	A	312	358	428	458	495
Circuit 2 ^(a)	A	455	495	458	493	495
Single power connection point option	A	766	853	885	950	990
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	307	353	422	452	490
Circuit 2 ^(a)	A	450	490	452	487	490
Single power connection point option	A	756	842	874	939	979
Maximum current (Un-10 %)^{(1) or (2)}						
Standard unit						
Circuit 1 ^(a)	A	331	380	464	496	526
Circuit 2 ^(a)	A	493	526	496	524	526
Single power connection point option	A	823	906	959	1019	1052
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	326	375	458	490	521
Circuit 2 ^(a)	A	488	521	490	518	521
Single power connection point option	A	813	895	948	1008	1041

(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.

(a) When the machines are equipped with two power supplies, circuit 1 is intended to supply refrigerant circuit A and circuit 2 supplies the refrigerant circuit B

TECHNICAL SPECIFICATIONS

POWERCAT LX XE		3428	3828	4008	4408	4608
Start-up current⁽³⁾ + ⁽⁴⁾						
Standard unit						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	678	691	719	734	733
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	674	685	714	729	727
Maximum start-up current (Un)⁽²⁾ + ⁽⁴⁾						
Standard unit						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	793	809	834	852	851
Unit + Xtra & Super low noise option						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Single power connection point option	A	789	803	829	847	845

(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 inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

(a) When the machines are equipped with two power supplies, circuit 1 is intended to supply refrigerant circuit A and circuit 2 supplies the refrigerant circuit B

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

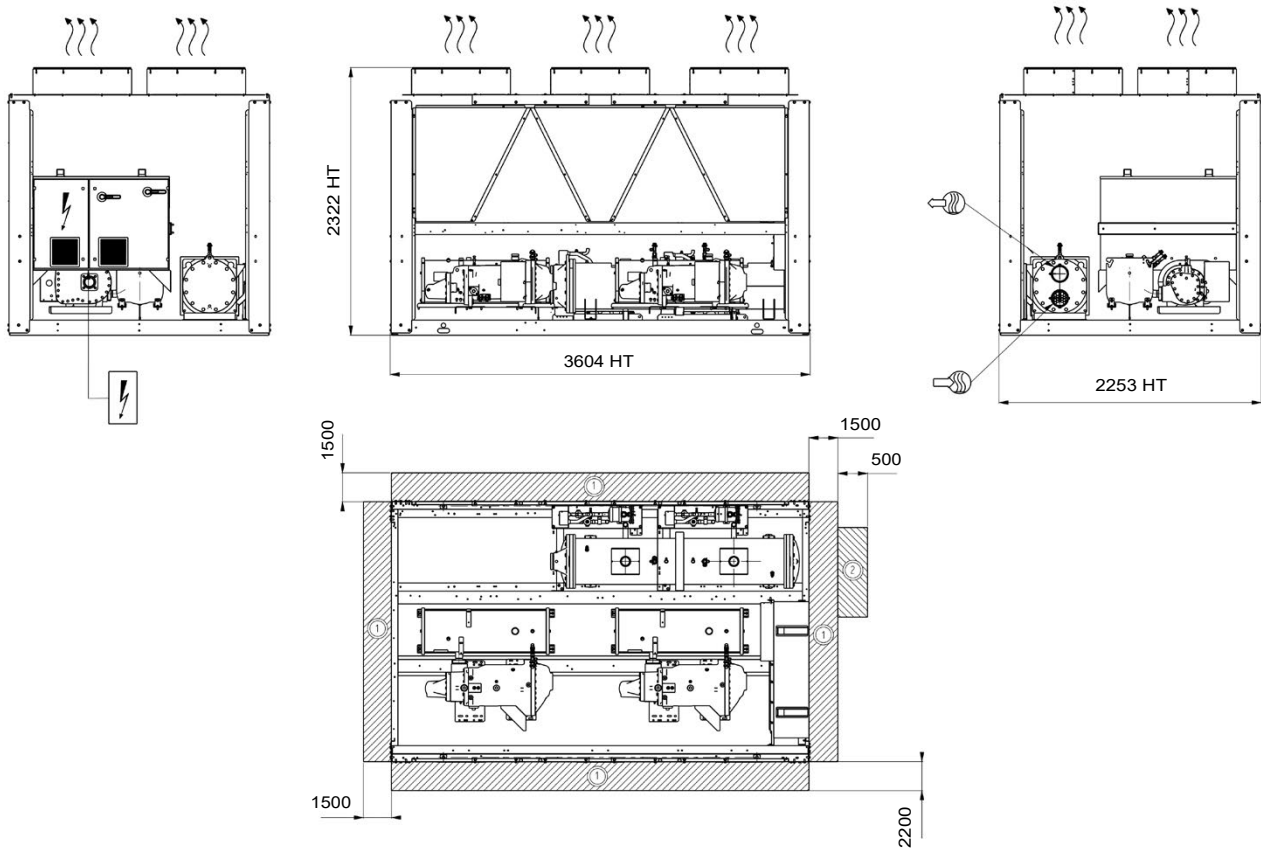
POWERCAT LX HE/XE		0808 to 1528	1858 to 3028	3428 to 4608
Short-circuit withstand current (TN system)				
Circuit A+B	kA	38	50	50
Circuit C+D	kA	NA	NA	50
Unit + single power connection point option	A	NA	NA	50

