# SHERPA

Air-water split heat pump.

COP > 4

DHW 60°C

Energy class: A A+

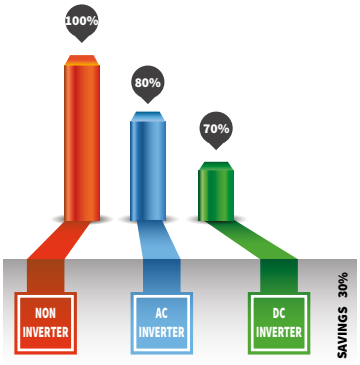
## RENEWABLE TECHNOLOGIES

Sherpa uses the heat in the air, and transfers it to system terminals in an efficient manner. For each kW of electricity consumed, Sherpa is able to produce over 4 of thermal energy. This means that 75% of energy is free, renewable and clean.

## COMPACT TECHNOLOGY

The engineering of components has made it possible to insert a 3-way valve for the management of Domestic Hot Water.
The reduced size allow installation inside a kitchen cabinet.

## OLIMPIA SPLENDID'S INVERTER DC TECHNOLOGY




## SMART CONTROL

The smart onboard control panel has been developed by Olimpia Splendid, it's extremely flexible and can be fully configured. It features all the advanced characteristics needed to manage every different kind of heat pump systems. It takes into account the climatic season, the thermal load request and adjusts consequently the operation of the motor on the basis of the difference between the temperature of the external environment and the water supply temperature.

Compatible with: AQUADUE® CONTROL

## FEATURES

**3-way valve incorporated** in the internal module for the deviation of the system water supply to the DHW reservoir: allowing installation simplification.

**Provides DHW** with temperatures up to 60 ° C

**DHW Management:** Sherpa can manage DHW with extreme flexibility through two management methods:
water sensor inserted in the boiler or contact thermostat in the tank.

**Climatic curves** based on the outside air temperature:
two curves are available, one for cooling and one for heating. The climatic curves allow you to change the system temperature according with external climate conditions, adjusting the heat input to the heat requirements of the building in order to obtain energy savings.

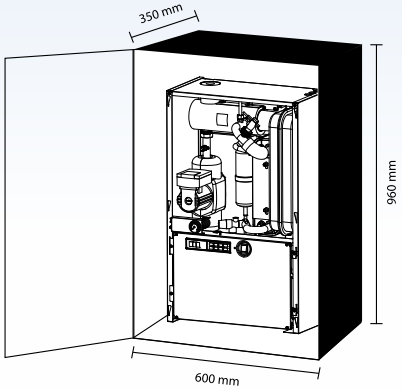
**Two configurable set points** in cooling, **Three configurable set points** in heating (one of which for DHW): the set points can also be selected by remote contact.

**2-stage electric heater:** configurable single or double stage which can be activated to support the heat pump, through verification, by electronic control, of the actual thermal capacity of the heat pump. Each stage is activated in accordance with the real need for thermal power, in order to optimize electrical consumption.

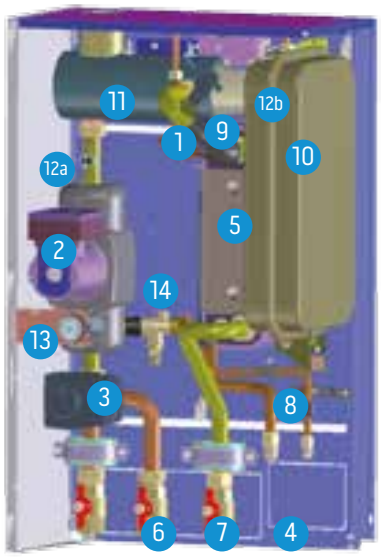
**Daily programmer** with night mode:
Night mode provides energy savings of up to 20%. Complete management of antilegionella cycles.

**Complete management** of antilegionella cycles.

**Refrigerant gas** R410A.*




The engineering of components has made it possible to include necessary components within the machine for system operation and Domestic Hot Water management. The fitting of 3-way valve within the module simplifies installation procedures and reduces work times.




