Databook

Code: Chiller configurator – 1.6
Printing Date: December 2023

Air Cooled Chiller with integrated free cooling

HFO R-1234ze

HFC 134a

HFO-HFC R513A

EWF(H)(D)(S)~TZ D

- VFD Screw
- Nominal capacity range 180 - 1950 kW
- 4 efficiency levels
- 50Hz and 60Hz power supply

AHRI CERTIFIED® www.ahridirectory.org
Air-Cooled Water Chilling Packages
AHRI Standards 550/590 and 551/591

CE

DAIKIN

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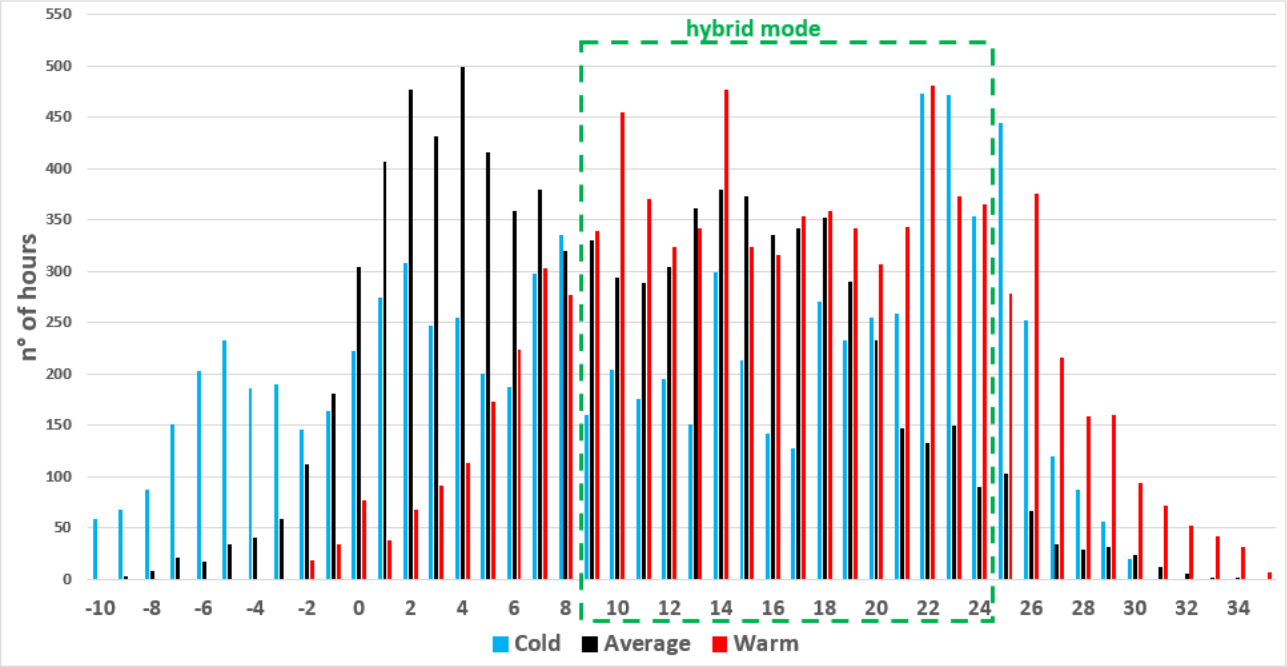
1. General Characteristics

TOP class efficiency without compromise

Now in its IV generation, TZ chiller is now introducing a fully integrated water side economizer, the so called "free cooling". The free cooling makes possible to chill the fluid using the cold outdoor air.

The amount of the "free cooling effect" depends on the difference between the fluid returning from the system and the outdoor temperature, so the amount of free cooling varies based on time of the day and seasons. When the "free cooling effect" cover a part of the total cooling demand the remaining capacity is provided by chiller compressors (so with "mechanical cooling"). The condition when cooling load is covered partially by free cooling with mechanical cooling to fill the difference is called "hybrid mode".

Considering a system running with 20°C supply and 30°C returning to the chiller the hybrid mode will be possible in the range of temperature from 24°C to 9°C, above 24°C operation is in mechanical cooling, while below 9°C is free cooling.



Is evident that the contribution of hybrid mode has large impact on annual operating cost, so the efficiency on hybrid mode is critical. In hybrid mode the capacity required from the compressors is much lower than the max available so they will operate in unloaded condition.

To operate efficiently the compressors must be capable of modulate capacity efficiently in every condition.

Daikin TZ is equipped with Single screw compressors driven by a Variable Frequency Drive (VFD) and capability to adjust the volume ratio based on the actual operating condition (Variable Volume Ratio). For this reason, TZ technology is the perfect match with free cooling applications.

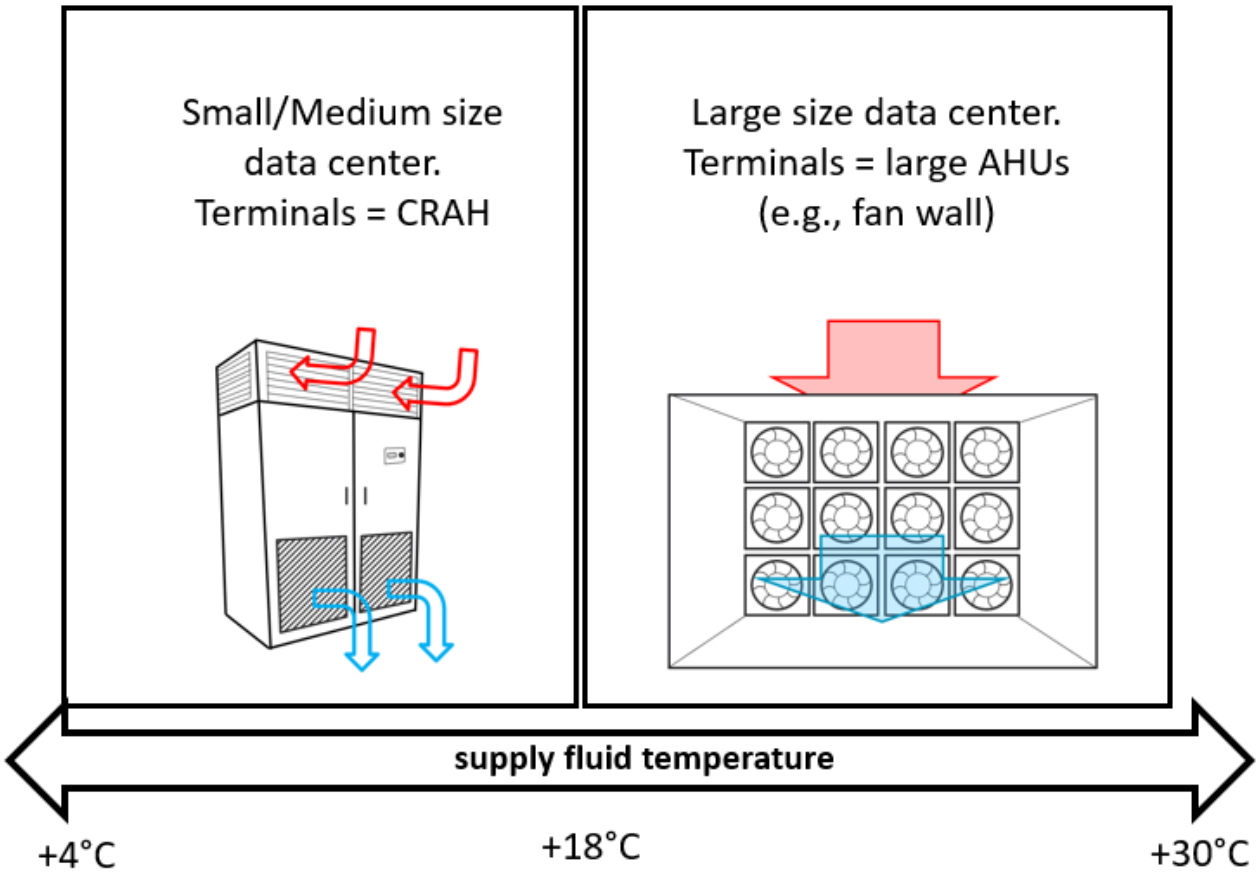
TZ D with integrated free cooling operates with best efficiency in all operating modes. All models are equipped with variable speed fans to modulate air flow minimizing power consumption also in free cooling mode.

Extended operating range

New TZ-D is the perfect solution for data center thanks to the widest range of operating condition:

- Outdoor conditions: from -20°C up to +55°C
- Supplied chilled fluid from +4°C up to +30°C.

The required supply temperature for data center plants changes significantly based on the size of data center and type of terminals.



Low Environmental impact

TZ-D TOP LEVEL performance reflects in low operating cost cutting-down not only the owner expenses but reducing at same time the indirect emissions. The very low GWP of R1234ze (low direct emissions) combined with the reduced power consumption (low indirect emissions) result in the best Life Cycle Climate Performance (LCCP).

Outstanding reliability

The chillers have one or two independent refrigerant circuits. Each compressor is provided with a Variable Frequency Drive (VFD) installed on the compressor and cooled directly by the refrigerant. Compared to other technologies: air cooled, and glycol cooled drivers, Daikin technology offer real independency from outdoor conditions (temperature, humidity, altitude, pollutions).
The VFD's are design and manufactured by Daikin to operate continuously in the most extreme conditions: high and low temperature environment without additional requirement for maintenance unlike air cooled and glycol cooled drives.

Integrated Active Harmonic Filtration (THD_i < 5%)

Harmonic distortion is caused by nonlinear loads such as power electronic devices, variable frequency drives, and certain types of lighting, which inject harmonic currents into the power system.
Harmonic distortion causes additional power consumption in electrical systems. It can lead to increased energy losses and reduced efficiency, resulting in higher energy costs. Low harmonic distortion helps minimize these losses, improving energy efficiency and reducing operational expenses. Many countries have established regulations and standards to limit the level of harmonic distortion produced by electrical equipment. By keeping harmonic distortion within the prescribed limits, manufacturers and users can ensure compliance with these standards.
Install active harmonic filters at strategic points in the electrical system, typically at the load side of harmonic-generating devices. Active harmonic filters (AHFs) are electronic devices used to reduce harmonic distortion in electrical systems. They are capable of dynamically compensating for harmonic currents in real-time, thereby improving the power quality of the system. AHFs actively monitor the harmonic currents and generate compensating currents that cancel out the harmonics, resulting in a reduction in Total Harmonic Distortion (THD).

A) Understating THD

THD stands for Total Harmonic Distortion. It is a measure used to quantify the level of distortion present in an electrical signal, typically voltage or current. THD is expressed as a percentage, and it can be related to current and voltage.

THDi (Total Harmonic Distortion of Current): THD_I measures the percentage of total harmonic current distortion relative to the fundamental current in an electrical system. It indicates the amount of harmonic current flowing through the system compared to the fundamental current. THD_I is expressed as a percentage and is calculated by summing the root mean square (RMS) values of all harmonic currents and dividing it by the RMS value of the fundamental current.

THDv (Total Harmonic Distortion of Voltage): THD_V measures the percentage of total harmonic voltage distortion relative to the fundamental voltage in an electrical system. It represents the level of harmonic voltage components compared to the fundamental voltage. THD_V is expressed as a percentage and is calculated by summing the RMS values of all harmonic voltages and dividing it by the RMS value of the fundamental voltage.

TDD_I (Total Demand Distortion Index): It is a metric used to quantify the level of harmonic distortion in an electrical system, specifically in relation to the overall demand or load on the system.
Unlike THD (Total Harmonic Distortion), which measures the harmonic content relative to the fundamental frequency, TDD_I considers both the harmonic distortion and the overall load on the system. It provides a more comprehensive evaluation of the harmonic distortion considering the system's demand.

Generally speaking, a chiller with VFD compressors without harmonic filtration has $THD_I \approx 35\%$ and $THD_V \approx 8\%$.
There are ways to reduce the harmonic distortions generated by the chiller but is important to keep in in mind that achieving low THD requires a comprehensive approach that considers on each case the specific characteristics of the electrical system, including the type of loads, system configuration, and intended application. Mitigate harmonic distortions from chiller alone may not solve a possible issue with system distortion.
Consulting with a qualified electrical engineer or power quality specialist is highly recommended to design and implement an effective strategy to achieve low THD levels in your specific system.

B) Passive Filtration vs Active Filtration

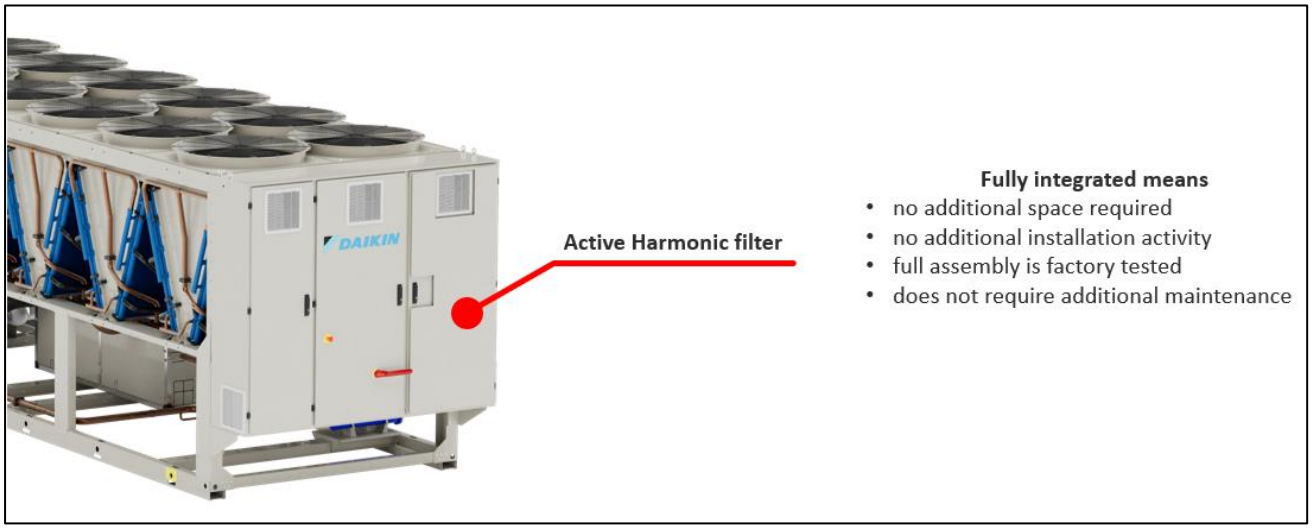
Active and passive filters are two different approaches to mitigating harmonic distortion in electrical systems.

	Passive Filtration	Active Filtration
Operation	Passive filters use passive components such as resistors, inductors, and capacitors to create filter circuits that attenuate specific harmonic frequencies. They rely on the inherent properties of these components to provide harmonic mitigation	Active filters use electronic components such as transistors, amplifiers, and control systems to actively monitor the harmonic content and generate compensating signals that cancel out the harmonics. They inject these signals into the system to reduce or eliminate the harmonic distortion.
Flexibility	Passive filters are effective in mitigating harmonics at specific frequencies for which they are designed. They provide a fixed amount of harmonic compensation and are generally suitable for addressing individual harmonics or narrow bands of harmonics. For this reason, is difficult to tune on the specific system requirement and avoid resonance effect.	Active filters offer a high degree of flexibility in terms of adjusting their compensation characteristics and adapting to changing harmonic conditions. They can provide precise control and compensation over a wide range of harmonic frequencies and amplitudes.
Size and weight	Passive filters tend to be larger and heavier compared to active filters, primarily due to the physical size of the passive components involved. They may require more space for installation.	Daikin Active Filter is fully integrated on chiller footprint, does not require 'on field activity' such as wiring or setting.

Make sure to understand system requirement and provide the right solution based on real customer needs.

C) Integrated Active Harmonic Filter by Daikin

Daikin offer a unique solution for active harmonic filtration developed by Daikin Power Electronic division. Based on same proprietary technology used for compressors drive, the active harmonic filter by Daikin is fully integrated on the chiller. The device is installed inside the electrical panel, cooled by the refrigerant from the chiller circuit ensuring temperature control in all operating conditons regardless environmental conditions.



The Active Filter monitors the supply current including distortion. From this reading the control system reacts producing same current harmonics with opposite sign cancelling out distortions on current from the grid.

Power can be fed by networks or by local backup generators. Overload protection and current limit can be enabled.

The device measure line current and voltage harmonics such as THD_I, TDD_I and THD_V.

Harmonic current reduction is performed in a frequency range from the 2nd to the 49th harmonic thus to meet requirements of IEEE 519 standard (TDD_I <5%).

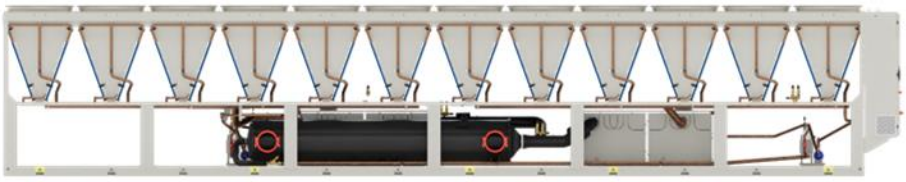
It's possible to choose which harmonic to compensate to avoid possible resonances with AC grid.

Note: the iAHF operation may be affected by presence of other equipment installed: UPS, Power factor correction devices, generators are example of components that may interfere with AHF operation.
Consulting with a qualified electrical engineer or power quality specialist is highly recommended to design and implement an effective strategy to achieve low THD levels in your specific system.

Free Cooling

EWF- TZ D - chillers are provided with fully integrated free cooling system (heat exchanger and piping). The unit control enables the free cooling operation when the outdoor air temperature is cold enough to chill the fluid returning to the chiller form the system. Standard unit is configured with open loop free cooling meaning that the fluid from the system pass through the free cooling heat exchanger. The closed loop version is available as option to allow operation with water or lower percentage of glycol in the system.
Either open loop or closed loop versions have free cooling components integrated in the unit footprint, no additional space required compared to a standard chiller without free cooling capability.

standard version



with integrated free cooling

Range overview

The IV generation of TZ is available with 3 refrigerants:

- R1234ze (EWFH)
- R513A (EWFS)
- R134a (EWFD)

all available in four efficiency tiers:

- Blue (B-)
- Silver (S-)
- Gold (X-)
- Platinum (P-)

two sound configurations:

- Standard Noise
- Standard Sound + option 76-b (compressor enclosure)

Superior control logic

The MicroTech 4 controller provides an easy-to-use control environment. The control logic is designed to provide maximum efficiency, to continue operation in unusual operating conditions and to provide history of unit operation. Easy interface with, BACnet, Ethernet TCP/IP or Modbus communications. Master/Slave operation is provided as standard allowing to connect 4 units working as single system.

Code requirements – Safety and observant of laws/directives

All units are designed and manufactured in accordance with the following directives and harmonized standards:

Low voltage directive	DIRECTIVE 2014/35/EU
Electromagnetic compatibility (EMC)	DIRECTIVE 2014/30/EU
Machinery directive	DIRECTIVE 2006/42/EC
Pressure equipment design	DIRECTIVE 2014/68/EU
Ecodesign	DIRECTIVE 2009/125/EC
Safety of machinery	EN 60204-1
EMC - Part 6-2	EN 61000-6-2
EMC - Part 6-4	EN 61000-6-4
Safety and environmental requirements	EN 378-1; EN 378-2; EN 378-4
Methods for calculation pressure relief devices.	EN 13136

Certifications

Units are CE marked, complying with European directives in force, concerning manufacturing and safety.

Compressors

Semi-hermetic Single Screw Compressor with integrated Variable Frequency Drive (VFD). The Single Screw compressor technology by Daikin is design to achieve TOP efficiency level at full capacity as well as in part-load situation. The main screw engages with the gate rotor(s) creating the compression chamber. The gate rotor (one or two depending on the compressor size) is made of a composite material with enhanced resistance to mechanical stress. The compressor capacity is continuously modulated by the integrated VFD. The drive is cooled directly by the refrigerant allowing for continuous operation regardless environmental condition (unlike the air cooled and glycol cooled drives). Gold and Platinum versions are also equipped with variable Volume Ratio (VVR) technology to further enhance compression efficiency during part load operation.

Evaporator

1) **single circuit units**

direct expansion plate-to-plate type evaporator This heat exchanger is made of stainless-steel brazed plates and is covered with 20mm closed cell insulation material. The exchanger is equipped with an electric heater for protection against freezing and evaporator water connections are provided with Victaulic kit (as standard). The evaporator is manufactured in accordance with 2014/68/EU.

2) **dual circuit units:**

direct expansion shell & tube evaporator with refrigerant evaporating inside the tubes and water flowing in the shell. The tubes are enhanced for maximum heat transfer and rolled into steel tube sheet and sealed.

The evaporators are single-pass on both refrigerant and water sides for pure counter-flow heat exchange and low refrigerant pressure drops. Both attributes contribute to the heat exchanger effectiveness and total unit's outstanding efficiency.

For both BPHE and S&T evaporators the installation of flow switch and filter is mandatory.

Condenser

The condenser is made entirely of aluminum. Full-depth louvered aluminum fins are inserted between the aluminum tubes maximizing the heat exchange. The Microchannel technology ensures the highest performance with the minimum surface for the exchanger. This technology reduces unit refrigerant charge compared to traditional copper tubes and aluminum condenser.

Special treatment ensure resistance to the corrosion by atmospheric agents extending the lifetime.

Note: applications in industrial, costal, highly polluted urban environment or combinations of them, require proper evaluation to understand if additional measures are needed to protect the condenser coil from the aggressive environment.

Free Cooling circuit

The free cooling circuit is integrated in the chiller footprint. Pipes are made of steel with integrated filter for free cooling circuit. Motorized valves managed by unit control send the fluid to the evaporator or to free cooling exchanger first based on the operating conditions.

Standard unit is with "open loop" configuration meaning that the fluid from the system is sent directly in the free cooling heat exchanger. Fluid must be a brine mixture to prevent freeze and burst when temperature is equal or lower than 4°C.

As option the unit can be provided with "closed loop" configuration. In this configuration a closed loop is created between the free cooling heat exchanger and an additional brazed plate heat exchanger with a circulating pump. Fluid in the closed loop is with glycol. The fluid returning from the system is chilled by the glycol coming from the free cooling exchanger in the intermediate heat exchanger. The glycol is confined in the closed loop and the fluid in the system can be pure water or lower concentration of glycol.

Fans

Fans are propeller type with high efficiency design blades developed by Daikin to maximize performances. Fans are driven by variable speed EC motors to enhance efficiency at all conditions and reduce sound in extend operating range towards negative ambient temperatures. Fan is rated IP55.

Electronic expansion valve

The unit is equipped with electronic expansion valves to achieve precise control of refrigerant mass flow. As today's systems require improved energy efficiency, accurate temperature control, wide range of operating conditions, the application of electronic expansion valves becomes mandatory.

Electronic expansion valves have unique features: short opening and closing time, high resolution, positive shut-off function to eliminate use of additional solenoid valve, continuous modulation of mass flow without stress in the refrigerant circuit and corrosion resistance stainless steel body. If compared to traditional thermostatic valves, electronic expansion valves allow the system to work with low condenser pressure (wintertime) without any refrigerant flow problems and the perfect control of the chilled water temperature.

Refrigerant circuit

Each unit has one or two independent refrigerant circuits and each one includes:

- Compressor
- Refrigerant
- Evaporator
- Air Cooled Condenser
- Electronic expansion valve
- Sight glass with moisture indicator
- Filter drier
- Charging valves
- High pressure switch
- High pressure transducers
- Low pressure transducers
- Oil pressure transducer
- Suction temperature sensor

Electrical panel

Power and control are in the main panel that is manufactured to ensure protection against all weather conditions. The electrical panel is IP54 and (when opening the doors) internally protected against possible accidental contact with live parts. The main panel is fitted with a main switch interlocked door that shuts off power supply when opening.

MicroTech 4 controller

The new MicroTech 4 controller is installed as standard in all Daikin units.

It gives the possibility to check the most relevant control parameters and modify unit set points. Additionally, temperatures and pressures of water, refrigerant and air, programmable values, set points can be accessed based on a preset list of user profiles. A sophisticated software with adaptive logic, selects the most energy efficient combination of compressors, EEXV and fans to keep stable operating conditions to maximize unit energy efficiency and reliability.

MicroTech 4 protects critical components based on external signals from onboard sub-system (such as motor temperatures, refrigerant and oil pressures and temperatures, correctness of phase sequence, pressure switches and freezing of heat exchanger). The input coming from high-pressure switches cuts all digital output from the controller in less than 50ms, as an additional security for the equipment. Floating point calculations supported for increased accuracy in Pressure / Temperature conversions.

