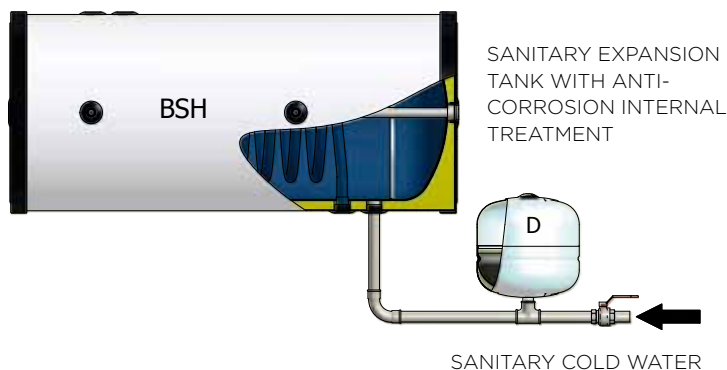




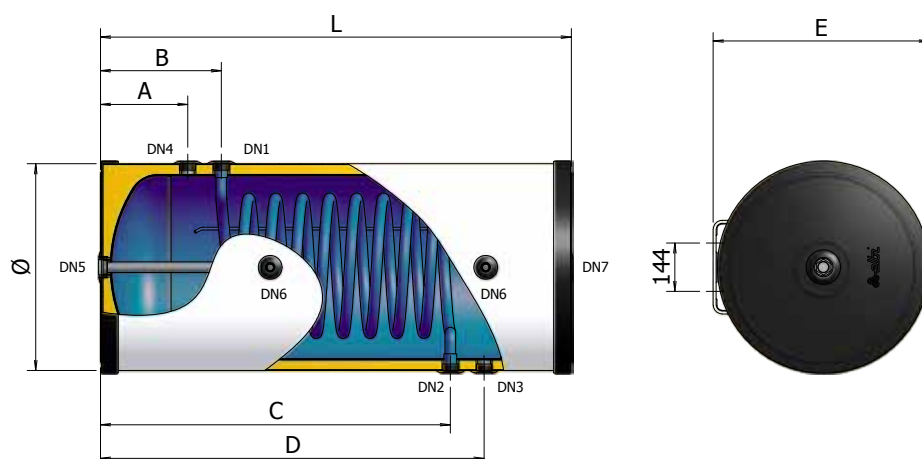
# BSH

## GLASSLINED CYLINDER

WITH FIXED HEAT EXCHANGER FOR SANITARY HOT WATER, WALL MOUNTING (100 - 300 LITRES)



### BSH 100 - 150 - 200 - 300



#### KEYWORD

**DN1:** Primary fluid inlet, heat exchanger side; **DN2:** Primary fluid outlet, heat exchanger side; **DN3:** Sanitary cold water inlet; **DN4:** Sanitary hot water outlet; **DN5:** Magnesium anode; **DN6:** Probe (Thermometer, Thermostat); **DN7:** Service connection.



CYLINDER



FOR SANITARY HOT WATER



SUITABLE FOR SOLAR SYSTEMS



MAGNESIUM ANODE



INTERNAL ANTI-CORROSION GLASSLINING TREATMENT



POLYURETHANE INSULATION



+ 95°C  
CYLINDER  
MAX TEMPERATURE



+ 110°C  
EXCHANGER  
MAX TEMPERATURE



P<sub>MAX</sub> 10 bar  
MAX WORKING PRESSURE



P<sub>SCA</sub> 12 bar  
HEAT EXCHANGER  
MAX PRESSURE

**WARRANTY: 5 YEARS**

#### INSULATION:

Expanded polyurethane without CFC and HCFC

#### HEAT EXCHANGER:

fixed single-tube coil

#### REFERENCE STANDARDS

##### CYLINDER:

Directive PED 97/23/EC - ART. 3.3, without CE marking  
Standard EN 12897:2006

##### INTERNAL GLASSLINING:

DIN 4753

The glasslining treatment makes the cylinder suitable to contain hot water for sanitary use and resistant to corrosive phenomena.



#### INSTALLATION:

- traditional boilers (wall-hung and/or floor-standing)
- condensing boilers
- solar thermal systems

**WALL MOUNTING** in vertical or horizontal position.

Wall mounting brackets applied.