1. Electrical resistance
2. Circulator
3. -way valve
4. Return water
5. BPHE Plate exchangers
6. System flow
7. DHW flow
8. Refrigerant circuit connections
9. Flow switch
10. Expansion vessel
11. Automatic air vent
12. Electrical resistance safety thermostats
13. Gauge
14. 3 bar security valve

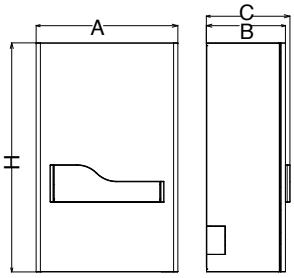
* Non hermetically sealed equipment containing fluorinated gas with GWP equivalent 2088

# SHERPA

| | | SHERPA 7 | SHERPA 11 | SHERPA 13 | SHERPA 13T | SHERPA 16 | SHERPA 16T |
|---|---|---|---|---|---|---|---|
| **Standard indoor unit** | Code | 599501A | | 599503A | | | |
| **Indoor unit with 3-way integrated valve** | Code | 599505A | | 599500A | | | |
| **External unit** | Code | OS-CEBSH24EI | OS-CEBCH36EI | OS-CEINH48EI | OS-CETNH48EI | OS-CEINH60EI | OS-CETNH60EI |
| **Heating capacity (a)** | kW | 6,5 | 10,5 | 12,5 | 12,5 | 14 | 16 |
| **COP** | W/W | 4,1 | 4,1 | 4,1 | 4,1 | 4,1 | 4,1 |
| **Heating capacity (b)** | kW | 5,0 | 8,3 | 10,0 | 10,0 | 10,5 | 12,0 |
| **COP** | W/W | 3,1 | 3,2 | 3,1 | 3,1 | 2,9 | 2,9 |
| **Heating capacity (c)** | kW | 6,2 | 9,9 | 11,6 | 11,6 | 13,0 | 14,6 |
| **COP** | W/W | 3,4 | 3,2 | 3,3 | 3,3 | 3,2 | 3,0 |
| **Heating capacity (d)** | kW | 4,8 | 7,8 | 9,3 | 9,3 | 9,8 | 10,9 |
| **COP** | W/W | 2,5 | 2,3 | 2,2 | 2,2 | 2,3 | 2,2 |
| **Cooling capacity (e)** | kW | 7,6 | 12,1 | 12,6 | 12,8 | 13,8 | 15,3 |
| **EER** | W/W | 4,0 | 4,4 | 3,5 | 3,5 | 3,1 | 3,2 |
| **Cooling capacity (f)** | kW | 5,6 | 8,1 | 10,4 | 10,4 | 11,3 | 12,8 |
| **EER** | W/W | 3,1 | 3,1 | 3 | 3 | 2,7 | 2,8 |
| **Energy efficency class (35°C - 55°C)** | | A A+ | A A+ | A A+ | A A+ | A A+ | A A+ |
| **Indoor unit sound pressure level** | dB(A) | 30 | 30 | 30 | 30 | 30 | 30 |
| **Indoor unit sound power level** | dB(A) | 41 | 41 | 41 | 41 | 41 | 41 |
| **Outdoor unit sound pressure level** | dB(A) | 51/52 | 53/55 | 57/57 | 57/57 | 57/57 | 57/59 |
| **Outdoor unit sound power level** | dB(A) | 64/65 | 66/68 | 70/70 | 70/70 | 70/70 | 70/72 |
| **Evaporator type** | | Brazed plates | Brazed plates | Brazed plates | Brazed plates | Brazed plates | Brazed plates |
| **Diameter refrigerant inlet connection** | | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" | 3/8" |
| **Diameter refrigerant outlet connection** | | 5/8" | 5/8" | 5/8" | 5/8" | 5/8" | 5/8" |
| **CIRCULATION PUMP** | | | | | | | |
| **Absorption** | W | 40 - 130 | | | | | |
| **Residual available pressure** | kPa | 80 | 82 | 80 | 80 | 78 | 73 |
| **Expansion tank capacity** | l | 8 | 8 | 8 | 8 | 8 | 8 |
| **Internal unit power supply** | V/ph/Hz | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 | 230/1/50 |
| **Corrente massima assorbita (g)** | A | 14,1 | 14,1 | 27,2 | 27,2 | 27,2 | 27,2 |
| **External unit power supply** | V/ph/Hz | 230/1/50 | 230/1/50 | 230/1/50 | 400/3/50 | 230/1/50 | 400/3/50 |
| **Maximum current absorption** | A | 13,5 | 22 | 28 | 8,15 | 28 | 11,5 |
| **Hydraulic connections** | | 1" | 1" | 1" | 1" | 1" | 1" |
| **Additional electrical resistors** | kW | 1,5+1,5 | 1,5+1,5 | 3+3 | 3+3 | 3+3 | 3+3 |
| **Refrigerant gas** | type | R410A | R410A | R410A | R410A | R410A | R410A |
| **Global warming potential** | GWP | 2088 | 2088 | 2088 | 2088 | 2088 | 2088 |
| **Refrigerant gas charge** | Kg | 2,1 | 2,75 | 4,45 | 4,0 | 4,45 | 4,2 |