Control main features

- Control system has the following features:
- Management of compressors and fans modulation
- Control of cooling or heating leaving water temperatures
- Management of cooling and heating capacities according to the load
- Switch of operating modes in less than 1 minute
- Return reset (set point reset based on return water temperature)
- Set point reset (optional)
- Unit operation in partial failure condition
- Managed operations during critical conditions:
- High ambient temperature
- High thermal load
- Startup with high and low differential operating conditions
- Startup with high entering water temperature in cooling mode
- Startup with low entering water temperature in heating mode
- Optimized management of compressor load
- Optimized fan management according to

condensing pressure
- General faults alarm relay
- Automatic re-start in case of power failure
- Rapid Restart to recover full load in the shortest possible time for Data Centre application.
- ICM Standard control for multiple units' management (optional)
- Soft load (optimized management of the compressor load during the start-up)
- Start at high cold heat exchanger water temperature.

Visualization of:
- cooling and heating entering/leaving water temperature of heat exchangers.
- outdoor ambient temperature
- condensing-evaporating temperature and pressure, suction, and discharge superheat for each circuit
- hours and starts counter for compressors and pumps.
- status safety devices

Control additional features
- System upgrade with commercial SD cards
- Save/Restore of configuration parameters with a commercial SD card.
- Ethernet port for remote or local servicing using standard web browsers.
- Daikin on Site connectivity for cloud based.

Safety device / logic for each refrigerant circuit.

The following devices / logics are available:
- high pressure (pressure switch)
- high pressure (transducer)
- low pressure (transducer)
- fans circuit breakers
- high compressor discharge temperature
- high motor winding temperature
- phase monitor
- low pressure ratio
- high oil pressure drops.
- low oil pressure
- no pressure changes at start

System security
The following securities are available:
- phase monitor (available as option)
- low ambient temperature lock-out
- freeze protection.

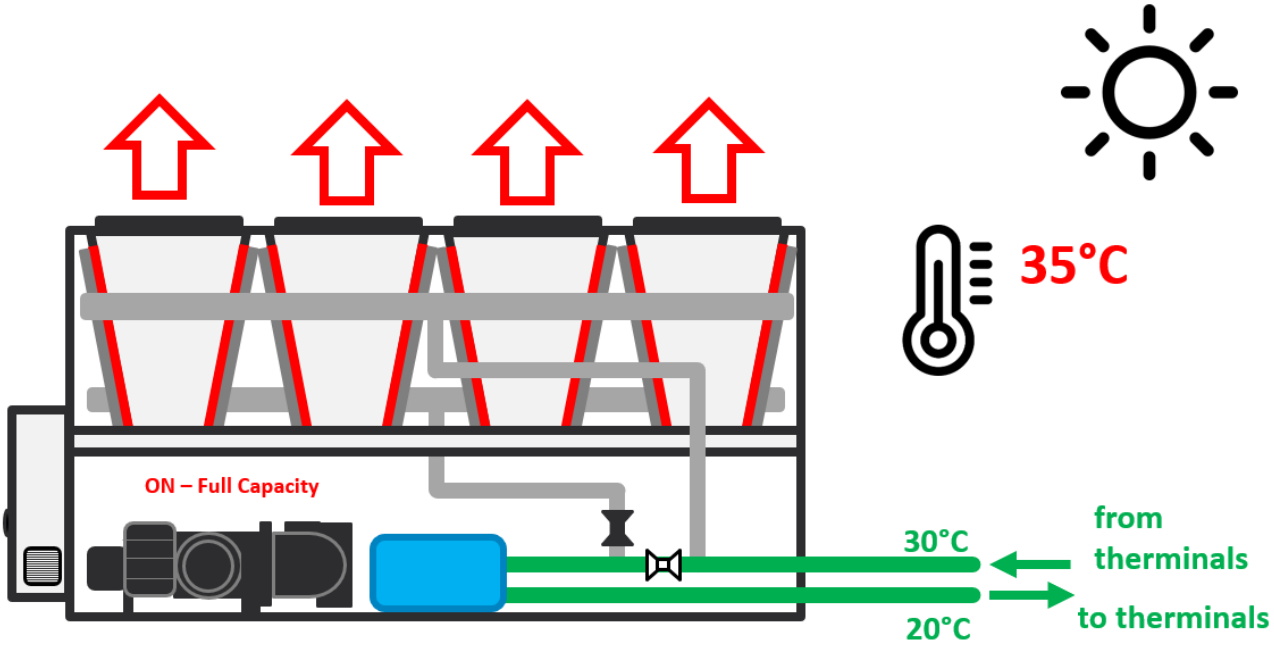
Regulation type
Proportional integral derivative regulation on the cold heat exchanger leaving water output probe.

Supervising systems MicroTech 4 remote communication (on request)
MicroTech 4 can communicate to BMS (Building Management System) based on the most common protocols as:
- Modbus RTU (Native)
- BACnet BTP certified over IP and MS/TP (class 4) (Native)
- Ethernet TCP/IP (Native)

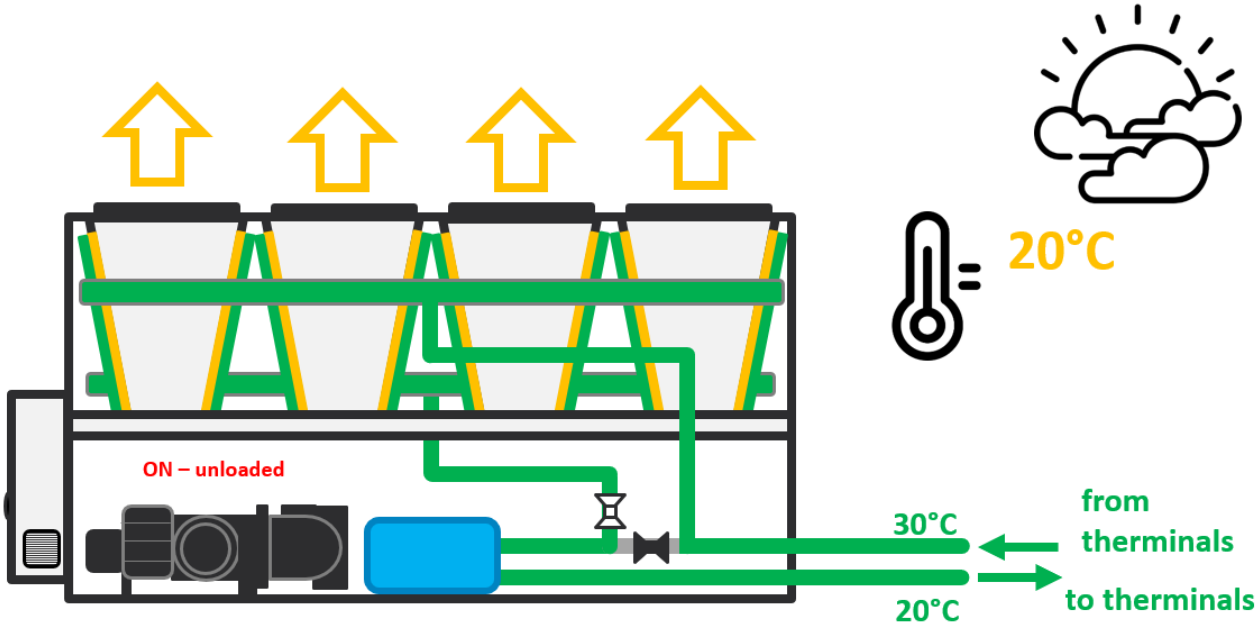
2. Free Cooling description

Free Cooling operation – Open Loop (with glycol)

EWFT chiller is equipped with fully integrated free cooling system to exploit the cold energy available from the environment to chill the fluid.
The fluid entering the unit can be sent directly to the evaporator (where mechanical cooling is provided) or to the free cooling coils installed in series with the condenser coils first and then to the evaporator.
Fluid in air cooled exchanger must be glycol mixture to avoid bursting and freezing when ambient temperatures is close and below zero.
When outdoor ambient is above fluid temperature the unit runs in full mechanical mode providing the cooling capacity using only the compressors as a traditional chiller. This operating mode is called “mechanical cooling”

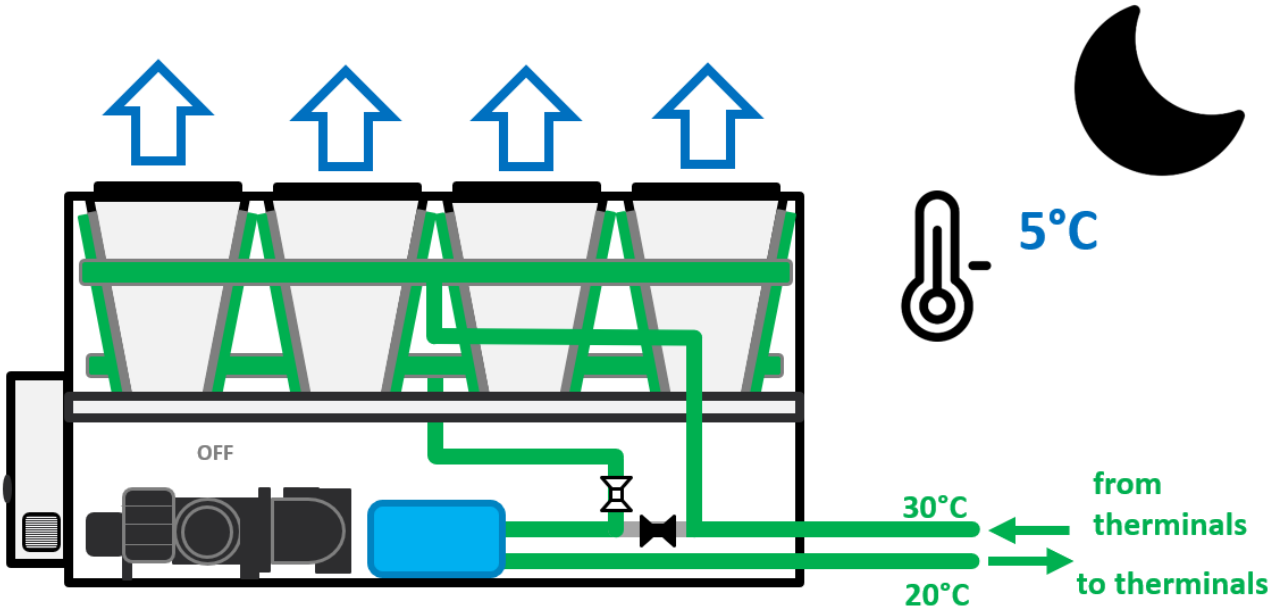


Once ambient temperature falls below enough the temperature of the fluid entering the unit, is possible to exploit the outdoor air to pre-chill the fluid before entering the evaporator. The fluid returning to the chiller is sent to the free cooling heat exchanger installed in series with the condenser to be chilled by the outdoor air.



The fluid leaves the free cooling exchanger after been partially chilled and enters the chiller evaporator to be brought to set point temperature. This operating condition is usually called “partial free cooling” or “mixed mode” because the fluid is chilled at first using the air for the surroundings and only after enters the chiller evaporator where the mechanical cooling (with compressors) provides the remaining cold energy. Having part of the cooling effect provided for free by ambient air, the mechanical cooling is required for a fraction of the required load so mechanical cooling operates unloaded with air efficiency.

When ambient temperature is lower enough than required set point the load is entirely provided for free by the outdoor air. The mechanical cooling is turned off and the fluid leaves the free cooling exchanger at set point temperature. This operating mode is called “Full Free Cooling mode”

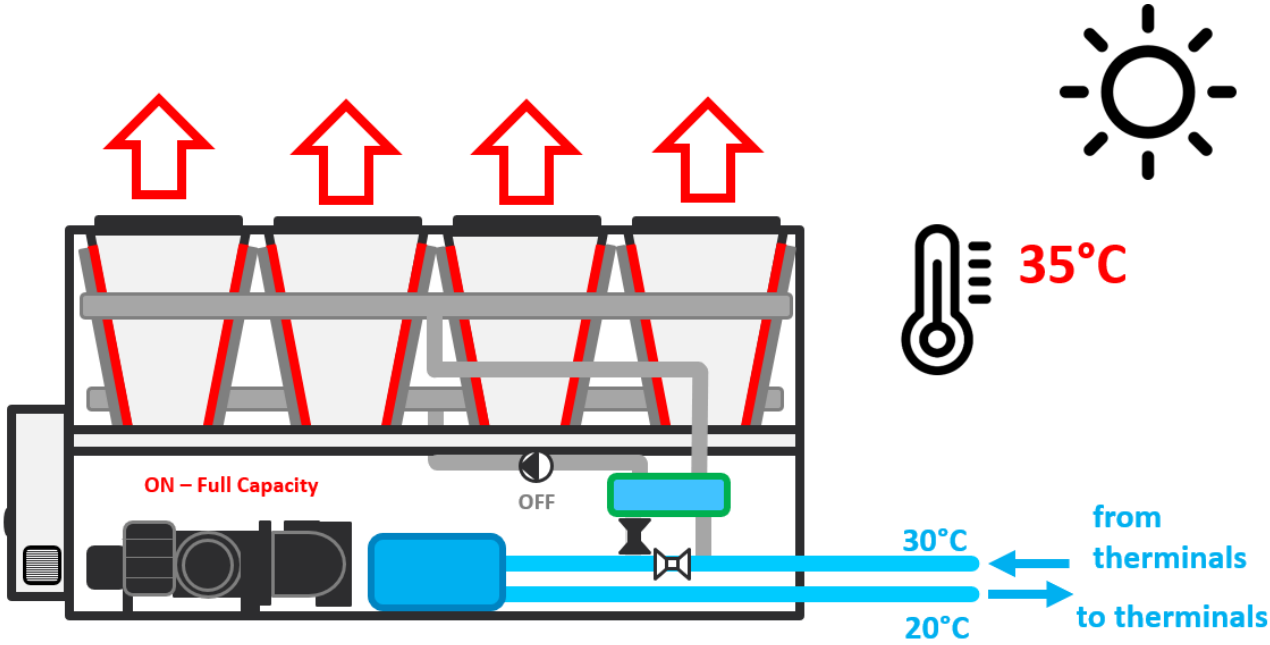


The modulation of the capacity is achieved adjusting the fan speed based on required capacity and ambient temperature.

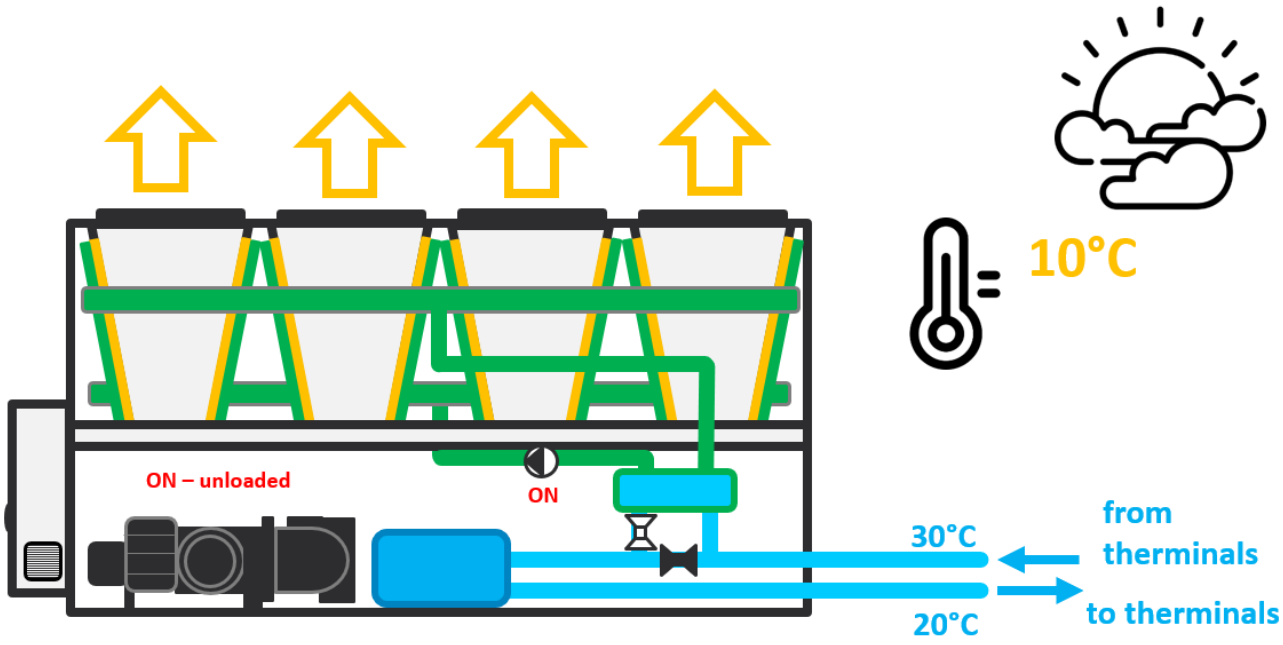
The cooling efficiency for the three operating modes change greatly based on the ambient temperature and so the operating mode. Applications with high occurrence of Mixed Mode and Free Cooling Mode provides short Return of Investment (ROI) against traditional chillers.

Free Cooling operation – Closed Loop (without glycol) (OPT231)

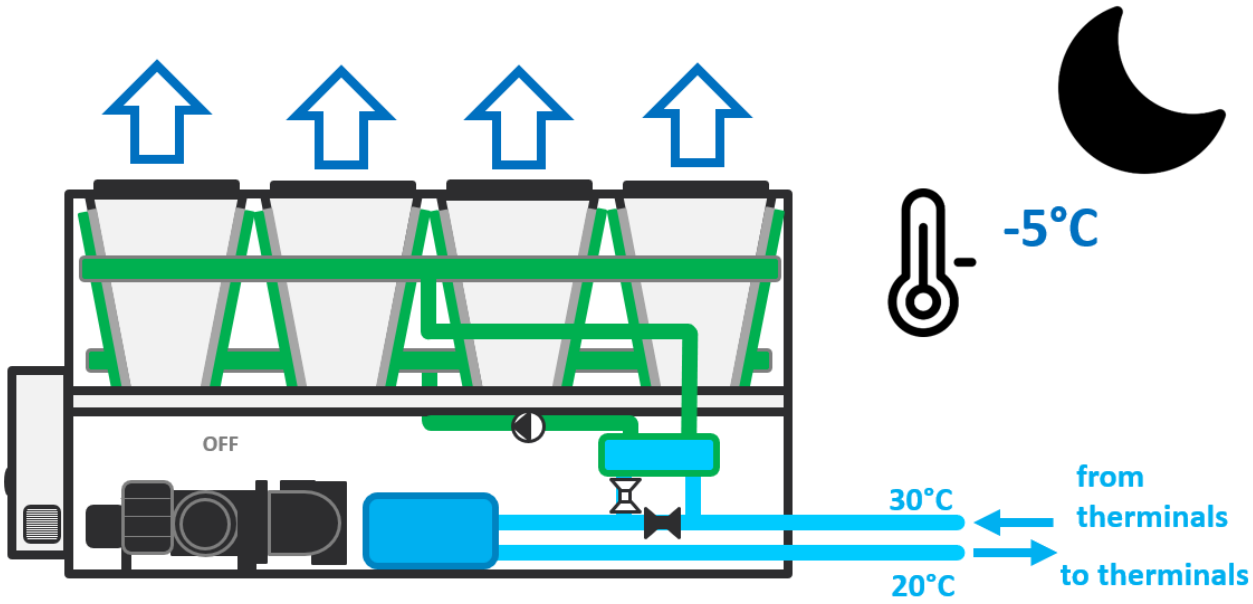
To prevent bursting and freezing in the free cooling exchanger when ambient temperatures is close and below zero use of glycol is required. For installation where glycol is not allowed in the system is possible to select option 231 to have the Closed Loop version. By selecting option 231 the unit is equipped with a brazed plate heat exchanger installed to create a closed loop with the free cooling exchanger and a dedicated pump. With this option the fluid in the system can be pure water while the glycol is confined in the closed loop between free cooling exchanger and brazed plate exchanger. The concept is the same of Open Loop version. When ambient temperature is above the water temperature returning to the unit the operation is purely mechanical. The pump on the closed loop is OFF and the BPHE is bypassed.



When ambient temperature is lower enough than the returning water temperature the “Mixed Mode” is enabled. The pump in the closed loop in tuned ON and the water is pre-chiller in the BPHE by the flowing in the free cooling exchanger.



Compared to the open loop version the temperature difference between water entering the exchanger and ambient must be bigger as result of the additional heat exchange.
When outdoor temperature is cold enough the mechanical cooling is turned OFF and the full capacity is provided by Free Cooling operation.



Due to the additional heat exchange the Free Cooling Performances are lower than Open Loop version while the performance in mechanical mode is the same.

3. F-Gas Information

Additional information related to F-GAS Regulation (EU) No 517/2014 of the European Parliament and of the Council of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFH235TZBSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH255TZBSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH300TZBSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH350TZBSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH400TZBSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH420TZBSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH455TZBSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH505TZBSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH545TZBSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH400TZBSD2	R1234ze	7	2	8,5	0,1	69,2	0,5
EWFH425TZBSD2	R1234ze	7	2	8,0	0,1	69,7	0,5
EWFH485TZBSD2	R1234ze	7	2	7,1	0,0	70,6	0,5
EWFH545TZBSD2	R1234ze	7	2	6,3	0,0	71,3	0,5
EWFH590TZBSD2	R1234ze	7	2	8,7	0,1	90,9	0,6
EWFH635TZBSD2	R1234ze	7	2	8,3	0,1	91,2	0,6
EWFH745TZBSD2	R1234ze	7	2	18,9	0,1	102,5	0,7
EWFH785TZBSD2	R1234ze	7	2	17,8	0,1	103,6	0,7
EWFH845TZBSD2	R1234ze	7	2	16,7	0,1	104,6	0,7
EWFH900TZBSD2	R1234ze	7	2	20,3	0,1	123,0	0,9
EWFH985TZBSD2	R1234ze	7	2	18,4	0,1	124,8	0,9
EWFHC11TZBSD2	R1234ze	7	2	22,8	0,2	142,3	1,0
EWFHH11TZBSD2	R1234ze	7	2	21,0	0,1	144,1	1,0
EWFHC13TZBSD2	R1234ze	7	2	40,5	0,3	146,4	1,0
EWFHH13TZBSD2	R1234ze	7	2	38,2	0,3	148,7	1,0
EWFHH14TZBSD2	R1234ze	7	2	44,0	0,3	164,8	1,2
EWFHC15TZBSD2	R1234ze	7	2	41,8	0,3	167,0	1,2
EWFHH15TZBSD2	R1234ze	7	2	49,7	0,3	180,9	1,3
EWFH240TZSSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH265TZSSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH295TZSSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH370TZSSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH415TZSSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH450TZSSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH490TZSSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH540TZSSD1	R1234ze	7	1	99,5	0,7	-	-

i) The above data are referred to the unit without additional optional.
ii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

1) Refrigerant charge values are for indication only and not considered binding. Refer to unit nameplate for specific unit refrigerant charge.
2) GWP based on Fourth Assessment Report (AR4) used as reference in current REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFH400TZSSD2	R1234ze	7	2	13,3	0,1	86,3	0,6
EWFH470TZSSD2	R1234ze	7	2	11,1	0,1	88,5	0,6
EWFH535TZSSD2	R1234ze	7	2	10,5	0,1	89,0	0,6
EWFH595TZSSD2	R1234ze	7	2	13,0	0,1	108,4	0,8
EWFH630TZSSD2	R1234ze	7	2	12,4	0,1	108,9	0,8
EWFH690TZSSD2	R1234ze	7	2	20,2	0,1	101,1	0,7
EWFH740TZSSD2	R1234ze	7	2	17,8	0,1	103,6	0,7
EWFH795TZSSD2	R1234ze	7	2	23,9	0,2	119,4	0,8
EWFH855TZSSD2	R1234ze	7	2	22,5	0,2	120,7	0,8
EWFH910TZSSD2	R1234ze	7	2	26,2	0,2	138,9	1,0
EWFH980TZSSD2	R1234ze	7	2	31,2	0,2	155,8	1,1
EWFHC10TZSSD2	R1234ze	7	2	36,3	0,3	172,5	1,2
EWFHC11TZSSD2	R1234ze	7	2	34,8	0,2	174,0	1,2
EWFHC12TZSSD2	R1234ze	7	2	32,1	0,2	176,7	1,2
EWFHH12TZSSD2	R1234ze	7	2	49,1	0,3	159,7	1,1
EWFHH13TZSSD2	R1234ze	7	2	46,4	0,3	162,4	1,1
EWFHC14TZSSD2	R1234ze	7	2	52,3	0,4	178,3	1,2
EWFHC15TZSSD2	R1234ze	7	2	58,3	0,4	194,2	1,4
EWFHH15TZSSD2	R1234ze	7	2	58,3	0,4	194,2	1,4
EWFH220TZXSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH230TZXSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH275TZXSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH300TZXSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH350TZXSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH400TZXSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH470TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH515TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH540TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH620TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH465TZXSD2	R1234ze	7	2	11,7	0,1	87,8	0,6
EWFH545TZXSD2	R1234ze	7	2	15,8	0,1	105,5	0,7
EWFH600TZXSD2	R1234ze	7	2	14,3	0,1	107,1	0,7
EWFH645TZXSD2	R1234ze	7	2	21,7	0,2	99,6	0,7
EWFH700TZXSD2	R1234ze	7	2	20,2	0,1	101,1	0,7
EWFH750TZXD2	R1234ze	7	2	25,4	0,2	117,9	0,8
EWFH790TZXSD2	R1234ze	7	2	32,6	0,2	132,5	0,9
EWFH840TZXSD2	R1234ze	7	2	30,7	0,2	134,4	0,9
EWFH900TZXSD2	R1234ze	7	2	29,0	0,2	136,1	1,0
EWFH975TZXSD2	R1234ze	7	2	32,7	0,2	154,3	1,1
EWFHH10TZXSD2	R1234ze	7	2	38,0	0,3	170,8	1,2
EWFHH11TZXSD2	R1234ze	7	2	55,7	0,4	153,1	1,1

