



BSV

DHW Glasslined Vertical Cylinders with Fixed Heat Exchanger

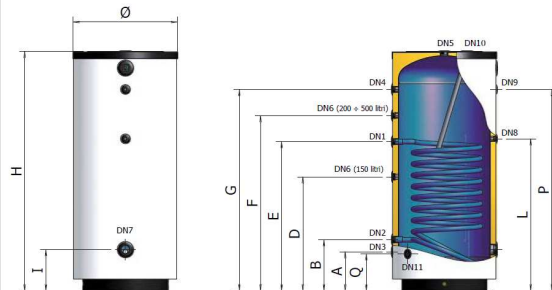


In compliance with: **European Directive no. 3.3 - PED 97/23/EC** and **Norm EN 12897:2006**

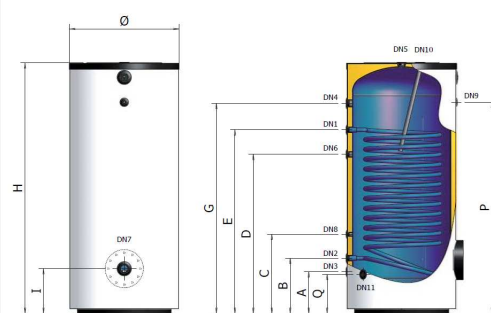
To be installed in flat surface in **vertical** position.

ENAMELLING treatment according **DIN 4753** standard

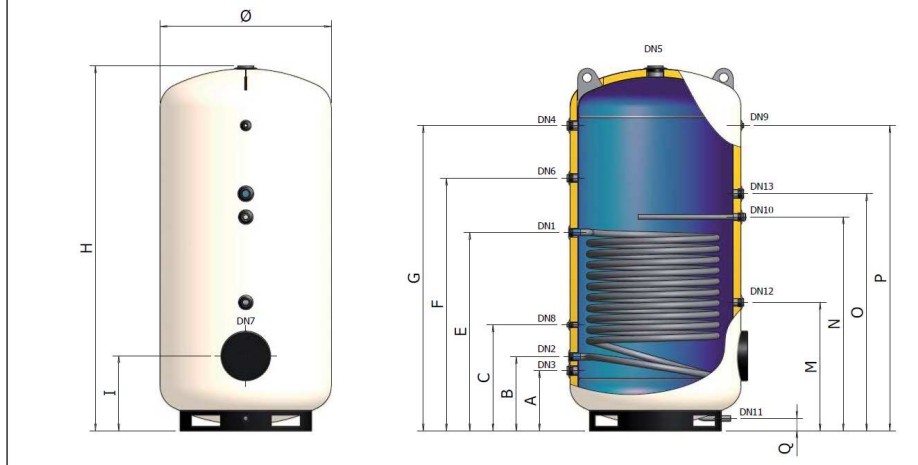
BSV 150 - 200 - 300 - 400 - 500






BSV 800 - 1000



BSV 1500 - 2000



DN1: Primary inlet; **DN2:** Primary outlet; **DN3:** Secondary inlet ; **DN4:** Secondary outlet; **DN5:** draw-offs; **DN6:** Circulation; **DN7:** Immersion element / Inspection boss; **DN8:** Thermostat; **DN9:** Thermometer; **DN10:** Magnesium Anode; **DN11:** Drain

MOD	COD		SERP 	
			m ² LITRI	
BSV-150	A3A0L43 PGP40	150	0,60 4	600 950
BSV-200	A3A0L47 PGP40	200	0,70 5	600 1170
BSV-300	A3A0L51 PGP40	300	1,05 7	650 1395
BSV-400	A3A0L53 PGP40	400	1,20 8	750 1445
BSV-500	A3A0L55 PGP40	500	1,45 9	750 1695
BSV-800	A3A0L60 PGP40	800	2,00 13	900 1795
BSV-1000	A3A0L62 PGP40	1000	2,40 15	900 2045
BSV-800+FL.	A3A1L60 SWS50	800	2,00 13	900 1795
BSV-1000+FL.	A3A1L62 SWS50	1000	2,40 15	900 2045
BSV-1500+FL.	A3A1H67 VW050	1500	3,60 36	1100 2370
BSV-2000+FL.	A3A1H70 VW050	2000	4,30 43	1200 2375

