Air source inverter heat pump for outdoor installation

MULTICHILL HEAT PUMP

MCHP 18.2 - 35.2 RANGE

TECHNICAL CATALOGUE

ErP

R-32

SIZE	18.2	20.1	25.2	30.2	35.2
COOLING CAPACITY KW	53.3	58.9	72.0	77.7	85.0
HEATING CAPACITY KW	53.0	66.0	79.3	84.7	91.0

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The products described in this manual are compliant with Eurovent.

Features and benefits

MultiChill Heat Pump series is the new air cooled heat pump, equipped with Full DC Inverter technology and R32 refrigerant, for outdoor installation. It is available from 53 kW up to 85 kW and is the most effective and valuable solution both in terms of capital investment and running costs.

Energy efficiency

Class A Eurovent at full load in heating and in cooling.
SCOP up to 4.08, which reaches the A++ class according to EU Regulation 811/2013 (ErP) with low water temperature (LWT 35°C).
SEER up to 4.64 which makes it extremely competitive even compared to the cooling only units.
Capacity modulation from 30% to 100%.

Wide operating range

Outdoor air temperature	max	min
• heating mode	43 °C	-15 °C
• domestic hot water mode	43 °C	-15 °C
• cooling mode	48 °C	-10 °C

Outlet water temperature	max	min
• heating mode	55 °C	25 °C
• domestic hot water mode	55 °C	15 °C
• cooling mode	20 °C	5 °C

Functionality

Management and production of domestic hot water up to 55 ° C.
Climate compensation with outdoor temperature.
ECO mode
- temperature set for maximum comfort (for example during the day)
- temperature set for maximum energy saving (for example at night)
- time bands and customizable temperatures

SILENT mode
- speed reduction of compressors and fans
- three levels of silence: standard mode, silenced, super silenced

Modular Design

MultiChill Heat Pump was designed for modularity. It is possible to connect up to 16 units in a local network, reaching a maximum capacity of 1360 kW and up to 4 units connected hydraulically. The combinations can also take place with different capacity units.
The modular system, obtained by combining several modules, preserves the strengths of the single module, but multiplies the advantages:
- Increased system efficiency
- Higher reliability
- Simplified handling and installation
- Quick and easy maintenance
- Scalability

Application Versatility

All the main system components are integrated in the unit, assuring the best reliability and an easy installation:

- Hydronic assembly with 1 inverter pump.
- 3-way valve for domestic hot water management.
- System storage tank: 170 (size 18.2-20.2) or 275 liters (size 25.2-30.2-35.2).

Technology

The technical solutions adopted place MultiChill Heat Pump on top of its category:

- DC inverter technology on compressors and fans
- Electronic expansion valve
- Flow switch
- Hydrophilic battery

Tax credit

Due to its high efficiency, MultiChill Heat Pump may be eligible for heat pump subsidies in your country.

Perfect for LEED

All models satisfy prerequisites 2 (Minimum Energy Performce) and 3 (Fundamental Refrigerant Management) of Energy and Environment thematic area of LEED certification.

Compressor
Size 18.2 - 20.2
Inverter controlled rotary-type hermetic compressor equipped with a motor protection device for overheating, overcurrents and excessive temperatures of the supply gas. It is installed on anti-vibration mounts and it is equipped with oil charge.The compressor is wrapped in a sound-absorbing hood, that reduces its sound emissions and it thermally insulates it. A crankcase heater, which starts automatically, keeps the oil from being diluted by the refrigerant when the compressor stops.
Compressors are connected in tandem on a single refrigerating circuit with a dedicated system for the oil recovery.
Size 25.2 - 30.2 - 35.2
Scroll hermetic compressor with steam injection controlled by inverter, complete with motor over-temperature and over-current devices and protection against excessive gas discharge temperature. It is installed on anti-vibration mounts and it is equipped with oil charge. The compressor is wrapped in a sound-absorbing hood, that reduces its sound emissions and it thermally insulates it. A crankcase heater, which starts automatically, keeps the oil from being diluted by the refrigerant when the compressor stops.
Compressors are connected in tandem on a single refrigerating circuit with a dedicated system for the oil recovery.

Structure
Supporting structure realised with steel with zinc-magnesium superficial traitment painted with polyester powder RAL 9001, that ensures excellent mechanical features and high long-term resilience against corrosion.

Panelling
External RAL 9001 painted zinc-magnesium sheet metal panelling that ensures superior resistance to corrosion for outdoor installation and eliminates the need for periodic painting. Each panel can be easily removed to allow full access to internal components.

Internal exchanger
Direct expansion heat exchanger, brazed AISI 316 stainless steel plates, in pack without seals using copper as the brazing material, with low refrigerant charge and large exchange surface.
The exchanger comes complete with:
- external thermal insulation no-condensation, thickness 17 mm, in expanded polypropylene (EPP)
- antifreeze heater to protect the water side exchanger, preventing the formation of frost if the water temperature falls below a set value.
- flow switch
- anti-ice probe

External exchanger
Direct expansion finned coil exchanger made with copper pipes placed on staggered rows mechanically expanded to better adhere to the fin collar.
Fins are made from aluminum with hydrophic treatment that allows the correct evacuation of condensing water and optimizes defrosting.
Fins have a special corrugated surface and they are appropriately distanced to ensure the maximum heat exchange efficiency.

Fan
Helical fans with 4 profiled blades made of reinfoced plastic, directly coupled to the DC brushless motor with electronic control, IP 54 execution.
Fans are located in aerodinamically shaped structures to increase efficiency and minimize noise level, equipped with accident prevention steel guards.

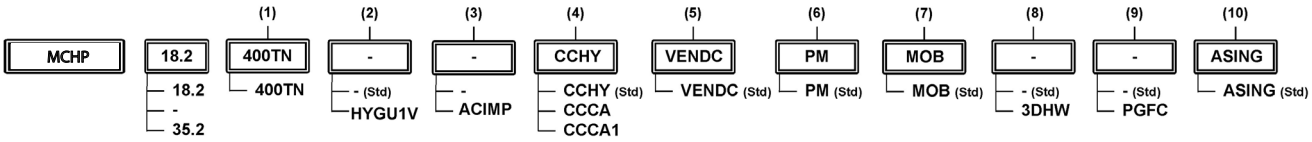
Refrigeration circuit
Refrigeration circuit with:
- filter dryer
- liquid receiver
- pressure transducer (high/low)
- refrigerant temperature probe
- electronic expansion valves
- non return valve
- 4-way reverse-cycle valve
- high pressure safety pressure switch
- low pressure safety pressure switch
- low pressure safety valve
- inlet liquid separator
- oil separator
- high compressor discharge temperature safety thermostat
- cooling system of the of the electrical control panel using undercooled liquid

Only for size 25.2 - 30.2 - 35.2:
- economiser exchanger.

Electrical panel
- phase monitor;
- auxiliary components protection fuse;
- compressor protection fuse;
- fan motor thermal protections;
- interface terminal with graphic display;
- intuitive graphical interface retro lighted;
- display of operating status;
- Unit On/Off and overload reset;
- manual changing of the operating mode (hot or cold);
- management of the operating parameters,
- daily, weekly programmer of temperature set-point and unit on/off;
- self-diagnosis system with immediate display of the fault code;
- compressor overload protection and timer;
- relay for remote cumulative fault signal;
- potential-free contact for remote on-off control;
- potential-free contact for summer / winter change;
- potential-free contacts for compressor status;
- serial port with modbus port (RS485) for remote communication.

Test
Unit subjected to factory-tested in specific steps and test pressure of the piping of the refrigerant circuit (with nitrogen and hydrogen), before shipping them.

Drive Configuration



(1) Voltage
400TN - Supply voltage 400/3/50 + N (standard)

(2) User side hydronic unit
(-) not required (standard)
HYGU1V - User side hydronic assembly with 1 inverter pump

(3) Storage tank
(-) not required (standard)
ACIMP- Steel inertial storage tank

(4) Condensing coil
CCHY - Hydrophilic aluminium fins coil (standard)
CCCA - Copper / aluminium condenser coil with acrylic lining
CCCA1 - Condenser coil with Aluminium Energy Guard DCC treatment

(5) Fans
VENDC - DC high efficiency fans (standard)

(6) Phase monitor
PM - Phase monitor (standard)

(7) Serial communication module Modbus
MOB - Serial port RS485 with modbus protocol (standard)

(8) Domestic hot water valve
(-) not required (standard)
3DHW- Built-in 3 way valve for domestic hot water on the unit

(9) Protection grill
(-) not required (standard)
PGFC - Finned coil protection grill

(10) Water fittings
ASING - Water connections for single unit (standard)

HYGU1V

User side hydronic group with 1 inverter pump
Hydronic unit made of a centrifugal electric pump, adjusted by way of inverter, body and propeller made in AISI 304 steel. The electric pump is equipped with three-phase electric motor with IP55 protection and complete with heat formed insulating casing. The water connection are 2" Victaulic.

Hydronic unit performance is available on page 14 and 15.

ACIMP

Steel inertial storage tank
Option supplied built-in the unit. Steel storage tank complete with double layer covering with closed-cell insulation, stainless steel anti-freeze immersion resistance, bleed valve, draw off cock, cast-iron shut-off butterfly valve with quick connections and activation lever with a mechanical calibration lock at the evaporator output, quick connections with insulated casing.

The storage tank capacity is 170 liters for size 18.2 and 20.2.
The storage tank capacity is 275liters for size 25.2, 30.2 and 35.2

CCCA

Copper / aluminium condenser coil with acrylic lining
Coils with copper pipes and aluminium fins with acrylic lining. Resist bi-metallic corrosion and allow for application in coastal areas.
Attention!
- Cooling capacity variation -2.7%
- Variation in compressor power input +4.2%
- Operating range reduction -2.1°C

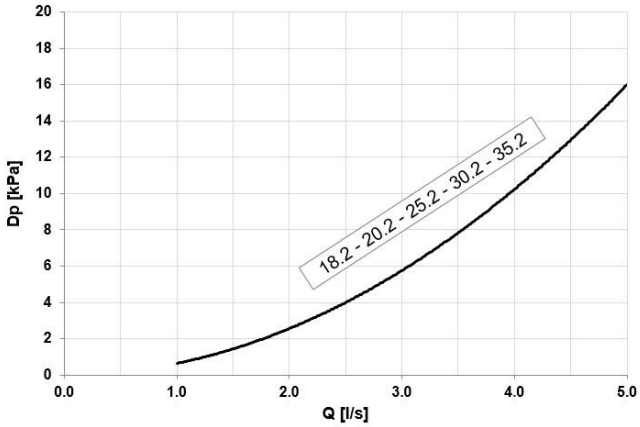
CCCA1

Condenser coil with Aluminum Energy Guard DCC treatment
A treatment which offers an optimal thermal exchange and guarantees and protects the finned coil exchangers from corrosion over time. Can be used in settings with very aggressive saline concentrations and other chemical agents in the air thus maintaining the performance of the coils over time.

3DHW

Built-in 3-way valve for domestic hot water on the unit
The 3-way diverter valve deviating the water flow towards a heating storage tank for domestic water is installed on the side of the unit.
If the temperature of the ACS is under the set-point, MultiChill Heat Pump changes to ACS production mode (priority compared to other operational modes can be set).
The unit controller closes a digital output driving the flow deviation valve from the storage system until it reaches the ACS set-point set on the user interface.
The water connections are 2" Victaulic

3-way valve pressure drop



Q = Water flow rate [l/s]
Dp = Water side pressure drops [kPa]

⚠ **The maximum nominal pressure of the unit with the 3-way valve option is 6bar**

Built-in options

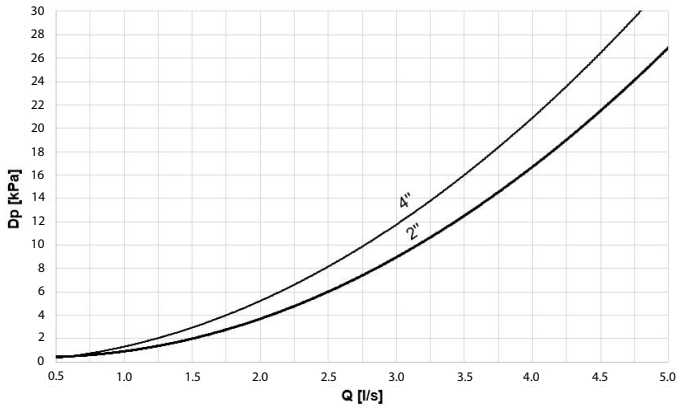
PGFC	**Finned coil protection grill** The grilles protect the external coil from accidental contact with objects or persons. Ideal for installation in places where persons can pass from, such as car parks, terraces, etc
SNB	**Main switch on board** Main switch I=67A/AC23 for the unit ON/OFF and M40 fairleads, mounted on board
IFWI	**Water side filter provided inside unit packaging** The device prevents the exchanger from getting dirty by any impurities present in the hydraulic circuit. The mechanical stainless steel mesh filter must be positioned on the water inlet line. It can be easily dismantled for periodic maintenance and cleaning. The water connections of the filter are Victaulic 2".

IFWX

Steel mesh strainer on the water side
The device stops the exchanger from being clogged by any impurities which are in the hydraulic circuit. The mechanical steel mesh strainer must be placed on the water input line. It can be easily dismantled for periodical maintenance and cleaning.

Filter fittings are Victaulic type by 2'' for singular configuration and 4'' for modular configuration.

Steel mesh strainer pressure drops



Q = Water flow rate [l/s]
DP = Water side pressure drops [kPa]

This accessory is not available for modular system.

IFWCX

Steel mesh strainer on the water side
The device stops the exchanger from being clogged by any impurities which are in the hydraulic circuit. The mechanical steel mesh strainer must be placed on the water input line. It can be easily dismantled for periodical maintenance and cleaning.

Available only with AMODX option

This accessory is available for modular system.

AVIBX

Anti-vibration mount support
The rubber antivibration mounts are attached in special housing on the support frame and serve to smooth the vibrations produced by the unit thus reducing the noise transmitted to the support structure.

PGFCX

Finned coil protection grill
The grilles protect the external coil from accidental contact with objects or persons.
Ideal for installation in places where persons can pass from, such as car parks, terraces, etc

AMODX

Water fitting for modular unit
In order to configure a modular system, each unit must be selected with the water connections for modular unit. The kit is made of two 4" collectors placed horizontally and two butterfly valves that make it possible to exclude the unit from the modular system in case of malfunction. The water outputs remain in the same position of the individual unit, only the diameters of the pipes, which are 4", are changed.

SNATEX

Main switch for remote external installation
Watertight box IP54 containing n°1 main switch I=67A/AC23 for the unit ON/OFF and M40 fairleads.

REMAUX

Advanced remote control module
Multifunction board in watertight box IP56 for the advanced use of digital inputs and Modbus gateway with configurable baud rate.
The available digital inputs allow the following functions from remote:
- remote on/off
- heat/cool (summer/winter commutation)
- DHW activation (for heat pump version only)
- double set-point management
- silent mode or super silent mode activation (selectable on user interface)

The board does not allow the contemporary use of digital inputs and Modbus signal.

CCKMUX

Closing caps kit for modular units
Options for modular system connection.

