



*Air source inverter chiller for outdoor installation*

# ELFOEnergy SHEEN EVO

WSAT-YSi 16.2 - 40.2 RANGE



TECHNICAL BULLETIN



SIZE	16.2	20.2	24.2	30.2	35.2	40.2
COOLING CAPACITY KW	43,0	54,0	65,0	76,0	87,0	98,0

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Clivet is taking part in the EUROVENT certification programme up to 1,500 kW. The products concerned appear in the certified products list of the EUROVENT [www.eurovent-certification.com](http://www.eurovent-certification.com) site.

# Features

ELFOEnergy Sheen EVO series is the new air cooled chiller equipped with Full DC Inverter technology and R32 refrigerant, for outdoor installation.

It is available from 43 kW up to 98 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.

SEER up to 5,37.

Capacity modulation from 30% to 100%.

## Wide operating range

Outdoor air temperature	max	min
Cooling	48°C	-20°C
Outlet water temperature	max	min
Cooling	20°C	-8°C

## Functionality

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.

## 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
- System storage tank: 160 liters (size 16.2 - 20.2 - 24.2) or 275 liters (size 30.2 - 35.2 - 40.2)

It is possible to connect up to 16 units in a local network, reaching a maximum capacity of 1568 kW.

## Technology

The technical solutions adopted place ELFOEnergy Storm EVO on top of its category:

- DC inverter technology on compressors and fans
- Electronic expansion valve
- Flow switch
- Microchannel coil

## Perfect for LEED

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

## Compressor

### Size 16.2 - 20.2 - 24.2

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 30.2 - 35.2 - 40.2

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

Bearing structure realised with frame in steel with zinc-magnesium superficial treatment 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

Full aluminium microchannel coil. The entire exchanger (tubes, fins and manifolds) is made of aluminum and welded into a single body through a special brazing technology in a controlled-temperature chamber. The fins have a special corrugated surface to ensure maximum heat exchange efficiency. The special flat configuration of the pipes reduces the section that opposes to the air flow, limiting the pressure drops and maximizing the surface. The total refrigerant charge into the microchannel coil is reduced by 40% compared to an equivalent copper coil.

## Fan

Helical fans with 4 profiled blades made of reinforced plastic, directly coupled to the DC brushless motor with electronic control, IP 54 execution.

## Refrigeration circuit

Refrigeration circuit with:

- pressure transducer;
- refrigerant temperature probe;
- electronic expansion valves;
- non return valve;
- high pressure safety pressure switch;
- low pressure 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 30.2 - 35.2 - 40.2:

- economiser exchanger.

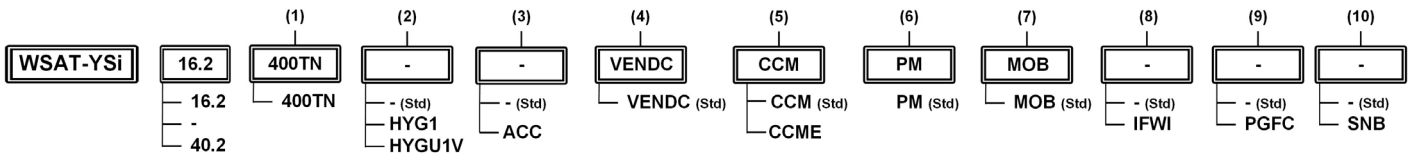
## Electrical panel

- phase monitor;
- interface terminal with graphic display;
- intuitive graphical interface retro lighted;
- display of operating status;
- unit On/Off and overload reset;
- 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;
- relay for remote cumulative fault signal;
- potential-free contact for remote on-off control;
- 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.

# Unit configuration



## (1) Voltage

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

## (2) User side hydronic unit

(-) not required (standard)

HYG1 - Hydronic assembly with 1 ON/OFF pump

HYGU1V - User side hydronic assembly with 1 inverter pump

## (3) Storage tank

(-) not required (standard)

ACC - Storage tank

## (4) Fans

VENDC - DC high efficiency fans (standard)

## (5) Condensing coil

CCM - Batteria condensante microcanali in alluminio (Standard)

CCME - E-coated microchannel coil

## (6) Phase monitor

PM - Phase monitor (standard)

## (7) Serial communication module Modbus

MOB - Serial port RS485 with modbus protocol (standard)

## (8) Water side filter

(-) not required (standard)

IFWI - Steel mesh strainer on the water side include in the packaging

## (9) Protection grill

(-) not required (standard)

PGFC - Finned coil protection grill

## (10) Main switch

(-) not required (standard)

SNB - Main switch on board

**HYG1 Hydronic group with 1 ON/OFF 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.

**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.

**ACC 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 160 liters for size 16.2, 20.2 and 24.2.  
 The storage tank capacity is 275liters for size 30.2, 35.2 and 40.2.

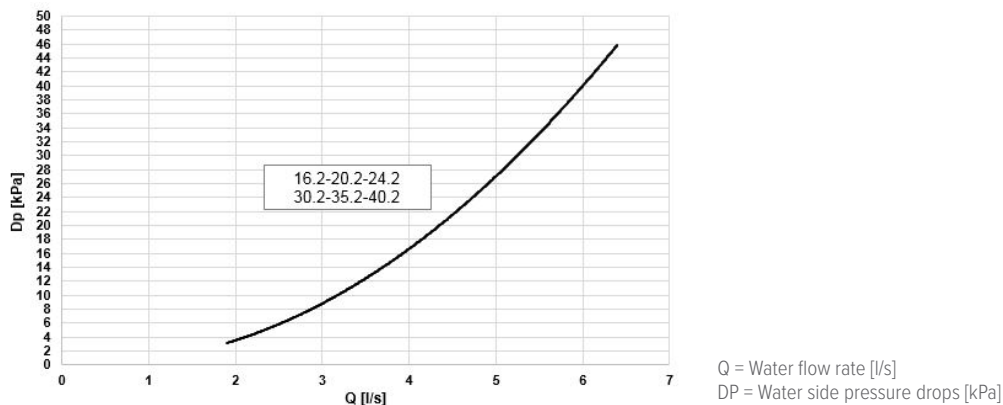
**SNB Main switch on board**  
 Main switch I=67A/AC23 for the unit ON/OFF and M40 fairleads, mounted on board.

**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.

**IFWI Steel mesh strainer on the water side include in the 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 ".

**Steel mesh strainer pressure drops**



**CCME E-coated microchannel coil**  
 The full aluminium microchannel coil is completely treated by electrolysis so as to create a protective layer of epoxy polymer on the surface, with the following characteristics:

- over 3000 hours of protection against salt spray (ASTM G85 A3 - SWAAT);
- over 2000 hours of protection against UV rays (ASTM G155-05a);
- provide a very high resistance against corrosion.

**FEMC EMC filtering for residential, commercial and light industry environments (direct connection to the public grid).**  
 It allows the unit to be installed in residential, commercial or light industrial environments, reducing electromagnetic interference.

# Accessories separately supplied

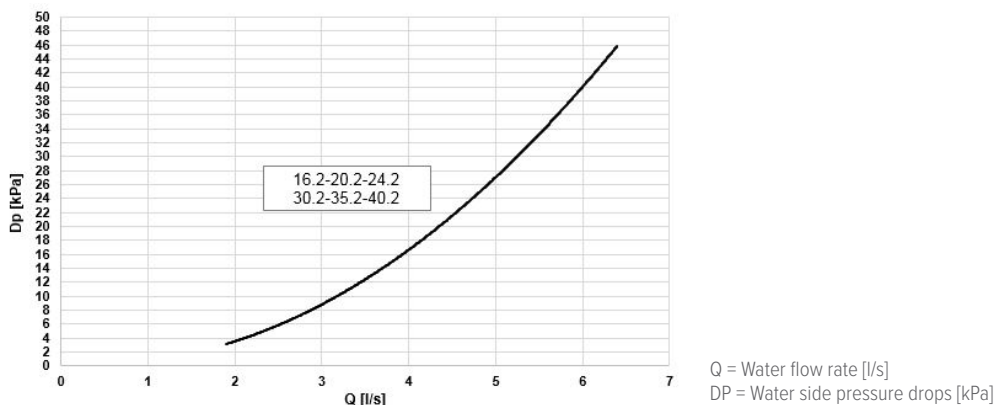
## IFWX

### 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”.

### Steel mesh strainer pressure drops



⚠ Installation is a responsibility of the Customer.

## 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.

⚠ Installation is a responsibility of the Customer.

## 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.

⚠ Installation is a responsibility of the Customer.

## AMMSX

### Anti-seismic spring antivibration mounts

The anti-seismic spring antivibration mounts must be fastened in special housings on the supporting metal struts. The containment structure is designed to ensure high resistance multidirectional forces acting on the surface of the unit in the presence of wind and / or telluric movements. The antivibration mounts have been tested according to ANSI/ASHRAE 171-2008 standard (Method of Testing Seismic Restraint devices for HVAC&R Equipment). The performance levels and the test methodology have been validated and certified by Lloyd's Register.

⚠ Installation is a responsibility of the Customer.

## Performance

SIZE			16.2	20.2	24.2	30.2	35.2	40.2
<b>RADIANT PANELS</b>								
<b>Cooling</b>								
Cooling capacity	kW	1/4	64,0	72,0	80,0	92,0	101	113
EER		2	4,02	3,76	3,07	4,16	3,78	3,37
Water flow-rate	l/s	1	3,14	3,54	3,93	4,50	4,89	5,56
User side exchanger pressure drops	kPa	1	38	47	57	52	61	78
<b>TERMINAL UNIT</b>								
<b>Cooling</b>								
Cooling capacity	kW	3	43	54	65	76	87	98
EER		2	3,30	3,14	2,76	3,25	3,07	2,79
SEER		5	4,97	4,81	4,65	5,37	5,15	4,95
$\eta_{s,c}$	%	6	196	189	183	212	203	195
Water flow-rate	l/s	5	2,14	2,51	3,06	3,60	4,21	4,58
User side exchanger pressure drops	kPa	3	18	25	36	34	46	54

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  $\leq 70$  kW at specified reference conditions) and the Commission delegated Regulation (EU) No 813/2013 (rated heat output  $\leq 400$  kW at specified reference conditions).

1. Entering/leaving water temperature user side 23/18 °C, Entering external exchanger air temperature 35 °C.
2. EER (EN 14511:2018) cooling performance coefficient. Ratio between delivered cooling capacity and power input in compliance with EN 14511:2018.
3. User side entering/leaving water temperature 12/7 °C, external exchanger entering air 35 °C.
4. Data referred to unit operation with inverter frequency optimized for this application.
5. Data calculated according to the EN 14825:2016 Regulation.
6. The seasonal space cooling efficiency  $\eta_{s,c}$  expressed in%.