MOD	A mm	B mm	C mm	D mm	E mm	F mm	G mm	I mm	L mm	P mm	Q mm
BSV-150	220	300	/	485	715	/	765	250	465	685	220
BSV-200	235	320	/	/	670	765	935	275	785	935	220
BSV-300	255	340	/	/	955	1055	1155	270	955	1155	240
BSV-400	280	365	/	/	900	1040	1180	295	980	1180	265
BSV-500	280	365	/	/	1060	1245	1430	295	1080	1430	265
BSV-800	340	450	635	995	1195	/	1470	365	/	1470	320
BSV-1000	340	450	645	1295	1495	/	1710	365	/	1720	320
BSV-800+FL.	340	450	635	995	1195	/	1470	435	/	1470	320
BSV-1000+FL.	340	450	645	1295	1495	/	1710	435	/	1720	320
BSV-1500+FL.	455	545	750	-	1345	1695	2035	550	-	2035	80
BSV-2000+FL.	445	535	760	-	1425	1685	2025	540	-	2025	80

ANODO												
MOD	Ø x Øatt. x L	DN1	DN2	DN3	DN4	DN5	DN6	DN7	DN8	DN9	DN10	DN11
BSV-150	32 x 1.1/4" x 350	1"	1"	1"	1"	1.1/4"	3/4"	2"	1/2"	1/2"	1.1/4"	1/2"
BSV-200	32 x 1.1/4" x 350	1"	1"	1"	1"	1.1/4"	3/4"	2"	1/2"	1/2"	1.1/4"	1/2"
BSV-300	32 x 1.1/4" x 550	1"	1"	1"	1"	1.1/4"	3/4"	2"	1/2"	1/2"	1.1/4"	1/2"
BSV-400	32 x 1.1/4" x 550	1"	1"	1"	1"	1.1/4"	3/4"	2"	1/2"	1/2"	1.1/4"	1/2"
BSV-500	32 x 1.1/4" x 700	1"	1"	1"	1"	1.1/4"	3/4"	2"	1/2"	1/2"	1.1/4"	1/2"
BSV-800	32 x 1.1/4" x 700	1"	1"	1"	1.1/4"	1.1/4"	1"	2"	1/2"	1/2"	1.1/4"	3/4"
BSV-1000	32 x 1.1/4" x 700	1"	1"	1"	1.1/4"	1.1/4"	1"	2"	1/2"	1/2"	1.1/4"	3/4"
BSV-800+FL.	32 x 1.1/4" x 700	1"	1"	1"	1.1/4"	1.1/4"	1"	Øi 220	1/2"	1/2"	1.1/4"	3/4"
BSV-1000+FL.	32 x 1.1/4" x 700	1"	1"	1"	1.1/4"	1.1/4"	1"	Øi 220	1/2"	1/2"	1.1/4"	3/4"
BSV-1500+FL.	32 x 1.1/4" x 670	1.1/4"	1.1/4"	1.1/2"	1.1/2"	3"	1.1/4"	Øi 220	1/2"	1/2"	1.1/4"	1"
BSV-2000+FL.	32 x 1.1/4" x 670	1.1/4"	1.1/4"	1.1/2"	1.1/2"	3"	1.1/4"	Øi 220	1/2"	1/2"	1.1/4"	1"

MOD	M mm	N mm	O mm	DN 12	DN 13
BSV-1500+FL.	895	1445	1595	1.1/4"	1.1/2"
BSV-2000+FL.	885	1475	1605	1.1/4"	1.1/2"



TECHNICAL FEATURES	CYLINDER (Secondary Circuit)	HEAT EXCHANGER (Primary Circuit)
MAX WORKING TEMPERATURE	95 °C	110 °C

MODEL	MAX WORKING PRESSURE		HEAT EXCHANGER PRESSURE DROP
	CYLINDER (Secondary Circuit)	HEAT EXCHANGERS (Primary Circuit)	LOWER HEAT EXCHANGER
BSV 150	10 bar	12 bar	80 mbar
BSV 200			110 mbar
BSV 300			200 mbar
BSV 400			220 mbar
BSV 500			270 mbar
BSV 800			350 mbar
BSV 1000			400 mbar
BSV 1500	6 bar		510 mbar
BSV 2000			630 mbar

