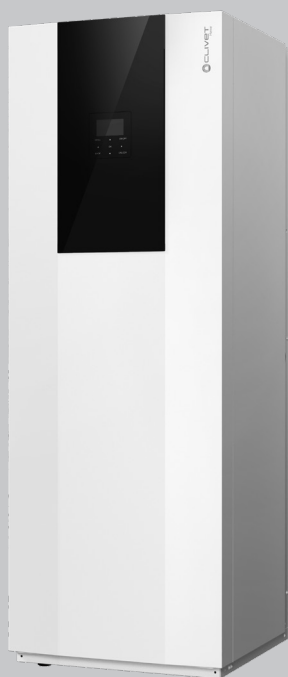


*Indoor hydronic unit with base
with DHW tank for Hydro Split
systems*

HYDRO-SPLIT TOWER

HQCN-NEE 1 TC A RANGE



TECHNICAL BULLETIN

DHW TANK

190 L - A

250 L - A

3	Caratteristiche e vantaggi
4	Caratteristiche tecniche unità standard
5	Accessori forniti separatamente
8	Compatibilità opzioni
9	Dati tecnici generali
14	Collegamenti idraulici
16	Collegamenti di sistema
20	Dimensionali

Features and benefits

HYDRO-SPLIT MODULES are specialized autonomous heat pump systems dedicated to meet the thermal and comfort requirements of single or multi-family homes with medium-low energy consumption

The system consists of a new generation monobloc outdoor unit, EDGE EVO 2.0 to R-32, EDGE F to R-290 and EDGE PRO with very high efficiency that encloses the refrigerant circuit inside, this is combined with an internal hydraulic module available in four different versions as shown below.

HYDRO-SPLIT MINI

- Mini Version
- 50-litre domestic water tank
- Single-area water booster kit already included in standard unit
- Integrated inertial storage tank
- Built-in WiFi for connection to the dedicated APP
- Compact dimensions, suitable for replacing a boiler



HYDRO-SPLIT TOWER

- Tower Version
- Two domestic water volumes 190 and 250 litres
- Integrated inertial storage tank
- Built-in WiFi for connection to the dedicated APP
- Integrated inertial storage tank



HYDRO-SPLIT BOX

- Box Version
- Integrated three-way valve for domestic hot water
- Compact dimensions
- Integrated inertial storage tank
- Built-in WiFi for connection to the dedicated APP



HYDRO-SPLIT INVISIBLE

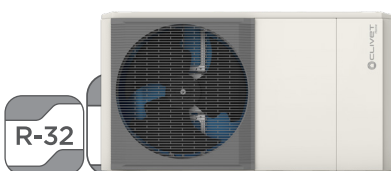
- Uncased version
- 150-litre domestic water tank can be expanded to 300 litres
- Compact dimensions for easy installation in walls
- Also available in the hybrid version with 24 kW or 34 kW boiler
- Integrated inertial storage tank
- Built-in WiFi for connection to the dedicated APP



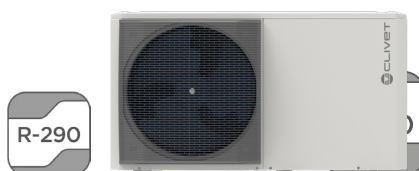
Outdoor units that can be combined:

Packaged heat pumps with hermetic Twin Rotary DC compressor with soft start, controlled by an inverter that constantly modulates the power delivered according to actual demand, guaranteeing the best in terms of reliability, low consumption and high seasonal efficiency.

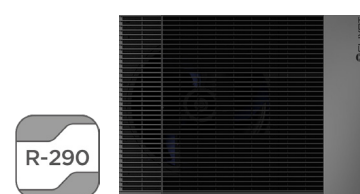
EDGE EVO 2.0 - WiSAN-YME 1 S



EDGE F - WiSAN-PME 1 S



EDGE PRO - WiSAN-PMP 1 S



HYDRO-SPLIT TOWER - Indoor unit

Zinc magnesium structure

Supporting structure made of zinc-magnesium sheet metal that ensures excellent mechanical features and high long-term resistance to corrosion.

Panelling

External panelling in zinc-magnesium sheet metal, with white paint in RAL 9003 to ensure better resistance to corrosion. Panels that can be easily removed to allow full access to internal components.

EPP structure

Innovative structure in EPP (expanded polypropylene) is an advanced solution to replace the traditional internal sheet metal structure of heat pumps.

Domestic hot water

- 190-litre or 250-litre DHW storage tank with vitrified internal surface and external polyurethane insulation (50mm thick).
- Electronic anode
- 2 kW safety and antilegionella cycle electric heater
- Internal exchanger in vitrified steel with an exchange surface of 2 m²
- Provision for domestic hot water recirculation circuit
- Water tank drain tap
- Probe well for solar thermal control

Water circuit

- 3-way switching valve for system or domestic water
- Magnetic dirt separator
- 12-litre system expansion tank, 1 bar pre-charging
- Anti-scalding valve
- Pressure relief valve 6 bar
- 15-litre inertial tank

Electrical panel

The electrical panel is located inside the unit and can be accessed by an easily removable panel.

The power section includes:

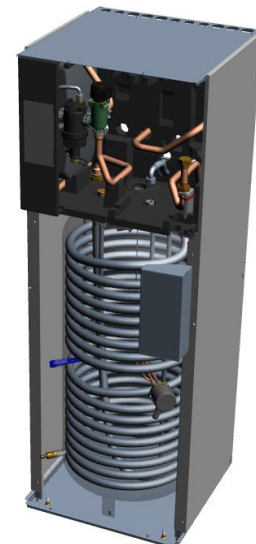
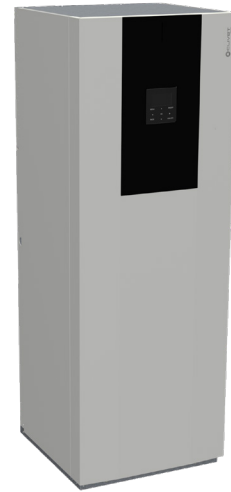
- power inlet terminals.

Coloured keypad for:

- remote microprocessor control with single-area thermostat function;
- BMS management;
- daily and weekly switch-on/off scheduler and set point;
- anti-legionella function scheduling;
- one-/two-area booster management;
- solar thermal management;
- management for backup heaters;
- interface terminal with remotely controlled graphic display
- integrated wifi module for connection to the APP
- cascade operation;
- the electrical panel contains a T5 temperature probe, 3 metres long

Standard unit kit

- Torx insert for opening and closing the unit's panels
- Adjustable feet that can be screwed on the base of the unit
- Cover cap for remotely controlled keypad
- 1 quick coupling spring
- 1 expansion tank connection gasket
- 1 O-ring



Accessories separately supplied

EH246X EH9X

Additional electric heater adjustable to three capacities of 2, 4 or 6 kW

Additional electric heater adjustable to one capacity of 9 kW

Integration electric heater in STAINLESS STEEL with 2-4 kW single-phase or 6-9 kW three-phase capacities.

The electric heater can operate both for the system and for the production of domestic hot water in two different modes:

- as an integration, when the heat pump capacity is not enough to fulfil the required set point;
- as a safety element if the heat pump fails.

⚠ Configuration with additional electric heater excludes condensing boiler for integration/replacement (HYFE24 - HYFE34).

⚠ Selection of the additional three-phase electric heater changes the voltage of the indoor unit only. The power supply of the outdoor unit remains unchanged.



KIR2HX - KIR2HLX

Hydraulic kit for managing two areas with the same temperature

Hydraulic kit for managing two areas with high and mixed temperature

Distribution module for 2-area heating systems with compact design and ample versatility for different types of indoor unit installation.

Kit consisting of:

- 1 collector / separator painted black;
- 2 circulators;
- 1 sliding temperature mixing valve (only in the KIR2HLX kit);
- 1 lower anti-rotation template;
- 1 module mounting bracket;
- connecting pipes
- 1 probe for managing the mixed circuit temperature (only in the KIR2HLX kit)

⚠ For technical pump head data, refer to the dedicated section in the GENERAL TECHNICAL DATA chapter.

⚠ Water booster kit excludes SICGX intermediate exchanger kit for glycol circuit

KCSIX

Kit for hydraulic separation between primary and secondary circuit with pump on secondary circuit

The single-area kit consists of a hydraulic separator combined with a high efficiency pump. Allows interaction between the primary circuit circulator and the secondary circuit circulator. Furthermore, the separator also has the function of a deaerator. With the following benefits and advantages:

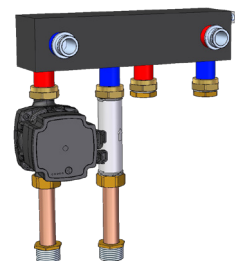
- makes the connected hydraulic circuits independent;
- ensures effective operation of the secondary circulator that provides the hydraulic demand of air conditioning systems;
- air extraction system;

The kit consists of:

- 1 collector / separator painted black;
- 1 circulator;
- 1 lower anti-rotation template;
- 1 module mounting bracket;
- connecting pipes

⚠ For technical pump head data, refer to the dedicated section in the GENERAL TECHNICAL DATA chapter.

⚠ Water booster kit excludes SICGX intermediate exchanger kit for glycol circuit



VEACSX

DHW expansion tank

15 l domestic hot water expansion tank (maximum operating pressure of 10 bar). Thanks to its fusiform design, it is an ideal solution for space optimization, which can be installed behind the unit. The dimensions of the expansion tank are as follows
160 mm diameter
Height 750 mm

ACI40X 40-litre inertial tank ideal for installation behind indoor units

Inertial tank to be installed outside the unit. Extremely compact, supplied with air vents and support brackets for wall installation. Suitable for all EDGE EVO 2.0 and EDGE F sizes, it facilitates operation and helps to fulfil the thermal requirement, guaranteeing optimal modulation.

It can be installed next to or behind the unit.

Kit consisting of:

- 1 Steel water tank
- 1 2-metre flexible hose
- Extremely compact:
LENGTH: 440 mm
DEPTH: 220 mm
HEIGHT: 887 mm
- Maximum operating temperature: 100°C
- Maximum operating pressure: 6 bar
- Thermally isolated with EPP 40 g/l
- Insulation thickness 30 mm
- Automatic air vent

⚠ Richiede l'accessorio KCAIAX



KCAIAX Additional inertial tank connection kit

Kit for connecting an inertial tank outside the unit
It consists of 2 hydraulic module inlet/outlet pipes

⚠ Kit required to connect the ACI40X option

COFX Aesthetic cover plates to conceal the 40-litre inertial tank

Aesthetic cover plates for the inertial tank, if installed at the back of the unit.