## Construction

SIZE			16.2	20.2	24.2	30.2	35.2	40.2
<b>Compressor</b>								
Compressor type			ROTARY INVERTER			SCROLL INVERTER		
Refrigerant			R32					
N° compressor	Nr		2	2	2	2	2	2
Oil charge	l		4,6	4,6	4,6	4,2	4,2	4,2
Refrigerant charge	Kg		4,5	4,5	4,5	7,5	7,5	7,5
N° circuits	Nr		1	1	1	1	1	1
<b>User side exchanger</b>								
Type of internal exchanger		1	BHPE					
Water content	l		5,7	5,7	5,7	7,8	7,8	7,8
<b>External Section Fans</b>								
Fans type			BRUSHLESS DC MOTOR					
N° fans	Nr		2	2	2	3	3	3
Standard air-flow	l/s		6944	6944	6944	10417	10417	10417
Installed unit power	kW		0,8	0,8	0,8	0,9	0,9	0,9
<b>Water circuit</b>								
Maximum water side pressure	MPa		1	1	1	1	1	1
Minimum circuit water volume in cooling	l	2	150	150	150	200	200	200
Total internal water volume	l		6	6	6	6	6	6
<b>Power supply</b>								
Standard power supply			400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N

7. BPHE = plate exchanger
8. 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.



# General technical data

## Electrical data

### Supply voltage 400/3/50+N

SIZE		16.2	20.2	24.2	30.2	35.2	40.2
<b>F.L.A. Full load current at max admissible conditions</b>							
F.L.A. - Total	[A]	46,0	46,0	46,0	60,2	60,2	60,2
<b>F.L.I. Full load power input at max admissible conditions</b>							
F.L.I. - Total	[kW]	31,8	31,8	31,8	42,0	42,0	42,0
<b>M.I.C. Maximum inrush current</b>							
M.I.C. - Total	[A]	46,0	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 Clivet technical office.

## 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		
16.2	69	72	73	76	77	73	65	55	65	80
20.2	70	73	74	77	77	74	67	57	66	81
24.2	70	72	75	78	79	75	69	59	67	82
30.2	67	79	73	76	79	74	67	58	66	82
35.2	74	75	75	77	81	75	68	60	68	83
40.2	77	77	75	78	81	76	70	62	69	84

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 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		
16.2	74	72	68	70	72	73	65	57	62	77
20.2	74	72	68	70	72	73	65	57	62	77
24.2	74	72	68	70	72	73	65	57	62	77
30.2	63	79	72	74	74	70	63	54	62	78
35.2	63	79	72	74	74	70	63	54	62	78
40.2	63	79	72	74	74	70	63	54	62	78

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 cooling:  
- internal exchanger water = 12/7°C  
- ambient temperature = 35°C

Silenced mode can be set from the user interface terminal.

### Super silenced mode

SIZE	Sound power level								Sound pressure level	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000		
16.2	52	71	63	69	68	67	58	49	58	73
20.2	52	71	63	69	68	67	58	49	58	73
24.2	52	71	63	69	68	67	58	49	58	73
30.2	64	71	67	72	71	68	63	53	60	75
35.2	64	71	67	72	71	68	63	53	60	75
40.2	64	71	67	72	71	68	63	53	60	75

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 cooling:  
- internal exchanger water = 12/7°C  
- ambient temperature = 35°C

Super Silenced mode can be set from the user interface terminal.

### 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		
16.2	70	72	75	78	79	75	69	59	67	82
20.2	70	72	75	78	79	75	69	59	67	82
24.2	70	72	75	78	79	75	69	59	67	82
30.2	77	77	75	78	81	76	70	62	69	84
35.2	77	77	75	78	81	76	70	62	69	84
40.2	77	77	75	78	81	76	70	62	69	84

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).

# General technical data

## Performance correction factors- Silenced Mode

SIZE		16.2	20.2	24.2	30.2	35.2	40.2
Cooling capacity factor	Nr	0,930	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	1,000
EER factor	Nr	0,930	0,930	0,930	0,930	0,930	0,930

## Performance correction factors - Super Silenced Mode

SIZE		16.2	20.2	24.2	30.2	35.2	40.2
Cooling capacity factor	Nr	0,880	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	1,020
EER factor	Nr	0,86	0,86	0,86	0,86	0,86	0,86

## 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

m <sup>2</sup> K/W	Internal exchanger	
	F1	FK1
0,44x10 <sup>-4</sup>	-	-
0,88x10 <sup>-4</sup>	0,96	0,99
1,76x10 <sup>-4</sup>	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.

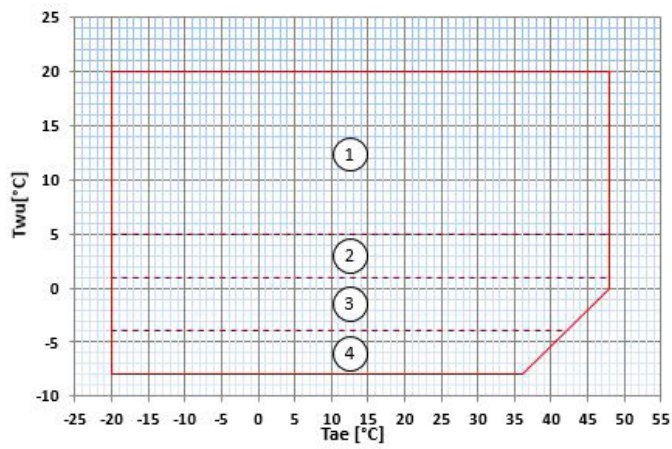
## Overload and control device calibrations

		Open	Close	Value
<b>Refrigerant side</b>				
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	-
<b>Water side</b>				
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 16.2 - 20.2 - 24.2 - 30.2 - 35.2 - 40.2



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

1. Normal operating range.
- Low water temperature function:
2. Operating range where the use of ethylene glycol is mandatory in a percentage above to 10%
3. Operating range where the use of ethylene glycol is mandatory in a percentage above to 20%
4. Operating range where the use of ethylene glycol is mandatory in a percentage above to 30%

# Configurations

## Standard unit

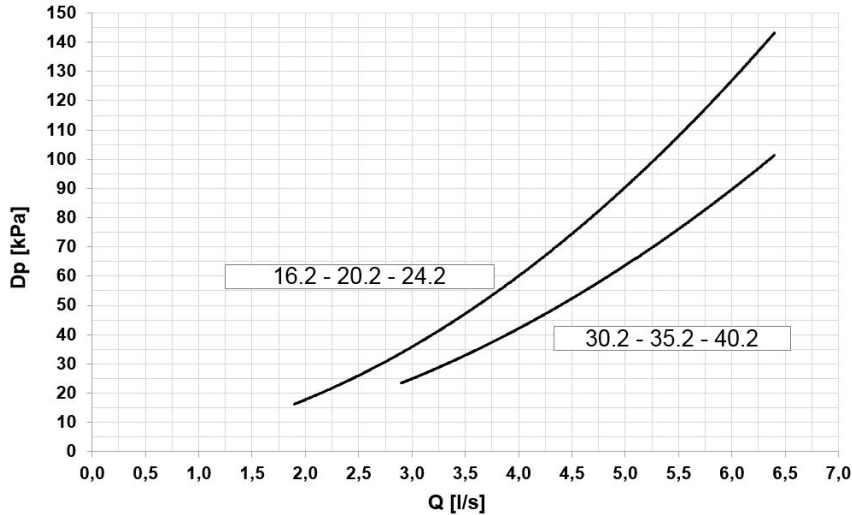
### Internal exchanger pressure drop

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

$$Q \text{ [l/s]} = \frac{kWf}{4,186 \times DT}$$

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

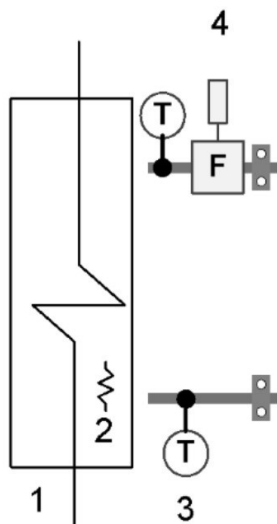
⚠ To the internal exchanger pressure drops, it must be added the pressure drops of the steel mesh mechanical filter that must be placed on the water input line. It is a device mandatory for the correct unit operation, and it is provided by Clivet as accessory.

### Admissible water flow rates

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

SIZE		16.2	20.2	24.2	30.2	35.2	40.2
Minimum flow-rate	[l/s]	1,9	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	6,4

### Hydraulic diagram



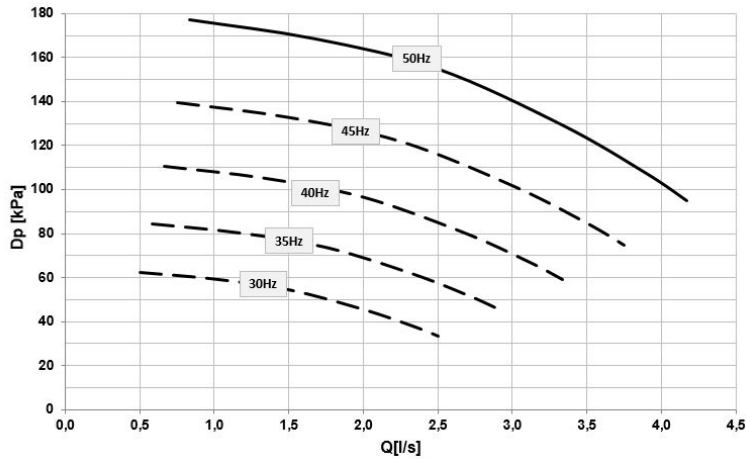
1. Exchanger
2. Anti-freeze resistance
3. Water temperature probe
4. Flow Switch

## 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".

### Inverter pump available pressure curves - Size 16.2 - 20.2 - 24.2

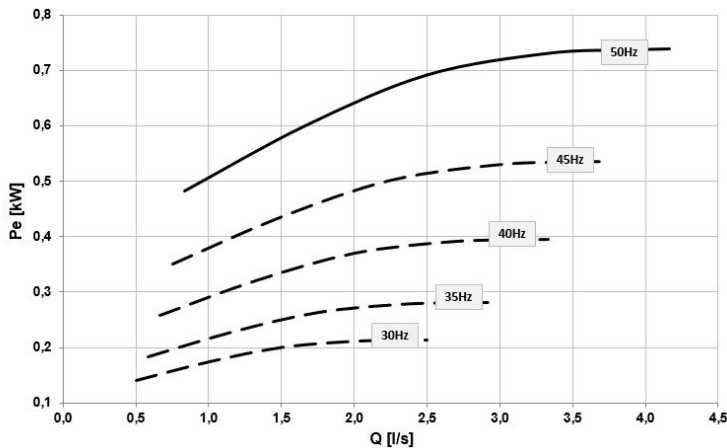


DP = Available pressure [kPa]  
Q = Water flow-rate [l/s]

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

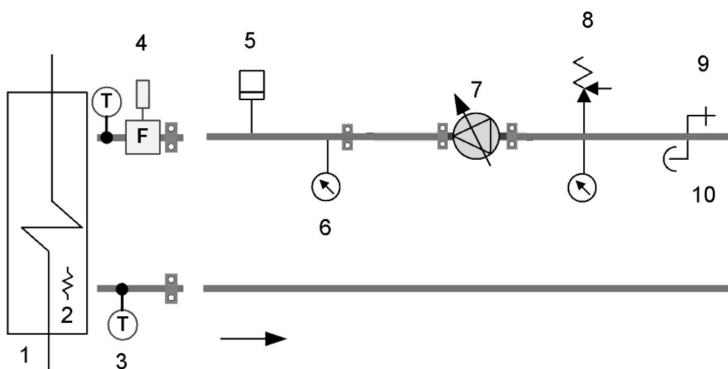
- User side exchanger pressure drops
- IFWX - Steel mesh strainer on the water side" accessory (where present).