(a) Water outlet temperature 35°C / External air temperature 7°C
(b) Water outlet temperature 35°C / External air temperature -2°C
(c) Water outlet temperature 45°C / External air temperature 7°C
(d) Water outlet temperature 45°C / External air temperature -2°C
(e) Water outlet temperature 18°C / External air temperature 35°C
(f) Water outlet temperature 7°C / External air temperature 35°C
(g) With inserted resistors

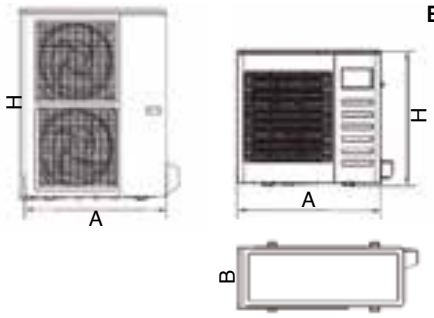
| INTERNAL UNIT | | SHERPA 7 | SHERPA 11 | SHERPA 13 | SHERPA 13T | SHERPA 16 | SHERPA 16T |
|---|---|---|---|---|---|---|---|
| | | SMALL | | BIG | | | |
| **A** | mm | 500 | 500 | 500 | 500 | 500 | 500 |
| **B** | mm | 280 | 280 | 280 | 280 | 280 | 280 |
| **C** | mm | 296 | 296 | 296 | 296 | 296 | 296 |
| **H** | mm | 810 | 810 | 810 | 810 | 810 | 810 |
| **standard weight** | Kg | 36 | 36 | 38 | 38 | 38 | 38 |
| **Weight with 3 way valve** | Kg | 36,3 | 36,3 | 38,3 | 38,3 | 38,3 | 38,3 |




**INTERNAL UNIT**

| EXTERNAL UNIT | | SHERPA 7 | SHERPA 11 | SHERPA 13 | SHERPA 13T | SHERPA 16 | SHERPA 16T |
|---|---|---|---|---|---|---|---|
| | | MONO-VENT | | DOUBLE VENT | | | |
| **A** | mm | 847 | 990 | 938 | 938 | 938 | 938 |
| **B** | mm | 330 | 350 | 392 | 392 | 392 | 392 |
| **H** | mm | 700 | 950 | 1369 | 1369 | 1369 | 1369 |
| **Weight** | Kg | 58 | 82 | 99 | 102 | 99 | 107 |