MODEL	INSULATION	THICKNESS	MINIMUM DENSITY	THERMAL CONDUCTIVITY	INSULATION ALLOWABLE HEAT LOSS (*)	COVER (EXTERNAL FINISH)
BSV 150	Injected Rigid polyurethane c/w 95% Closed-Cells - CFC and HCFC free	50 mm	40 kg/m ³	23,5 mW/m K	0,79 kWh / 24h	RAL 9006 Grey Polystyrene
BSV 200					0,98 kWh / 24h	
BSV 300					1,29 kWh / 24h	
BSV 400					1,56 kWh / 24h	
BSV 500					1,84 kWh / 24h	
BSV 800					2,37 kWh / 24h	
BSV 1000					2,71 kWh / 24h	
BSV 1500	Expanded Soft-Cells Polyurethane	50 mm	15 kg/m ³	39,0 mW/m K	6,53 kWh / 24h	Skay bianco RAL 9001
BSV 2000					7,15 kWh / 24h	

(*) Heat loss based with sanitary water @60°C and room temperature @15 °C.

SUPPLIED WITH

- Magnesium anode w/ Tester

SAFETY DEVICES

In order to avoid overpressure to occur in the cylinder the following control and safety devices shall be installed:

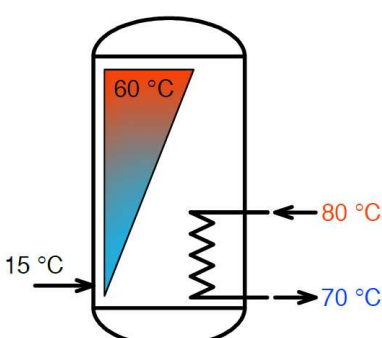
- **SAFETY VALVE** set at pressure below the cylinder max working pressure
- ELBI mod. **D – DV** series **EXPANSION SANITARY VESSEL**.
- ELBI mod. **DS – DSV** series **EXPANSION SOLAR VESSEL**.

MODEL	EXPANSION SANITARY VESSEL on secondary circuit (mod. ELBI serie D-DV)
BSV 150	D - 11
BSV 200	D – 18
BSV 300	D – 24
BSV 400	D – 35
BSV 500	D – 35
BSV 800	DV – 50
BSV 1000	DV – 80
BSV 1500	DV – 150
BSV 2000	DV – 150

The sizing chart is applicable under the following working conditions: T.outlet = 85 °C / T.inlet = 15 °C / Precharge = 3 bar / Max pressure = 6 bar
The Expansion Tanks capacities must be installed based on the real situation of the system.

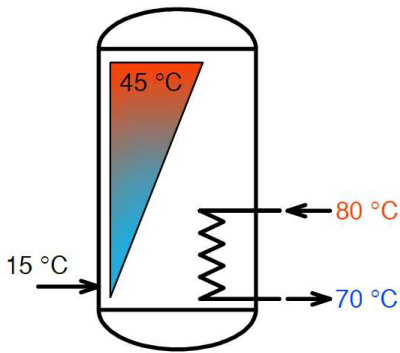
MODEL	MAGNESIUM ANODE	CATHODIC PROTECTION
BSV 150	1.1/4" x 350 / Cod. 8560046	Cathodic protection Lt. 100÷400 Cod. 8560175
BSV 200	1.1/4" x 350 / Cod. 8560046	
BSV 300	1.1/4" x 350 / Cod. 8560046	
BSV 400	1.1/4" x 550 / Cod. 8560066	
BSV 500	1.1/4" x 550 / Cod. 8560066	
BSV 800	1.1/4" x 700 / Cod. 8560086	Cathodic protection Lt. 500÷1000 Cod. 8560175
BSV 1000	1.1/4" x 700 / Cod. 8560086	
BSV 1500	n.2 x 1.1/4" x 670 / Cod. 8560070	Cathodic protection Lt. 1500÷2000 Cod. 8560180
BSV 2000	n.2 x 1.1/4" x 670 / Cod. 8560070	

PERFORMANCES @60°C

HEAT EXCHANGER: T.inlet = 80°C ; ΔT = 10°C - CYLINDER: T.inlet main water supply = 15°C ; T.oulet hot water = 60°C						
	MODEL	POWER [Kw]	PUMP CAPACITY [lts/h]	HEATING TIME [min] ⁽¹⁾	DHW at 60°C [lt/h]	FIRST 10 MIN. PRODUCTION OF WATER @45°C ⁽²⁾ [lts]
	BSV 150	15,00	1320	37	287	176
	BSV 200	19,50	1720	34	373	224
	BSV 300	25,90	2290	34	495	300
	BSV 400	29,00	2500	45	554	375
	BSV 500	33,00	2900	47	630	449
	BSV 800	50,00	4400	49	955	668
	BSV 1000	60,00	5300	47	1140	770
	BSV 1500	79,00	6900	60	1500	1040
	BSV 2000	93,00	8200	67	1800	1300

