

# SHERPA

Air-water split heat pump.



COP > 4

ACS a 60°C

Energy class: 35° **A+**

55° **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.

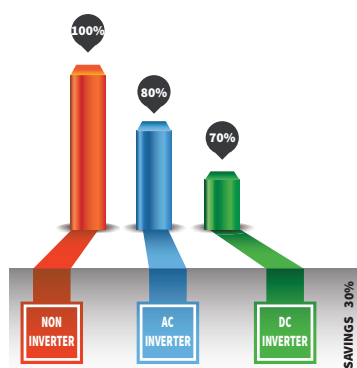


## COMPACT TECHNOLOGY

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<sup>®</sup>**  
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.

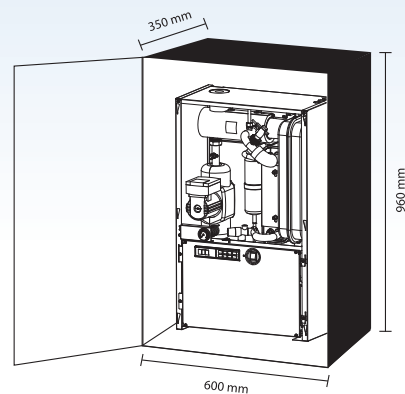
**Two configurable set points** in cooling, **Three configurable set points** in heating (one of which for DHW); the set points can also be selected by remote contact.

**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.

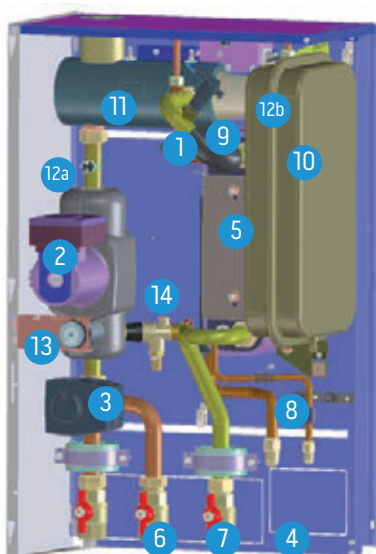
**Daily programmer** with night mode: Night mode provides energy savings of up to 20%. Complete management of antilegionella cycles.

**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 | 8 Refrigerant circuit connections           |
| 2 Circulator            | 9 Flow switch                               |
| 3 3-way valve           | 10 Expansion vessel                         |
| 4 Return water          | 11 Automatic air vent                       |
| 5 BPHE Plate exchangers | 12 Electrical resistance safety thermostats |
| 6 System flow           | 13 Gauge                                    |
| 7 DHW flow              | 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
Indoor unit standard	599501A		599503A			
indoor unit with 3-way integrated valve	599505A		599500A			
Outdoor Unit S1	OS-CESH24EI	OS-CESH36EI	OS-CESH48EI	OS-CEST48EI	OS-CESH60EI	OS-CEST60EI
refrigerant/water exchanger	Brazed plates	Brazed plates	Brazed plates	Brazed plates	Brazed plates	Brazed plates
Heating capacity (a)	6,50	10,50	12,50	12,50	14	16
COP (a)	4,12	4,14	4,12	4,12	4,11	4,11
Heating capacity (b)	4,30	7,20	8	8	8,50	9,20
COP (b)	2,60	2,65	2,70	2,70	2,40	2,50
Heating capacity (c)	6,50	9,90	12,50	12,50	13,30	14
COP (c)	3,40	3,14	3,21	3,21	3,10	3,10
Heating capacity (d)	3,80	6,20	7,20	7,20	8,50	9
COP (d)	2,30	2	2,10	2,10	2,10	2,10
Cooling capacity (e)	7,90	11,80	12,30	12,50	13,50	15
EER (e)	4,50	4,40	4	4,10	3,80	4
Cooling capacity (f)	5,60	8,10	10,40	10,40	11,30	12,80
EER (f)	3,10	3,08	3	3	2,70	2,80
Energy efficiency class heating mode 35°/55 °C	A+	A+	A+	A+	A+	A+
Sound pressure of indoor unit (g)	35	35	35	35	35	35
Sound power indoor unit	41	41	41	41	41	41
Sound pressure outdoor unit (h)	54/55	56/58	60/60	60/60	60/60	60/62
Sound power outdoor unit	64/65	66/68	70/70	70/70	70/70	70/72
Diameter refrigerant connections	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8	3/8-5/8
Circulator absorption	40-130	40-130	40-130	40-130	40-130	40-130
Capacity of expansion vessel	8	8	8	8	8	8
Power supply of indoor unit	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
maximum current absorption indoor unit (electrical heaters activated)	A	14,10	14,10	27,20	27,20	27,20
maximum current absorption indoor unit (electrical heaters deactivated)	A	1,1	1,1	1,1	1,1	1,1
Additional electrical heater elements	kW	1,5 + 1,5	1,5 + 1,5	3 + 3	3 + 3	3 + 3
Hydraulic connections	"	1	1	1	1	1
Outdoor unit power supply	V/ph/ Hz	230/1/50	230/1/50	230/1/50	400/3/50	230/1/50
Outdoor unit maximum absorbed current	A	13,5	22	28	8,15	28
refrigerant gas (i)		R410A	R410A	R410A	R410A	R410A
Refrigerant gas charge (outdoor unit)	Kg	1,95	3,2	4	4	4,3