### Inverter pump absorption curves - Size 16.2 - 20.2 - 24.2



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

## Hydraulic diagram

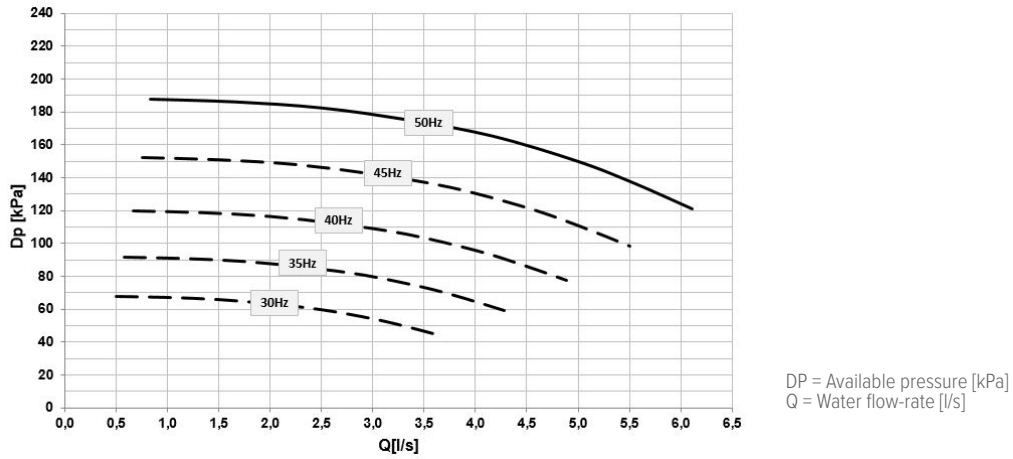


1. Exchanger
2. Antifreeze heater
3. Water temperature probe
4. Flow Switch
5. System load safety pressure switch
6. Pressure gauge
7. Inverter pump
8. Safety valve
9. Discharge
10. Vent

# Configurations

## Hydronic assembly - Unit with 1 inverter pump (HYGU1V)

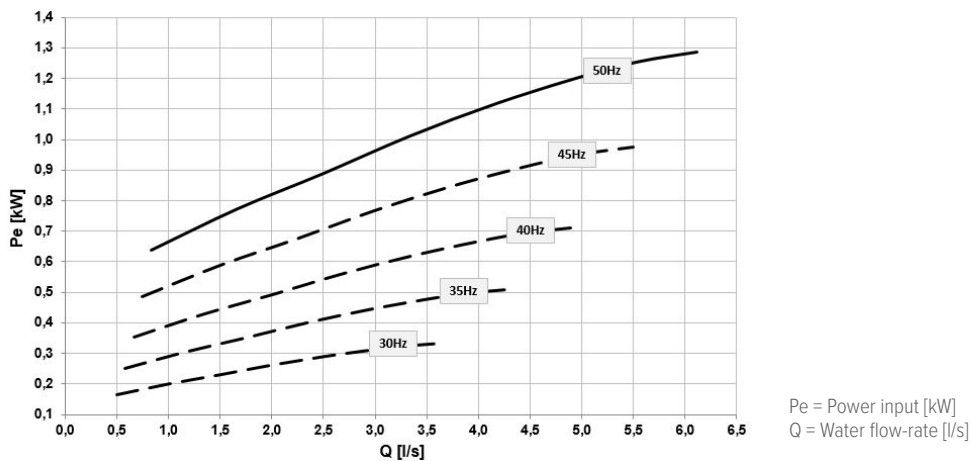
### Inverter pump available pressure curves 30.2 - 35.2 - 40.2



⚠ 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).

### Inverter pump absorption curves - Size 30.2 - 35.2 - 40.2

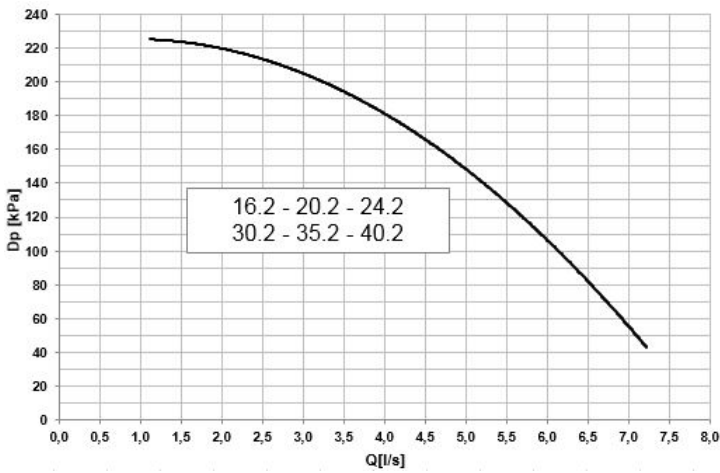


### Electrical data

SIZE		16.2	20.2	24.2	30.2	35.2	40.2
F.L.A.	A	1,90	1,90	1,90	2,50	2,50	2,50
F.L.I.	kW	0,75	0,75	0,75	1,1	1,1	1,1

## Hydronic assembly - Unit with 1 ON/OFF pump

### ON/OFF pump available pressure curves - Size

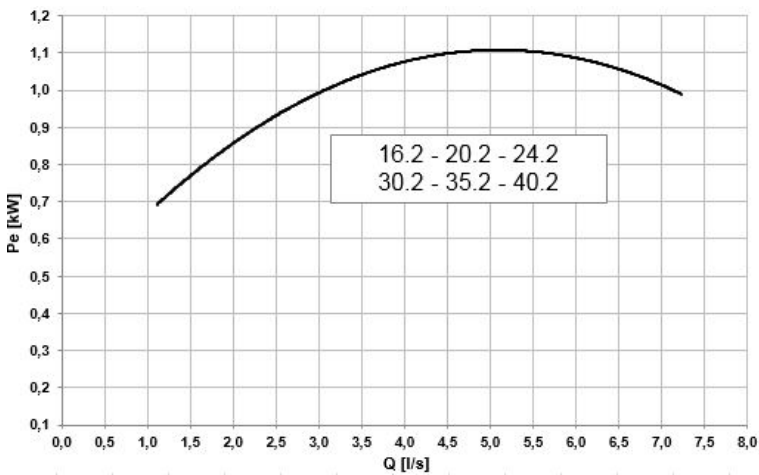


DP = Available pressure [kPa]  
Q = Water flow-rate [l/s]

⚠ 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).