(1) If another current limitation protection device is used, its time-current and thermal constraint (I^2t) trip characteristics must be at least equivalent to those of the recommended protection.

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

DIMENSIONS

■ POWERCAT LX HE-XE 0808 to 1008



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:

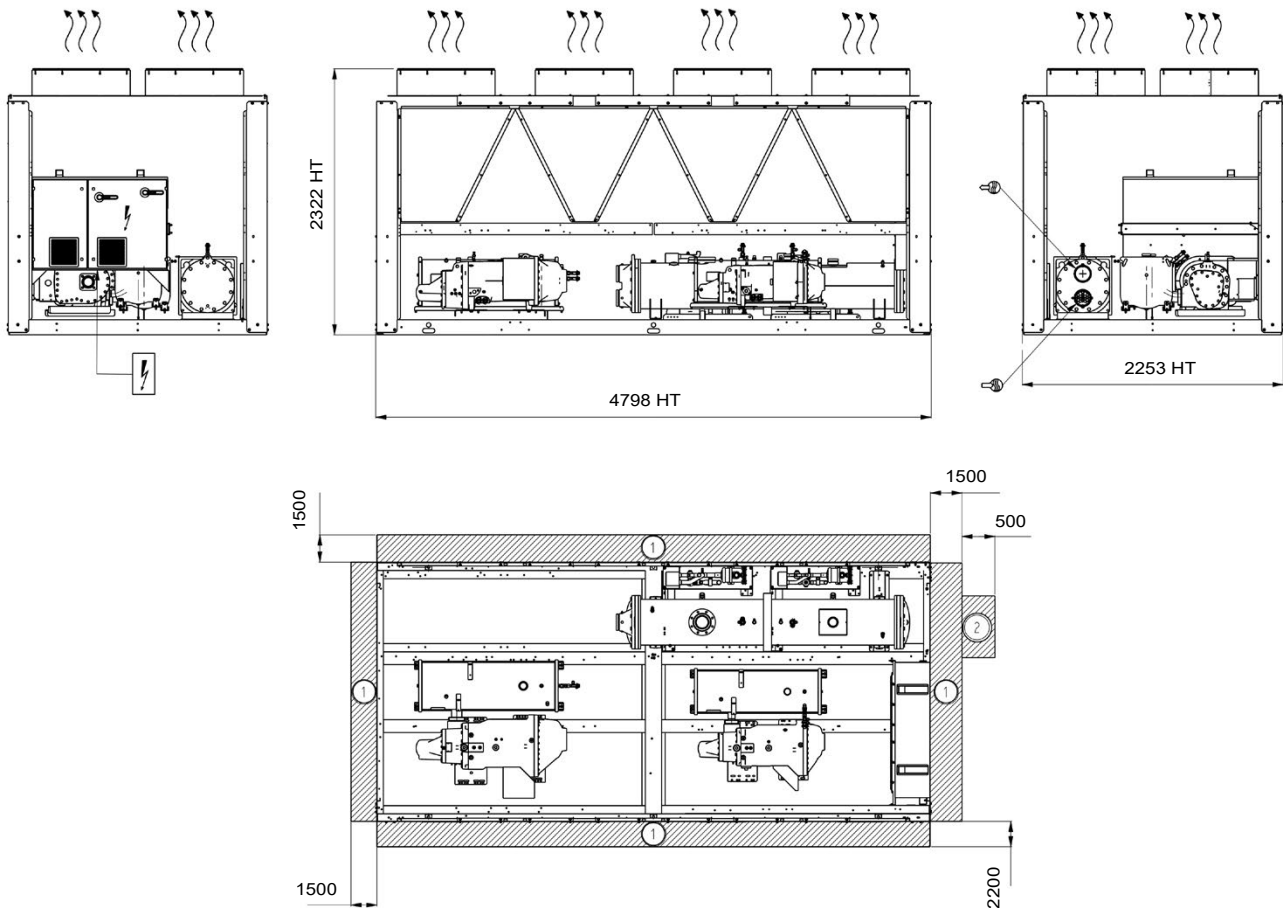
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX HE-XE 1108 to 1358 and LX HE 1528