(a) Heating mode, inlet/outlet water temperature 30°C/35°C, outdoor air temperature 7°C d.b./6°C w.b.  
 (b) Heating mode, inlet/outlet water temperature 30°C/35°C, outdoor air temperature -2°C d.b./-1°C w.b.  
 (c) Heating mode, inlet/outlet water temperature 40°C/45°C, outdoor air temperature 7°C d.b./6°C w.b.  
 (d) Heating mode, inlet/outlet water temperature 40°C/45°C, outdoor air temperature -2°C d.b./-1°C w.b.  
 (e) Cooling mode, inlet/outlet water temperature 23°C/18°C, outdoor air temperature 35°C

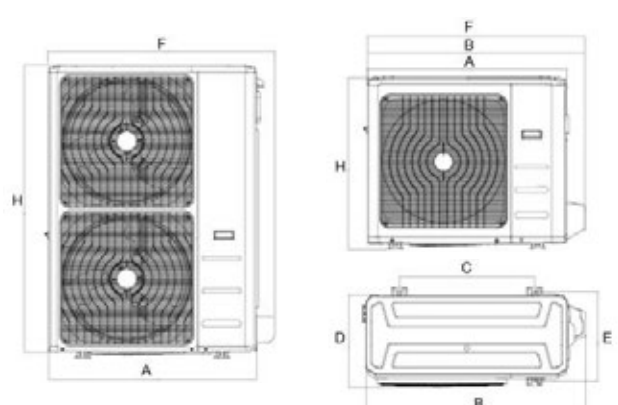
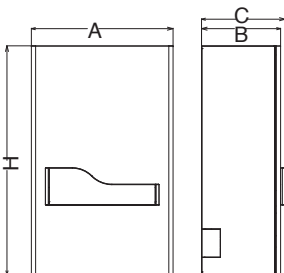
(f) Cooling mode, inlet/outlet water temperature 12°C/7°C, outdoor air temperature 35°C  
 (g) Sound pressure values measured at a distance of 1 m in semi-anechoic chamber  
 (h) Sound pressure values measured at a distance of 4 m in a free field  
 (i) Equipment not hermetically sealed containing fluorinated gases with an equivalent GWP of 2088