General technical data

Performance

SIZE			18.2	20.2	25.2	30.2	35.2
Radiant panels							
Heating							
Heating capacity (EN 14511:2018)	1/8	kW	54.4	61.3	65.3	79.4	87.7
COP (EN 14511:2018)	2		4.07	4.00	4.29	4.17	4.15
ErP Space Heating Energy Class - AVERAGE Climate - W35	10		A++	A++	A++	A++	-
SCOP - Average Climate - W35	9		4.04	4.03	4.08	4.07	4.06
ηs,h	12	%	159	158	160	160	159
Cooling							
Cooling capacity (EN 14511:2018)	5/8	kW	62.4	72.3	89.2	95.1	107
EER (EN 14511:2018)	6		4.14	3.93	4.18	4.10	4.04
Water flow-rate	5	l/s	3.05	3.20	4.27	4.60	4.80
User side internal exchanger pressure drops	5	kPa	35.6	38.9	47.0	54.2	58.8
Terminal Unit							
Heating							
Heating capacity (EN 14511:2018)	3	kW	53.3	66.7	79.1	85.0	91.2
COP (EN 14511:2018)	2		3.21	3.21	3.33	3.29	3.25
Cooling							
Cooling capacity (EN 14511:2018)	7	kW	53.1	58.8	72.4	78.4	85.3
EER (EN 14511:2018)	6		2.95	2.90	3.15	3.10	2.91
SEER	9		4.57	4.51	4.64	4.62	4.50
ηs,c	13	%	179.8	177	183	182	177
Water flow-rate	7	l/s	2.58	2.84	3.44	3.74	4.12
User side internal exchanger pressure drops	7	kPa	26.0	31.2	31.1	36.5	43.9
Radiators							
Heating							
Heating capacity (EN 14511:2018)	4	kW	54.0	63.3	78.6	85.6	92.6
COP (EN 14511:2018)	2		2.72	2.61	2.59	2.57	2.53
Water flow-rate	4	l/s	2.30	2.94	3.59	3.92	4.16
User side internal exchanger pressure drops	4	kPa	21.0	33.2	33.7	39.9	44.7
AHRI Data							
Cooling capacity (AHRI 550/590)	11	kW	52.6	58.3	72.3	77.8	84.6
Total power input (AHRI 550/590)	11	kW	17.1	20.1	23.0	25.2	28.9
COP_R	11		3.08	2.90	3.14	3.09	2.93
IPLV	11		4.94	4.87	4.94	4.92	4.79

The Product is compliant with the ErP (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 811/2013 (rated heat output ≤ 70 kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output ≤ 400 kW at specified reference conditions)
Contains fluorinated greenhouse gases'(GWP 2087,5)

1. Entering/leaving water temperature user side 30/35 °C, Entering external exchanger air temperature 7 °C (R.H. = 85%)
2. COP (EN 14511:2013) Heating performance coefficient. Ratio between delivered heating capacity and power input in compliance with EN 14511:2013.
3. Entering/leaving water temperature user side 40/45 °C, Entering external exchanger air temperature 7 °C (R.H. = 85%)
4. Entering/leaving water temperature user side 50/55 °C, Entering external exchanger air temperature7 °C (R.H. = 85%)
5. Entering/leaving water temperature user side 23/18 °C, Entering external exchanger air temperature 35 °C
6. EER (EN 14511:2013) cooling performance coefficient. Ratio between delivered coolimg capacitu and power input in compliance with EN 14511:2013
7. User side entering/leaving water temperature 12/7 °C, external exchanger entering air 35°C
8. Data referred to unit operation with inverter frequency optimized for this application.
9. Data calculated according to the EN 14825:2016 Regulation
10. Seasonal Space Heating Energy Efficiency Class according to Commission delegated Regulation (EU) No 811/2013. W = Water outlet temperature (°C)
11. Data compliant to Standard AHRI 550/590 referred to the following conditions: internal exchanger water temperature = 6.7 °C. Water flow-rate 0.043 l/s per kW. Entering external exchanger air temperature 35°C. Evaporator fouling factor = 0.18 x 10^(-4) m2 K/W
12. Seasonal energy efficiency in heating EN 14825:2018
13. Seasonal energy efficiency in cooling EN 14825:2018

Construction

SIZE			18.2	20.2	25.2	30.2	35.2
Compressor							
Compressor type			ROTARY INVERTER		SCROLL INVERTER		
Refrigerant					R32		
N° compressors		Nr	2	2	2	2	2
Oil charge		l	5	5	6	6	6
Refrigerant charge		Kg	15.0	15.0	21.0	21.0	21.0
N° circuits		Nr	1	1	1	1	1
User side exchanger							
Type of internal exchanger	1				BPHE		
Water content		l	5.7	5.7	7.8	7.8	7.8
External Section Fans							
Fans type					BRUSHLESS DC MOTOR		
N° fans		Nr	2	2	3	3	3
Standard air-flow		l/s	6889	6889	10333	10333	10333
Installed unit power		kW	0.9	0.9	0.9	0.9	0.9
Water circuit							
Maximum water side pressure		MPa	1	1	1	1	1
Minimum circuit water volume in heating	2	l	400	400	620	620	620
Minimum circuit water volume in cooling	3	l	150	150	200	200	200
Total internal water volume		l	5.9	5.9	8.0	8.0	8.0
Power supply							
Standard power supply			400/3N~/50	400/3N~/50	400/3N~/50	400/3N~/50	400/3N~/50

1. BPHE = plate exchanger
2. Entering/leaving water temperature user side 25/30 °C, external exchanger entering air 2°C (U.R. = 85%) - Minimum water volume that does not consider the volume of water inside the unit.
3. Entering/leaving water temperature user side 15/10 °C, external exchanger entering air 25°C (U.R. = 85%) - Minimum water volume that does not consider the volume of water inside the unit.

Electrical data

Supply voltage 400/3/50+N

SIZE		18.2	20.2	25.2	30.2	35.2
F.L.A. Full load current at max admissible conditions						
F.L.A. - Total	[A]	38.5	38.5	59.7	59.7	59.7
F.L.I. Full load power input at max admissible conditions						
F.L.I. - Total	[kW]	25.6	25.6	40.1	40.1	40.1
M.I.C. Maximum inrush current						
M.I.C. - Total	[A]	46.0	46.0	60.2	60.2	60.2

Power supply 400/3/50 (+ NEUTRAL) +/- 10%.
Maximum Phase Unbalance: 2%.
For non standard voltage please contact Airedale technical office

General technical data

Sound levels

Standard Mode

SIZE	Sound power level								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
18.2	62	67	68	72	79	72	64	52	64	82
20.2	68	79	76	73	76	67	59	52	65	82
25.2	65	66	69	73	80	73	65	51	62	81
30.2	59	67	69	72	80	73	65	51	65	84
35.2	90	83	80	80	83	74	65	54	67	85

Sound levels refer to units with nominal test conditions.
The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field.
Noise levels are determined using the tensiometric method (UNI EN ISO 9614-2)

Data referred to the following conditions in heating:
- internal exchanger water = 30/35°C
- ambient temperature 7/6 °C

Data referred to the following conditions in cooling:
- internal exchanger water = 12/7°C
- ambient temperature 35°C

Silenced Mode

SIZE	Sound power level								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
18.2	54	57	62	67	66	64	57	46	56	74
20.2	73	65	70	69	65	62	55	49	56	74
25.2	66	57	60	68	67	65	56	43	58	76
30.2	61	55	59	67	66	63	55	41	58	76
35.2	86	67	69	70	63	58	54	47	58	76

Silenced mode can be set from the user interface terminal

Sound levels refer to units with nominal test conditions.
The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field.
Noise levels are determined using the tensiometric method (UNI EN ISO 9614-2)

Data referred to the following conditions in heating:
- internal exchanger water = 30/35°C
- ambient temperature 7/6 °C

Data referred to the following conditions in cooling:
- internal exchanger water = 12/7°C
- ambient temperature 35°C

Super Silenced Mode

SIZE	Sound power level								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
18.2	48	51	57	62	58	61	56	44	52	70
20.2	68	64	70	64	59	62	54	48	53	71
25.2	69	58	59	66	62	59	51	40	53	71
30.2	61	49	56	64	61	59	52	39	53	71
35.2	86	63	58	68	60	56	54	48	55	73

Super Silenced mode can be set from the user interface terminal

Sound levels refer to units with nominal test conditions.
The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field.
Noise levels are determined using the tensiometric method (UNI EN ISO 9614-2)

Data referred to the following conditions in heating:
- internal exchanger water = 30/35°C
- ambient temperature 7/6 °C

Data referred to the following conditions in cooling:
- internal exchanger water = 12/7°C
- ambient temperature 35°C

At maximum conditions data

SIZE	Sound power level								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
18.2	55	65	67	72	77	70	61	50	67	83
20.2	55	65	67	72	77	70	61	50	67	83
25.2	57	67	69	73	79	72	64	51	69	85
30.2	57	67	69	73	79	72	64	51	69	85
35.2	57	67	69	73	79	72	64	51	69	85

Sound levels refer to units with maximum test conditions. The sound pressure level refers to a distance of 1 meter from the outer surface of the unit operating in open field. Noise levels are determined using the tensiometric method (UNI EN ISO 9614-2).

Performance correction factors- Silenced Mode

SIZE		18.2	20.2	25.2	30.2	35.2
Cooling capacity factor	Nr	0.930	0.930	0.930	0.930	0.930
Total power input factor	Nr	1.000	1.000	1.000	1.000	1.000
EER factor	Nr	0.930	0.930	0.930	0.930	0.930
Heating capacity factor	Nr	0.950	0.950	0.950	0.950	0.950
Total power input factor	Nr	0.950	0.950	0.950	0.950	0.950
COP factor	Nr	1.000	1.000	1.000	1.000	1.000

Performance correction factors - Super Silenced Mode

SIZE		18.2	20.2	25.2	30.2	35.2
Cooling capacity factor	Nr	0.880	0.880	0.880	0.880	0.880
Total power input factor	Nr	1.020	1.020	1.020	1.020	1.020
EER factor	Nr	0.860	0.860	0.860	0.860	0.860
Heating capacity factor	Nr	0.900	0.900	0.900	0.900	0.900
Total power input factor	Nr	0.900	0.900	0.900	0.900	0.900
COP factor	Nr	1.000	1.000	1.000	1.000	1.000

Correction factors for glycol use

% ETHYLENE GLYCOL BY WEIGHT		0%	10%	20%	30%	40%	50%
Freezing point	°C	0	-4	-9	-16	-23	-37
Correction factor for unit cooling capacity	Nr	1	0.984	0.973	0.965	0.96	0.95
Correction factor for flow rate	Nr	1	1.019	1.051	1.092	1.145	1.2
Correction factor for system pressure drop	Nr	1	1.118	1.268	1.482	1.791	2.1

The correction factors shown refer to water and glycol ethylene mixes used to prevent the formation of frost on the exchangers in the water circuit during inactivity in winter.

Fouling Correction Factors

	Internal exchanger	
M^2K/W	F1	FK1
$0.44x10^{(-4)}$	-	-
$0.88x10^{(-4)}$	0.96	0.99
$1.76x10^{(-4)}$	0.93	0.98

The cooling performance values provided in the tables are based on the external exchanger having clean plates (fouling factor 1). For different fouling factor values, multiply the performance by the coefficients shown in the table.
F1 = Cooling capacity correction factors
FK1 = Compressor power input correction factor

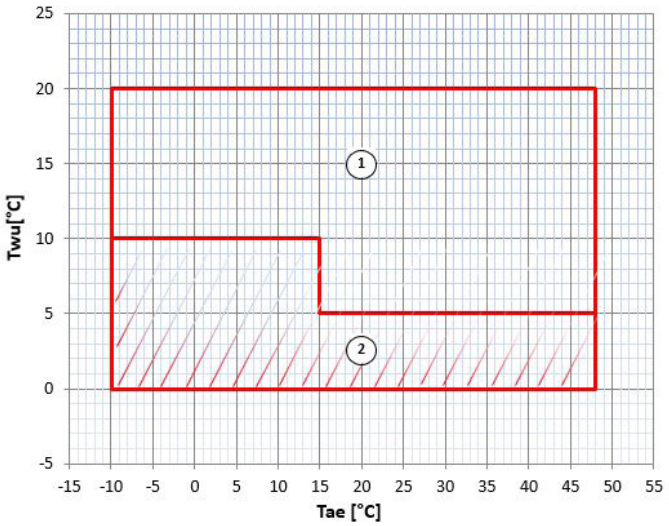
Overload and control device calibrations

		OPEN	CLOSE	VALUE
Refrigerant side				
High pressure safety switch	kPa	4200	3200	-
Low pressure safety switch	kPa	50	130	-
Low pressure safety valve	kPa	-	-	3000
Compressor discharge high temperature safety thermostat	°C	115	75	-
Water side				
Antifreeze protection	°C	4	20	-
High pressure safety valve	kPa	-	-	600*

* The value entered refers to units supplied with a hydronic group installed on board.

Operating range - Cooling

Size 18.2 - 20.2 - 25.2 - 30.2 - 35.2

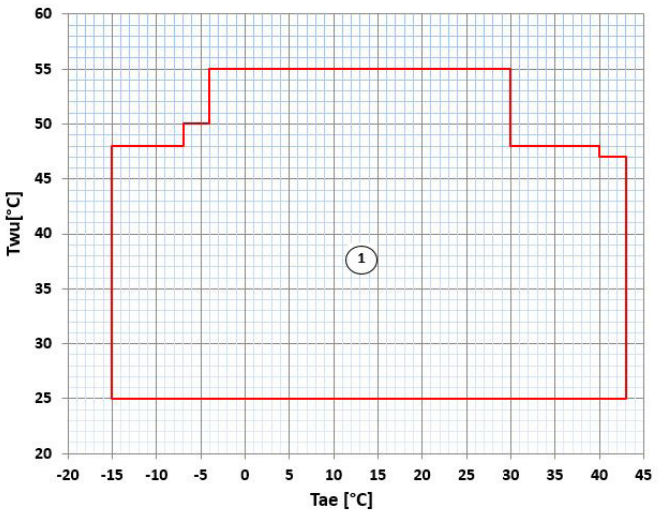


Twu [°C] = Leaving exchanger water temperature
Tae [°C] = External exchanger inlet air temperature

1. Normal operating range.
2. Operating range where the use of ethylene glycol is mandatory in relation to the temperature of the water at the outlet of the user side exchanger.