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2) GWP based on Fourth Assessment Report (AR4) used as reference in current REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFH400TZSSD2	R1234ze	7	2	13,3	0,1	86,3	0,6
EWFH470TZSSD2	R1234ze	7	2	11,1	0,1	88,5	0,6
EWFH535TZSSD2	R1234ze	7	2	10,5	0,1	89,0	0,6
EWFH595TZSSD2	R1234ze	7	2	13,0	0,1	108,4	0,8
EWFH630TZSSD2	R1234ze	7	2	12,4	0,1	108,9	0,8
EWFH690TZSSD2	R1234ze	7	2	20,2	0,1	101,1	0,7
EWFH740TZSSD2	R1234ze	7	2	17,8	0,1	103,6	0,7
EWFH795TZSSD2	R1234ze	7	2	23,9	0,2	119,4	0,8
EWFH855TZSSD2	R1234ze	7	2	22,5	0,2	120,7	0,8
EWFH910TZSSD2	R1234ze	7	2	26,2	0,2	138,9	1,0
EWFH980TZSSD2	R1234ze	7	2	31,2	0,2	155,8	1,1
EWFHC10TZSSD2	R1234ze	7	2	36,3	0,3	172,5	1,2
EWFHC11TZSSD2	R1234ze	7	2	34,8	0,2	174,0	1,2
EWFHC12TZSSD2	R1234ze	7	2	32,1	0,2	176,7	1,2
EWFHH12TZSSD2	R1234ze	7	2	49,1	0,3	159,7	1,1
EWFHH13TZSSD2	R1234ze	7	2	46,4	0,3	162,4	1,1
EWFHC14TZSSD2	R1234ze	7	2	52,3	0,4	178,3	1,2
EWFHC15TZSSD2	R1234ze	7	2	58,3	0,4	194,2	1,4
EWFHH15TZSSD2	R1234ze	7	2	58,3	0,4	194,2	1,4
EWFH220TZXSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH230TZXSD1	R1234ze	7	1	34,0	0,2	-	-
EWFH275TZXSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH300TZXSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH350TZXSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH400TZXSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH470TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH515TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH540TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH620TZXSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH465TZXSD2	R1234ze	7	2	11,7	0,1	87,8	0,6
EWFH545TZXSD2	R1234ze	7	2	15,8	0,1	105,5	0,7
EWFH600TZXSD2	R1234ze	7	2	14,3	0,1	107,1	0,7
EWFH645TZXSD2	R1234ze	7	2	21,7	0,2	99,6	0,7
EWFH700TZXSD2	R1234ze	7	2	20,2	0,1	101,1	0,7
EWFH750TZXSD2	R1234ze	7	2	25,4	0,2	117,9	0,8
EWFH790TZXSD2	R1234ze	7	2	32,6	0,2	132,5	0,9
EWFH840TZXSD2	R1234ze	7	2	30,7	0,2	134,4	0,9
EWFH900TZXSD2	R1234ze	7	2	29,0	0,2	136,1	1,0
EWFH975TZXSD2	R1234ze	7	2	32,7	0,2	154,3	1,1
EWFHH10TZXSD2	R1234ze	7	2	38,0	0,3	170,8	1,2
EWFHH11TZXSD2	R1234ze	7	2	55,7	0,4	153,1	1,1

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Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFHH12TZXSD2	R1234ze	7	2	61,9	0,4	168,8	1,2
EWFHH13TZXSD2	R1234ze	7	2	68,1	0,5	184,4	1,3
EWFH225TZPSD1	R1234ze	7	1	55,8	0,4	-	-
EWFH265TZPSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH295TZPSD1	R1234ze	7	1	77,7	0,5	-	-
EWFH340TZPSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH395TZPSD1	R1234ze	7	1	99,5	0,7	-	-
EWFH435TZPSD1	R1234ze	7	1	121,4	0,8	-	-
EWFH490TZPSD1	R1234ze	7	1	121,4	0,8	-	-
EWFH545TZPSD1	R1234ze	7	1	121,4	0,8	-	-
EWFH500TZPSD2	R1234ze	7	2	16,7	0,1	104,6	0,7
EWFH540TZPSD2	R1234ze	7	2	21,3	0,1	121,9	0,9
EWFH615TZPSD2	R1234ze	7	2	31,3	0,2	111,9	0,8
EWFH645TZPSD2	R1234ze	7	2	29,1	0,2	114,2	0,8
EWFH700TZPSD2	R1234ze	7	2	27,1	0,2	116,1	0,8
EWFH770TZPSD2	R1234ze	7	2	32,6	0,2	132,5	0,9
EWFH845TZPSD2	R1234ze	7	2	38,2	0,3	148,7	1,0
EWFH900TZPSD2	R1234ze	7	2	36,2	0,3	150,8	1,1
EWFH960TZPSD2	R1234ze	7	2	41,8	0,3	167,0	1,2
EWFHC10TZPSD2	R1234ze	7	2	39,8	0,3	169,0	1,2
EWFHH10TZPSD2	R1234ze	7	2	45,3	0,3	185,3	1,3
EWFHH11TZPSD2	R1234ze	7	2	65,9	0,5	164,7	1,2
EWFHC12TZPSD2	R1234ze	7	2	76,9	0,5	176,1	1,2
EWFD275TZBSD1	R134a	1430	1	34,0	48,6	0,0	0,0
EWFD320TZBSD1	R134a	1430	1	55,8	79,9	0,0	0,0
EWFD345TZBSD1	R134a	1430	1	55,8	79,9	0,0	0,0
EWFD400TZBSD1	R134a	1430	1	55,8	80,0	0,0	0,0
EWFD470TZBSD1	R134a	1430	1	55,8	80,0	0,0	0,0
EWFD525TZBSD1	R134a	1430	1	77,7	111,5	0,0	0,0
EWFD580TZBSD1	R134a	1430	1	77,7	111,5	0,0	0,0
EWFD625TZBSD1	R134a	1430	1	77,7	111,6	0,0	0,0
EWFD510TZBSD2	R134a	1430	2	38,8	55,8	38,8	55,8
EWFD545TZBSD2	R134a	1430	2	38,8	55,9	38,8	55,9
EWFD570TZBSD2	R134a	1430	2	38,8	55,9	38,8	55,9
EWFD630TZBSD2	R134a	1430	2	39,8	57,4	59,7	86,1
EWFD670TZBSD2	R134a	1430	2	39,8	57,4	59,7	86,1
EWFD755TZBSD2	R134a	1430	2	60,7	87,6	60,7	87,6
EWFD830TZBSD2	R134a	1430	2	60,7	87,6	60,7	87,6
EWFD915TZBSD2	R134a	1430	2	60,7	87,7	60,7	87,7
EWFDC10TZBSD2	R134a	1430	2	60,7	87,8	60,7	87,8
EWFDH10TZBSD2	R134a	1430	2	61,4	88,8	81,8	118,4

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Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFDH11TZBSD2	R134a	1430	2	82,5	119,5	82,5	119,5
EWFDC12TZBSD2	R134a	1430	2	83,1	120,4	103,9	150,5
EWFDC13TZBSD2	R134a	1430	2	104,4	151,4	104,4	151,4
EWFDC14TZBSD2	R134a	1430	2	104,4	151,5	104,4	151,5
EWFDC15TZBSD2	R134a	1430	2	104,8	152,2	125,8	182,7
EWFDH16TZBSD2	R134a	1430	2	104,8	152,3	125,8	182,8
EWFDH17TZBSD2	R134a	1430	2	104,8	152,4	125,8	182,9
EWFDH18TZBSD2	R134a	1430	2	126,3	183,7	126,3	183,7
EWFDH19TZBSD2	R134a	1430	2	126,3	183,8	126,3	183,8
EWFD285TZSSD1	R134a	1430	1	55,8	81,3	-	-
EWFD325TZSSD1	R134a	1430	1	77,7	113,2	-	-
EWFD380TZSSD1	R134a	1430	1	77,7	113,3	-	-
EWFD430TZSSD1	R134a	1430	1	77,7	113,4	-	-
EWFD495TZSSD1	R134a	1430	1	77,7	113,5	-	-
EWFD535TZSSD1	R134a	1430	1	99,5	145,5	-	-
EWFD595TZSSD1	R134a	1430	1	99,5	145,6	-	-
EWFD650TZSSD1	R134a	1430	1	99,5	145,7	-	-
EWFD520TZSSD2	R134a	1430	2	39,8	58,3	59,7	87,5
EWFD555TZSSD2	R134a	1430	2	39,8	58,4	59,7	87,5
EWFD585TZSSD2	R134a	1430	2	39,8	58,4	59,7	87,6
EWFD645TZSSD2	R134a	1430	2	60,7	89,1	60,7	89,1
EWFD705TZSSD2	R134a	1430	2	60,7	89,2	60,7	89,2
EWFD760TZSSD2	R134a	1430	2	61,4	90,2	81,8	120,3
EWFD835TZSSD2	R134a	1430	2	61,4	90,3	81,8	120,4
EWFD960TZSSD2	R134a	1430	2	61,4	90,4	81,8	120,5
EWFDC10TZSSD2	R134a	1430	2	61,4	90,4	81,8	120,6
EWFDH10TZSSD2	R134a	1430	2	61,4	90,5	81,8	120,6
EWFDH11TZSSD2	R134a	1430	2	82,5	121,8	82,5	121,8
EWFDH12TZSSD2	R134a	1430	2	104,4	154,1	104,4	154,1
EWFDH13TZSSD2	R134a	1430	2	104,8	154,8	125,8	185,8
EWFDH14TZSSD2	R134a	1430	2	104,8	155,0	125,8	185,9
EWFDH15TZSSD2	R134a	1430	2	104,8	155,1	125,8	186,1
EWFDH16TZSSD2	R134a	1430	2	104,8	155,2	125,8	186,2
EWFDH17TZSSD2	R134a	1430	2	126,3	187,0	126,3	187,0
EWFDH18TZSSD2	R134a	1430	2	126,3	187,1	126,3	187,1
EWFDH19TZSSD2	R134a	1430	2	126,3	187,2	126,3	187,2
EWFD295TZXSD1	R134a	1430	1	55,8	82,8	-	-
EWFD345TZXSD1	R134a	1430	1	77,7	115,3	-	-
EWFD380TZXSD1	R134a	1430	1	77,7	115,4	-	-
EWFD440TZXSD1	R134a	1430	1	99,5	148,0	-	-
EWFD515TZXSD1	R134a	1430	1	99,5	148,1	-	-

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Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFD565TZXSD1	R134a	1430	1	121,4	180,7	-	-
EWFD635TZXSD1	R134a	1430	1	121,4	180,9	-	-
EWFD705TZXSD1	R134a	1430	1	121,4	181,0	-	-
EWFD760TZXSD1	R134a	1430	1	121,4	181,1	-	-
EWFD525TZXSD2	R134a	1430	2	60,7	90,6	60,7	90,6
EWFD565TZXSD2	R134a	1430	2	60,7	90,7	60,7	90,7
EWFD610TZXSD2	R134a	1430	2	61,4	91,8	81,8	122,4
EWFD670TZXSD2	R134a	1430	2	61,4	91,8	81,8	122,4
EWFD725TZXSD2	R134a	1430	2	61,4	91,9	81,8	122,5
EWFD805TZXSD2	R134a	1430	2	82,5	123,6	82,5	123,6
EWFD880TZXSD2	R134a	1430	2	82,5	123,7	82,5	123,7
EWFD950TZXSD2	R134a	1430	2	82,5	123,8	82,5	123,8
EWFDC10TZXSD2	R134a	1430	2	83,1	124,7	103,9	155,9
EWFDH10TZXSD2	R134a	1430	2	83,1	124,8	103,9	156,0
EWFDH11TZXSD2	R134a	1430	2	104,4	156,9	104,4	156,9
EWFDC12TZXSD2	R134a	1430	2	104,4	157,0	104,4	157,0
EWFDH12TZXSD2	R134a	1430	2	104,4	157,1	104,4	157,1
EWFDH13TZXSD2	R134a	1430	2	104,8	157,9	125,8	189,5
EWFDH14TZXSD2	R134a	1430	2	126,3	190,3	126,3	190,3
EWFDH15TZXSD2	R134a	1430	2	126,3	190,4	126,3	190,4
EWFDH16TZXSD2	R134a	1430	2	126,3	190,5	126,3	190,5
EWFDH17TZXSD2	R134a	1430	2	126,3	190,6	126,3	190,6
EWFD285TZPSD1	R134a	1430	1	77,7	117,4	-	-
EWFD330TZPSD1	R134a	1430	1	99,5	150,5	-	-
EWFD370TZPSD1	R134a	1430	1	99,5	150,6	-	-
EWFD405TZPSD1	R134a	1430	1	121,4	183,8	-	-
EWFD450TZPSD1	R134a	1430	1	121,4	183,9	-	-
EWFD490TZPSD1	R134a	1430	1	121,4	184,0	-	-
EWFD530TZPSD2	R134a	1430	2	61,4	93,1	81,8	124,2
EWFD575TZPSD2	R134a	1430	2	61,4	93,2	81,8	124,2
EWFD615TZPSD2	R134a	1430	2	82,5	125,4	82,5	125,4
EWFD675TZPSD2	R134a	1430	2	82,5	125,5	82,5	125,5
EWFD735TZPSD2	R134a	1430	2	82,5	125,5	82,5	125,5
EWFD810TZPSD2	R134a	1430	2	83,1	126,5	103,9	158,1
EWFD890TZPSD2	R134a	1430	2	83,1	126,5	103,9	158,2
EWFD960TZPSD2	R134a	1430	2	83,1	126,6	103,9	158,3
EWFDC10TZPSD2	R134a	1430	2	104,4	159,2	104,4	159,2
EWFDH10TZPSD2	R134a	1430	2	104,4	159,3	104,4	159,3
EWFDH11TZPSD2	R134a	1430	2	104,8	160,1	125,8	192,1
EWFDC12TZPSD2	R134a	1430	2	104,8	160,2	125,8	192,2
EWFDH12TZPSD2	R134a	1430	2	104,8	160,3	125,8	192,4

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Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFDH13TZPSD2	R134a	1430	2	126,3	193,2	126,3	193,2
EWFDH14TZPSD2	R134a	1430	2	126,3	193,3	126,3	193,3
EWFDH15TZPSD2	R134a	1430	2	126,3	193,4	126,3	193,4
EWFS275TZBSD1	R513A	630	1	34,0	21,4	-	-
EWFS320TZBSD1	R513A	630	1	55,8	35,2	-	-
EWFS345TZBSD1	R513A	630	1	55,8	35,2	-	-
EWFS400TZBSD1	R513A	630	1	55,8	35,2	-	-
EWFS470TZBSD1	R513A	630	1	55,8	35,2	-	-
EWFS525TZBSD1	R513A	630	1	77,7	48,9	-	-
EWFS580TZBSD1	R513A	630	1	77,7	48,9	-	-
EWFS625TZBSD1	R513A	630	1	77,7	48,9	-	-
EWFS755TZBSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFS830TZBSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFS915TZBSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFSC10TZBSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFSH10TZBSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFSH11TZBSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFSC12TZBSD2	R513A	630	2	83,1	52,3	103,9	65,4
EWFSC13TZBSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSC14TZBSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSC15TZBSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH16TZBSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH17TZBSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH18TZBSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH19TZBSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFS285TZSSD1	R513A	630	1	55,8	35,2	-	-
EWFS325TZSSD1	R513A	630	1	77,7	48,9	-	-
EWFS380TZSSD1	R513A	630	1	77,7	48,9	-	-
EWFS430TZSSD1	R513A	630	1	77,7	48,9	-	-
EWFS495TZSSD1	R513A	630	1	77,7	48,9	-	-
EWFS535TZSSD1	R513A	630	1	99,5	62,7	-	-
EWFS595TZSSD1	R513A	630	1	99,5	62,7	-	-
EWFS650TZSSD1	R513A	630	1	99,5	62,7	-	-
EWFS520TZSSD2	R513A	630	2	39,8	25,1	59,7	37,6
EWFS555TZSSD2	R513A	630	2	39,8	25,1	59,7	37,6
EWFS585TZSSD2	R513A	630	2	39,8	25,1	59,7	37,6
EWFS645TZSSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFS705TZSSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFS760TZSSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS835TZSSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS960TZSSD2	R513A	630	2	61,4	38,7	81,8	51,6

i) The above data are referred to the unit without additional optional.

ii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

1) Refrigerant charge values are for indication only and not considered binding. Refer to unit nameplate for specific unit refrigerant charge.

2) GWP based on Fourth Assessment Report (AR4) used as reference in current REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFSC10TZSSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFSH10TZSSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFSH11TZSSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFSH12TZSSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSH13TZSSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH14TZSSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH15TZSSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH16TZSSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH17TZSSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH18TZSSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH19TZSSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFS295TZXSD1	R513A	630	1	55,8	35,2	-	-
EWFS345TZXSD1	R513A	630	1	77,7	48,9	-	-
EWFS380TZXSD1	R513A	630	1	77,7	48,9	-	-
EWFS440TZXSD1	R513A	630	1	99,5	62,7	-	-
EWFS515TZXSD1	R513A	630	1	99,5	62,7	-	-
EWFS565TZXSD1	R513A	630	1	121,4	76,5	-	-
EWFS635TZXSD1	R513A	630	1	121,4	76,5	-	-
EWFS705TZXSD1	R513A	630	1	121,4	76,5	-	-
EWFS760TZXSD1	R513A	630	1	121,4	76,5	-	-
EWFS525TZXSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFS565TZXSD2	R513A	630	2	60,7	38,2	60,7	38,2
EWFS610TZXSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS670TZXSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS725TZXSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS805TZXSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFS880TZXSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFS950TZXSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFSC10TZXSD2	R513A	630	2	83,1	52,3	103,9	65,4
EWFSH10TZXSD2	R513A	630	2	83,1	52,3	103,9	65,4
EWFSH11TZXSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSC12TZXSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSH12TZXSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSH13TZXSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH14TZXSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH15TZXSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH16TZXSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH17TZXSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFS285TZPSD1	R513A	630	1	77,7	48,9	-	-
EWFS330TZPSD1	R513A	630	1	99,5	62,7	-	-
EWFS370TZPSD1	R513A	630	1	99,5	62,7	-	-

i) The above data are referred to the unit without additional optional.

ii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

1) Refrigerant charge values are for indication only and not considered binding. Refer to unit nameplate for specific unit refrigerant charge.

2) GWP based on Fourth Assessment Report (AR4) used as reference in current REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

Model	Ref. type	Ref. GWP [2]	N° of circuits	Ref. charge circuit #1 [kg] [1]	Ref. charge circuit #1 (TCO2Eq)	Ref. charge circuit #2 [kg] [1]	Ref. charge circuit #2 (TCO2Eq)
EWFS405TZPSD1	R513A	630	1	121,4	76,5	-	-
EWFS450TZPSD1	R513A	630	1	121,4	76,5	-	-
EWFS490TZPSD1	R513A	630	1	121,4	76,5	-	-
EWFS530TZPSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS575TZPSD2	R513A	630	2	61,4	38,7	81,8	51,6
EWFS615TZPSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFS675TZPSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFS735TZPSD2	R513A	630	2	82,5	52,0	82,5	52,0
EWFS810TZPSD2	R513A	630	2	83,1	52,3	103,9	65,4
EWFS890TZPSD2	R513A	630	2	83,1	52,3	103,9	65,4
EWFS960TZPSD2	R513A	630	2	83,1	52,3	103,9	65,4
EWFSC10TZPSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSH10TZPSD2	R513A	630	2	104,4	65,8	104,4	65,8
EWFSH11TZPSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSC12TZPSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH12TZPSD2	R513A	630	2	104,8	66,0	125,8	79,3
EWFSH13TZPSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH14TZPSD2	R513A	630	2	126,3	79,5	126,3	79,5
EWFSH15TZPSD2	R513A	630	2	126,3	79,5	126,3	79,5

i) The above data are referred to the unit without additional optional.

ii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

1) Refrigerant charge values are for indication only and not considered binding. Refer to unit nameplate for specific unit refrigerant charge.
2) GWP based on Fourth Assessment Report (AR4) used as reference in current REGULATION (EU) No 517/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 April 2014 on fluorinated greenhouse gases and repealing Regulation (EC) No 842/2006

4. Nomenclature

EWF H 900 T Z X S D 2

Digit 13: Number of independent refrigerant circuit
1 or 2

Digit 12: series revision

D = IV generation

Digit 11: Sound Configuration

S = Standard Sound

Digit 10: Efficiency tier

B = Blue
S = Silver
X = Gold
P = Platinum

Digit 9: Compressor control

Z = Variable Frequency Drive

Digit 8: Range

T = A/C with Screw Compressor

Digit 5 -7: capacity at std conditions

if Capacity > 1000 → C10, H10, C11, H11…

Digit 4: Refrigerant

H = R1234ze
D = R134a
S = R513A

Digit 1 – 3: Unit type

EWF = Air Cooled Chiller with free cooling

5. Options

Features provided as standard

- 19 mm evaporator insulation
- Victaulic connections
- Discharge line shut off valve.
- Suction line shut off valve.
- Double set-point
- Evaporator electric heater
- Electronic expansion valve
- Set point reset.
- Under/Over voltage control
- Thermal overload protection
- Phase sequence protection
- Hour run meter.
- General fault contactor
- Alarm from external device
- Fans circuit breakers
- Main switch interlock door
- Time scheduler
- Speedtrol (operation down to -20°C)
- Variable speed EC fans
- Demand limit and alarm from external device
- Master / Slave (up to 4 units)

Options on demand

OPT 21 – Evaporator flange kit.

OPT 63 – High Pressure side manometers.

OPT 64 – Low Pressure side manometers.

OPT 76-B – Soundproof system (compressor)
Enclosure on compressor to reduce unit sound emission. Provided as standard on Reduced Sound Configuration units (indicated with "R" in digit 13 of code string).

OPT 91 – Double pressure relief valve with diverter.

OPT 115 – Water filter.

OPT 58 – Evaporator Flow Switch

OPT 121 – Refrigerant Leak detection.
Requires compressor enclosure (OPT 76-b)

OPT 139 – E-coating microchannel coils
Provides additional resistance to corrosion in aggressive environment. See details in Installation and Operation manual.

OPT 225 - Blue coat microchannel coils
Provides additional resistance to corrosion in mildly aggressive environment. See details in Installation and Operation manual.

OPT 140 – Unit Guards (to cover unit access)
Wire mesh around the unit

OPT 141 – Side panels on coils end
Enhanced esthetics and protection of piping

OPT 187 – High evaporator leaving temperature (above 18°C)
Unit suitable for operation with supply temperature above 18°C

OPT 16 – Energy meter

OPT 95 – Compressor circuit breakers

OPT 102 – Ground fault relay

OPT 142 – High Ambient kit
Unit suitable for operation continuous operation above 46°C air entering the unit.

OPT 184 – iCM standard
Control functionality to manage systems including up to 8 units, not necessarily of the same model. The master unit can manage the slaves connected in series on the hydraulic plant with the aim of optimize the running hours of each compressor and to control pumps also in variable flow systems. iCM is compatible with Heat recovery, free-cooling and variable primary flow options to optimized operation of multiple units.

OPT 180 – Modbus RTU MSTP

OPT 181 – BACnet MSTP

OPT 182 – BACnet IP

OPT155 – Daikin on Site modem (with antenna) + Mobile App HMI

OPT 110 – Rapid restart
In case of power failure reach full capacity within 180 seconds from power restoration.

OPT 232 – Integrated Active Harmonic Filtration
Unit mounted active harmonic filter providing THDi <5% (Total Harmonic Distortion Current) of the chiller at full capacity.