## INTERNAL UNIT

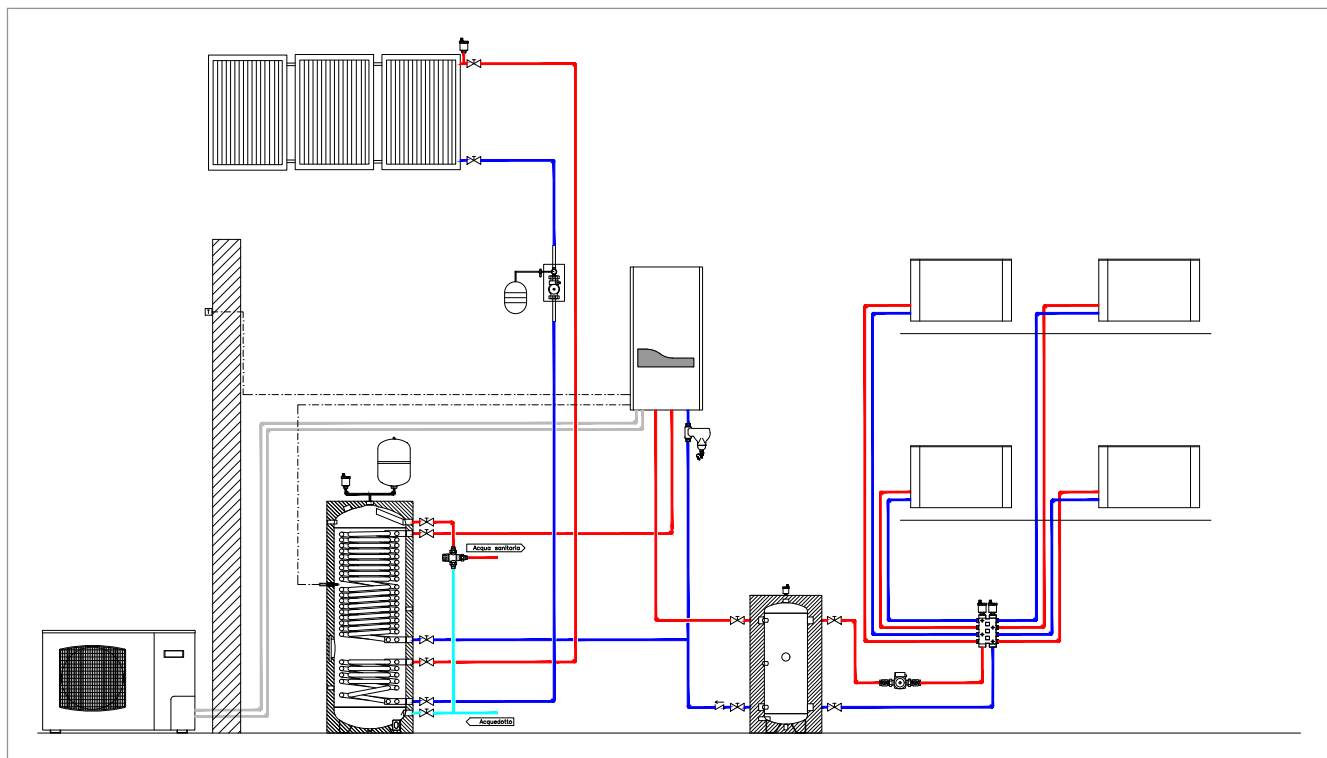
		SHERPA 7	SHERPA 11	SHERPA 13	SHERPA 13T	SHERPA 16	SHERPA 16T
		SMALL		BIG			
A	mm	500	500	500	500	500	500
B	mm	280	280	280	280	280	280
C	mm	296	296	296	296	296	296
H	mm	810	810	810	810	810	810
standard weight	Kg	36	36	38	38	38	38
Weight with 3 way valve	Kg	36,3	36,3	38,3	38,3	38,3	38,3

