



PRODUCT SELECTION DATA

AIR-COOLED FIXED-SPEED SCREW CHILLER



Very economical operation

Low sound levels

Simple installation

Environmentally responsible

Exceptional reliability

30XBEZE 200 - 1200
30XBPZE 200 - 1200

AQUAFORCE
PUREtec

Nominal cooling capacity 210 - 1170 kW - 50 Hz

The AquaForce® 30XBEZE and 30XBPZE liquid chillers are the economic solution with ultra-low GWP R-1234ze refrigerant for commercial and industrial applications where high reliability and economic operation in all climate conditions are key customer requirements.

The AquaForce® 30XBEZE and 30XBPZE liquid chillers are designed to meet current and future regulations for energy efficiency and operating sound levels. They use the latest Carrier technologies:

- Refrigerant R-1234ze
- Carrier 06T twin-rotor fixed-speed screw compressors.
- Low noise 6th generation of Carrier Flying Bird™ fans with variable speed AC motor (30XBEZE) or variable speed EC motor.
- Carrier flooded shell-and-tube evaporator with new copper tube design for low pressure drops
- 2nd generation of "V" shape Carrier Novation™ microchannel heat exchangers with optional Enviro-Shield coatings.
- Carrier SmartVu™ control with color touch screen user interface that includes 10 languages.



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

AQUAFORCE® VISION WITH PURETEC™ REFRIGERANT

SUSTAINABILITY

PUREtec™: the environmental excellence solution

■ GWP<1

Carrier has selected HFO R-1234ze as the best refrigerant to replace HFC R-134a on screw chillers and heat-pumps.

HFO R-1234ze offers a **Global Warming Potential (GWP) index below 1**, similar to that of natural substances (CO₂ GWP=1).

■ High efficiency

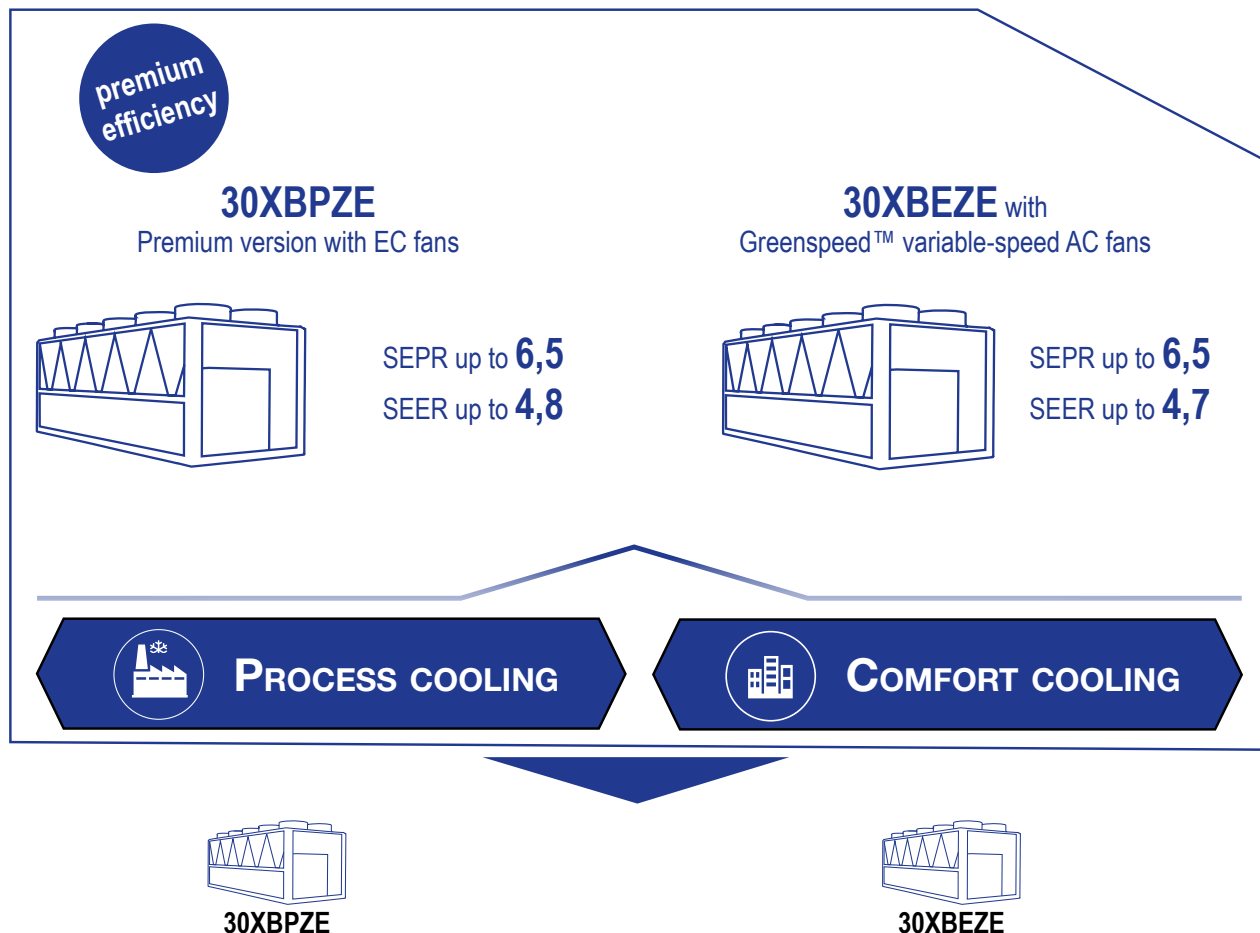
This excellent efficiency performance in turn means a **lower total carbon footprint**, with a reduction of 10% compared to HFC R-134a and HFC/HFO R-513A refrigerants.

■ Regulation compliance

Carrier has made the strategic decision to choose a long-term solution for its new chiller and heat-pump ranges using screw compressors: **HFO R-1234ze, with a GWP<1, is not impacted by the F-gas Regulation.**

AQUAFORCE® VISION THE RIGHT SOLUTION FOR EVERY APPLICATION

Carrier's AquaForce® Vision range is available in three levels of efficiency to perfectly match each customer application and meet the European Ecodesign directive requirements.



The AquaForce® 30XBPZE with Greenspeed™ intelligence is the premium version EC fans to improve both the full load and part load energy efficiency. The 30XBPZE provides very cost effective operation in both process and comfort applications through the use of state of the art EC fan technology.

The AquaForce® 30XBEZE is equipped with fixed-speed screw compressor and variable-speed AC fans motors. The 30XBEZE offers an economical solution whilst providing high full load energy efficiency level for process applications and 12/7°C operation in hot climates. 30XBEZE is compliant with the 2021 EU Ecodesign SEPR -2/-8°C and 12/7°C requirements for medium and high temperature process chillers.

AQUAFORCE® VISION CUSTOMER BENEFITS

■ Outstanding performance

Equipped with fixed-speed screw compressors with EC fans and extra condensing surface, Carrier's AquaForce® Vision 30XBPZE chiller with Greenspeed™ intelligence improve both the full load and part load energy efficiency. The 30XBPZE provides very cost effective operation in both process and comfort applications through the use of state of the art EC fan technology.



SEER
up to **4,5**

■ Low sound levels

The new generation of Carrier 06T fixed-speed twin screw compressor with integrated resonator array and the 6th generation of Flying Bird™ fans with new fan blade design inspired by nature help reduce compressor and airflow noise down to as little as 90 dB(A). 30XBEZE/30XBPZE is 6 dB(A) quieter than the previous AquaForce® 30XAV generation.



90 dB(A)

■ Environmentally responsible

Carrier AquaForce® Vision 30XBEZE/30XBPZE is a boost for green cities and contributes to a sustainable future. Combining a reduced load refrigerant and exceptional energy efficiency it significantly lowers energy consumption while reducing carbon dioxide emissions by 25% throughout its life cycle.



UP TO
25% LESS
CO₂ EMISSION

■ Extensive scope of application

Carrier AquaForce® Vision adapts effortlessly to a wide range of applications. Extended operating temperatures from -20°C to 55°C outdoor air temperatures and negative water temperatures make it ideal for various sectors of activity. From high-end office buildings and hotels to healthcare facilities, data centers and industrial projects, AquaForce® Vision 30XBEZE/30XBPZE meets the most demanding expectations in terms of energy efficiency and savings, whatever the climate and wherever the location.



FROM
-20°C
to **55°C**

■ Easy installation & maintenance

Built-in fixed-speed pumps up to 400 kW, automatic nominal water flow adjustment through electronic control, automatic unit energy performance measurement under real conditions, all these new features provide peace of mind for installers and service companies alike.



25%
SMALLER

CUSTOMER BENEFITS

The range is available in 2 efficiency levels.

■ 30XBEZE standard unit

The AquaForce® 30XBEZE is equipped with fixed-speed screw compressors and variable speed fans with AC motors. The 30XBEZE offers an economical solution whilst providing high full load efficiency for process applications and operation in high ambients.

(Average SEPR of 6,1, average SEER of 4,6, average EER of 3,3)

■ 30XBPZE premium unit

The 30XBPZE premium unit is equipped with variable speed EC fans to improve both the full load and part load energy efficiency. The 30XBPZE provides very cost effective operation in both process and comfort applications through the use of state of the art EC fan technology. (Average SEPR of 6,4, average SEER of 4,6, average EER of 3,4)

Very economical operation

Exceptionally high full load and part load energy efficiency:

- 30XBEZE version with Eurovent energy efficiency class A, and SEER 12/7°C up to 4,7 in accordance with EN14825.
- 30XBPZE version with Eurovent energy efficiency class A, and SEER 12/7°C up to 4,8 in accordance with EN14825.
- Twin-rotor screw compressor equipped with a high-efficiency motor and a variable capacity valve that permits exact matching of the cooling capacity to the load.
- Novation™ aluminium condenser with high-efficiency micro-channels.
- Flooded shell-and-tube evaporator with new generation of cooler tubes to reduce exchanger pressure drops, especially in applications with high percentage of glycol.
- Electronic expansion device permitting operation at a lower condensing pressure and improved utilisation of the evaporator heat exchange surface (superheat control).
- Economiser system with electronic expansion device for increased cooling capacity.

Low operating sound levels

■ Compressors

- Discharge dampers integrated in the oil separator (Carrier patent).
- Silencer on the economiser return line.
- Compressor and oil separator acoustic enclosure, reducing radiated noise (option).

■ Condenser section

- Condenser coils in wide angle V configuration, allowing quieter air flow across the coil
- Low-noise 6th generation Flying Bird fans, made of a composite material (Carrier patent), are now even quieter and do not generate intrusive low-frequency noise
- Rigid fan mounting preventing start-up noise (Carrier patent).

CUSTOMER BENEFITS

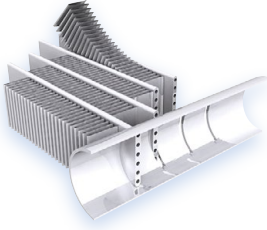
Simple installation

- Integrated hydraulic module (option)
 - Centrifugal low or high-pressure water pump (as required), based on the pressure loss of the hydraulic installation
 - Single or dual pump (as required) with run time balancing and automatic changeover to the back-up pump if a fault develops
 - Water filter to protect pump against circulating debris
 - High-capacity membrane expansion tank ensures pressurisation of the water circuit (option)
 - Thermal insulation and aluminium cladding (option)
 - Pressure sensor to check filter condition and for direct numerical display of the water flow rate with an estimate of the instantaneous cooling capacity at the control interface
- Simplified electrical connections
 - Main disconnect switch with high trip capacity
 - Transformer to supply the integrated control circuit (400/24 V).
- Fast commissioning
 - Systematic factory operation test before shipment
 - Quick-test function for step-by-step verification of the controls, expansion devices, fans and compressors.

Exceptional reliability

- Screw compressors
 - Industrial-type screw compressors with oversized bearings and motor cooled by suction gas.
 - All compressor components are easily accessible on site minimising down-time.
 - Dedicated electronic compressor protection module.
- Air condenser
 - 2nd generation of "V" shape Carrier Novation™ aluminium microchannel heat exchangers (MCHE) with high corrosion resistance. The all aluminium design eliminates the formation of galvanic currents between aluminium and copper that cause coil corrosion in saline or corrosive environments.
- Evaporator
 - Thermal insulation with aluminium sheet finish (option) for improved resistance to mechanical and UV damage.
- Auto-adaptive control
 - Control algorithm prevents excessive compressor cycling (Carrier patent)
 - Automatic compressor unloading in case of abnormally high condensing pressure. If condenser coil fouling or fan failure occurs, the AquaForce® continues to operate, but at reduced capacity
- Exceptional endurance tests
 - Partnerships with specialised laboratories and use of sophisticated finite element stress analysis for the design of critical components.
 - Transport simulation test in the laboratory on a vibrating table. The test is based on a military standard and equivalent to 4000 km by truck.
 - Salt mist corrosion resistance test in the laboratory for increased corrosion resistance.

30XBEZE AND 30XBPZE TECHNICAL INSIGHTS

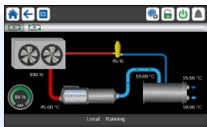


3RD GENERATION OF NOVATION® MICRO CHANNEL HEAT EXCHANGERS

- Exclusive Carrier design
- Increased reliability with new aluminum alloy
- Significantly reduces refrigerant charge (-40% vs cu/al coils)
- Enviro-shield™ coating for mildly corrosive environments
- Super Enviro-shield™ coating for highly corrosive environments (industry or marine applications)
- Easy cleaning with high pressure air or water washer

ADVANCED SMARTVU™ WITH 7 INCH COLOR TOUCH SCREEN INTERFACE

- Exclusive Carrier design
- 10 languages available: DE, EN, ES, FR, IT, NL, PT, TR, TU + one additional customer choice
- Touch screen user interface
- BACnet, J-Bus or LON communication interfaces
- Optional wireless connectivity



- Remote monitoring with Carrier Connect

FLOODED SHELL AND TUBE EVAPORATOR

- Exclusive Carrier design
- Flooded technology for high energy efficiency
- New generation of copper tubes with specific profile to reduce pressure drops when operating with glycol



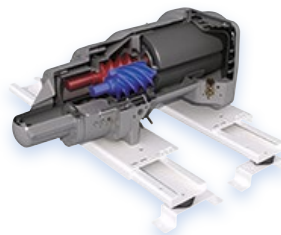
6TH GENERATION OF VARIABLE-SPEED FLYING BIRD™ FANS WITH AC OR EC MOTOR

- Exclusive Carrier design
- Fan blade design inspired by nature
- AC motor technology
- High efficiency version with EC motor technology (option and 30XBPZE).



FIXED-SPEED DUAL PUMPS WITH AC MOTOR (OPTION)

- Low static pressure (~100 kPa) or high static pressure (~180 kPa) available
- Available on all sizes up to 400 kW



CARRIER FIXED-SPEED 06T TWIN SCREW COMPRESSOR WITH AC MOTOR

- Exclusive Carrier design
- Twin screw compressor designed for fixedspeed operation
- Sliding valve control (30%-100%)
- Bearing life exceeding 100.000 hours
- 99,7% of units without compressor default

CUSTOMER BENEFITS

Environmental responsibility

- The AquaForce® with PUREtec™ refrigerant liquid chillers with Greenspeed™ Intelligence is a boost for green cities and contributes to a sustainable future. Combining a reduced charge of R-1234ze refrigerant and exceptional energy efficiency it significantly lowers energy consumption while reducing carbon dioxide emissions by 15% throughout its life cycle (compared to previous fixed-speed screw liquid chiller generation).
- R-1234ze: HFO refrigerant with zero ozone depletion potential and ultra low GWP (<1).
- 40% less refrigerant charge: the micro-channel technology used for condenser coils optimises heat transfer while minimising the refrigerant volume.
- Leak tight refrigerant circuits:
 - Reduction of leaks as no capillary tubes and flare connections are used
 - Verification of pressure transducers and temperature sensors without transferring refrigerant charge
 - Discharge line shut-off valve and liquid line service valve for simplified maintenance.
- Refrigerant leak alert: the AquaForce® 30XBEZE/30XBPZE liquid chiller is equipped with an automatic refrigerant leak detection algorithm that can detect serious refrigerant loss at any point on the system (Sensitivity: 25% refrigerant charge loss per circuit, depending on the conditions). The automatic refrigerant leak detection system can help to achieve recognition within pollution prevention assessment programs, ideal for assisting in the design of sustainable buildings.
- Refrigerant leak detection: available as an option, this additional dry-contact allows reporting of possible leaks. The leak detector (by others) should be mounted in the most likely leak location.