SOLX DHW plate exchanger kit for solar thermal connection

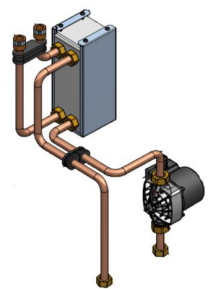
Solar integration kit for hot sanitary water that can be installed inside the unit consisting of :

- 1 braze-welded plate exchanger in stainless steel (AISI 316) for domestic hot water production;
- 1 circulator;
- 1 exchanger support;
- copper connection pipes;
- 2 plastic supports.

Via the circulator, domestic hot water is taken directly from the tank and heated, by the stainless steel plate exchanger with a heat exchange capacity of 2703 W/K, with hot water from the solar collectors.

In this case, a solar circulation unit, which can be installed outside the unit, must be connected for operation. To size the solar collector system and components, see the ELFOSun technical documentation. For correct operation, the temperature probe of the solar panel control box must be positioned in the well of the outdoor unit's water tank.

⚠ Solar integration for domestic water excludes the booster kit and SICGX



Standard unit technical specifications

SICGX

Intermediate exchanger for clean separation between primary and secondary circuit

Braze-welded plate exchanger for clean separation of the water circuit between the outdoor unit and the system including the emitters. This allows less glycol to be used for frost protection of the entire part of the circuit exposed to the outdoor temperature.

To check the available pressure provided by the pump, refer to the specific curve page 15.

The kit consists of:

- 1 braze-welded plate exchanger
- 1 electronic circulator
- 1 module mounting bracket;
- connecting pipes

⚠ Intermediate exchanger kit for glycol circuit excludes KIR2HX - KIR2HLX - KCSIX and SOLX water booster kits

KTCTX

Top outlet connection piping kit

⚠ Compatible only with standard model

KTCSX

Left outlet connection piping kit

⚠ Compatible only with standard model

⚠ Not compatible with KTCSTX option

KTCRX

Right outlet connection piping kit

⚠ Compatible only with standard model

KTCHSX

Top outlet connection piping kit, for 2-zone circuits

⚠ Compatible with options: EH246X, EH9X, KIR2HX - KIR2HLX, KCSIX, VEACSX, KCAIAX, SICGX

⚠ Not compatible with KTCSTX option

KTCHRX

Right outlet connection piping, for 2-zone circuits

⚠ Compatible with options: EH246X, EH9X, KIR2HX - KIR2HLX, KCSIX, VEACSX, KCAIAX, SICGX

KTCSTX

Solar circuit top connection kit

⚠ Compatible with options: EH246X, EH9X, KIR2HX - KIR2HLX, KCSIX, VEACSX, KCAIAX, SICGX

⚠ Only compatible with SOLX option; not compatible with KTCSX and KTCHSX

Compatibility of options for HYDRO-SPLIT TOWER + EDGE Hydro-Split system.

When combining HYDRO-SPLIT TOWER and EDGE units, the selectable options for the monoblock are as follows:

“Hybrid configuration” section

- GAS BOILER_FE 24.4-33.4 - 4-pipe condensing boiler for hybrid heat pumps
- KCSAFX - ø 60/100 mm vertical coaxial fitting
- CCOAX - 90° coaxial elbow for ø 60/100 mm horizontal outlet that can be adjusted at 360°
- TCOAX - L1000mm ø 60/100 coaxial pipe with terminal
- KAS80X - ø 80 mm vertical fittings
- KSDFX - ø 80 mm flue gas splitter kit
- VDACSX - Thermostatic switching valve for domestic water
- GAS BOILER_UC 70.2-115.2-200F.2 - 2-pipe condensing boiler for hybrid heat pumps
- INAILX - INAIL safety kit for installation of single boiler
- FH100X - ø 100 mm vertical flue gas terminal
- HIDUCX - Remote control for UC 70.2-115.2 boilers

⚠ "Hybrid configuration" not compatible with options: EH246X- Supplementary electric heater settable in three power levels of 2, 4 or 6 kW
EH9X- Supplementary electric heater settable in one power level of 9 Kw

“Configuration with solar thermal panels” section

- ELFOSUN3

“Configuration with primary and secondary circuit” section

- DI50-2X - 50-litre hydraulic circuit breaker
- DI100X - 100-litre hydraulic circuit breaker

“Other accessories supplied separately” section

- KTFLEX - Hose kit for connection to the unit
- VAGX - Safety antifreeze valve for system
- DTX - Drain pan with electric heater
- AMRX - Kit of antivibration mounts for floor installation
- AMMSX - Kit of anti-seismic antivibration mounts for floor installation
- ASTFX - Kit of antivibration mounts for installation on wall brackets, inertial storage tank or tray
- KSIPX - Wall fixing bracket kit
- HTC2WX - HID-TConnect2 Chronothermostat for temperature control white
- CONTROL4 NRG

For all plant accessories, please refer to the EASYTANK ACCESSORIES.

Internal compatibility HYDRO-SPLIT TOWER		Accessories separately supplied							
		EH246X	EH9X	KCSIX KIR2HX KIR2HLX	SICGX	VEACSX	SOLX	ACI40X	KCAIAX
Accessories separately supplied	EH246X	-	-	●	●	●	●	●	●
	EH9X	-	-	●	●	●	●	●	●
	KCSIX KIR2HX - KIR2HLX	●	●	-	-	●	●	●	●
	SICGX	●	●	-	-	●	-	-	-
	VEACSX	●	●	●	●	-	●	●	●
	SOLX	●	●	●	-	-	-	●	●
	ACI40X	●	●	●	-	●	●	-	●
	KCAIAX	●	●	●	-	●	●	●	-

General technical data

Construction characteristics - Indoor unit

SIZE			A - 190 L	A - 250 L
System characteristics				
Maximum system circuit pressure		bar	3	3
System expansion tank	1	l	12	12
Expansion tank pre-charging		bar	1	1
System water connections		inch	1"	1"
DHW Characteristics				
Type of Tank		-	Vitrified Steel	Vitrified Steel
Domestic hot water Tank Volume		l	190	250
Internal coil exchange surface		m ²	1,7	2
Water tank leakage		W/K	1.81(1.95)	2.04(2.20)
DHW safety electric heater		kW	2	2
Maximum DHW circuit pressure		bar	6	6
Recommended DHW expansion tank size	2	l	12	16
Domestic water connections		inch	3/4"	3/4"
Size				
Operation (L x W x H)		mm	600 x 615 x 1685	600 x 615 x 1995
Packaging (L x W x H)		mm	660 x 690 x 1890	660 x 690 x 2190
Operating weight		kg	357	417
Shipping weight		kg	158	175

1. Sufficient volume up to a maximum of 70 litres of system water content.
2. It is mandatory for the installer to install the DHW expansion tank. The volumes indicated are for reference purposes only.

Hydraulic data - Indoor unit + EDGE EVO 2.0 - WiSAN-YME 1 S

SIZE		2.1		3.1		4.1		5.1		6.1	7.1	8.1
Features		190 L	250 L	190 L	250 L	190 L	250 L	190 L	250 L	250 L	250 L	250 L
Minimum system water content	l	30		30		70		70		70	70	70
Minimum water flow rate allowed	l/s	0,11		0,11		0,11		0,11		0,2	0,2	0,2
Maximum water flow rate allowed	l/s	0,25		0,35		0,46		0,58		0,69	0,76	0,83
Net boiler capacity	l	182	240	182	240	182	240	182	240	240	240	240
DHW tank setpoint	°C	50		50		50		50		50	50	50
Water mixed at 40°C (V40)	l	204	269	204	269	204	269	204	269	269	269	269
Heating time	h:min	02:30	02:25	02:30	02:25	02:08	02:05	02:08	02:05	01:46	01:46	01:46
Energy consumption during heating	kWh	2,20	2,70	2,20	2,70	2,30	2,85	2,30	2,85	3,01	3,01	3,01

1. Consider the water content of the area with less volume
2. Time required to bring the water volume of the tank from a temperature of 10°C to a temperature of 50°C
3. Energy consumption to bring the water volume of the tank from a temperature of 10°C to a temperature of 50°C



Hydraulic data - Indoor unit + EDGE F - WiSAN-PME 1 S

SIZE		2.1		3.1		4.1		5.1		6.1	7.1	8.1
Features		190 L	250 L	190 L	250 L	190 L	250 L	190 L	250 L	250 L	250 L	250 L
Minimum system water content	l	40		40		70		70		70	70	70
Minimum water flow rate allowed	l/s	0,1		0,1		0,17		0,17		0,17	0,17	0,17
Maximum water flow rate allowed	l/s	0,42		0,42		0,64		0,69		0,89	1	1,08
Net boiler capacity	l	182	240	182	240	182	240	182	240	240	240	240
DHW tank setpoint	°C	50		50		50		50		50	50	50
Water mixed at 40°C (V40)	l	204	269	204	269	204	269	204	269	269	269	269
Heating time	h:min	01:57	01:52	01:57	01:52	01:35	01:30	01:35	01:30	01:15	01:15	01:15
Energy consumption during heating	kWh	2,40	2,95	2,40	2,95	2,50	3,05	2,50	3,05	3,25	3,25	3,25



1. Consider the water content of the area with less volume
2. Time required to bring the water volume of the tank from a temperature of 10°C to a temperature of 50°C
3. Energy consumption to bring the water volume of the tank from a temperature of 10°C to a temperature of 50°C

Hydraulic data - Indoor unit + EDGE PRO - WiSAN-PMP 1 S

SIZE		2.1		3.1		4.1		5.1		6.1	7.1	8.1
Features		190 L	250 L	190 L	250 L	190 L	250 L	190 L	250 L	250 L	250 L	250 L
Minimum system water content	l	30		30		40		40		40	40	40
Minimum water flow rate allowed	l/s	0,11		0,11		0,11		0,11		0,11	0,11	0,11
Maximum water flow rate allowed	l/s	0,42		0,42		0,64		0,69		0,89	1	1,08
Net boiler capacity	l	182	240	182	240	182	240	182	240	240	240	240
DHW tank setpoint	°C	50		50		50		50		50	50	50
Water mixed at 40°C (V40)	l	204	269	204	269	204	269	204	269	269	269	269
Heating time	h:min	1:57	1:52	1:57	1:52	1:35	1:30	1:35	1:30	1:15	1:15	1:15
Energy consumption during heating	kWh	2,35	2,90	2,35	2,90	2,45	3,00	2,45	3,00	3,20	3,20	3,20