### ON/OFF pump absorption curves



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

## Electrical data

SIZE		16.2	20.2	24.2	30.2	35.2	40.2
F.L.A.	A	2,5	2,5	2,5	2,5	2,5	2,5
F.L.I.	kW	1,1	1,1	1,1	1,1	1,1	1,1



# Performances

## Cooling - Size 16.2

To	Tae	Percentage of compressor load															
		100%		90%		80%		70%		60%		50%		40%		30%	
°C	°C	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER
5	15	50,66	5,38	45,40	5,48	41,04	5,56	36,52	5,93	32,07	6,33	26,91	7,05	22,67	8,10	18,52	9,70
	20	48,39	4,66	43,35	4,77	39,17	4,85	34,81	5,15	30,50	5,46	25,47	5,99	21,34	6,75	17,26	7,74
	25	46,08	4,04	41,29	4,15	37,28	4,22	33,07	4,46	28,91	4,69	24,02	5,08	19,98	5,58	15,97	6,14
	30	43,74	3,51	39,18	3,60	35,35	3,66	31,31	3,85	27,28	4,02	22,54	4,28	18,59	4,58	14,66	4,85
	35	41,37	3,04	37,06	3,12	33,40	3,18	29,52	3,31	25,62	3,43	21,02	3,59	17,17	3,75	13,32	3,82
	40	38,96	2,63	34,89	2,70	31,41	2,75	27,69	2,85	23,94	2,92	19,48	2,99	15,72	3,04	11,95	2,97
	45	36,52	2,28	32,68	2,33	29,39	2,36	25,82	2,43	22,22	2,47	17,90	2,48	14,23	2,45	10,54	2,29
7	15	54,16	5,73	48,54	5,86	43,87	5,94	39,01	6,34	34,22	6,76	28,64	7,50	24,05	8,62	19,54	10,23
	20	51,76	4,95	46,40	5,08	41,92	5,18	37,22	5,49	32,57	5,82	27,14	6,37	22,65	7,15	18,22	8,17
	25	49,34	4,29	44,22	4,41	39,92	4,49	35,39	4,74	30,89	4,99	25,60	5,38	21,22	5,89	16,87	6,46
	30	46,87	3,71	42,00	3,82	37,88	3,89	33,52	4,09	29,16	4,26	24,03	4,53	19,74	4,83	15,47	5,09
	35	43,00	3,30	39,73	3,31	35,80	3,37	31,61	3,52	27,40	3,63	22,41	3,79	18,23	3,94	14,04	3,99
	40	41,79	2,78	37,42	2,86	33,68	2,91	29,65	3,01	25,59	3,09	20,75	3,16	16,67	3,19	12,57	3,10
	45	39,18	2,41	35,06	2,47	31,51	2,51	27,65	2,57	23,74	2,61	19,05	2,61	15,07	2,57	11,05	2,38
10	15	59,60	6,29	53,42	6,45	48,27	6,57	42,87	6,99	37,53	7,46	31,29	8,28	26,15	9,48	21,08	11,27
	20	57,03	5,42	51,12	5,58	46,16	5,69	40,94	6,04	35,75	6,38	29,68	6,98	24,65	7,83	19,68	8,91
	25	54,40	4,67	48,75	4,82	44,00	4,92	38,95	5,19	33,93	5,46	28,01	5,87	23,10	6,42	18,22	7,01
	30	51,71	4,04	46,34	4,17	41,78	4,26	36,91	4,46	32,04	4,65	26,29	4,92	21,49	5,23	16,70	5,48
	35	48,96	3,49	43,86	3,60	39,50	3,67	34,81	3,83	30,11	3,95	24,52	4,11	19,83	4,26	15,13	4,26
	40	46,15	3,02	41,32	3,11	37,16	3,17	32,66	3,28	28,11	3,35	22,69	3,41	18,11	3,43	13,51	3,30
	45	43,27	2,60	38,70	2,68	34,76	2,72	30,43	2,79	26,05	2,82	20,79	2,81	16,33	2,75	11,82	2,52
12	15	63,36	6,68	56,79	6,87	51,29	7,00	45,51	7,46	39,78	7,96	33,09	8,82	27,57	10,14	22,13	12,09
	20	60,66	5,74	54,36	5,92	49,07	6,05	43,47	6,42	37,92	6,80	31,40	7,42	26,00	8,31	20,65	9,47
	25	57,88	4,94	51,87	5,11	46,79	5,22	41,38	5,51	35,99	5,79	29,65	6,23	24,37	6,79	19,12	7,41
	30	55,04	4,26	49,30	4,41	44,44	4,51	39,22	4,73	34,00	4,92	27,83	5,20	22,67	5,53	17,52	5,76
	35	52,12	3,68	46,68	3,80	42,02	3,89	36,99	4,05	31,94	4,18	25,94	4,33	20,91	4,48	15,86	4,47
	40	49,13	3,18	43,97	3,28	39,53	3,34	34,70	3,46	29,81	3,52	23,99	3,59	19,08	3,60	14,13	3,44
	45	46,06	2,74	41,18	2,82	36,96	2,87	32,32	2,94	27,61	2,97	21,97	2,95	17,17	2,88	12,34	2,61
15	15	69,19	7,29	61,99	7,53	55,95	7,71	49,56	8,22	43,23	8,77	35,84	9,77	29,73	11,26	23,71	13,55
	20	66,26	6,24	59,36	6,46	53,55	6,62	47,37	7,03	41,23	7,44	34,02	8,16	28,05	9,14	22,13	10,44
	25	63,25	5,36	56,66	5,56	51,08	5,70	45,10	6,01	39,14	6,31	32,13	6,81	26,29	7,43	20,49	8,10
	30	60,16	4,61	53,87	4,78	48,52	4,90	42,76	5,14	36,98	5,35	30,16	5,66	24,45	5,99	18,76	6,25
	35	56,97	3,97	51,00	4,12	45,88	4,21	40,32	4,39	34,74	4,52	28,10	4,68	22,53	4,84	16,96	4,82
	40	53,70	3,42	48,04	3,54	43,16	3,62	37,81	3,74	32,41	3,81	25,97	3,87	20,54	3,88	15,08	3,69
	45	50,32	2,94	44,98	3,04	40,33	3,09	35,20	3,17	29,99	3,19	23,75	3,17	18,45	3,08	13,12	2,78
18	15	75,21	7,93	67,35	8,23	60,75	8,46	53,72	9,04	46,77	9,66	38,64	10,82	31,92	12,57	25,30	15,33
	20	72,04	6,76	64,51	7,04	58,16	7,24	51,37	7,70	44,61	8,16	36,69	8,97	30,12	10,11	23,62	11,69
	25	68,77	5,79	61,58	6,03	55,48	6,21	48,91	6,56	42,36	6,89	34,65	7,44	28,23	8,14	21,86	8,92
	30	65,41	4,97	58,55	5,17	52,70	5,32	46,36	5,58	40,01	5,81	32,52	6,15	26,25	6,53	20,01	6,83
	35	64,00	4,02	55,42	4,44	49,83	4,56	43,72	4,75	37,57	4,89	30,29	5,07	24,18	5,23	18,07	5,22
	40	58,37	3,67	52,19	3,81	46,85	3,90	40,97	4,03	35,03	4,10	27,97	4,17	22,01	4,17	16,03	3,96
	45	54,68	3,15	48,84	3,27	43,77	3,33	38,12	3,41	32,39	3,43	25,55	3,41	19,74	3,30	13,91	2,97
20	15	79,30	8,37	70,99	8,73	63,99	9,00	56,54	9,63	49,15	10,33	40,52	11,61	33,39	13,63	26,36	16,90
	20	75,95	7,13	68,00	7,44	61,28	7,67	54,06	8,17	46,89	8,68	38,48	9,57	31,51	10,87	24,62	12,69
	25	72,51	6,08	64,90	6,36	58,45	6,55	51,48	6,93	44,52	7,30	36,34	7,90	29,53	8,66	22,78	9,57
	30	68,95	5,22	61,71	5,44	55,52	5,61	48,79	5,89	42,05	6,13	34,10	6,51	27,45	6,91	20,84	7,26
	35	65,29	4,48	58,40	4,67	52,49	4,80	46,00	5,00	39,48	5,15	31,76	5,35	25,27	5,52	18,81	5,52
	40	61,51	3,84	54,98	4,00	49,34	4,10	43,09	4,23	36,79	4,31	29,31	4,38	22,99	4,38	16,67	4,17
	45	57,60	3,30	51,44	3,42	46,07	3,49	40,08	3,58	34,00	3,60	26,75	3,57	20,60	3,45	14,43	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.

## Cooling - Size 20.2

To	Tae	Percentage of compressor load															
		100%		90%		80%		70%		60%		50%		40%		30%	
°C	°C	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER
5	15	59,42	5,14	53,27	5,29	48,00	5,40	42,48	5,70	37,07	6,01	30,96	6,55	25,82	7,31	20,79	8,42
	20	56,69	4,43	50,86	4,57	45,84	4,69	40,55	4,94	35,33	5,20	29,42	5,63	24,41	6,18	19,49	6,91
	25	53,94	3,82	48,43	3,97	43,65	4,07	38,59	4,28	33,57	4,49	27,85	4,80	22,98	5,20	18,17	5,63
	30	51,15	3,31	45,96	3,44	41,44	3,54	36,60	3,71	31,78	3,87	26,25	4,10	21,52	4,35	16,82	4,57
	35	48,32	2,86	43,46	2,98	39,19	3,07	34,58	3,21	29,96	3,33	24,62	3,48	20,03	3,62	15,43	3,68
	40	45,45	2,48	40,93	2,58	36,91	2,66	32,53	2,77	28,10	2,85	22,96	2,94	18,51	3,01	14,02	2,95
45	42,54	2,14	38,35	2,23	34,59	2,30	30,43	2,38	26,21	2,43	21,27	2,48	16,95	2,47	12,57	2,34	
7	15	63,46	5,45	56,93	5,63	51,32	5,76	45,42	6,09	39,60	6,42	33,02	6,98	27,46	7,80	22,01	8,91
	20	60,60	4,69	54,41	4,86	49,06	4,99	43,39	5,27	37,78	5,54	31,39	5,98	25,98	6,56	20,65	7,30
	25	57,70	4,04	51,85	4,21	46,75	4,33	41,32	4,55	35,91	4,77	29,74	5,10	24,47	5,50	19,25	5,92
	30	54,76	3,49	49,25	3,64	44,41	3,75	39,21	3,93	34,02	4,10	28,04	4,33	22,92	4,59	17,81	4,80
	35	54,00	3,14	46,60	3,15	42,03	3,25	37,07	3,40	32,07	3,52	26,31	3,68	21,33	3,82	16,34	3,86
	40	48,72	2,61	43,89	2,73	39,59	2,81	34,87	2,93	30,09	3,02	24,53	3,11	19,69	3,16	14,82	3,08
10	15	69,77	5,94	62,64	6,17	56,49	6,33	49,96	6,70	43,50	7,06	36,17	7,68	29,97	8,56	23,86	9,78
	20	66,69	5,09	59,93	5,30	54,05	5,47	47,77	5,77	41,54	6,06	34,43	6,55	28,38	7,17	22,40	7,94
	25	63,56	4,37	57,16	4,57	51,56	4,73	45,53	4,97	39,52	5,21	32,63	5,56	26,74	5,98	20,88	6,43
	30	60,37	3,77	54,33	3,95	49,01	4,09	43,23	4,29	37,45	4,47	30,78	4,71	25,04	4,98	19,32	5,18
	35	57,11	3,26	51,44	3,42	46,40	3,53	40,88	3,69	35,32	3,82	28,87	3,99	23,30	4,12	17,70	4,15
	40	53,78	2,81	48,47	2,95	43,72	3,05	38,46	3,18	33,12	3,27	26,90	3,36	21,49	3,40	16,02	3,30
45	50,38	2,43	45,44	2,55	40,98	2,63	35,98	2,72	30,87	2,78	24,88	2,81	19,62	2,79	14,29	2,60	
12	15	74,15	6,27	66,60	6,54	60,05	6,73	53,08	7,13	46,18	7,52	38,32	8,19	31,66	9,12	25,10	10,42
	20	70,91	5,36	63,74	5,61	57,48	5,80	50,78	6,12	44,11	6,44	36,49	6,95	30,00	7,61	23,57	8,42
	25	67,61	4,61	60,82	4,83	54,86	5,00	48,41	5,27	41,98	5,52	34,59	5,89	28,27	6,34	21,98	6,78
	30	64,23	3,97	57,82	4,17	52,16	4,32	45,98	4,53	39,78	4,72	32,63	4,98	26,48	5,25	20,33	5,45
	35	60,78	3,42	54,76	3,60	49,39	3,73	43,48	3,90	37,51	4,03	30,61	4,21	24,62	4,34	18,61	4,35
	40	57,25	2,95	51,61	3,11	46,55	3,22	40,90	3,34	35,18	3,44	28,51	3,53	22,69	3,57	16,83	3,45
45	53,62	2,55	48,38	2,68	43,62	2,77	38,26	2,87	32,77	2,92	26,34	2,96	20,70	2,92	14,98	2,71	
15	15	80,95	6,79	72,73	7,12	65,57	7,37	57,89	7,80	50,28	8,24	41,61	9,01	34,25	10,07	26,99	11,53
	20	77,45	5,78	69,64	6,09	62,79	6,32	55,41	6,68	48,05	7,03	39,64	7,59	32,46	8,34	25,36	9,26
	25	73,87	4,96	66,46	5,23	59,94	5,43	52,84	5,73	45,73	5,99	37,58	6,41	30,59	6,89	23,65	7,39
	30	70,20	4,26	63,20	4,50	57,00	4,68	50,19	4,91	43,35	5,11	35,45	5,40	28,65	5,70	21,86	5,89
	35	66,43	3,67	59,85	3,87	53,98	4,03	47,46	4,21	40,87	4,36	33,24	4,54	26,63	4,69	19,99	4,68
	40	62,57	3,17	56,41	3,34	50,87	3,47	44,64	3,61	38,31	3,71	30,95	3,81	24,52	3,84	18,05	3,69
45	58,60	2,72	52,87	2,88	47,66	2,98	41,73	3,08	35,67	3,14	28,56	3,17	22,33	3,12	16,02	2,89	
18	15	88,00	7,32	79,07	7,72	71,26	8,04	62,84	8,54	54,48	9,04	44,97	9,91	36,88	11,14	28,91	12,91
	20	84,21	6,22	75,72	6,58	68,26	6,87	60,16	7,27	52,08	7,66	42,84	8,30	34,96	9,15	27,16	10,21
	25	80,32	5,32	72,27	5,63	65,17	5,88	57,38	6,20	49,57	6,51	40,63	6,97	32,95	7,52	25,32	8,09
	30	76,32	4,57	68,73	4,84	61,97	5,05	54,50	5,31	46,98	5,53	38,31	5,85	30,85	6,17	23,39	6,41
	35	72,00	3,76	65,08	4,16	58,68	4,34	51,52	4,54	44,29	4,70	35,91	4,90	28,65	5,05	21,38	5,05
	40	68,01	3,38	61,33	3,58	55,28	3,73	48,44	3,88	41,49	3,99	33,41	4,09	26,36	4,13	19,27	3,97
45	63,68	2,91	57,46	3,08	51,77	3,20	45,26	3,31	38,60	3,37	30,81	3,40	23,98	3,34	17,07	3,08	
20	15	92,79	7,68	83,37	8,14	75,13	8,51	66,20	9,04	57,33	9,60	47,23	10,57	38,64	11,93	30,19	13,98
	20	88,80	6,52	79,84	6,92	71,96	7,25	63,37	7,68	54,79	8,12	45,00	8,82	36,63	9,74	28,36	10,95
	25	84,68	5,56	76,21	5,91	68,70	6,20	60,44	6,54	52,16	6,87	42,67	7,37	34,52	7,97	26,44	8,61
	30	80,46	4,77	72,46	5,07	65,33	5,31	57,40	5,58	49,42	5,82	40,24	6,16	32,31	6,51	24,42	6,78
	35	76,13	4,10	68,60	4,36	61,85	4,55	54,25	4,77	46,58	4,93	37,70	5,15	30,01	5,32	22,30	5,32
	40	71,68	3,53	64,63	3,74	58,25	3,91	51,00	4,07	43,63	4,18	35,06	4,29	27,59	4,32	20,09	4,16
45	67,09	3,03	60,53	3,22	54,53	3,35	47,63	3,46	40,56	3,53	32,31	3,56	25,08	3,50	17,77	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