OPT 75 – Rubber anti vibration mounts

OPT 77 – Spring Anti vibration mounts

OPT 71 – Container kit

OPT 112 – Transport kit

6. Technical data

EWFH TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**235**	**255**	**300**	**350**	**400**	**420**
Cooling Capacity (1)	kW	313,9	346,0	406,4	483,9	531,2	557,2
Power input (1)	kW	96,1	116,2	154,3	142,4	172,9	190,0
Cooling Efficiency – EER (1)	kW/kW	3,270	2,980	2,630	3,400	3,070	2,930
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,059	4,998	4,723	5,229	5,089	5,053
$\eta_{s,c}$ (3)	%	199	197	186	206	201	199
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,774	5,486	5,116	5,742	5,475	5,278
IPLV (5)	kW/kW	5,386	5,251	4,930	5,670	5,470	5,364
Full Free Cooling Temperature(12)	°C	5,8	4,29	1,46	5,42	3,96	3,08
Flow rate (1)	l/s	10,8	11,9	13,9	16,6	18,2	19,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	11,3	13,5	14,8	33,7	40,3	44,0
Unit pressure drop free cooling ON(12)(6)	kPa	74,4	85,8	112	99,1	117	127
Sound Power (1)(7) **– Lw**	dB(a)	98	100	101	97	98	98
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	93	93	95	92	93	93
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	40	48	42,7	42,7	42,7
Minimum water flow rate (10)	l/s	7,6	7,6	8,5	5,94	5,94	5,94
Length	mm	2560	2560	2560	3640	3640	3640
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	2626	2626	2656	3581	3581	3581
Operating weight (8)	kg	2882	2887	2938	3927,7	3932,7	3932,7
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current (1)(8)(11)	A	157	187	244	233	278	304
Max Running Current (7)(8)(11)	A	204	227	268	291	334	355
Current for Wiring Sizing (8)(11)	A	224	249	275	320	367	391
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

i)The above data are referred to the unit without additional optional.
ii) The above data are referred the unit installed in compliancy with installation prescription.
iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C. Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0.
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**455**	**505**	**545**	**400**	**425**	**485**
Cooling Capacity [1]	kW	594,2	651,8	717,4	538,7	566,5	663,9
Power input [1]	kW	218,7	242,4	250,2	144,6	158,4	195,8
Cooling Efficiency – EER [1]	kW/kW	2,720	2,690	2,870	3,730	3,580	3,390
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	4,925	4,875	5,148	4,974	4,912	4,875
$\eta_{s,c}$ [3]	%	194	192	203	196	193	192
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	5,019	4,875	5,047	6,007	5,912	5,767
IPLV [5]	kW/kW	4,994	5,082	5,233	5,334	5,262	5,224
Full Free Cooling Temperature[12]	°C	1,94	0,25	3,75	7,87	7,21	4,99
Flow rate [1]	l/s	20,4	22,4	24,6	18,5	19,4	22,8
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	49,5	32,9	39,8	28,5	31,0	35,1
Unit pressure drop free cooling ON[12][6]	kPa	143	143	118	78,7	85,5	98,2
Sound Power [1][7] **– Lw**	dB(a)	100	102	103	97	100	101
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	93	94	95	94	95	96
Number of circuits / Compressors	#	1	1	1	2	2	2
Water volume – open loop Free Cooling	Lt	42,7	58,1	58,1	152	152	255
Minimum water flow rate [10]	l/s	5,94	10,2	10,2	8,7	8,7	8,6
Length	mm	3640	3640	4720	4720	4720	4720
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	3581	3966	4475	3874	3874	4064
Operating weight [8]	kg	3937,7	4364,1	4943,1	4510	4515	4915
Water Connection Size	Ø mm	139,7	139,7	139,7	139,7	139,7	168,3
Running Current [1][8][11]	A	346	381	393	238	258	320
Max Running Current [7][8][11]	A	396	435	463	334	358	406
Current for Wiring Sizing [8][11]	A	436	457	468	368	394	447
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

i)The above data are referred to the unit without additional optional.
ii) The above data are referred the unit installed in compliancy with installation prescription.
iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**545**	**590**	**635**	**745**	**785**	**845**
Cooling Capacity (1)	kW	747,2	787,5	861,2	998,9	1051,0	1136,3
Power input (1)	kW	238,9	248,7	289,1	287,6	320,6	361,1
Cooling Efficiency – EER (1)	kW/kW	3,130	3,170	2,980	3,470	3,280	3,150
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	4,819	4,948	4,899	5,268	5,165	5,139
$\eta_{s,c}$ (3)	%	190	195	193	208	204	203
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,545	5,432	5,436	5,834	5,618	5,506
IPLV (5)	kW/kW	5,172	5,275	5,242	5,594	5,496	5,443
Full Free Cooling Temperature(12)	°C	3	5,78	4,4	4,94	4,09	2,74
Flow rate (1)	l/s	25,6	27,0	29,5	34,3	36,0	39,0
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	35,7	47,5	44,8	47,4	51,6	58,0
Unit pressure drop free cooling ON(12)(6)	kPa	113	110	116	116	127	137
Sound Power (1)(7) **– Lw**	dB(a)	103	104	105	100	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	96	97	98	95	95	96
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	232	255	232	280	280	492
Minimum water flow rate (10)	l/s	10,7	8,6	10,7	12,9	12,9	12,3
Length	mm	4720	5800	5800	6880	6880	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	4093	4573	4603	5549	5549	5793
Operating weight (8)	kg	4909	5505	5494	6616	6626	7299
Water Connection Size	Ø mm	168,3	168,3	168,3	168,3	168,3	219,1
Running Current (1)(8)(11)	A	384	399	472	469	519	579
Max Running Current (7)(8)(11)	A	452	494	895	581	624	667
Current for Wiring Sizing (8)(11)	A	497	535	901	639	686	733
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

i)The above data are referred to the unit without additional optional.
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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**900**	**985**	**C11**	**H11**	**C13**	**H13**
Cooling Capacity (1)	kW	1213,7	1324,7	1479,5	1571,8	1724,5	1815,6
Power input (1)	kW	377,9	443,3	487,5	542,9	527,7	603,8
Cooling Efficiency – EER (1)	kW/kW	3,210	2,990	3,040	2,890	3,270	3,010
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,268	5,129	5,106	4,996	5,425	5,348
$\eta_{s,c}$ (3)	%	208	202	201	197	214	211
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,536	5,21	5,17	5,051	6,572	6,304
IPLV (5)	kW/kW	5,506	5,399	5,392	5,238	5,966	5,902
Full Free Cooling Temperature(12)	°C	4,32	2,78	3,18	2,15	2,56	1,67
Flow rate (1)	l/s	41,6	45,4	50,7	53,9	59,1	62,3
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	64,9	59,5	45,2	49,4	38,7	41,9
Unit pressure drop free cooling ON(12)(6)	kPa	130	142	128	142	130	141
Sound Power (1)(7) **– Lw**	dB(a)	101	103	105	107	104	105
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	96	97	98	98	98	98
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	492	583	1043	1043	1011	1011
Minimum water flow rate (10)	l/s	12,3	14,6	18,1	18,1	22,6	22,6
Length	mm	7960	7960	9040	9040	10120	10120
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	6303	6392	7587	7587	8542	8542
Operating weight (8)	kg	7884	8165	10366	10376	11347	11357
Water Connection Size	Ø mm	219,1	219,1	273	273	273	273
Running Current (1)(8)(11)	A	604	701	767	849	835	948
Max Running Current (7)(8)(11)	A	719	801	889	927	1015	1106
Current for Wiring Sizing (8)(11)	A	791	880	935	935	1116	1210
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H14**	**C15**	**H15**
Cooling Capacity [1]	kW	1944,9	1996,8	2083,0
Power input [1]	kW	659,1	724,8	758,8
Cooling Efficiency – EER [1]	kW/kW	2,950	2,760	2,740
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,365	5,278	5,295
$\eta_{s,c}$ [3]	%	212	208	209
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,249	6,097	6,134
IPLV [5]	kW/kW	5,812	5,741	5,748
Full Free Cooling Temperature[12]	°C	2,28	1,8	2,79
Flow rate [1]	l/s	66,7	68,5	71,4
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	46,8	48,3	52,9
Unit pressure drop free cooling ON[12][6]	kPa	139	146	140
Sound Power [1][7] **– Lw**	dB(a)	106	107	107
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	99	99	99
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	11200	11200	12280
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	9051	9051	9561
Operating weight [8]	kg	11946	11956	12536
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	1030	1135	1185
Max Running Current [7][8][11]	A	1218	1330	1400
Current for Wiring Sizing [8][11]	A	1340	1463	1540
Max Inrush Current [8][9][11]	A	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**240**	**265**	**295**	**370**	**415**	**450**
Cooling Capacity [1]	kW	322,7	352,6	403,9	493,5	555,6	599,4
Power input [1]	kW	87,7	102,1	121,9	133,5	164,8	177,8
Cooling Efficiency – EER [1]	kW/kW	3,680	3,450	3,320	3,700	3,370	3,370
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,37	5,267	5,211	5,412	5,299	5,284
$\eta_{s,c}$ [3]	%	212	208	205	213	209	208
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,171	5,977	5,813	6,055	5,451	5,621
IPLV [5]	kW/kW	5,695	5,620	5,412	5,962	5,678	5,767
Full Free Cooling Temperature[12]	°C	10,35	9,44	7,85	8,91	7,47	6,47
Flow rate [1]	l/s	11,1	12,1	13,9	16,9	19,1	20,6
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	11,9	14,1	14,6	35,1	43,4	28,1
Unit pressure drop free cooling ON[12][6]	kPa	46,3	53,8	64,1	78,3	95,8	86,4
Sound Power [1][7] **– Lw**	dB(a)	98	100	102	97	98	98
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	94	94	95	93	94	94
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	40	48	42,7	42,7	58,1
Minimum water flow rate [10]	l/s	7,6	7,6	8,5	5,94	5,94	10,2
Length	mm	3640	3640	3640	4720	4720	4720
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	3136	3136	3166	4090	4090	4154
Operating weight [8]	kg	3462	3462	3513	4502,7	4507,7	4607,1
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current [1][8][11]	A	145	166	196	219	266	285
Max Running Current [7][8][11]	A	214	237	259	302	344	365
Current for Wiring Sizing [8][11]	A	235	261	285	332	379	402
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**490**	**540**	**400**	**470**	**535**	**595**
Cooling Capacity (1)	kW	650,1	717,6	539,1	629,2	681,2	803,4
Power input (1)	kW	206,0	227,4	141,8	175,5	194,5	231,9
Cooling Efficiency – EER (1)	kW/kW	3,160	3,160	3,800	3,590	3,500	3,460
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,208	5,441	5,195	5,058	5,097	5,15
$\eta_{s,c}$ (3)	%	205	215	205	199	201	203
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,389	5,303	4,695	5,92	5,871	3,933
IPLV (5)	kW/kW	5,594	5,459	5,560	5,390	5,423	5,509
Full Free Cooling Temperature(12)	°C	5,31	7,04	10,36	8,69	7,71	7,92
Flow rate (1)	l/s	22,3	24,6	18,5	21,6	23,4	27,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	32,8	39,3	28,7	37,4	36,4	39,6
Unit pressure drop free cooling ON(12)(6)	kPa	98,6	93,9	64,1	82,8	88,6	88,7
Sound Power (1)(7) **– Lw**	dB(a)	101	102	98	101	101	104
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	94	95	95	96	97	98
Number of circuits / Compressors	#	1	1	2	2	2	2
Water volume – open loop Free Cooling	Lt	58,1	58,1	152	152	255	232
Minimum water flow rate (10)	l/s	10,2	10,2	8,7	8,7	8,6	10,7
Length	mm	4720	5800	5800	5800	5800	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	4154	4985	4384	4384	4573	5113
Operating weight (8)	kg	4612,1	5518,1	5085	5095	5495	6064
Water Connection Size	Ø mm	139,7	139,7	139,7	139,7	168,3	168,3
Running Current (1)(8)(11)	A	327	359	234	290	318	374
Max Running Current (7)(8)(11)	A	406	455	345	405	428	495
Current for Wiring Sizing (8)(11)	A	447	480	379	445	471	544
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**630**	**690**	**740**	**795**	**855**	**910**
Cooling Capacity (1)	kW	850,3	941,1	995,8	1069,0	1144,7	1219,8
Power input (1)	kW	252,2	261,8	284,4	310,2	341,5	360,9
Cooling Efficiency – EER (1)	kW/kW	3,370	3,600	3,500	3,450	3,350	3,380
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,072	5,348	5,253	5,277	5,348	5,38
$\eta_{s,c}$ (3)	%	200	211	207	208	211	212
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,644	5,917	5,831	5,813	5,67	5,643
IPLV (5)	kW/kW	5,431	5,690	5,600	5,662	5,622	5,657
Full Free Cooling Temperature(12)	°C	7,2	5,8	4,99	6,19	5,23	6,18
Flow rate (1)	l/s	29,2	32,3	34,2	36,7	39,3	41,8
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	43,5	43,0	47,3	53,6	56,8	62,7
Unit pressure drop free cooling ON(12)(6)	kPa	97,1	106	115	114	124	122
Sound Power (1)(7) **– Lw**	dB(a)	105	99	100	101	101	102
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	98	95	95	96	96	97
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	232	280	280	280	492	492
Minimum water flow rate (10)	l/s	10,7	12,9	12,9	12,9	12,3	12,3
Length	mm	6880	6880	6880	7960	7960	9040
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5113	5549	5549	6059	6303	6812
Operating weight (8)	kg	6069	6611	6616	7201	7879	8459
Water Connection Size	Ø mm	168,3	168,3	168,3	168,3	219,1	219,1
Running Current (1)(8)(11)	A	404	431	465	503	550	579
Max Running Current (7)(8)(11)	A	526	538	581	634	677	729
Current for Wiring Sizing (8)(11)	A	570	592	639	698	745	802
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**980**	**C10**	**C11**	**C12**	**H12**	**H13**
Cooling Capacity (1)	kW	1331,5	1404,6	1500,1	1650,7	1760,0	1860,7
Power input (1)	kW	401,6	417,8	448,7	524,5	508,1	582,6
Cooling Efficiency – EER (1)	kW/kW	3,320	3,360	3,340	3,150	3,460	3,190
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,381	5,392	5,353	5,19	5,529	5,447
$\eta_{s,c}$ (3)	%	212	213	211	205	218	215
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,437	3,898	5,5	5,066	6,752	6,444
IPLV (5)	kW/kW	5,622	5,638	5,592	5,422	6,121	5,964
Full Free Cooling Temperature(12)	°C	6,63	7,32	6,39	5,05	4,05	3,09
Flow rate (1)	l/s	45,7	48,2	51,4	56,6	60,4	63,8
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	77,7	64,4	45,4	53,4	39,8	43,5
Unit pressure drop free cooling ON(12)(6)	kPa	130	118	104	119	117	129
Sound Power (1)(7) **– Lw**	dB(a)	103	104	105	107	104	105
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	97	98	98	99	98	98
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	492	583	1043	1043	1011	1011
Minimum water flow rate (10)	l/s	12,3	14,6	18,1	18,1	22,6	22,6
Length	mm	10120	11200	11200	11200	11200	11200
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	7322	7920	8606	8606	9051	9051
Operating weight (8)	kg	9044	9899	11515	11530	11926	11936
Water Connection Size	Ø mm	219,1	219,1	273	273	273	273
Running Current (1)(8)(11)	A	639	663	709	821	806	916
Max Running Current (7)(8)(11)	A	802	852	891	948	1025	1117
Current for Wiring Sizing (8)(11)	A	882	937	958	958	1128	1222
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

i)The above data are referred to the unit without additional optional.
ii) The above data are referred the unit installed in compliancy with installation prescription.
iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**C14**	**C15**	**H15**
Cooling Capacity [1]	kW	1974,1	2038,4	2148,5
Power input [1]	kW	634,8	649,6	772,0
Cooling Efficiency – EER [1]	kW/kW	3,110	3,140	2,780
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,523	5,559	5,47
$\eta_{s,c}$ [3]	%	218	219	216
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,392	6,385	6,239
IPLV [5]	kW/kW	6,063	6,076	5,970
Full Free Cooling Temperature[12]	°C	3,75	4,6	3,86
Flow rate [1]	l/s	67,7	69,9	73,7
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	47,7	50,2	53,5
Unit pressure drop free cooling ON[12][6]	kPa	128	121	133
Sound Power [1][7] **– Lw**	dB(a)	106	107	108
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	99	100	100
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	12280	13360	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	9561	10070	10070
Operating weight [8]	kg	12521	13106	13116
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	994	1023	1205
Max Running Current [7][8][11]	A	1228	1351	1410
Current for Wiring Sizing [8][11]	A	1351	1486	1552
Max Inrush Current [8][9][11]	A	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**220**	**230**	**275**	**300**	**350**	**400**
Cooling Capacity (1)	kW	294,3	316,3	373,8	409,1	472,7	537,6
Power input (1)	kW	83,0	94,9	98,3	116,8	118,6	150,7
Cooling Efficiency – EER (1)	kW/kW	3,550	3,330	3,800	3,500	3,990	3,570
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,493	5,444	5,544	5,609	6,003	5,967
$\eta_{s,c}$ (3)	%	217	215	219	221	237	23
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,902	6,732	6,519	6,537	7,31	6,658
IPLV (5)	kW/kW	6,046	6,019	6,119	6,101	6,701	6,280
Full Free Cooling Temperature(12)	°C	6,66	5,66	8,78	7,69	9,4	7,84
Flow rate (1)	l/s	10,1	10,9	12,8	14,0	16,2	18,4
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	10,1	11,4	12,8	15,0	32,3	41,0
Unit pressure drop free cooling ON(12)(6)	kPa	67,4	75,2	56,3	65,4	72,8	90,5
Sound Power (1)(7) **– Lw**	dB(a)	97	97	100	101	97	100
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	90	91	93	93	91	91
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	40	48	48	42,7	42,7
Minimum water flow rate (10)	l/s	7,6	7,6	8,5	8,5	5,94	5,94
Length	mm	2560	2560	3640	3640	4720	4720
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	2797	2797	3337	3337	4146	4146
Operating weight (8)	kg	3054	3054	3679	3684	4552,7	4562,7
Water Connection Size	Ø mm	88,9	88,9	88,9	88,9	139,7	139,7
Running Current (1)(8)(11)	A	135	153	161	188	197	245
Max Running Current (7)(8)(11)	A	172	183	214	236	269	310
Current for Wiring Sizing (8)(11)	A	190	201	235	259	296	340
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**470**	**515**	**540**	**620**	**465**	**545**
Cooling Capacity (1)	kW	627,1	680,6	712,1	819,3	639,3	745,7
Power input (1)	kW	172,2	195,9	182,4	241,7	157,4	183,2
Cooling Efficiency – EER (1)	kW/kW	3,640	3,470	3,900	3,390	4,060	4,070
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	6,110	5,704	5,444	5,379	5,800	5,912
$\eta_{s,c}$ (3)	%	241	225	215	212	229	233
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,762	6,428	7,322	6,839	6,624	5,413
IPLV (5)	kW/kW	6,571	6,450	6,125	5,832	6,277	6,389
Full Free Cooling Temperature(12)	°C	8,73	7,73	7,15	5,15	10,48	8,82
Flow rate (1)	l/s	21,5	23,3	24,4	28,1	21,9	25,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	30,5	35,8	23,4	30,1	38,4	35,3
Unit pressure drop free cooling ON(12)(6)	kPa	74,9	86	77,2	96,8	73,1	78,7
Sound Power (1)(7) **– Lw**	dB(a)	105	102	99	101	101	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	92	93	92	93	95	95
Number of circuits / Compressors	#	1	1	1	1	2	2
Water volume – open loop Free Cooling	Lt	58,1	58,1	76,3	76,3	152	232
Minimum water flow rate (10)	l/s	10,2	10,2	13,4	13,4	8,7	10,7
Length	mm	5800	5800	5800	5800	6880	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	4720	4720	5474	5474	5065	5284
Operating weight (8)	kg	5243,1	5248,1	6043,3	6053,3	5841	6230
Water Connection Size	Ø mm	139,7	139,7	139,7	139,7	139,7	168,3
Running Current (1)(8)(11)	A	277	312	296	385	257	295
Max Running Current (7)(8)(11)	A	357	394	414	491	364	406
Current for Wiring Sizing (8)(11)	A	393	434	456	541	401	442
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**600**	**645**	**700**	**750**	**790**	**840**
Cooling Capacity (1)	kW	817,3	877,0	941,7	1013,6	1071,7	1139,2
Power input (1)	kW	220,5	230,7	256,6	267,4	271,3	303,5
Cooling Efficiency – EER (1)	kW/kW	3,710	3,800	3,670	3,790	3,950	3,750
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,831	5,957	5,918	6,147	6,205	6,127
$\eta_{s,c}$ (3)	%	230	235	234	243	245	242
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,739	7,05	6,967	7,142	7,038	6,926
IPLV (5)	kW/kW	6,300	6,479	6,362	6,639	6,690	6,489
Full Free Cooling Temperature(12)	°C	7,71	6,79	5,79	6,91	7,89	7,12
Flow rate (1)	l/s	28,0	30,1	32,3	34,8	36,8	39,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	31,1	34,8	39,1	47,0	51,1	56,4
Unit pressure drop free cooling ON(12)(6)	kPa	81,2	90,8	102	103	101	111
Sound Power (1)(7) **– Lw**	dB(a)	106	98	100	101	102	103
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	96	93	93	93	94	94
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	289	289	289	492	492	492
Minimum water flow rate (10)	l/s	13	13	13	12,3	12,3	12,3
Length	mm	6880	6880	6880	7960	9040	9040
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5336	5593	5593	6358	6868	6868
Operating weight (8)	kg	6406	6668	6673	7920	8500	8505
Water Connection Size	Ø mm	168,3	168,3	168,3	219,1	219,1	219,1
Running Current (1)(8)(11)	A	357	384	423	439	445	493
Max Running Current (7)(8)(11)	A	448	472	517	527	579	618
Current for Wiring Sizing (8)(11)	A	492	520	569	580	637	680
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**900**	**975**	**H10**	**H11**	**H12**	**H13**
Cooling Capacity [1]	kW	1210,2	1312,2	1468,8	1564,7	1682,3	1812,0
Power input [1]	kW	342,0	375,8	416,1	422,1	463,2	521,6
Cooling Efficiency – EER [1]	kW/kW	3,540	3,490	3,530	3,710	3,630	3,470
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	6,008	6,025	5,997	5,645	5,693	5,758
$\eta_{s,c}$ [3]	%	237	238	237	223	225	227
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,695	6,108	6,202	7,177	6,961	6,864
IPLV [5]	kW/kW	6,472	6,443	6,436	6,376	6,481	6,426
Full Free Cooling Temperature[12]	°C	6,3	6,81	6,71	5,83	6,16	6,32
Flow rate [1]	l/s	41,5	45,0	50,4	53,7	57,7	62,1
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	51,3	58,4	30,4	48,9	54,2	41,5
Unit pressure drop free cooling ON[12][6]	kPa	110	115	86,5	110	115	101
Sound Power [1][7] **– Lw**	dB(a)	105	107	105	103	104	105
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	94	95	96	96	96	97
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	583	583	1011	1011	1011	1011
Minimum water flow rate [10]	l/s	14,6	14,6	22,6	22,6	22,6	22,6
Length	mm	9040	10120	11200	11200	12280	13360
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	6957	7466	8383	9051	9561	10070
Operating weight [8]	kg	8785	9370	11223	11906	12491	13081
Water Connection Size	Ø mm	219,1	219,1	273	273	273	273
Running Current [1][8][11]	A	550	601	661	678	739	826
Max Running Current [7][8][11]	A	655	702	787	902	992	1090
Current for Wiring Sizing [8][11]	A	721	772	866	992	1091	1198
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**225**	**265**	**295**	**340**	**395**	**420**
Cooling Capacity [1]	kW	308,3	364,2	398,9	460,2	543,6	573,6
Power input [1]	kW	73,4	83,7	98,4	100,8	129,4	133,0
Cooling Efficiency – EER [1]	kW/kW	4,200	4,350	4,050	4,570	4,200	4,310
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	6,008	6,095	6,081	6,58	6,397	6,579
$\eta_{s,c}$ [3]	%	237	241	240	260	253	260
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,312	7,556	7,271	7,983	7,59	5,795
IPLV [5]	kW/kW	6,738	6,736	6,579	7,506	7,214	7,271
Full Free Cooling Temperature[12]	°C	10,78	11,86	11,12	11,82	11,4	12,09
Flow rate [1]	l/s	10,6	12,5	13,7	15,8	18,6	19,7
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	11,2	12,2	14,5	17,5	23,5	26,0
Unit pressure drop free cooling ON[12][6]	kPa	42,8	38,3	44,9	44,2	58,7	77
Sound Power [1][7] **– Lw**	dB(a)	97	98	103	96	99	100
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	91	93	94	92	92	93
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	48	48	58,1	58,1	58,1
Minimum water flow rate [10]	l/s	7,6	8,5	8,5	10,2	10,2	10,2
Length	mm	3640	4720	4720	5800	5800	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	3307	3846	3846	4720	4720	5229
Operating weight [8]	kg	3628	4254	4259	5223,1	5233,1	5813,1
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current [1][8][11]	A	121	136	161	170	213	219
Max Running Current [7][8][11]	A	183	214	235	258	301	330
Current for Wiring Sizing [8][11]	A	201	235	258	283	331	363
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**490**	**545**	**500**	**540**	**615**	**645**
Cooling Capacity (1)	kW	653,0	717,1	684,2	730,5	834,7	875,7
Power input (1)	kW	160,4	163,7	158,9	165,0	195,6	206,6
Cooling Efficiency – EER (1)	kW/kW	4,070	4,380	4,300	4,430	4,270	4,240
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	6,481	5,753	6,199	6,24	6,646	6,55
$\eta_{s,c}$ (3)	%	256	227	245	247	263	259
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	7,297	8,001	6,966	7,58	7,332	7,884
IPLV (5)	kW/kW	7,135	6,730	6,819	6,956	7,347	7,226
Full Free Cooling Temperature(12)	°C	10,27	9,3	9,81	10,71	9,31	8,76
Flow rate (1)	l/s	22,4	24,6	23,5	25,1	28,6	30,0
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	20,1	23,8	23,3	25,9	35,0	37,4
Unit pressure drop free cooling ON(12)(6)	kPa	55,1	64,6	61,1	59,1	76,2	82,1
Sound Power (1)(7) **– Lw**	dB(a)	105	99	101	101	97	98
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	93	93	95	96	93	93
Number of circuits / Compressors	#	1	1	2	2	2	2
Water volume – open loop Free Cooling	Lt	76,3	76,3	289	289	492	492
Minimum water flow rate (10)	l/s	13,4	13,4	13	13	12,3	12,3
Length	mm	6880	6880	6880	7960	7960	7960
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5315	5984	5336	5846	6358	6358
Operating weight (8)	kg	5939,3	6618,3	6391	6971	7900	7905
Water Connection Size	Ø mm	139,7	139,7	168,3	168,3	219,1	219,1
Running Current (1)(8)(11)	A	259	269	259	268	332	348
Max Running Current (7)(8)(11)	A	367	425	375	406	432	458
Current for Wiring Sizing (8)(11)	A	404	467	412	444	476	503
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**700**	**770**	**845**	**900**	**960**	**C10**
Cooling Capacity [1]	kW	945,2	1038,0	1153,1	1224,2	1446,8	1352,1
Power input [1]	kW	231,1	250,4	271,4	309,9	394,2	352,3
Cooling Efficiency – EER [1]	kW/kW	4,090	4,150	4,250	3,950	3,670	3,840
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,945	6,46	6,506	6,388	5,929	6,3
$\eta_{s,c}$ [3]	%	235	255	257	253	234	249
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,611	7,394	7,499	7,129	6,569	6,93
IPLV [5]	kW/kW	7,016	7,052	7,143	6,966	6,615	6,787
Full Free Cooling Temperature[12]	°C	7,82	8,3	8,47	7,72	6,89	7,8
Flow rate [1]	l/s	32,4	35,6	39,5	42,0	49,6	46,4
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	42,1	39,8	60,3	66,1	43,0	38,9
Unit pressure drop free cooling ON[12][6]	kPa	92,3	86,8	170	117	98,4	88,8
Sound Power [1][7] **– Lw**	dB(a)	99	101	102	104	107	107
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	93	94	95	95	95	95
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	492	583	546	546	1043	1043
Minimum water flow rate [10]	l/s	12,3	14,6	14,5	14,5	18,1	18,1
Length	mm	7960	9040	10120	10120	11200	11200
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	6358	6957	7519	7519	8341	8341
Operating weight [8]	kg	7910	8765	9329	9339	11225	11235
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	273	273
Running Current [1][8][11]	A	385	414	445	503	696	639
Max Running Current [7][8][11]	A	505	558	609	647	694	731
Current for Wiring Sizing [8][11]	A	556	614	670	712	764	804
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFH TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H10**	**H11**	**C12**
Cooling Capacity [1]	kW	1439,3	1532,9	1610,7
Power input [1]	kW	378,7	367,3	385,1
Cooling Efficiency – EER [1]	kW/kW	3,800	4,170	4,180
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,568	6,031	6,095
$\eta_{s,c}$ [3]	%	220	238	241
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,912	7,423	7,821
IPLV [5]	kW/kW	6,825	6,965	7,041
Full Free Cooling Temperature[12]	°C	8,23	7,43	7,88
Flow rate [1]	l/s	49,4	52,6	55,2
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	29,5	32,4	35,0
Unit pressure drop free cooling ON[12][6]	kPa	76,2	84,5	84,1
Sound Power [1][7] **– Lw**	dB(a)	106	102	103
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	96	96	96
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	12280	12280	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	8892	9561	10070
Operating weight [8]	kg	11797	12476	13061
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	605	596	623
Max Running Current [7][8][11]	A	779	875	923
Current for Wiring Sizing [8][11]	A	857	962	1015
Max Inrush Current [8][9][11]	A	0	0	0