4. Consider the water content of the area with less volume
5. Time required to bring the water volume of the tank from a temperature of 10°C to a temperature of 50°C
6. Energy consumption to bring the water volume of the tank from a temperature of 10°C to a temperature of 50°C

The use of glycol and the intermediate heat exchanger changes the performance of the machine: it is possible to estimate the operating performance by multiplying the correction factors by the nominal operating values

Ethylene glycol table

MIN outdoor temperature	Glycol concentration	Correction factors			
		Capacity	Power input	Water resistance	Water flow
0°C	0%	0,985	1	1	1
-5°C	10%	0,973	0,998	1,118	1,019
-15°C	20%	0,964	0,995	1,268	1,051
-25°C	30%	0,958	0,992	1,482	1,092

Propylene glycol table

MIN outdoor temperature	Glycol concentration	Correction factors			
		Capacity	Power input	Water resistance	Water flow
0°C	0%	0,978	1	1	1
-5°C	10%	0,963	0,996	1,071	1
-15°C	20%	0,951	0,992	1,189	1,016
-25°C	30%	0,942	0,988	1,380	1,034

⚠ The glycol concentration must never be > 30%.

General technical data

EDGE EVO 2.0 - WiSAN-YME 1 S - performance

Heating

SIZE			2.1	3.1	4.1	5.1	6.1 / 6.1T	7.1 / 7.1T	8.1 / 8.1T
Air 7 °C - Water 35 °C									
Rated heating capacity	1	kW	4,20	6,35	8,40	10,0	12,1	14,5	15,9
Total power input	1	kW	0,82	1,28	1,63	2,02	2,44	3,15	3,53
COP	1	-	5,10	4,95	5,15	4,95	4,95	4,60	4,50
Water flow rate	1	l/s	0,20	0,30	0,40	0,48	0,58	0,69	0,76
Nominal available pressure	1	kPa	85	84	80	71	60	48	40
Air 2 °C - Water 35 °C									
Rated heating capacity	2	kW	4,40	5,50	7,10	8,20	9,20	11,0	13,0
Total power input	2	kW	1,10	1,41	1,73	2,05	2,36	3,06	3,77
COP	2	-	4,00	3,90	4,10	4,00	3,90	3,60	3,45
Water flow rate	2	l/s	0,21	0,26	0,34	0,39	0,44	0,53	0,62
Nominal available pressure	2	kPa	85	85	82	80	78	65	54
Air -7 °C - Water 35 °C									
Rated heating capacity	3	kW	4,70	6,00	7,00	8,00	10,0	12,0	13,1
Total power input	3	kW	1,52	2,00	2,19	2,62	3,33	4,21	4,85
COP	3	-	3,10	3,00	3,20	3,05	3,00	2,85	2,70
Water flow rate	3	l/s	0,22	0,29	0,33	0,38	0,48	0,57	0,63
Nominal available pressure	3	kPa	85	85	83	81	72	60	55
Air 7 °C - Water 45 °C									
Rated heating capacity	4	kW	4,30	6,30	8,10	10,0	12,3	14,1	16,0
Total power input	4	kW	1,13	1,70	2,10	2,67	3,32	3,92	4,57
COP	4	-	3,80	3,70	3,85	3,75	3,70	3,60	3,50
Water flow rate	4	l/s	0,21	0,30	0,39	0,48	0,59	0,67	0,76
Nominal available pressure	4	kPa	85	85	80	70	56	48	38
Air 7 °C - Water 55 °C									
Rated heating capacity	5	kW	4,40	6,00	7,50	9,50	11,9	13,8	16,0
Total power input	5	kW	1,49	2,03	2,36	3,06	3,90	4,68	5,61
COP	5	-	2,95	2,95	3,18	3,10	3,05	2,95	2,85
Water flow rate	5	l/s	0,21	0,29	0,36	0,45	0,57	0,66	0,76
Nominal available pressure	5	kPa	85	85	82	75	60	52	38

Data according to EN 14511:2018.

1. entering/leaving water temperature 30/35 °C, outdoor air temperature -7 °C dry bulb / -6 °C wet bulb
2. entering/leaving water temperature 30/35 °C, outdoor air temperature -2 °C dry bulb / -1 °C wet bulb
3. entering/leaving water temperature 30/35 °C, outdoor air temperature -7 °C dry bulb / -8 °C wet bulb
4. entering/leaving water temperature 40/45 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb
5. entering/leaving water temperature 47/55 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb

Cooling

SIZE			2.1	3.1	4.1	5.1	6.1 / 6.1T	7.1 / 7.1T	8.1 / 8.1T
Air 35 °C - Water 18 °C									
Nominal cooling capacity	6	kW	4,50	6,50	8,30	9,90	12,0	13,5	14,2
Total power input	6	kW	0,82	1,35	1,64	2,18	3,04	3,74	3,94
EER	6	-	5,50	4,80	5,05	4,55	3,95	3,61	3,61
Water flow rate	6	l/s	0,22	0,31	0,40	0,47	0,57	0,65	0,68
Nominal available pressure	6	kPa	85	84	80	71	60	54	47
Air 35 °C - Water 7 °C									
Nominal cooling capacity	7	kW	4,70	7,00	7,45	8,20	11,5	12,4	14,0
Total power input	7	kW	1,36	2,33	2,22	2,52	4,18	4,96	5,60
EER	7	-	3,45	3,00	3,35	3,25	2,75	2,50	2,50
Water flow rate	7	l/s	0,22	0,33	0,36	0,39	0,55	0,59	0,67
Nominal available pressure	7	kPa	85	83	82	80	63	56	48

Data according to EN 14511:2018.

6. entering/leaving water temperature 23/18 °C, outdoor air temperature -35 °C dry bulb / -27 °C wet bulb
7. entering/leaving water temperature 12/7 °C, outdoor air temperature -35 °C dry bulb / -27 °C wet bulb

EDGE F - WiSAN-PME 1 S - performance

Heating

SIZE			2.1	3.1	4.1	5.1	6.1 / 6.1T	7.1 / 7.1T	8.1 / 8.1T
Air 7 °C - Water 35 °C									
Rated heating capacity	1	kW	4,50	6,20	8,40	10,0	12,0	14,0	15,0
Total power input	1	kW	0,87	1,27	1,68	2,13	2,50	3,11	3,41
COP	1	-	5,15	4,90	5,00	4,70	4,80	4,50	4,40
Water flow rate	1	l/s	0,21	0,30	0,40	0,48	0,57	0,67	0,71
Nominal available pressure	1	kPa	89	87	80	71	63	54	49
Air 2 °C - Water 35 °C									
Rated heating capacity	2	kW	4,40	5,60	7,10	8,20	9,10	10,1	12,8
Total power input	2	kW	1,07	1,44	1,84	2,25	2,39	2,81	4,00
COP	2	-	4,10	3,90	3,85	3,65	3,80	3,60	3,20
Water flow rate	2	l/s	0,21	0,27	0,34	0,39	0,43	0,48	0,61
Nominal available pressure	2	kPa	89	88	85	80	81	75	60
Air -7 °C - Water 35 °C									
Rated heating capacity	3	kW	4,50	5,90	7,00	8,00	10,0	11,5	12,7
Total power input	3	kW	1,45	2,00	2,33	2,81	3,57	4,00	4,26
COP	3	-	3,10	2,95	3,00	2,85	2,80	2,70	2,50
Water flow rate	3	l/s	0,21	0,28	0,33	0,38	0,48	0,52	0,55
Nominal available pressure	3	kPa	89	88	85	80	75	68	66
Air 7 °C - Water 45 °C									
Rated heating capacity	4	kW	4,50	6,40	8,20	10,0	12,0	14,0	15,0
Total power input	4	kW	1,11	1,68	2,13	2,74	3,24	4,00	4,48
COP	4	-	4,05	3,80	3,85	3,65	3,70	3,50	3,35
Water flow rate	4	l/s	0,21	0,30	0,39	0,48	0,57	0,67	0,71
Nominal available pressure	4	kPa	89	87	80	71	63	54	49
Air 7 °C - Water 55 °C									
Rated heating capacity	5	kW	4,60	6,20	7,80	9,50	12,0	14,0	15,0
Total power input	5	kW	1,44	2,00	2,44	3,11	3,87	4,67	5,26
COP	5	-	3,20	3,10	3,20	3,05	3,10	3,00	2,85
Water flow rate	5	l/s	0,14	0,18	0,23	0,28	0,36	0,42	0,45
Nominal available pressure	5	kPa	90	89	86	85	87	81	78

Data according to EN 14511:2022.