Cooling capacity and EER calculated according to EN 14511:2018

# Performances

## Cooling - Size 24.2

To	Tae	Percentage of compressor load															
		100%		90%		80%		70%		60%		50%		40%		30%	
°C	°C	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER
5	15	72,40	4,71	65,49	4,92	58,49	5,10	51,06	5,36	45,47	5,56	37,50	5,96	29,77	6,59	23,83	7,24
	20	68,88	4,02	62,40	4,22	55,80	4,40	48,75	4,63	43,40	4,81	35,74	5,14	28,25	5,63	22,46	6,09
	25	65,31	3,45	59,29	3,64	53,10	3,81	46,40	4,01	41,30	4,16	33,95	4,43	26,71	4,80	21,07	5,09
	30	61,71	2,97	56,14	3,14	50,36	3,30	44,03	3,48	39,17	3,60	32,13	3,81	25,14	4,07	19,66	4,23
	35	58,06	2,56	52,95	2,71	47,57	2,86	41,62	3,01	37,01	3,11	30,28	3,27	23,54	3,44	18,21	3,50
	40	54,37	2,20	49,72	2,34	44,76	2,47	39,17	2,60	34,80	2,68	28,40	2,81	21,91	2,90	16,73	2,87
	45	50,62	1,89	46,43	2,02	41,89	2,14	36,68	2,25	32,56	2,31	26,47	2,40	20,24	2,43	15,21	2,34
7	15	77,11	4,95	69,86	5,20	62,46	5,42	54,57	5,70	48,60	5,92	40,06	6,35	31,73	7,00	25,30	7,69
	20	73,43	4,22	66,63	4,45	59,66	4,67	52,14	4,92	46,42	5,10	38,20	5,47	30,13	5,97	23,87	6,43
	25	69,69	3,62	63,36	3,83	56,81	4,03	49,67	4,25	44,20	4,41	36,31	4,70	28,50	5,07	22,40	5,36
	30	65,91	3,11	60,04	3,30	53,92	3,48	47,16	3,68	41,95	3,80	34,38	4,04	26,84	4,30	20,89	4,45
	35	65,00	2,76	56,67	2,85	50,98	3,01	44,61	3,18	39,65	3,29	32,41	3,46	25,13	3,63	19,35	3,67
	40	58,16	2,31	53,25	2,46	47,98	2,61	42,00	2,75	37,30	2,83	30,39	2,96	23,38	3,06	17,76	3,01
	45	54,19	1,98	49,76	2,12	44,94	2,25	39,34	2,37	34,90	2,43	28,33	2,53	21,58	2,56	16,12	2,45
10	15	84,55	5,18	76,72	5,49	68,70	5,76	60,04	6,08	53,44	6,31	43,99	6,78	34,73	7,49	27,55	8,20
	20	80,59	4,41	73,26	4,68	65,68	4,94	57,41	5,22	51,09	5,42	41,99	5,82	33,01	6,36	26,00	6,82
	25	76,56	3,78	69,73	4,02	62,59	4,26	54,74	4,50	48,69	4,66	39,93	4,98	31,24	5,38	24,41	5,66
	30	72,47	3,24	66,13	3,46	59,46	3,67	52,01	3,88	46,23	4,02	37,83	4,27	29,42	4,54	22,77	4,68
	35	68,31	2,79	62,47	2,99	56,25	3,17	49,21	3,35	43,71	3,46	35,66	3,65	27,54	3,83	21,07	3,85
	40	64,06	2,40	58,73	2,58	52,98	2,74	46,35	2,89	41,12	2,98	33,43	3,11	25,61	3,21	19,31	3,15
	45	59,73	2,06	54,92	2,22	49,63	2,36	43,42	2,49	38,47	2,56	31,14	2,65	23,61	2,68	17,49	2,55
12	15	89,74	5,25	81,49	5,58	73,01	5,90	63,80	6,23	56,77	6,47	46,68	6,96	36,76	7,69	29,06	8,45
	20	85,58	4,46	77,85	4,76	69,84	5,04	61,05	5,34	54,30	5,54	44,57	5,94	34,96	6,51	27,45	7,00
	25	81,32	3,81	74,13	4,08	66,59	4,33	58,22	4,59	51,76	4,76	42,40	5,08	33,09	5,49	25,77	5,78
	30	77,01	3,27	70,33	3,50	63,27	3,73	55,33	3,95	49,15	4,09	40,17	4,34	31,17	4,63	24,03	4,77
	35	72,61	2,81	66,46	3,02	59,88	3,22	52,37	3,40	46,47	3,51	37,87	3,71	29,17	3,88	22,22	3,90
	40	68,11	2,42	62,49	2,60	56,40	2,78	49,32	2,93	43,72	3,02	35,49	3,16	27,10	3,25	20,35	3,18
	45	63,52	2,08	58,44	2,24	52,84	2,40	46,20	2,52	40,89	2,59	33,05	2,68	24,97	2,71	18,41	2,57
15	15	97,81	5,25	88,93	5,64	79,73	6,01	69,64	6,37	61,91	6,61	50,81	7,14	39,88	7,93	31,37	8,71
	20	93,32	4,45	84,97	4,79	76,29	5,12	66,65	5,43	59,22	5,63	48,53	6,06	37,93	6,65	29,63	7,17
	25	88,72	3,79	80,94	4,09	72,76	4,38	63,58	4,64	56,47	4,82	46,18	5,16	35,91	5,59	27,82	5,88
	30	84,03	3,25	76,82	3,51	69,15	3,76	60,44	3,99	53,63	4,13	43,74	4,39	33,81	4,68	25,93	4,82
	35	79,25	2,79	72,60	3,02	65,45	3,24	57,20	3,43	50,71	3,54	41,22	3,74	31,64	3,92	23,96	3,92
	40	74,36	2,40	68,28	2,60	61,65	2,79	53,87	2,95	47,69	3,03	38,62	3,17	29,37	3,26	21,92	3,18
	45	69,34	2,06	63,85	2,24	57,75	2,40	50,44	2,53	44,58	2,59	35,93	2,69	27,03	2,71	19,79	2,56
18	15	106,05	5,24	96,64	5,69	86,68	6,12	75,66	6,51	67,18	6,75	55,02	7,33	43,05	8,20	33,70	9,11
	20	101,24	4,44	92,36	4,82	82,96	5,20	72,42	5,52	64,28	5,73	52,57	6,19	40,95	6,84	31,84	7,41
	25	96,34	3,78	87,98	4,11	79,13	4,43	69,10	4,71	61,29	4,88	50,01	5,25	38,77	5,70	29,89	6,03
	30	91,27	3,24	83,50	3,52	75,20	3,80	65,68	4,03	58,20	4,17	47,37	4,45	36,49	4,76	27,84	4,90
	35	86,07	2,78	80,00	3,07	71,17	3,26	62,15	3,46	55,01	3,57	44,63	3,77	34,12	3,96	25,72	3,98
	40	80,73	2,39	74,20	2,60	67,02	2,80	58,51	2,96	51,72	3,05	41,79	3,20	31,66	3,29	23,49	3,21
	45	75,28	2,05	69,36	2,23	62,76	2,41	54,76	2,54	48,32	2,60	38,85	2,70	29,10	2,72	21,18	2,57
20	15	111,74	5,24	101,74	5,73	91,40	6,21	79,74	6,62	70,76	6,88	57,87	7,50	45,17	8,43	35,26	9,43
	20	106,61	4,44	97,35	4,85	87,47	5,25	76,33	5,60	67,70	5,82	55,28	6,30	42,98	6,99	33,31	7,61
	25	101,39	3,78	92,74	4,13	83,43	4,48	72,82	4,77	64,54	4,95	52,60	5,32	40,68	5,80	31,27	6,16
	30	96,13	3,24	88,00	3,53	79,29	3,83	69,20	4,07	61,28	4,21	49,81	4,50	38,28	4,83	29,12	4,98
	35	90,64	2,78	83,16	3,03	75,03	3,29	65,47	3,48	57,91	3,60	46,91	3,81	35,79	4,01	26,88	4,02
	40	85,02	2,39	78,18	2,61	70,64	2,82	61,63	2,99	54,42	3,07	43,91	3,22	33,19	3,32	24,54	3,24
	45	79,26	2,05	73,07	2,24	66,13	2,42	57,66	2,56	50,83	2,62	40,80	2,72	30,49	2,74	22,11	2,59