(1) Heating time from 15°C to 60°C
(2) Domestic Hot Water available @45°C in the first 10 minutes of water draw-off from stored water @60°C

PERFORMANCES @45°C

HEAT EXCHANGER: T.inlet = 80°C ; ΔT = 10°C - CYLINDER: T.inlet main water supply = 15°C ; T.oulet hot water = 45°C					
	MODEL	POWER [Kw]	PUMP CAPACITY [lts/h]	HEATING TIME [min] ⁽¹⁾	DHW at 45°C [lt/h]
	BSV 150	18,80	1650	20	536
	BSV 200	25,00	2200	18	715
	BSV 300	33,00	2900	18	945
	BSV 400	36,00	3170	24	1030
	BSV 500	43,00	3800	24	1230
	BSV 800	59,50	5200	28	1700
	BSV 1000	68,50	6000	27	1960
	BSV 1500	95,00	8300	33	2700
	BSV 2000	112,00	9850	37	3200
(3) Heating time from 15°C to 45°C					

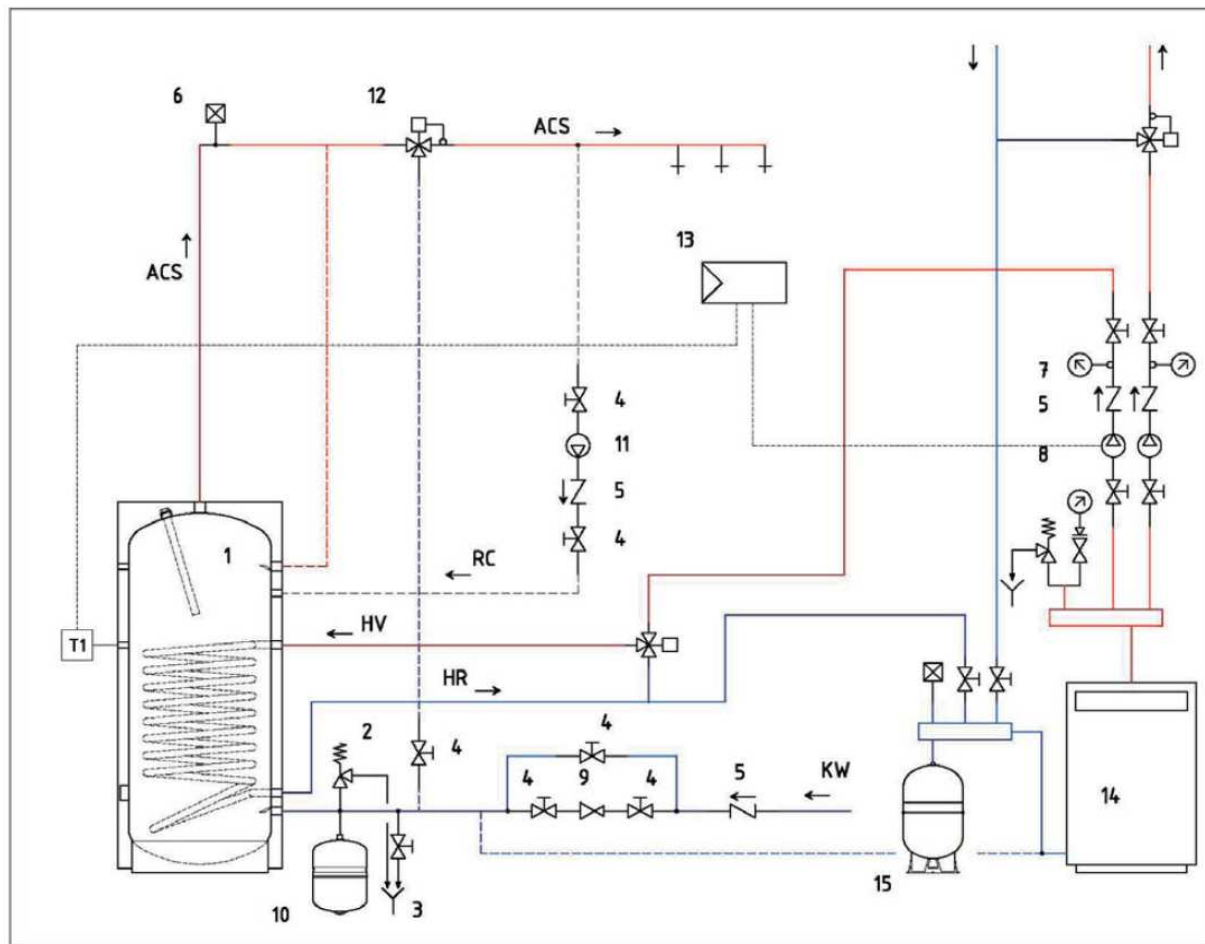
IMMERSION HEATING ELEMENTS-HOT WATER CYLINDERS APPLICABILITY TABLE

Immersion heating element model					Heating time from 15°C to 60°C (minutes)								
ART.	Power (kW)	Input (Volt)	Fitting	Length (mm)	BSV 150	BSV 200	BSV 300	BSV 400	BSV 500	BSV 800	BSV 1000	BSV 1500	BSV 2000
8601000	1	220 V / MF	G 1.1/4"	295	480 min.	630 min.	960 min.	1270 min.	1580 min.	2520 min.	3150 min.	4720 min.	6300 min.
8601650	1.65	220 V / MF	G 1.1/4"	450	285 min.	380 min.	580 min.	770 min.	970 min.	1550 min.	1920 min.	2870 min.	3820 min.