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:

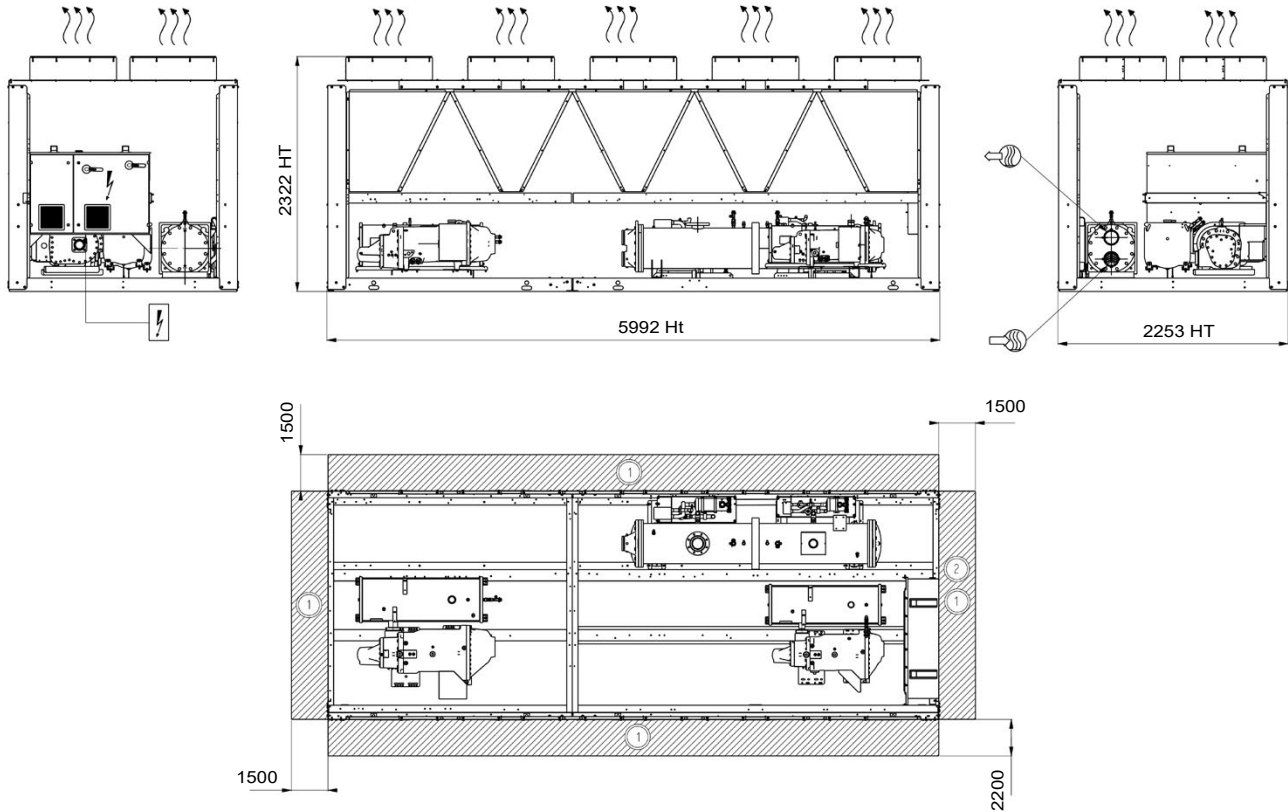
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX XE 1528