1. entering/leaving water temperature 30/35 °C, outdoor air temperature -7 °C dry bulb / -6 °C wet bulb
2. entering/leaving water temperature 30/35 °C, outdoor air temperature -2 °C dry bulb / -1 °C wet bulb
3. entering/leaving water temperature 30/35 °C, outdoor air temperature -7 °C dry bulb / -8 °C wet bulb
4. entering/leaving water temperature 40/45 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb
5. entering/leaving water temperature 47/55 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb

Cooling

SIZE			2.1	3.1	4.1	5.1	6.1 / 6.1T	7.1 / 7.1T	8.1 / 8.1T
Air 35 °C - Water 18 °C									
Nominal cooling capacity	1	kW	4,50	6,50	8,30	10,0	12,0	14,0	16,0
Total power input	1	kW	0,82	1,27	1,61	2,11	2,67	3,33	4,10
EER	1	-	5,50	5,10	5,15	4,75	4,50	4,20	3,90
Water flow rate	1	l/s	0,21	0,31	0,40	0,48	0,57	0,67	0,76
Nominal available pressure	1	kPa	89	87	80	71	63	54	45
Air 35 °C - Water 7 °C									
Nominal cooling capacity	2	kW	4,70	6,80	7,50	8,90	11,5	12,7	14,0
Total power input	2	kW	1,29	2,19	2,17	2,74	3,77	4,38	5,09
EER	2	-	3,65	3,10	3,45	3,25	3,05	2,90	2,75
Water flow rate	2	l/s	0,22	0,32	0,36	0,42	0,55	0,60	0,67
Nominal available pressure	2	kPa	89	86	83	81	66	60	54

Data according to EN 14511:2022

1. entering/leaving water temperature 23/18 °C, outdoor air temperature -35 °C dry bulb / -27 °C wet bulb
2. entering/leaving water temperature 12/7 °C, outdoor air temperature -35 °C dry bulb / -27 °C wet bulb

General technical data

EDGE PRO - WiSAN-PMP 1 S - performance

Heating

SIZE			2.1	3.1	4.1 / 4.1T	5.1 / 5.1T	6.1 / 6.1T	7.1 / 7.1T	8.1 / 8.1T
Air 7°C - Water 35°C									
Rated heating capacity	1	kW	4.1	6.1	8.0	9.5	12.1	14.0	15.5
Total power input	1	kW	0.77	1.21	1.52	1.92	2.44	2.98	3.44
COP	1	-	5.30	5.03	5.25	4.95	4.95	4.70	4.50
Water flow rate	1	l/s	0.2	0.3	0.4	0.5	0.6	0.7	0.7
Nominal available pressure	1	kPa	56	56	51	51	45	42	38
Maximum available pressure	1	kPa	86	86	85	79	64	53	45
Air 2°C - Water 35°C									
Rated heating capacity	2	kW	4.0	5.6	7.1	8.2	9.2	11.0	13.0
Total power input	2	kW	0.95	1.40	1.73	2.10	2.30	2.89	3.60
COP	2	-	4.23	4.00	4.10	3.90	4.00	3.80	3.61
Water flow rate	2	l/s	0.2	0.3	0.3	0.4	0.4	0.5	0.6
Nominal available pressure	2	kPa	56	56	51	51	45	42	38
Maximum available pressure	2	kPa	86	86	87	85	80	70	58
Air -7°C - Water 35°C									
Rated heating capacity	3	kW	4.1	6.0	7.0	8.0	10.0	12.0	13.1
Total power input	3	kW	1.26	1.98	2.15	2.54	3.17	4.29	4.85
COP	3	-	3.25	3.03	3.25	3.15	3.15	2.80	2.70
Water flow rate	3	l/s	0.2	0.3	0.3	0.4	0.5	0.6	0.6
Nominal available pressure	3	kPa	56	56	51	51	45	42	38
Maximum available pressure	3	kPa	86	86	87	85	76	64	58
Air 7°C - Water 45°C									
Rated heating capacity	4	kW	4.5	6.4	8.1	9.5	12.3	14.1	15.5
Total power input	4	kW	1.08	1.64	2.03	2.44	3.15	3.76	4.25
COP	4	-	4.17	3.91	4.00	3.90	3.90	3.75	3.65
Water flow rate	4	l/s	0.2	0.3	0.4	0.5	0.6	0.7	0.7
Nominal available pressure	4	kPa	56	56	51	51	45	42	38
Maximum available pressure	4	kPa	86	86	85	79	62	52	45
Air 7°C - Water 55°C									
Rated heating capacity	5	kW	4.6	6.2	8.0	9.5	11.9	13.8	16.0
Total power input	5	kW	1.38	1.92	2.39	2.97	3.66	4.38	5.25
COP	5	-	3.33	3.23	3.35	3.20	3.25	3.15	3.05
Water flow rate	5	l/s	0.1	0.2	0.2	0.3	0.4	0.4	0.5
Nominal available pressure	5	kPa	56	56	51	51	45	42	38
Maximum available pressure	5	kPa	88	86	87	87	87	83	76

Data according to EN 14511:2022.

1. inlet/outlet water temperature 30/35 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb
2. inlet/outlet water temperature 30/35 °C, outdoor air temperature 2 °C dry bulb / 1 °C wet bulb
3. water inlet/outlet temperature 30/35°C, outdoor air temperature -7°C dry bulb / -8°C wet bulb

4. inlet/outlet water temperature 40/45 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb
5. inlet/outlet water temperature 47/55 °C, outdoor air temperature 7 °C dry bulb / 6 °C wet bulb

SIZE			2.1	3.1	4.1 / 4.1T	5.1 / 5.1T	6.1 / 6.1T	7.1 / 7.1T	8.1 / 8.1T
Air 35 °C - Water 18 °C									
Nominal cooling capacity	1	kW	4.5	6.5	8.3	10.0	12.0	14.0	15.0
Total power input	1	kW	0.80	1.18	1.58	2.17	2.61	3.18	3.53
EER	1	-	5.65	5.51	5.25	4.60	4.60	4.40	4.25
Water flow rate	1	l/s	0.2	0.3	0.4	0.5	0.6	0.7	0.7
Nominal available pressure	1	kPa	56	56	51	51	45	42	38
Maximum available pressure	1	kPa	86	85	84	76	64	53	48
Air 35 °C - Water 7 °C									
Nominal cooling capacity	2	kW	4.70	6.80	7.45	8.10	11.5	12.4	14
Total power input	2	kW	1.29	2.19	2.22	2.61	3.77	4.13	5.19
EER	2	-	3.65	3.10	3.35	3.10	3.05	3	2.7
Water flow rate	2	l/s	0.2	0.3	0.4	0.4	0.5	0.6	0.7
Nominal available pressure	2	kPa	86	85	87	85	67	62	53
Maximum available pressure	2	kPa	86	85	84	76	64	53	48

Data according to EN 14511:2022

1. inlet/outlet water temperature 23/18 °C, outdoor air temperature 35 °C dry bulb / 27 °C wet bulb

2. inlet/outlet water temperature 12/7 °C, outdoor air temperature 35 °C dry bulb / 27 °C wet bulb

Condensing boiler general data

Hybrid System composed of EDGE (EVO 2.0 or EDGE F) + GASBOILER FE + HYDRO-SPLIT TOWER

MODEL				FE 24.4	FE 33.4
Heating Performance					
Nominal heating capacity (Qn)	-	Max	[kW]	24,5	34,8
		Min	[kW]	4,8	5,0
Heating capacity (Pn)	60/80°C	Max	[kW]	24,0	34,0
		Min	[kW]	4,7	4,9
	30/50°C	Max	[kW]	26,0	37,0
		Min	[kW]	5,2	5,4
Efficiency	60/80°C	Max	%	97,8	97,7
		Min	%	97,6	97,2
	30/50°C	Max	%	106,1	106,2
		Min	%	107,3	107,1
	30% di Pn	-	%	109,7	109,7
Heated water content	-	-	[l]	3,4	4,3
Operating pressure	PMS	Max	[bar]	3	3
	-	Min	[bar]	0,8	0,8
Expansion tank	Volume	-	[l]	8	10
	Pre-charging	-	[bar]	0,8	0,8
DHW performance					
Nominal heating capacity (Qnw)	-	Max	[kW]	28,5	34,8
		Min	[kW]	4,7	5,0
Heating capacity	-	Max	[kW]	28,0	34,0
		Min	[kW]	4,7	4,8
DHW flowrate	ΔT=25°C	-	[l/min]	16,1	19,5
	ΔT=30°C	-	[l/min]	13,4	16,2
	ΔT=45 K	-	[l/min]	8,9	10,8
DHW production in continuous operation	ΔT=40 K	-	[l/min]	10,0	12,1
	ΔT=35 K	-	[l/min]	11,5	13,9
	ΔT=30 K	-	[l/min]	13,4	16,2
	ΔT=25 K	-	[l/min]	16,1	19,5
Water temperature		Max	[°C]	65	65
		Min	[°C]	40	40
Operating pressure	PMW	Max	[bar]	9	9
	-	Min	[bar]	0,3	0,3
ErP data					
Seasonal eff. Average climate	Heating	ηs	%	94	94
		Energy class	-	A	A
	ACS	ηwh	%	85	85
		Energy class	-	A	A
		Withdrawal profile	-	XL	XXL
Sound power level		Lwa	[dB(A)]	49	52
Thermal losses and smoke exhaust					
Chimney loss	"burner ON 80/60°C"	Pmax	%	2,00	2,10
		Pmin	%	2,00	2,90
	"burner ON 50/30°C"	Pmax	%	1,40	1,40
		Pmin	%	1,00	1,00
Smoke temperature	80/60°C	Pmax	[°C]	66	67
		Pmin	[°C]	64	62
	50/30°C	Pmax	[°C]	52	53
		Pmin	[°C]	44	45
Smoke flowrate	-	Pmax	[g/s]	11,2	16
	-	Pmin	[g/s]	2,3	2,4
Nitrogen oxide (NOX) emissions		Class	-	6	6
		-	[mg/kWh]	35	33

General technical data

Electrical data

Standard HYDRO-SPLIT TOWER indoor unit

Power supply 220-240V ~ 50Hz

Electrical current consumption of the DHW Electric heater	A	8,7
Power input of the DHW Electric heater	kW	2
Total electrical current consumption	A	9,1
Total power input	kW	2,1

Power supply 220-240V ~ 50Hz +/-10.

The units comply with the requirements of European standard IEC EN 60335.

Indoor unit configured with single-phase integration electric heaters

SIZE		2 KW	4 KW
Power supply 220-240V ~50Hz			
F.L.A. - Current consumption of the unit with single-phase electric heater	A	8,7	17,4
F.L.I - Power input of the unit with single-phase electric heater	kW	2	4

Power supply 220-240V ~ 50Hz ±10%.

The units comply with the requirements of European standard IEC EN 60335.

Data to be added to standard unit values

Indoor unit configured with three-phase integration electric heaters

SIZE		6 KW	9 KW
Power supply 380-415V 3N ~50Hz			
F.L.A. - Current consumption of the unit with single-phase electric heater	A	8,7	13,0
F.L.I - Power input of the unit with single-phase electric heater	kW	6	9

Power supply 380-415V 3N ~50Hz +/- 6%

The units comply with the requirements of European standard IEC EN 60335.

Data to be added to standard unit values

2 areas: both high temperature - 2 areas: high + low temperature (mixed)

Power supply 220-240V ~ 50Hz

F.L.A. - Absorbed current at maximum admissible conditions	A	0,5
F.L.I - Power input at full load (at maximum conditions allowed)	W	120

Power supply 220-240V ~ 50Hz ±10%.

The units comply with the requirements of European standard IEC EN 60335.