**EXTERNAL UNIT**



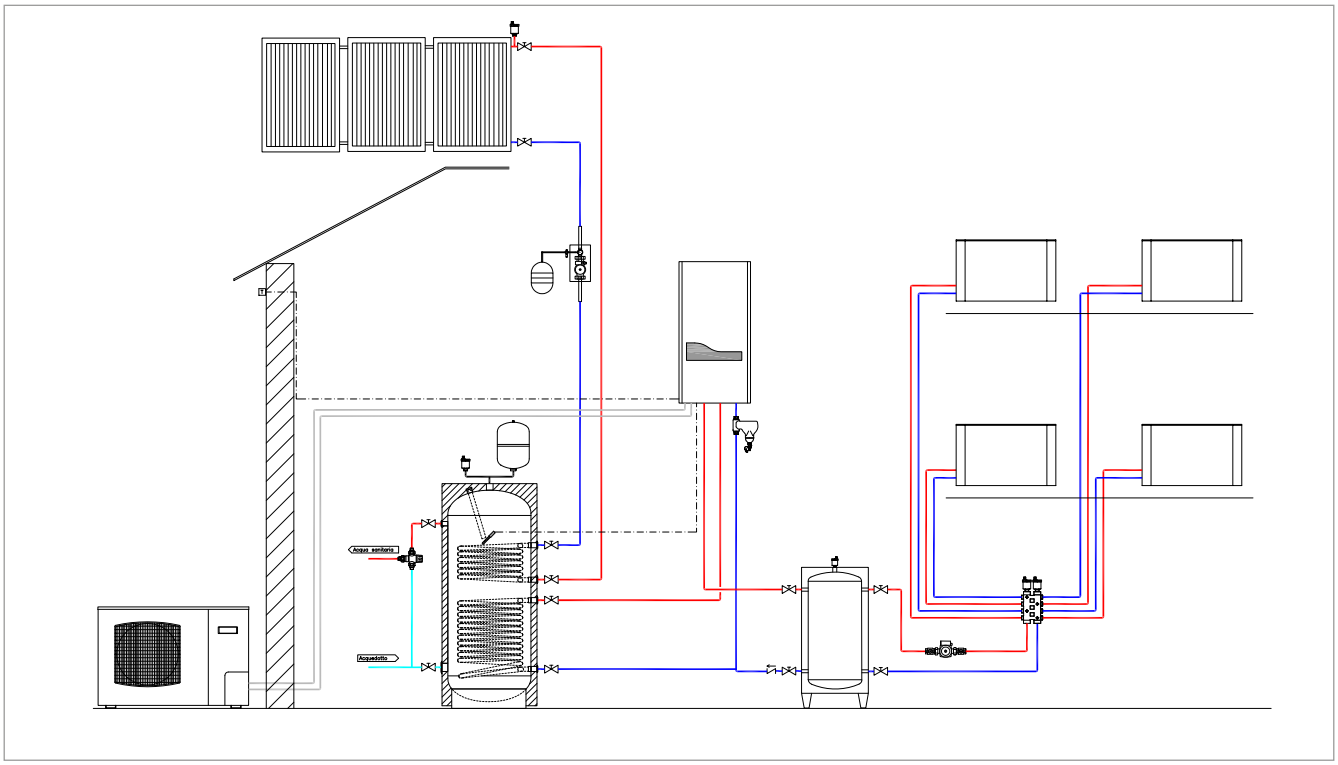

**Code B0622 - 3-WAY VALVE KIT FOR DOMESTIC HOT WATER.**
- Compact size
- Two point control

**Code B0623 - OUTDOOR AIR SENSOR KIT**
Sensor screen for measuring ambient air temperature. The sensor is necessary to enable electrical resistors activation and climatic curves.

**Code B0624 - DHW BOILER SENSOR KIT**
Sensor for measuring and direct control of water temperature in the domestic water storage tank.

**Code B0665 - HEATING CABLE KIT**
Prevents the formation of ice on the bottom of the external unit in the case of prolonged operation in extreme conditions.

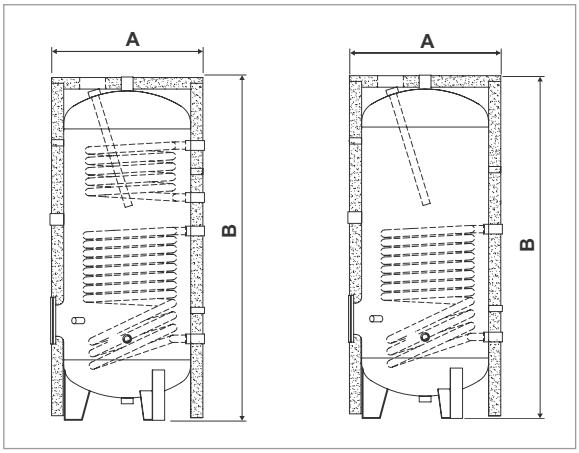
SHERPA heat pump (heating and cooling; DHW); Fan coil radiator terminals Bi2 SLR; domestic integration with solar thermal.