## EXTERNAL UNIT S1

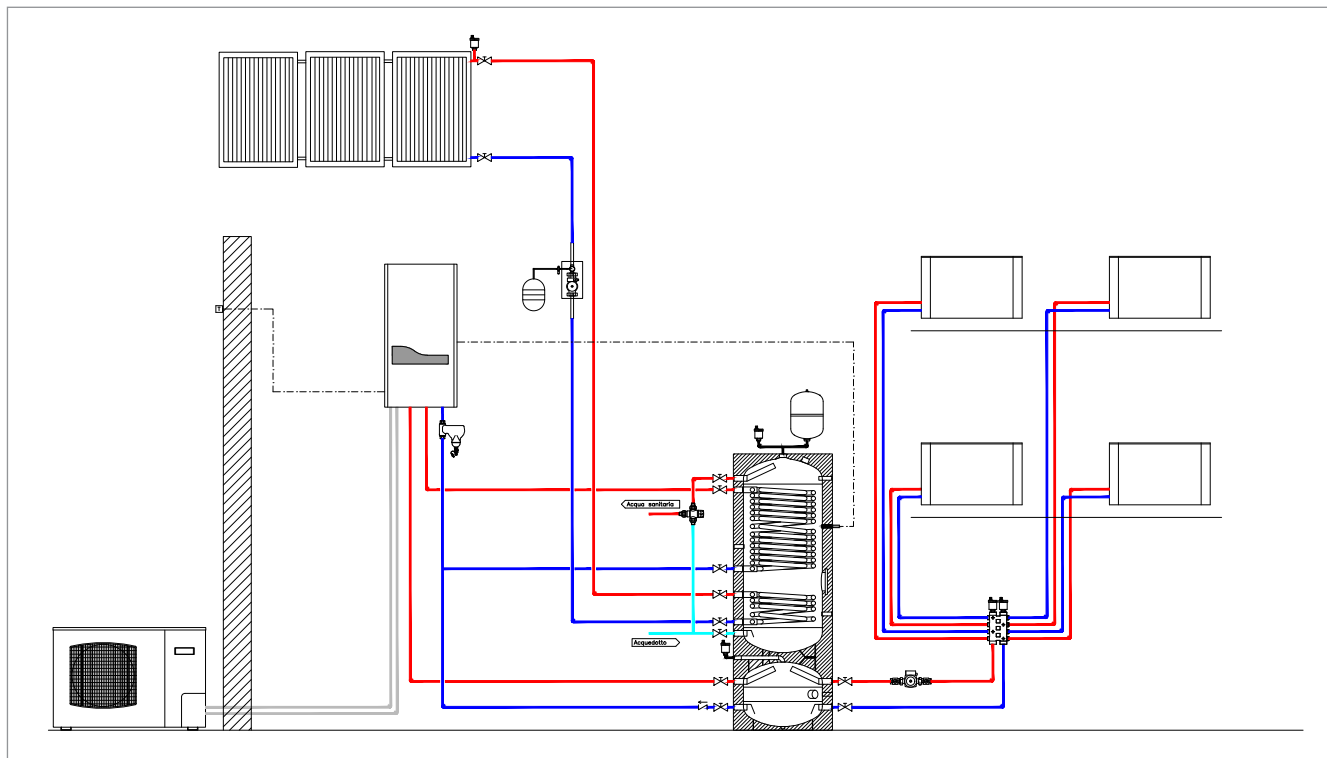
		7	11	13	13T	16	16T
		CESH24EI	CESH36EI	CESH48EI	CEST48EI	CESH60EI	CEST60EI
		MONO-VENT			DOUBLE VENT		
A	mm	845	946	952	952	952	952
B	mm	914	1030	1045	1045	1045	1045
C	mm	540	673	634	634	634	634
D	mm	363	410	415	415	415	415
E	mm	350	403	404	404	404	404
F	mm	915	1036	1032	1032	1032	1032
H	mm	702	810	1333	1333	1333	1333
Weight	kg	49	67	95	108	95	113



SHERPA heat pump (heating and cooling; high-temperature DHW production); fan coil terminals Bi2 SLR; DHW integration with solar thermal system and inertial storage tank for the cooling plant.



SHERPA heat pump (heating and cooling; high-temperature DHW production); fan coil terminals Bi2 SLR; DHW integration with solar thermal system and integrated inertial storage tank for the cooling plant.



**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 range accessories

## SHERPA / SHERPA AQUADUE / SHERPA MONOBLOC

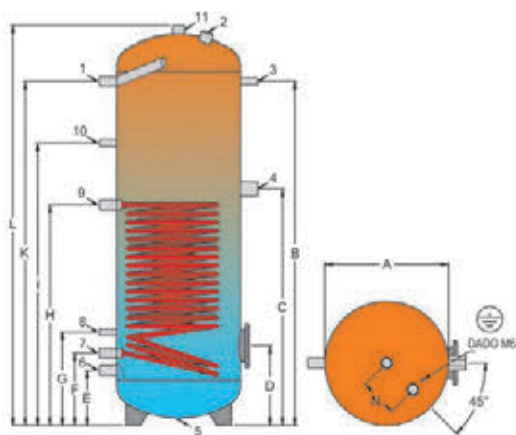
OS Code	Description	Cylinder Capacity litres	puffer Capacity litres	Total height mm	Diameter with insulation mm	insulation mm	Energy Class	Coil exchangers	Coil surfaces Heat Pump mq	Empty weight kg
	<b>01193</b> Standard cylinder 200 L	200	-	1215	600	50	<b>C</b> 67W	1	1,5	90
	<b>01194</b> Standard cylinder 300 L	300	-	1615	600	50	<b>C</b> 85W	1	1,8	115
	<b>01804</b> High-efficiency HE cylinder 200 L	200	-	1215	640	70	<b>B</b> 51W	1 double coil	3,0	120
	<b>01805</b> High-efficiency HE cylinder 300 L	300	-	1615	640	70	<b>B</b> 63W	1 double coil	4,0	160
	<b>01806</b> High-efficiency HES solar cylinder 300 L	300	-	1615	640	70	<b>B</b> 63W	1 double coil + 1 solar unit	3,7	140
	<b>01807</b> Hybrid HY cylinder 300 L	300	80	1925	690	70	<b>B</b> 73W	1	2,8	150
	<b>01808</b> Hybrid HY solar cylinder 300 L	300	80	1925	690	70	<b>B</b> 73	1 + 1 solar unit	3,3	150
	<b>01199</b> Heat storage 50 L	-	50	935	400	50	<b>B</b> 34W	-	-	25
	<b>01200</b> Heat storage 100 L	-	100	1095	500	50	<b>B</b> 50W	-	-	35
	<b>B0618</b> Resistance for boiler 2 kW									
	<b>B0666</b> Resistance for boiler 3 kW									
	<b>B0617</b> Flange resistance kit									