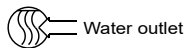


Key
All dimensions in mm

- 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:

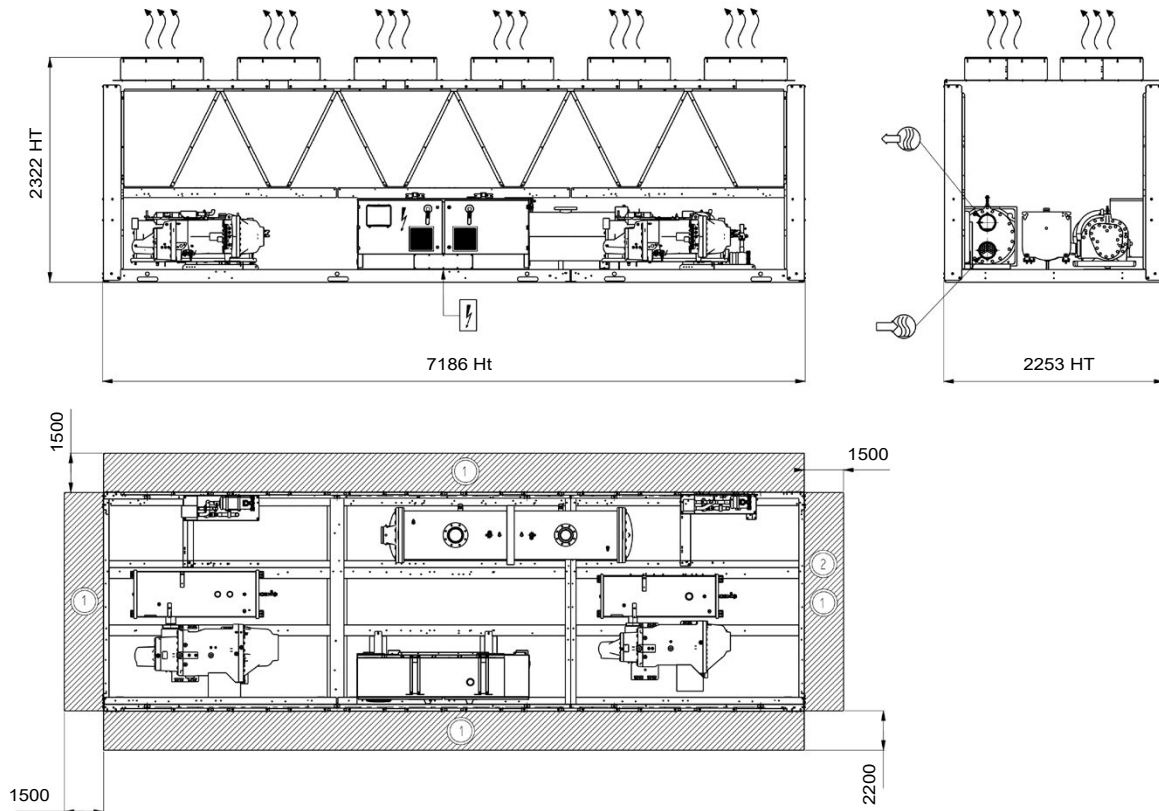
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX HE-XE 1858 to 2308 and LX HE 2528



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:

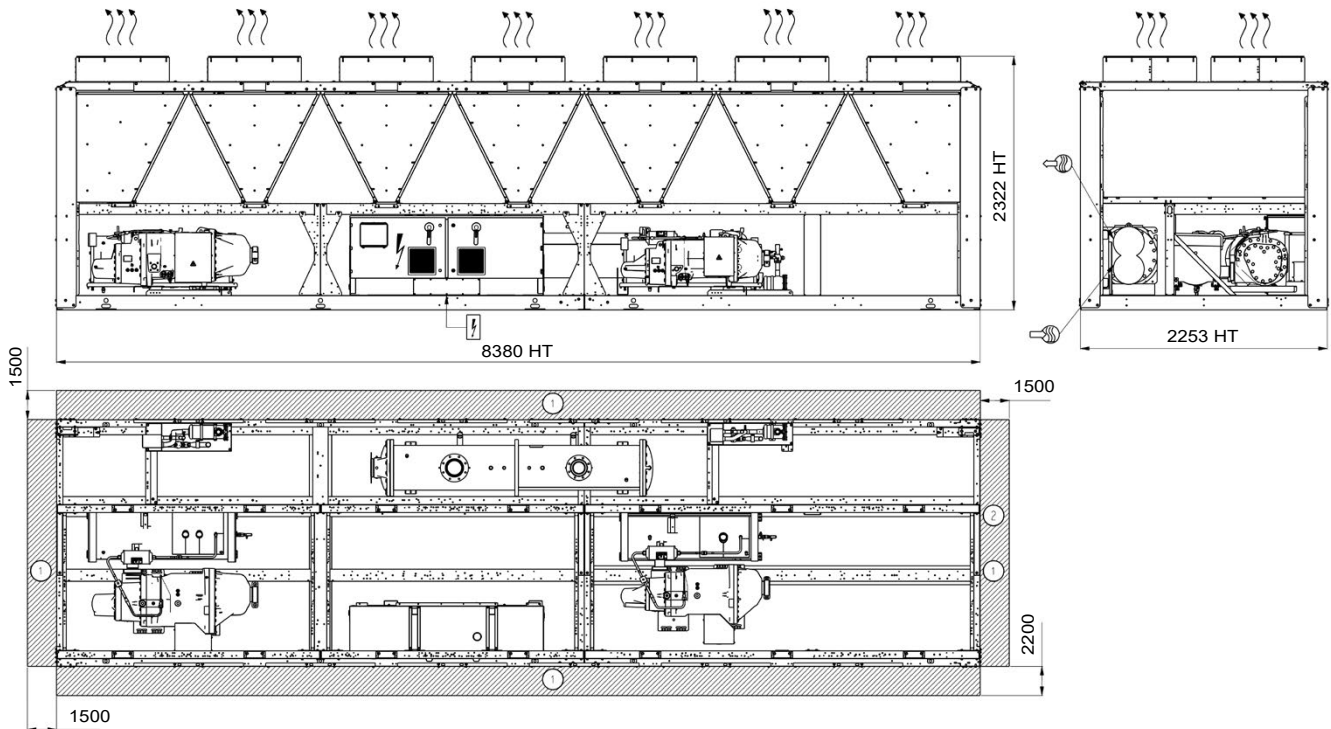
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX XE 2528 and LX HE-XE 2628



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:

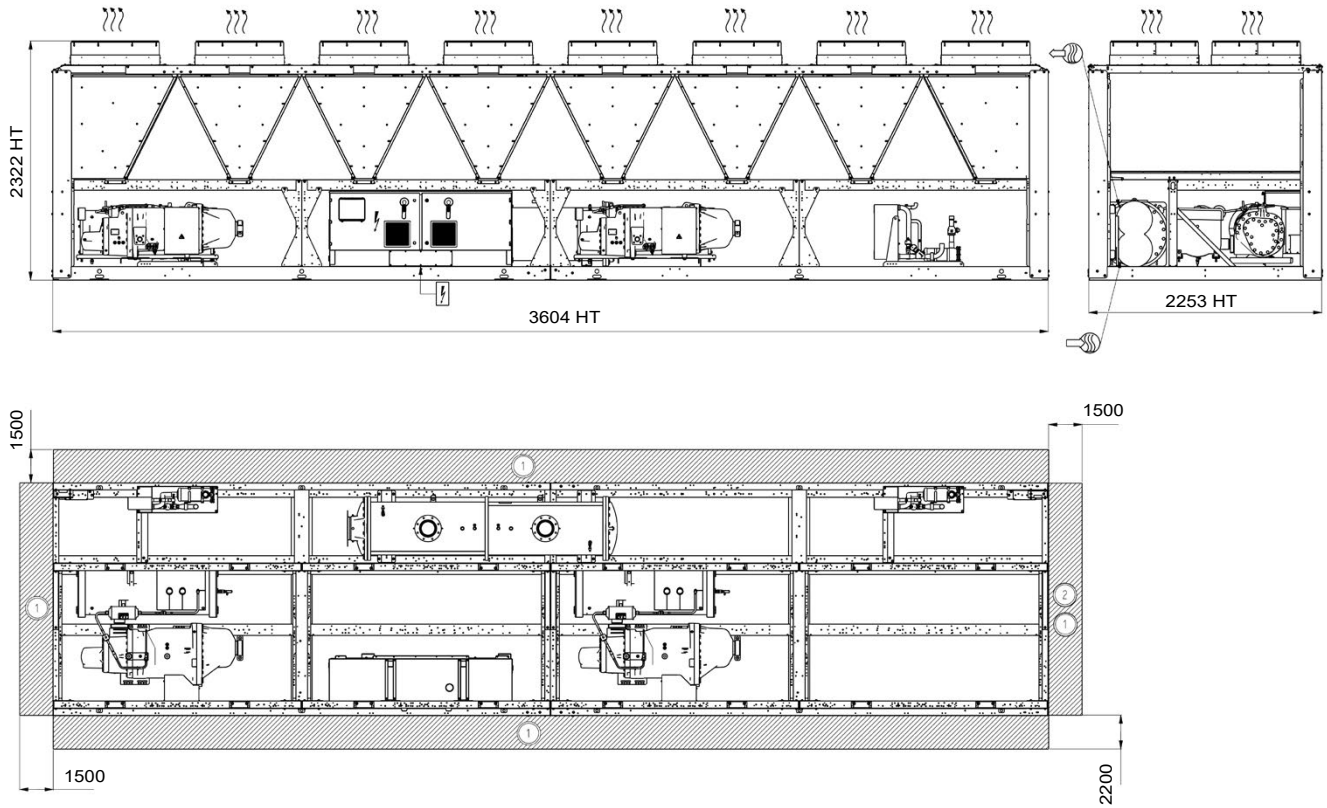
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX HE-XE 3028

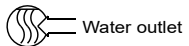


Key
All dimensions in mm

- 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:

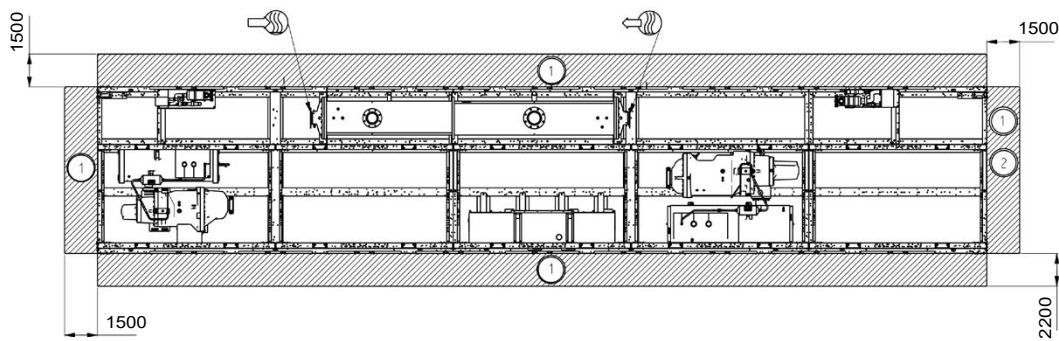
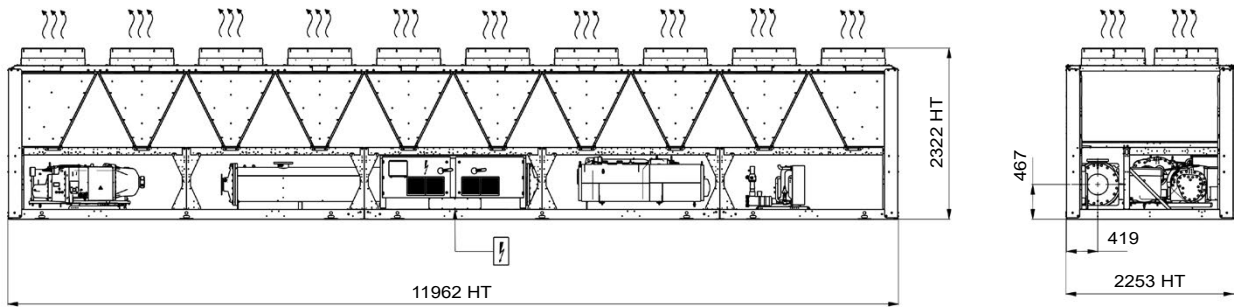
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX HE-XE 3428 to 4408