Operating range - Heating

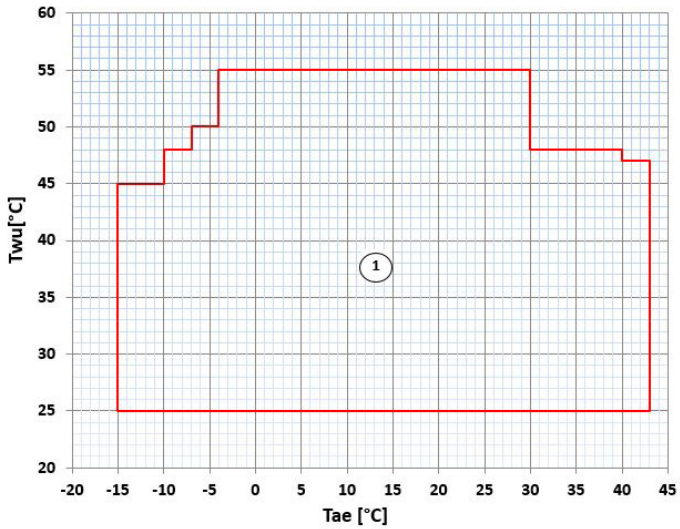
Size 18.2 - 20.2



Twu [°C] = Leaving exchanger water temperature
Tae [°C] = External exchanger inlet air temperature

1. Normal operating range

Size 25.2 - 30.2 - 35.2



Twu [°C] = Leaving exchanger water temperature
Tae [°C] = External exchanger inlet air temperature

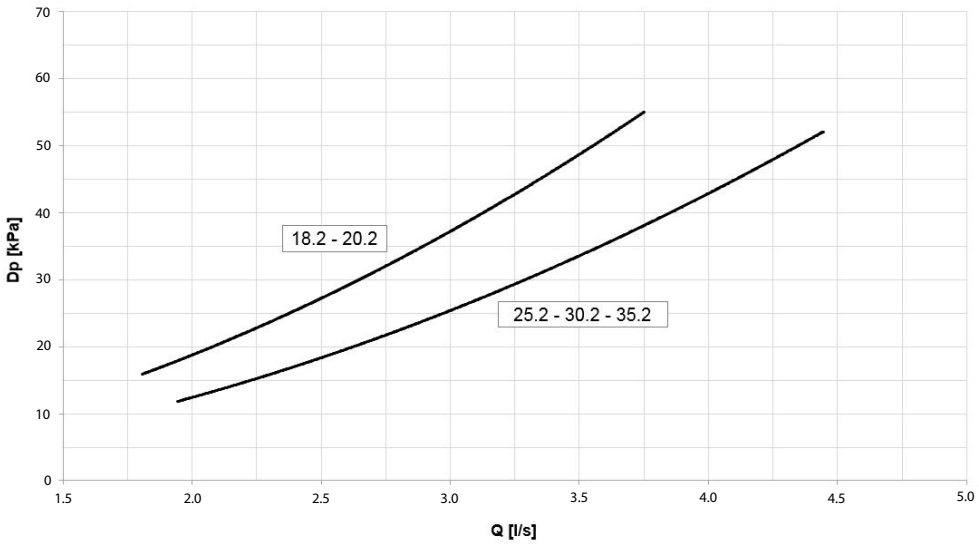
1. Normal operating range

Standard Unit

Internal exchanger pressure drop

Standard unit without hydronic assembly on the user side, but equipped with components as listed on the key of the enclosed plumbing circuit diagram.
It is possible to control an external pump by an on/off or 0-10V signal.
Water fittings are Victaulic type by 2".

Internal exchanger pressure drop curves



The pressure drops on the water side are calculated by considering an average water temperature at 7°C.

Q = Water flow rate[l/s]
DP = Pressure drops [kPa]

The water flow rate must be calculated with the following formula

Q [l/s] = kWf / (4.186 x DT)

kWf = Cooling capacity in kW
DT = Temperature difference between entering / leaving water

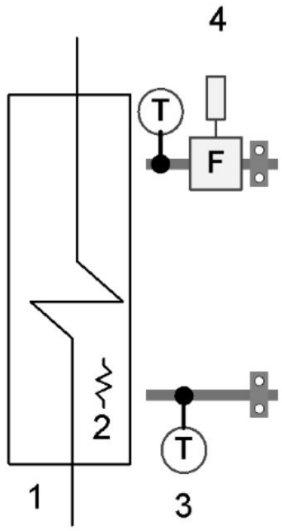
⚠ **To the internal exchanger pressure drops must be added the pressure drops of the steel mesh mechanical filter that must be placed on the water input line. It is a device compulsory for the correct unit operation, and it is provided by Airedale as accessory.**

Admissible water flow rates

Min. (Qmin) and max. (Qmax) water flow-rates admissibles for the correct unit operation.

SIZE		18.2	20.2	25.2	30.2	35.2
Minimum flow	[l/s]	1.9	1.9	2.9	2.9	2.9
Maximum flow-rate	[l/s]	6.4	6.4	6.4	6.4	6.4

Hydraulic diagram

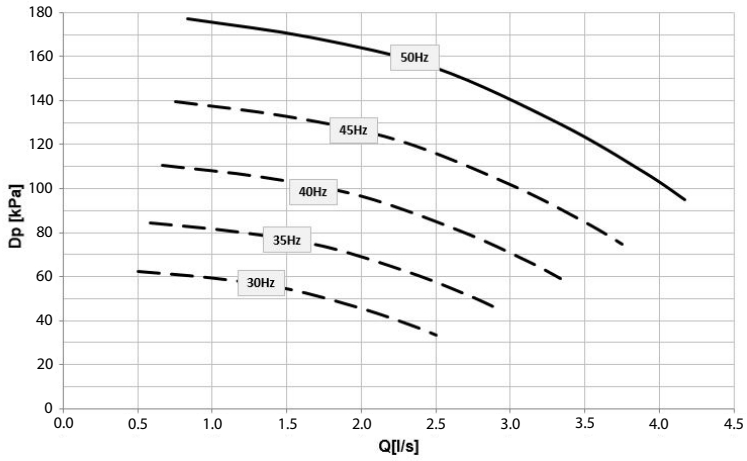


1. Exchanger
2. Anti-freeze resistance
3. Water temperature probe
4. Flow Switch

Hydronic assembly - Unit with 1 inverter pump (HYGU1V)

This configuration provides for one inverter-controlled electric centrifugal pump with body and impeller in AISI 304 steel and components listed in the key of the included water diagram. The electric pump is equipped with three-phase electric motor with IP55-protection and complete with thermoformed insulated casing.
During the installation phase it is possible to choose the most suitable head curve for system requirements by setting the inverter frequency.
The pump will always work at fixed flow.
Water fittings are Victaulic type by 2".

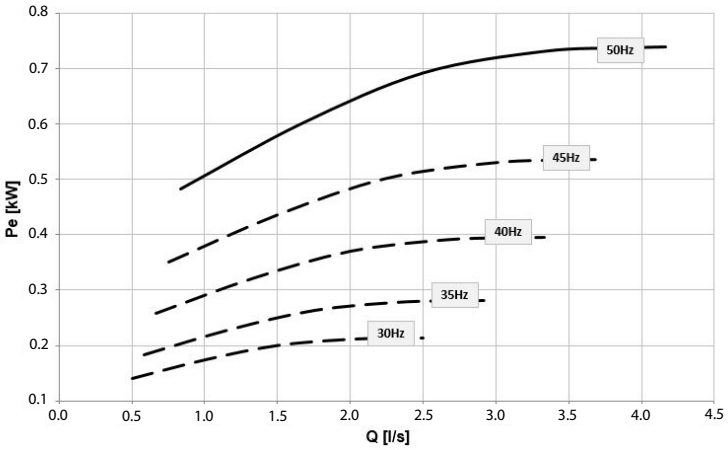
Pump available pressure curves size 18.2 - 20.2



DP = Available pressure [kPa]
Q = Water flow-rate [l/s]

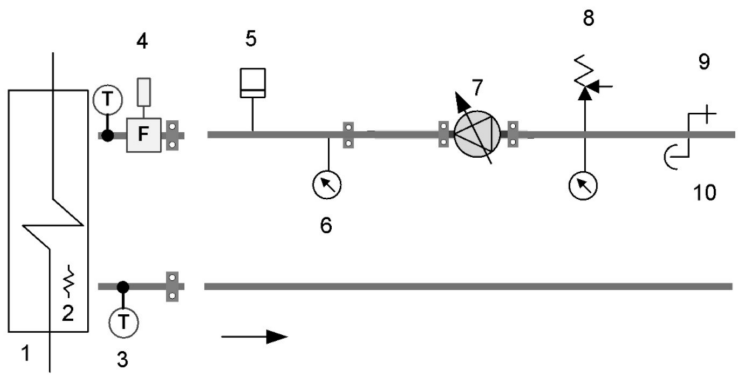
⚠ **Caution: in order to obtain useful head values, the head represented in these diagrams must be lowered by:**
- **User side exchanger pressure drops**
- **IFWX - Steel mesh strainer on the water side" accessory (where present).**

Pump absorbtion curves size 18.2 - 20.2



Pe = Power input [kW]
Q = Water flow-rate [l/s]

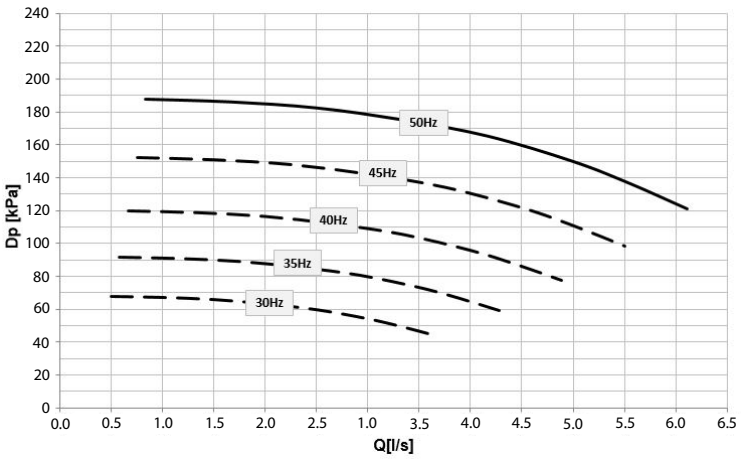
Hydraulic diagram



1. Exchanger
2. Antifreeze heater
3. Water temperature probe
4. Flow Switch
5. System load safety pressure switch
6. Pressure gauge
7. Inverter pump
8. Safety valve
9. Discharge
10. Vent

Hydronic assembly - Unit with 1 inverter pump (HYGU1V)

Pump available pressure curves size 25.2 - 30.2 - 35.2

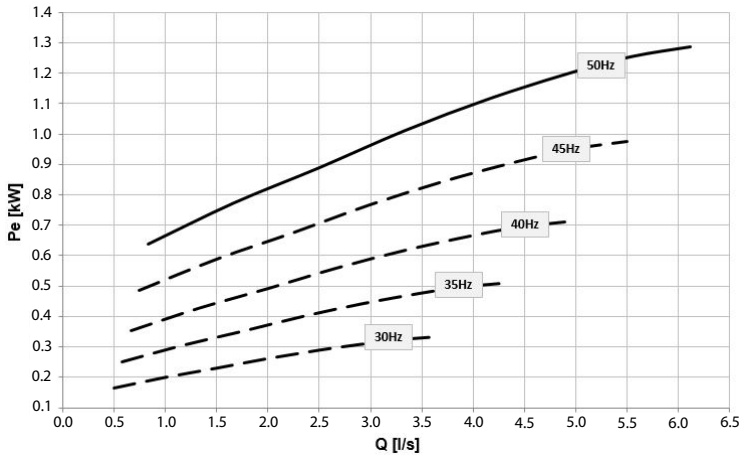


DP = Available pressure [kPa]
Q = Water flow-rate [l/s]

⚠ **Caution: in order to obtain useful head values, the head represented in these diagrams must be lowered by:**

- **User side exchanger pressure drops**
- **IFWX - Steel mesh strainer on the water side" accessory (where present).**

Pump absorption curves size 25.2 - 30.2 - 35.2



Pe = Power input [kW]
Q = Water flow-rate [l/s]

Electrical data

SIZE		18.2	20.2	25.2	30.2	35.2
F.L.A.	A	1.90	1.90	2.50	2.50	2.50
F.L.I.	kW	0.75	0.75	1.1	1.1	1.1

Performances in heating - Size 18.2

To	Tae (°C) DB/WB	Heating capacity EN14511								COP EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	MIN%	100%	90%	80%	70%	60%	50%	40%	MIN%
25	-10/-11.1	38.1	34.7	30.9	26.2	22.2	17.8	13.7	12.6	3.37	3.20	3.12	3.02	2.93	2.82	2.67	2.51
	-7/-8	41.1	37.8	34.0	29.1	24.8	20.0	15.5	14.4	3.60	3.45	3.40	3.32	3.23	3.13	3.01	2.86
	2/1.1	51.9	48.6	44.3	38.7	33.5	27.3	21.1	19.6	4.45	4.35	4.35	4.32	4.26	4.15	3.97	3.89
	7/6	58.7	55.3	50.6	44.3	38.4	31.4	24.4	22.6	4.98	4.91	4.94	4.94	4.88	4.78	4.58	4.51
	10/8.2	63.1	59.5	54.5	47.9	41.5	34.0	26.3	24.4	5.32	5.27	5.32	5.34	5.29	5.18	4.98	4.89
	18/14	75.0	71.1	65.4	57.5	50.0	40.8	31.5	29.2	6.25	6.27	6.39	6.48	6.48	6.39	6.16	6.07
30	-10/-11.1	37.1	33.8	30.1	25.6	21.7	17.3	13.3	12.3	3.07	2.92	2.85	2.76	2.67	2.57	2.45	2.29
	-7/-8	40.2	37.0	33.2	28.5	24.3	19.5	15.1	14.0	3.28	3.15	3.10	3.03	2.95	2.85	2.73	2.59
	2/1.1	51.1	47.9	43.6	38.0	32.8	26.6	20.5	19.0	4.02	3.94	3.94	3.92	3.86	3.75	3.57	3.50
	7/6	58.0	54.5	49.8	43.6	37.7	30.7	23.6	21.9	4.49	4.43	4.46	4.46	4.41	4.30	4.10	4.03
	10/8.2	62.3	58.7	53.7	47.0	40.7	33.1	25.5	23.6	4.78	4.74	4.78	4.80	4.76	4.65	4.44	4.36
	18/14	74.1	70.1	64.4	56.5	49.0	39.8	30.5	28.3	5.59	5.60	5.71	5.79	5.78	5.69	5.45	5.35
35	-10/-11.1	36.2	33.0	29.4	25.0	21.2	17.0	13.0	12.0	2.80	2.67	2.61	2.53	2.45	2.35	2.22	2.02
	-7/-8	39.4	36.3	32.5	27.9	23.7	19.1	14.7	13.6	2.99	2.87	2.83	2.77	2.69	2.59	2.47	2.29
	2/1.1	50.4	47.1	42.9	37.3	32.1	26.0	19.9	18.5	3.65	3.57	3.58	3.55	3.50	3.39	3.21	3.09
	7/6	54.4	51.3	49.0	42.8	36.9	30.0	22.9	21.2	4.07	4.00	4.02	4.02	3.98	3.87	3.66	3.57
	10/8.2	61.4	57.8	52.8	46.2	39.8	32.3	24.8	22.9	4.31	4.26	4.31	4.32	4.28	4.17	3.95	3.86
	18/14	73.1	69.1	63.3	55.5	47.9	38.8	29.5	27.3	5.00	5.01	5.11	5.17	5.16	5.05	4.80	4.70
40	-10/-11.1	35.4	32.3	28.8	24.6	20.8	16.5	12.8	11.8	2.56	2.44	2.39	2.32	2.25	2.12	2.01	1.91
	-7/-8	38.6	35.6	32.0	27.4	23.3	18.8	14.4	13.4	2.73	2.63	2.59	2.54	2.47	2.37	2.24	2.14
	2/1.1	49.7	46.4	42.2	36.7	31.5	25.4	19.4	17.9	3.32	3.25	3.25	3.23	3.18	3.06	2.88	2.80
	7/6	56.4	52.9	48.2	42.0	36.2	29.2	22.2	20.5	3.67	3.62	3.65	3.64	3.59	3.48	3.26	3.18
	10/8.2	60.6	57.0	52.0	45.3	39.0	31.5	24.0	22.1	3.89	3.85	3.89	3.90	3.85	3.73	3.50	3.42
	18/14	72.1	68.0	62.2	54.4	46.8	37.7	28.5	26.3	4.50	4.50	4.58	4.63	4.60	4.48	4.21	4.11
45	-10/-11.1	34.7	31.8	28.4	24.2	20.6	16.4	12.6	11.7	2.34	2.24	2.19	2.14	2.07	1.93	1.83	1.75
	-7/-8	38.0	35.0	31.5	27.0	23.0	18.5	14.2	13.2	2.50	2.41	2.38	2.33	2.26	2.17	2.04	1.95
	2/1.1	49.0	45.8	41.5	36.1	30.9	24.9	18.9	17.4	3.01	2.95	2.96	2.94	2.88	2.76	2.57	2.50
	7/6	53.3	50.6	47.5	41.3	35.4	28.5	21.5	19.9	3.21	3.19	3.20	3.17	3.14	3.08	2.89	2.82
	10/8.2	59.8	56.1	51.1	44.5	38.2	30.7	23.2	21.3	3.51	3.48	3.51	3.51	3.46	3.33	3.09	3.01
	18/14	71.0	66.9	61.0	53.2	45.6	36.6	27.4	25.2	4.03	4.03	4.10	4.13	4.09	3.96	3.68	3.57
50	-10/-11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-7/-8	37.4	34.5	31.1	26.7	22.8	18.3	14.0	13.1	2.29	2.21	2.18	2.14	2.08	1.99	1.87	1.75
	2/1.1	48.3	45.1	40.9	35.5	30.4	24.3	18.4	17.0	2.74	2.69	2.69	2.67	2.61	2.50	2.33	2.22
	7/6	54.8	51.3	46.7	40.5	34.7	27.8	20.9	19.2	3.01	2.97	2.99	2.97	2.92	2.80	2.57	2.48
	10/8.2	58.8	55.2	50.2	43.6	37.3	29.9	22.3	20.5	3.17	3.14	3.17	3.16	3.11	2.98	2.73	2.65
	18/14	69.7	65.6	59.7	51.9	44.4	35.4	26.3	24.0	3.61	3.61	3.67	3.69	3.64	3.50	3.21	3.10
55	2/1.1	47.6	44.5	40.3	34.9	29.9	23.9	18.0	16.5	2.50	2.45	2.45	2.43	2.37	2.26	2.02	2.00
	7/6	54.0	50.5	45.8	39.7	33.9	27.1	20.2	18.6	2.72	2.69	2.70	2.69	2.63	2.50	2.26	2.23
	10/8.2	57.9	54.2	49.2	42.6	36.4	29.0	21.5	19.8	2.86	2.83	2.86	2.85	2.79	2.65	2.40	2.36
	18/14	68.3	64.1	58.3	50.5	43.1	34.1	25.1	23.0	3.23	3.23	3.27	3.29	3.23	3.08	2.78	2.73