- Manometer
- Thermostatic mixer
- Automatic air vent
- Expansion vessel
- Water temperature sensor
- Off valve
- Diverter valve
- Air temperature sensor
- Dirt separator filter
- Antifreeze valve
- Immersion thermosthat

## BOILERS FOR DOMESTIC HOT WATER.

- Rigid polyurethane coating
- Available in double coil performance
- Enameled steel
- Sacrificial anode
- External finish in sky
- Sensor holder shaft



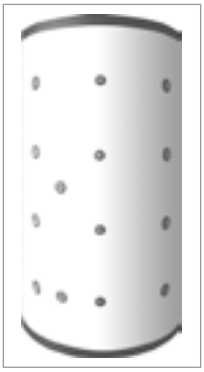

| FEATURES | | Single exchanger | | | Double exchanger | | |
|---|---|---|---|---|---|---|---|
| | Code | 01193 | 01194 | 01195 | 01196 | 01197 | 01198 |
| Water volume | lt | 200 | 300 | 500 | 200 | 300 | 500 |
| Max. water temperature | °C | 85 | | | | | |
| Height (tot. with isolation) | mm (B) | 1215 | 1615 | 1690 | 1215 | 1615 | 1690 |
| Diameter (tot. With isolation) | mm (A) | 600 | | 750 | 600 | | 750 |
| Exhanger measurement | m2 | 1,5 | 1,8 | 2,2 | 1,5/0,5 | 1,8/1,1 | 2,2/1,3 |
| Serpentine | | single | single | single | double | double | double |
| Material outer | | Casing rigid polyurethane covering 50 mm | | | | | |
| Color | | blu | | | | | |
| Weight | kg | 85 | 110 | 150 | 90 | 125 | 165 |
| Energy efficiency class | ERP | C | C | D | C | C | D |

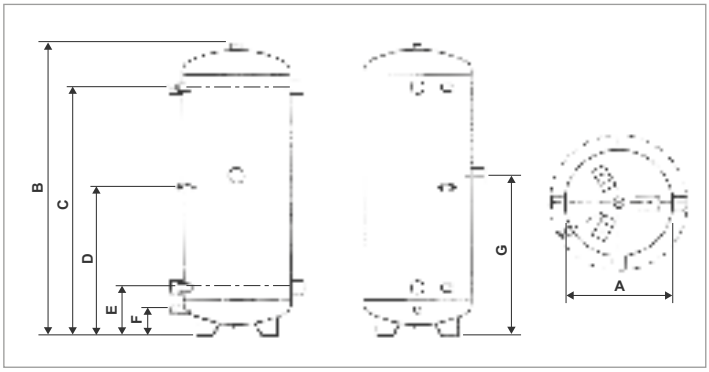
On each model you can add an electric immersion resistor, which is supplied as a kit complete with a removable flange.
(*) Optional, to be ordered as a separate kit complete with flange

| Code | DESCRIPTION |
|---|---|
| B0617 | Flange resistance kit |
| B0618* | Resistance for boiler 2 kW (for boiler up to 300 l) |
| B0666* | Resistance for boiler 3 kW (for boiler from 500 l) |

## PUFFER INERTIAL TANK.

- They guarantee system inertia and minimize inverter compressor frequency variations to the lowest level.
- Minimum content advised for water in the system: 3.5 liters for each kW of installed power.
- Tanks made of carbon steel coated in rigid polyurethane 50mm thick and finished in sky blue.
- Maximum water temperature 85 ° C.






| | Code | 01199 | 01200 | 01201 |
|---|---|---|---|---|
| Water volume lt | lt | 50 | 100 | 200 |
| Weight kg | kg | 25 | 34 | 45 |
| A (diameter without insolation) mm | mm | 300 | 400 | 450 |
| A1 (total external diameter) mm | mm | 400 | 500 | 550 |
| B (total height) | mm | 933 | 1095 | 1395 |
| C | mm | 785 | 935 | 1200 |
| D | mm | 485 | 560 | 705 |
| E | mm | 180 | 185 | 215 |
| F | mm | 100 | 100 | 105 |
| G | mm | 530 | 605 | 750 |
| Energy efficiency class | ERP | B | B | C |