- R-1234ze long-term refrigerant solution
 - HFO refrigerant with nearly zero global warming potential (GWP < 1) and zero ozone depletion potential (ODP = 0).
 - Not impacted by the HFC phase-down plan in Europe (79% HFC reduction in EU member states at 2030 horizon)
 - Compliant with refrigerant regulation in Switzerland that bans the use of HFC refrigerant in large capacity airconditioning equipment.

Designed to support Green Building Design

A green building is a building that is environmentally sustainable and has been designed, constructed and is operated to minimise the total impact on the environment.

The resulting building will be economical to operate, offer increased comfort and create a healthier environment for the people who live and work there, increasing productivity.

The air conditioning system can use between 30 and 40% of the annual building energy consumption. Selection of the right air conditioning system is one of the main aspects to consider when designing a green building. For buildings with a variable load throughout the year 30XBEZE/30XBPZE units offer a solution to this important challenge.

A number of green building certification programs exist in the market and offer third-party assessment of green building measures for a wide variety of building types.

The following example looks at how Carrier's new 30XBEZE/30XBPZE range helps customers involved in LEED® building certification.

The other benefit of using the AquaForce® with PUREtec™ refrigerant products is the eligibility for BUILDING labeling programs like BREEAM, HQE in France or Green Building Council labelling, that are recognizing the use of sustainable heating and air-conditioning equipment.

Let's take the example of BREEAM assessment method for the sustainability of buildings.

Two credits can be awarded where the refrigerants used in air-conditioning systems have a Global Warming Potential below 10.

And one additional credit can be awarded where the systems have a low Total Equivalent Warming Impact.

The AquaForce® with PUREtec™ refrigerant is not only a solution that is reducing the energy bill and the CO₂ footprint. It also helps the green certification of your buildings.

Energy saving certificate

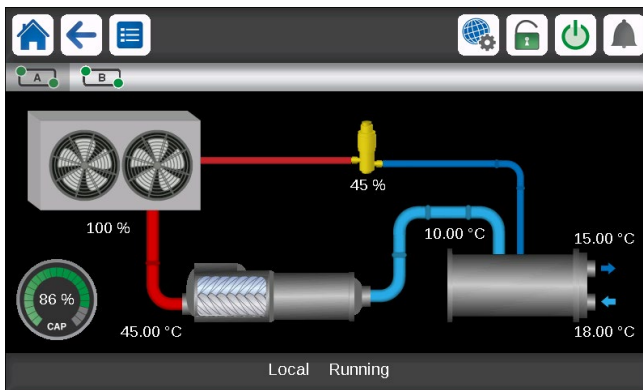
AquaForce® with with PUREtec™ refrigerant is eligible to Energy savings certificates in France (CEE) in comfort, industrial and agriculture applications:

- Floating High pressure control (by modulating the air flow through fan activation and its speed)
- Floating Low pressure control
- Variable speed on asynchronous fan motor
- Variable speed on asynchronous pump motor

For more details about financial incentives in France, please refer to "Fiche produit CEE"

TECHNICAL INSIGHTS

SmartVu™



- New innovative smart control features:
 - An intuitive and user-friendly, coloured, 7" interface
 - 10 languages available on choice: DE, EN, ES, FR, IT, NL, PT, TR, TU + one additional customer choice
 - Screen-shots with concise and clear information in local languages
 - Complete menu, customised for different users (end user, service personnel and Carrier-factory technicians)
 - Setpoint offset based on the outside air temperature
 - Safe operation and unit setting: Password protection ensures that unauthorised people cannot modify any advanced parameters
 - Simple and "smart" intelligence uses data collection from the constant monitoring of all machine parameters to optimise unit operation
 - Night-mode: Cooling capacity management for reduced noise level.
 - With hydraulic module: Water pressure display and water flow rate calculation.
- Energy management:
 - Internal time schedule clock controls chiller on/off times and operation at a second set-point
 - The DCT (Data Collection Tool) records the alarms history to simplify and facilitate service operations.
- Maintenance functions
 - F-Gas regulation leak check reminder alert
 - Maintenance alert can be configured to days, months or hours of operation
- Advanced communication features
 - Easy and high-speed communication technology over Ethernet (IP) to a centralised building management system
 - Access to multiple unit parameters.

Remote management (standard)

- Units with SmartVu™ control can be easily accessed from the internet, using a PC with an Ethernet connection. This makes remote control quick and easy and offers significant advantages for service operations.
- AquaForce® with Greenspeed® Intelligence is equipped with an RS485 serial port that offers multiple remote control, monitoring and diagnostic possibilities. When networked with other Carrier equipment through the CCN (Carrier Comfort Network - proprietary protocol), all components form a HVAC system fully-integrated and balanced through one of the Carrier's network system products, like the Chiller System Manager or the Plant System Manager (optional).

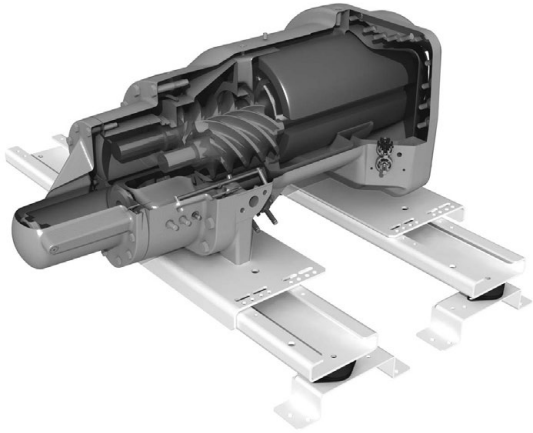
- The 30XBEZE/30XBPZE also communicates with other building management systems via optional communication gateways (BACnet, LON or JBus).
- The following commands/visualisations are possible from remote connection:
 - Start/Stop of the machine
 - Dual set-point management: Through a dedicated contact is possible to activate a second set-point (example, unoccupied mode)
 - Demand limit setting: To limit the maximum chiller capacity to a predefined value
 - Water pump control: These outputs control the contactors of one/two evaporator water pumps.
 - Water pumps changeover (only with hydraulic module options): These contacts are used to detect a water pump operation fault and automatically change over to the other pump.
 - Operation visualisation: Indication if the unit is operating or if it is in stand-by (no cooling load)
 - Alarm visualisation.

Remote management (EMM option)

- The Energy Management Module (EMM) offers extended remote control possibilities:
 - Room temperature: Permits set-point reset based on the building indoor air temperature (if Carrier thermostats are installed)
 - Set-point reset: Allows reset of the cooling set-point based on a 4-20 mA or 0-10 V signal
 - Demand limit: Permits limitation of the maximum chiller capacity based on 0-10 V signal
 - Demand limit 1 and 2: Closing of these contacts limits the maximum chiller capacity to two predefined values.
 - User safety: This contact can be used for any customer safety loop; opening the contact generates a specific alarm.
 - Ice storage end: When ice storage has finished, this input permits return to the second set-point (unoccupied mode).
 - Time schedule override: Closing of this contact cancels the programmed time schedule.
 - Out of service: This signal indicates that the chiller is completely out of service.
 - Chiller capacity: This analogue output (0-10 V) gives an immediate indication of the chiller capacity.
 - Alert indication: This volt-free contact indicates the necessity to carry out a maintenance operation or the presence of a minor fault.
 - Compressors running status: Set of outputs (as many as the compressors number) indicating which compressors are running.

TECHNICAL INSIGHTS

06T Screw Compressor



99.7%* of units without a compressor failure

* Quality rate measured over a period of 15 years operation

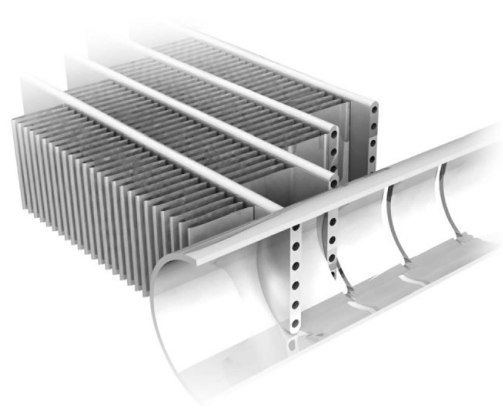
The Carrier 06T screw compressor benefits from Carrier's long experience in the development of twin-rotor screw compressors. The compressor is equipped with bearings with oversized rollers, oil pressure lubricated for reliable and durable operation, even at maximum load.

A variable control valve controlled by the oil pressure permits infinitely variable cooling capacity. This system allows optimal adjustment of the compressor cooling capacity and ensures exceptionally high stability of the chilled water leaving temperature.

Among the other advantages: if a fault occurs e.g. if the condenser is fouled or at very high outside temperature, the compressor does not switch off, but continues operation with a reduced capacity (unloaded mode).

The compressor is equipped with a separate oil separator that minimises the amount of oil in circulation in the refrigerant circuit and, with its integrated silencer, considerably reduces discharge gas pulsations for much quieter operation.

Novation® Heat Exchangers with Micro-Channel coil Technology



Already utilised in the automobile and aeronautical industries for many years, the Novation™ MCHE micro-channel heat exchanger used in the AquaForce® is entirely made of aluminium. This one-piece concept significantly increases its corrosion resistance by eliminating the galvanic currents that are created when two different metals (copper and aluminium) come into contact in traditional heat exchangers. Unlike traditional heat exchangers the Novation™ MCHE heat exchanger can be used in moderate marine and urban environments (Carrier recommendation).

From an energy efficiency point-of-view the Novation™ MCHE heat exchanger is approximately 10% more efficient than a traditional coil and allows a 40% reduction in the amount of refrigerant used in the chiller. The low thickness of the Novation™ MCHE reduces air pressure losses by 50% and makes it susceptible to very little fouling (e.g. by sand). Cleaning of the Novation™ MCHE heat exchanger is very fast using a high-pressure washer.

Carrier Novation® MCHE with Super Enviro-shield® coating, the ideal customer choice

To further enhance long-term performance, and to protect coils from early deterioration, Carrier offers (as options) dedicated treatments for installations in corrosive environments.

The Novation™ MCHE with Enviro-Shield protection (option 262) are recommended for installations in moderately corrosive environments. The Enviro-Shield protection utilises corrosion inhibitors which actively arrest oxidation in case of mechanical damage.

The Novation™ MCHE with the exclusive Super Enviro-Shield protection (option 263) are recommended for installations in corrosive environments. The Super Enviro-Shield protection consist in an extremely durable and flexible epoxy coating uniformly applied over all coil surfaces for complete isolation from the contaminated environment.

TECHNICAL INSIGHTS

Novation® Heat Exchangers with Micro-Channel coil Technology

After a total of more than 7,000 hours of testing following various test standards in UTC laboratories, the Carrier Novation® MCHE with Super Enviro-shield® coating appears to be the ideal customer choice to minimize the harmful effects of corrosive atmospheres and ensure long equipment life.

- Best corrosion resistance per ASTM B117/D610 test
- Best heat transfer performance per Carrier Marine 1 test
- Proven reliability per ASTM B117 test

Coil Types (ranked by performance)	Visual Corrosion Evaluation	Heat Transfer Performance Degradation	Time to Failure	Test Campaign Conclusions
Super Enviro-shield® Novation™ MCHE	Very good	Very good	No coil leak	Best
Super Enviro-shield® Cu/Al coil	Very good	Good	No coil leak	Very good
Enviro-shield® Novation™ MCHE	Very good	Good	No coil leak	Very good
Al/Al coil	Very good	Good	No coil leak	Very good
Novation™ MCHE	Good	Good	No coil leak	Good
Cu/Cu coil	Good	Good	Leak	Acceptable
Blygold® Cu/Al coil	Good	Good	No coil leak	Acceptable
Precoat Cu/Al coil	Bad	Bad	No coil leak	Bad
Cu/Al coil	Bad	Bad	No coil leak	Bad

New Generation of Flying Bird VI fans



The 30XBEZE and 30XPZE utilize Carrier's 6th generation Flying Bird™ fan technology, engineered for maximum efficiency, super low noise, and wide operating range. The fan includes Carrier patented rotating shroud technology and back-swept blades with a unique wave-serration trailing edge inspired from nature.

It was designed and optimized for the 30XBEZE air management system configuration and heat exchanger technology and is offered with induction and EC motor options. The fan meets the latest European eco-design requirements for fan efficiency. The fan uses Carrier's robust and proven injection molded composite-thermoplastic construction.

OPTIONS

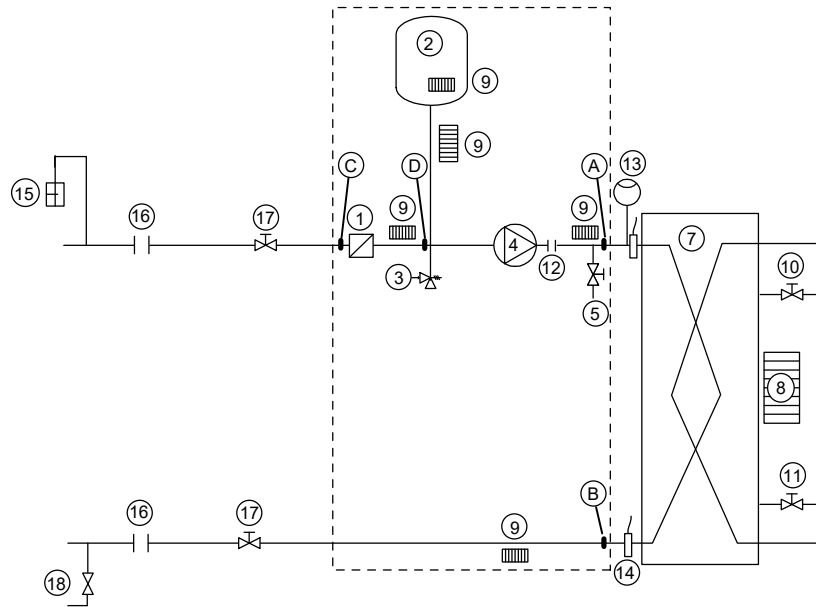
Options	No.	Description	Advantages	Use for 30XBEZE / 30XBPZE
Medium-temperature brine solution	5	Implementation of new control algorithms and redesigned evaporator to allow chilled brine solution production down to -6°C when ethylene glycol is used (0°C with propylene glycol)	Covers specific applications such as ice storage and industrial processes	30XB(E/P)ZE 200-1200
Low-temperature brine solution	6	Implementation of new control algorithms and redesigned evaporator to allow chilled brine solution production down to -12°C when ethylene glycol is used (-10°C with propylene glycol)	Covers specific applications such as ice storage and industrial processes	30XB(E/P)ZE 200-1200
Unit equipped for air discharge ducting	10	Fans equipped with discharge connection flanges - maximum available pressure 60 Pa	Facilitates connections to the discharge ducts	30XB(E/P)ZE 200-1200
Low noise level	15	Aesthetic and sound absorbing compressor enclosure	Noise level reduction	30XB(E/P)ZE 200-1200
Very low noise level	15LS	Sound absorbing & aesthetic compressor enclosure and oil separator, evaporator and suction line acoustic treatment, combined with low-speed fans	Noise level reduction in sensitive environments	30XB(E/P)ZE 200-1200
Ultra low noise level	15LS+	Acoustic compressor enclosure, low-speed fans and enhanced sound insulation of main noise sources	Noise level reduction for sensible site	30XB(E/P)ZE 200-1200
Tropicalisation	22	Unit control box suitable for tropical climates	Reduced relative humidity in the control boxes for operation in tropical climates (warm and humid)	30XB(E/P)ZE 200-1200
Grilles and enclosure panels	23	Metallic protection grilles and side enclosure panels	Improves aesthetics, protection against intrusion to the unit interior, coil and piping protection against impacts.	30XB(E/P)ZE 200-1200
Enclosure panels	23A	Side enclosure panels	Improves aesthetics and piping protection against impacts.	30XB(E/P)ZE 200-1200
Low inrush current	25C	compressor loading and unloading sequence to limit the unit start-up current	Reduced start-up current	30XB(E/P)ZE 200-1200
Water exchanger frost protection	41A	Electric resistance heater on the water exchanger and discharge valve	Water exchanger frost protection down to -20°C outside temperature	30XB(E/P)ZE 200-1200
Evaporator & hydraulic module frost protection	41B	Electric resistance heater on water exchanger, discharge valve and hydraulic module	Water exchanger and hydraulic module frost protection down to -20°C outside temperature	30XB(E/P)ZE 200-400
Total heat recovery	50	Unit equipped with additional heat exchanger in parallel with the condenser coils.	Production of free hot-water simultaneously with chilled water production	30XB(E/P)ZE 200-750
Total heat recovery on one circuit	50C	Unit equipped with additional heat exchanger in parallel with the condenser coils on one circuit only	Production of free hot-water simultaneously with chilled water production	30XB(E/P)ZE 900-1200
Master/slave operation	58	Unit equipped with supplementary water outlet temperature sensor kit (to be field installed) allowing master/slave operation of two units connected in parallel	Optimised operation of two units connected in parallel operation with operating time equalisation	30XB(E/P)ZE 900-1200
Single power connection point	81	Unit power connection via one main supply connection	Quick and easy installation	30XB(E/P)ZE 900-1200
Evap. and pumps with aluminum jacket	88A	Evaporator and pumps covered with an aluminum sheet for thermal insulation protection	Improved resistance to aggressive climate conditions	30XB(E/P)ZE 200-400
Service valve set	92	Liquid line valve (evaporator inlet) and compressor suction line valve	Allow isolation of various refrigerant circuit components for simplified service and maintenance	30XB(E/P)ZE 200-1200
Compressor discharge valves	93A	Shut-off valve on the compressor discharge piping	Simplified maintenance	30XB(E/P)ZE 200-1200
Evaporator with one pass more	100A	Evaporator with one pass more on the water side	Optimise chiller operation when the chilled water circuit is designed with low waterflows (high evaporator delta T)	30XB(E/P)ZE 200-1200
21 bar evaporator	104	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)	30XB(E/P)ZE 200-1200
Reversed evaporator water connections	107	Evaporator with reversed water inlet/outlet	Easy installation on sites with specific requirements	30XB(E/P)ZE 200-1200
HP dual-pump hydraulic module	116S	Hydraulic module equipped with water filter, two high pressure pumps, drain valve and pressure transducers (expansion tank & aluminum jacket not included).	Easy and fast installation (plug & play).	30XB(E/P)ZE 200-400