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Heating capacity and COP calculated according to EN 14511:2018
ATTENTION: The data of the heat capacity and COP include defrostings.

Performances in cooling - Size 18.2

To	Tae	Cooling capacity EN14511								EER EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	min%	100%	90%	80%	70%	60%	50%	40%	min%
5	10	62.8	56.0	49.8	44.7	39.5	33.1	27.2	25.3	5.95	6.04	6.23	6.32	6.39	6.45	6.48	6.51
	15	60.2	53.7	47.7	42.8	37.8	31.6	25.8	24.0	5.12	5.20	5.37	5.45	5.50	5.54	5.53	5.55
	25	55.0	49.1	43.6	39.1	34.4	28.5	23.0	21.3	3.88	3.94	4.08	4.15	4.18	4.17	4.12	4.12
	35	49.7	44.3	39.4	35.2	30.8	25.3	20.2	18.6	2.95	3.00	3.09	3.14	3.14	3.10	2.99	2.97
	45	44.1	39.4	34.9	31.2	27.1	22.0	17.3	15.7	2.23	2.27	2.33	2.35	2.33	2.25	2.19	2.07
7	10	66.9	59.7	53.1	47.7	42.2	35.3	28.9	26.9	6.28	6.40	6.63	6.77	6.83	6.91	6.94	7.00
	15	64.2	57.3	51.0	45.8	40.4	33.6	27.4	25.5	5.40	5.50	5.70	5.82	5.88	5.92	5.91	5.94
	25	58.8	52.5	46.7	41.8	36.8	30.4	24.5	22.7	4.08	4.17	4.32	4.41	4.44	4.44	4.38	4.38
	35	53.1	47.5	42.2	37.7	33.0	27.0	21.5	19.8	2.95	3.16	3.27	3.33	3.34	3.29	3.16	3.15
	45	47.3	42.3	37.5	33.4	29.0	23.5	18.3	16.7	2.35	2.39	2.47	2.49	2.47	2.38	2.22	2.19
10	10	73.1	65.3	58.1	52.2	46.1	38.5	31.4	29.2	6.69	6.85	7.15	7.32	7.41	7.50	7.53	7.58
	15	70.4	62.9	56.0	50.3	44.3	36.8	30.0	27.8	5.82	5.96	6.22	6.37	6.47	6.53	6.53	6.60
	25	64.6	57.8	51.4	46.0	40.4	33.4	26.9	24.8	4.40	4.51	4.70	4.81	4.86	4.88	4.80	4.82
	35	58.5	52.3	46.5	41.5	36.3	29.7	23.5	21.6	3.34	3.42	3.55	3.62	3.63	3.59	3.45	3.44
	45	52.1	46.6	41.3	36.8	32.0	25.8	20.0	18.2	2.53	2.58	2.67	2.70	2.68	2.59	2.40	2.37
15	10	84.2	75.4	67.1	60.3	53.1	44.2	35.9	33.3	7.50	7.78	8.23	8.51	8.72	8.89	9.00	9.09
	15	81.3	72.7	64.7	58.1	51.1	42.4	34.3	31.7	6.53	6.76	7.14	7.38	7.55	7.69	7.72	7.81
	25	74.9	67.0	59.5	53.3	46.8	38.5	30.8	28.4	4.95	5.10	5.36	5.53	5.63	5.67	5.60	5.64
	35	67.9	60.8	54.0	48.2	42.0	34.2	27.0	24.8	3.75	3.86	4.03	4.13	4.16	4.13	3.97	3.96
	45	60.6	54.2	48.0	42.7	37.0	29.7	22.8	20.8	2.84	2.91	3.02	3.07	3.06	2.95	2.74	2.69
18	10	91.2	81.7	72.7	65.3	57.5	47.7	38.6	36.2	7.98	8.35	8.92	9.30	9.58	9.87	10.0	10.1
	15	88.1	78.9	70.2	62.9	55.3	45.8	36.9	34.6	6.96	7.26	7.72	8.03	8.27	8.49	8.59	8.58
	25	81.3	72.7	64.6	57.8	50.7	41.6	33.2	31.0	5.28	5.48	5.78	5.99	6.12	6.20	6.15	6.09
	35	73.8	62.4	58.6	52.3	45.6	37.0	29.1	27.0	4.00	4.14	4.34	4.46	4.51	4.47	4.31	4.23
	45	65.8	58.9	52.1	46.3	40.1	32.1	24.6	22.8	3.03	3.11	3.25	3.30	3.29	3.18	2.95	2.94
20	10	95.9	85.9	76.5	68.7	60.4	50.1	40.5	38.0	8.31	8.74	9.39	9.84	10.2	10.6	10.8	10.9
	15	92.7	83.0	73.9	66.2	58.2	48.1	38.7	36.2	7.25	7.59	8.12	8.50	8.78	9.06	9.21	9.22
	25	85.6	76.6	68.0	60.9	53.3	43.7	34.8	32.5	5.50	5.73	6.07	6.30	6.46	6.57	6.54	6.49
	35	77.7	69.5	61.7	55.0	47.9	38.9	30.5	28.3	4.17	4.32	4.55	4.68	4.75	4.73	4.57	4.48
	45	69.3	62.0	54.9	48.7	42.1	33.7	25.8	23.9	3.16	3.25	3.40	3.46	3.45	3.35	3.11	3.10

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Cooling capacity and EER calculated according to EN 14511:2018

Performances in heating - Size 20.2

To	Tae (°C) DB/WB	Heating capacity EN14511								COP EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	min%	100%	90%	80%	70%	60%	50%	40%	min%
25	-10/-11.1	47.5	41.9	38.0	33.8	29.3	24.5	19.4	15.0	3.55	3.39	3.26	3.18	3.10	2.98	2.85	2.71
	-7/-8	50.1	44.8	41.1	36.9	32.3	27.3	21.8	17.1	3.71	3.59	3.49	3.44	3.38	3.28	3.16	3.05
	2/1.1	61.1	55.8	52.1	47.6	42.4	36.5	29.5	23.3	4.38	4.35	4.33	4.35	4.35	4.30	4.19	4.04
	7/6	68.2	62.8	59.0	54.2	48.5	41.9	34.0	26.9	4.81	4.84	4.85	4.92	4.96	4.92	4.82	4.67
	10/8.2	72.8	67.3	63.4	58.4	52.3	45.2	36.7	29.1	5.09	5.14	5.19	5.28	5.34	5.32	5.22	5.06
	18/14	85.7	79.7	75.4	69.8	62.8	54.4	44.2	34.8	5.81	5.97	6.11	6.30	6.45	6.48	6.42	6.26
30	-10/-11.1	46.1	40.8	37.0	32.9	28.5	23.9	18.9	14.6	3.22	3.08	2.97	2.90	2.83	2.73	2.60	2.46
	-7/-8	48.9	43.8	40.1	36.1	31.6	26.7	21.2	16.6	3.36	3.26	3.17	3.14	3.09	2.99	2.88	2.77
	2/1.1	60.2	55.0	51.3	46.9	41.7	35.8	28.9	22.7	3.95	3.93	3.91	3.94	3.95	3.89	3.79	3.65
	7/6	67.4	62.0	58.2	53.4	47.7	41.1	33.2	26.2	4.33	4.35	4.37	4.44	4.47	4.44	4.34	4.19
	10/8.2	72.1	66.5	62.5	57.5	51.5	44.4	35.9	28.3	4.57	4.62	4.67	4.75	4.81	4.79	4.69	4.53
	18/14	84.9	78.8	74.5	68.8	61.8	53.4	43.2	33.9	5.19	5.34	5.47	5.63	5.77	5.79	5.72	5.55
35	-10/-11.1	44.9	39.7	36.1	32.2	27.9	23.4	18.5	14.3	2.93	2.81	2.71	2.65	2.59	2.49	2.38	2.24
	-7/-8	47.9	42.9	39.3	35.4	30.9	26.1	20.8	16.2	3.05	2.97	2.90	2.86	2.82	2.74	2.63	2.52
	2/1.1	59.4	54.2	50.5	46.1	41.0	35.1	28.2	22.1	3.57	3.56	3.55	3.57	3.58	3.53	3.43	3.28
	7/6	66.7	61.3	57.4	52.6	46.9	40.3	32.5	25.4	3.90	4.00	4.01	4.03	4.04	4.01	3.91	3.75
	10/8.2	71.3	65.7	61.7	56.7	50.6	43.6	35.1	27.5	4.11	4.16	4.20	4.28	4.33	4.31	4.21	4.04
	18/14	84.1	77.9	73.5	67.8	60.7	52.3	42.1	32.9	4.65	4.78	4.89	5.04	5.15	5.17	5.09	4.91
40	-10/-11.1	43.7	38.8	35.3	31.5	27.4	23.0	18.2	14.1	2.66	2.56	2.48	2.43	2.37	2.29	2.19	2.06
	-7/-8	46.9	42.1	38.6	34.8	30.4	25.7	20.4	15.9	2.78	2.71	2.65	2.62	2.58	2.51	2.40	2.30
	2/1.1	58.6	53.5	49.8	45.4	40.3	34.5	27.7	21.5	3.25	3.24	3.23	3.25	3.26	3.21	3.11	2.95
	7/6	65.9	60.5	56.6	51.9	46.2	39.6	31.8	24.7	3.54	3.56	3.58	3.63	3.66	3.63	3.52	3.35
	10/8.2	70.5	64.9	60.9	55.8	49.8	42.7	34.3	26.7	3.71	3.76	3.79	3.87	3.91	3.89	3.78	3.60
	18/14	83.2	76.9	72.5	66.7	59.6	51.3	41.1	31.8	4.19	4.30	4.39	4.52	4.62	4.63	4.53	4.33
45	-10/-11.1	42.6	38.0	34.6	30.9	26.9	22.7	18.0	13.9	2.42	2.34	2.27	2.23	2.18	2.11	2.01	1.89
	-7/-8	45.9	41.3	38.0	34.2	29.9	25.3	20.1	15.7	2.53	2.47	2.42	2.40	2.37	2.30	2.20	2.09
	2/1.1	57.8	52.7	49.1	44.8	39.7	33.9	27.1	21.0	2.94	2.94	2.93	2.96	2.96	2.92	2.81	2.65
	7/6	66.7	59.7	55.8	51.1	45.4	38.8	31.1	24.0	3.21	3.23	3.25	3.28	3.31	3.27	3.16	2.99
	10/8.2	69.7	64.0	60.0	54.9	48.9	41.9	33.5	25.9	3.35	3.39	3.42	3.49	3.53	3.50	3.38	3.20
	18/14	82.1	75.8	71.3	65.5	58.4	50.1	39.9	30.7	3.75	3.85	3.94	4.05	4.13	4.12	4.01	3.80
50	-10/-11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-7/-8	45.1	40.6	37.4	33.7	29.6	25.0	19.9	15.5	2.31	2.26	2.22	2.20	2.18	2.12	2.02	1.92
	2/1.1	57.0	52.0	48.4	44.1	39.1	33.4	26.5	20.5	2.67	2.67	2.67	2.69	2.70	2.65	2.54	2.39
	7/6	64.2	58.8	55.0	50.3	44.6	38.1	30.3	23.3	2.89	2.91	2.93	2.97	3.00	2.95	2.84	2.66
	10/8.2	68.7	63.1	59.0	54.0	48.0	41.0	32.6	25.0	3.02	3.06	3.09	3.15	3.18	3.15	3.03	2.84
	18/14	80.9	74.5	70.0	64.2	57.1	48.8	38.7	29.5	3.36	3.45	3.52	3.62	3.69	3.68	3.56	3.33
55	2/1.1	56.2	51.3	47.7	43.5	38.5	32.8	26.0	20.0	2.43	2.43	2.43	2.45	2.46	2.41	2.30	2.13
	7/6	63.3	58.0	54.1	49.4	43.8	37.3	29.6	22.6	2.61	2.63	2.65	2.69	2.71	2.67	2.55	2.37
	10/8.2	67.7	62.1	58.0	53.0	47.0	40.1	31.7	24.2	2.72	2.76	2.79	2.84	2.87	2.83	2.71	2.51
	18/14	79.4	73.1	68.5	62.8	55.7	47.5	37.4	28.3	3.00	3.08	3.15	3.24	3.30	3.27	3.14	2.91

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Heating capacity and COP calculated according to EN 14511:2018
ATTENTION: The data of the heat capacity and COP include defrostings.