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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
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(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**275**	**320**	**345**	**400**	**470**	**525**
Cooling Capacity [1]	kW	369,3	428,0	465,2	559,3	618,4	708,2
Power input [1]	kW	109,9	119,0	138,0	167,3	196,0	206,7
Cooling Efficiency – EER [1]	kW/kW	3,360	3,600	3,370	3,340	3,160	3,430
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	4,949	5,245	5,331	5,382	5,141	5,364
$\eta_{s,c}$ [3]	%	195	207	210	212	203	212
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	5,783	6,064	5,847	5,756	5,633	5,798
IPLV [5]	kW/kW	5,248	5,612	5,562	5,760	5,549	5,729
Full Free Cooling Temperature[12]	°C	3,27	7,12	5,99	3,08	1,21	3,97
Flow rate [1]	l/s	12,7	14,7	16,0	19,2	21,2	24,3
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	15,3	20,4	23,8	44,3	53,4	38,6
Unit pressure drop free cooling ON[12][6]	kPa	96	74,3	85,2	128	154	115
Sound Power [1][7] **– Lw**	dB(a)	97	98	100	97	97	98
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	95	97	97	96	96	97
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	40	40	42,7	42,7	58,1
Minimum water flow rate [10]	l/s	7,6	7,6	7,6	5,94	5,94	10,2
Length	mm	2560	3640	3640	3640	3640	4720
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	2626	3136	3136	3581	3581	4154
Operating weight [8]	kg	2847	3432	3432	3907	3917	4581
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current [1][8][11]	A	178	192	220	270	312	328
Max Running Current [7][8][11]	A	220	262	284	346	362	400
Current for Wiring Sizing [8][11]	A	242	287	287	381	398	440
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**580**	**625**	**510**	**545**	**570**	**630**
Cooling Capacity [(1)]	kW	775,4	835,4	686,7	728,9	769,0	840,5
Power input [(1)]	kW	245,7	285,8	200,4	222,4	248,1	245,9
Cooling Efficiency – EER [(1)]	kW/kW	3,160	2,920	3,430	3,280	3,100	3,420
Seasonal Energy Efficiency Ratio - SEER [(1)(2)]	kW/kW	5,199	5,090	4,802	4,756	4,707	4,970
$\eta_{s,c}$ [(3)]	%	205	201	189	187	185	196
Seasonal Energy Performance Ratio - SEPR [(1)(2)]	kW/kW	5,524	5,241	5,859	5,715	5,589	5,807
IPLV [(5)]	kW/kW	5,550	5,372	5,137	5,108	5,062	5,330
Full Free Cooling Temperature[(12)]	°C	2,39	1,02	4,5	3,41	2,47	4,82
Flow rate [(1)]	l/s	26,6	28,7	23,6	25,0	26,4	28,8
Evaporator Pressure Drop free cooling OFF [(1)(6)]	kPa	45,7	52,4	29,8	33,0	36,1	32,1
Unit pressure drop free cooling ON[(12)(6)]	kPa	136	155	96,4	109	120	100
Sound Power [(1)(7)] **– Lw**	dB(a)	98	101	99	99	100	101
Sound Power [(1)(7)] **– Lw with + OP76b**	dB(a)	97	98	98	98	98	99
Number of circuits / Compressors	#	1	1	2	2	2	2
Water volume – open loop Free Cooling	Lt	58,1	58,1	270	270	270	255
Minimum water flow rate [(10)]	l/s	10,2	10,2	8,6	8,6	8,6	10,7
Length	mm	4720	4720	4720	4720	4720	5800
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [(8)]	kg	4154	4154	4045	4045	4045	4573
Operating weight [(8)]	kg	4591	4596	4662	4667	4672	5255
Water Connection Size	Ø mm	139,7	139,7	168,3	168,3	168,3	168,3
Running Current [(1)(8)(11)]	A	386	446	327	360	398	395
Max Running Current [(7)(8)(11)]	A	457	464	411	440	471	512
Current for Wiring Sizing [(8)(11)]	A	468	468	452	484	516	561
Max Inrush Current [(8)(9)(11)]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
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(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**670**	**755**	**830**	**915**	**C10**	**H10**
Cooling Capacity (1)	kW	905,8	1017,5	1112,2	1216,3	1554,9	1438,6
Power input (1)	kW	292,2	281,5	324,5	362,9	473,1	450,4
Cooling Efficiency – EER (1)	kW/kW	3,100	3,610	3,430	3,350	3,290	3,190
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	4,883	5,456	5,327	5,217	5,132	5,282
$\eta_{s,c}$ (3)	%	192	215	210	206	202	208
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,598	6,050	5,862	5,920	5,605	5,674
IPLV (5)	kW/kW	5,260	5,839	5,674	5,628	5,474	5,650
Full Free Cooling Temperature(12)	°C	3,56	4,67	3,14	1,5	-0,01	1,33
Flow rate (1)	l/s	31,1	34,9	38,1	41,7	53,3	49,3
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	36,3	49,6	56,8	42,1	55,1	48,9
Unit pressure drop free cooling ON(12)(6)	kPa	115	120	141	140	199	150
Sound Power (1)(7) **– Lw**	dB(a)	102	99	100	99	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	99	99	99	99	99	100
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	280	280	481	481	557
Minimum water flow rate (10)	l/s	10,7	12,9	12,9	15,3	15,3	18,2
Length	mm	5800	6880	6880	6880	6880	7960
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	4573	5549	5549	5806	5806	6427
Operating weight (8)	kg	5265	6341	6351	6819	6834	7606
Water Connection Size	Ø mm	168,3	168,3	168,3	219,1	219,1	219,1
Running Current (1)(8)(11)	A	464	460	524	582	745	712
Max Running Current (7)(8)(11)	A	556	600	668	668	751	817
Current for Wiring Sizing (8)(11)	A	561	660	735	735	826	896
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**H11**	**C12**	**C13**	**C14**	**C15**	**H16**
Cooling Capacity (1)	kW	1558,6	1664,1	1798,7	1884,6	2067,5	2175,4
Power input (1)	kW	475,5	504,9	555,2	608,0	657,0	673,3
Cooling Efficiency – EER (1)	kW/kW	3,280	3,300	3,240	3,100	3,150	3,230
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,362	5,458	5,392	5,299	5,339	5,414
$\eta_{s,c}$ (3)	%	211	215	213	209	211	214
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,684	5,713	5,399	5,436	5,373	6,629
IPLV (5)	kW/kW	5,783	5,753	5,705	5,579	5,589	5,971
Full Free Cooling Temperature(12)	°C	1,65	3,22	3,66	2,85	2,9	1,98
Flow rate (1)	l/s	53,5	57,1	61,7	64,6	70,9	74,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	55,3	61,5	69,4	74,9	51,2	55,5
Unit pressure drop free cooling ON(12)(6)	kPa	147	145	148	160	137	150
Sound Power (1)(7) **– Lw**	dB(a)	101	102	104	105	106	104
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	100	101	101	102	102	102
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	557	557	557	557	1011	1011
Minimum water flow rate (10)	l/s	18,2	18,2	18,2	18,2	22,6	22,6
Length	mm	9040	10120	11200	11200	12280	12280
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	6936	7446	7956	8277	9157	9561
Operating weight (8)	kg	8191	8776	9366	9697	11117	11535
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	273	273
Running Current (1)(8)(11)	A	749	792	867	954	1027	1051
Max Running Current (7)(8)(11)	A	884	930	948	1120	1200	1227
Current for Wiring Sizing (8)(11)	A	935	947	958	1232	1275	1280
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H17**	**H18**	**H19**
Cooling Capacity [1]	kW	2269,8	2450,5	2554,3
Power input [1]	kW	743,2	827,9	956,3
Cooling Efficiency – EER [1]	kW/kW	3,050	2,960	2,670
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,336	5,185	5,225
$\eta_{s,c}$ [3]	%	210	204	206
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,410	6,167	5,992
IPLV [5]	kW/kW	5,829	5,779	5,685
Full Free Cooling Temperature[12]	°C	1,25	1,34	0,53
Flow rate [1]	l/s	77,8	84,0	87,6
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	59,3	66,1	70,8
Unit pressure drop free cooling ON[12][6]	kPa	161	166	179
Sound Power [1][7] **– Lw**	dB(a)	105	106	107
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	102	102	102
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	12280	13360	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	9561	10070	10070
Operating weight [8]	kg	11550	12140	12150
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	1162	1287	1477
Max Running Current [7][8][11]	A	1340	1475	1608
Current for Wiring Sizing [8][11]	A	1474	1621	1621
Max Inrush Current [8][9][11]	A	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**285**	**325**	**380**	**430**	**495**	**535**
Cooling Capacity [1]	kW	382,0	442,2	497,8	565,0	668,2	726,0
Power input [1]	kW	98,8	115,8	134,6	156,0	185,9	198,4
Cooling Efficiency – EER [1]	kW/kW	3,870	3,820	3,700	3,620	3,600	3,660
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,263	5,535	5,711	5,727	5,422	5,459
$\eta_{s,c}$ [3]	%	208	218	225	226	214	215
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,279	6,358	6,233	6,068	6,048	6,077
IPLV [5]	kW/kW	5,706	5,873	5,918	6,074	5,885	6,016
Full Free Cooling Temperature[12]	°C	8,55	10,12	8,82	7,25	4,91	6,88
Flow rate [1]	l/s	13,1	15,2	17,1	19,4	22,9	24,9
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	16,3	17,7	35,8	45,1	34,8	40,5
Unit pressure drop free cooling ON[12][6]	kPa	61,5	53,6	103	98,4	104	96,1
Sound Power [1][7] **– Lw**	dB(a)	98	98	100	98	97	98
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	96	98	98	97	97	98
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	48	48	42,7	58,1	58,1
Minimum water flow rate [10]	l/s	7,6	8,5	8,5	5,94	10,2	10,2
Length	mm	3640	4720	4720	4720	4720	5800
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	3136	3675	3675	4090	4154	4664
Operating weight [8]	kg	3427	4045	4050	4487	4576	5161
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current [1][8][11]	A	161	187	215	253	297	316
Max Running Current [7][8][11]	A	231	272	294	357	372	411
Current for Wiring Sizing [8][11]	A	254	298	298	392	410	452
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**595**	**650**	**520**	**555**	**585**	**645**
Cooling Capacity (1)	kW	796,9	872,4	698,1	747,7	789,3	876,4
Power input (1)	kW	231,2	270,8	189,7	208,0	229,0	241,3
Cooling Efficiency – EER (1)	kW/kW	3,450	3,220	3,680	3,600	3,450	3,630
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,357	5,320	5,128	5,080	4,983	5,147
$\eta_{s,c}$ (3)	%	211	210	202	200	196	203
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,772	5,472	5,816	5,179	5,696	6,044
IPLV (5)	kW/kW	5,826	5,630	5,419	5,361	5,308	5,508
Full Free Cooling Temperature(12)	°C	5,6	4,23	7,4	6,49	5,74	6,78
Flow rate (1)	l/s	27,3	29,9	23,9	25,6	27,1	30,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	48,1	56,8	31,2	34,9	38,1	34,5
Unit pressure drop free cooling ON(12)(6)	kPa	112	131	84,4	93,8	101	90,6
Sound Power (1)(7) **– Lw**	dB(a)	98	101	99	99	101	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	98	98	99	99	99	100
Number of circuits / Compressors	#	1	1	2	2	2	2
Water volume – open loop Free Cooling	Lt	58,1	58,1	270	270	270	255
Minimum water flow rate (10)	l/s	10,2	10,2	8,6	8,6	8,6	10,7
Length	mm	5800	5800	5800	5800	5800	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	4664	4664	4555	4555	4555	5083
Operating weight (8)	kg	5166	5176	5237	5242	5247	5835
Water Connection Size	Ø mm	139,7	139,7	168,3	168,3	168,3	168,3
Running Current (1)(8)(11)	A	365	423	311	338	370	388
Max Running Current (7)(8)(11)	A	467	474	421	450	481	523
Current for Wiring Sizing (8)(11)	A	480	480	463	495	528	572
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**705**	**760**	**835**	**960**	**C10**	**H10**
Cooling Capacity (1)	kW	963,0	1006,2	1119,7	1280,8	1356,0	1402,2
Power input (1)	kW	288,9	264,1	311,5	365,7	406,7	429,1
Cooling Efficiency – EER (1)	kW/kW	3,330	3,810	3,600	3,500	3,330	3,270
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,032	5,659	5,558	5,444	5,349	5,338
$\eta_{s,c}$ (3)	%	198	223	219	215	211	211
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,708	6,322	6,015	6,062	5,618	5,613
IPLV (5)	kW/kW	5,424	6,045	5,875	5,800	5,680	5,709
Full Free Cooling Temperature(12)	°C	5,49	7	5,55	3,4	2,36	1,78
Flow rate (1)	l/s	33,0	34,5	38,4	43,9	46,5	48,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	40,3	48,3	58,1	44,8	49,0	46,9
Unit pressure drop free cooling ON(12)(6)	kPa	105	104	123	128	137	140
Sound Power (1)(7) **– Lw**	dB(a)	103	99	100	100	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	100	100	100	100	100	100
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	280	280	481	481	557
Minimum water flow rate (10)	l/s	10,7	12,9	12,9	15,3	15,3	18,2
Length	mm	6880	7960	7960	7960	7960	7960
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5083	6059	6059	6316	6316	6427
Operating weight (8)	kg	5840	6916	6926	7404	7409	7601
Water Connection Size	Ø mm	168,3	168,3	168,3	219,1	219,1	219,1
Running Current (1)(8)(11)	A	459	434	505	586	647	680
Max Running Current (7)(8)(11)	A	566	610	679	706	761	789
Current for Wiring Sizing (8)(11)	A	572	671	747	776	837	868
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**H11**	**H12**	**H13**	**H14**	**H15**	**H16**
Cooling Capacity (1)	kW	1554,9	1712,6	1849,0	1998,9	2057,0	2175,4
Power input (1)	kW	473,1	506,7	561,0	622,3	572,2	673,3
Cooling Efficiency – EER (1)	kW/kW	3,290	3,380	3,300	3,210	3,600	3,230
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,362	5,492	5,510	5,340	5,382	5,414
$\eta_{s,c}$ (3)	%	211	217	217	211	212	214
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,684	5,764	5,503	5,524	6,997	6,629
IPLV (5)	kW/kW	5,697	5,967	5,764	5,690	6,081	5,971
Full Free Cooling Temperature(12)	°C	2,28	5,01	4,8	3,52	3,03	1,98
Flow rate (1)	l/s	53,3	58,7	63,4	68,6	70,5	74,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	55,1	63,9	72,6	48,6	50,8	55,5
Unit pressure drop free cooling ON(12)(6)	kPa	146	133	141	129	136	150
Sound Power (1)(7) **– Lw**	dB(a)	101	102	104	105	103	104
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	100	101	102	102	102	102
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	557	557	557	1011	1011	1011
Minimum water flow rate (10)	l/s	18,2	18,2	18,2	22,6	22,6	22,6
Length	mm	9040	11200	12280	12280	12280	12280
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	6936	7956	8465	9157	9561	9561
Operating weight (8)	kg	8191	9356	9945	11107	11520	11535
Water Connection Size	Ø mm	219,1	219,1	219,1	273	273	273
Running Current (1)(8)(11)	A	745	795	875	975	901	1051
Max Running Current (7)(8)(11)	A	884	948	1187	1156	1124	1227
Current for Wiring Sizing (8)(11)	A	935	958	1248	1271	1237	1280
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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ii) The above data are referred the unit installed in compliancy with installation prescription.
iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H17**	**H18**	**H19**
Cooling Capacity [1]	kW	2344,7	2450,5	2554,3
Power input [1]	kW	732,0	827,9	956,3
Cooling Efficiency – EER [1]	kW/kW	3,200	2,960	2,670
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,408	5,185	5,225
$\eta_{s,c}$ [3]	%	213	204	206
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,471	6,167	5,992
IPLV [5]	kW/kW	5,891	5,779	5,685
Full Free Cooling Temperature[12]	°C	2,18	1,34	0,53
Flow rate [1]	l/s	80,4	84,0	87,6
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	61,4	66,1	70,8
Unit pressure drop free cooling ON[12][6]	kPa	154	166	179
Sound Power [1][7] **– Lw**	dB(a)	105	106	107
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	102	102	102
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	13360	13360	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	10070	10070	10070
Operating weight [8]	kg	12130	12140	12150
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	1145	1287	1477
Max Running Current [7][8][11]	A	1351	1475	1608
Current for Wiring Sizing [8][11]	A	1486	1621	1621
Max Inrush Current [8][9][11]	A	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**295**	**345**	**380**	**440**	**515**	**565**
Cooling Capacity (1)	kW	401,2	469,3	513,3	602,0	696,2	745,6
Power input (1)	kW	107,1	119,4	140,9	143,9	183,6	190,5
Cooling Efficiency – EER (1)	kW/kW	3,740	3,930	3,640	4,180	3,790	3,910
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,513	5,770	5,694	6,127	5,991	6,002
$\eta_{s,c}$ (3)	%	218	228	225	242	237	237
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,876	7,069	6,779	7,721	6,991	6,721
IPLV (5)	kW/kW	6,087	6,309	6,223	6,763	6,548	6,747
Full Free Cooling Temperature(12)	°C	7,93	9,51	8,44	9,2	7,44	8,83
Flow rate (1)	l/s	13,8	16,1	17,6	20,6	23,9	25,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	18,1	19,7	23,4	28,8	37,5	25,7
Unit pressure drop free cooling ON(12)(6)	kPa	66,8	59,3	69,1	70,2	89,6	69,3
Sound Power (1)(7) **– Lw**	dB(a)	97	98	103	96	97	100
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	93	95	95	94	94	95
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	48	48	58,1	58,1	76,3
Minimum water flow rate (10)	l/s	7,6	8,5	8,5	10,2	10,2	13,4
Length	mm	3640	4720	4720	5800	5800	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	3307	3846	3846	4720	4720	5315
Operating weight (8)	kg	3598	4216	4221	5202	5212	5897
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current (1)(8)(11)	A	174	192	224	235	294	304
Max Running Current (7)(8)(11)	A	224	261	289	314	342	404
Current for Wiring Sizing (8)(11)	A	246	288	298	345	376	444
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**635**	**705**	**760**	**525**	**565**	**610**
Cooling Capacity (1)	kW	856,0	931,9	1005,8	726,9	780,5	816,1
Power input (1)	kW	235,0	236,5	284,2	173,0	192,6	203,7
Cooling Efficiency – EER (1)	kW/kW	3,640	3,940	3,540	4,200	4,050	4,010
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,971	5,379	5,305	5,812	5,746	5,825
$\eta_{s,c}$ (3)	%	236	212	209	229	227	230
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,739	7,307	6,985	5,644	6,981	7,221
IPLV (5)	kW/kW	6,544	5,859	5,769	6,305	6,193	6,275
Full Free Cooling Temperature(12)	°C	7,12	5,96	4,84	9,1	8,26	9,54
Flow rate (1)	l/s	29,4	32,0	34,5	24,9	26,8	28,0
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	33,2	38,4	44,3	41,0	46,0	30,3
Unit pressure drop free cooling ON(12)(6)	kPa	87,2	100	114	83,6	93,7	70,6
Sound Power (1)(7) **– Lw**	dB(a)	105	99	100	100	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	95	95	95	96	96	97
Number of circuits / Compressors	#	1	1	1	2	2	2
Water volume – open loop Free Cooling	Lt	76,3	76,3	76,3	255	255	255
Minimum water flow rate (10)	l/s	13,4	13,4	13,4	8,6	8,6	10,7
Length	mm	6880	6880	6880	6880	6880	7960
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5315	5984	5984	5254	5254	5763
Operating weight (8)	kg	5907	6586	6596	5986	5996	6576
Water Connection Size	Ø mm	139,7	139,7	139,7	168,3	168,3	168,3
Running Current (1)(8)(11)	A	370	377	448	286	315	332
Max Running Current (7)(8)(11)	A	452	520	568	389	429	457
Current for Wiring Sizing (8)(11)	A	491	572	625	428	472	503
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**670**	**725**	**805**	**880**	**950**	**C10**
Cooling Capacity (1)	kW	887,3	961,8	1092,9	1196,6	1293,6	1345,3
Power input (1)	kW	230,7	257,5	284,1	310,3	358,0	356,6
Cooling Efficiency – EER (1)	kW/kW	3,850	3,730	3,850	3,860	3,610	3,770
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,719	5,728	5,937	6,090	5,977	6,099
$\eta_{s,c}$ (3)	%	226	226	234	241	236	241
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,928	6,880	6,938	7,037	7,159	6,755
IPLV (5)	kW/kW	6,135	6,225	6,482	6,614	6,459	6,591
Full Free Cooling Temperature(12)	°C	8,58	7,59	7,67	6,48	5,37	6,49
Flow rate (1)	l/s	30,4	33,0	37,5	41,0	44,4	46,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	34,7	36,5	35,4	40,7	45,8	48,9
Unit pressure drop free cooling ON(12)(6)	kPa	80,8	88,7	85,8	98,7	111	107
Sound Power (1)(7) **– Lw**	dB(a)	101	102	105	98	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	97	97	98	96	96	97
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	298	481	481	481	481
Minimum water flow rate (10)	l/s	10,7	14,3	15,3	15,3	15,3	15,3
Length	mm	7960	7960	9040	9040	9040	10120
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5763	5834	6624	6881	6881	7390
Operating weight (8)	kg	6581	6704	7753	8019	8029	8609
Water Connection Size	Ø mm	168,3	168,3	219,1	219,1	219,1	219,1
Running Current (1)(8)(11)	A	372	412	452	503	574	572
Max Running Current (7)(8)(11)	A	498	535	573	626	683	720
Current for Wiring Sizing (8)(11)	A	548	585	607	689	751	792
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**H10**	**H11**	**C12**	**H12**	**H13**	**H14**
Cooling Capacity [1]	kW	1415,4	1524,6	1621,9	1730,6	1814,3	1952,2
Power input [1]	kW	396,8	415,4	461,9	509,1	535,2	490,7
Cooling Efficiency – EER [1]	kW/kW	3,570	3,670	3,510	3,400	3,390	3,980
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,952	5,419	6,0	5,809	5,981	5,690
$\eta_{s,c}$ [3]	%	235	214	237	229	236	225
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,866	6,972	6,760	6,650	6,575	7,592
IPLV [5]	kW/kW	6,418	6,605	6,440	6,380	6,347	6,404
Full Free Cooling Temperature[12]	°C	5,79	6,21	5,32	4,33	5,11	5,29
Flow rate [1]	l/s	48,5	52,3	55,6	59,3	62,2	66,9
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	52,3	53,7	59,6	39,1	41,8	46,6
Unit pressure drop free cooling ON[12][6]	kPa	116	113	124	113	110	113
Sound Power [1][7] **– Lw**	dB(a)	102	103	105	108	106	102
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	97	97	97	98	98	98
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	481	557	557	557	1011	1011
Minimum water flow rate [10]	l/s	15,3	18,2	18,2	18,2	22,6	22,6
Length	mm	10120	11200	11200	11200	12280	13360
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	7390	8011	8011	8011	8892	10070
Operating weight [8]	kg	8619	9391	9401	9416	10826	12080
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	273	273
Running Current [1][8][11]	A	632	660	729	799	837	780
Max Running Current [7][8][11]	A	782	744	803	851	899	997
Current for Wiring Sizing [8][11]	A	860	819	883	924	924	1097
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H15**	**H16**	**H17**
Cooling Capacity [1]	kW	2065,7	2200,8	2323,9
Power input [1]	kW	577,7	660,1	761,0
Cooling Efficiency – EER [1]	kW/kW	3,580	3,330	3,050
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,512	5,517	5,368
$\eta_{s,c}$ [3]	%	217	218	212
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,038	6,838	6,451
IPLV [5]	kW/kW	6,197	6,076	5,915
Full Free Cooling Temperature[12]	°C	4,41	3,35	2,36
Flow rate [1]	l/s	70,8	75,5	79,7
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	50,4	55,7	60,9
Unit pressure drop free cooling ON[12][6]	kPa	123	138	151
Sound Power [1][7] **– Lw**	dB(a)	103	104	105
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	99	99	99
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	13360	13360	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	10070	10070	10070
Operating weight [8]	kg	12095	12110	12125
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	909	1031	1188
Max Running Current [7][8][11]	A	1103	1217	1330
Current for Wiring Sizing [8][11]	A	1214	1268	1463
Max Inrush Current [8][9][11]	A	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**285**	**330**	**370**	**405**	**450**	**490**
Cooling Capacity [(1)]	kW	384,1	452,2	500,1	559,5	622,0	642,0
Power input [(1)]	kW	87,5	104,1	122,8	121,3	138,2	138,4
Cooling Efficiency – EER [(1)]	kW/kW	4,390	4,340	4,070	4,610	4,500	4,640
Seasonal Energy Efficiency Ratio - SEER [(1)(2)]	kW/kW	6,018	6,229	6,138	6,369	6,325	6,262
$\eta_{s,c}$ [(3)]	%	238	246	243	252	250	247
Seasonal Energy Performance Ratio - SEPR [(1)(2)]	kW/kW	7,819	7,650	7,291	6,352	4,850	7,622
IPLV [(5)]	kW/kW	6,730	6,820	6,691	7,327	7,623	7,171
Full Free Cooling Temperature[(12)]	°C	11,45	11,96	11,1	11,73	10,75	10,1
Flow rate [(1)]	l/s	13,2	15,5	17,2	19,2	21,3	20,5
Evaporator Pressure Drop free cooling OFF [(1)(6)]	kPa	13,4	18,3	22,3	25,2	18,7	18,9
Unit pressure drop free cooling ON[(12)(6)]	kPa	42,1	44,5	53,1	52,8	51	42,2
Sound Power [(1)(7)] **– Lw**	dB(a)	97	98	100	95	96	98
Sound Power [(1)(7)] **– Lw with + OP76b**	dB(a)	94	95	96	95	95	95
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	48	48	48	58,1	76,3	76,3
Minimum water flow rate [(10)]	l/s	8,5	8,5	8,5	10,2	13,4	13,4
Length	mm	4720	5800	5800	6880	6880	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [(8)]	kg	3846	4356	4356	5229	5315	5315
Operating weight [(8)]	kg	4211	4791	4796	5771	5882	5887
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current [(1)(8)(11)]	A	145	169	197	201	226	226
Max Running Current [(7)(8)(11)]	A	220	258	285	293	352	404
Current for Wiring Sizing [(8)(11)]	A	242	284	310	322	388	444
Max Inrush Current [(8)(9)(11)]	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**530**	**575**	**615**	**675**	**735**	**810**
Cooling Capacity [1]	kW	730,7	792,8	811,8	919,6	998,7	1105,3
Power input [1]	kW	166,8	187,0	187,4	220,3	252,3	263,6
Cooling Efficiency – EER [1]	kW/kW	4,380	4,240	4,330	4,170	3,960	4,190
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	6,194	6,108	6,056	5,971	6,024	6,262
$\eta_{s,c}$ [3]	%	245	241	239	236	238	247
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,167	7,550	6,025	6,652	6,611	7,327
IPLV [5]	kW/kW	6,719	6,613	6,593	6,435	6,529	6,853
Full Free Cooling Temperature[12]	°C	10,66	9,84	10,94	9,71	8,8	8,97
Flow rate [1]	l/s	25,1	27,2	27,8	31,5	34,3	37,9
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	41,5	47,6	30,3	37,5	39,4	36,2
Unit pressure drop free cooling ON[12][6]	kPa	75,6	86,2	62,3	76,4	83,8	79
Sound Power [1][7] **– Lw**	dB(a)	100	100	101	101	102	105
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	96	96	97	98	98	98
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	255	255	255	298	481
Minimum water flow rate [10]	l/s	8,6	8,6	10,7	10,7	14,3	15,3
Length	mm	7960	7960	9040	9040	9040	10120
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	5763	5763	6273	6273	6344	7134
Operating weight [8]	kg	6566	6571	7151	7161	7279	8327
Water Connection Size	Ø mm	168,3	168,3	168,3	168,3	168,3	219,1
Running Current [1][8][11]	A	277	307	308	357	404	421
Max Running Current [7][8][11]	A	399	429	468	508	535	573
Current for Wiring Sizing [8][11]	A	439	472	514	559	585	607
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**890**	**960**	**C10**	**H10**	**H11**	**C12**
Cooling Capacity [1]	kW	1177,7	1275,2	1326,9	1449,2	1497,0	1619,4
Power input [1]	kW	282,8	320,6	330,5	382,3	379,0	433,6
Cooling Efficiency – EER [1]	kW/kW	4,160	3,980	4,010	3,790	3,950	3,730
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	6,488	6,363	6,411	6,274	6,440	6,286
$\eta_{s,c}$ [3]	%	257	252	253	248	255	248
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,579	7,586	7,434	7,277	7,321	7,098
IPLV [5]	kW/kW	7,078	6,894	6,876	6,739	6,964	6,778
Full Free Cooling Temperature[12]	°C	8,21	7,2	8,04	6,91	7,73	6,69
Flow rate [1]	l/s	40,4	43,7	45,5	49,7	51,3	55,5
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	39,4	44,5	47,3	54,7	51,7	58,8
Unit pressure drop free cooling ON[12][6]	kPa	87,3	98,8	96,4	111	103	116
Sound Power [1][7] **– Lw**	dB(a)	99	100	101	102	103	105
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	97	97	97	97	98	98
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	481	481	481	481	557	557
Minimum water flow rate [10]	l/s	15,3	15,3	15,3	15,3	18,2	18,2
Length	mm	10120	10120	11200	11200	12280	12280
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	7390	7390	7900	7900	8521	8521
Operating weight [8]	kg	8594	8604	9189	9199	9971	9976
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1
Running Current [1][8][11]	A	462	519	637	685	605	687
Max Running Current [7][8][11]	A	616	672	709	761	796	845
Current for Wiring Sizing [8][11]	A	677	740	780	837	876	929
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFD TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz					
Model		**H12**	**H13**	**H14**	**H15**
Cooling Capacity [1]	kW	1734,6	1847,6	1954,2	2069,8
Power input [1]	kW	481,3	518,0	481,1	565,5
Cooling Efficiency – EER [1]	kW/kW	3,600	3,570	4,060	3,660
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	6,189	6,180	5,850	5,671
$\eta_{s,c}$ [3]	%	245	244	231	224
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,919	6,725	7,731	7,210
IPLV [5]	kW/kW	6,639	6,674	6,585	6,367
Full Free Cooling Temperature[12]	°C	5,76	6,06	5,28	4,37
Flow rate [1]	l/s	59,5	63,4	67,0	71,0
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	39,3	43,2	46,6	50,6
Unit pressure drop free cooling ON[12][6]	kPa	102	104	113	124
Sound Power [1][7] **– Lw**	dB(a)	108	106	102	103
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	98	98	98	99
Number of circuits / Compressors	#	2	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6	22,6
Length	mm	12280	13360	13360	13360
Width	mm	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553
Shipping weight [8]	kg	8892	9402	10070	10070
Operating weight [8]	kg	10816	11401	12085	12100
Water Connection Size	Ø mm	273	273	273	273
Running Current [1][8][11]	A	757	812	766	891
Max Running Current [7][8][11]	A	893	951	1039	1135
Current for Wiring Sizing [8][11]	A	982	1021	1143	1248
Max Inrush Current [8][9][11]	A	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**275**	**320**	**345**	**400**	**470**	**525**
Cooling Capacity (1)	kW	353,3	412,4	447,6	528,7	571,3	657,0
Power input (1)	kW	116,8	124,1	144,8	172,6	194,9	206,4
Cooling Efficiency – EER (1)	kW/kW	3,030	3,320	3,090	3,060	2,930	3,180
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	4,648	5,032	4,966	5,234	4,921	5,225
$\eta_{s,c}$ (3)	%	183	198	196	206	194	206
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,464	5,846	5,645	5,60	5,463	5,685
IPLV (5)	kW/kW	5,084	5,463	5,375	5,565	5,295	5,599
Full Free Cooling Temperature(12)	°C	3,67	7,32	6,22	3,69	2,34	4,85
Flow rate (1)	l/s	12,1	14,1	15,4	18,1	19,6	22,5
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	14,2	19,0	22,2	40,0	46,1	33,9
Unit pressure drop free cooling ON(12)(6)	kPa	88,9	68,2	78,2	114	131	98,7
Sound Power (1)(7) **– Lw**	dB(a)	97	98	100	97	97	98
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	73	74	75	73	73	73
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	40	40	42,7	42,7	58,1
Minimum water flow rate (10)	l/s	7,6	7,6	7,6	5,94	5,94	10,2
Length	mm	2560	3640	3640	3640	3640	4720
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	2626	3136	3136	3581	3581	4154
Operating weight (8)	kg	2847	3432	3432	3907	3917	4581
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current (1)(8)(11)	A	188	199	230	278	311	328
Max Running Current (7)(8)(11)	A	220	262	284	346	362	400
Current for Wiring Sizing (8)(11)	A	242	287	287	381	398	440
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**580**	**625**	**755**	**830**	**915**	**C10**
Cooling Capacity (1)	kW	728,9	758,7	956,9	1067,0	1162,6	1244,3
Power input (1)	kW	250,2	274,5	275,4	347,3	386,6	442,7
Cooling Efficiency – EER (1)	kW/kW	2,910	2,760	3,470	3,072	3,010	2,810
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,233	5,015	5,288	5,217	5,037	4,917
$\eta_{s,c}$ (3)	%	206	198	209	206	198	194
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,375	5,129	6,023	5,665	5,715	5,335
IPLV (5)	kW/kW	5,564	5,377	5,660	5,550	5,409	5,281
Full Free Cooling Temperature(12)	°C	3,08	2,4	5,35	3,56	2,02	2,66
Flow rate (1)	l/s	25,0	26,0	32,8	36,6	39,9	42,7
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	41,1	44,1	44,6	53,1	38,7	43,2
Unit pressure drop free cooling ON(12)(6)	kPa	119	128	106	124	127	129
Sound Power (1)(7) **– Lw**	dB(a)	98	101	99	100	99	100
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	73	74	74	74	74	74
Number of circuits / Compressors	#	1	1	2	2	2	2
Water volume – open loop Free Cooling	Lt	58,1	58,1	280	280	481	481
Minimum water flow rate (10)	l/s	10,2	10,2	12,9	12,9	15,3	15,3
Length	mm	4720	4720	6880	6880	6880	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	4154	4154	5549	5549	5806	5806
Operating weight (8)	kg	4591	4596	6341	6351	6819	6834
Water Connection Size	Ø mm	139,7	139,7	168,3	168,3	219,1	219,1
Running Current (1)(8)(11)	A	393	429	451	558	617	700
Max Running Current (7)(8)(11)	A	457	464	600	668	668	751
Current for Wiring Sizing (8)(11)	A	468	468	660	735	735	826
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**H10**	**H11**	**C12**	**C13**	**C14**	**C15**
Cooling Capacity (1)	kW	1343,5	1446,7	1570,3	1721,3	1797,1	1969,9
Power input (1)	kW	453,9	475,3	520,6	574,3	633,0	687,1
Cooling Efficiency – EER (1)	kW/kW	2,960	3,040	3,020	3,000	2,840	2,870
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,034	5,163	4,951	5,254	5,165	5,168
$\eta_{s,c}$ (3)	%	198	204	195	207	204	204
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,526	5,541	5,264	5,324	5,177	5,162
IPLV (5)	kW/kW	5,468	5,513	5,558	5,543	5,454	5,411
Full Free Cooling Temperature(12)	°C	2,23	3,21	3,88	2,58	2,15	1,31
Flow rate (1)	l/s	46,1	49,6	53,9	59,0	61,6	67,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	44,0	49,3	56,2	65,1	70,3	48,0
Unit pressure drop free cooling ON(12)(6)	kPa	131	127	129	136	147	125
Sound Power (1)(7) **– Lw**	dB(a)	101	101	102	104	105	106
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	75	75	75	75	76	76
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	557	557	557	557	557	1011
Minimum water flow rate (10)	l/s	18,2	18,2	18,2	18,2	18,2	22,6
Length	mm	7960	9040	10120	11200	11200	12280
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	6427	6936	7446	7956	8277	9157
Operating weight (8)	kg	7606	8191	8776	9366	9697	11117
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	219,1	273
Running Current (1)(8)(11)	A	717	748	816	895	991	1071
Max Running Current (7)(8)(11)	A	817	884	930	948	1120	1200
Current for Wiring Sizing (8)(11)	A	896	935	947	958	1232	1275
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D BS| Blue Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz					
Model		**H16**	**H17**	**H18**	**H19**
Cooling Capacity [1]	kW	2035,6	2107,1	2314,2	2312,5
Power input [1]	kW	679,2	739,9	872,6	887,7
Cooling Efficiency – EER [1]	kW/kW	3,000	2,850	2,650	2,610
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,095	5,177	5,178	5,098
$\eta_{s,c}$ [3]	%	201	204	204	201
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,388	6,132	5,860	5,790
IPLV [5]	kW/kW	5,860	5,754	5,648	5,583
Full Free Cooling Temperature[12]	°C	2,87	2,25	1,33	2,12
Flow rate [1]	l/s	69,8	72,3	79,4	79,3
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	50,0	52,8	60,6	61,5
Unit pressure drop free cooling ON[12][6]	kPa	131	139	148	146
Sound Power [1][7] **– Lw**	dB(a)	104	105	106	107
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	76	76	76	76
Number of circuits / Compressors	#	2	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6	22,6
Length	mm	12280	12280	13360	13360
Width	mm	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553
Shipping weight [8]	kg	9561	9561	10070	10070
Operating weight [8]	kg	11535	11550	12140	12150
Water Connection Size	Ø mm	273	273	273	273
Running Current [1][8][11]	A	1060	1157	1353	1376
Max Running Current [7][8][11]	A	1227	1340	1475	1608
Current for Wiring Sizing [8][11]	A	1280	1474	1621	1621
Max Inrush Current [8][9][11]	A	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
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Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**285**	**325**	**380**	**430**	**495**	**535**
Cooling Capacity (1)	kW	379,6	427,0	497,7	565,5	644,9	699,1
Power input (1)	kW	104,5	114,9	142,1	166,4	190,8	200,7
Cooling Efficiency – EER (1)	kW/kW	3,630	3,720	3,500	3,400	3,380	3,480
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,070	5,307	5,507	5,460	5,167	5,335
$\eta_{s,c}$ (3)	%	200	209	217	215	204	210
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,086	6,183	6,056	5,903	5,851	5,936
IPLV (5)	kW/kW	6,487	6,589	6,445	7,060	7,327	6,935
Full Free Cooling Temperature(12)	°C	8,62	10,46	8,81	7,22	5,45	7,38
Flow rate (1)	l/s	13,0	14,6	17,1	19,4	22,1	24,0
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	16,2	16,4	35,8	45,3	32,7	37,8
Unit pressure drop free cooling ON(12)(6)	kPa	60,8	50,5	103	98,6	97,7	90,2
Sound Power (1)(7) **– Lw**	dB(a)	98	98	100	98	97	98
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	73	74	75	73	73	74
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	48	48	42,7	58,1	58,1
Minimum water flow rate (10)	l/s	7,6	8,5	5,94	5,94	10,2	10,2
Length	mm	3640	4720	4720	4720	4720	5800
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	3136	3675	3675	4090	4154	4664
Operating weight (8)	kg	3427	4045	4050	4487	4576	5161
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current (1)(8)(11)	A	170	185	226	268	305	319
Max Running Current (7)(8)(11)	A	231	272	294	357	372	411
Current for Wiring Sizing (8)(11)	A	254	298	298	392	410	452
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**595**	**650**	**520**	**555**	**585**	**645**
Cooling Capacity [1]	kW	768,1	849,0	672,4	718,1	763,4	839,2
Power input [1]	kW	235,1	281,5	190,5	206,7	233,6	237,7
Cooling Efficiency – EER [1]	kW/kW	3,270	3,020	3,530	3,470	3,270	3,530
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,220	5,093	4,767	4,838	4,774	4,926
$\eta_{s,c}$ [3]	%	206	201	188	191	188	194
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	5,611	5,363	5,892	5,738	5,662	5,818
IPLV [5]	kW/kW	6,450	6,337	6,306	6,178	6,272	6,550
Full Free Cooling Temperature[12]	°C	6,13	4,66	7,82	7,04	6,2	7,38
Flow rate [1]	l/s	26,3	29,1	23,1	24,6	26,2	28,8
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	44,8	54,1	29,0	32,6	36,0	31,9
Unit pressure drop free cooling ON[12][6]	kPa	105	124	79,6	88,2	96,4	84,6
Sound Power [1][7] **– Lw**	dB(a)	98	101	99	99	101	101
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	74	74	75	75	75	76
Number of circuits / Compressors	#	1	1	2	2	2	2
Water volume – open loop Free Cooling	Lt	58,1	58,1	270	270	270	255
Minimum water flow rate [10]	l/s	10,2	10,2	8,6	8,6	8,6	10,7
Length	mm	5800	5800	5800	5800	5800	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	4664	4664	4555	4555	4555	5083
Operating weight [8]	kg	5166	5176	5237	5242	5247	5835
Water Connection Size	Ø mm	139,7	139,7	168,3	168,3	168,3	168,3
Running Current [1][8][11]	A	370	439	312	336	377	383
Max Running Current [7][8][11]	A	467	474	421	450	481	523
Current for Wiring Sizing [8][11]	A	480	480	463	495	528	572
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**705**	**760**	**835**	**960**	**C10**	**H10**
Cooling Capacity (1)	kW	927,7	984,9	1076,3	1237,0	1300,8	1315,3
Power input (1)	kW	286,3	271,9	318,4	377,4	417,1	420,5
Cooling Efficiency – EER (1)	kW/kW	3,240	3,620	3,380	3,280	3,120	3,130
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	4,820	5,427	5,30	5,171	5,102	5,043
$\eta_{s,c}$ (3)	%	190	214	209	204	201	199
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,647	6,127	5,851	5,818	5,332	5,586
IPLV (5)	kW/kW	6,785	6,548	6,624	6,415	6,507	6,418
Full Free Cooling Temperature(12)	°C	6,04	7,29	6,1	4	3,11	2,94
Flow rate (1)	l/s	31,8	33,8	36,9	42,4	44,6	45,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	37,6	46,8	54,1	42,5	46,2	43,0
Unit pressure drop free cooling ON(12)(6)	kPa	98,9	101	115	120	127	125
Sound Power (1)(7) **– Lw**	dB(a)	103	99	100	100	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	76	74	74	74	74	75
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	280	280	481	481	557
Minimum water flow rate (10)	l/s	10,7	12,9	12,9	15,3	15,3	18,2
Length	mm	6880	7960	7960	7960	7960	7960
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5083	6059	6059	6316	6316	6427
Operating weight (8)	kg	5840	6916	6926	7404	7409	7601
Water Connection Size	Ø mm	168,3	168,3	168,3	219,1	219,1	219,1
Running Current (1)(8)(11)	A	455	446	515	603	662	667
Max Running Current (7)(8)(11)	A	566	610	679	706	761	789
Current for Wiring Sizing (8)(11)	A	572	671	747	776	837	868
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**H11**	**H12**	**H13**	**H14**	**H15**	**H16**
Cooling Capacity (1)	kW	1474,3	1645,1	1766,4	1894,7	1965,4	2043,3
Power input (1)	kW	475,6	515,1	562,9	618,6	608,3	641,8
Cooling Efficiency – EER (1)	kW/kW	3,100	3,190	3,140	3,060	3,230	3,180
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,122	5,274	4,372	4,156	5,294	5,056
$\eta_{s,c}$ (3)	%	202	208	172	163	209	199
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	5,545	5,592	5,503	5,144	6,630	6,388
IPLV (5)	kW/kW	6,452	6,402	6,469	6,286	5,536	5,698
Full Free Cooling Temperature(12)	°C	3,22	5,16	5,49	4,41	3,8	3,13
Flow rate (1)	l/s	50,6	56,4	60,6	65,0	67,4	70,1
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	51,0	60,6	67,6	45,1	47,5	50,5
Unit pressure drop free cooling ON(12)(6)	kPa	133	126	132	118	125	134
Sound Power (1)(7) **– Lw**	dB(a)	101	102	104	105	103	104
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	75	75	76	76	75	76
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	557	557	557	1011	1011	1011
Minimum water flow rate (10)	l/s	18,2	18,2	18,2	22,6	22,6	22,6
Length	mm	9040	11200	12280	12280	12280	12280
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	6936	7956	8465	9157	9561	9561
Operating weight (8)	kg	8191	9356	9945	11107	11520	11535
Water Connection Size	Ø mm	219,1	219,1	219,1	273	273	273
Running Current (1)(8)(11)	A	749	807	878	970	954	1004
Max Running Current (7)(8)(11)	A	884	948	1187	1156	1124	1227
Current for Wiring Sizing (8)(11)	A	935	958	1248	1271	1237	1280
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D SS| Silver Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H17**	**H18**	**H19**
Cooling Capacity [1]	kW	2235,0	2280,9	2357,6
Power input [1]	kW	745,8	800,9	882,7
Cooling Efficiency – EER [1]	kW/kW	3,000	2,850	2,670
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,217	4,602	5,064
$\eta_{s,c}$ [3]	%	206	181	200
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	5,894	5,994	5,790
IPLV [5]	kW/kW	5,723	5,836	5,606
Full Free Cooling Temperature[12]	°C	3,02	2,67	2,12
Flow rate [1]	l/s	76,6	78,2	80,9
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	57,4	59,4	63,6
Unit pressure drop free cooling ON[12][6]	kPa	142	147	155
Sound Power [1][7] **– Lw**	dB(a)	105	106	107
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	76	76	76
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	13360	13360	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	10070	10070	10070
Operating weight [8]	kg	12130	12140	12150
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	1166	1247	1368
Max Running Current [7][8][11]	A	1351	1475	1608
Current for Wiring Sizing [8][11]	A	1486	1621	1621
Max Inrush Current [8][9][11]	A	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**295**	**345**	**380**	**440**	**515**	**565**
Cooling Capacity (1)	kW	393,3	464,2	504,5	576,4	684,7	755,0
Power input (1)	kW	111,7	127,2	147,6	146,3	193,5	206,8
Cooling Efficiency – EER (1)	kW/kW	3,520	3,650	3,420	3,940	3,540	3,650
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,287	5,458	5,423	5,849	5,656	5,799
$\eta_{s,c}$ (3)	%	208	215	214	231	223	229
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,635	6,766	6,620	7,475	6,991	6,998
IPLV (5)	kW/kW	5,759	5,595	5,394	5,248	5,188	5,131
Full Free Cooling Temperature(12)	°C	7,14	8,71	7,68	8,8	6,63	7,75
Flow rate (1)	l/s	13,5	15,9	17,3	19,8	23,5	25,9
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	17,5	19,4	22,6	26,5	36,4	26,6
Unit pressure drop free cooling ON(12)(6)	kPa	64,2	58,1	67	65	86,8	70,5
Sound Power (1)(7) **– Lw**	dB(a)	97	98	103	96	97	100
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	72	73	73	71	71	71
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	40	48	48	58,1	58,1	76,3
Minimum water flow rate (10)	l/s	7,6	8,5	8,5	10,2	10,2	13,4
Length	mm	3640	4720	4720	5800	5800	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	3307	3846	3846	4720	4720	5315
Operating weight (8)	kg	3598	4216	4221	5202	5212	5897
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current (1)(8)(11)	A	181	204	234	238	309	328
Max Running Current (7)(8)(11)	A	224	261	289	314	342	404
Current for Wiring Sizing (8)(11)	A	246	288	298	345	376	444
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**635**	**705**	**760**	**525**	**565**	**610**
Cooling Capacity [1]	kW	832,8	912,5	967,7	701,3	756,2	806,7
Power input [1]	kW	245,0	262,0	298,7	176,7	203,0	210,7
Cooling Efficiency – EER [1]	kW/kW	3,400	3,480	3,240	3,970	3,730	3,830
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,696	5,285	5,158	5,598	5,491	5,570
$\eta_{s,c}$ [3]	%	225	208	203	221	217	220
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,597	7,257	6,805	6,937	6,750	6,900
IPLV [5]	kW/kW	5,296	5,220	5,811	5,660	5,565	5,488
Full Free Cooling Temperature[12]	°C	6,43	5,1	4,18	8,64	7,72	8,79
Flow rate [1]	l/s	28,6	31,3	33,2	24,1	25,9	27,7
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	31,4	37,2	41,4	38,5	43,7	29,8
Unit pressure drop free cooling ON[12][6]	kPa	83	96,5	107	78,3	88,3	69
Sound Power [1][7] **– Lw**	dB(a)	105	99	100	100	100	101
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	72	72	72	72	73	73
Number of circuits / Compressors	#	1	1	1	2	2	2
Water volume – open loop Free Cooling	Lt	76,3	76,3	76,3	255	255	255
Minimum water flow rate [10]	l/s	13,4	13,4	13,4	8,6	8,6	10,7
Length	mm	6880	6880	6880	6880	6880	7960
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	5315	5984	5984	5254	5254	5763
Operating weight [8]	kg	5907	6586	6596	5986	5996	6576
Water Connection Size	Ø mm	139,7	139,7	139,7	168,3	168,3	168,3
Running Current [1][8][11]	A	385	415	469	292	331	342
Max Running Current [7][8][11]	A	452	520	568	389	429	457
Current for Wiring Sizing [8][11]	A	491	572	625	428	472	503
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**670**	**725**	**805**	**880**	**950**	**C10**
Cooling Capacity (1)	kW	870,6	937,3	1038,1	1125,0	1220,6	1274,1
Power input (1)	kW	242,2	266,3	280,0	301,9	354,2	356,3
Cooling Efficiency – EER (1)	kW/kW	3,600	3,520	3,710	3,730	3,450	3,580
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,470	5,520	5,693	5,530	5,674	5,183
$\eta_{s,c}$ (3)	%	216	218	225	218	224	204
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,625	6,573	6,684	7,241	6,895	7,003
IPLV (5)	kW/kW	5,498	5,500	5,594	5,570	5,485	5,977
Full Free Cooling Temperature(12)	°C	7,87	6,93	5,54	6,26	5,07	6,16
Flow rate (1)	l/s	29,9	32,1	35,6	38,6	41,9	43,7
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	33,8	35,1	32,5	36,9	42,3	44,8
Unit pressure drop free cooling ON(12)(6)	kPa	77,9	84,5	78,8	89,2	102	98,2
Sound Power (1)(7) **– Lw**	dB(a)	101	102	105	98	100	101
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	74	74	75	72	72	72
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	298	481	481	481	481
Minimum water flow rate (10)	l/s	10,7	14,3	15,3	15,3	15,3	15,3
Length	mm	7960	7960	9040	9040	9040	10120
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	5763	5834	6624	6881	6881	7390
Operating weight (8)	kg	6581	6704	7753	8019	8029	8609
Water Connection Size	Ø mm	168,3	168,3	219,1	219,1	219,1	219,1
Running Current (1)(8)(11)	A	389	425	446	491	569	572
Max Running Current (7)(8)(11)	A	498	535	573	626	683	720
Current for Wiring Sizing (8)(11)	A	548	585	607	689	751	792
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**H10**	**H11**	**C12**	**H12**	**H13**	**H14**
Cooling Capacity (1)	kW	1370,2	1436,4	1536,8	1603,6	1720,1	1866,7
Power input (1)	kW	407,6	405,9	463,6	489,2	532,4	523,3
Cooling Efficiency – EER (1)	kW/kW	3,360	3,540	3,320	3,280	3,230	3,570
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	4,899	5,793	5,680	5,627	5,687	5,603
$\eta_{s,c}$ (3)	%	193	229	224	222	224	221
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,714	6,818	6,565	6,273	6,423	7,323
IPLV (5)	kW/kW	5,840	5,764	5,622	5,541	5,840	6,097
Full Free Cooling Temperature(12)	°C	5,12	5,94	4,96	4,27	4,67	4,8
Flow rate (1)	l/s	47,0	49,3	52,7	55,0	59,0	64,0
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	50,1	49,1	54,4	35,3	39,1	43,4
Unit pressure drop free cooling ON(12)(6)	kPa	111	103	115	100	102	106
Sound Power (1)(7) **– Lw**	dB(a)	102	103	105	108	106	102
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	72	72	72	73	73	73
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	481	557	557	557	1011	1011
Minimum water flow rate (10)	l/s	15,3	18,2	18,2	18,2	22,6	22,6
Length	mm	10120	11200	11200	11200	12280	13360
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	7390	8011	8011	8011	8892	10070
Operating weight (8)	kg	8619	9391	9401	9416	10826	12080
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	273	273
Running Current (1)(8)(11)	A	648	645	731	769	833	828
Max Running Current (7)(8)(11)	A	782	744	803	851	899	997
Current for Wiring Sizing (8)(11)	A	860	819	883	924	924	1097
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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iii) All the data are subject to change without notice. For updated information on project base refer to Chiller Selection Software and unit's certified drawing