OPTIONS

Options	No.	Description	Advantages	Use for 30XBEZE / 30XBPZE
LP dual-pump hydraulic module	116U	Hydraulic module equipped with water filter, two low pressure pumps, drain valve and pressure transducers (expansion tank & aluminum jacket not included).	Easy and fast installation (plug & play).	30XB(E/P)ZE 200-400
Lon gateway	148D	Bi-directional communication board complying with Lon Talk protocol	Connects the unit by communication bus to a building management system	30XB(E/P)ZE 200-1200
Bacnet over IP	149	Bi-directional high-speed communication using BACnet protocol over Ethernet network (IP)	Easy and high-speed connection by ethernet line to a building management system. Allows access to multiple unit parameters	30XB(E/P)ZE 200-1200
Modbus over IP and RS485	149B	Bi-directional high-speed communication using Modbus protocol over Ethernet network (IP)	Easy and high-speed connection by ethernet line to a building management system. Allows access to multiple unit parameters	30XB(E/P)ZE 200-1200
Energy Management Module	156	EMM Control board with additional inputs/ outputs. See Energy Management Module option chapter	Extended remote control capabilities (Set-point reset, ice storage end, demand limits, boiler on/off command...)	30XB(E/P)ZE 200-1200
7" user interface	158A	Control supplied with a 7 inch colour touch screen user interface	Enhanced ease of use.	30XB(E/P)ZE 200-1200
Refrigerant leak detection	159	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	30XB(E/P)ZE 200-1200
Dual relief valves on 3-way valve	194	Three-way valve upstream of dual relief valves on the shell and tubes evaporator	Valve replacement and inspection facilitated without refrigerant loss. Comforms to European standard EN378/BGVD4	30XB(E/P)ZE 200-1200
Compliance with Swiss regulations	197	Additional tests on the water heat exchangers: supply (additional of PED documents) supplementary certificates and test certifications	Conformance with Swiss regulations	30XB(E/P)ZE 200-1200
Compliance with Russian regulations	199	EAC certification	Conformance with Russian regulations	30XB(E/P)ZE 200-1200
Compliance with Australian regulations	200	Unit approved to Australian code	Conformance with Australian regulations	30XB(E/P)ZE 200-1200
Insulation of the evap. in/out ref. lines	256	Thermal insulation of the evaporator entering/leaving refrigerant lines with flexible, UV resistant insulation	Prevents condensation on the evaporator entering/leaving refrigerant lines	30XB(E/P)ZE 200-1200
Enviro-Shield anti-corrosion protection	262	Coating by conversion process which modifies the surface of the aluminum producing a coating that is integral to the coil. Complete immersion in a bath to ensure 100% coverage. No heat transfer variation, tested 4000 hours salt spray per ASTM B117	Improved corrosion resistance, recommended for use in moderately corrosive environments	30XB(E/P)ZE 200-1200
Super Enviro-Shield anti-corrosion protection	263	Extremely durable and flexible epoxy polymer coating applied on micro channel heat exchangers 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	Improved corrosion resistance, recommended for use in extremely corrosive environments	30XB(E/P)ZE 200-1200
Welded evaporator connection kit	266	Victaulic piping connections with welded joints	Easy installation	30XB(E/P)ZE 200-1200
Compressor enclosure	279a	Compressor enclosure	Improved aesthetic, compressor protection against external elements (dust, sand, water...)	30XB(E/P)ZE 200-1200
Evaporator with aluminum jacket	281	Evaporator covered with an aluminum sheet for thermal insulation protection	Improved resistance to aggressive climate conditions	30XB(E/P)ZE 200-1200
230V electrical plug	284	230V AC power supply source provided with plug socket and transformer (180 VA, 0,8 Amps)	Permits connection of a laptop or an electrical device during unit commissioning or servicing	30XB(E/P)ZE 200-1200
Expansion tank	293	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	30XB(E/P)ZE 200-1200
US screw compressor	297	Screw compressor made in US		30XB(E/P)ZE 200-1200
Variable Water Flow control	299	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	30XB(E/P)ZE 200-1200
Free-cooling dry-cooler control	313	Control & connections to a Free Cooling Drycooler 09PE or 09VE fitted with option FC control box	Easy system management, Extended control capabilities to a drycooler used in Free Cooling mode	30XB(E/P)ZE 200-1200

HYDRAULIC MODULE (OPTIONS 116S & U)

Typical water circuit diagram



Legend

Components of unit and hydraulic module

- A Pressure sensor (A-B = Δp evaporator)
- B Pressure sensor
- C Pressure sensor (C-D = Δp water filter)
- D Pressure sensor
- 1 Victaulic screen filter
- 2 Expansion tank
- 3 Relief valve
- 4 Water pump
- 5 Drain valve
- 7 Evaporator
- 8 Evaporator defrost heater (option)
- 9 Hydraulic module defrost heater

- 10 Air vent (evaporator)
 - 11 Water purge (evaporator)
 - 12 Expansion compensator (flexible connections)
 - 13 Flow switch
 - 14 Water temperature sensor
- System components (field-supplied)**
- 15 Air vent
 - 16 Flexible connection
 - 17 Shut-down valves
 - 18 Charge valve
 - Hydraulic module (option)

ELECTRICAL DATA (OPTIONS 116S & U)

The pumps that are factory-installed in these units comply with the European Ecodesign directive ErP. The additional electrical data required by regulation 640/2009 is given in the installation, operation and maintenance manual.

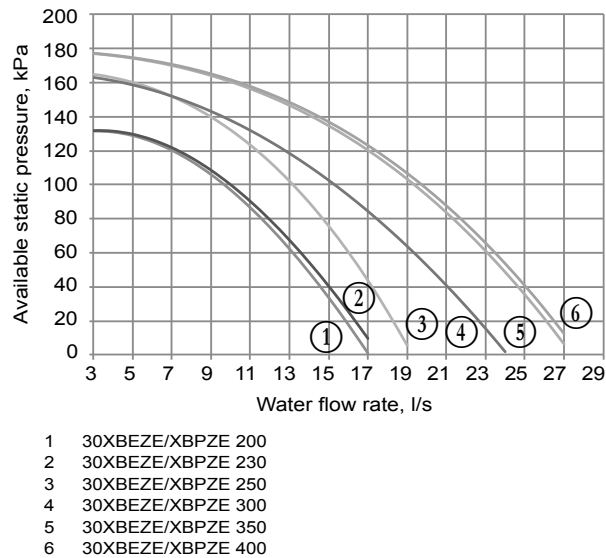
This regulation concerns the application of directive 2009/125/EC on the eco-design requirements for electric motors.

PUMP CURVE (OPTIONS 116S & U)

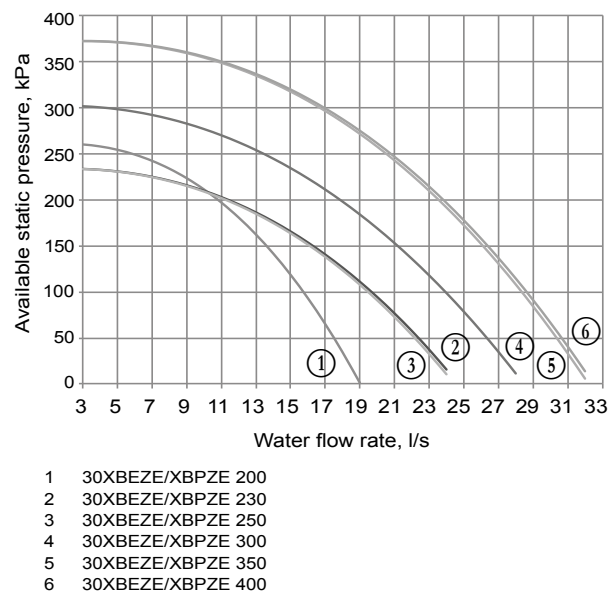
Conditions and limits of use:

- Fresh water 20°C
- In case of use of the glycol, the maximum water flow is reduced.
- When the glycol is used, it's limited to 40%.

Dual pump low pressure



Dual pump high pressure



LOW TEMPERATURE BRINE SOLUTION (OPTION 6)

This option allows to reach very low brine temperatures according to values below and to maintain delta temperature in case of variable flow.

Variable water allows to adapt chilled water production to the real need and helps to save energy.

Lowest acceptable water flow must be validated with selection software.

MEG 35%: -12°C (@ delta T 4K)

MEG 40%: -12°C (@ delta T 3K)

MPG 35%: -8°C (@ delta T 4K)

MPG 40%: -10°C (@ delta T 3K)

TOTAL HEAT RECLAIM (OPTION 50 AND 50C)

Suitable for heating, domestic hot water production, agriculture and food industry, industrial processes and other hot-water requirements.

With the total heat reclaim option it is possible to reduce the energy consumption bill considerably, when compared to conventional heating equipment such as fossil fuel boilers or electric water tanks.

Operating principle

If hot water production is required, the compressor discharge gases are directed towards the heat reclaim condenser. The refrigerant releases its heat to the hot water that leaves the condenser at a temperature of up to 60°C. In this way 100% of the heat rejected by the liquid chiller can be used to produce hot water. When the demand for heat is satisfied, the hot gas is again directed towards the air condenser where the heat is rejected to the outside air by the fans. Hot water temperature control is ensured by the chiller SmartVu™ control that independently controls the reclaim operation of each refrigerant circuit.

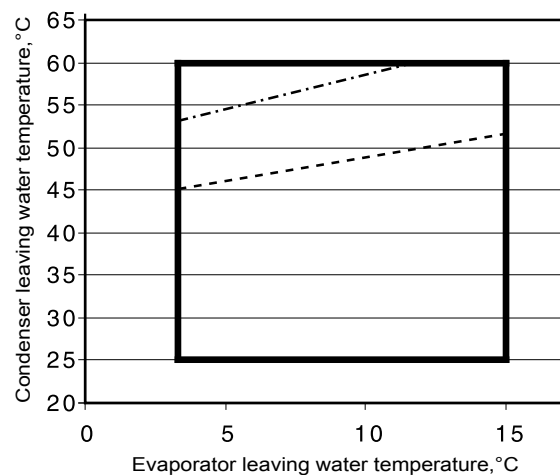
NOTE: Heat reclaim is only possible, possible if the unit is producing cooling at the same time.

Condenser water temperature (°C)	Minimum	Maximum
Entering temperature at start-up	12,5*	55
Entering temperature during operation	20	55
Leaving temperature during operation	25	60
Evaporator water temperature (°C)	Minimum	Maximum
Entering temperature at start-up	-	45
Entering temperature during operation	6,8	21

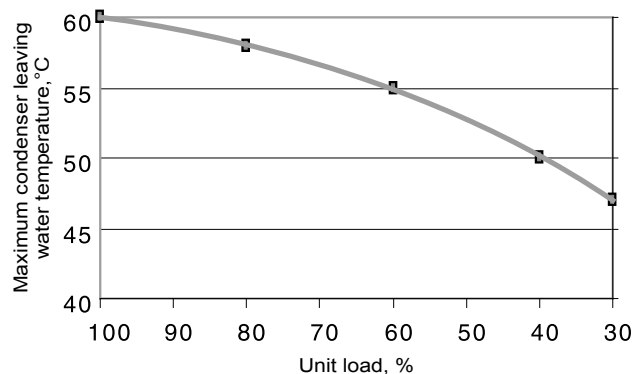
* The entering water temperature at start-up must not fall below 12.5°C. For installations with a lower temperature a three-way valve must be used.

Note: If the evaporator leaving water temperature is below 4°C, a glycol-water solution or the frost protection option must be used.

In part-load operation, the limitation of the condenser leaving water temperature is due to the operating range of the screw compressor. If the condenser leaving water temperature is above the limit value given in the curves below, the unit will automatically change over to air-cooled operating mode:



Part load operating limits
(evaporator leaving water temperature = 7°C)



FAN WITH AVAILABLE PRESSURE (OPTION 10)

This option allows a duct connection at the discharge side of the condenser fan. The unit is equipped with a duct connection frame. The chiller can operate at a static discharge pressure of up to 60 Pa with reduced performance. The performance can be estimated using the coefficients below, applicable at the conditions shown in the curve below.

Selection method

To obtain the capacities at the static duct pressure, apply the coefficients shown in the table below.

30XBEZE option 10

		Correction factors			
Fan pressure drop	Pa	0	20	40	60
Air flow	%	0	-3,5%	-7,5%	-12,1%
Cooling capacity	%	0	-0,5%	-1,0%	-1,5%
EER	%	0	-1,5%	-3,5%	-5,0%
Power input	%	0	+1,0%	+2,5%	+3,5%

Note: All fans must be individually ducted.