Performances in cooling - Size 20.2

To	Tae	Cooling capacity EN14511								EER EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	min%	100%	90%	80%	70%	60%	50%	40%	min%
5	10	69.7	61.5	54.6	48.5	42.6	36.4	29.7	25.3	5.61	5.84	6.08	6.26	6.36	6.42	6.46	6.51
	15	66.8	59.0	52.4	46.5	40.8	34.7	28.2	24.0	4.82	5.02	5.23	5.39	5.48	5.53	5.53	5.55
	25	61.0	53.9	47.9	42.5	37.2	31.5	25.3	21.3	3.65	3.81	3.97	4.10	4.16	4.18	4.14	4.12
	35	55.0	48.7	43.3	38.3	33.4	28.1	22.3	18.6	2.77	2.89	3.02	3.11	3.15	3.13	3.04	2.97
	45	48.8	43.2	38.4	34.0	29.5	24.6	19.2	15.7	2.10	2.19	2.28	2.34	2.35	2.30	2.17	2.07
7	10	74.2	65.5	58.3	51.8	45.4	38.8	31.6	26.9	5.89	6.17	6.45	6.66	6.80	6.88	6.93	7.00
	15	71.2	62.9	55.9	49.7	43.5	37.0	30.0	25.5	5.06	5.30	5.55	5.73	5.85	5.90	5.91	5.94
	25	65.2	57.6	51.2	45.5	39.8	33.6	27.0	22.7	3.83	4.01	4.20	4.34	4.43	4.45	4.41	4.38
	35	58.8	52.1	46.3	41.1	35.8	30.1	23.8	19.8	2.90	3.05	3.19	3.29	3.34	3.32	3.22	3.15
	45	52.3	46.3	41.2	36.5	31.6	26.3	20.5	16.7	2.21	2.31	2.41	2.47	2.49	2.44	2.30	2.19
10	10	81.0	71.6	63.7	56.7	49.7	42.3	34.4	29.2	6.23	6.57	6.92	7.19	7.36	7.47	7.51	7.58
	15	78.0	69.0	61.4	54.6	47.8	40.6	32.9	27.8	5.42	5.71	6.02	6.26	6.42	6.50	6.54	6.60
	25	71.7	63.4	56.4	50.1	43.7	37.0	29.6	24.8	4.12	4.32	4.55	4.73	4.84	4.88	4.84	4.82
	35	64.8	57.4	51.1	45.3	39.4	33.1	26.1	21.6	3.12	3.28	3.45	3.57	3.63	3.62	3.52	3.44
	45	57.6	51.1	45.5	40.2	34.8	28.9	22.4	18.2	2.37	2.49	2.61	2.68	2.70	2.65	2.49	2.37
15	10	93.2	82.6	73.6	65.5	57.4	48.7	39.4	33.3	6.91	7.37	7.88	8.30	8.61	8.80	8.93	9.09
	15	90.0	79.7	71.0	63.1	55.2	46.8	37.7	31.7	6.03	6.42	6.85	7.20	7.46	7.63	7.71	7.81
	25	82.9	73.5	65.3	58.0	50.6	42.7	34.0	28.4	4.58	4.87	5.16	5.40	5.57	5.65	5.63	5.64
	35	75.1	66.6	59.3	52.6	45.7	38.2	30.0	24.8	3.48	3.68	3.90	4.06	4.15	4.16	4.04	3.96
	45	66.9	59.4	52.8	46.7	40.4	33.4	25.7	20.8	2.65	2.79	2.94	3.04	3.07	3.02	2.84	2.69
18	10	101	89.5	79.7	70.9	62.1	52.7	42.5	36.2	7.29	7.86	8.48	9.01	9.44	9.72	9.94	10.1
	15	97.4	86.4	77.0	68.4	59.8	50.7	40.7	34.6	6.38	6.85	7.36	7.80	8.15	8.38	8.54	8.58
	25	89.8	79.7	71.0	63.0	54.9	46.2	36.7	31.0	4.87	5.19	5.56	5.83	6.05	6.16	6.17	6.09
	35	81.5	72.3	64.4	57.0	49.6	41.4	32.4	27.0	3.70	3.93	4.18	4.37	4.49	4.51	4.40	4.23
	45	72.7	64.5	57.4	50.7	43.8	36.1	27.7	22.8	2.82	2.98	3.15	3.26	3.31	3.25	3.06	2.94
20	10	106	94.1	83.9	74.6	65.3	55.3	44.5	38.0	7.55	8.18	8.89	9.51	10.0	10.4	10.7	10.9
	15	102	90.9	81.0	72.0	63.0	53.2	42.7	36.2	6.61	7.13	7.71	8.22	8.62	8.92	9.15	9.22
	25	94.6	83.9	74.7	66.3	57.8	48.6	38.6	32.5	5.06	5.41	5.81	6.13	6.38	6.53	6.56	6.49
	35	85.8	76.2	67.8	60.1	52.2	43.5	34.1	28.3	3.85	4.10	4.37	4.58	4.72	4.75	4.64	4.48
	45	76.6	68.0	60.5	53.4	46.1	38.0	29.1	23.9	2.93	3.11	3.29	3.42	3.47	3.42	3.22	3.10

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Cooling capacity and EER calculated according to EN 14511:2018

Performances in heating - Size 25.2

To	Tae (°C) DB/WB	Heating capacity EN14511								COP EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	min%	40%	100%	90%	80%	70%	60%	50%	min%	40%
25	-10/-11.1	48.8	44.4	43.5	40.3	35.8	31.3	26.5	22.3	3.02	3.20	3.24	3.26	3.24	3.27	3.47	3.54
	-7/-8	54.4	49.0	47.9	44.2	39.2	34.1	28.7	23.9	3.35	3.55	3.60	3.62	3.59	3.60	3.81	3.86
	2/1.1	70.9	62.8	61.1	56.1	49.2	42.4	35.3	28.9	4.31	4.56	4.62	4.63	4.57	4.56	4.76	4.69
	7/6	80.0	70.6	68.7	63.0	55.2	47.4	39.3	32.0	4.83	5.11	5.19	5.20	5.12	5.09	5.31	5.20
	10/8.2	85.2	75.5	73.4	67.4	58.9	50.6	41.8	34.1	5.12	5.45	5.54	5.55	5.46	5.43	5.66	5.62
	18/14	100.1	88.7	86.3	79.2	69.3	59.4	49.0	39.8	5.88	6.36	6.48	6.53	6.47	6.46	6.75	6.61
30	-10/-11.1	49.4	44.2	43.1	39.8	35.2	30.6	25.7	21.5	2.77	2.95	3.00	3.02	3.00	3.02	3.20	3.25
	-7/-8	54.8	48.6	47.3	43.6	38.3	33.2	27.7	23.0	3.06	3.27	3.32	3.34	3.31	3.32	3.50	3.54
	2/1.1	70.7	61.9	60.1	55.0	48.0	41.2	34.0	27.6	3.92	4.17	4.24	4.26	4.20	4.18	4.36	4.28
	7/6	79.7	69.6	67.5	61.7	53.8	46.0	37.8	30.6	4.37	4.67	4.75	4.76	4.69	4.67	4.86	4.74
	10/8.2	84.7	74.3	72.1	65.9	57.4	49.0	40.3	32.6	4.62	4.96	5.06	5.08	5.01	4.98	5.18	5.12
	18/14	99.3	87.2	84.6	77.5	67.5	57.6	47.2	38.0	5.31	5.78	5.91	5.97	5.93	5.93	6.19	6.12
35	-10/-11.1	50.1	44.1	42.9	39.4	34.7	30.0	25.0	20.8	2.53	2.69	2.74	2.75	2.73	2.74	2.88	2.91
	-7/-8	55.2	48.4	47.0	43.1	37.7	32.4	26.9	22.2	2.80	2.98	3.03	3.04	3.01	3.00	3.15	3.15
	2/1.1	70.7	61.2	59.2	54.1	47.0	40.1	32.9	26.5	3.55	3.78	3.84	3.85	3.79	3.76	3.91	3.80
	7/6	79.3	68.6	65.3	60.6	52.6	44.7	36.6	29.4	3.96	4.22	4.29	4.31	4.24	4.20	4.35	4.21
	10/8.2	84.3	73.2	70.9	64.7	56.1	47.7	38.9	31.3	4.16	4.48	4.57	4.59	4.52	4.48	4.64	4.55
	18/14	98.6	85.9	83.2	76.0	66.0	56.0	45.7	36.6	4.76	5.21	5.33	5.39	5.34	5.33	5.54	5.45
40	-10/-11.1	50.8	44.2	42.8	39.2	34.3	29.5	24.5	20.2	2.32	2.45	2.49	2.49	2.46	2.45	2.56	2.56
	-7/-8	55.7	48.3	46.7	42.7	37.2	31.8	26.3	21.5	2.56	2.70	2.74	2.75	2.70	2.68	2.79	2.77
	2/1.1	70.7	60.7	58.6	53.4	46.2	39.2	32.1	25.6	3.23	3.41	3.46	3.46	3.39	3.35	3.45	3.31
	7/6	79.2	67.9	65.6	59.7	51.6	43.7	35.6	28.4	3.58	3.80	3.86	3.86	3.79	3.73	3.84	3.68
	10/8.2	83.9	72.4	70.0	63.7	55.1	46.6	37.9	30.2	3.77	4.03	4.10	4.12	4.03	3.98	4.09	3.98
	18/14	98.0	84.9	82.1	74.9	64.8	54.8	44.5	35.4	4.30	4.68	4.79	4.84	4.78	4.75	4.90	4.78
45	-10/-11.1	51.6	44.4	42.8	39.1	34.0	29.1	24.1	19.7	2.12	2.22	2.24	2.24	2.19	2.17	2.25	2.22
	-7/-8	56.4	48.3	46.6	42.5	36.8	31.4	25.8	21.0	2.33	2.44	2.47	2.46	2.41	2.37	2.44	2.40
	2/1.1	70.8	60.3	58.1	52.8	45.6	38.6	31.4	24.9	2.92	3.05	3.09	3.09	3.01	2.95	3.01	2.86
	7/6	79.1	67.4	64.9	59.0	50.8	42.9	34.8	27.6	3.33	3.39	3.44	3.44	3.35	3.28	3.35	3.17
	10/8.2	83.6	71.7	69.3	63.0	54.2	45.7	37.0	29.4	3.39	3.60	3.66	3.66	3.57	3.50	3.57	3.44
	18/14	97.4	84.0	81.2	73.9	63.8	53.8	43.5	34.4	3.84	4.17	4.26	4.29	4.22	4.17	4.28	4.13
50	-10/-11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-7/-8	56.8	48.3	46.6	42.4	36.6	31.1	25.5	20.6	2.12	2.19	2.21	2.20	2.13	2.08	2.13	2.07
	2/1.1	70.8	60.0	57.8	52.5	45.2	38.1	30.9	24.4	2.64	2.73	2.76	2.74	2.65	2.58	2.62	2.47
	7/6	78.8	67.0	64.5	58.5	50.3	42.4	34.3	27.1	2.90	3.03	3.06	3.05	2.95	2.88	2.91	2.74
	10/8.2	83.4	71.3	68.7	62.4	53.7	45.2	36.4	28.8	3.04	3.20	3.25	3.24	3.15	3.07	3.11	2.92
	18/14	96.7	83.3	80.5	73.2	63.1	53.2	42.9	33.8	3.43	3.70	3.78	3.80	3.72	3.65	3.72	3.56
55	2/1.1	70.8	59.9	57.6	52.3	44.9	37.9	30.3	23.8	2.38	2.44	2.45	2.43	2.34	2.27	2.23	2.09
	7/6	78.6	66.7	64.2	58.3	50.0	42.1	33.9	26.8	2.59	2.69	2.72	2.70	2.60	2.52	2.53	2.36
	10/8.2	82.9	70.9	68.4	62.1	53.3	44.8	36.1	28.5	2.71	2.84	2.88	2.87	2.77	2.69	2.70	2.52
	18/14	92.5	82.1	79.9	72.8	62.7	52.8	42.5	33.4	3.13	3.30	3.34	3.35	3.27	3.19	3.24	3.07

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Heating capacity and COP calculated according to EN 14511:2018
ATTENTION: The data of the heat capacity and COP include defrostings.

Performances in cooling - Size 25.2

To	Tae	Cooling capacity EN14511								EER EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	min%	100%	90%	80%	70%	60%	50%	40%	min%
5	10	82.5	75.3	65.6	56.8	47.8	38.9	32.9	28.4	5.65	5.73	5.87	5.94	5.96	5.92	5.84	5.79
	15	79.8	72.7	63.3	54.6	45.9	37.2	31.3	26.9	4.97	5.06	5.22	5.31	5.36	5.36	5.31	5.28
	25	74.3	67.6	58.6	50.4	41.9	33.6	28.0	23.9	3.93	4.03	4.18	4.28	4.36	4.39	4.37	4.36
	35	68.7	62.4	53.9	46.0	38.0	30.0	24.8	20.9	3.02	3.08	3.19	3.25	3.27	3.25	3.19	3.15
	45	62.9	57.0	49.0	41.6	34.0	26.4	21.5	18.0	2.27	2.30	2.35	2.36	2.33	2.25	2.28	2.40
7	10	87.3	79.6	69.4	59.9	50.4	41.0	34.6	29.8	5.89	6.00	6.16	6.25	6.29	6.25	6.17	6.12
	15	84.4	76.9	66.9	57.7	48.4	39.1	32.9	28.3	5.20	5.31	5.48	5.58	5.65	5.65	5.60	5.56
	25	78.8	71.7	62.1	53.3	44.3	35.4	29.5	25.2	4.12	4.22	4.39	4.51	4.59	4.63	4.60	4.59
	35	72.4	66.2	57.2	48.8	40.2	31.7	26.2	22.1	3.15	3.24	3.35	3.42	3.46	3.43	3.36	3.32
	45	66.9	60.7	52.2	44.3	36.2	28.1	22.8	19.0	2.40	2.43	2.49	2.50	2.48	2.38	2.41	2.53
10	10	94.5	86.2	75.1	64.9	54.5	44.2	37.3	32.1	6.11	6.24	6.42	6.52	6.54	6.46	6.36	6.63
	15	91.7	83.6	72.6	62.6	52.4	42.3	35.5	30.4	5.54	5.68	5.89	6.03	6.11	6.12	6.07	6.03
	25	85.8	78.0	67.6	57.9	48.1	38.4	31.9	27.1	4.40	4.53	4.73	4.87	4.97	5.01	4.98	4.96
	35	79.6	72.3	62.4	53.2	43.9	34.5	28.4	23.9	3.41	3.49	3.63	3.71	3.75	3.73	3.65	3.60
	45	73.4	66.6	57.3	48.6	39.7	30.8	24.9	20.7	2.60	2.64	2.71	2.73	2.70	2.61	2.63	2.75
15	10	108	98.4	85.7	73.9	62.0	50.1	42.1	36.2	6.75	6.96	7.26	7.43	7.53	7.49	7.38	7.70
	15	105	95.6	83.0	71.5	59.7	48.0	40.2	34.4	6.14	6.36	6.66	6.87	7.02	7.07	7.02	6.99
	25	98.7	89.6	77.6	66.5	55.1	43.8	36.3	30.8	4.97	5.11	5.37	5.56	5.71	5.78	5.76	5.75
	35	92.0	83.6	72.1	61.5	50.6	39.7	32.6	27.4	3.86	3.98	4.15	4.27	4.33	4.32	4.25	4.19
	45	85.4	77.6	66.8	56.7	46.3	35.8	28.9	24.0	2.98	3.05	3.14	3.18	3.16	3.06	3.09	3.23
18	10	116	106	92.6	79.9	66.9	54.0	41.5	38.9	7.18	7.45	7.84	8.10	8.25	8.26	8.07	8.54
	15	113	103	89.9	77.3	64.5	51.8	39.4	37.0	6.55	6.81	7.21	7.49	7.69	7.80	7.72	7.74
	25	107	97.4	84.3	72.1	59.8	47.4	35.4	33.3	5.31	5.52	5.83	6.07	6.26	6.38	6.36	6.37
	35	98.2	89.2	78.7	67.1	55.1	43.2	31.7	29.8	4.15	4.18	4.36	4.46	4.52	4.63	4.55	4.53
	45	93.6	85.0	73.2	62.1	50.7	39.3	27.9	26.2	3.26	3.34	3.45	3.50	3.50	3.40	3.45	3.59
20	10	123	112	97.5	84.1	70.4	56.8	43.5	40.8	7.49	7.81	8.28	8.59	8.81	8.86	8.68	9.20
	15	120	109	94.7	81.5	67.9	54.5	41.4	38.9	6.85	7.16	7.61	7.95	8.22	8.36	8.32	8.34
	25	113	103	89.0	76.2	63.1	50.0	37.3	35.1	5.59	5.83	6.19	6.46	6.70	6.85	6.85	6.86
	35	106	96.6	83.4	71.0	58.4	45.8	33.5	31.5	4.43	4.60	4.83	5.00	5.11	5.13	4.99	5.00
	45	99.4	90.3	77.8	66.1	54.0	41.8	29.6	27.9	3.47	3.56	3.69	3.76	3.76	3.66	3.72	3.88