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:

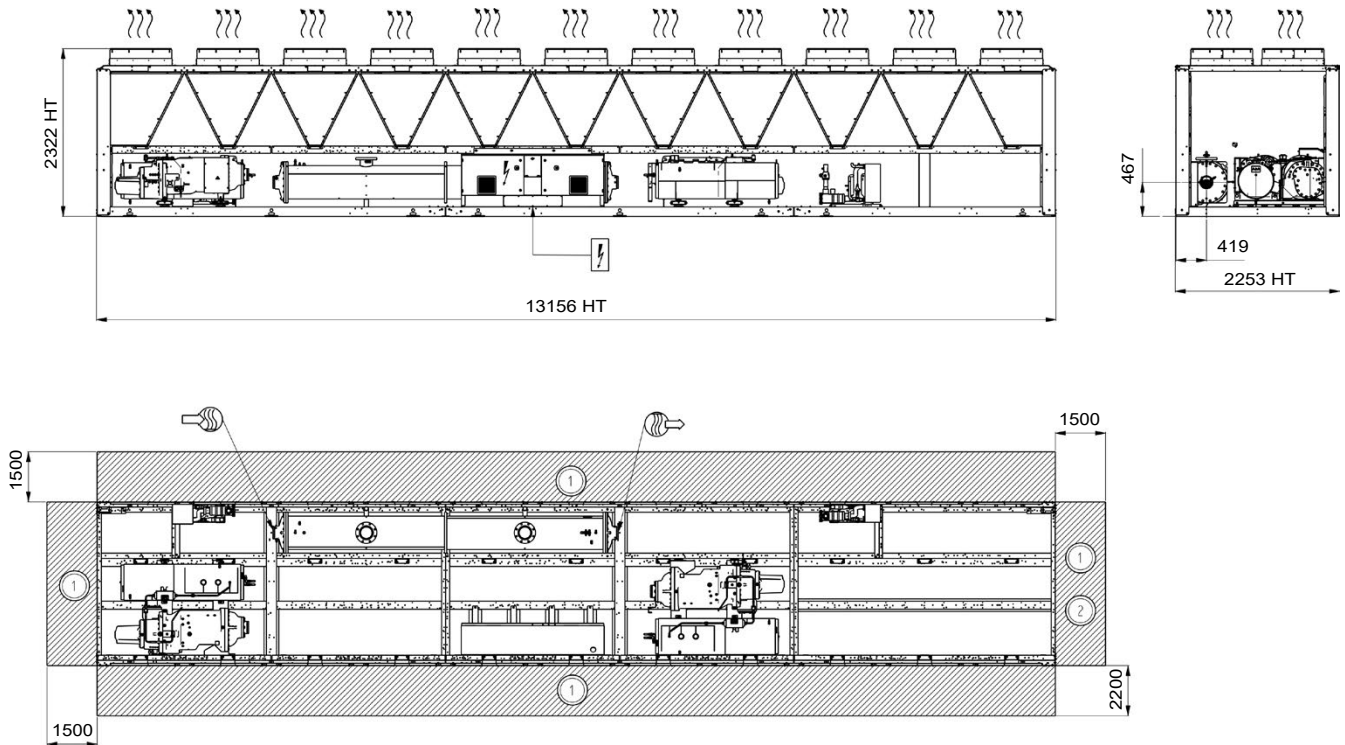
Non-contractual drawings.

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.

DIMENSIONS

■ POWERCAT LX HE-XE 4608



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.