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

## Cooling - Size 30.2

To	Tae	Percentage of compressor load															
		100%		90%		80%		70%		60%		50%		40%		30%	
°C	°C	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER
5	15	84,01	5,15	76,86	5,28	70,53	5,37	62,61	5,66	54,46	5,93	50,69	6,19	38,71	6,65	29,90	6,97
	20	81,09	4,58	74,16	4,74	67,99	4,86	60,24	5,14	52,25	5,42	48,54	5,64	36,71	6,12	27,99	6,43
	25	78,14	4,03	71,44	4,20	65,44	4,33	57,87	4,59	50,02	4,82	46,38	5,00	34,71	5,40	26,07	5,61
	30	75,17	3,53	68,69	3,69	62,87	3,81	55,48	4,02	47,79	4,21	44,21	4,34	32,69	4,60	24,14	4,66
	35	72,16	3,07	65,92	3,21	60,27	3,32	53,07	3,49	45,54	3,63	42,02	3,70	30,67	3,82	22,21	3,72
	40	69,12	2,67	63,12	2,78	57,66	2,87	50,65	3,00	43,28	3,08	39,83	3,12	28,65	3,11	20,27	2,90
	45	66,05	2,31	60,29	2,40	55,02	2,47	48,20	2,56	41,00	2,59	37,61	2,60	26,61	2,50	18,32	2,21
7	15	89,20	5,42	81,58	5,57	74,82	5,67	66,34	5,98	57,61	6,26	53,56	6,53	40,72	7,01	31,28	7,31
	20	86,10	4,82	78,71	4,99	72,13	5,12	63,84	5,43	55,27	5,71	51,30	5,94	38,63	6,44	29,28	6,73
	25	82,99	4,25	75,85	4,43	69,44	4,56	61,35	4,84	52,95	5,09	49,05	5,27	36,54	5,67	27,28	5,87
	30	79,85	3,72	72,96	3,89	66,75	4,02	58,85	4,25	50,62	4,44	46,79	4,57	34,45	4,85	25,29	4,87
	35	76,00	3,25	70,06	3,39	64,05	3,50	56,35	3,68	48,30	3,83	44,54	3,90	32,38	4,03	23,31	3,91
	40	73,53	2,81	67,16	2,94	61,34	3,04	53,85	3,17	45,97	3,26	42,28	3,29	30,31	3,29	21,33	3,04
	45	70,34	2,44	64,23	2,54	58,62	2,62	51,34	2,71	43,65	2,75	40,03	2,75	28,25	2,65	19,37	2,33
10	15	97,30	5,69	88,96	5,87	81,53	6,00	72,19	6,33	62,55	6,63	58,08	6,90	43,90	7,40	33,47	7,69
	20	93,95	5,06	85,86	5,26	78,63	5,41	69,50	5,73	60,05	6,04	55,66	6,27	41,66	6,79	31,33	7,07
	25	90,58	4,46	82,77	4,66	75,76	4,82	66,85	5,11	57,58	5,37	53,26	5,55	39,46	5,97	29,23	6,15
	30	87,24	3,91	79,71	4,10	72,89	4,24	64,19	4,48	55,12	4,69	50,89	4,82	37,27	5,10	27,15	5,12
	35	83,89	3,41	76,63	3,58	70,03	3,71	61,56	3,90	52,69	4,05	48,53	4,12	35,11	4,24	25,09	4,10
	40	80,54	2,97	73,57	3,11	67,19	3,22	58,95	3,36	50,28	3,45	46,20	3,48	32,99	3,47	23,07	3,21
	45	77,17	2,58	70,50	2,69	64,35	2,78	56,35	2,88	47,88	2,92	43,89	2,92	30,88	2,81	21,07	2,47
12	15	102,82	5,77	94,13	5,98	86,24	6,13	76,29	6,47	66,02	6,78	61,24	7,05	46,14	7,58	35,02	7,89
	20	99,44	5,14	90,88	5,36	83,22	5,52	73,49	5,86	63,42	6,16	58,73	6,40	43,82	6,92	32,80	7,23
	25	95,93	4,53	87,66	4,75	80,21	4,92	70,71	5,21	60,85	5,49	56,24	5,66	41,53	6,10	30,62	6,29
	30	92,44	3,97	84,46	4,17	77,22	4,33	67,98	4,58	58,31	4,80	53,80	4,91	39,28	5,20	28,48	5,22
	35	88,96	3,47	81,28	3,65	74,27	3,79	65,26	3,98	55,81	4,13	51,38	4,21	37,08	4,34	26,38	4,18
	40	85,49	3,02	78,11	3,18	71,34	3,29	62,58	3,44	53,34	3,53	49,00	3,56	34,91	3,55	24,33	3,28
	45	82,03	2,63	74,96	2,76	68,44	2,85	59,93	2,95	50,90	2,99	46,65	2,99	32,78	2,88	22,31	2,53
15	15	114,01	5,94	104,22	6,18	95,59	6,37	84,46	6,74	72,99	7,08	67,62	7,36	50,71	7,95	38,25	8,28
	20	110,18	5,28	100,83	5,54	92,29	5,74	81,43	6,10	70,17	6,44	64,91	6,66	48,21	7,26	35,88	7,59
	25	106,38	4,66	97,35	4,91	89,05	5,11	78,44	5,43	67,41	5,72	62,24	5,89	45,77	6,38	33,55	6,58
	30	102,74	4,10	93,91	4,32	85,85	4,51	75,50	4,77	64,70	5,00	59,63	5,12	43,38	5,43	31,29	5,46
	35	99,04	3,59	90,49	3,79	82,70	3,94	72,62	4,15	62,04	4,31	57,08	4,37	41,06	4,53	29,07	4,37
	40	95,33	3,13	87,12	3,30	79,57	3,43	69,79	3,58	59,45	3,69	54,58	3,71	38,80	3,71	26,93	3,43
	45	91,64	2,73	83,79	2,87	76,50	2,98	67,00	3,08	56,91	3,13	52,15	3,12	36,60	3,02	24,86	2,66
18	15	126,23	6,16	115,36	6,46	105,65	6,69	93,40	7,11	80,60	7,51	74,60	7,80	55,73	8,50	41,83	8,92
	20	122,09	5,49	111,57	5,79	102,24	6,04	90,14	6,44	77,57	6,82	71,70	7,06	53,06	7,75	39,28	8,15
	25	118,01	4,86	107,82	5,14	98,76	5,39	86,94	5,74	74,62	6,06	68,86	6,25	50,46	6,80	36,80	7,05
	30	113,98	4,28	104,28	4,54	95,34	4,75	83,82	5,04	71,76	5,30	66,10	5,42	47,94	5,79	34,41	5,82
	35	110,00	3,76	100,67	3,99	92,00	4,16	80,76	4,39	68,96	4,58	63,41	4,64	45,51	4,83	32,10	4,67
	40	106,06	3,29	97,09	3,49	88,70	3,63	77,78	3,80	66,24	3,92	60,80	3,94	43,15	3,96	29,88	3,67
	45	102,29	2,88	93,58	3,04	85,48	3,16	74,87	3,28	63,59	3,34	58,27	3,32	40,88	3,22	27,73	2,85
20	15	133,23	6,19	121,77	6,52	111,49	6,77	98,53	7,23	84,96	7,68	78,59	7,99	58,59	8,78	43,83	9,27
	20	128,95	5,53	117,84	5,85	107,84	6,12	95,15	6,55	81,84	6,97	75,60	7,22	55,84	7,99	41,21	8,46
	25	124,74	4,90	113,98	5,21	104,37	5,47	91,87	5,84	78,81	6,20	72,68	6,38	53,17	7,01	38,68	7,31
	30	120,59	4,33	110,20	4,60	100,88	4,84	88,67	5,14	75,88	5,42	69,86	5,54	50,59	5,95	36,23	6,03
	35	116,50	3,81	106,48	4,05	97,45	4,25	85,54	4,49	73,02	4,68	67,13	4,75	48,12	4,96	33,88	4,82
	40	112,45	3,34	102,98	3,55	94,09	3,71	82,50	3,88	70,25	4,01	64,49	4,03	45,74	4,07	31,63	3,78
	45	108,46	2,93	99,39	3,10	90,80	3,23	79,55	3,35	67,58	3,42	61,93	3,40	43,45	3,31	29,48	2,94

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

## Cooling - Size 35.2

To	Tae	Percentage of compressor load															
		100%		90%		80%		70%		60%		50%		40%		30%	
°C	°C	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER
5	15	94,58	4,84	86,89	5,03	78,84	5,18	71,15	5,44	61,05	5,71	52,86	6,01	43,29	6,35	33,40	6,60
	20	91,27	4,26	83,87	4,45	76,07	4,64	68,59	4,89	58,71	5,17	50,67	5,46	41,25	5,80	31,47	6,06
	25	87,92	3,72	80,82	3,92	73,29	4,11	66,02	4,34	56,37	4,60	48,47	4,84	39,19	5,13	29,52	5,31
	30	84,53	3,24	77,73	3,43	70,48	3,60	63,41	3,80	54,00	4,02	46,26	4,21	37,12	4,41	27,56	4,47
	35	81,11	2,82	74,62	2,99	67,64	3,14	60,79	3,30	51,62	3,48	44,04	3,61	35,05	3,71	25,60	3,64
	40	77,63	2,44	71,48	2,59	64,78	2,73	58,15	2,85	49,22	2,98	41,80	3,05	32,96	3,07	23,63	2,90
	45	74,11	2,12	68,28	2,24	61,89	2,36	55,48	2,45	46,80	2,53	39,55	2,56	30,86	2,51	21,66	2,27
7	15	100,43	5,09	92,26	5,29	83,69	5,46	75,47	5,74	64,65	6,03	55,88	6,34	45,64	6,69	35,04	6,94
	20	96,92	4,47	89,06	4,69	80,76	4,89	72,76	5,15	62,20	5,46	53,59	5,76	43,49	6,11	33,01	6,36
	25	93,37	3,91	85,83	4,12	77,82	4,33	70,04	4,57	59,73	4,85	51,29	5,10	41,35	5,40	30,99	5,56
	30	89,79	3,41	82,58	3,61	74,87	3,80	67,33	4,01	57,27	4,24	48,99	4,44	39,21	4,64	28,97	4,68
	35	87,00	3,07	79,32	3,15	71,91	3,32	64,60	3,49	54,80	3,67	46,70	3,80	37,07	3,91	26,96	3,82
	40	82,54	2,58	76,04	2,73	68,93	2,88	61,87	3,02	52,33	3,15	44,40	3,22	34,94	3,24	24,95	3,05
	45	78,87	2,23	72,72	2,37	65,93	2,49	59,11	2,60	49,85	2,68	42,10	2,71	32,81	2,66	22,95	2,40
10	15	109,42	5,30	100,64	5,55	91,28	5,75	82,23	6,05	70,32	6,37	60,64	6,69	49,33	7,08	37,62	7,33
	20	105,59	4,66	97,18	4,92	88,11	5,14	79,32	5,43	67,68	5,76	58,18	6,07	47,04	6,44	35,47	6,69
	25	101,76	4,08	93,71	4,33	84,95	4,56	76,41	4,81	65,05	5,11	55,74	5,38	44,77	5,68	33,33	5,85
	30	98,07	3,57	90,23	3,79	81,80	4,00	73,51	4,23	62,45	4,47	53,33	4,68	42,53	4,89	31,22	4,92
	35	94,21	3,11	86,75	3,31	78,65	3,50	70,63	3,68	59,86	3,87	50,93	4,01	40,31	4,12	29,13	4,02
	40	90,33	2,71	83,27	2,88	75,51	3,05	67,76	3,19	57,28	3,33	48,55	3,41	38,11	3,42	27,08	3,22
	45	86,45	2,35	79,77	2,50	72,37	2,64	64,89	2,75	54,72	2,84	46,19	2,87	35,94	2,82	25,05	2,55
12	15	115,80	5,36	106,38	5,62	96,60	5,86	86,97	6,16	74,29	6,50	63,98	6,84	51,93	7,23	39,45	7,49
	20	111,76	4,72	102,74	4,98	93,27	5,24	83,92	5,53	71,54	5,87	61,42	6,19	49,55	6,58	37,21	6,84
	25	107,76	4,14	99,24	4,39	89,97	4,64	80,89	4,90	68,81	5,21	58,89	5,48	47,20	5,80	35,00	5,97
	30	103,74	3,61	95,62	3,85	86,69	4,08	77,88	4,30	66,11	4,56	56,40	4,77	44,89	4,99	32,83	5,02
	35	99,88	3,16	92,00	3,37	83,43	3,57	74,90	3,75	63,45	3,95	53,94	4,10	42,62	4,21	30,70	4,10
	40	95,85	2,75	88,38	2,93	80,18	3,11	71,95	3,25	60,80	3,40	51,50	3,48	40,38	3,50	28,61	3,29
	45	91,82	2,40	84,77	2,55	76,94	2,70	69,01	2,81	58,19	2,91	49,11	2,94	38,18	2,89	26,57	2,61
15	15	125,86	5,36	115,67	5,66	104,86	5,92	94,48	6,26	80,61	6,63	69,30	6,99	56,07	7,42	42,37	7,72
	20	121,57	4,73	111,75	5,02	101,36	5,30	91,23	5,61	77,68	5,98	66,59	6,32	53,56	6,74	40,01	7,02
	25	117,29	4,15	107,90	4,43	97,96	4,70	88,03	4,98	74,80	5,31	63,93	5,59	51,10	5,93	37,71	6,12
	30	113,03	3,64	104,05	3,89	94,49	4,14	84,87	4,37	71,99	4,65	61,33	4,87	48,70	5,09	35,45	5,15
	35	108,78	3,18	100,37	3,41	91,06	3,63	81,75	3,82	69,20	4,03	58,78	4,18	46,35	4,30	33,26	4,20
	40	104,56	2,78	96,61	2,98	87,67	3,17	78,67	3,32	66,47	3,48	56,27	3,56	44,06	3,58	31,13	3,38
	45	100,44	2,43	92,83	2,60	84,31	2,76	75,63	2,87	63,79	2,98	53,82	3,01	41,83	2,96	29,06	2,69
18	15	136,64	5,37	125,58	5,71	113,86	6,02	102,39	6,38	87,39	6,81	75,01	7,21	60,54	7,70	45,54	8,07
	20	132,06	4,75	121,46	5,08	110,12	5,40	99,10	5,73	84,31	6,14	72,18	6,51	57,91	6,99	43,07	7,34
	25	127,55	4,19	117,37	4,49	106,42	4,79	95,75	5,09	81,30	5,45	69,40	5,76	55,35	6,14	40,67	6,37
	30	123,05	3,68	113,34	3,95	102,80	4,23	92,44	4,48	78,35	4,78	66,69	5,01	52,86	5,27	38,34	5,35
	35	118,59	3,23	109,36	3,47	101,00	3,78	89,20	3,92	75,47	4,15	64,06	4,31	50,44	4,44	36,09	4,36
	40	114,16	2,83	105,39	3,04	95,83	3,25	86,00	3,41	72,66	3,58	61,49	3,68	48,10	3,71	33,92	3,51
	45	109,76	2,48	101,48	2,66	92,35	2,84	82,87	2,96	69,91	3,08	59,00	3,12	45,84	3,07	31,83	2,80
20	15	144,17	5,40	132,54	5,76	120,19	6,11	108,05	6,49	92,16	6,97	79,05	7,42	63,71	7,97	47,79	8,43
	20	139,45	4,79	128,28	5,14	116,32	5,49	104,52	5,84	88,98	6,29	76,13	6,70	61,00	7,22	45,25	7,63
	25	134,76	4,23	124,06	4,55	112,51	4,88	101,12	5,19	85,89	5,59	73,28	5,93	58,37	6,35	42,79	6,62
	30	130,14	3,73	119,91	4,02	108,76	4,31	97,81	4,58	82,87	4,90	70,51	5,16	55,83	5,44	40,42	5,55
	35	125,54	3,28	115,81	3,54	105,10	3,80	94,48	4,01	79,94	4,26	67,83	4,44	53,37	4,59	38,13	4,52
	40	121,01	2,89	111,75	3,11	101,50	3,33	91,22	3,50	77,08	3,69	65,23	3,79	51,01	3,83	35,94	3,63
	45	116,48	2,54	107,74	2,73	98,08	2,92	88,03	3,05	74,29	3,17	62,70	3,22	48,73	3,18	33,84	2,90