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Cooling capacity and EER calculated according to EN 14511:2018

Performances in heating - Size 30.2

To	Tae (°C) DB/WB	Heating capacity EN14511								COP EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	min%	100%	90%	80%	70%	60%	50%	40%	min%
25	-10/-11.1	54.1	50.5	47.8	44.6	41.0	36.5	31.2	24.9	3.05	3.11	3.17	3.23	3.26	3.24	3.29	3.51
	-7/-8	60.0	56.0	52.8	49.2	45.0	40.0	33.9	26.8	3.37	3.45	3.52	3.59	3.62	3.59	3.63	3.85
	2/1.1	77.6	72.1	67.8	62.8	57.2	50.4	42.3	32.9	4.32	4.42	4.52	4.60	4.64	4.58	4.59	4.79
	7/6	87.3	81.1	76.4	70.7	64.3	56.5	47.2	36.5	4.81	4.95	5.07	5.17	5.21	5.13	5.13	5.33
	10/8.2	93.5	86.7	81.6	75.6	68.7	60.3	50.3	38.9	5.13	5.27	5.40	5.51	5.56	5.47	5.47	5.68
	18/14	109	101.7	95.8	88.8	80.8	71.0	59.2	45.5	5.90	6.10	6.28	6.44	6.53	6.48	6.51	6.78
30	-10/-11.1	54.5	50.7	47.7	44.3	40.5	35.9	30.4	24.1	2.79	2.86	2.92	2.98	3.02	3.00	3.04	3.23
	-7/-8	60.2	55.9	52.5	48.7	44.4	39.2	33.0	25.9	3.08	3.16	3.24	3.30	3.34	3.31	3.35	3.53
	2/1.1	77.2	71.4	67.0	61.9	56.1	49.2	41.0	31.6	3.91	4.03	4.13	4.22	4.26	4.20	4.21	4.38
	7/6	86.5	80.2	75.3	69.5	62.9	55.1	45.7	35.1	4.36	4.49	4.62	4.72	4.77	4.70	4.70	4.87
	10/8.2	92.5	85.7	80.4	74.3	67.2	58.8	48.8	37.3	4.63	4.77	4.91	5.03	5.08	5.02	5.02	5.19
	18/14	108	100.3	94.3	87.2	79.0	69.2	57.3	43.7	5.31	5.51	5.70	5.87	5.97	5.93	5.97	6.20
35	-10/-11.1	55.0	50.9	47.7	44.2	40.2	35.4	29.8	23.4	2.54	2.61	2.67	2.72	2.76	2.73	2.76	2.91
	-7/-8	60.4	55.9	52.4	48.4	43.9	38.6	32.3	25.1	2.80	2.88	2.95	3.01	3.04	3.01	3.03	3.17
	2/1.1	76.8	70.9	66.3	61.1	55.2	48.2	39.9	30.6	3.54	3.64	3.74	3.82	3.86	3.80	3.79	3.91
	7/6	85.9	79.4	74.4	68.5	61.8	53.9	44.5	33.9	3.98	4.17	4.23	4.27	4.31	4.25	4.23	4.35
	10/8.2	91.7	84.7	79.3	73.2	66.0	57.5	47.4	36.0	4.16	4.30	4.43	4.54	4.59	4.53	4.51	4.64
	18/14	107	99.2	93.0	85.8	77.6	67.7	55.8	42.2	4.81	4.97	5.13	5.29	5.39	5.35	5.37	5.55
40	-10/-11.1	55.6	51.2	47.9	44.1	40.0	35.1	29.4	22.9	2.32	2.37	2.43	2.48	2.50	2.46	2.47	2.57
	-7/-8	60.8	56.0	52.3	48.2	43.5	38.1	31.7	24.5	2.55	2.61	2.68	2.73	2.75	2.71	2.70	2.80
	2/1.1	76.6	70.5	65.8	60.5	54.5	47.4	39.1	29.7	3.20	3.29	3.38	3.44	3.47	3.40	3.37	3.45
	7/6	85.5	78.8	73.7	67.7	61.0	52.9	43.5	32.9	3.54	3.65	3.76	3.84	3.87	3.80	3.76	3.83
	10/8.2	91.1	84.0	78.5	72.3	65.1	56.5	46.4	34.9	3.75	3.87	3.99	4.08	4.12	4.05	4.01	4.08
	18/14	106	98.1	91.9	84.7	76.4	66.4	54.6	41.0	4.28	4.45	4.61	4.75	4.84	4.79	4.78	4.89
45	-10/-11.1	56.2	51.6	48.1	44.2	39.9	34.9	29.0	22.4	2.10	2.15	2.20	2.24	2.25	2.20	2.18	2.25
	-7/-8	61.2	56.2	52.4	48.1	43.3	37.8	31.3	24.0	2.31	2.36	2.42	2.46	2.47	2.41	2.39	2.44
	2/1.1	76.5	70.2	65.4	60.0	53.9	46.8	38.4	29.0	2.88	2.95	3.03	3.08	3.09	3.02	2.97	3.00
	7/6	85.0	78.3	73.1	67.1	60.3	52.2	42.7	32.1	3.29	3.34	3.39	3.43	3.45	3.36	3.31	3.33
	10/8.2	90.6	83.4	77.9	71.5	64.3	55.7	45.5	34.1	3.35	3.46	3.56	3.64	3.67	3.58	3.53	3.55
	18/14	105	97.2	91.0	83.8	75.5	65.5	53.6	40.1	3.82	3.97	4.11	4.23	4.30	4.24	4.20	4.26
50	-10/-11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-7/-8	61.6	56.5	52.5	48.1	43.2	37.6	31.0	23.6	2.09	2.13	2.18	2.21	2.21	2.14	2.10	2.12
	2/1.1	76.4	70.1	65.2	59.7	53.6	46.4	37.9	28.2	2.58	2.65	2.71	2.75	2.75	2.67	2.60	2.54
	7/6	84.7	77.9	72.7	66.6	59.8	51.7	42.2	31.5	2.84	2.92	3.00	3.05	3.06	2.97	2.90	2.88
	10/8.2	90.1	82.9	77.3	70.9	63.8	55.1	45.0	33.5	2.99	3.08	3.17	3.23	3.25	3.16	3.09	3.08
	18/14	105	96.5	90.3	83.1	74.8	64.8	52.9	39.4	3.39	3.52	3.65	3.75	3.80	3.73	3.68	3.69
55	2/1.1	77.3	70.4	65.1	59.6	53.4	45.6	37.7	27.4	2.34	2.38	2.42	2.45	2.44	2.33	2.28	2.16
	7/6	85.6	78.1	72.4	66.4	59.5	50.8	41.9	31.0	2.57	2.62	2.67	2.71	2.71	2.59	2.54	2.44
	10/8.2	90.6	82.9	76.9	70.6	63.4	54.1	44.6	33.2	2.73	2.78	2.82	2.87	2.88	2.75	2.70	2.67
	18/14	104	95.6	89.0	82.5	74.3	63.6	52.5	39.0	3.14	3.20	3.26	3.32	3.35	3.24	3.22	3.20

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Heating capacity and COP calculated according to EN 14511:2018
ATTENTION: The data of the heat capacity and COP include defrostings.

Performances in cooling - Size 30.2

To	Tae	Cooling capacity EN14511								EER EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	30%	100%	90%	80%	70%	60%	50%	40%	30%
5	10	88.7	80.9	72.5	62.5	52.3	43.1	33.2	29.2	5.57	5.64	5.77	5.89	5.95	5.94	5.85	5.81
	15	85.8	78.2	70.0	60.3	50.3	41.3	31.5	27.7	4.89	4.98	5.11	5.24	5.34	5.36	5.32	5.29
	25	80.0	72.8	65.0	55.8	46.2	37.6	28.2	24.7	3.85	3.94	4.07	4.21	4.33	4.38	4.38	4.36
	35	74.0	67.2	59.9	51.1	42.0	33.8	24.8	21.6	2.96	3.02	3.11	3.21	3.27	3.27	3.19	3.16
	45	67.7	61.5	54.7	46.4	37.8	30.0	21.5	18.6	2.24	2.27	2.32	2.36	2.35	2.30	2.35	2.38
7	10	93.8	85.5	76.6	66.1	55.2	45.5	34.9	30.7	5.80	5.90	6.04	6.20	6.27	6.27	6.16	6.13
	15	90.8	82.7	74.0	63.7	53.1	43.5	33.1	29.1	5.10	5.21	5.35	5.52	5.62	5.65	5.60	5.57
	25	84.8	77.1	68.9	59.0	48.8	39.7	29.6	25.9	4.03	4.13	4.27	4.43	4.56	4.61	4.61	4.59
	35	**78.4**	71.4	63.6	54.3	44.5	35.8	26.2	22.8	**3.10**	3.17	3.27	3.38	3.45	3.45	3.36	3.33
	45	72.1	65.5	58.2	49.4	40.2	32.0	22.8	19.7	2.36	2.40	2.45	2.50	2.50	2.44	2.49	2.51
10	10	102	92.6	83.0	71.5	59.7	49.1	37.5	33.0	6.00	6.12	6.29	6.46	6.54	6.51	6.36	6.30
	15	98.6	89.8	80.4	69.1	57.5	47.1	35.7	31.3	5.42	5.55	5.74	5.93	6.08	6.12	6.07	6.04
	25	92.3	84.0	75.0	64.2	53.0	43.0	32.0	28.0	4.30	4.42	4.59	4.77	4.92	5.00	4.99	4.97
	35	85.7	77.9	69.5	59.2	48.6	39.0	28.4	24.7	3.33	3.42	3.53	3.65	3.74	3.75	3.65	3.61
	45	79.0	71.8	63.9	54.3	44.2	35.0	24.8	21.4	2.55	2.60	2.66	2.72	2.73	2.66	2.71	2.73
15	10	116	106	94.7	81.6	68.0	55.8	42.4	37.2	6.57	6.78	7.05	7.32	7.49	7.52	7.38	7.31
	15	113	103	91.9	79.0	65.6	53.6	40.4	35.4	5.97	6.18	6.44	6.73	6.96	7.06	7.03	7.00
	25	106	96.5	86.2	73.7	60.8	49.2	36.4	31.8	4.80	4.97	5.18	5.43	5.64	5.76	5.78	5.76
	35	99.0	90.1	80.3	68.4	56.1	44.9	32.6	28.3	3.77	3.88	4.03	4.19	4.31	4.34	4.25	4.20
	45	91.9	83.6	74.5	63.3	51.5	40.8	28.8	24.8	2.92	2.99	3.08	3.15	3.18	3.12	3.18	3.20
18	10	125	114	102	88.2	73.4	60.1	45.6	39.0	6.95	7.23	7.56	7.93	8.18	8.28	8.16	8.06
	15	122	111	99.5	85.5	70.9	57.9	43.5	37.1	6.34	6.60	6.93	7.30	7.60	7.76	7.77	7.72
	25	115	105	93.6	80.1	66.0	53.3	39.4	33.4	5.14	5.35	5.61	5.91	6.17	6.33	6.38	6.35
	35	108	**95.1**	87.6	74.7	61.1	49.0	35.5	29.8	4.02	**4.10**	4.29	4.46	4.65	4.78	4.70	4.62
	45	101	91.6	81.6	69.4	56.5	44.8	31.6	26.2	3.19	3.27	3.37	3.47	3.51	3.46	3.54	3.44
20	10	132	120	108	92.8	77.2	63.2	47.9	41.0	7.23	7.56	7.94	8.38	8.71	8.86	8.78	8.67
	15	128	117	105	90.1	74.7	60.9	45.7	39.0	6.61	6.92	7.29	7.72	8.09	8.30	8.36	8.31
	25	121	111	98.9	84.6	69.7	56.3	41.5	35.1	5.40	5.63	5.93	6.28	6.58	6.78	6.87	6.84
	35	114	104	92.8	79.1	64.8	51.8	37.5	31.5	4.30	4.46	4.66	4.89	5.06	5.13	5.06	4.98
	45	107	97.3	86.8	73.8	60.1	47.6	33.6	27.9	3.39	3.49	3.60	3.72	3.77	3.72	3.82	3.71

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Cooling capacity and EER calculated according to EN 14511:2018