Example

30XBEZE-0600 with 40 Pa pressure drop

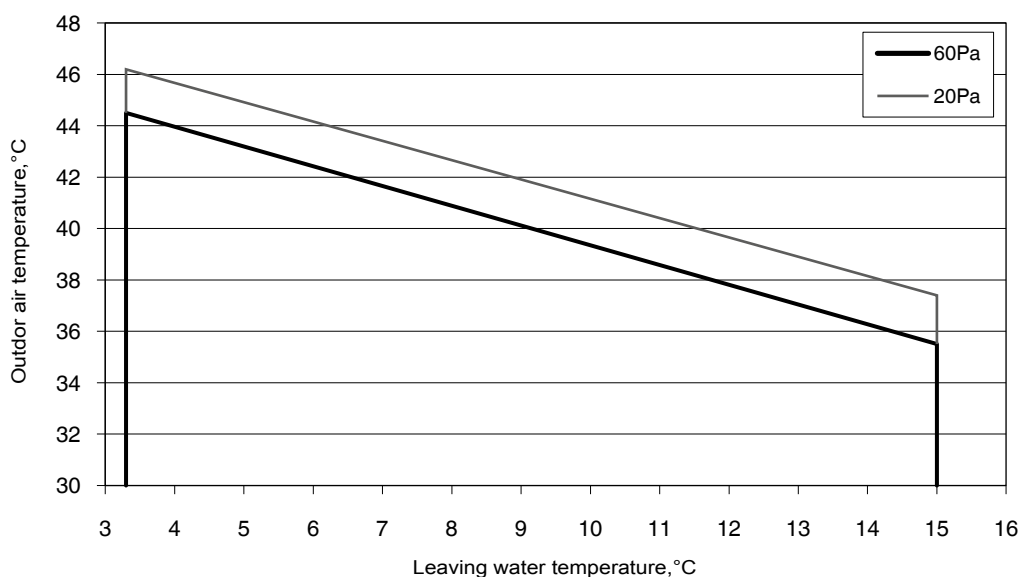
Performance at the following conditions:

- 35°C outside air temperature
- 12/7°C entering/leaving water temperature

30XBEZE option 10

30XBEZE0600		0 Pa	Correction factors	40 Pa
Air flow	l/s	57840	-7,5%	53502
Cooling capacity	kW	788	-1,0%	781
EER	kW/kW	3,14	-3,5%	3,03
Power input	kW	251	2,5%	257

Application limits for correction factors for high air temperatures



PHYSICAL DATA, SIZES 30XBEZE 200 TO 600

30XBEZE				200	230	250	300	350	400	450	500	550	600	
Cooling														
Standard unit	CA1	Nominal capacity	kW	210	229	246	298	340	380	472	520	556	592	
Full load performances*		EER	kW/kW	3,31	3,26	3,29	3,35	3,33	3,32	3,33	3,42	3,27	3,27	
Unit with option 15LS (+)	CA1	Nominal capacity	kW	208	226	244	296	337	374	464	512	546	580	
Full load performances*		EER	kW/kW	3,33	3,35	3,28	3,36	3,31	3,27	3,40	3,47	3,27	3,24	
Standard unit	Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,65	4,57	4,54	4,49	4,51	4,51	4,67	4,78	4,60	4,59	
Seasonal energy efficiency **		ηs cool _{12/7°C}	%	183	180	179	177	177	177	184	188	181	181	
		SEPR _{12/7°C} Process high temp.	kWh/kWh	6,23	6,36	6,43	6,26	6,24	6,34	6,36	6,39	6,03	6,06	
Unit with Option 6	Seasonal energy efficiency **	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	3,55	3,53	3,53	3,37	3,53	3,51	3,49	3,60	3,56	3,38	
Seasonal energy efficiency **		SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,59	4,59	4,57	4,64	4,65	4,63	-	-	-	-	
		ηs cool _{12/7°C}	%	181	181	180	183	183	182	-	-	-	-	
Unit with Option 299	Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	6,22	6,35	6,45	6,31	6,28	6,37	-	-	-	-	
Seasonal energy efficiency **		SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,59	4,59	4,57	4,64	4,65	4,63	-	-	-	-	
		ηs cool _{12/7°C}	%	181	181	180	183	183	182	-	-	-	-	
Unit with Option 5	Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	6,20	6,36	6,32	6,05	6,23	6,13	6,22	6,26	6,15	5,80	
Seasonal energy efficiency **		SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,71	4,64	4,52	4,53	4,48	4,49	4,67	4,82	4,58	4,58	
		ηs cool _{12/7°C}	%	186	182	178	178	176	176	184	190	180	180	
Unit with option 15LS (+)	Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	6,36	6,56	6,44	6,34	6,24	6,03	6,39	6,53	5,95	6,06	
Seasonal energy efficiency **		SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	3,55	3,53	3,53	3,37	3,53	3,50	3,51	3,60	3,54	3,35	
		SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,65	4,65	4,54	4,68	4,61	4,60	-	-	-	-	
Unit with Option 6 & 15LS (+)	Seasonal energy efficiency **	ηs cool _{12/7°C}	%	183	183	179	184	182	181	-	-	-	-	
Seasonal energy efficiency **		SEPR _{12/7°C} Process high temp.	kWh/kWh	6,35	6,46	6,46	6,40	6,28	6,06	-	-	-	-	
		SEPR _{12/7°C} Process high temp.	kWh/kWh	6,27	6,43	6,37	6,12	6,28	6,25	6,34	6,32	6,21	5,87	
Unit with Option 299 & 15LS (+)	Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	6,27	6,43	6,37	6,12	6,28	6,25	6,34	6,32	6,21	5,87	
Seasonal energy efficiency **		SEPR _{12/7°C} Process high temp.	kWh/kWh	6,27	6,43	6,37	6,12	6,28	6,25	6,34	6,32	6,21	5,87	
		SEPR _{12/7°C} Process high temp.	kWh/kWh	6,27	6,43	6,37	6,12	6,28	6,25	6,34	6,32	6,21	5,87	
Sound levels														
Standard unit														
Sound power ⁽¹⁾				dB(A)	99	99	99	99	101	99	101	99	103	103
Sound pressure at 10 m ⁽²⁾					67	67	67	67	69	67	68	66	70	70
Sound pressure at 1 m				dB(A)	80	80	80	79	81	79	80	78	82	82
Unit + option 15 ⁽³⁾														
Sound power ⁽¹⁾				dB(A)	93	93	94	95	95	95	97	96	97	98
Sound pressure at 10 m ⁽²⁾					61	61	62	63	63	63	64	63	64	65
Sound pressure at 1 m				dB(A)	74	74	75	75	75	75	76	75	76	77
Unit + option 15LS ⁽³⁾														
Sound power ⁽¹⁾				dB(A)	87	87	87	90	91	91	93	92	94	94
Sound pressure at 10 m ⁽²⁾					55	55	55	58	59	59	60	59	61	61
Sound pressure at 1 m				dB(A)	68	68	68	70	71	71	72	71	73	73
Unit + option 15LS+ ⁽³⁾														
Sound power ⁽¹⁾				dB(A)	-	-	-	-	89	89	91	90	91	92
Sound pressure at 10 m ⁽²⁾					-	-	-	-	57	57	58	57	58	59
Sound pressure at 1 m				dB(A)	-	-	-	-	69	69	70	69	70	71
Dimensions														
Standard unit														
Length				mm	3604	3604	3604	4798	4798	4798	7186	7186	7186	7186
Width				mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height				mm	2322	2322	2322	2322	2322	2322	2322	2322	2322	2322

* In accordance with standard EN14511-3:2018.

** In accordance with standard EN14825:2016, average climate

*** With EG 30%

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside 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 _{-2/-8°C} **Bold values compliant to Ecodesign regulation: (EU) No 2015/1095 for Process application**

NA Non Authorized for the specific application for CEE market

- Not applicable

(1) in dB ref=10⁻¹²W, '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) Options : 15 = Low noise, 15LS = Very Low noise, 15LS+ = Ultra Low noise



Eurovent certified values

PHYSICAL DATA, SIZES 30XBEZE 200 TO 600

30XBEZE		200	230	250	300	350	400	450	500	550	600
Operating weight⁽⁴⁾											
Standard unit	l	3040	3071	3091	3674	3737	3798	4797	4943	5201	5514
Unit + option 15 ⁽³⁾	l	3308	3339	3359	3973	4036	4097	5128	5274	5532	5845
Compressors		06T semi-hermetic screw compressor, 50 r/s									
Circuit A		1	1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1	1
No. of control stages											
Refrigerant⁽⁴⁾		R1234ze(E) / A2L									
Circuit A	kg	37	35	35	51	52	52	58	58	65	69
	teqCO ₂	0,04	0,04	0,04	0,05	0,05	0,05	0,06	0,06	0,07	0,07
Circuit B	kg	39	36	37	37	37	37	59	62	58	65
	teqCO ₂	0,04	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,06	0,07
Oil											
Circuit A	l	20,8	20,8	20,8	23,5	23,5	23,5	23,5	23,5	27,6	27,6
Circuit B	l	20,8	20,8	20,8	20,8	20,8	20,8	23,5	23,5	23,5	23,5
Capacity control		SmartVu™, Electronic Expansion Valve (EXV)									
Minimum capacity	%	15	15	15	15	15	15	15	15	15	15
Air heat exchanger		Aluminum micro-channel coils (MCHE)									
Fans		Inverter driven Flying Bird (TM) VI fans with AC motors									
Standard unit											
Quantity		6	6	6	8	8	8	11	12	12	12
Maximum total air flow	l/s	28920	28920	28920	38560	38560	38560	53020	57840	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	15,7
Unit + option 15LS											
Maximum total air flow	l/s	23580	23580	23580	31440	31440	31440	43230	47160	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	11,7
Water heat exchanger		Flooded multi-tube type									
Water volume	l	58	61	61	66	70	77	79	94	98	119
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Water connections		Victaulic® type									
Standard											
Nominal diameter	in	5	5	5	5	5	5	5	6	6	6
Actual outside diameter	mm	141,3	141,3	141,3	141,3	141,3	141,3	141,3	168,3	168,3	168,3
Options 100A											
Nominal diameter	in	4	4	4	4	4	4	5	5	5	5
Actual outside diameter	mm	114,3	114,3	114,3	114,3	114,3	114,3	141,3	141,3	141,3	141,3
Options 100C											
Nominal diameter	in	5	5	5	5	5	5	6	6	6	6
Actual outside diameter	mm	141,3	141,3	141,3	141,3	141,3	141,3	168,3	168,3	168,3	168,3
Casing paint		Colour code RAL 7035									

(3) Options : 15 = Low noise, 15LS = Very Low noise, 15LS+ = Ultra Low noise

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

PHYSICAL DATA, SIZES 30XBEZE 630 TO 1200

30XBEZE			630	700	750	900	950	1050	1150	1200	
Cooling											
Standard unit	CA1	Nominal capacity	kW	628	684	755	877	957	1025	1120	1171
Full load performances*		EER	kW/kW	3,29	3,29	3,29	3,30	3,29	3,29	3,26	3,24
Unit with option 15LS (+)	CA1	Nominal capacity	kW	613	671	737	860	935	1003	1093	1146
Full load performances*		EER	kW/kW	3,24	3,24	3,26	3,28	3,22	3,28	3,16	3,25
Standard unit	Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,59	4,61	4,59	4,67	4,62	4,61	4,64	4,59
Seasonal energy efficiency **		ηs cool _{12/7°C}	%	181	181	180	184	182	181	183	181
		SEPR _{12/7°C} Process high temp.	kWh/kWh	5,93	6,10	5,99	5,94	5,64	6,01	5,92	5,95
Unit with Option 6	Seasonal energy efficiency **	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	3,37	3,36	3,38	3,41	3,31	3,48	3,43	3,31
Seasonal energy efficiency **											
Unit with Option 299	Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	-	-	-	-	-	-	-	-
Seasonal energy efficiency **		ηs cool _{12/7°C}	%	-	-	-	-	-	-	-	-
		SEPR _{12/7°C} Process high temp.	kWh/kWh	-	-	-	-	-	-	-	-
Unit with Option 5	Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	5,76	5,76	5,75	5,77	5,51	5,89	5,68	5,51
Seasonal energy efficiency **											
Unit with option 15LS (+)	Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	4,59	4,59	4,56	4,65	4,58	4,60	4,61	4,56
Seasonal energy efficiency **		ηs cool _{12/7°C}	%	180	181	179	183	180	181	182	180
		SEPR _{12/7°C} Process high temp.	kWh/kWh	5,97	6,15	6,19	6,29	6,04	6,12	6,06	6,00
Unit with Option 6 & 15LS (+)	Seasonal energy efficiency **	SEPR _{-2/-8°C} Process medium temp.***	kWh/kWh	3,32	3,29	3,36	3,40	3,30	3,47	3,44	3,31
Seasonal energy efficiency **											
Unit with Option 299 & 15LS (+)	Seasonal energy efficiency **	SEER _{12/7°C} Comfort low temp.	kWh/kWh	-	-	-	-	-	-	-	-
Seasonal energy efficiency **		ηs cool _{12/7°C}	%	-	-	-	-	-	-	-	-
		SEPR _{12/7°C} Process high temp.	kWh/kWh	-	-	-	-	-	-	-	-
Unit with Option 5 & 15LS (+)	Seasonal energy efficiency **	SEPR _{12/7°C} Process high temp.	kWh/kWh	5,84	5,82	5,82	5,83	5,72	5,91	5,77	5,70
Seasonal energy efficiency **											
Sound levels											
Standard unit											
Sound power ⁽¹⁾		dB(A)	101	104	102	103	102	104	104	104	
Sound pressure at 10 m ⁽²⁾			68	71	69	70	69	71	71	71	
Sound pressure at 1 m ⁽²⁾		dB(A)	80	83	81	81	80	81	81	81	
Unit + option 15 ⁽³⁾											
Sound power ⁽¹⁾		dB(A)	97	99	98	98	98	100	99	99	
Sound pressure at 10 m ⁽²⁾			64	66	65	65	65	67	66	66	
Sound pressure at 1 m ⁽²⁾		dB(A)	76	78	77	76	76	77	76	76	
Unit + option 15LS ⁽³⁾											
Sound power ⁽¹⁾		dB(A)	94	95	94	94	94	99	95	96	
Sound pressure at 10 m ⁽²⁾			61	62	61	61	61	66	62	63	
Sound pressure at 1 m ⁽²⁾		dB(A)	73	74	73	72	72	76	72	73	
Unit + option 15LS+ ⁽³⁾											
Sound power ⁽¹⁾		dB(A)	91	93	92	93	93	97	94	95	
Sound pressure at 10 m ⁽²⁾			58	60	59	60	60	64	61	62	
Sound pressure at 1 m ⁽²⁾		dB(A)	70	72	71	71	71	74	71	72	

* In accordance with standard EN14511-3:2018.

** In accordance with standard EN14825:2016, average climate

*** With EG 30%

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside 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 _{-2/-8°C} **Bold values compliant to Ecodesign regulation: (EU) No 2015/1095 for Process application**

NA Non Authorized for the specific application for CEE market

- Not 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).

(3) Options : 15 = Low noise, 15LS = Very Low noise, 15LS+ = Ultra Low noise



Eurovent certified values

PHYSICAL DATA, SIZES 30XBEZE 630 TO 1200

30XBEZE		630	700	750	900	950	1050	1150	1200
Dimensions									
Standard unit									
Length	mm	7186	8380	8380	10770	10770	11962	11962	13157
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽⁴⁾									
Standard unit	kg	5563	6168	6344	7687	7780	8660	8735	9072
Unit + option 15 ⁽³⁾	kg	5894	6499	6675	8061	8154	9034	9109	9446
Compressors		06T semi-hermetic screw compressor, 50 r/s							
Circuit A		1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1
No. of control stages									
Refrigerant⁽⁴⁾		R1234ze(E) / A2L							
Circuit A	kg	69	72	72	80	80	115	121	124
	teqCO ₂	0,07	0,07	0,07	0,08	0,08	0,12	0,12	0,12
Circuit B	kg	67	74	74	121	126	121	127	130
	teqCO ₂	0,07	0,07	0,07	0,12	0,13	0,12	0,13	0,13
Oil		Oil type							
Circuit A	l	27,6	27,6	27,6	27,6	27,6	36,0	36,0	36,0
Circuit B	l	23,5	27,6	27,6	36,0	36,0	36,0	36,0	36,0
Circuit C	l								
Circuit D	l								
Capacity control		SmartVu™, Electronic Expansion Valve (EXV)							
Minimum capacity	%	15	15	15	15	15	15	15	15
Air heat exchanger		Aluminum micro-channel coils (MCHE)							
Fans		Inverter driven Flying Bird (TM) VI fans with AC motors							
Standard unit									
Quantity		12	14	14	18	18	20	20	22
Maximum total air flow	l/s	57840	67480	67480	86760	86760	96400	96400	106040
Maximum rotation speed	r/s	15,7	15,7	15,7	15,7	15,7	15,7	15,7	15,7
Unit + option 15LS									
Maximum total air flow	l/s	47160	55020	55020	70740	70740	78600	78600	86460
Maximum rotation speed	r/s	11,7	11,7	11,7	11,7	11,7	11,7	11,7	11,7
Water heat exchanger		Flooded multi-tube type							
Water volume	l	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
Water connections		Victaulic® type							
Standard & option 6									
Nominal diameter	in	6	6	8	6	6	6	6	6
Actual outside diameter	mm	168,3	168,3	219,1	168,3	168,3	168,3	168,3	168,3
Options 5 & 100A									
Nominal diameter	in	5	5	6	6	6	6	6	6
Actual outside diameter	mm	141,3	141,3	168,3	168,3	168,3	168,3	168,3	168,3
Casing paint		Colour code RAL 7035							

(3) Options : 15 = Low noise, 15LS = Very Low noise, 118a = Dx freecooling option, 50= heat recovery.