## DHW STANDARD CYLINDERS

CYLINDER FOR DOMESTIC HOT WATER PRODUCTION

Cylinder with 1 carbon steel coil, complete with anodic protection, internal vitrification treatment in compliance with DIN 4753-3 and EN 10025 Standards. Insulation: Rigid polyurethane with thickness of 50 mm

energy class **C**



N°	TYPE OF ATTACHMENT	200 ÷ 300
1.	Hot water flow	1"
2.	Anode	1" 1/4
3.	Thermometer-Probe	1/2"
4.	Electric heating element	1" 1/2
5.	Pallet attachment (blind)	1/2"
6.	Cold water inlet	1"
7.	Coil return	1"
8.	Thermostat	1/2"
9.	Coil flow	1"
10.	Recirculation	1/2"
11.	Hot water flow	1" 1/4

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
<b>200</b>	500	1000	810	320	220	290	375	750	835	-	975	1215	-	150
<b>300</b>	500	1390	955	320	220	290	375	890	1165	-	1390	1615	-	150

## HE/HES HIGH EFFICIENCY DHW CYLINDER

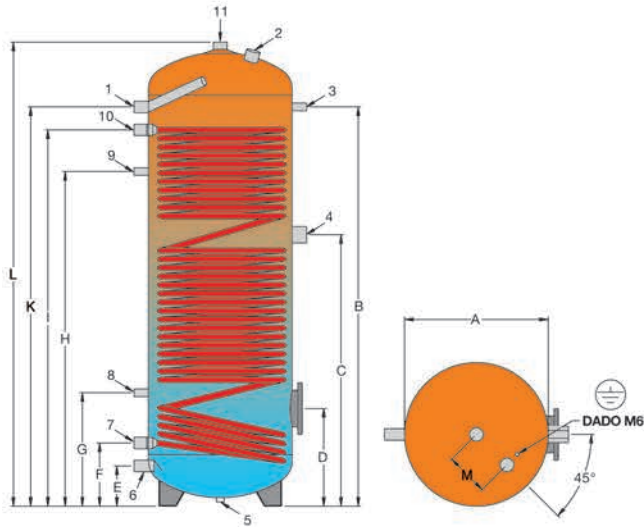
energy class **B**

CYLINDER FOR DOMESTIC HOT WATER PRODUCTION BY HEAT PUMP (HE) AND SOLAR PANELS (HES)

Cylinder with 1 or 2 carbon steel coils with large exchange surface, complete with anodic protection and internal vitrification treatment in compliance with DIN 4753-3 and EN 10025 Standards. Insulation: Rigid polyurethane with thickness of 70 mm.

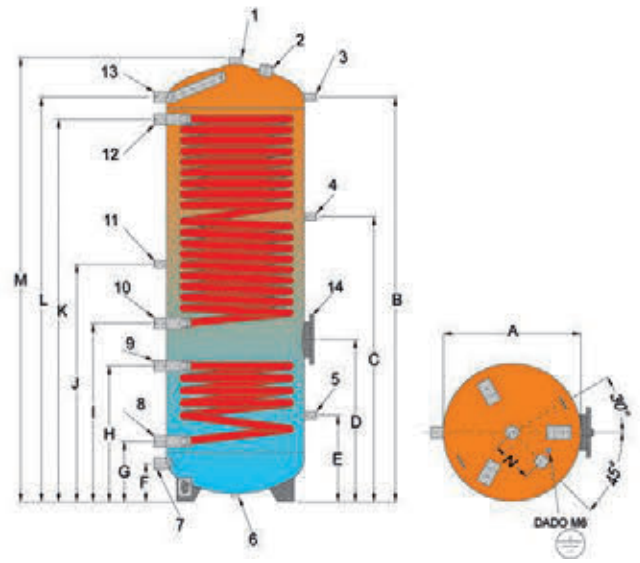
### HE

1 coil cylinder (large surface for heat pump)