Performances in heating - Size 35.2

To	Tae (°C) DB/WB	Heating capacity EN14511								COP EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	min%	100%	90%	80%	70%	60%	50%	40%	min%
25	-10/-11.1	58.6	54.2	50.2	46.8	43.2	38.5	32.8	26.7	3.01	3.07	3.14	3.20	3.25	3.27	3.19	3.46
	-7/-8	65.1	60.1	55.6	51.7	47.6	42.3	35.8	28.8	3.33	3.40	3.48	3.55	3.61	3.62	3.52	3.79
	2/1.1	84.4	77.7	71.6	66.3	60.7	53.4	44.7	35.5	4.24	4.34	4.47	4.56	4.63	4.63	4.46	4.75
	7/6	95.0	87.4	80.6	74.6	68.2	60.0	50.0	39.5	4.72	4.85	5.00	5.11	5.20	5.19	4.99	5.29
	10/8.2	102	93.5	86.2	79.7	73.0	64.1	53.3	42.0	5.02	5.16	5.32	5.44	5.55	5.54	5.33	5.64
	18/14	119	110	101	93.7	85.8	75.4	62.7	49.3	5.77	5.96	6.17	6.35	6.50	6.54	6.33	6.73
30	-10/-11.1	59.2	54.5	50.3	46.7	42.9	38.0	32.1	25.9	2.74	2.81	2.89	2.95	3.00	3.02	2.94	3.19
	-7/-8	65.4	60.2	55.5	51.3	47.0	41.5	34.9	27.9	3.03	3.11	3.19	3.26	3.33	3.34	3.25	3.49
	2/1.1	84.0	77.1	70.9	65.4	59.6	52.3	43.4	34.2	3.83	3.94	4.07	4.16	4.25	4.25	4.09	4.35
	7/6	94.2	86.6	79.6	73.5	67.0	58.6	48.5	38.0	4.26	4.39	4.54	4.66	4.75	4.76	4.58	4.84
	10/8.2	101	92.5	85.0	78.5	71.6	62.6	51.7	40.5	4.52	4.66	4.83	4.95	5.07	5.08	4.88	5.16
	18/14	118	108	99.7	92.2	84.1	73.7	60.9	47.5	5.18	5.37	5.59	5.77	5.93	5.99	5.80	6.17
35	-10/-11.1	59.9	55.0	50.5	46.6	42.6	37.6	31.5	25.2	2.49	2.56	2.63	2.69	2.74	2.75	2.67	2.87
	-7/-8	65.9	60.4	55.4	51.1	46.6	41.0	34.2	27.1	2.75	2.82	2.91	2.97	3.03	3.04	2.94	3.14
	2/1.1	83.7	76.7	70.3	64.7	58.8	51.3	42.4	33.1	3.46	3.56	3.68	3.77	3.85	3.85	3.69	3.90
	7/6	93.7	87.7	78.8	72.6	66.0	57.5	47.3	36.8	3.98	4.15	4.26	4.37	4.40	4.40	4.23	4.36
	10/8.2	99.9	91.6	84.1	77.4	70.4	61.3	50.4	39.1	4.06	4.19	4.35	4.47	4.58	4.58	4.39	4.62
	18/14	118	108	98.4	90.8	82.7	72.2	59.3	45.9	4.79	4.90	5.02	5.19	5.35	5.40	5.23	5.52
40	-10/-11.1	60.6	55.5	50.8	46.7	42.5	37.3	31.0	24.6	2.27	2.33	2.40	2.45	2.49	2.49	2.40	2.55
	-7/-8	66.3	60.7	55.5	51.0	46.4	40.5	33.6	26.5	2.50	2.56	2.64	2.70	2.74	2.74	2.63	2.78
	2/1.1	83.6	76.4	69.9	64.2	58.1	50.5	41.5	32.3	3.13	3.22	3.33	3.40	3.46	3.45	3.29	3.44
	7/6	93.3	85.3	78.1	71.9	65.1	56.5	46.3	35.8	3.45	3.56	3.69	3.79	3.86	3.85	3.67	3.83
	10/8.2	99.3	90.9	83.3	76.6	69.5	60.3	49.3	38.1	3.65	3.77	3.92	4.02	4.11	4.10	3.91	4.08
	18/14	116	106	97.4	89.8	81.6	71.0	58.1	44.7	4.16	4.32	4.51	4.67	4.81	4.84	4.66	4.88
45	-10/-11.1	61.5	56.0	51.1	46.9	42.5	37.1	30.7	24.2	2.06	2.12	2.17	2.21	2.25	2.23	2.13	2.24
	-7/-8	66.9	61.0	55.7	51.0	46.2	40.2	33.2	26.0	2.26	2.32	2.39	2.43	2.47	2.45	2.33	2.43
	2/1.1	83.5	76.2	69.6	63.8	57.7	50.0	40.8	31.6	2.81	2.89	2.99	3.05	3.10	3.07	2.90	3.00
	7/6	91.2	84.9	77.6	71.3	64.5	55.8	45.5	35.0	3.25	3.29	3.34	3.39	3.45	3.42	3.23	3.34
	10/8.2	98.7	90.3	82.7	75.9	68.8	59.5	48.5	37.2	3.26	3.37	3.50	3.59	3.66	3.64	3.44	3.56
	18/14	115	105	96.5	88.8	80.6	70.0	57.1	43.8	3.70	3.85	4.02	4.16	4.27	4.29	4.10	4.26
50	-10/-11.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	-7/-8	67.5	61.4	55.9	51.1	46.2	40.1	32.9	25.6	2.05	2.10	2.15	2.19	2.21	2.18	2.05	2.12
	2/1.1	83.5	76.1	69.4	63.5	57.3	49.6	40.4	31.1	2.52	2.59	2.68	2.73	2.76	2.72	2.55	2.61
	7/6	92.6	84.5	77.2	70.8	64.0	55.3	45.0	34.4	2.77	2.85	2.95	3.02	3.06	3.02	2.84	2.90
	10/8.2	98.2	89.8	82.2	75.4	68.2	59.0	47.9	36.6	2.91	3.01	3.12	3.20	3.25	3.22	3.02	3.10
	18/14	114	104	95.7	88.1	79.9	69.3	56.4	43.1	3.28	3.41	3.57	3.69	3.79	3.79	3.60	3.71
55	2/1.1	83.4	76.0	69.3	63.4	57.2	49.4	40.1	30.5	2.26	2.32	2.39	2.43	2.46	2.41	2.24	2.22
	7/6	92.6	84.4	76.9	70.5	63.7	55.0	44.7	34.1	2.53	2.58	2.63	2.69	2.72	2.67	2.49	2.52
	10/8.2	98.7	89.7	81.5	75.0	67.8	58.6	47.6	36.3	2.70	2.74	2.78	2.84	2.88	2.84	2.65	2.69
	18/14	116	104	93.7	86.8	79.4	68.8	56.0	42.7	3.16	3.18	3.20	3.29	3.34	3.33	3.15	3.22

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Heating capacity and COP calculated according to EN 14511:2018
ATTENTION: The data of the heat capacity and COP include defrostings.

Performances in cooling - Size 35.2

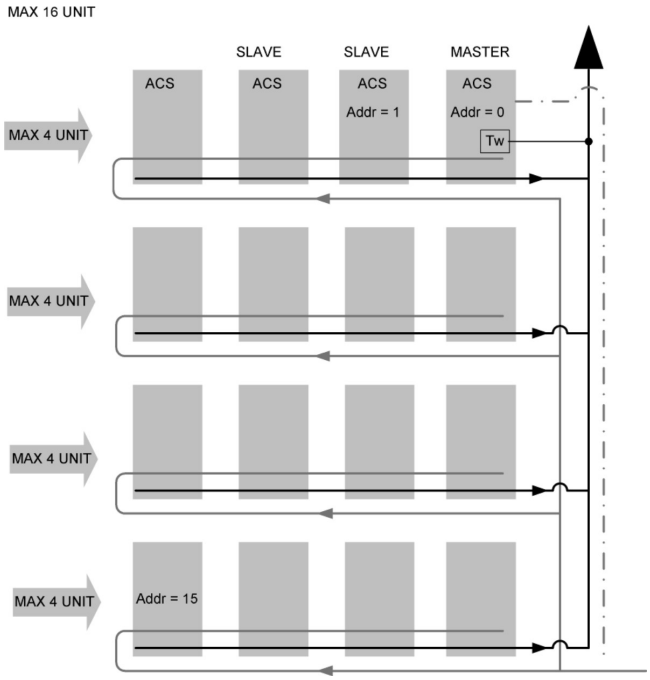
To	Tae	Cooling capacity EN14511								EER EN14511							
		Percentage of compressor load								Percentage of compressor load							
°C	°C	100%	90%	80%	70%	60%	50%	40%	30%	100%	90%	80%	70%	60%	50%	40%	30%
5	10	96.4	87.9	77.2	68.5	58.9	47.7	36.7	30.8	5.32	5.51	5.67	5.83	5.95	5.95	5.89	5.82
	15	93.2	85.0	74.6	66.1	56.7	45.7	35.0	29.2	4.66	4.84	5.00	5.18	5.32	5.36	5.34	5.30
	25	87.0	79.3	69.5	61.3	52.3	41.8	31.5	26.1	3.66	3.82	3.97	4.14	4.29	4.36	4.39	4.37
	35	80.4	73.3	64.1	56.4	47.8	37.9	28.0	22.9	2.81	2.93	3.04	3.16	3.25	3.27	3.23	3.17
	45	73.6	67.1	58.6	51.4	43.3	33.9	24.5	19.8	2.14	2.21	2.28	2.34	2.37	2.33	2.20	2.33
7	10	102	93.0	81.6	72.4	62.2	50.3	38.6	32.3	5.53	5.74	5.93	6.13	6.26	6.28	6.21	6.14
	15	98.6	90.0	79.0	69.9	59.9	48.3	36.8	30.7	4.85	5.05	5.24	5.44	5.59	5.65	5.63	5.58
	25	92.1	84.0	73.6	64.9	55.3	44.2	33.2	27.4	3.82	3.99	4.16	4.35	4.51	4.59	4.62	4.60
	35	85.3	77.8	68.0	59.9	50.7	40.1	29.6	24.2	2.91	3.07	3.20	3.33	3.43	3.45	3.40	3.34
	45	78.3	71.4	62.4	54.7	46.1	36.1	26.1	21.0	2.25	2.33	2.41	2.48	2.51	2.47	2.34	2.46
10	10	110	101	88.5	78.4	67.3	54.3	41.7	34.8	5.69	5.94	6.16	6.38	6.53	6.54	6.43	6.33
	15	107	97.7	85.8	75.9	65.0	52.2	39.8	33.1	5.13	5.37	5.59	5.83	6.03	6.11	6.10	6.05
	25	100	91.4	80.1	70.7	60.2	48.0	35.9	29.6	4.07	4.26	4.46	4.67	4.86	4.97	5.00	4.97
	35	93.1	84.9	74.3	65.4	55.4	43.7	32.2	26.2	3.16	3.30	3.44	3.59	3.71	3.75	3.70	3.63
	45	85.7	78.3	68.5	60.1	50.6	39.6	28.5	22.9	2.43	2.52	2.61	2.69	2.74	2.70	2.56	2.69
15	10	126	115	101	89.5	76.7	61.8	47.2	39.3	6.19	6.52	6.85	7.19	7.45	7.53	7.45	7.34
	15	122	112	98.1	86.8	74.2	59.5	45.1	37.4	5.61	5.92	6.25	6.58	6.87	7.02	7.06	7.01
	25	115	105	92.0	81.2	69.1	54.9	41.0	33.7	4.51	4.76	5.02	5.30	5.56	5.71	5.78	5.76
	35	107	98.1	85.9	75.6	64.0	50.5	37.0	30.1	3.55	3.73	3.92	4.11	4.27	4.33	4.29	4.22
	45	99.7	91.1	79.7	70.0	59.0	46.1	33.2	26.5	2.77	2.89	3.01	3.12	3.19	3.16	3.01	3.15
18	10	136	124	109	96.7	82.9	66.7	50.8	42.3	6.51	6.91	7.31	7.74	8.09	8.25	8.23	8.12
	15	132	121	106	93.9	80.3	64.3	48.6	40.3	5.93	6.30	6.68	7.10	7.47	7.69	7.78	7.75
	25	125	114	100	88.2	75.0	59.6	44.4	36.4	4.82	5.11	5.43	5.75	6.06	6.26	6.37	6.37
	35	117	107	93.7	82.4	69.8	55.0	40.3	32.7	3.83	4.04	4.26	4.48	4.68	4.77	4.75	4.67
	45	109	99.7	87.4	76.7	64.7	50.6	36.4	29.1	3.02	3.16	3.29	3.43	3.51	3.49	3.34	3.51
20	10	143	131	115	101.7	87.2	70.2	53.4	44.4	6.74	7.18	7.66	8.14	8.58	8.81	8.84	8.74
	15	139	127	112	99.0	84.6	67.8	51.2	42.4	6.17	6.57	7.01	7.49	7.93	8.21	8.36	8.34
	25	132	120	106	93.2	79.2	62.9	46.8	38.4	5.05	5.36	5.71	6.09	6.44	6.69	6.85	6.86
	35	124	113	99.2	87.3	73.9	58.2	42.6	34.6	4.04	4.27	4.51	4.77	4.99	5.11	5.10	5.03
	45	116	106	92.8	81.6	68.8	53.8	38.8	30.9	3.21	3.36	3.51	3.66	3.76	3.76	3.60	3.78

To = Leaving internal exchanger water temperature (°C)
Tae [°C]= External exchanger inlet air temperature
Performances in function of the inlet/outlet water temperature differential = 5°C
Cooling capacity and EER calculated according to EN 14511:2018

Domestic hot water management in the modular system

It is possible to connect up to 16 units on a local network, reaching a maximum power of 1360 kW and up to 4 units connected hydraulically. The combinations can also occur with units with different power.
The modular system, obtained by combining multiple modules, preserves the strengths of the individual module, but it multiplies the advantages:

- **Increasing system efficiency:**
  the operation of multiple units connect in parallel increases total seasonal efficiency by 3%.
- **Greater reliability:**
  The redundancy of cooling circuits and compressors guarantees full operation even in case of malfunction of a single module, that can be repaired while the system continues to be in operation.
- **Handling and simplified installation:**
  the compact dimensions of an individual module make it easy to pass through doors and elevators. The V design of the coils makes it possible to reduce side clear space. The quick connections allow simple and quick installation.
- **Easy and quick maintenance:**
  all of the main components can be reached from the front guaranteeing on-line maintenance of a module, without blocking the adjacent modules. Every unit is equipped with cutoff and non return valve in order to isolate the individual unit in case of malfunction.
- **Scalability:**
  it is possible to add additional modules, even subsequently, in order to satisfy system load requirements that may have changed.



Modular system connection diagram - addressing

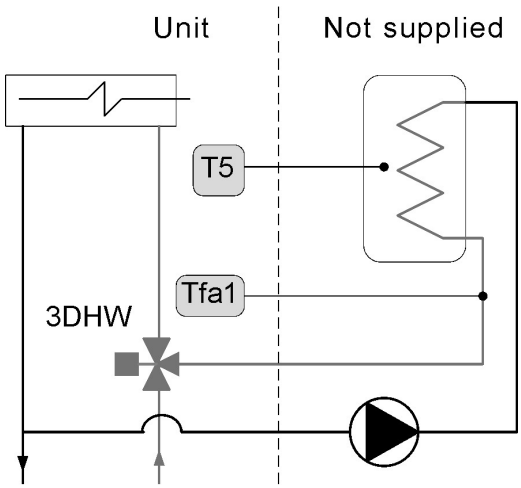
Domestic hot water management in the modular system

Every module of the system can produce domestic hot water.