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

PHYSICAL DATA, SIZES 30XBPZE 200 TO 600

30XBPZE				200	230	250	300	350	400	450	500	550	600
Cooling													
Standard unit	CA1	Nominal capacity	kW	210	229	246	298	340	380	473	520	556	593
Full load performances*		EER	kW/kW	3,37	3,32	3,34	3,42	3,38	3,37	3,42	3,49	3,33	3,44
Unit with Option 15LS	CA1	Nominal capacity	kW	208	226	244	296	337	374	464	512	546	580
Full load performances*		EER	kW/kW	3,37	3,33	3,29	3,40	3,34	3,30	3,42	3,50	3,29	3,27
Standard unit Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	4,75	4,68	4,62	4,57	4,61	4,60	4,76	4,86	4,66	4,69
		ηs cool ^{12/7°C}	%	187	184	182	180	182	181	188	192	183	185
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,29	6,42	6,48	6,28	6,31	6,42	6,43	6,44	6,07	6,15
Unit with option 6 Seasonal energy efficiency **		SEPR ^{-2/-8°C} Process medium temp.***	kWh/kWh	3,57	3,58	3,57	3,42	3,58	3,56	3,56	3,65	3,60	3,43
Unit with option 299 Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	4,70	4,70	4,65	4,73	4,76	4,73	-	-	-	-
		ηs cool ^{12/7°C}	%	185	185	183	186	187	186	-	-	-	-
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,28	6,41	6,49	6,32	6,35	6,46	-	-	-	-
Unit with Option 5 Seasonal energy efficiency **		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,28	6,43	6,39	6,12	6,30	6,20	6,32	6,35	6,26	5,90
Unit with option 15LS(+) Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	4,83	4,70	4,59	4,61	4,60	4,58	4,70	4,86	4,59	4,54
		ηs cool ^{12/7°C}	%	190	185	180	181	181	180	185	191	181	179
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,45	6,54	6,48	6,37	6,33	6,13	6,40	6,43	6,06	6,09
Unit with Option 6 & 15LS (+) Seasonal energy efficiency **		SEPR ^{-2/-8°C} Process medium temp.***	kWh/kWh	3,56	3,58	3,57	3,42	3,57	3,54	3,55	3,65	3,60	3,42
Unit with Option 299 & 15LS (+) Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	4,76	4,71	4,61	4,77	4,74	4,69	-	-	-	-
		ηs cool ^{12/7°C}	%	188	185	181	188	186	185	-	-	-	-
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,44	6,46	NA	6,42	6,37	6,17	-	-	-	-
Unit with Option 5 & 15LS (+) Seasonal energy efficiency **		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,34	6,5	6,43	6,19	6,34	6,30	6,29	6,33	6,21	5,87
Sound levels													
Standard unit													
Sound power ⁽¹⁾			dB(A)	99	99	99	99	101	99	101	99	103	103
Sound pressure at 10 m ⁽²⁾				67	67	67	67	69	67	68	66	70	70
Sound pressure at 1 m			dB(A)	80	80	80	79	81	79	80	78	82	82
Unit + option 15 ⁽³⁾													
Sound power ⁽¹⁾			dB(A)	93	93	94	95	95	95	97	96	97	98
Sound pressure at 10 m ⁽²⁾				61	61	62	63	63	63	64	63	64	65
Sound pressure at 1 m			dB(A)	74	74	75	75	75	75	76	75	76	77
Unit + option 15LS ⁽³⁾													
Sound power ⁽¹⁾			dB(A)	87	87	87	90	91	91	93	92	94	94
Sound pressure at 10 m ⁽²⁾				55	55	55	58	59	59	60	59	61	61
Sound pressure at 1 m			dB(A)	68	68	68	70	71	71	72	71	73	73
Unit + option 15LS+ ⁽³⁾													
Sound power ⁽¹⁾			dB(A)	-	-	-	-	89	89	91	90	91	92
Sound pressure at 10 m ⁽²⁾				-	-	-	-	57	57	58	57	58	59
Sound pressure at 1 m			dB(A)	-	-	-	-	69	69	70	69	70	71

* In accordance with standard EN14511-3:2018.

** In accordance with standard EN14825:2016, average climate

*** With EG 30%

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fouling factor 0 m².K/W

$\eta_{\text{S cool}}$ $_{12/7^{\circ}\text{C}}$ & SEER $_{12/7^{\circ}\text{C}}$ **Bold values compliant to Ecodesign regulation: (EU) No 2016/2281 for Comfort application**

SEPR $_{-2/-8^{\circ}\text{C}}$ **Bold values compliant to Ecodesign regulation: (EU) No 2015/1095 for Process application**

NA Non Authorized for the specific application for CEE market

(1) in dB ref=10⁻¹²W, '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) Options : 15 = Low noise, 15LS = Very Low noise, 118a = Dx freecooling option, 50= heat recovery.



Eurovent certified values

PHYSICAL DATA, SIZES 30XPZE 200 TO 600

30XPZE		200	230	250	300	350	400	450	500	550	600
Dimensions											
Standard unit											
Length	mm	3604	3604	3604	4798	4798	4798	7186	7186	7186	7186
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽⁴⁾											
Standard unit	kg	3015	3047	3066	3652	3715	3776	4761	4895	5161	5474
Unit + option 15 ⁽³⁾	kg	3283	3314	3334	3952	4014	4075	5092	5226	5492	5805
Compressors		06T semi-hermetic screw compressor, 50 r/s									
Circuit A	l	1	1	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1	1	1
No. of control stages	l										
Refrigerant⁽⁴⁾		R1234ze(E) / A2L									
Circuit A	kg	39	37	37	52	53	55	60	61	69	69
	teqCO ₂	0,04	0,04	0,04	0,05	0,05	0,05	0,06	0,06	0,07	0,07
Circuit B	kg	40,0	38	39	40	40	36	61	64	61	67
	teqCO ₂	0,04	0,04	0,04	0,04	0,04	0,04	0,06	0,06	0,06	0,07
Oil											
Circuit A	l	20,8	20,8	20,8	23,5	23,5	23,5	23,5	23,5	27,6	27,6
Circuit B	l	20,8	20,8	20,8	20,8	20,8	20,8	23,5	23,5	23,5	23,5
Capacity control		SmartVu™, Electronic Expansion Valve (EXV)									
Minimum capacity	%	15	15	15	15	15	15	15	15	15	15
Air heat exchanger		Aluminum micro-channel coils (MCHE)									
Fans		Inverter driven Flying Bird (TM) VI fans with EC motors									
Standard unit											
Quantity		6	6	6	8	8	8	11	12	12	12
Maximum total air flow	l/s	28920	28920	28920	38560	38560	38560	53020	57840	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	15,7
Unit + option 15LS											
Maximum total air flow	l/s	23580	23580	23580	31440	31440	31440	43230	47160	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	11,7
Water heat exchanger		Flooded multi-tube type									
Water volume	l	58	61	61	66	70	77	79	94	98	119
Max. water-side operating pressure without hydraulic module	kPa	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
Water connections		Victaulic® type									
Standard & option 6											
Nominal diameter	in	5	5	5	5	5	5	5	6	6	6
Actual outside diameter	mm	141,3	141,3	141,3	141,3	141,3	141,3	141,3	168,3	168,3	168,3
Options 5 & 100A											
Nominal diameter	in	4	4	4	4	4	4	5	5	5	5
Actual outside diameter	mm	114,3	114,3	114,3	114,3	114,3	114,3	141,3	141,3	141,3	141,3
Casing paint		Colour code RAL 7035									

(3) Options : 15 = Low noise, 15LS = Very Low noise, 118a = Dx freecooling option, 50= heat recovery.

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

PHYSICAL DATA, SIZES 30XBPZE 0630 TO 1200

30XBPZE				630	700	750	900	950	1050	1150	1200
Cooling											
Standard unit	CA1	Nominal capacity	kW	637	685	763	880	968	1026	1120	1173
Full load performances*		EER	kW/kW	3,44	3,35	3,43	3,39	3,42	3,35	3,31	3,34
Unit with Option 15LS (+)	CA1	Nominal capacity	kW	623	671	748	864	949	1002	1093	1145
Full load performances*		EER	kW/kW	3,43	3,27	3,44	3,40	3,42	3,31	3,18	3,26
Standard unit Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	4,75	4,70	4,79	4,79	4,79	4,69	4,66	4,65
		ηs cool ^{12/7°C}	%	187	185	189	189	189	185	183	183
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,03	6,15	6,07	6,00	5,73	6,07	5,99	6,07
Unit with option 6 Seasonal energy efficiency **		SEPR ^{-2/-8°C} Process medium temp.***	kWh/kWh	3,43	3,41	3,45	3,47	3,37	3,53	3,49	3,36
Unit with option 299 Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	-	-	-	-	-	-	-	-
		ηs cool ^{12/7°C}	%	-	-	-	-	-	-	-	-
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	-	-	-	-	-	-	-	-
Unit with Option 5 Seasonal energy efficiency **		SEPR ^{12/7°C} Process high temp.	kWh/kWh	5,84	5,84	5,82	5,86	5,61	5,99	5,76	5,65
Unit with option 15LS(+) Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	4,70	4,57	4,69	4,70	4,71	4,67	4,60	4,61
		ηs cool ^{12/7°C}	%	185	180	185	185	185	184	181	181
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	6,00	6,13	6,00	5,96	5,72	6,05	5,93	5,95
Unit with Option 6 & 15LS (+) Seasonal energy efficiency **		SEPR ^{-2/-8°C} Process medium temp.***	kWh/kWh	3,41	3,37	3,44	3,46	3,36	3,51	3,46	3,34
Unit with Option 299 & 15LS (+) Seasonal energy efficiency **		SEER ^{12/7°C} Comfort low temp.	kWh/kWh	-	-	-	-	-	-	-	-
		ηs cool ^{12/7°C}	%	-	-	-	-	-	-	-	-
		SEPR ^{12/7°C} Process high temp.	kWh/kWh	-	-	-	-	-	-	-	-
Unit with Option 5 & 15LS (+) Seasonal energy efficiency **		SEPR ^{12/7°C} Process high temp.	kWh/kWh	5,84	5,83	5,76	5,83	5,55	5,96	5,73	5,58
Sound levels											
Standard unit											
Sound power ⁽¹⁾			dB(A)	101	104	102	103	102	104	104	104
Sound pressure at 10 m ⁽²⁾				68	71	69	70	69	71	71	71
Sound pressure at 1 m			dB(A)	80	83	80	80	79	81	81	81
Unit + option 15 ⁽³⁾											
Sound power ⁽¹⁾			dB(A)	97	99	98	98	98	100	99	99
Sound pressure at 10 m ⁽²⁾				64	66	65	65	65	67	66	66
Sound pressure at 1 m			dB(A)	76	78	76	75	75	77	76	76
Unit + option 15LS ⁽³⁾											
Sound power ⁽¹⁾			dB(A)	94	95	94	94	94	99	95	96
Sound pressure at 10 m ⁽²⁾				61	62	61	61	61	66	62	63
Sound pressure at 1 m			dB(A)	73	74	72	71	71	76	72	73
Unit + option 15LS+ ⁽³⁾											
Sound power ⁽¹⁾			dB(A)	91	92	92	93	93	97	94	95
Sound pressure at 10 m ⁽²⁾				58	59	59	60	60	64	61	62
Sound pressure at 1 m			dB(A)	70	71	70	70	70	74	71	72

* In accordance with standard EN14511-3:2018.

** In accordance with standard EN14825:2016, average climate

*** With EG 30%

CA1 Cooling mode conditions: Evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator frosting 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 _{-2/-8°C} **Bold values compliant to Ecodesign regulation: (EU) No 2015/1095 for Process application**

NA Non Authorized for the specific application for CEE market

(1) In dB ref=10⁻¹²W, '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) Options : 15 = Low noise, 15LS = Very Low noise, 15LS+ = Ultra Low noise



Eurovent certified values

PHYSICAL DATA, SIZES 30XBPZE 0630 TO 1200

30XBPZE		630	700	750	900	950	1050	1150	1200
Dimensions									
Standard unit									
Length	mm	8380	8380	9574	11962	11962	11962	11962	13157
Width	mm	2253	2253	2253	2253	2253	2253	2253	2253
Height	mm	2322	2322	2322	2322	2322	2322	2322	2322
Operating weight⁽⁴⁾									
Standard unit	kg	5841	6114	6607	7867	7993	8622	8697	9000
Unit + option 15 ⁽³⁾	kg	6172	6445	6938	8241	8367	8996	9071	9374
Compressors		06T semi-hermetic screw compressor, 50 r/s							
Circuit A	l	1	1	1	1	1	1	1	1
Circuit B		1	1	1	1	1	1	1	1
No. of control stages	l								
Refrigerant⁽⁴⁾		R1234ze(E) / A2L							
Circuit A	kg	75	72	79	82	84	115	121	124
	teqCO ₂	0,08	0,07	0,08	0,08	0,08	0,12	0,12	0,12
Circuit B	kg	67	74	83	118	130	121	127	130
	teqCO ₂	0,07	0,07	0,08	0,12	0,13	0,12	0,13	0,13
Oil									
Circuit A	l	27,6	27,6	27,6	27,6	27,6	36,0	36,0	36,0
Circuit B	l	23,5	27,6	27,6	36,0	36,0	36,0	36,0	36,0
Capacity control		SmartVu™, Electronic Expansion Valve (EXV)							
Minimum capacity	%	15	15	15	15	15	15	15	15
Air heat exchanger		Aluminum micro-channel coils (MCHE)							
Fans		Inverter driven Flying Bird (TM) VI fans with EC motors							
Standard unit									
Quantity		14	14	16	19	20	20	20	22
Maximum total air flow	l/s	67480	67480	77120	91580	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
Unit + option 15LS									
Maximum total air flow	l/s	55020	55020	62880	74670	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
Water heat exchanger		Flooded multi-pipe type							
Water volume	l	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
Water connections		Victaulic® type							
Standard & option 6									
Nominal diameter	in	6	6	8	6	6	6	6	6
Actual outside diameter	mm	168.3	168.3	219.1	168.3	168.3	168.3	168.3	168.3
Options 5 & 100A									
Nominal diameter	in	5	5	6	6	6	6	6	6
Actual outside diameter	mm	141.3	141.3	168.3	168.3	168.3	168.3	168.3	168.3
Casing paint		Colour code RAL 7035							

(3) Options : 15 = Low noise, 15LS = Very Low noise, 15LS+ = Ultra Low noise

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

ELECTRICAL DATA, 30XBEZE 200 TO 750

30XBEZE		200	230	250	300	350	400	450	500	550	600	630	700	750
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	97	105	112	142	160	174	224	239	257	270	281	305	327
Unit + option 15LS	kW	92	99	107	135	153	167	214	229	246	260	271	293	315
Power factor at maximum power ⁽¹⁾														
Standard unit														
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	0,90	0,88	0,89
Unit + option 15LS														
Displacement Power Factor (Cos Phi)		0,90	0,90	0,89	0,89	0,90	0,88	0,89	0,90	0,89	0,89	0,89	0,89	0,89
Nominal operating current draw ⁽²⁾														
Standard unit	A	116	125	134	161	181	198	248	268	288	304	314	347	367
Unit + option 15LS	A	107	116	125	149	169	185	231	249	269	286	296	326	345
Maximum operating current draw (Un) ⁽¹⁾														
Standard unit	A	155	169	182	227	258	280	359	384	417	439	454	500	530
Unit + option 15LS	A	147	160	173	216	247	269	343	367	400	422	437	480	510
Maximum current (Un-10%) ⁽¹⁾														
Standard unit	A	166	181	195	244	277	300	385	412	447	471	488	537	569
Unit + option 15LS	A	158	172	187	232	265	289	369	395	430	454	471	517	549
Nominal start-up current ⁽³⁾														
Standard unit	A	227	227	236	360	454	454	501	521	700	717	717	759	769
Unit + option 15LS	A	223	223	232	356	450	450	494	512	693	710	710	749	759
Unit + option 25C	A	184	180	189	317	407	407	392	412	605	612	612	628	642
Maximum start-up current(Un) ⁽²⁾														
Standard unit	A	248	261	261	381	479	479	581	580	754	776	776	837	852
Unit + option 15LS	A	244	257	257	377	475	475	574	572	747	769	769	827	842
Unit + option 25C	A	205	214	214	338	432	432	472	472	659	671	671	706	725

(1) Values obtained at unit continuous maximum operating conditions (data given on the unit nameplate)

(2) Operating current of the smallest compressor(s) + fan current + locked rotor current or reduced start-up current of the largest compressor.