(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
(2) Seasonal Energy Efficiency Ratio as defined in EN14825, part load condition in cooling for Air to Water units, fan coil application, variable outlet, variable flow.
(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D XS| Gold Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz				
Model		**H15**	**H16**	**H17**
Cooling Capacity [1]	kW	1957,9	2092,9	2138,8
Power input [1]	kW	577,6	655,3	711,3
Cooling Efficiency – EER [1]	kW/kW	3,390	3,190	3,010
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,478	5,355	5,225
$\eta_{s,c}$ [3]	%	216	211	206
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	6,816	6,147	6,234
IPLV [5]	kW/kW	5,958	6,475	6,196
Full Free Cooling Temperature[12]	°C	3,99	2,82	2,4
Flow rate [1]	l/s	67,1	71,8	73,3
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	46,7	51,9	53,9
Unit pressure drop free cooling ON[12][6]	kPa	114	128	133
Sound Power [1][7] **– Lw**	dB(a)	103	104	105
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	73	73	74
Number of circuits / Compressors	#	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011
Minimum water flow rate [10]	l/s	22,6	22,6	22,6
Length	mm	13360	13360	13360
Width	mm	2238	2238	2238
Height	mm	2553	2553	2553
Shipping weight [8]	kg	10070	10070	10070
Operating weight [8]	kg	12095	12110	12125
Water Connection Size	Ø mm	273	273	273
Running Current [1][8][11]	A	909	1024	1115
Max Running Current [7][8][11]	A	1103	1217	1330
Current for Wiring Sizing [8][11]	A	1214	1268	1463
Max Inrush Current [8][9][11]	A	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**285**	**330**	**370**	**405**	**450**	**490**
Cooling Capacity [1]	kW	379,8	447,7	484,8	550,1	613,9	660,6
Power input [1]	kW	90,6	109,7	125,7	126,1	145,1	161,2
Cooling Efficiency – EER [1]	kW/kW	4,190	4,080	3,860	4,360	4,230	4,100
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,743	5,964	5,882	6,268	6,216	6,048
$\eta_{s,c}$ [3]	%	227	236	232	248	246	239
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,375	7,291	6,819	4,687	7,969	7,675
IPLV [5]	kW/kW	6,447	6,205	5,786	5,655	6,054	5,949
Full Free Cooling Temperature[12]	°C	10,82	11,41	10,65	11,18	10,07	9,32
Flow rate [1]	l/s	13,0	15,4	16,6	18,9	21,1	22,7
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	13,1	18,1	20,9	24,5	18,3	20,8
Unit pressure drop free cooling ON[12][6]	kPa	41,1	43,6	50,1	51,2	49,7	56,3
Sound Power [1][7] **– Lw**	dB(a)	97	98	100	95	96	98
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	71	73	73	71	71	71
Number of circuits / Compressors	#	1	1	1	1	1	1
Water volume – open loop Free Cooling	Lt	48	48	48	58,1	76,3	76,3
Minimum water flow rate [10]	l/s	8,5	8,5	8,5	10,2	13,4	13,4
Length	mm	4720	5800	5800	6880	6880	6880
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	3846	4356	4356	5229	5315	5315
Operating weight [8]	kg	4211	4791	4796	5771	5882	5887
Water Connection Size	Ø mm	88,9	88,9	88,9	139,7	139,7	139,7
Running Current [1][8][11]	A	149	178	202	208	237	261
Max Running Current [7][8][11]	A	220	258	285	293	352	404
Current for Wiring Sizing [8][11]	A	242	284	310	322	388	444
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**530**	**575**	**615**	**675**	**735**	**810**
Cooling Capacity [1]	kW	709,1	778,7	838,4	887,5	962,2	1069,0
Power input [1]	kW	170,7	194,8	212,7	231,2	257,6	273,2
Cooling Efficiency – EER [1]	kW/kW	4,160	4,000	3,940	3,840	3,730	3,910
Seasonal Energy Efficiency Ratio - SEER [1][2]	kW/kW	5,945	5,862	5,852	5,730	5,785	6,009
$\eta_{s,c}$ [3]	%	235	231	231	226	228	237
Seasonal Energy Performance Ratio - SEPR [1][2]	kW/kW	7,358	7,217	5,744	6,974	6,890	7,074
IPLV [5]	kW/kW	6,001	5,870	5,962	6,219	6,346	6,142
Full Free Cooling Temperature[12]	°C	10,21	9,21	9,86	9,23	8,3	8,44
Flow rate [1]	l/s	24,3	26,7	28,8	30,4	33,0	36,7
Evaporator Pressure Drop free cooling OFF [1][6]	kPa	39,4	46,2	32,1	35,0	36,8	34,2
Unit pressure drop free cooling ON[12][6]	kPa	71,8	83,5	65,4	71,8	78,2	74,8
Sound Power [1][7] **– Lw**	dB(a)	100	100	101	101	102	105
Sound Power [1][7] **– Lw with + OP76b**	dB(a)	72	73	73	74	74	74
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	255	255	255	255	298	481
Minimum water flow rate [10]	l/s	8,6	8,6	10,7	10,7	14,3	15,3
Length	mm	7960	7960	9040	9040	9040	10120
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight [8]	kg	5763	5763	6273	6273	6344	7134
Operating weight [8]	kg	6566	6571	7151	7161	7279	8327
Water Connection Size	Ø mm	168,3	168,3	168,3	168,3	168,3	219,1
Running Current [1][8][11]	A	283	319	345	373	412	435
Max Running Current [7][8][11]	A	399	429	468	508	535	573
Current for Wiring Sizing [8][11]	A	439	472	514	559	585	607
Max Inrush Current [8][9][11]	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz							
Model		**890**	**960**	**C10**	**H10**	**H11**	**C12**
Cooling Capacity (1)	kW	1159,8	1236,5	1302,5	1381,4	1446,9	1537,4
Power input (1)	kW	296,4	332,7	343,6	382,2	398,4	435,5
Cooling Efficiency – EER (1)	kW/kW	3,910	3,720	3,790	3,610	3,630	3,530
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	6,196	5,371	6,078	5,687	6,041	6,011
$\eta_{s,c}$ (3)	%	245	212	240	224	239	237
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	7,660	7,292	7,237	7,025	6,994	6,884
IPLV (5)	kW/kW	6,314	6,136	6,287	6,156	6,119	6,152
Full Free Cooling Temperature(12)	°C	7,42	6,58	7,29	6,51	7,13	6,35
Flow rate (1)	l/s	39,8	42,4	44,7	47,4	49,6	52,7
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	38,7	42,6	46,3	50,7	54,2	54,1
Unit pressure drop free cooling ON(12)(6)	kPa	84,8	93,7	93	102	96,6	106
Sound Power (1)(7) **– Lw**	dB(a)	99	100	101	102	103	105
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	72	72	72	72	72	73
Number of circuits / Compressors	#	2	2	2	2	2	2
Water volume – open loop Free Cooling	Lt	481	481	481	481	557	557
Minimum water flow rate (10)	l/s	15,3	15,3	15,3	15,3	18,2	18,2
Length	mm	10120	10120	11200	11200	12280	12280
Width	mm	2238	2238	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553	2553	2553
Shipping weight (8)	kg	7390	7390	7900	7900	8521	8521
Operating weight (8)	kg	8594	8604	9189	9199	9971	9976
Water Connection Size	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1
Running Current (1)(8)(11)	A	483	537	553	610	634	689
Max Running Current (7)(8)(11)	A	616	672	709	761	796	845
Current for Wiring Sizing (8)(11)	A	677	740	780	837	876	929
Max Inrush Current (8)(9)(11)	A	0	0	0	0	0	0