Data to be added to standard unit values

Single area booster kit

Power supply 220-240V ~ 50Hz

F.L.A. - Absorbed current at maximum admissible conditions	A	0,3
F.L.I - Power input at full load (at maximum conditions allowed)	W	60

Integration condensing boiler

Power supply 220-240V ~ 50Hz

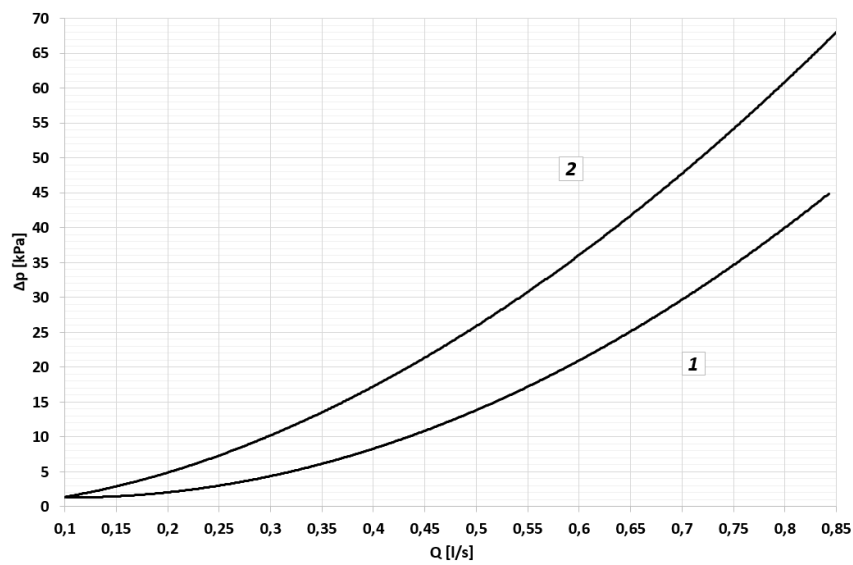
F.L.A. - Absorbed current at maximum admissible conditions	A	0,4
F.L.I - Power input at full load (at maximum conditions allowed)	W	99

Solar option kit - Glycol water exchanger kit

Power supply 220-240V ~ 50Hz

F.L.A. - Absorbed current at maximum admissible conditions	A	0,3
F.L.I - Power input at full load (at maximum conditions allowed)	W	75

Indoor unit pressure drops



1. STANDARD indoor unit pressure drops

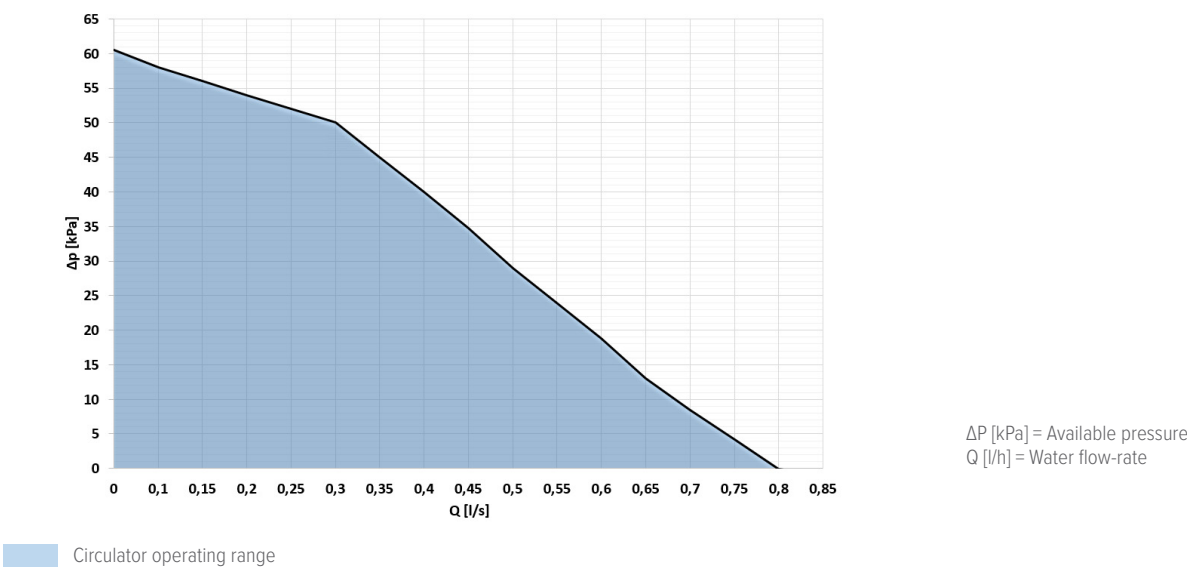
2. Pressure drops with SICGX option

Note: EH246X-EH09X have negligible drops

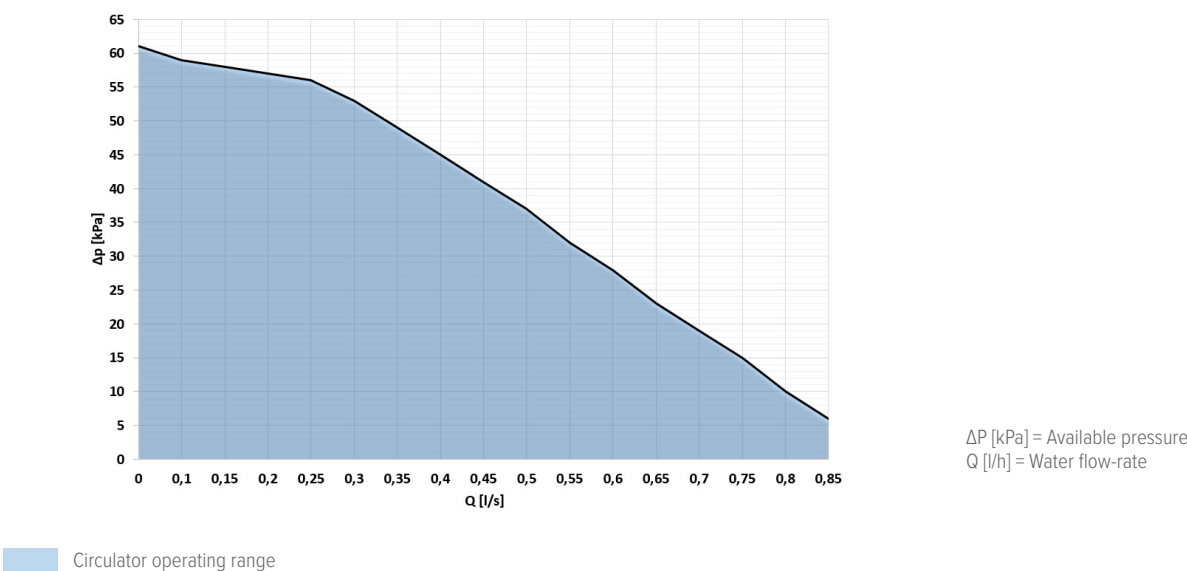
Note: it is advisable to install a hydraulic separator

General technical data

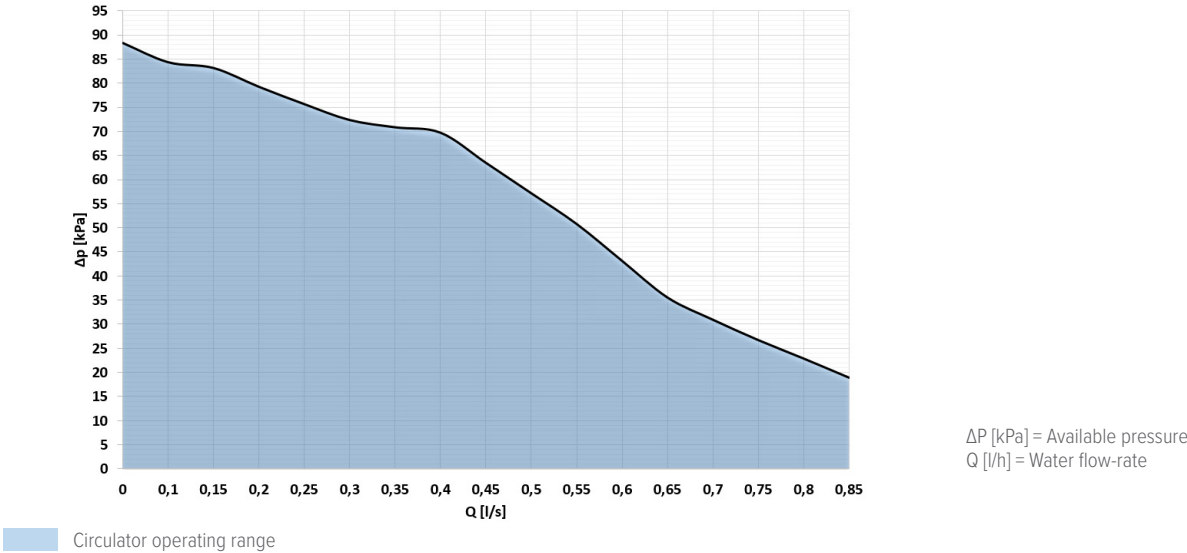
Available pressure - KIR2HX - KIR2HLX



Available pressure - KCSIX

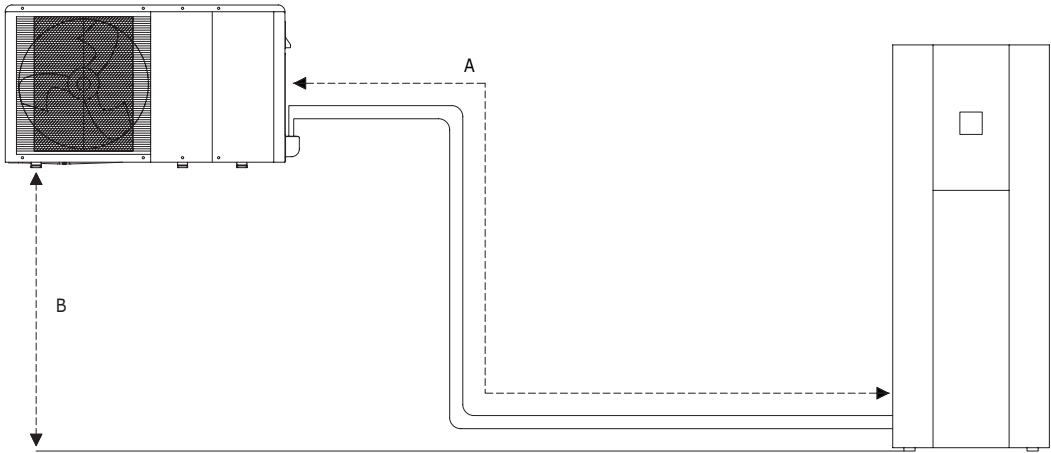


Available pressure - SICGX



Hydraulic line sizing

Equivalent length of the lines (metres) = actual length (metres) + quantity of bends x K
Use the K value from the following table



SIZE		2.1	3.1	4.1	5.1	6.1	7.1	8.1
K values								
standard 90° elbow bend	m	0,6	0,6	0,6	0,6	0,9	0,9	0,9
45° bend (standard)	m	0,3	0,3	0,3	0,3	0,3	0,3	0,3
Length and height difference of hydraulic lines								
A- Minimum and maximum connection distance between indoor and outdoor units	m	40	40	30	30	25	20	20
B- Maximum height difference between indoor and outdoor units	m	20	20	20	20	15	15	15

Note: recommended diameter, the one the same size as the connection on the outdoor unit.