8602000	2	220 V / MF	G 1.1/4"	515	n.a.	n.a.	n.a.	640 min.	800 min.	1270 min.	1580 min.	2370 min.	3150 min.
8602600	2.6	220 V / MF	G 1.1/4"	675	n.a.	n.a.	n.a.	n.a.	n.a.	980 min.	1230 min.	1830 min.	2450 min.
8602601	2.6	220 V / MF	G 1.1/4"	360	180 min.	250 min.	370 min.	490 min.	630 min.	980 min.	1230 min.	1830 min.	2450 min.
8603300	3.3	220 V / MF	G 1.1/4"	825	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1450 min.	1940 min.
8603301	3.3	220 V / MF	G 1.1/4"	435	145 min.	200 min.	295 min.	390 min.	490 min.	780 min.	980 min.	1450 min.	1940 min.
8604001	4	220 V / MF	G 1.1/4"	510	n.a.	n.a.	n.a.	320 min.	410 min.	640 min.	800 min.	1200 min.	1600 min.
8705000	5	380 V / TF	G 1.1/2"	445	95 min.	140 min.	200 min.	260 min.	330 min.	520 min.	640 min.	950 min.	1300 min.
8706000	6	380 V / TF	G 1.1/2"	510	n.a.	n.a.	n.a.	220 min.	280 min.	430 min.	540 min.	800 min.	1060 min.
8708000	8	380 V / TF	G 1.1/2"	670	n.a.	n.a.	n.a.	n.a.	n.a.	330 min.	420 min.	610 min.	800 min.
8710000	10	380 V / TF	G 1.1/2"	820	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	490 min.	640 min.
8712000	12	380 V / TF	G 1.1/2"	970	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	410 min.	540 min.