### HES

2 coil cylinder (large surface for heat pump+ solar unit)



N°	TYPE OF ATTACHMENT	200 ÷ 300
1.	Hot water flow	1"
2.	Anode	1" 1/4
3.	Thermometer-Probe	1/2"
4.	Electric heating element	1" 1/2
5.	Pallet attachment (blind)	1/2"
6.	Water inlet	1"
7.	Coil return	1"
8.	Probe	1/2"
9.	Recirculation	1/2"
10.	Coil flow	1"
11.	Hot water flow	1" 1/4

N°	TYPE OF ATTACHMENT	300
1.	Hot water flow	1" 1/4
2.	Anode	1" 1/4
3.	Thermometer-Probe	1/2"
4.	Thermostat	1/2"
5.	Thermostat	1/2"
6.	Pallet attachment (blind)	1/2"
7.	Cold water inlet	1"
8.	Lower coil return	1"
9.	Lower coil flow	1"
10.	Upper coil return	1"
11.	Recirculation	1/2"
12.	upper coil flow	1"
13.	Hot water flow	1"
14.	Flange with electric heating element attachment	1" 1/2

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N
HE 200	500	995	735	320	140	220	370	835	990	-	1070	1215	150	-
HE 300	500	1390	945	340	140	220	395	1165	1310	-	1390	1615	150	-
HES 300	500	1470	1035	590	315	140	220	495	650	865	1390	1470	1615	150

# SHERPA range accessories

SHERPA / SHERPA AQUADUE / SHERPA MONOBLOC

## HYBRID HY/HYS DHW CYLINDERS

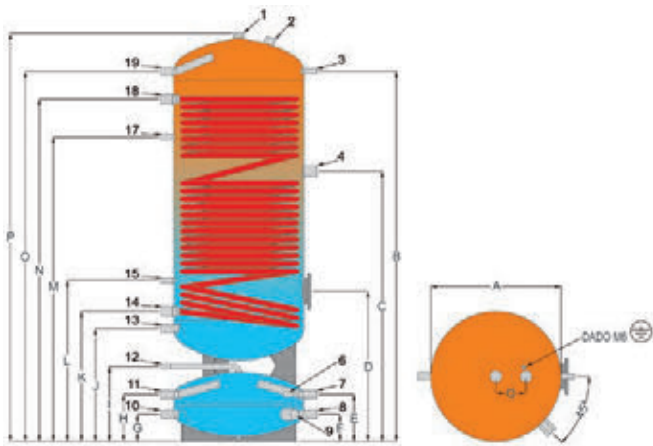
energy class **B**

COMBINED HEAT STORAGE UNIT: CYLINDER FOR DOMESTIC HOT WATER PRODUCTION BY HEAT PUMP (HY) AND SOLAR PANELS (HYS) AND INERTIAL STORAGE FOR THE PLANT WATER

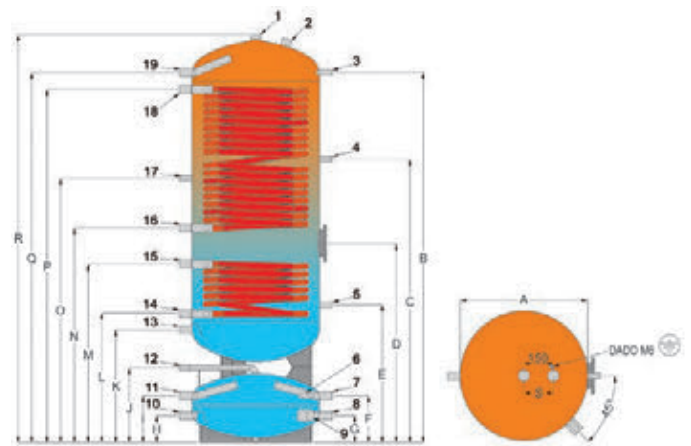
Upper cylinder with 1 or 2 carbon steel coils with large exchange surface, complete with anodic protection and internal vitrification treatment in compliance with DIN 4753-3 and EN 10025 Standards. Lower storage tank for heating or cooled water, interior not treated.