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(1) Standard Rating at Ambient 35°C Inlet temperature 26°C, leaving temperature 18°C: Fluid Ethylene glycol 25%, Fouling factor = 0
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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

EWFS TZ-D PS| Platinum Efficiency, Standard Sound, | 400 V / 3ph / 50 Hz					
Model		**H12**	**H13**	**H14**	**H15**
Cooling Capacity (1)	kW	1651,8	1785,6	1875,0	1970,5
Power input (1)	kW	480,7	519,7	514,8	571,8
Cooling Efficiency – EER (1)	kW/kW	3,440	3,440	3,640	3,450
Seasonal Energy Efficiency Ratio - SEER (1)(2)	kW/kW	5,921	5,886	5,120	5,622
$\eta_{s,c}$ (3)	%	234	232	202	222
Seasonal Energy Performance Ratio - SEPR (1)(2)	kW/kW	6,737	6,633	7,524	7,000
IPLV (5)	kW/kW	6,299	6,124	5,955	5,832
Full Free Cooling Temperature(12)	°C	5,31	5,45	4,7	3,88
Flow rate (1)	l/s	56,6	61,2	64,3	67,6
Evaporator Pressure Drop free cooling OFF (1)(6)	kPa	36,6	40,6	43,5	47,3
Unit pressure drop free cooling ON(12)(6)	kPa	95,3	98,3	106	116
Sound Power (1)(7) **– Lw**	dB(a)	108	106	102	103
Sound Power (1)(7) **– Lw with + OP76b**	dB(a)	73	73	73	73
Number of circuits / Compressors	#	2	2	2	2
Water volume – open loop Free Cooling	Lt	1011	1011	1011	1011
Minimum water flow rate (10)	l/s	22,6	22,6	22,6	22,6
Length	mm	12280	13360	13360	13360
Width	mm	2238	2238	2238	2238
Height	mm	2553	2553	2553	2553
Shipping weight (8)	kg	8892	9402	10070	10070
Operating weight (8)	kg	10816	11401	12085	12100
Water Connection Size	Ø mm	273	273	273	273
Running Current (1)(8)(11)	A	757	814	816	900
Max Running Current (7)(8)(11)	A	893	951	1039	1135
Current for Wiring Sizing (8)(11)	A	982	1021	1143	1248
Max Inrush Current (8)(9)(11)	A	0	0	0	0

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(3) The seasonal space cooling energy efficiency ηs,c is calculated as defined in Regulation (EU) 2016/2281 the seasonal energy efficiency ratio SEER divided by the conversion coefficient CC (2.5), corrected by contributions accounting for temperature control (0.03).
(4) Seasonal Energy Performance Ratio as defined in EN14825, part load condition in cooling for Air to Water units, high temperature application.
(5) Based on AHRI conditions
(6) Fluid: Ethylene Glycol 25%, not including filter pressure drop. The installation of the filter is mandatory.
(7) Sound power level measured in accordance with ISO9614, referred to unit operating at Standard Rating Conditions for Air to water chillers according to EN14511:2 Outdoor Heat exchanger inlet dry bulb temperature 35°; Indoor heat exchanger inlet water temperature 12°C, outlet water temperature 7°C
(8) This are intended as guideline only and referred for unit without options. Refer to dedicated wiring diagram and unit nameplate for specific values.
(9) Determined as follow: LRA of largest compressor + FLA of remaining compressors + FLA of the fans.
Value intended as guideline. Refer to unit nameplate for specific value.
(10) Minimum flow rate in variable flow application in correspondence of minimum chiller capacity, supply temperature 7°C, fluid: water
(11) Value refered to 400V/50Hz power supply. ±10% tolerance on Voltage, Voltage unbalance between phases must be within ± 3%.
(12) Inlet 26°C, Leaving 18°C, Fluid: 25% Ethylene Glycol, Fouling factor = 0.

7. Electrical data

EWFH TZ-D BS| Blue Efficiency, Standard Sound				
Models	Fans FLA	Auxiliary circuit	Entry cross section cable	SCC Icw 1 Sec.
	A	A	q.ty x mm²	kA eff
EWFH235TZBSD1	18,6	2,38	240 mm²	15
EWFH255TZBSD1	18,6	2,38	240 mm²	15
EWFH300TZBSD1	18,6	2,38	240 mm²	15
EWFH350TZBSD1	28,0	2,38	2x185 mm²	20
EWFH400TZBSD1	28,0	2,38	2x185 mm²	20
EWFH420TZBSD1	28,0	2,38	2x185 mm²	20
EWFH455TZBSD1	28,0	2,38	2x185 mm²	20
EWFH505TZBSD1	28,0	2,38	2x185 mm²	20
EWFH545TZBSD1	37,3	2,38	2x185 mm²	20
EWFH400TZBSD2	37,3	3,50	2x185 mm²	20
EWFH425TZBSD2	37,3	3,50	2x185 mm²	20
EWFH485TZBSD2	37,3	3,50	2x240 mm²	20
EWFH545TZBSD2	37,3	3,50	2x240 mm²	20
EWFH590TZBSD2	46,6	3,50	2x240 mm²	20
EWFH635TZBSD2	46,6	3,50	2x400 mm²	25
EWFH745TZBSD2	55,9	3,50	2x400 mm²	25
EWFH785TZBSD2	55,9	3,50	2x400 mm²	25
EWFH845TZBSD2	55,9	3,50	2x400 mm²	25
EWFH900TZBSD2	65,2	3,50	2x400 mm²	25
EWFH985TZBSD2	65,2	3,50	2x400 mm²	25
EWFHC11TZBSD2	74,6	3,50	2x400 mm²	25
EWFHH11TZBSD2	74,6	3,50	2x400 mm²	25
EWFHC13TZBSD2	83,9	3,50	2x500 mm²	25
EWFHH13TZBSD2	83,9	3,50	2x500 mm²	25
EWFHH14TZBSD2	93,2	3,50	3x500 mm²	25
EWFHC15TZBSD2	93,2	3,50	3x500 mm²	25
EWFHH15TZBSD2	102,5	3,50	3x500 mm²	25

The above data are referred to the base unit without optional.
All the data are intended as guideline and are subject to change without notice. For updated information on project base refer to dedicated wiring diagram

8. Operating Limits

8.1 EWFH~TZ D – R1234ze

At Evaporator – Brazed Plate Heat Exchanger	Unit configuration	Fluid	Min [°C]	Max [°C]
Leaving fluid temperature range	Standard unit	Water	4	18
	Hight LWT option	Water	4	30
	Brine option	Glycol Mix	-12	18
Entering fluid temperature range	Standard unit	Water	7	28
	Hight LWT option	Water	7	40
	Brine option	Glycol Mix	-9	28
Entering fluid temperature range at start up	Standard unit	Water	7	40
	Hight LWT option	Water	7	40
	Brine option	Glycol Mix	-9	40
Fluid Temperature difference across evaporator Entering - Leaving	Standard unit	Water	3	10
	Hight LWT option	Water	3	10
	Brine option	Glycol Mix	3	10

For operation below 4°C leaving from evaporator the use of glycol mixture is mandatory.
The values above are intended as guidelines, refer to unit selection on project base for actual values.

Transportation and Storage temperature	Min [°C]	Max [°C]
	-20	56

At Condenser – MCH/Tube and fin Exchanger	Unit configuration	Fluid	Min [°C]	Max [°C]
Operating Ambient Temperature	Standard unit with EC fans	Air	-20	46
	Unit with High Ambient kit (OPT142)	Air	-20	55

The values above are intended as guidelines, refer to unit selection on project base for actual values.

Condenser fans External Static pressure	Unit configuration	Pa
	Standard unit	0

If additional pressure resistance is added on airflow e.g., louvers around the unit or ducts on condenser discharge, the airflow will be affected causing a deration of unit performance. The External Static Pressure where available is referred to the nominal airflow of the standard unit. Refer to chiller selection for airflow information.

Max Operating Pressure on water side	Heat Exchanger	bar
	STD unit – BPHE	10
	STD unit – S&T	10

All above values are intended as guidelines which may change according to specific unit configurations.

8.2 EWFD~TZ D – R134a

At Evaporator – Brazed Plate Heat Exchanger	Unit configuration	Fluid	Min [°C]	Max [°C]
Leaving fluid temperature range	Standard unit	Water	4	18
	Hight LWT option	Water	4	25
	Brine option	Glycol Mix	-12	18
Entering fluid temperature range	Standard unit	Water	7	28
	Hight LWT option	Water	7	35
	Brine option	Glycol Mix	-9	28
Entering fluid temperature range at start up	Standard unit	Water	7	35
	Hight LWT option	Water	7	35
	Brine option	Glycol Mix	-9	35
Fluid Temperature difference across evaporator Entering - Leaving	Standard unit	Water	3	10
	Hight LWT option	Water	3	10
	Brine option	Glycol Mix	3	10

For operation below 4°C leaving from evaporator the use of glycol mixture is mandatory.
The values above are intended as guidelines, refer to unit selection on project base for actual values.

Transportation and Storage temperature	Min [°C]	Max [°C]
	-20	56

At Condenser – MCH/Tube and fin Exchanger	Unit configuration	Fluid	Min [°C]	Max [°C]
Operating Ambient Temperature	Standard unit with EC fans	Air	-20	46
	Unit with High Ambient kit (OPT142)	Air	-20	52

The values above are intended as guidelines, refer to unit selection on project base for actual values.

Condenser fans External Static pressure	Unit configuration	Pa
	Standard unit	0

If additional pressure resistance is added on airflow e.g., louvers around the unit or ducts on condenser discharge, the airflow will be affected causing a deration of unit performance. The External Static Pressure where available is referred to the nominal airflow of the standard unit. Refer to chiller selection for airflow information.

Max Operating Pressure on water side	Heat Exchanger	bar
	STD unit – BPHE	10
	STD unit – S&T	10

All above values are intended as guidelines which may change according to specific unit configurations.