Note: for height differences of more than 12 metres, adjust the pre-charge of the expansion vessel of the outdoor unit.

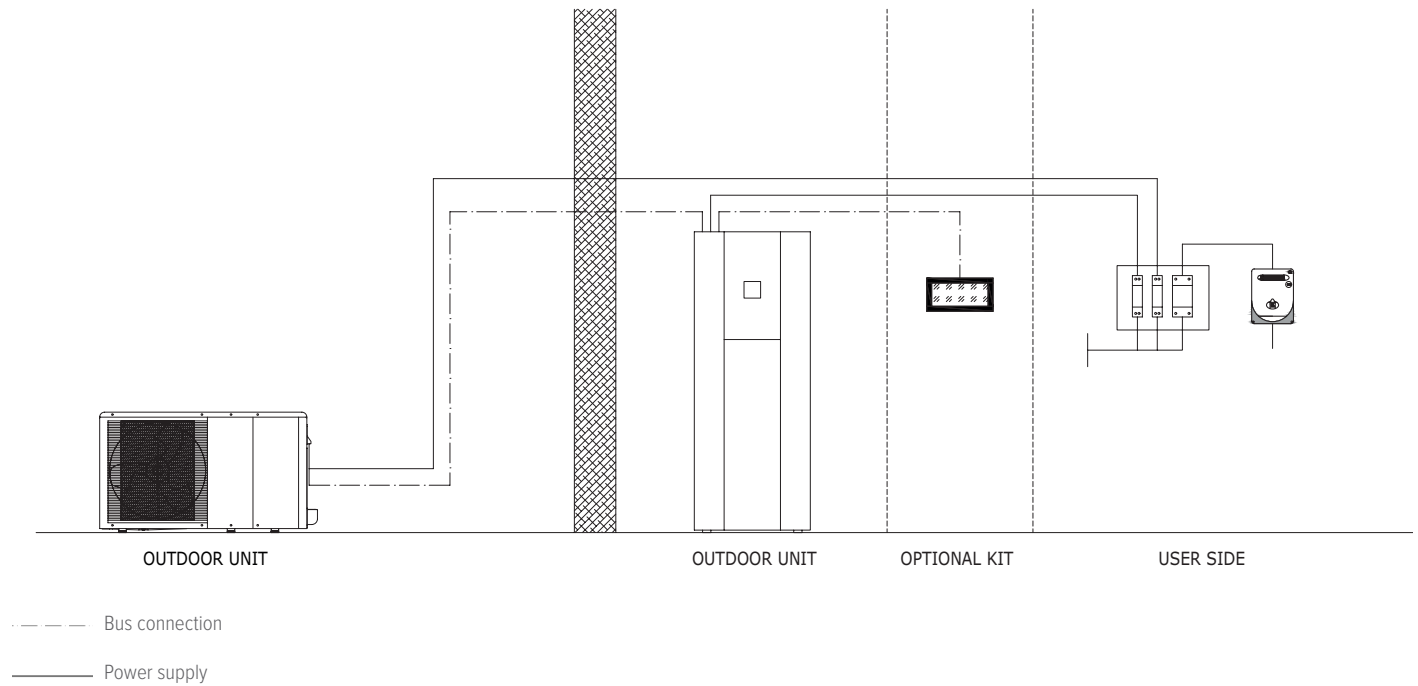
Hydraulic connections

Electrical connections

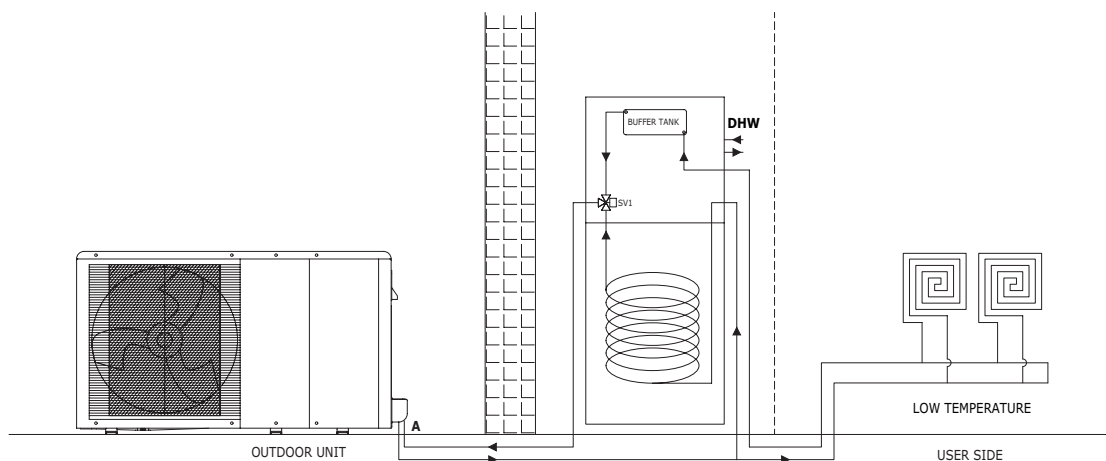
The electrical connection must be carried out in compliance with the national regulations in force. The connection must be carried out by specialised personnel who are qualified to work with live voltage.

The HYDRO-SPLIT TOWER system can be controlled via the control panel on board the unit. To manage the unit, you can use the supervision system CONTROL4 NRG or common electromechanical thermostats.

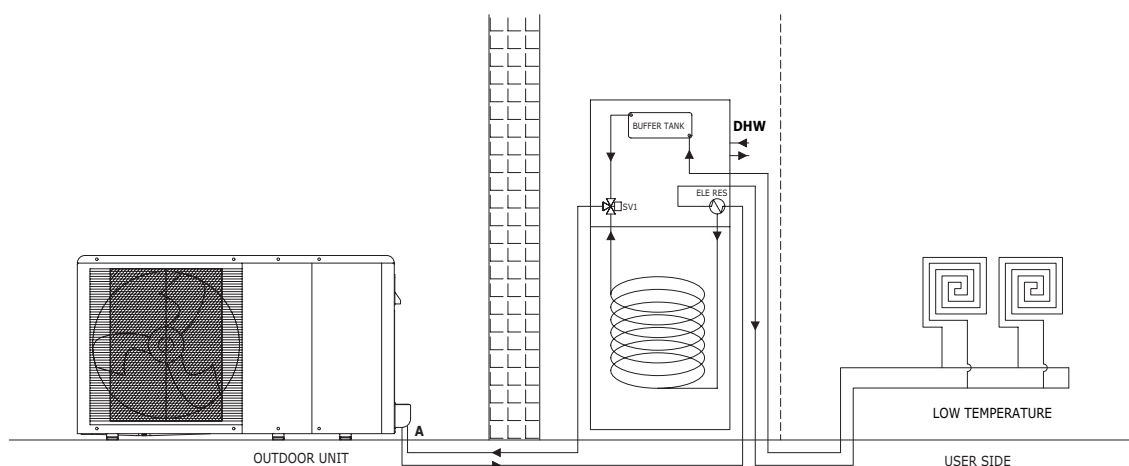
Refer to the installation manual for more information on the connections.



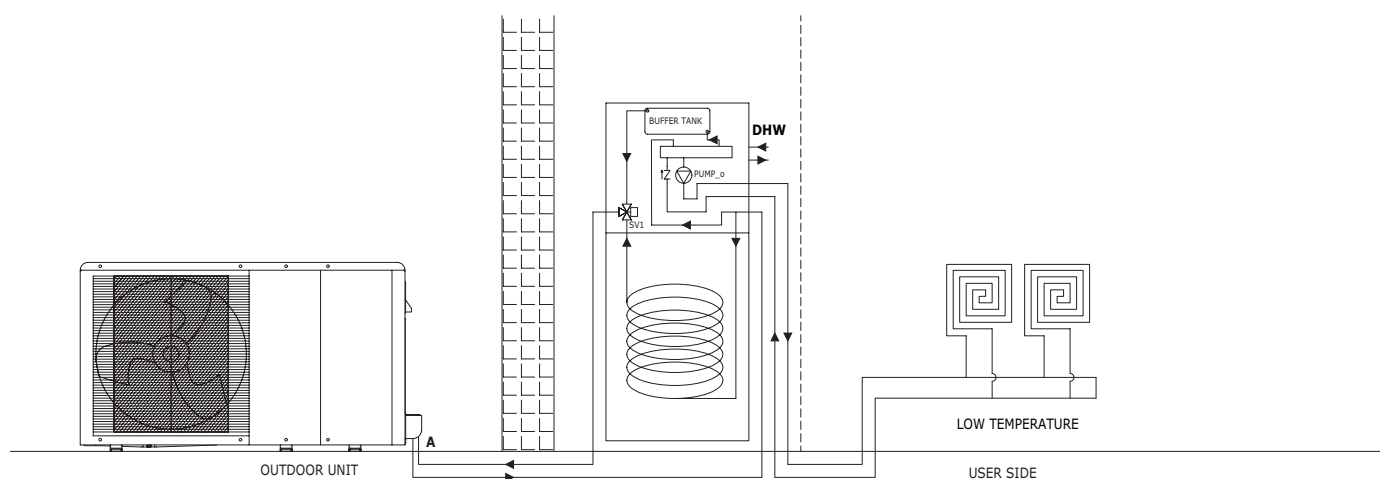
General description of the system and possible connections