Insulation: Rigid polyurethane with thickness of 70 mm

**HY**  
1 coil cylinder  
(for heat pump + buffer tank)



**HYS**  
2 coil cylinder  
(for heat pump + solar unit + buffer tank)



N°	TYPE OF ATTACHMENT	300
1.	Domestic hot water flow	1" 1/4
2.	Anode	1" 1/4
3.	Thermometer	1/2"
4.	Probe	1" 1/2
6.	Probe	1/2"
7.	Boiler flow	1"
8.	Boiler return	1"
9.	Electric heating element	1" 1/2
10.	Heating system return	1"
11.	Heating system flow	1"
12.	Vent	1/2"
13.	Domestic cold water inlet	1"
14.	EBD - Lower coil return	1" 1/4
15.	EBD - Lower coil return	1/2"
17.	Recirculation	1/2"
18.	Upper coil flow	1" 1/4
19.	Domestic hot water flow	1"

N°	TYPE OF ATTACHMENT	300
1.	Domestic hot water flow	1" 1/4
2.	Anode	1" 1/4
3.	Thermometer	1/2"
4.	EBD - Probe	1/2"
5.	EBD - Probe	1/2"
6.	Probe	1/2"
7.	Boiler flow	1"
8.	Boiler return	1"
9.	Electric heating element	1" 1/2
10.	Heating system return	1"
11.	Heating system flow	1"
12.	Vent	1/2"
13.	Domestic cold water inlet	1"
14.	EBD - Lower coil return	1"
15.	EBD - Lower coil return	1"
16.	EBD - Upper coil return	1"
17.	Recirculation	1"
18.	Upper coil flow	1"
19.	Domestic hot water flow	1"

Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
<b>HY 300</b>	550	1755	1300	875	340	160	160	340	505	675	765	940	1425	1675	1755	1925	150	-	-
<b>HYS 300</b>	550	1755	1420	1035	810	340	160	160	340	505	675	755	945	1125	1280	1675	1755	1925	150

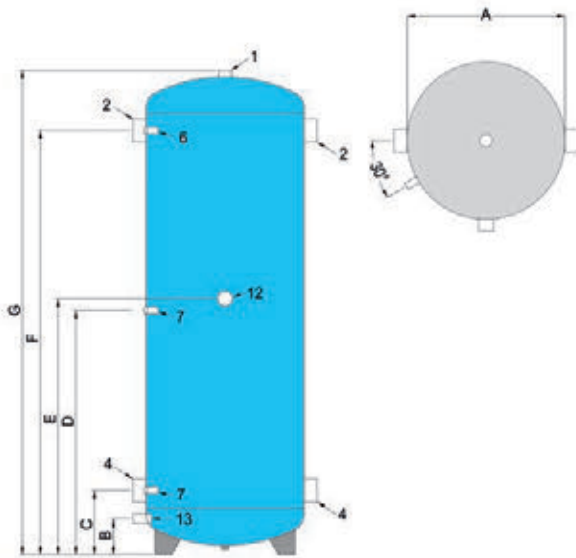
## HEAT STORAGE TANKS

### BUFFER HEAT STORAGE TANKS

Storage tank for cooled water, interior not treated. Can be used also for heating water.

Insulation: Polyurethane 50 mm

energy class **B**



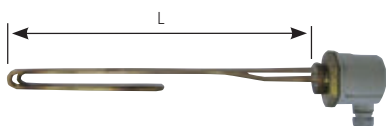
N°	TYPE OF ATTACHMENT	50-100
1.	Vent	1"
2.	boiler flow	1" 1/4
4.	oiler return-heating at 50°C	1" 1/4
5.	oiler return-heating at 30°C	1/2"
6.	thermometer	1/2"
7.	probe	1/2"
12.	Electric heating element	1" 1/2
13.	Drain	1/2"

Model	A	B	C	D	E	F	G
50	300	100	180	485	530	785	935
100	400	100	185	560	605	935	1095

## OPTIONAL

### ELECTRIC HEATING ELEMENTS

Copper immersion heating element, IP 65, with internal adjustable thermostat and temperature limiter.



Cod.	W	V	KG	L MM	ATT.
B0618	2000	230	1,5	390	1"1/2
B0666	3000	230	1,5	390	1"1/2

### FLANGE for HEATING ELEMENT

Mandatory accessory for correct positioning of the electric heating elements if used for anti-legionella cycles.