8.3 EWFS~TZ D – R513A

At Evaporator – Brazed Plate Heat Exchanger	Unit configuration	Fluid	Min [°C]	Max [°C]
Leaving fluid temperature range	Standard unit	Water	4	18
	Hight LWT option	Water	4	25
	Brine option	Glycol Mix	-12	18
Entering fluid temperature range	Standard unit	Water	7	28
	Hight LWT option	Water	7	35
	Brine option	Glycol Mix	-9	28
Entering fluid temperature range at start up	Standard unit	Water	7	35
	Hight LWT option	Water	7	35
	Brine option	Glycol Mix	-9	35
Fluid Temperature difference across evaporator Entering - Leaving	Standard unit	Water	3	10
	Hight LWT option	Water	3	10
	Brine option	Glycol Mix	3	10

For operation below 4°C leaving from evaporator the use of glycol mixture is mandatory.
The values above are intended as guidelines, refer to unit selection on project base for actual values.

Transportation and Storage temperature	Min [°C]	Max [°C]
	-20	56

At Condenser – MCH/Tube and fin Exchanger	Unit configuration	Fluid	Min [°C]	Max [°C]
Operating Ambient Temperature	Standard unit with EC fans	Air	-20	42
	Unit with High Ambient kit (OPT142)	Air	-20	46

The values above are intended as guidelines, refer to unit selection on project base for actual values.

Condenser fans External Static pressure	Unit configuration	Pa
	Standard unit	0

If additional pressure resistance is added on airflow e.g., louvers around the unit or ducts on condenser discharge, the airflow will be affected causing a deration of unit performance. The External Static Pressure where available is referred to the nominal airflow of the standard unit. Refer to chiller selection for airflow information.

Max Operating Pressure on water side	Heat Exchanger	bar
	STD unit – BPHE	10
	STD unit – S&T	10

All above values are intended as guidelines which may change according to specific unit configurations.

NOTES

- All data are referred to installation of the unit at sea level. For information on operation of the unit at different altitudes refer to Chiller Selection Software. Contact factory if the unit has to be installed 1000 m above the sea level.
- For installation where ambient can reach temperature below +4°C, freeze protection is mandatory.
- Installation of filter at chiller inlet is mandatory.
- Performance of the unit are available with Water, Ethylene glycol and Propylene glycol. In case different substance is required, contact factory to evaluate compatibility and performances.
- All data and information on unit operation are referred to the unit installed in compliance with Installation requirements (refer to Installation and Operation manual).
- Installation conditions may have impact on the above operating conditions, refer to Daikin representative for confirmation.
- Unit options and/or special execution may affect operating limit. Contact factory for specific information.
- All data and information are subject to change without notice. Always refer to latest information available from factory on project base.

9. Coolant Fluid Quality requirements for microchannel coils

To ensure the long operating lifespan for microchannel free cooling coil, the following conditions for coolant shall be in place:

- PH: Ideal case pH neutral at 20-25°C (7.5 < pH < 8.5)

- Ammonium NH4+< 2 mg/L.

- Cl- chloride ions < 10 mg/L. (water temp. < 65°C)

- Sulfate ions SO4-2 < 30 mg/L.

- Fluoride ions < 0.1 mg/L.

- No Fe2+ and Fe3+ ions if non negligible levels of dissolved oxygen present (>5mg/L) , Fe2+ and Fe3+ ions < 5mg/L if dissolved oxygen < 5mg/L.

- Zn ions is not allowed (ethylene glycol solution application).

- Dissolved silicon < 1mg/L

- Water hardness: > 0.5 mmol/L. Value between 1 and 2.5 mmol/L is recommended.

- Total alkalimetric title (TAC) < 100 mg/L.

- Specific resistance – electric conductivity : > 30 Ohm.m is expected. For electric conductivity value in the order of 20 to 60 mS/m is expected.

Notes:
- Dissolved oxygen: Any sudden change in water oxygenation conditions is not expected.
- The addition of corrosion inhibitor is necessary for ensured coil protection, e.g., those based on monopropylene glycol or sodium molybdate.
- High coolant velocity may lead to corrosion of microchannel tubes. To avoid the issue, it is recommended not to exceed tube side coolant velocity higher than 1.5m/s.
- Filter with > 20 mesh is recommended to prevent the tubes from blocking.

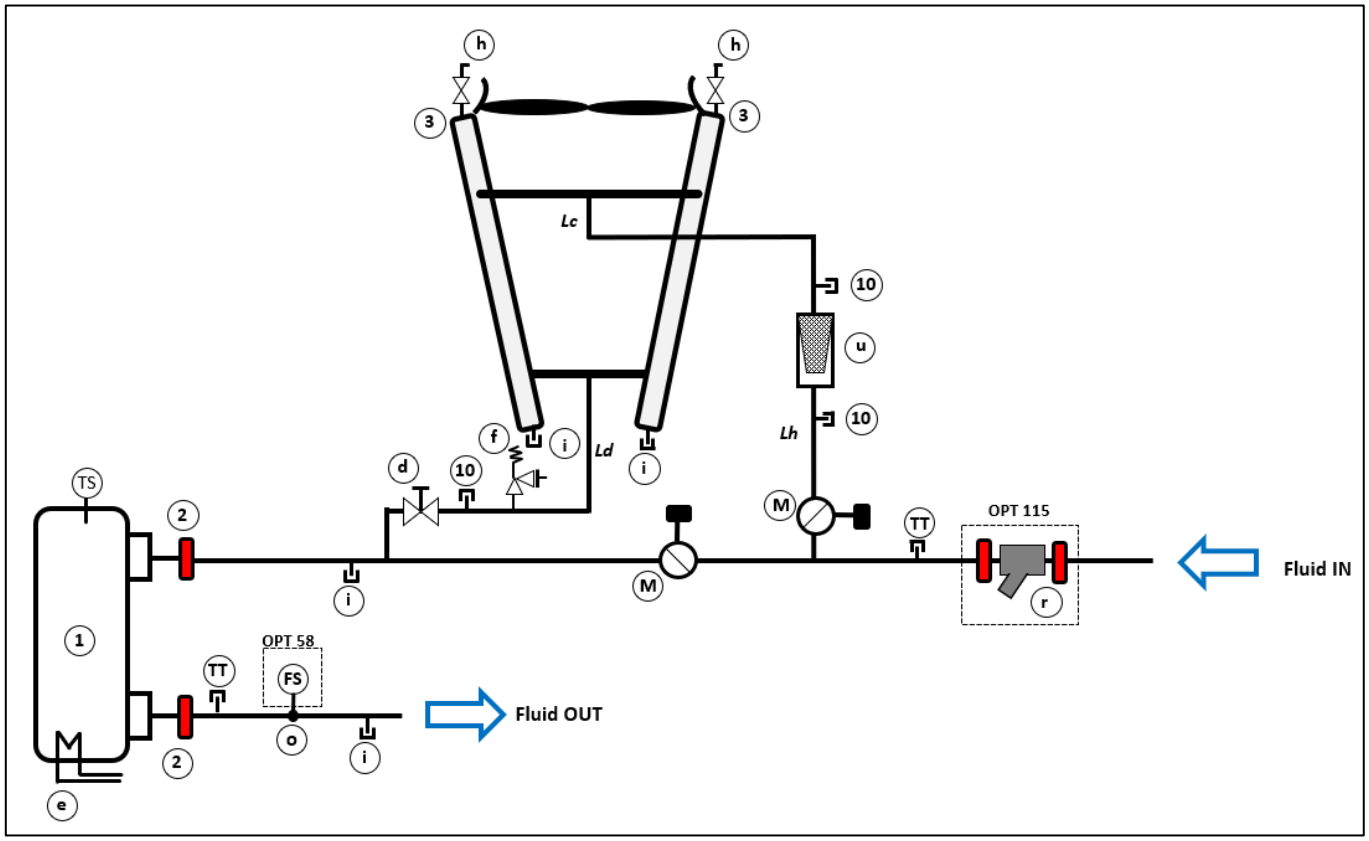
It is important to point out that this coolant requirement is not a guarantee against corrosion but must be considered as a tool to avoid the most critical issue .

10. Water Quality (closed loop version)

Water quality requirements		
	BPHE	S&T
Ph (25 °C)	7.5 – 9.0	6.8 – 8.4
Electrical conductivity [µS/cm] (25°C)	< 500	< 800
Chloride ion [mg Cl^- / l]	< 300	< 150
Sulphate ion [mg SO_4^{2-} / l]	< 100	< 100
Alkalinity [mg $CaCO_3$ / l]	< 200	< 100
Total Hardness [mg $CaCO_3$ / l]	75 ÷ 150	< 200
Iron [mg Fe / l]	< 1	< 0.2
Ammonium ion [mg NH^{4+} / l]	< 2	< 0.5
Silica [mg SiO_2 / l]	< 50	-
Chlorine molecular (mg Cl_2/l)	< 5	< 0.5

The values above are intended as guidelines and not exhaustive for a complete analysis on compatibility with unit component.
All data and information are subject to change without notice. Always refer to latest information available from factory on project base.

11. Hydronic scheme



Legend	
1	**Brazed Plate heat Exchanger – Evaporator**
2	Victaulic connection
3	Free Cooling Heat Exchanger
10	Access fitting ¼" NPT
i	Drain ¼" NPT
o	Flow switch fitting ½"G or 1" G
r	Filter (available as option – OPT115)
e	electric heater
d	Valve
f	Safety valve – 10 bar 1/2" MF
h	Air vent 3/8" NPT
M	Two-way valve with actuator
u	Free cooling exchangers filter
TT	Temperature sensor
TS	Temperature switch
FS	Flow switch
Ld	Coil out - flexible
Lh	Free cooling inlet manifold

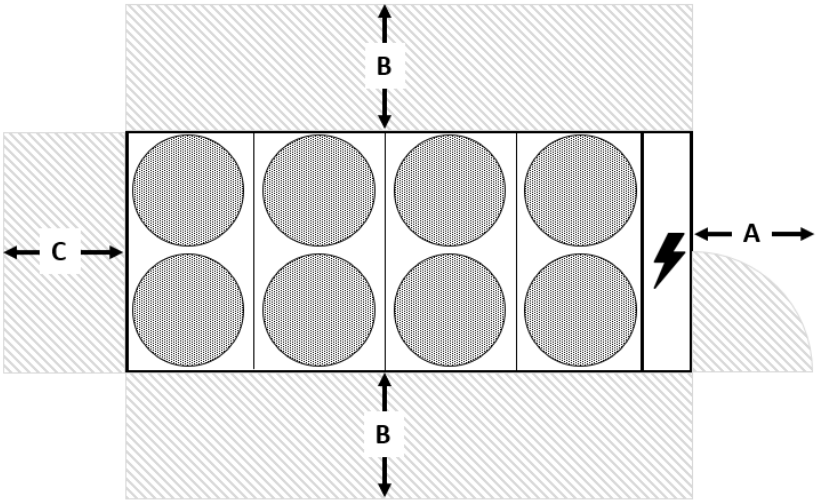
NOTE:
installation of filter and flow switch is mandatory.
Circuit must be protected from freezing.

12. Installation notes

Installation and maintenance of the unit must be performed only by qualified personnel who have knowledge with local codes and regulations, and experience with this type of equipment. Avoid installation in places that could be considered dangerous for all the maintenance operations.

Care should be taken to avoid rough handling or shock due to dropping the unit. Do not push or pull the unit from anything other than the base frame. Never allow the unit to fall during unloading or moving as this may result in serious damage. To lift the unit, rings are provided in the base frame of the unit. Spreader bar and cables should be arranged to prevent damage to cabinet.

The units are produced for outdoor installation on roofs, floors or below ground level on condition that the area is free from obstacles for the passage of the condenser air. The unit should be positioned on solid foundations and perfectly leveled; in the case of installation on roofs or floors, it may be advisable to arrange the use of suitable weight distribution beams. When the units are installed on the ground, a concrete base at least 250 mm wider and longer than the unit's footprint should be laid. Furthermore, this base should withstand the unit weight mentioned in the technical data table.



Space requirements Each side of the unit must be accessible after installation for periodic service.
The following pictures shows you minimum recommended clearance requirements for service activities.

- A at least 1500 mm
- B at least 1800 mm
- C at least 1800 mm for single circuit units
- C at least 3000 mm for dual circuit units

The above values are general guidelines. When consider unit installation is fundamental to consider proper clearances around the unit to perform all possible maintenance activities and replacing of unit's components in respect of safety standard. Deviation from guidelines should be evaluated by local service provider.

Is important also to consider proper space around the unit to prevent/mitigate hot air recirculation. In most of the cases hot air recirculation results in higher temperature entering the condenser affecting the unit performances.
In case of unit to be installed close to a wall with same eight a general rule is to have at least 3 meters between the wall and the unit. If the wall taller than the unit countermeasures could be necessary to mitigate hot air recirculation (see option list and contact Daikin representative to discuss possible solutions).
In case of multiple chillers installed side by side general rule is to have 3,6 meters between each chiller if the installation does not allow for this there are countermeasures could be necessary to mitigate hot air recirculation.
The above are general guidelines and different solutions could be considered based on specific installation constrains.

Refer to Installation and Operation Manual for details on storage, handling, and installation of the unit

13. Technical Specifications

General information

The chiller will be designed and manufactured in accordance with the following European directives:

- Construction of pressure vessel 2014/68/EU
- Machinery Directive 2006/42/EC
- Low Voltage 2014/35/EU
- Electromagnetic Compatibility 2014/30/EU
- Harmonized standard EN 60204–1 Safety of Machinery
- Manufacturing Quality Standards UNI – UNI EN 14000

The unit will be tested at full load in the factory (at the nominal working conditions and water temperatures).
The chiller will be delivered to the job site completely assembled and charged with refrigerant and oil.
The installation of the chiller must comply with the manufacturer's instructions for rigging and handling equipment.

The unit will be able to start up and operate (as standard) at full load with:

- Outside air temperature from..... °C to..... °C
- Evaporator leaving fluid temperature between..... °C and..... °C

Refrigerant:

HFO	R1234ze
HFO - HFC	R513A
HFC	R134a

Performance

Chiller shall supply the following performances:

Number of Chiller(s)		unit(s)
Fluid		type
Cooling capacity for single chiller		kW
Power input for single chiller		kW
Evaporator Entering Temperature (EET)		°C
Evaporator Leaving Temperature (ELT)		°C
Evaporator Water Flow rate		l/s
Design outdoor temperature		°C
Full Free Cooling temperature		°C
Minimum full load efficiency (EER)		kW/kW
Minimum part load efficiency (SEER)		kW/kW
Minimum part load efficiency (SEPR)		kW/kW
Minimum part load efficiency (IPLV)		kW/kW
Minimum part load efficiency (ESEER)		kW/kW

Operating voltage range should be 400V ±10%, 3ph, 50Hz (or 380V ±10%, 3ph, 60Hz), voltage unbalance maximum 3%, without neutral conductor and shall only have one power connection point.

Unit description

Chiller shall include one or two independent refrigerant circuits, semi-hermetic type rotary single screw compressors, electronic expansion device (EEXV), direct expansion brazed plate heat exchanger evaporator for single circuit and 'shell & tube' evaporator for dual circuit units, air-cooled condenser section made with aluminum Microchannel technology, R1234ze, R-134a, or R513A refrigerant, lubrication system, motor starting components, suction and discharge line shut-off valve, control system and all components necessary for a safe and stable unit operation.

Sound level and vibrations

Sound power level shall not exceed ……dB(A). The sound power levels must be rated in accordance with ISO 9614 (other types of rating cannot be used).

Dimensions

Unit dimensions shall not exceed following indications:

- Unit length..... mm
- Unit width..... mm
- Unit height..... mm

Compressors

The unit shall be equipped with a semi-hermetic, single screw type compressor with one main helical rotor (screw) engaging with one or two (depending on the model) gate rotors. The gate rotors shall be made of composite material (used in aerospace industry) to ensure high resistance to the mechanical stress and preventing the risk of "metal to metal" contact. The support of the gate rotor shall be of cast iron.
The compressor shall be provided with integral oil separator and oil filter. The oil injection shall be achieved without external mechanical pump but by means of pressure differential between compressor's suction and discharge. The compressor's oil cooling must be realized, when necessary, by refrigerant liquid injection. External dedicated heat exchanger and additional piping to carry the oil from the compressor to heat exchanger and vice versa will be not accepted. The compressor's oil cooling must be realized, when necessary, by refrigerant liquid injection. External dedicated heat exchanger and additional piping to carry the oil from the compressor to heat exchanger and vice versa will be not accepted. The compressor shall be direct electrical driven, without gear transmission between the screw and the electrical motor. The capacity of the compressor shall be controlled by Variable Frequency Driver. The drive shall be integrated on the compressor frame and cooled by the refrigerant. Other type of cooling system requiring dedicated maintenance activities (e.g., air or water / glycol mixtures) shall not be accepted. The drive casing shall be of UV resistant material and accessible without dismounting the compressor from the unit. Compressor shall be fully field serviceable. Compressor that must be removed and returned to the factory for service shall be unacceptable.

Evaporator

Single circuit units:

The units shall be equipped with a direct expansion plate to plate type evaporator The evaporator will be made of stainless-steel brazed plates and shall be linked with an electrical heater controlled by a thermostat and shall be insulated with flexible, closed cell polyurethaneinsulation material. The water connections shall be VICTAULIC type connections as standard to ensure quickmechanical disconnection between the unit and the hydronic network.
As option flanged connection can be provided.
The evaporator will be manufactured in accordance with PED approval.
Flow switch on evaporator available as option (shipped loose on Modular V)
Water filter on evaporator available as option (shipped loose)

Dual circuit units:
The units shall be equipped with a direct expansion shell & tube evaporator with copper tubes rolled into steel tube sheets.
The external shell shall insulate with flexible, closed cell polyurethane insulation material (20 -mm thick).

- The evaporator will have 2 circuits, one for each compressor and shall be single refrigerant pass.
- The water connections shall be VICTAULIC type connections as standard to ensure quick mechanical disconnection between the unit and the hydronic network.
- The evaporator will be manufactured in accordance to PED approval.
- Flow switch on evaporator available as option (shipped loose).
- Water filter needs to be provided on the plant.

Condenser Heat Exchanger

Full Aluminum - Microchannel type (standard Configuration)

The condenser is made entirely of aluminum with flat tubes containing small channels. Full - depth louvered aluminum fins are inserted between the tubes maximizing the heat exchange. The Microchannel technology ensures the highest performance with the minimum surface for the exchanger. The quantity of refrigerant is also reduced compared to Tube and fins condenser. Anticorrosion treatments ensure resistance to the corrosion by atmospheric agents extending the lifetime (available on request).

Additional treatments available as option

- **Blue Coat for Microchannel (available as option):**
  Epoxy powder is sprayed and electrostatically fixed to the coil. Once the external surface is completely covered by the epoxy material, the coil is sent into a furnace for the drying and curing phase. The result is a uniform and durable coating on the external surface of the coil that enhance the resistance to the corrosion. The treatment is recommended in all application where moderate risk of corrosion exist (e.g.: light polluted urban and industrial environments).

- **E-coating (available as option):**
  A layer of an epoxy polymer is added on the surface of the exchanger. The process consists in the complete immersion of the exchanger in the epoxy polymer solution. An electric voltage applied to the exchanger causes a difference with the electrical charge of the polymer molecules that, as result, are drawn to the metal. The thickness of the coating is controlled by the applied voltage. The result is a uniform layer of epoxy polymers applied all over the exchanger surface. A final UV top-coat treatment is applied on the coil surface.

  The heat exchanger provided with e-coating shall Pass 3000 hours in SWAAT test according to ASTM G85 Annex 3 without leakage.

Condenser

The condenser fans used in conjunction with the condenser coils, shall be propeller with glass reinforced resin blades for higher efficiencies and lower sound. Each fan shall be protected by a fan guard.
The air discharge shall be vertical, and each fan must be coupled to the electrical motor AC or EC type (depending on model and option selected). Fan shall be rated IP55.
The condenser fans shall have as a standard a thermally protection by internal thermal motor.

Free Cooling circuit

The free cooling circuit is integrated in the chiller footprint. Pipes are made of steel with integrated filter for free cooling circuit. Motorized valves managed by unit control send the fluid to the evaporator or to free cooling exchanger first based on the operating conditions.

Standard unit is with “open loop” configuration meaning that the fluid from the system is sent directly in the free cooling heat exchanger. Fluid must be a brine mixture to prevent freeze and burst when temperature is equal or lower than 4°C. As option the unit can be provided with “closed loop” configuration. In this configuration a closed loop is created between the free cooling heat exchanger and an additional brazed plate heat exchanger with a circulating pump. Fluid in the closed loop is with glycol. The fluid returning from the system is chilled by the glycol coming from the free cooling exchanger in the intermediate heat exchanger. The glycol is confined in the closed loop and the fluid in the system can be pure water or lower concentration of glycol.

Refrigerant circuit

The unit shall have one or two independent refrigerant circuits.

The circuit shall include as standard: electronic expansion device controlled by unit’s microprocessor control, liquid line shut-off valve, sight glass with moisture indicator, filter drier, charging valves, high pressure switch, high- and low-pressure transducers, oil pressure transducer and insulated suction line, Condensation control. The units will be provided with an automatic control for condensing pressure (SPEEDTROL) which ensures the working at low external temperatures down to -20°C (operation down to -30°C on request)

The unit automatically unloads when abnormal high condensing pressure is detected. This to prevent the shutdown of the refrigerant circuit (shutdown of the unit) due to a high-pressure fault.

The compressor shall be connected to unit’s metal base frame by rubber anti vibration supports to prevent the transmission of vibrations to all metal unit structure, to limit the unit noise emissions.

The chiller shall be provided with an acoustical compressor enclosure (available as option on specific version). This enclosure shall be realized with a light, corrosion resisting aluminum structure and metal panels. The compressor sound-proof enclosure (available as option) shall be internally fitted with flexible, multi-layer, high density materials.

Rapid Restart (available as option)

When unit is equipped with rapid restart, unit controller is powered by UPS unit. In case of power failure UPS unit keeps unit controller powered for 180 sec. When power is restored within that period unit start compressor within 30 seconds and reach full capacity within 180 seconds.

Master/Slave

The unit shell be able to operate in Master / Slave mode to be connected with another similar unit (up to 4), The master unit shall manage the slave units connected in series on the hydraulic plant with the aim of balancing compressors running hours and the load between of the units.

Electrical control panel

Power and control shall be located in the main panel that will be manufactured to ensure protection against all weather conditions.

The electrical panel shall be IP54 and (when opening the doors) internally protected against possible accidental contact with live parts.

The main panel shall be fitted with a main switch interlocked door that shuts off power supply when opening.

The power section will include compressors and fans starter devices.

Controller

The controller will be installed as standard, and it will be used to modify unit set-points and check control parameters.
A built-in display A mobile App HMI (Daikin mAP) will show chiller operating status plus temperatures and pressures of water, refrigerant and air, programmable values and set points. With Daikin mAP it is possible to access to unit documentation, spare parts list and making live Trend of unit operating values.
A sophisticated software with predictive logic, will select the most energy efficient combination of compressors, EEXV and condenser fans to keep stable operating conditions to maximize chiller energy efficiency and reliability.
The controller will be able to protect critical components based on external signals received from the unit itself (such as motor temperatures, refrigerant gas and oil pressures, correct phase sequence, pressure switches and evaporator flow switch). The input coming from the high-pressure switch cuts all digital output from the controller in less than 50ms, this will be an additional safety for the equipment.
Floating point calculations supported for increased accuracy in P/T conversions.

Controller features

Controller shall be guarantee following minimum functions:

Management of the compressors,
Chiller enabled to work in partial failure condition.
Full routine operation at condition of:

- high ambient temperature value
- high thermal load
- high evaporator entering water temperature (start-up)
- Display of evaporator entering/leaving water temperature
- Display of Outdoor Ambient Temperature
- Display of condensing-evaporating temperature and pressure suction and discharge superheat for each circuit
- Leaving water evaporator temperature regulation
- Compressor and evaporator pumps hours counter
- Display of Status Safety Devices
- Number of starts and compressor working hours.
- Optimized management of unit load
- Fan management according to condensing pressure
- Re-start in case of power failure (automatic / manual)
- Soft Load (optimized management of the unit load during the start-up)
- Start at high evaporator water temperature.
- Return Reset (Set Point Reset based on return water temperature)
- OAT (Outside Ambient temperature) set-point reset.

Set point Reset from external signal (optional)
Application and system upgrade with commercial SD cards
Ethernet port for remote or local servicing using standard web browsers.

High Level Communications Interface (on request)

The chiller shall be able to communicate to BMS (Building Management System) based on the most common protocols as:

- Modbus RTU
- BACnet BTP certified over IP

Performance monitoring (available as option)

Unit shall be capable of providing both instantaneous and integrated information of Capacity, Power Absorption and Efficiency. This information shall be accessible from unit controller with mobile App and remotely via communication protocol (Modbus, BACnet)

Integrated Active Harmonic Filter – iAHF (available as option)

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