(3) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

ELECTRICAL DATA, 30XBEZE 0900 TO 1200

30XBEZE		900	950	1050	1150	1200
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⁾ - 30XBEZE						
Standard unit						
Circuit 1 ^(a)	kW	154	163	224	245	262
Circuit 2 ^(a)	kW	246	262	244	260	262
Option 081	kW	399	426	468	505	524
Unit + option 15LS						
Circuit 1 ^(a)	kW	147	157	215	236	253
Circuit 2 ^(a)	kW	236	253	235	252	253
Option 081	kW	383	410	450	487	505
Power factor at maximum power⁽¹⁾ - 30XBEZE						
Standard unit						
Displacement Power Factor (Cos Phi)		0,89	0,89	0,89	0,89	0,89
Unit + option 15LS						
Displacement Power Factor (Cos Phi)		0,89	0,89	0,89	0,89	0,89
Nominal operating current draw⁽²⁾ - 30XBEZE						
Standard unit						
Circuit 1 ^(a)	A	174	184	250	267	292
Circuit 2 ^(a)	A	270	292	267	288	292
Option 081	A	444	475	516	555	583
Unit + option 15LS						
Circuit 1 ^(a)	A	163	173	235	252	275
Circuit 2 ^(a)	A	253	275	252	273	275
Option 081	A	416	447	486	524	549
Maximum operating current draw (Un)⁽¹⁾ - 30XBEZE						
Standard unit						
Circuit 1 ^(a)	A	250	265	365	397	425
Circuit 2 ^(a)	A	400	425	397	422	425
Option 081	A	650	690	762	819	850
Unit + option 15LS						
Circuit 1 ^(a)	A	240	255	351	383	410
Circuit 2 ^(a)	A	384	410	383	408	410
Option 081	A	624	665	733	790	819
Maximum current (Un-10%)⁽¹⁾ - 30XBEZE						
Standard unit						
Circuit 1 ^(a)	A	269	285	392	426	457
Circuit 2 ^(a)	A	429	457	426	454	457
Option 081	A	697	741	818	879	913
Unit + option 15LS						
Circuit 1 ^(a)	A	259	275	378	412	441
Circuit 2 ^(a)	A	414	441	412	440	441
Option 081	A	672	716	790	851	882
Nominal start-up current⁽³⁾ - 30XBEZE						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Option 081	A	854	876	893	915	918
Option 081 & Opt 25c	A	629	640	672	683	683
Maximum start-up current(Un)⁽²⁾ - 30XBEZE						
Circuit 1 ^(a)	A	587	587	629	629	629
Circuit 2 ^(a)	A	629	629	629	629	629
Option 081	A	987	1012	1026	1051	1054
Option 081 & Opt 25c	A	761	776	804	819	818

(1) Values obtained at unit continuous maximum operating conditions (data given on the unit nameplate)

(2) Operating current of the smallest compressor(s) + fan current + locked rotor current or reduced start-up current of the largest compressor.

(3) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

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

ELECTRICAL DATA, 30XBPZE 200 TO 750

30XBPZE		200	230	250	300	350	400	450	500	550	600	630	700	750
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	96	103	111	140	158	172	222	237	255	268	282	302	328
Unit + option 15LS	kW	94	101	109	138	156	170	218	233	250	264	278	298	323
Power factor at maximum power ⁽¹⁾														
Standard unit														
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
Unit + option 15LS														
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
Nominal operating current draw ⁽²⁾														
Standard unit	A	113	122	131	158	177	194	243	262	282	299	314	341	366
Unit + option 15LS	A	110	119	128	154	173	190	237	256	276	293	307	334	358
Maximum operating current draw (Un) ⁽¹⁾														
Standard unit	A	154	167	181	226	256	278	357	382	415	437	457	497	533
Unit + option 15LS	A	151	164	178	222	252	274	351	375	408	430	450	490	525
Maximum current (Un-10%) ⁽¹⁾														
Standard unit	A	165	180	194	242	275	299	383	409	445	469	491	534	572
Unit + option 15LS	A	162	176	191	238	271	295	377	403	439	463	483	527	564
Nominal start-up current ⁽³⁾														
Standard unit	A	227	227	236	360	454	454	500	519	699	716	718	758	770
Unit + option 15LS	A	225	225	234	358	452	452	498	516	697	713	715	754	766
Unit + option 25C	A	184	180	189	317	407	407	392	411	604	611	614	626	643
Maximum start-up current(Un) ⁽²⁾														
Standard unit	A	247	261	261	380	479	479	580	579	753	775	778	836	854
Unit + option 15LS	A	246	259	259	379	477	477	577	576	751	773	775	832	850
Unit + option 25C	A	204	213	213	337	431	431	471	470	658	670	673	705	727

(1) Values obtained at unit continuous maximum operating conditions (data given on the unit nameplate)

(2) Operating current of the smallest compressor(s) + fan current + locked rotor current or reduced start-up current of the largest compressor.

(3) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

ELECTRICAL DATA, 30XBPZE 900 TO 1200

30XBPZE		200	600	630	700	750
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					
Circuit 1 (a)	kW	154	164	222	243	260
Circuit 2 (a)	kW	244	262	242	258	260
Option 081	kW	397	425	464	501	520
Unit + option 15LS						
Circuit 1 (a)	kW	151	162	219	240	256
Circuit 2 (a)	kW	240	258	239	255	256
Option 081	kW	391	419	457	494	513
Power factor at maximum power ⁽¹⁾						
Standard unit						
Displacement Power Factor (Cos Phi)		0,88	0,89	0,88	0,89	0,89
Unit + option 15LS						
Displacement Power Factor (Cos Phi)		0,88	0,89	0,88	0,89	0,89
Nominal operating current draw ⁽²⁾ - 30XBEZE						
Standard unit						
Circuit 1 (a)	A	173	183	245	263	287
Circuit 2 (a)	A	265	289	263	284	287
Option 081	A	438	472	507	546	573
Unit + option 15LS						
Circuit 1 (a)	A	169	179	240	257	281
Circuit 2 (a)	A	260	283	257	279	281
Option 081	A	428	462	497	536	561
Maximum operating current draw (Un) ⁽¹⁾						
Standard unit						
Circuit 1 (a)	A	252	267	363	395	423
Circuit 2 (a)	A	398	426	395	420	423
Option 081	A	649	692	758	815	846
Unit + option 15LS						
Circuit 1 (a)	A	247	263	358	390	417
Circuit 2 (a)	A	392	420	390	415	417
Option 081	A	639	682	747	804	834
Maximum current (Un-10%) ⁽¹⁾						
Standard unit						
Circuit 1 (a)	A	270	286	390	424	454
Circuit 2 (a)	A	427	457	424	452	454
Option 081	A	697	743	814	876	908
Unit + option 15LS						
Circuit 1 (a)	A	266	282	385	419	449
Circuit 2 (a)	A	421	451	419	447	449
Option 081	A	687	733	804	865	897
Nominal start-up current ⁽³⁾						
Circuit 1 (a)	A	587	587	629	629	629
Circuit 2 (a)	A	629	629	629	629	629
Option 081	A	852	876	892	913	916
Option 081 & Opt 25c	A	627	640	670	681	680
Maximum start-up current(Un) ⁽²⁾						
Circuit 1 (a)	A	587	587	629	629	629
Circuit 2 (a)	A	629	629	629	629	629
Option 081	A	985	1013	1024	1049	1052
Option 081 & Opt 25c	A	759	777	802	817	816

(1) Values obtained at unit continuous maximum operating conditions (data given on the unit nameplate)

(2) Operating current of the smallest compressor(s) + fan current + locked rotor current or reduced start-up current of the largest compressor.

(3) Standardised EUROVENT conditions, water-cooled exchanger water inlet/outlet = 12°C/7°C, outdoor air temperature = 35°C.

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

ELECTRICAL DATA

Electrical data notes and operating conditions for 30XB(P)ZE units:

- 30XB(E/P)ZE 200 to 750 have a single power connection point; 30XB(E/P)ZE 900 to 1200 have two connections points.
- The control box includes the following standard features:
 - One supply disconnect switch per circuit
 - Starter and motor protection devices for each compressor, the fan(s) and the pump
 - Control devices

Field connections:

- All connections to the system and the electrical installations must be in full accordance with IEC60364 standard and all applicable local codes.
- The Carrier 30XB(E/P)ZE units are designed and built to ensure conformance with these codes. The recommendations of European standard EN 60204-1 (corresponds to IEC 60204-1) (machine safety - electrical machine components - part 1: General regulations) are specifically taken into account, when designing the electrical equipment.

IMPORTANT:

Annex B of EN 60204-1 describes the electrical characteristics used for the operation of the machines.

1. Environment⁽¹⁾. Environment as classified in EN 60364 (corresponds to IEC 60364):
 - Outdoor installation⁽¹⁾
 - Ambient temperature range: from -20°C to +55°C ⁽²⁾
 - altitude less than or equal to 2000 m (for hydronic module, see paragraph 4.7 in the IOM)
 - presence of hard solids, class AE3 (no significant dust present)⁽¹⁾
 - presence of corrosive and polluting substances, class AF1 (negligible)
 - Competence of persons: BA4 (skilled persons). Particularly, units shall not be located in places open to all persons, which can include children.
2. Compatibility for low-frequency conducted disturbances according to IEC61000-2-2 and to class 2 levels per IEC61000-2-4 standard:
 - Power supply frequency variation : +-2Hz
 - Phase imbalance : 2%
 - Total Voltage Harmonic Distortion (THDV) : 8% ⁽²⁾
3. The neutral (N) line must not be connected directly to the unit (if necessary use a transformer).
4. Overcurrent protection of the power supply conductors is not provided with the unit.

5. The factory installed disconnect switch(es)/circuit breaker(s) is (are) of a type suitable for power interruption in accordance with EN 60947-3 (corresponds to IEC 60947-3).
6. The units are designed for simplified connection on TN(s) networks (IEC 60364). For IT networks provide a local earth and consult competent local organisations to complete the electrical installation. 30XBEZE units (in which variable frequency drives are present) are not compatible with IT network. 30XBEZE units are designed to use for domestic / residential and industrial environments:

Machines that are not equipped with variable frequency drive(s) (30XBPZE) are in accordance with the codes

- 61000-6-3: Generic standards - Emission standard for residential, commercial and light industry.
- 61000-6-2: Generic standards - Immunity for industrial environments.

Machines that are equipped with variable frequency drive(s) (30XBEZE) are in accordance with the codes

- 61000-6-4: Generic standards - Emission standard for industrial environments.
- 61000-6-2: Generic standards - Immunity for industrial environments

- Leakage currents: If protection by monitoring the leakage currents is necessary to ensure the safety of the installation, the presence of circuitry with DC component as well as additional leakage currents introduced by the use of variable frequency drive(s) in the unit must be considered. In particular these protection devices shall be

- suitable for protection of circuitry with AC and DC components
- of reinforced immunity types and have a threshold not lower than 150mA.

- Capacitors that are integrated as part of the option 231 can generate electrical disturbances in the installation the unit is connected to. Presence of these capacitors must be considered during the electrical study prior to the start-up.

NOTE: If particular aspects of an actual installation do not conform to the conditions described above, or if there are other conditions which should be considered, always contact your local Carrier representative.

(1) The required protection level for this class is IP43BW (according to reference document IEC 60529). All 30XB(E/P)ZE units are protected to IP54-W and fulfil this protection condition.

(2) These limits are modified for machines equipped with option/QM 231:

Maximum ambient temperature : 45°C

Total Voltage harmonic distortion : 3%

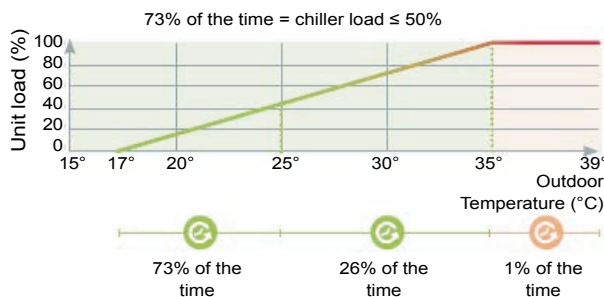
PART LOAD PERFORMANCE

SEER for comfort chillers (in accordance with EU ECODESIGN)

The SEER (Seasonal energy efficiency ratio) permits the evaluation of the average energy efficiency of comfort chillers, based on multiple operating conditions (load variation from 0% to 100%). From 1st January 2018, Tier 1 and from 1st January 2021, Tier 2, European member states will impose minimum SEER values to meet the requirements of Eco-design directive for ENER Lot 21 comfort cooling chillers. The Ecodesign Directive aims to minimize the environmental impact of energy-related products through consideration of their full lifecycle.



SEER is the new metric for chillers in comfort cooling applications.



EU ECODESIGN MEPS(*) for air-cooled chillers		Tier 1 (from 01/01/2018)	Tier 2 (from 01/01/2021)
SEER for comfort Chillers < 400kW	kWh/kWh	3,80	4,10
SEER for comfort Chillers > 400kW	kWh/kWh	4,10	4,55

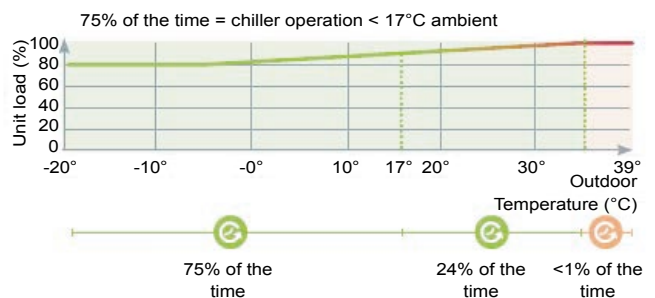
(*) Minimum Efficiency Performance Standards set by EU member states to comply with EU Ecodesign directive.

SEPR for process chillers (in accordance with EU ECODESIGN)

The SEPR (Seasonal energy performance ratio) permits the evaluation of the average energy efficiency of process chillers, based on multiple operating conditions (load variation from 80% to 100%). From 1st January 2018, Tier 1 and from 1st January 2021, Tier 2, European member states will impose minimum SEPR values for process chillers to meet the requirements of Eco-design directive for ENER Lot 21 for high temperature process chillers (7°C to 12°C) and for ENTR Lot 1 for low temperature process chillers (-25°C to -8°C) and medium temperature process chillers (-8°C to 7°C). The Ecodesign Directive aims to minimize the environmental impact of energy-related products through consideration of their full lifecycle. All process chillers marked with a CE label must meet the required SEPR (Seasonal Energy Performance Ratio) value stipulated in EU Directive.



SEPR is the new metric for chillers in industrial process cooling applications.



EU ECODESIGN MEPS(*) for air-cooled chillers		Tier 1 (from 01/07/2016)	Tier 2 (from 01/07/2018)
SEPR for medium temperature Process Chillers < 300 kW	kWh/kWh	2,24	2,32
SEPR for medium temperature Process Chillers > 300 kW	kWh/kWh	2,80	2,90

EU ECODESIGN MEPS(*) for air-cooled chillers		Tier 1 (from 01/01/2018)	Tier 2 (from 01/01/2021)
SEPR for high temperature Process Chillers < 400 kW	kWh/kWh	4,50	5,00
SEPR for high temperature Process Chillers > 400 kW	kWh/kWh	5,00	5,50

(*) Minimum Efficiency Performance Standards set by EU member states to comply with EU Ecodesign directive.