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

## Raffreddamento - Grandezza 40.2

To	Tae	Percentage of compressor load															
		100%		90%		80%		70%		60%		50%		40%		30%	
°C	°C	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER	P_cool	EER
5	15	107,77	4,42	97,29	4,73	88,77	4,94	79,35	5,21	69,55	5,47	59,42	5,77	52,30	6,01	38,04	6,33
	20	103,83	3,83	93,87	4,15	85,67	4,37	76,56	4,65	67,04	4,91	57,12	5,21	50,12	5,43	36,06	5,77
	25	100,00	3,32	90,39	3,62	82,56	3,84	73,74	4,10	64,48	4,34	54,80	4,61	47,93	4,79	34,07	5,06
	30	95,93	2,87	86,89	3,15	79,40	3,36	70,91	3,58	61,92	3,79	52,47	4,02	45,73	4,15	32,07	4,31
	35	91,83	2,49	83,33	2,74	76,21	2,93	68,04	3,12	59,33	3,29	50,11	3,46	43,51	3,54	30,06	3,57
	40	87,64	2,15	79,73	2,38	72,98	2,54	65,13	2,70	56,72	2,83	47,74	2,95	41,27	2,98	28,04	2,91
	45	83,40	1,86	76,07	2,06	69,71	2,20	62,21	2,33	54,07	2,43	45,34	2,50	39,03	2,49	26,01	2,34
7	15	114,40	4,62	103,15	4,96	94,26	5,19	84,21	5,49	73,75	5,76	62,91	6,08	55,27	6,33	40,00	6,66
	20	110,20	4,01	99,66	4,35	90,97	4,60	81,26	4,89	71,09	5,17	60,48	5,48	52,99	5,72	37,93	6,06
	25	105,95	3,47	95,98	3,80	87,67	4,04	78,29	4,31	68,41	4,57	58,06	4,85	50,71	5,04	35,86	5,32
	30	101,66	3,01	92,28	3,31	84,35	3,54	75,32	3,77	65,73	4,00	55,62	4,23	48,42	4,37	33,80	4,53
	35	98,00	2,79	88,53	2,88	81,01	3,08	72,32	3,29	63,04	3,47	53,19	3,64	46,13	3,73	31,74	3,76
	40	93,07	2,26	84,76	2,50	77,63	2,68	69,30	2,85	60,33	2,99	50,75	3,11	43,84	3,15	29,68	3,06
	45	88,61	1,96	80,94	2,17	74,23	2,32	66,27	2,46	57,61	2,57	48,30	2,64	41,55	2,64	27,62	2,47
10	15	124,73	4,79	112,56	5,17	102,71	5,44	91,83	5,77	80,33	6,07	68,38	6,41	59,95	6,68	43,10	7,02
	20	120,13	4,16	108,58	4,54	99,29	4,82	88,63	5,13	77,45	5,43	65,78	5,77	57,52	6,02	40,90	6,38
	25	115,53	3,61	104,61	3,97	95,73	4,24	85,45	4,53	74,59	4,80	63,20	5,10	55,09	5,30	38,72	5,59
	30	110,88	3,13	100,70	3,46	92,16	3,71	82,26	3,96	71,75	4,20	60,63	4,45	52,69	4,59	36,56	4,75
	35	106,21	2,72	96,77	3,02	88,59	3,24	79,09	3,46	68,91	3,65	58,08	3,84	50,31	3,92	34,42	3,95
	40	101,50	2,36	92,73	2,63	85,01	2,82	75,91	3,00	66,07	3,16	55,54	3,28	47,94	3,32	32,31	3,23
	45	96,89	2,05	88,67	2,28	81,42	2,45	72,73	2,60	63,25	2,72	53,02	2,80	45,59	2,79	30,22	2,62
12	15	131,93	4,81	119,10	5,22	108,70	5,52	97,15	5,86	84,93	6,17	72,22	6,54	63,24	6,81	45,29	7,19
	20	127,10	4,18	114,93	4,59	104,97	4,88	93,81	5,21	81,92	5,52	69,51	5,88	60,70	6,13	43,00	6,52
	25	122,25	3,64	110,76	4,01	101,27	4,30	90,48	4,60	78,95	4,89	66,83	5,20	58,20	5,39	40,75	5,70
	30	117,38	3,16	106,59	3,51	97,67	3,77	87,17	4,03	76,00	4,28	64,18	4,53	55,72	4,67	38,53	4,85
	35	112,50	2,75	102,42	3,06	93,96	3,30	83,88	3,52	73,07	3,72	61,55	3,91	53,28	3,99	36,35	4,03
	40	107,59	2,39	98,38	2,67	90,24	2,87	80,60	3,06	70,15	3,22	58,96	3,35	50,86	3,38	34,21	3,30
	45	102,64	2,08	94,17	2,33	86,54	2,50	77,32	2,65	67,26	2,77	56,38	2,86	48,47	2,85	32,10	2,68
15	15	143,28	4,76	129,46	5,22	118,18	5,55	105,44	5,90	92,22	6,25	78,31	6,65	68,46	6,94	48,78	7,38
	20	138,10	4,16	124,99	4,59	114,19	4,91	101,88	5,26	89,04	5,59	75,45	5,97	65,78	6,23	46,38	6,67
	25	132,90	3,62	120,55	4,03	110,23	4,33	98,50	4,65	85,89	4,95	72,63	5,28	63,16	5,48	44,02	5,83
	30	127,73	3,16	116,12	3,52	106,29	3,80	95,01	4,08	82,79	4,34	69,85	4,60	60,58	4,75	41,72	4,96
	35	122,54	2,76	111,70	3,08	102,38	3,33	91,55	3,57	79,74	3,78	67,13	3,98	58,05	4,06	39,47	4,12
	40	117,34	2,41	107,29	2,69	98,63	2,92	88,11	3,11	76,71	3,27	64,45	3,42	55,57	3,45	37,28	3,38
	45	112,12	2,10	102,87	2,35	94,74	2,55	84,71	2,70	73,72	2,83	61,81	2,92	53,14	2,91	35,15	2,75
18	15	155,38	4,62	140,52	5,11	128,34	5,47	114,45	5,85	100,06	6,24	84,86	6,67	74,08	6,98	52,56	7,54
	20	149,84	4,04	135,77	4,51	124,09	4,86	110,69	5,22	96,70	5,58	81,85	5,99	71,27	6,26	50,04	6,79
	25	144,36	3,54	131,06	3,97	119,92	4,30	106,98	4,62	93,40	4,94	78,90	5,30	68,54	5,51	47,59	5,91
	30	138,89	3,10	126,40	3,48	115,77	3,78	103,33	4,06	90,16	4,34	76,02	4,62	65,87	4,77	45,21	5,02
	35	133,41	2,72	121,75	3,06	113,00	3,37	99,87	3,56	86,98	3,78	73,21	4,00	63,27	4,09	42,91	4,17
	40	127,95	2,38	117,13	2,68	107,60	2,91	96,30	3,11	83,86	3,29	70,45	3,44	60,73	3,47	40,68	3,42
	45	122,47	2,09	112,52	2,35	103,56	2,55	92,78	2,72	80,78	2,85	67,76	2,95	58,26	2,94	38,53	2,79
20	15	163,83	4,71	148,25	5,23	135,43	5,64	120,80	6,05	105,40	6,47	89,48	6,98	78,05	7,32	55,24	7,98
	20	158,12	4,14	143,34	4,63	131,06	5,02	116,91	5,41	101,96	5,80	86,38	6,27	75,16	6,57	52,65	7,19
	25	152,44	3,64	138,49	4,09	126,75	4,45	113,09	4,80	98,71	5,15	83,35	5,54	72,36	5,78	50,15	6,25
	30	146,76	3,20	133,65	3,61	122,47	3,93	109,33	4,23	95,38	4,53	80,41	4,84	69,64	5,01	47,72	5,30
	35	141,13	2,82	128,88	3,18	118,25	3,46	105,63	3,71	92,13	3,96	77,53	4,20	66,99	4,29	45,38	4,40
	40	135,51	2,48	124,12	2,80	114,07	3,04	101,99	3,25	88,94	3,45	74,74	3,61	64,42	3,65	43,14	3,62
	45	129,86	2,18	119,40	2,46	109,94	2,67	98,54	2,85	85,82	2,99	72,01	3,10	61,93	3,09	40,97	2,95