Standard



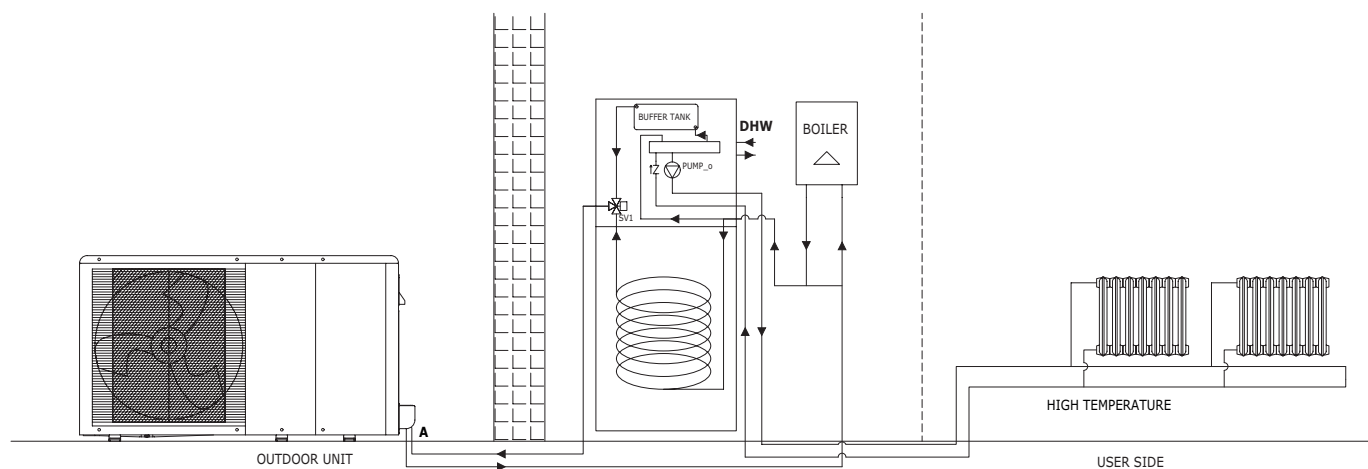
TBH backup



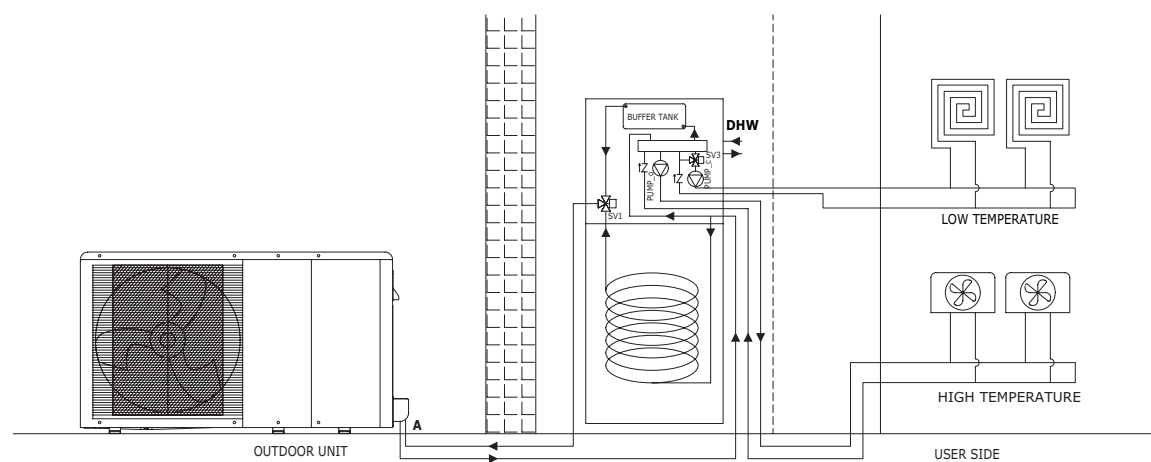
Single-area kit

System connections

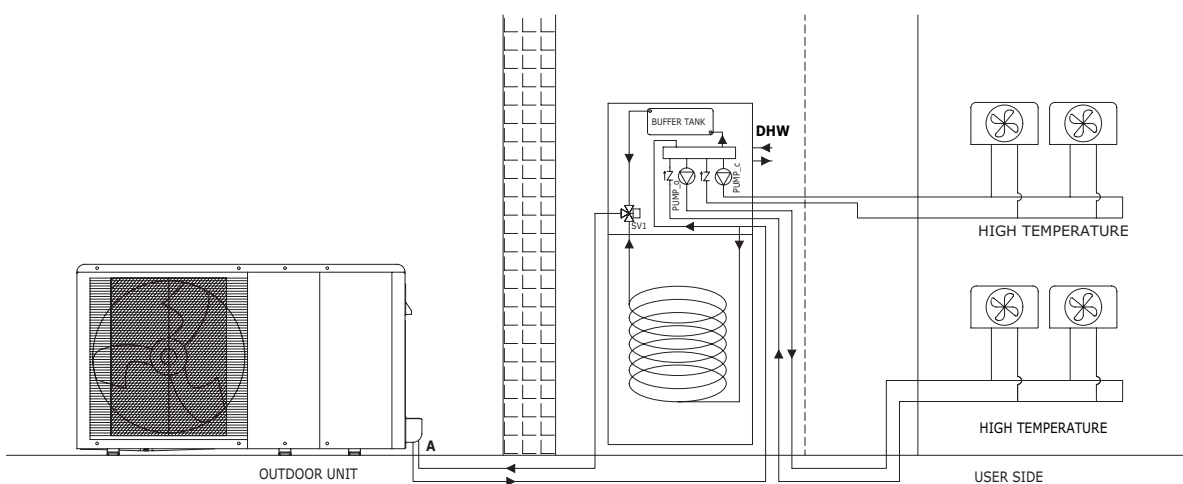
General description of the system and possible connections