SOUND SPECTRUM 30XBEZE UNITS

30XBEZE - Standard unit

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	96	95	92	98	86	81	dB(A)	99
230	dB	96	95	92	98	86	81	dB(A)	99
250	dB	97	95	92	98	86	81	dB(A)	99
300	dB	97	96	94	98	88	83	dB(A)	99
350	dB	104	106	95	96	88	84	dB(A)	101
400	dB	96	95	95	96	91	86	dB(A)	99
450	dB	103	105	96	95	90	86	dB(A)	101
500	dB	97	95	95	96	91	86	dB(A)	99
550	dB	104	107	97	99	90	86	dB(A)	103
600	dB	100	101	98	100	92	88	dB(A)	103
630	dB	99	98	97	97	91	88	dB(A)	101
700	dB	100	103	98	102	91	87	dB(A)	104
750	dB	101	101	98	99	90	90	dB(A)	102
900	dB	101	103	100	99	94	88	dB(A)	103
950	dB	101	103	99	98	94	88	dB(A)	102
1050	dB	102	103	102	101	94	88	dB(A)	104
1150	dB	101	103	102	101	94	88	dB(A)	104
1200	dB	101	103	102	101	94	88	dB(A)	104

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/-3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

30XBEZE - Unit with Option 15LS

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	88	89	83	84	76	68	dB(A)	87
230	dB	88	89	83	84	76	68	dB(A)	87
250	dB	88	89	83	84	76	68	dB(A)	87
300	dB	89	92	87	86	80	71	dB(A)	90
350	dB	90	96	87	86	80	69	dB(A)	91
400	dB	92	94	89	87	81	72	dB(A)	91
450	dB	90	96	91	88	81	77	dB(A)	93
500	dB	92	94	90	87	82	73	dB(A)	92
550	dB	91	97	91	89	80	70	dB(A)	94
600	dB	92	94	92	90	81	72	dB(A)	94
630	dB	96	96	92	89	81	74	dB(A)	94
700	dB	93	94	94	92	80	71	dB(A)	95
750	dB	97	96	93	89	79	75	dB(A)	94
900	dB	97	95	91	88	86	85	dB(A)	94
950	dB	97	95	91	88	86	85	dB(A)	94
1050	dB	97	98	99	93	90	87	dB(A)	99
1150	dB	97	95	92	90	88	86	dB(A)	95
1200	dB	98	96	93	91	89	87	dB(A)	96

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/-3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

30XBEZE - Unit with Option 15

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	95	94	90	90	83	78	dB(A)	93
230	dB	95	94	90	90	83	78	dB(A)	93
250	dB	95	94	91	90	83	78	dB(A)	94
300	dB	96	95	92	91	85	80	dB(A)	95
350	dB	96	94	92	91	86	80	dB(A)	95
400	dB	96	94	93	91	86	81	dB(A)	95
450	dB	96	97	94	93	89	82	dB(A)	97
500	dB	97	95	94	92	86	81	dB(A)	96
550	dB	101	99	94	94	86	81	dB(A)	97
600	dB	98	96	95	95	87	82	dB(A)	98
630	dB	99	96	95	94	87	83	dB(A)	97
700	dB	99	97	95	96	87	82	dB(A)	99
750	dB	99	96	95	94	87	83	dB(A)	98
900	dB	101	98	95	91	90	87	dB(A)	98
950	dB	101	98	95	91	90	87	dB(A)	98
1050	dB	102	99	99	95	92	88	dB(A)	100
1150	dB	101	99	96	93	90	87	dB(A)	99
1200	dB	101	99	96	93	90	87	dB(A)	99

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/-3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

30XBEZE - Unit with Option 15LS+

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	-	-	-	-	-	-	dB(A)	-
230	dB	-	-	-	-	-	-	dB(A)	-
250	dB	-	-	-	-	-	-	dB(A)	-
300	dB	-	-	-	-	-	-	dB(A)	-
350	dB	89	93	84	85	76	67	dB(A)	89
400	dB	90	92	85	85	77	70	dB(A)	89
450	dB	91	93	88	87	79	77	dB(A)	91
500	dB	92	92	87	85	79	73	dB(A)	90
550	dB	92	94	89	87	79	73	dB(A)	91
600	dB	93	92	90	88	80	75	dB(A)	92
630	dB	93	92	90	87	79	74	dB(A)	91
700	dB	94	92	91	89	80	76	dB(A)	93
750	dB	94	91	91	87	79	75	dB(A)	92
900	dB	97	93	90	87	85	84	dB(A)	93
950	dB	97	93	90	87	85	84	dB(A)	93
1050	dB	95	96	97	91	88	85	dB(A)	97
1150	dB	97	95	91	88	86	85	dB(A)	94
1200	dB	98	96	92	89	87	86	dB(A)	95

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/-3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

SOUND SPECTRUM 30XBPZE UNITS

30XBPZE - Standard unit

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	95	94	91	98	86	80	dB(A)	99
230	dB	95	94	91	98	86	80	dB(A)	99
250	dB	95	94	92	98	86	80	dB(A)	99
300	dB	96	95	94	97	87	83	dB(A)	99
350	dB	103	106	94	96	88	84	dB(A)	101
400	dB	95	93	95	96	91	86	dB(A)	99
450	dB	103	105	96	96	91	86	dB(A)	101
500	dB	96	93	95	96	91	86	dB(A)	99
550	dB	104	107	97	99	91	86	dB(A)	103
600	dB	98	101	98	101	93	88	dB(A)	103
630	dB	98	98	97	98	92	89	dB(A)	101
700	dB	99	103	98	102	91	87	dB(A)	104
750	dB	101	101	98	99	91	90	dB(A)	102
900	dB	100	103	100	99	93	88	dB(A)	103
950	dB	100	103	99	98	93	88	dB(A)	102
1050	dB	101	102	102	101	93	88	dB(A)	104
1150	dB	100	102	102	101	93	88	dB(A)	104
1200	dB	101	102	102	101	93	88	dB(A)	104

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/- 3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

30XBPZE - Unit with Option 15

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	93	93	90	90	82	78	dB(A)	93
230	dB	93	93	90	90	82	78	dB(A)	93
250	dB	94	94	91	91	83	79	dB(A)	94
300	dB	95	94	92	91	85	80	dB(A)	95
350	dB	95	93	92	91	87	80	dB(A)	95
400	dB	95	93	93	91	86	81	dB(A)	95
450	dB	97	95	94	93	89	82	dB(A)	97
500	dB	96	93	94	92	87	82	dB(A)	96
550	dB	100	98	93	93	86	81	dB(A)	97
600	dB	97	96	95	95	87	82	dB(A)	98
630	dB	97	94	95	93	87	82	dB(A)	97
700	dB	98	96	96	97	88	82	dB(A)	99
750	dB	100	94	95	95	88	84	dB(A)	98
900	dB	101	97	95	92	90	87	dB(A)	98
950	dB	101	97	95	92	90	87	dB(A)	98
1050	dB	101	98	98	95	91	88	dB(A)	100
1150	dB	101	99	96	94	90	87	dB(A)	99
1200	dB	102	98	96	94	91	87	dB(A)	99

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/- 3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

30XBPZE - Unit with Option 15LS

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	89	89	83	84	76	64	dB(A)	87
230	dB	89	89	83	84	76	64	dB(A)	87
250	dB	89	89	83	84	76	64	dB(A)	87
300	dB	90	92	87	86	79	67	dB(A)	90
350	dB	90	96	87	85	79	65	dB(A)	91
400	dB	92	93	88	87	81	69	dB(A)	91
450	dB	91	96	91	88	81	75	dB(A)	93
500	dB	92	94	90	87	82	70	dB(A)	92
550	dB	92	97	92	90	81	67	dB(A)	94
600	dB	93	94	92	90	81	69	dB(A)	94
630	dB	96	96	93	89	81	73	dB(A)	94
700	dB	93	94	93	92	80	68	dB(A)	95
750	dB	97	95	93	89	79	73	dB(A)	94
900	dB	97	94	91	88	86	84	dB(A)	94
950	dB	97	94	91	88	86	84	dB(A)	94
1050	dB	97	97	99	92	89	87	dB(A)	99
1150	dB	97	94	91	90	87	85	dB(A)	95
1200	dB	98	95	93	91	88	86	dB(A)	96

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/- 3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

Acoustic spectrum and power of the unit + option 15LS+

		Octave bands, Hz ⁽¹⁾						Sound power level ⁽²⁾	
		125	250	500	1k	2k	4k		
200	dB	-	-	-	-	-	-	dB(A)	-
230	dB	-	-	-	-	-	-	dB(A)	-
250	dB	-	-	-	-	-	-	dB(A)	-
300	dB	-	-	-	-	-	-	dB(A)	-
350	dB	90	93	84	85	76	65	dB(A)	89
400	dB	91	92	85	85	77	66	dB(A)	89
450	dB	91	93	88	87	78	75	dB(A)	91
500	dB	92	92	87	86	79	69	dB(A)	90
550	dB	92	93	89	87	78	70	dB(A)	91
600	dB	94	92	90	88	80	74	dB(A)	92
630	dB	93	91	90	87	79	71	dB(A)	91
700	dB	93	91	90	89	79	74	dB(A)	92
750	dB	94	91	91	88	79	72	dB(A)	92
900	dB	97	92	90	87	85	83	dB(A)	93
950	dB	97	92	90	87	85	83	dB(A)	93
1050	dB	96	95	97	91	87	84	dB(A)	97
1150	dB	97	94	91	88	86	84	dB(A)	94
1200	dB	98	95	92	89	86	85	dB(A)	95

- (1) In dB ref=10⁻¹² W, as a guideline. Measured in accordance with ISO 9614-1.
(2) In dB ref=10⁻¹² W, weighting (A), with uncertainty +/- 3 dB. Measured in accordance with ISO 9614-1 and certified by Eurovent.

OPERATING LIMITS

Water heat exchanger	Minimum	Maximum
Entering temperature at start-up °C	-	45 ⁽¹⁾
Leaving temperature during operation °C	3,3	20
Entering/leaving water temperature difference K	2,8	10
Condenser air temperature	Minimum	Maximum
Storage	-20	68
Operation, standard unit	-20	55 ⁽²⁾
With Low noise option (option 15LS)	-20	52 ⁽²⁾

Note: If the air temperature is below 0°C, a glycol/water solution or the frost protection option must be used.

Note: If the leaving water temperature is below 4°C, a glycol/water solution or the frost protection option must be used.

(1) Based on the installation type and the air temperature

(2) Part load, depended on sizes & leaving water temperature

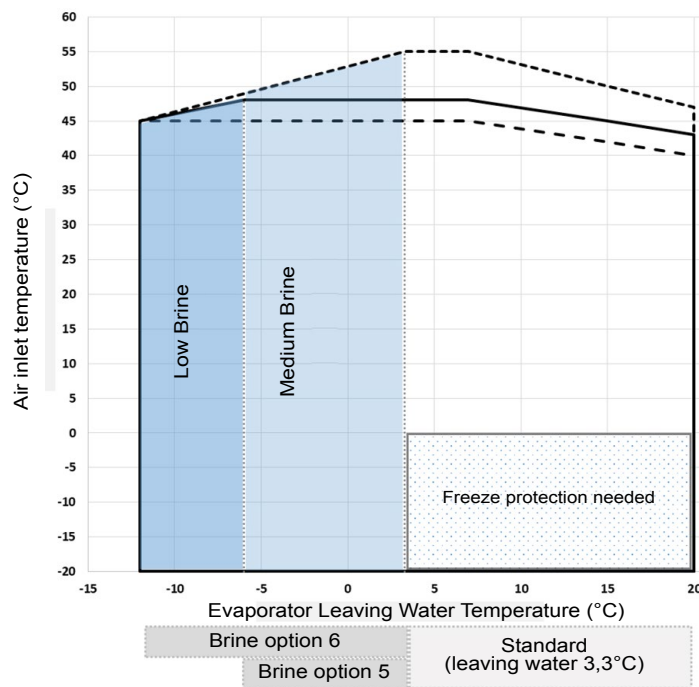
Units without hydraulic module

30XBEZE & 30XBPZE	Minimum flow rate ⁽¹⁾ (l/s)	Maximum flow rate ⁽²⁾ (l/s)
200	4,5	37,5
230	4,9	40,5
250	5,3	40,5
300	6,4	34,1
350	7,3	36,9
400	8,2	42,0
450	10,1	45,0
500	11,2	56,1
550	11,9	59,1
600	12,7	67,1
630	13,5	67,1
700	14,7	73,9
750	16,2	83,9
900	18,8	87,8
950	20,5	126,5
1050	22,0	92,9
1150	24,0	132,1
1200	25,1	107,4

(1) Minimum flow rate for optimal efficiency in variable flow configuration

(2) Maximum flow rate for a pressure drop of 100 kPa in the exchanger

OPERATING RANGE



NOTE

Ranges in brine applications given as a guide using ethylene glycol for an evaporator $\Delta T = 3K$. Refer to the electronic catalogue.

Low temperature brine, (-12°C ethylene glycol / -10°C propylene glycol)

Medium temperature brine, (-6°C ethylene glycol / 0°C propylene glycol)

Power factor correction option (option/QM 231) available for an inlet air temperature up to +45°C (30XBPZE only)

For operation in pure water at an inlet air temperature below 0°C, the frost protection (option_41A or 41B) must be provided

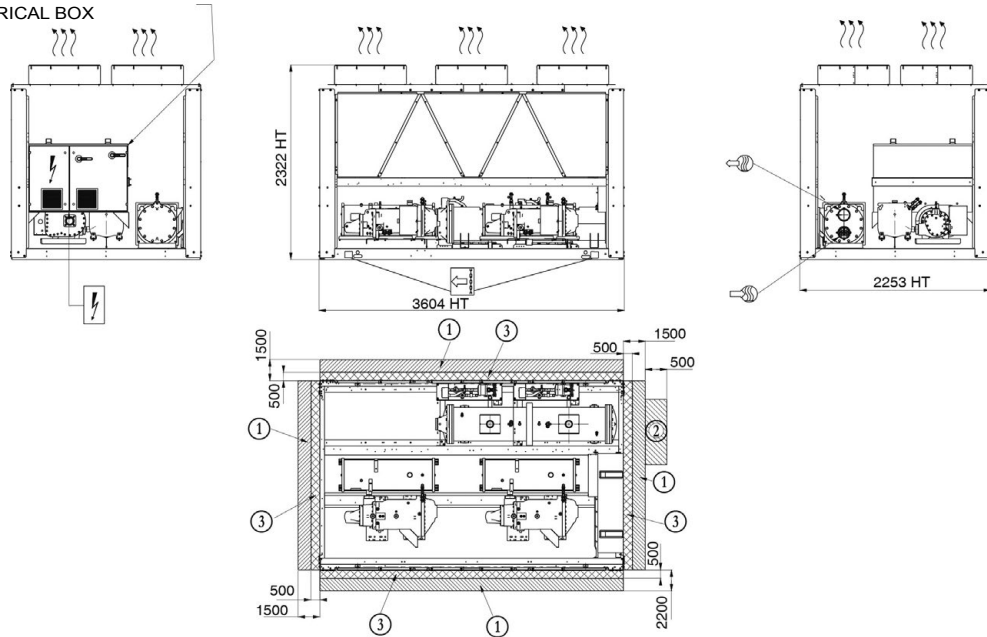
ATTENTION:

For 30XBEZE range, if the outside temperature is below -10°C and the unit has been switched off for more than 4 hours, it is necessary to wait 2 hours after the unit has been switched on again to allow the frequency converter to warm up.

DIMENSIONS / CLEARANCES

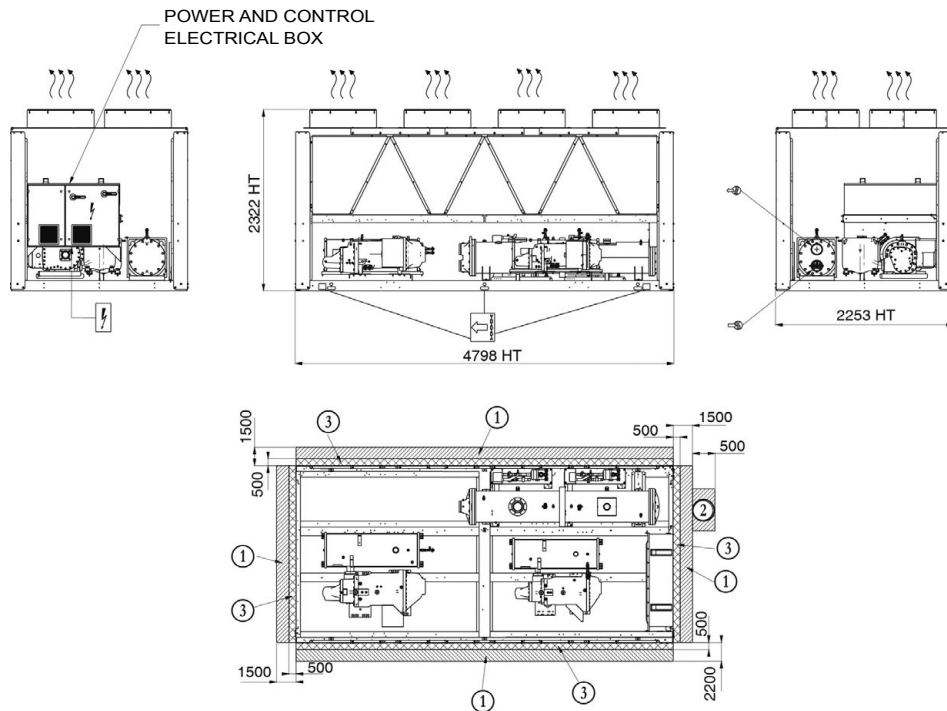
30XB(P)ZE 0200 to 250

POWER AND CONTROL
ELECTRICAL BOX



30XB(P)ZE 0300 to 400

POWER AND CONTROL
ELECTRICAL BOX



Legend

All dimensions are given in mm.