- It is necessary for each module dedicated to producing DHW to be equipped with 3-way valve installed on board (3DHW).
- Every module must have its own circulation pump and its own domestic hot water storage (responsibility of the Customer).
- The 3-way valve mounted on board presents a leakage equal to the following ratio: 0.015 ≤ Kvo Kvs (Kvs = 45)
- The DHW pumping unit will be managed directly by the unit dedicated to DHW using a free contact.
- DHW production only takes place if the DHW storage temperature is above a minimum threshold. The minimum temperature threshold varies based on the external temperature. In order to avoid that it falls under the minimum temperature, it is best to install a backup electric heater on the DHW storage.

t outdoor	t5 (ACS storage)	compr.	backup heater
24°C < t.o ≤ 30°C	< 15°C	OFF	ON
24°C < t.o ≤ 30°C	≥ 15°C	ON	OFF
t.o > 30°C	< 20°C	OFF	ON
t.o > 30°C	≥ 20°C	ON	OFF

Domestic hot water management is of priority compared to the system.



Connection diagram for connecting the individual module for producing domestic hot water.

If the system is satisfied (unit off):
When the temperature probe (T5), supplied by Airedale and positioned inside the storage calls for production of DHW, the unit dedicated to DHW activates, changing the set-point from set system to set DHW and diverts the water flow through the built-in 3-way valve. The unit will remain active until the DHW set-point has been satisfied, then it will shut-off.

If the system has a request (unit is on):
When the temperature probe (T5) sends a request for production of DHW, the unit dedicated to DHW, which is already active for the system stops, the cycle changes and if producing cooled water, the set-point changes from set system to set DHW and diverts the water flow through the built-in 3-way valve. The unit will remain active until the DHW set-point has been satisfied, then it will return to producing the system.

Modular system configuration

- Management of the entire system takes place through a unit defined as master. The master unit controller can be set up remotely at a maximum distance of up to 300 m.
- All units must be connected to each other using a shielded cable with three wires (3 x 0.75mm^2).
- Each module must be configured with the water connections for modular unit (AMODX).
- Each module can be equipped with inertial system storage tank (ACIMP).
- It's possible to select a built-in hydronic group. In this case, all units have to be of the same module (module 1: sizes 18.2-20.2, module 2: sizes 25.2-30.2-35.2) and with the same options. The presence of system tank or 3-way valve generates pressure drops which lead to imbalances in the hydraulic circuit. Special precautions to be taken:
  - The units has to be hydraulically connected at the same distance from each other using AMODX and CCKMUX accessories. The AMODX accessory selected with pump on board will be equipped with a non-return valve that avoids recirculation in the single unit.
  - Being a primary circuit with variable flow, if in the presence of a secondary one, the system requires a hydraulic circuit breaker. Alternatively, it can be equipped with inlet and outlet manifolds with bypass to compensate possible flow unbalances.
  - Check that each pump works within the allowed flow rate limits even when only one unit is ON and the others are OFF.

For different configurations, please contact Airedale Technical Office.

- It's possible to have an external pumping group, sized for the entire capacity of the modular system (responsibility of the Customer). Pumping unit management will take place from the Master unit through a potential free contact and 0-10V signal.
- It is necessary to install a Y filter on the water input of the entire modular system (customer responsibility) with the following characteristics: MESH equal to 30 (0.5 mm)

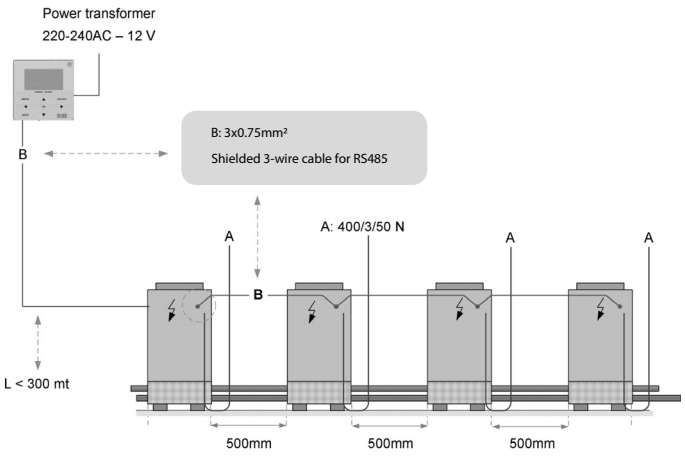
Every module is identified by a specific address.

Complete system management is carried out by the master unit, identified by the address 0.

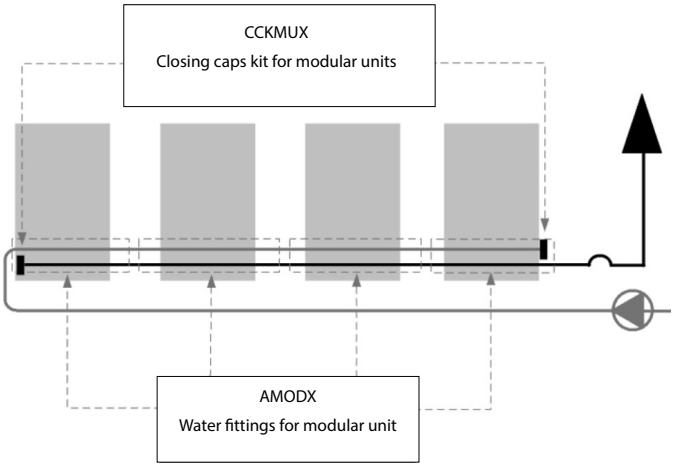
Thermoregulation takes place on the supply temperature of the entire defined system (Tw)

If Tw >= set point + 10°C:
the regulation activates 50% of the resources in sequence based on the defined address. Once a time interval has passed (default: 240 seconds), if the load increases, further resources are activated, if the load decreases, the units are shutoff with the sequence (first start, first stop).

If Tw < set point + 10°C:
The adjustment on activates the master unit. Once a time interval has passed (default: 240 seconds), if the load increases, in sequence further resources will activate based on the defined address, if the load decreases the master unit will shut-off.



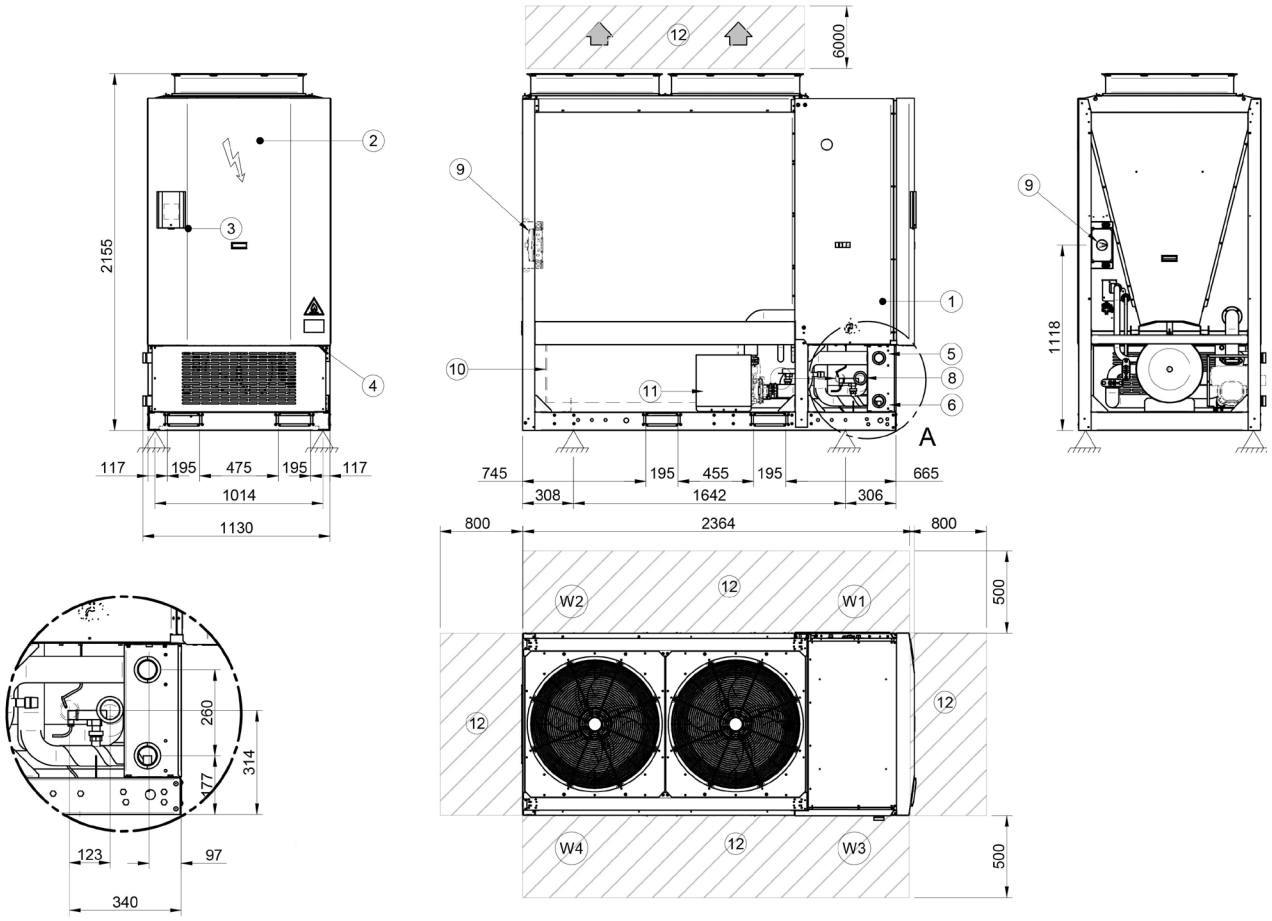
Modular system connection diagram:
- Clearance values
- Power supply
- Connection



Options for modular system connection:
- AMODX - Water fitting for modular unit
- CCKMUX - Closing caps kit

Size 18.2 - 20.2

DAAST0001_SEZ_REV02
Date 02/04/2021



1. Compressor enclosure
2. Electrical panel
3. Control keypad
4. Power input
5. Water inlet 2” Victaulic
6. Water outlet 2” Victaulic
7. DWH inlet 2” Victaulic (optional)
8. DWH outlet 2” Victaulic (optional)
9. Water tank (optional)
10. Main power switch (optional)
11. Pump (optional)
12. Functional spaces

In modular configuration the water input and output are 4” Victaulic.

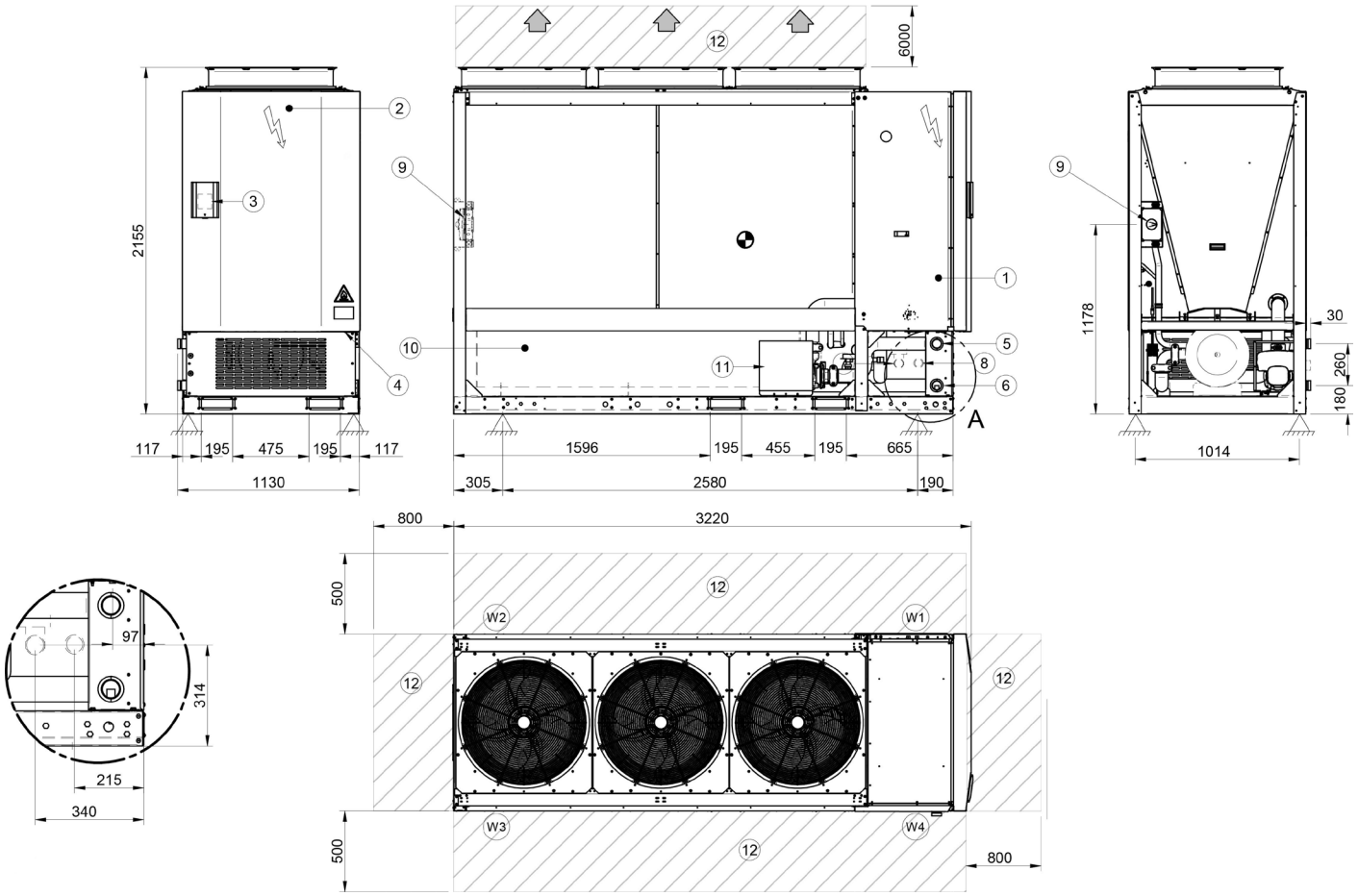
SIZE			18.2	20.2
Length		mm	2364	2364
Depth		mm	1130	1130
Height		mm	2155	2155
W1 Support point		kg	158	158
W2 Support point		kg	132	132
W3 Support point		kg	158	158
W4 Support point		kg	132	132
Operating weight		kg	590	590
Shipping weight		kg	580	580

The presence of optional accessories may result in a substantial variation of the weights shown in the table.

Dimensional drawings

Size 25.2 - 30.2 - 35.2

DAAST0002_REV02
Date 02/04/2021



1. Compressor enclosure
2. Electrical panel
3. Control keypad
4. Power input
5. Water inlet 2” Victaulic
6. Water outlet 2” Victaulic
7. DWH inlet 2” Victaulic (optional)
8. DWH outlet 2” Victaulic (optional)
9. Main power switch (optional)
10. Water tank (optional)
11. Pump (optional)
12. Functional spaces

In modular configuration the water input and output are 4” Victaulic.

SIZE			25.2	30.2	35.2
Length		mm	3220	3220	3210
Depth		mm	1130	1130	1130
Height		mm	2155	2155	2155
W1 Support point		kg	273	273	273
W2 Support point		kg	117	117	117
W3 Support point		kg	117	117	117
W4 Support point		kg	273	273	273
Operating weight		kg	796	796	780
Shipping weight		kg	780	780	796

The presence of optional accessories may result in a substantial variation of the weights shown in the table.

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