boiler + single-area kit solution

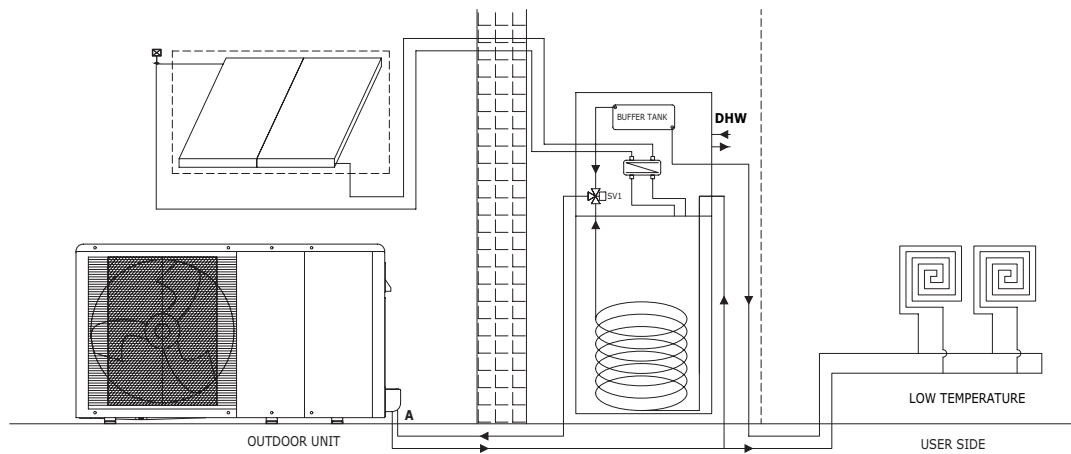


Kit for 2 AT-BT areas

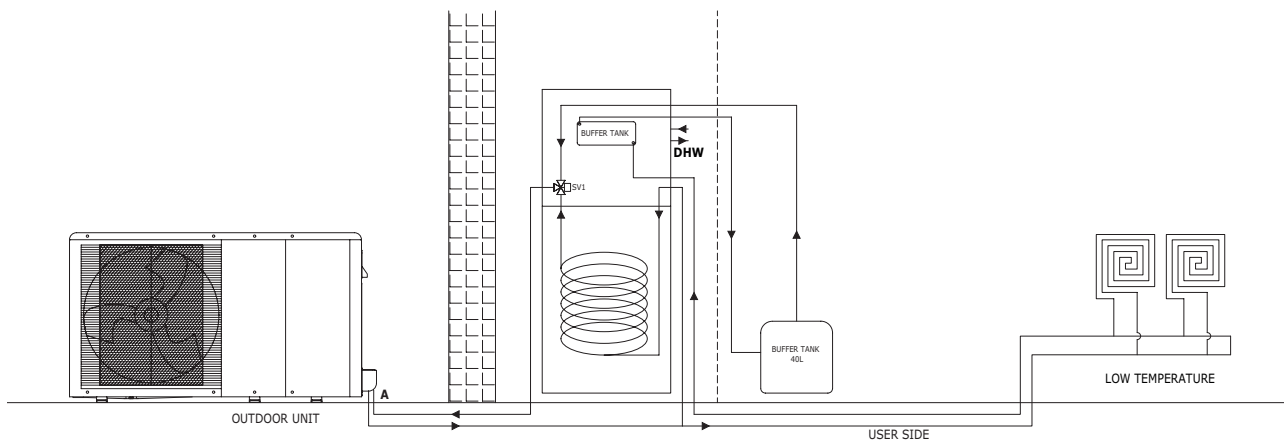


Kit for 2 AT-AT areas

General description of the system and possible connections



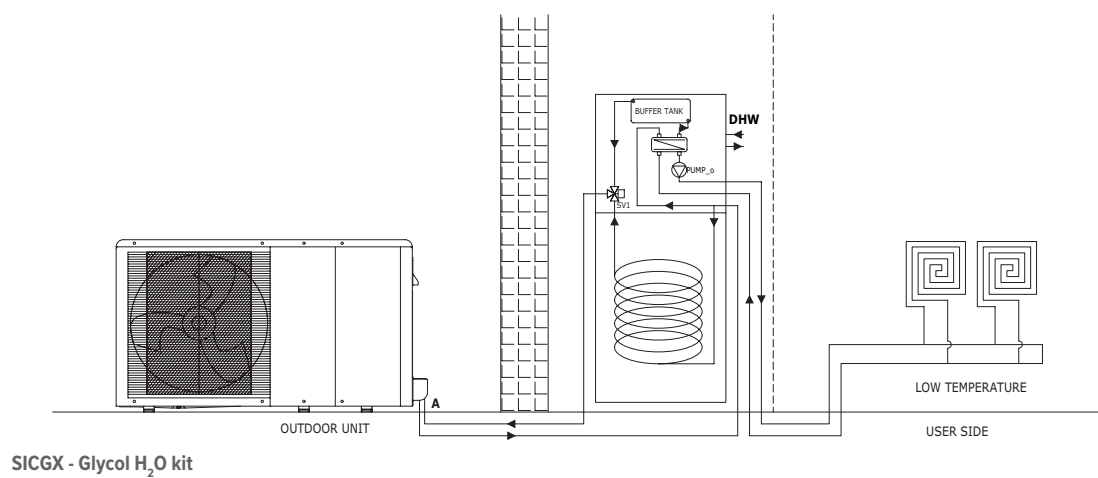
Solar kit



System 40L water tank

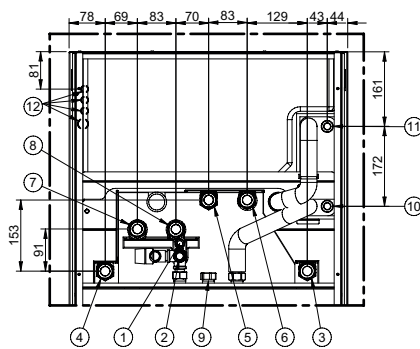
System connections

General description of the system and possible connections

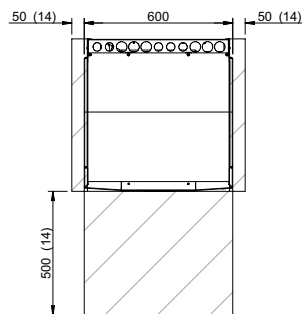
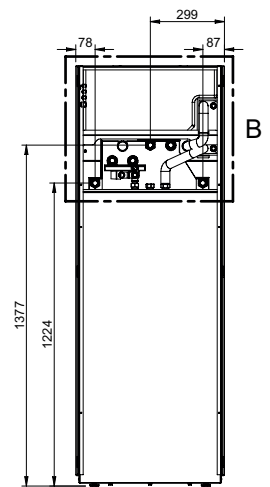
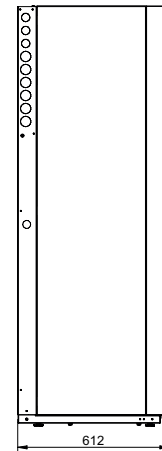
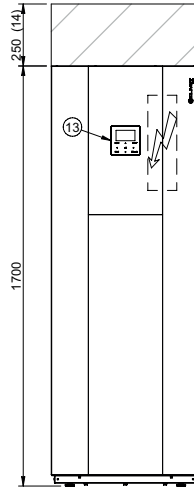


HYDRO-SPLIT TOWER 190 L

DAATL0001 REV01
DATA/DATE:10/11/2023



DETTAGLIO B



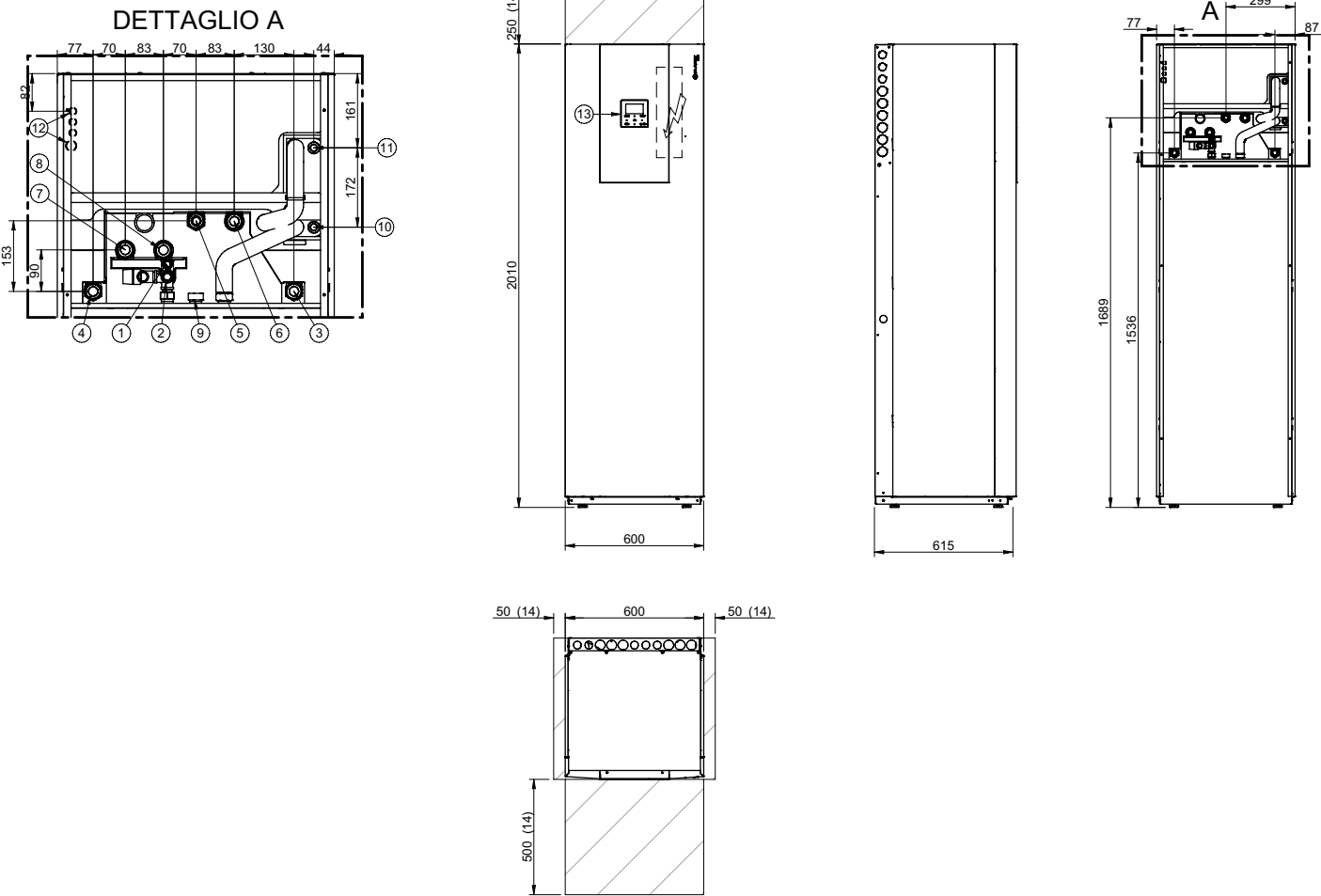
1. Domestic hot water outlet M 1/2"
2. Water supply system inlet F 1/4"
3. Return to outdoor unit M 1"
4. Supply from outdoor unit M 1"
5. Return from user side system M 1" area 1
6. Supply to user side system M 1" area 1 (optional accessory)
7. Return from user side system M 1" area 2 (optional accessory)
8. Supply to user side system M 1" area 2 (optional accessory)
9. DHW circulation circuit inlet M 3/4"
10. Return from solar system M 3/4" (optional accessory)
11. Supply to solar system M 3/4" (optional accessory)
12. Power input
13. Control keypad
14. Functional spaces for standard unit

SIZE		190 L
Operating weight	kg	357
Shipping weight	kg	158

The presence of optional accessories may result in significant variation of the weights indicated.

HYDRO-SPLIT TOWER 250 L

DAATL0002 REV01
DATA/DATE:10/11/2023



- 1. Domestic hot water outlet M 1/2"
- 2. Water supply system inlet F 1/2"
- 3. Return to outdoor unit M 1"
- 4. Supply from outdoor unit M 1"
- 5. Return from user side system M 1" area 1
- 6. Supply to user side system M 1" area 1 (optional accessory)
- 7. Return from user side system M 1" area 2 (optional accessory)
- 8. Supply to user side system M 1" area 2 (optional accessory)
- 9. DHW circulation circuit inlet M 3/4"
- 10. Return from solar system M 3/4" (optional accessory)
- 11. Supply to solar system M 3/4" (optional accessory)
- 12. Power input
- 13. Control keypad
- 14. Functional spaces for standard unit

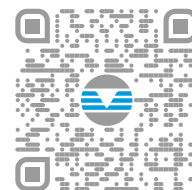
SIZE		250 L
Operating weight	kg	417
Shipping weight	kg	175

The presence of optional accessories may result in significant variation of the weights indicated.

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CLIVET S.p.A.

Via Camp Lonc 25, Z.I. Villapaiera 32032 - Feltre (BL) - Italy
Tel. +39 0439 3131 - info@clivet.it

CLIVET GMBH

Hummelsbütteler Steindamm 84,
22851 Norderstedt, Germany
Tel. +49 40 325957-0 - info.de@clivet.com

Clivet Group UK LTD

Units F5 & F6 Railway Triangle,
Portsmouth, Hampshire PO6 1TG
Tel. +44 02392 381235 -
Enquiries@Clivetgroup.co.uk

CLIVET LLC

Office 508-511, Elektrozavodskaya st. 24,
Moscow, Russian Federation, 107023
Tel. +7495 6462009 - info.ru@clivet.com

CLIVET MIDEAST FZCO

Dubai Silicon Oasis (DSO) Headquarter Building,
Office EG-05, P.O Box-342009, Dubai, UAE
Tel. +9714 3208499 - info@clivet.ae

Clivet South East Europe d.o.o.

Jarušćica 9b
10000, Zagreb, Croatia
Tel. +3851 222 8784 - info.see@clivet.com

CLIVET France SAS

6 Allée Kepler,
77420 Champs-sur-Marne
France
mail: info.fr@clivet.com
Tel: +33 01 88 60 99 40

Clivet Airconditioning Systems Pvt Ltd

Office No.501 & 502,5th Floor, Commercial -I,
Kohinoor City, Old Premier Compound, Off LBS
Marg, Kirod Road, Kurla West, Mumbai
Maharashtra 400070, India
Tel. +91 22 30930200 - sales.india@clivet.com