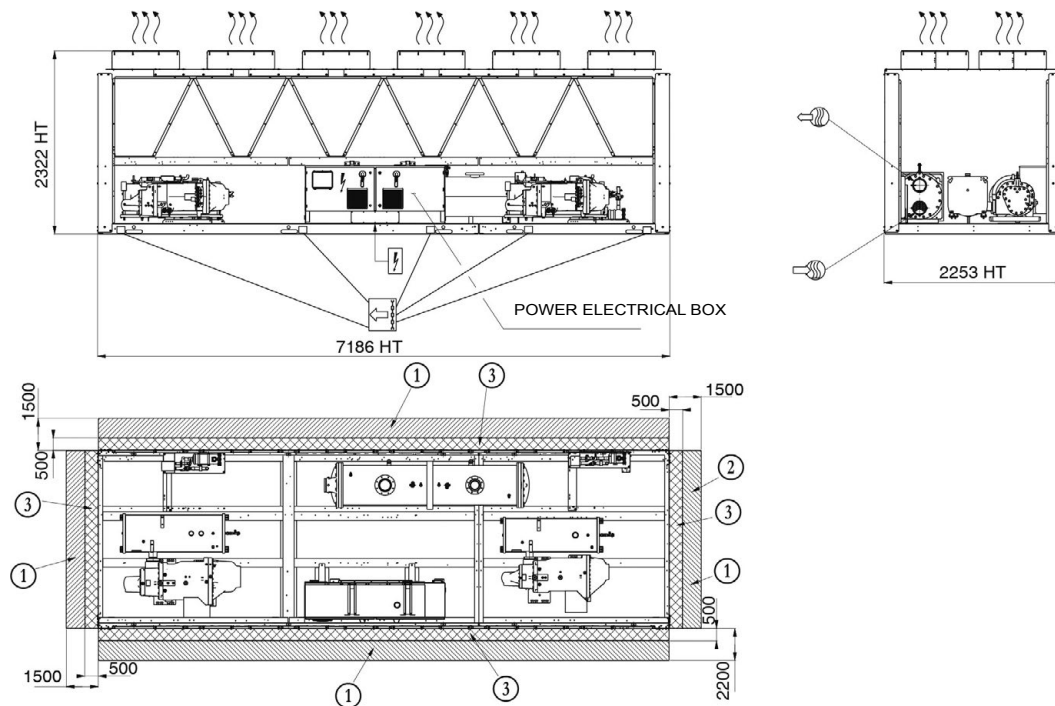
- ① Required clearances for maintenance (see note)
- ② Recommended space for evaporator tube removal
- ③ ATEX zone around the unit
- Water inlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.
- Water outlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.
- Air outlet – do not obstruct
- Power supply and control connection
- Slinging points

NOTES:

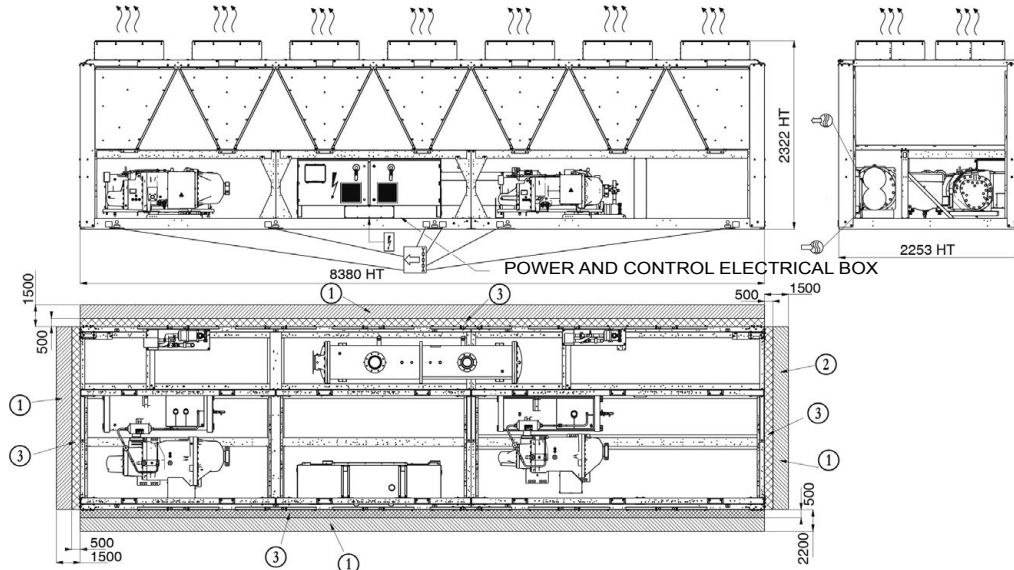
- Drawings are not contractually binding.
- Refer to unit nameplate for unit weight information
- Before designing an installation, consult the certified dimensional drawings, provided with the unit (Appendix 4).
- If the installation includes several units or if this (these) is (are) close to walls, please refer to chapters 3.7 - "Multiple chiller installation" and 3.8 - "Distance to the wall" of the installation manual to determine the space required

DIMENSIONS / CLEARANCES

30XBEZE 0450 to 630, 30XBPZE 0450 to 0600



30XBEZE 0700 & 750, 30XBPZE 0630 & 700



Legend

All dimensions are given in mm.

① Required clearances for maintenance (see note)

② Recommended space for evaporator tube removal

③ ATEX zone around the unit

Water inlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.

Water outlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.

Air outlet – do not obstruct

Power supply and control connection

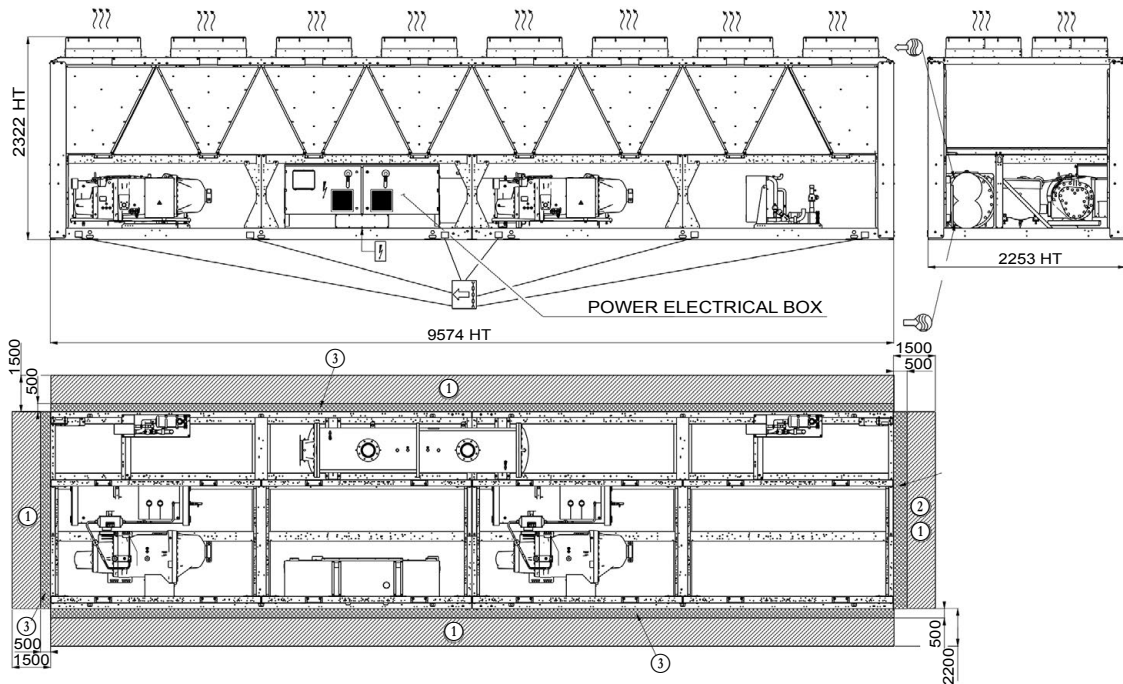
Slings points

NOTES:

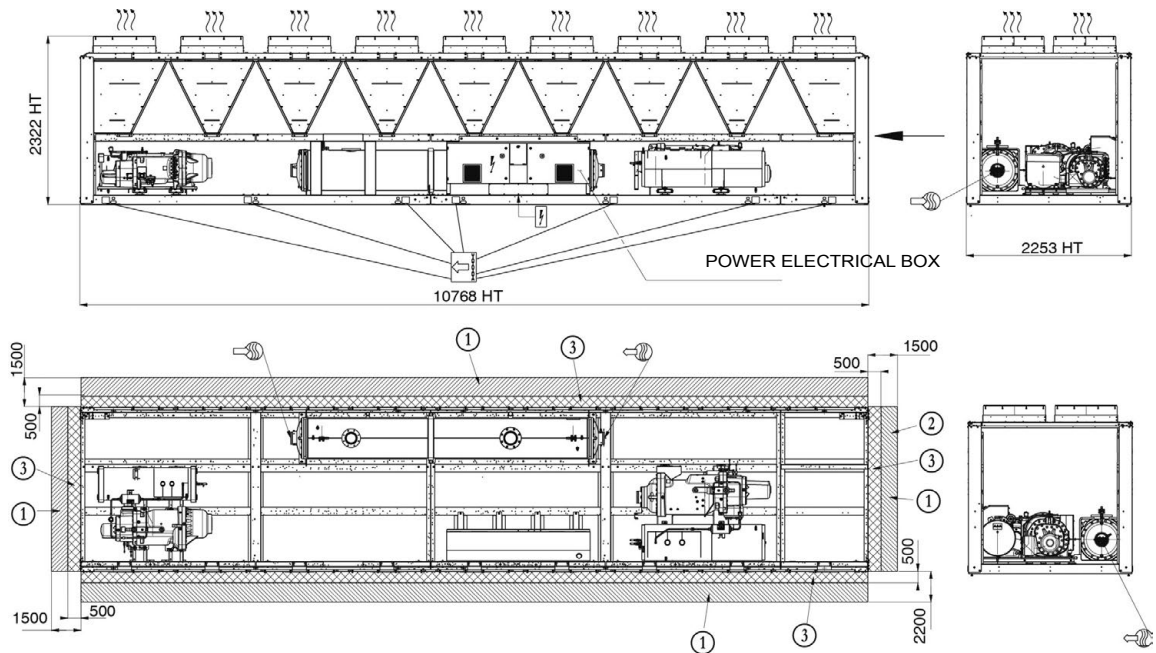
- Drawings are not contractually binding.
- Refer to unit nameplate for unit weight information
- Before designing an installation, consult the certified dimensional drawings, provided with the unit (Appendix 4).
- If the installation includes several units or if this (these) is (are) close to walls, please refer to chapters 3.7 - "Multiple chiller installation" and 3.8 - "Distance to the wall" of the installation manual to determine the space required

DIMENSIONS / CLEARANCES

30XBPZE 0750



30XBEZE 0900 to 950



Legend

All dimensions are given in mm.

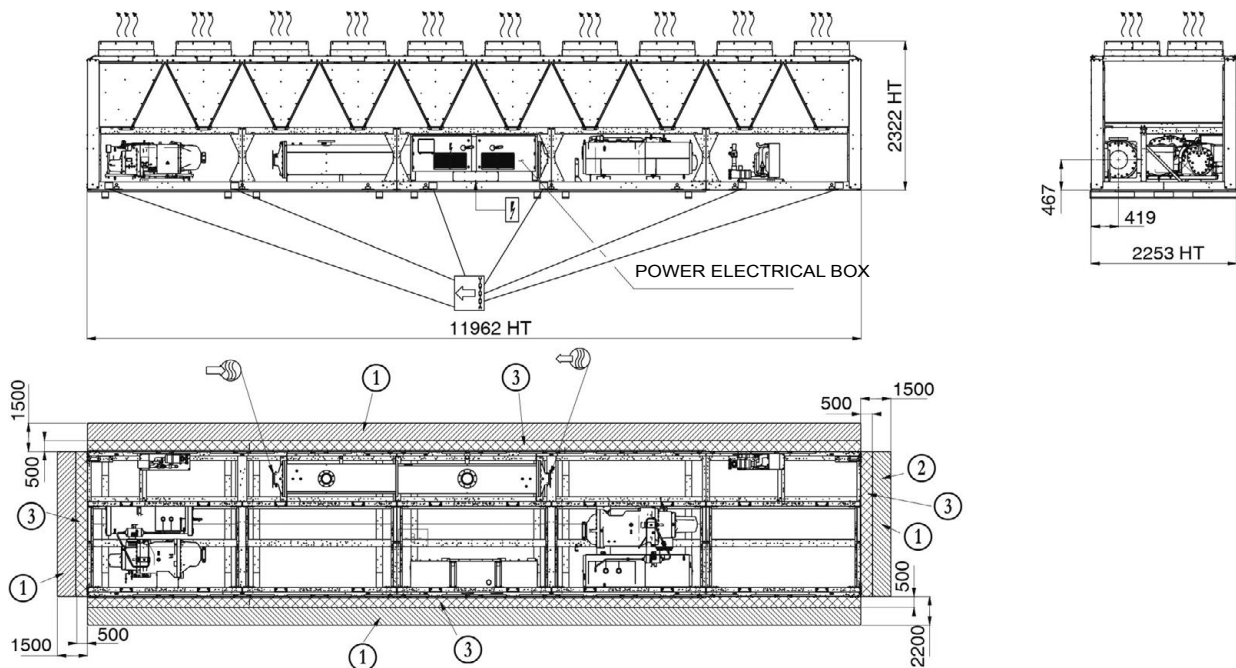
- ① Required clearances for maintenance (see note)
- ② Recommended space for evaporator tube removal
- ③ ATEX zone around the unit
- Water inlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.
- Water outlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.
-))) Air outlet – do not obstruct
- Power supply and control connection
- Slinging points

NOTES:

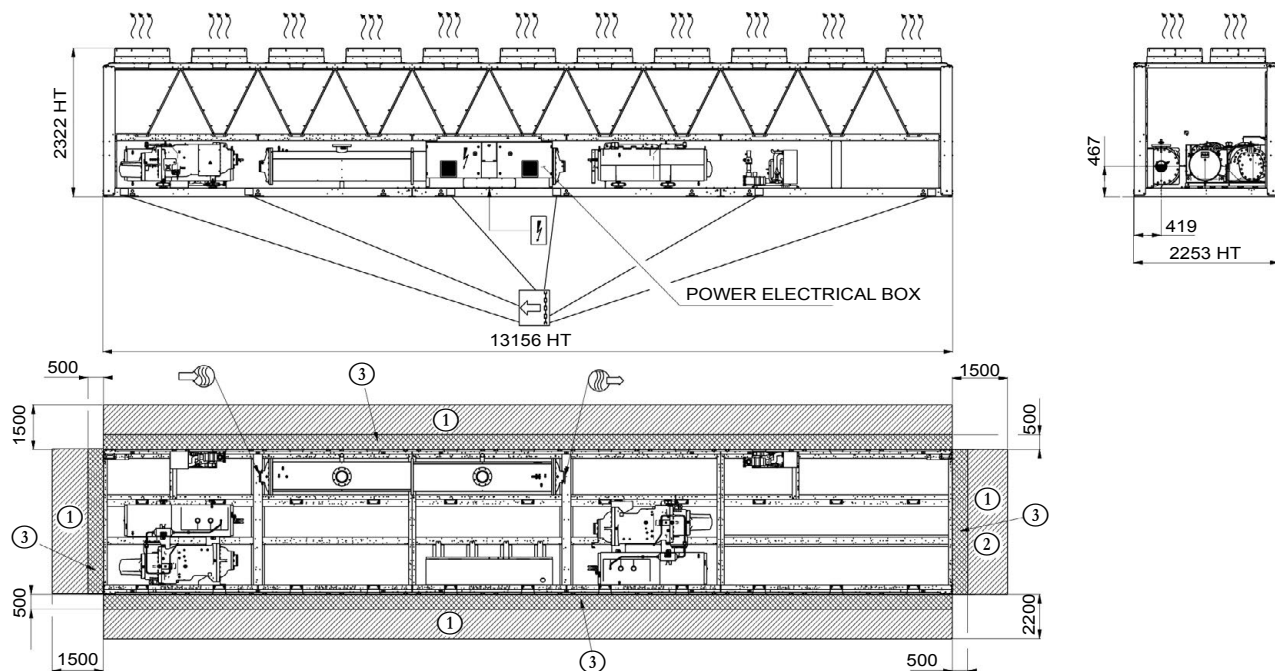
- Drawings are not contractually binding.
- Refer to unit nameplate for unit weight information
- Before designing an installation, consult the certified dimensional drawings, provided with the unit (Appendix 4).
- If the installation includes several units or if this (these) is (are) close to walls, please refer to chapters 3.7 - "Multiple chiller installation" and 3.8 - "Distance to the wall" of the installation manual to determine the space required

DIMENSIONS / CLEARANCES

30XBEZE 1050 & 1150, 30XBPZE 0900 to 1150



30XB(E/P)ZE 1200



Legend

All dimensions are given in mm.

① Required clearances for maintenance (see note)

② Recommended space for evaporator tube removal

③ ATEX zone around the unit

Water inlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.

Water outlet for standard unit - for options 100A, 100C, 107 refer to the certified drawing.

Air outlet – do not obstruct

Power supply and control connection

Slings points

NOTES:

- Drawings are not contractually binding.
- Refer to unit nameplate for unit weight information
- Before designing an installation, consult the certified dimensional drawings, provided with the unit (Appendix 4).
- If the installation includes several units or if this (these) is (are) close to walls, please refer to chapters 3.7 - "Multiple chiller installation" and 3.8 - "Distance to the wall" of the installation manual to determine the space required