n.a. = not applicable

INSTALLATION EXAMPLE

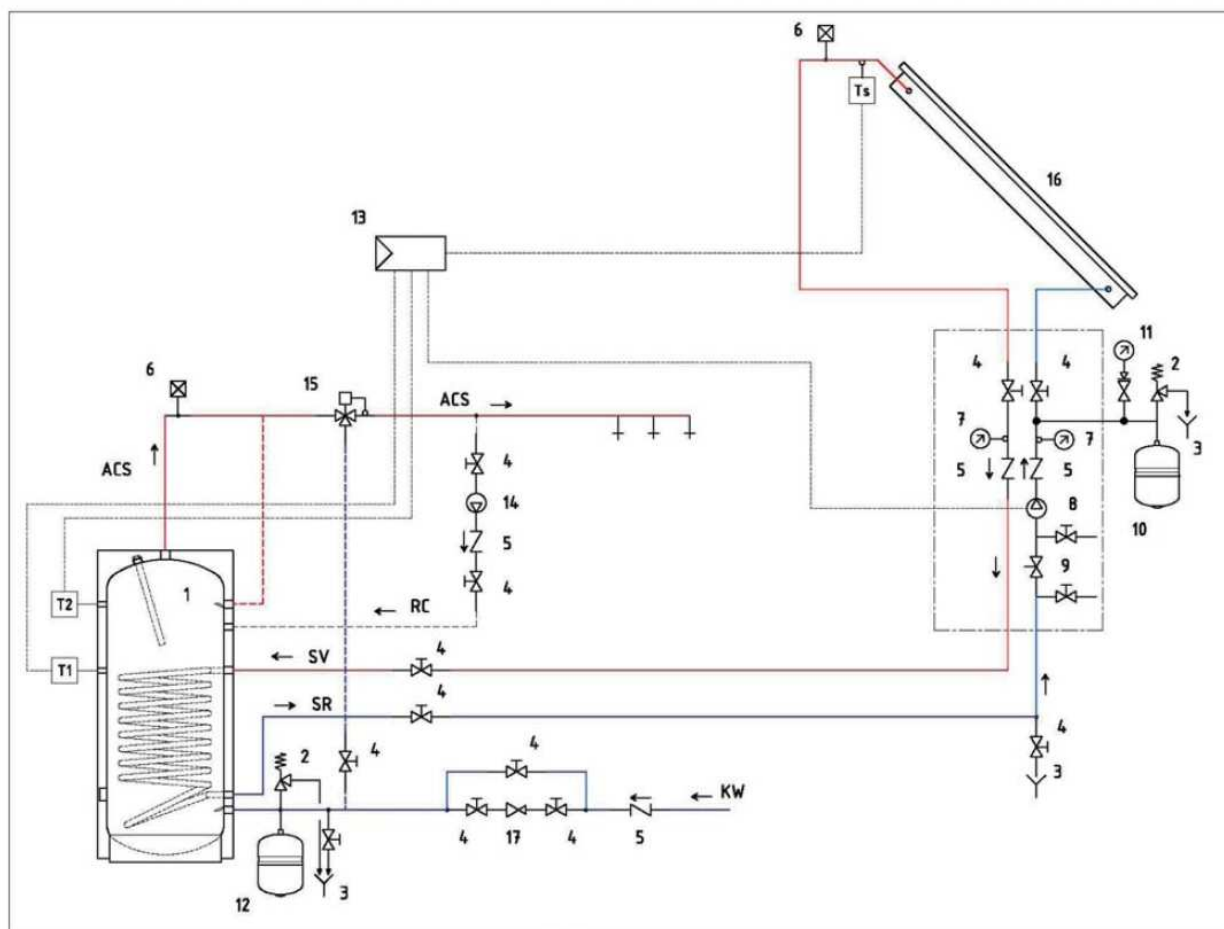
- Schema idraulico 1 (Bollitore BSV con caldaia):



- 1 BSV Cylinder
- 2 Safety Valve
- 3 Drain
- 4 Isolating valve
- 5 Check Valve
- 6 Purge Valve
- 7 Thermometer
- 8 Hot Water Circulating Pump
- 9 Pressure Reducing valve
- 10 D-DV series Sanitary Expansion Vessel
- 11 Sanitary Water Circulating Pump

- 12 Mixing Valve
- 13 Control Panel
- 14 Boiler
- DHW draw off
- KW Main Water Supply
- RC Circulation sanitary water
- HV Flow from Burner
- HR Return to Burner
- T₁ Probe

- Schema idraulico 2 (Bollitore BSV con collettore solare):



- 1 BSV Cylinder
- 2 Safety Valve
- 3 Drain
- 4 Isolating valve
- 5 Check Valve
- 6 Purge Valve
- 7 Thermometer
- 8 Solar Circuit Circulating Pump
- 9 Fill-in Valve
- 10 DS-DSV series solar expansion tank
- 11 Pressure Gauge
- 12 D-DV series sanitary expansion tank
- 13 Control Panel

- 14 Sanitary Circulating Pump
- 15 Mixing Valve
- 16 Solar Panel
- 17 Pressure Reducing Valve
- DHW draw off
- KW Mains Water supply
- RC Circulation
- SV Primary flow from Solar Panel
- SR Primary Return to Solar Panel
- T₁ T₂ Probes
- T_s Solar Panel Probe