To = Leaving internal exchanger water temperature (°C)

Tae [°C]= External exchanger inlet air temperature

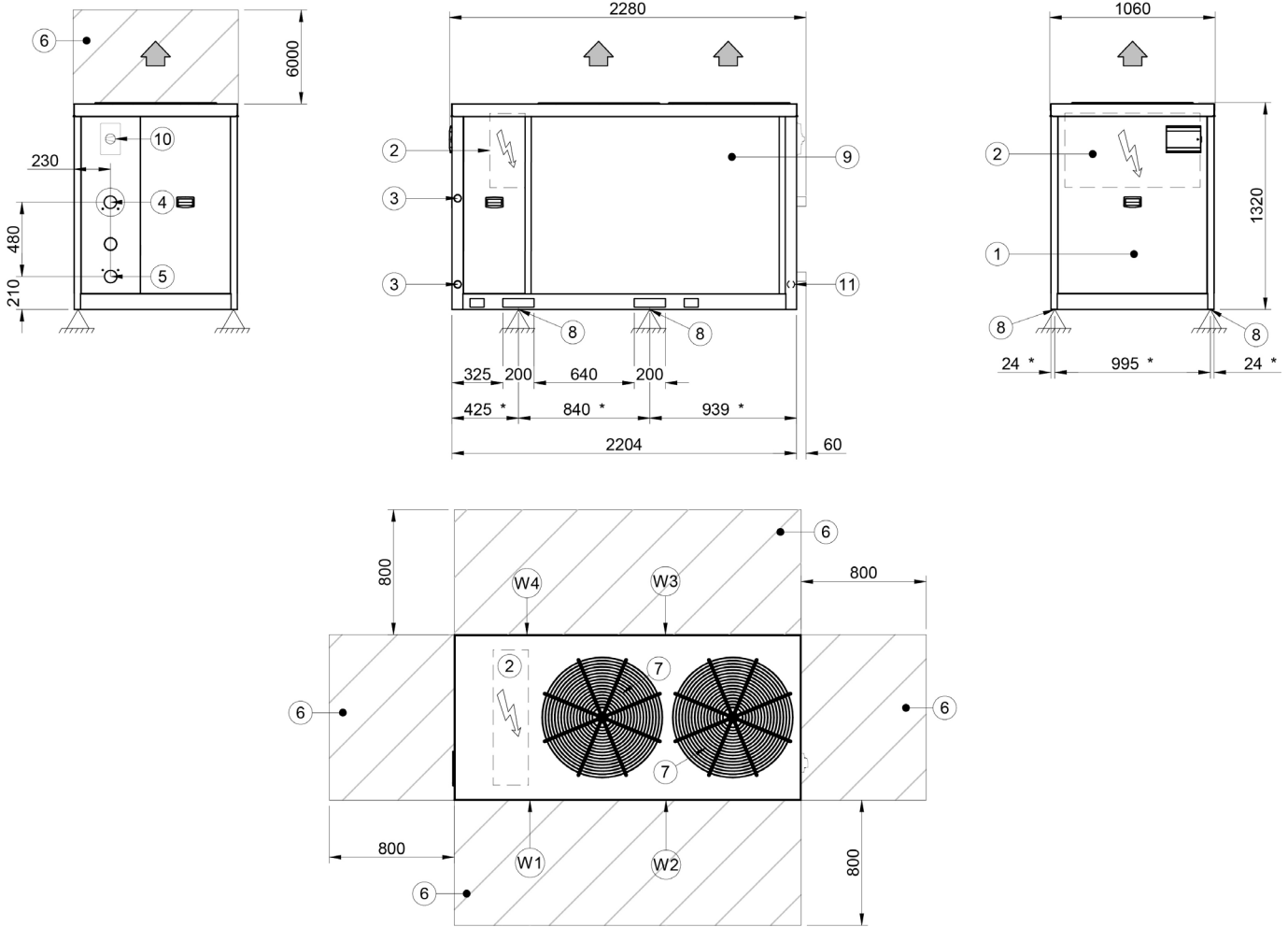
Performances in function of the inlet/outlet water temperature differential = 5°C

Cooling capacity and EER calculated according to EN 14511:2018

# Dimensional drawings

## Size 16.2 - 20.2 - 24.2

DAANC0001\_16.2-24.2 REV02  
Data/Date 04-02-2022



1. Compressor enclosure
  2. Quadro elettrico
  3. Power input
  4. Inlet water connection Victaulic 2"
  5. Outlet water connection Victaulic 2"
  6. Functional spaces
  7. Electrical fan
  8. Unit fixing holes
  9. External exchanger
  10. On board main switch (optional)
  11. Power input main switch (optional)
- \* Antivibration mounts position

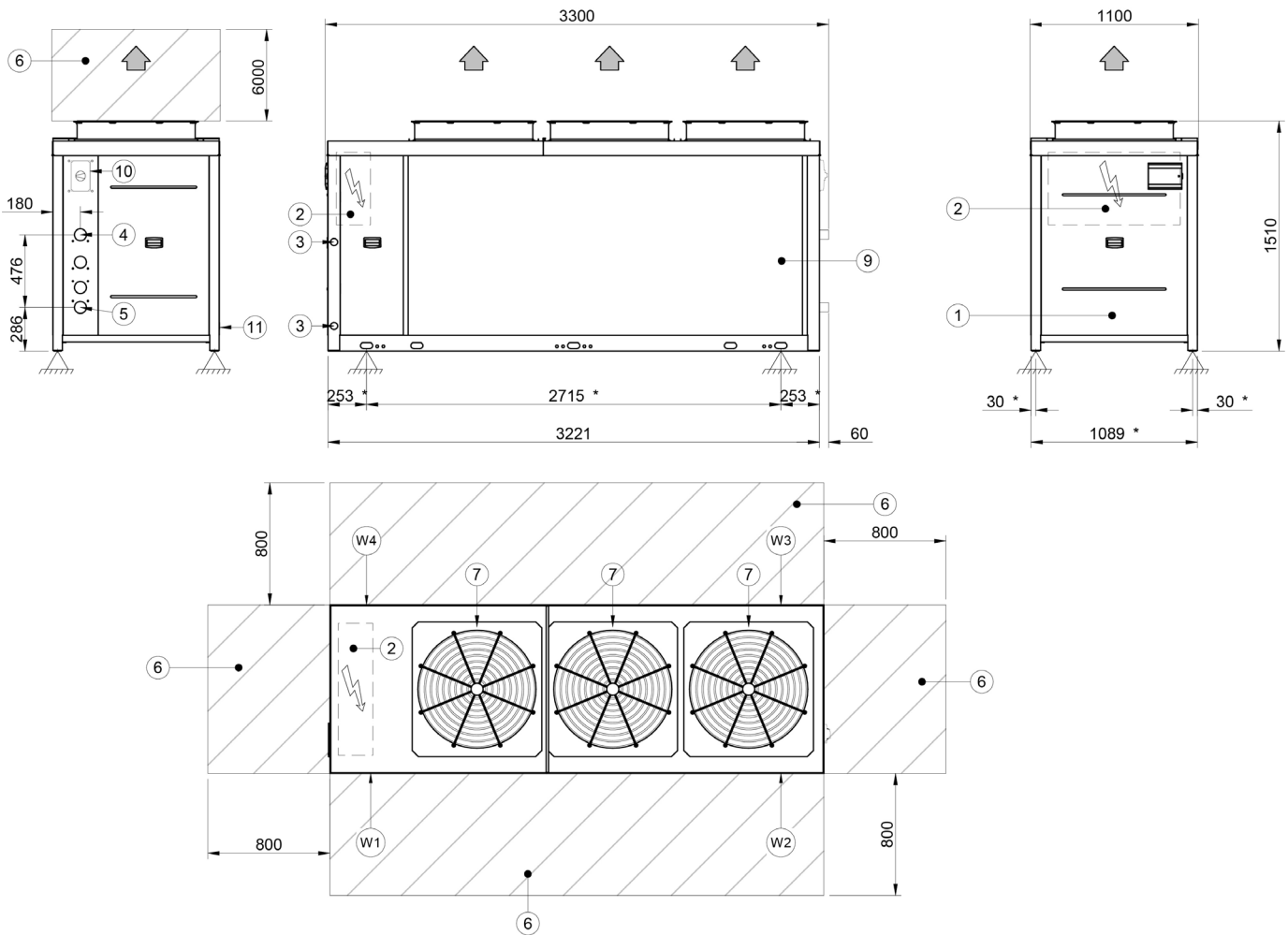
SIZE		16.2	20.2	24.2
Lenght	mm	2280	2280	2280
Depth	mm	1060	1060	1060
Height	mm	1320	1320	1320
W1 Support point	kg	141	141	141
W2 Support point	kg	94	94	94
W3 Support point	kg	94	94	94
W4 Support point	kg	141	141	141
Operating weight	kg	470	470	470
Shipping weight	kg	450	450	450

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



## Size 30.2 - 35.2 - 40.2

DAANC0002\_30.2-40.2 REV02  
Data/Date 04-02-2022



1. Compressor enclosure
2. Quadro elettrico
3. Power input
4. Inlet water connection Victaulic 2"
5. Outlet water connection Victaulic 2"
6. Functional spaces
7. Electrical fan
8. Unit fixing holes
9. External exchanger
10. On board main switch (optional)
11. Power input main switch (optional)

\* Antivibration mounts position

SIZE		30.2	35.2	40.2
Lenght	mm	3300	3300	3300
Depth	mm	1100	1100	1100
Height	mm	1510	1510	1510
W1 Support point	kg	214	214	214
W2 Support point	kg	126	126	126
W3 Support point	kg	126	126	126
W4 Support point	kg	214	214	214
Operating weight	kg	680	680	680
Shipping weight	kg	650	650	650

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



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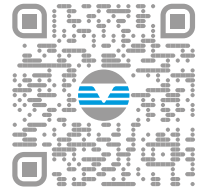
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