## DIMENSIONS

MODEL	CODE		HEAT EXCHANGER 		L	A	B	C	D	E	NOTES	
		LITRES	m²	LITRES	mm	mm	mm	mm	mm	mm		
BSH-100	A3B0L38 PGP30	100	0,40	3	460	885	175	305	585	705	495	
BSH-150	A3B0L43 PGP30	150	0,60	4	560	935	230	360	580	710	595	
BSH-200	A3B0L47 PGP30	200	0,80	5	560	1155	230	360	800	930	595	
BSH-300	A3B0L51 PGP30	300	1,05	7	610	1400	260	360	1040	1140	645	

MODEL	ANODE ø x ø conn. x L	DN1	DN2	DN3	DN4	DN5	DN6	DN7
BSH-100	32 x 1.1/4" x 150	1"	1"	1"	1"	1.1/4"	1/2"	1.1/4"
BSH-150	32 x 1.1/4" x 200	1"	1"	1"	1"	1.1/4"	1/2"	1.1/4"
BSH-200	32 x 1.1/4" x 200	1"	1"	1"	1"	1.1/4"	1/2"	1.1/4"
BSH-300	32 x 1.1/4" x 320	1"	1"	1"	1"	1.1/4"	1/2"	1.1/4"

## TECHNICAL FEATURES

MODEL	MAX WORKING PRESSURE CYLINDER (Secondary circuit)	MAX. WORKING PRESSURE HEAT EXCHANGER (Primary circuit)	HEAT EXCHANGER PRESSURE DROP			
BSH 100	10 bar	12 bar	50 mbar			
BSH 150			80 mbar			
BSH 200			110 mbar			
BSH 300			200 mbar			
MODEL	INSULATION TYPE	INSULATION THICKNESS	INSULATION DENSITY	INITIAL THERMAL CONDUCTIVITY	(*) INSULATION THERMAL LOSS	EXTERNAL COVER
BSH 100	95% closed cells rigid expanded polyurethane, CFC - HCFC free	30 mm	40 kg/m <sup>3</sup>	23,5 mW/m K	1,01 kWh / 24h	Grey polystyrene RAL 9006
BSH 150					1,32 kWh / 24h	
BSH 200					1,63 kWh / 24h	
BSH 300					2,16 kWh / 24h	

(\*) Thermal loss calculated with an accumulation temperature equal to 60 °C and with an external temperature equal to 15 °C.

## SAFETY DEVICES

The cylinders must be protected from the effects of over pressure by installing:

- A **SAFETY VALVE** calibrated to a pressure lower than the max. pressure of the cylinder;
- A **SANITARY EXPANSION TANK** model ELBI **D - DV series**

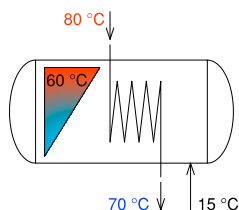
MODEL	RECOMMENDED SANITARY EXPANSION TANK (mod. ELBI D-DV series)
BSH 100	D - 8
BSH 150	D - 11
BSH 200	D - 18
BSH 300	D - 24

Tank sized using the following parameters:

T. accumulation= 85 °C / T. inlet = 15 °C / Pre-charge pressure = 3 bar / Max pressure = 6 bar

The recommended capacity must be verified on the basis of the actual dimensions of the system implemented.

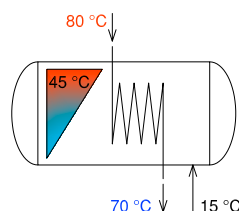
MODEL	MAGNESIUM ANODE SUPPLIED	CATHODIC PROTECTION APPLICABLE
BSH-100	1.1/4" x 150 / Cod. 8560000	Cathodic protection with cylinders 100/300 l. Code 8560170
BSH-150	1.1/4" x 200 / Cod. 8560010	
BSH-200	1.1/4" x 200 / Cod. 8560010	
BSH-300	1.1/4" x 320 / Cod. 8560040	

**ACCUMULATION AT 60 °C****HEAT EXCHANGER:** T. inlet = 80°C;  $\Delta T = 10^\circ\text{C}$ .**STORAGE WATER HEATER:** T. inlet = 15°C; T. accumulation = 60°C.

MODEL CYLINDER	THERMAL POWER [kW]	PUMP CAPACITY [l/hour]	HEATING TIME [min] <sup>(1)</sup>	PRODUCTION DHW AT 60°C [l/hour]	QUANTITY DHW AT 45°C FOR FIRST 10 min. <sup>(2)</sup> [l]
BSH 100	9,15	807	33	175	105
BSH 150	15,00	1320	37	287	176
BSH 200	19,50	1720	34	373	224
BSH 300	25,90	2290	34	495	300

(1) Time required to bring cylinder temperature from 15 °C to 60 °C

(2) Quantity of DHW (Sanitary Hot Water) at 45°C available in first 10 minutes with accumulation of DHW at 60° C

**ACCUMULATION AT 45 °C****HEAT EXCHANGER:** T.inlet = 80°C;  $\Delta T = 10^\circ\text{C}$ .**STORAGE WATER HEATER:** T.inlet = 15°C; T.accumulation = 45°C.

MODEL CYLINDER	THERMAL POWER [kW]	PUMP CAPACITY [l/hour]	HEATING TIME [min] <sup>(1)</sup>	PRODUCTION DHW AT 45°C [l/hour]
BSH 100	12,00	1060	17	344
BSH 150	18,70	1650	20	536
BSH 200	25,00	2200	18	715
BSH 300	33,00	2900	18	945

(1) Time required to bring cylinder temperature from 15 °C to 45 °C

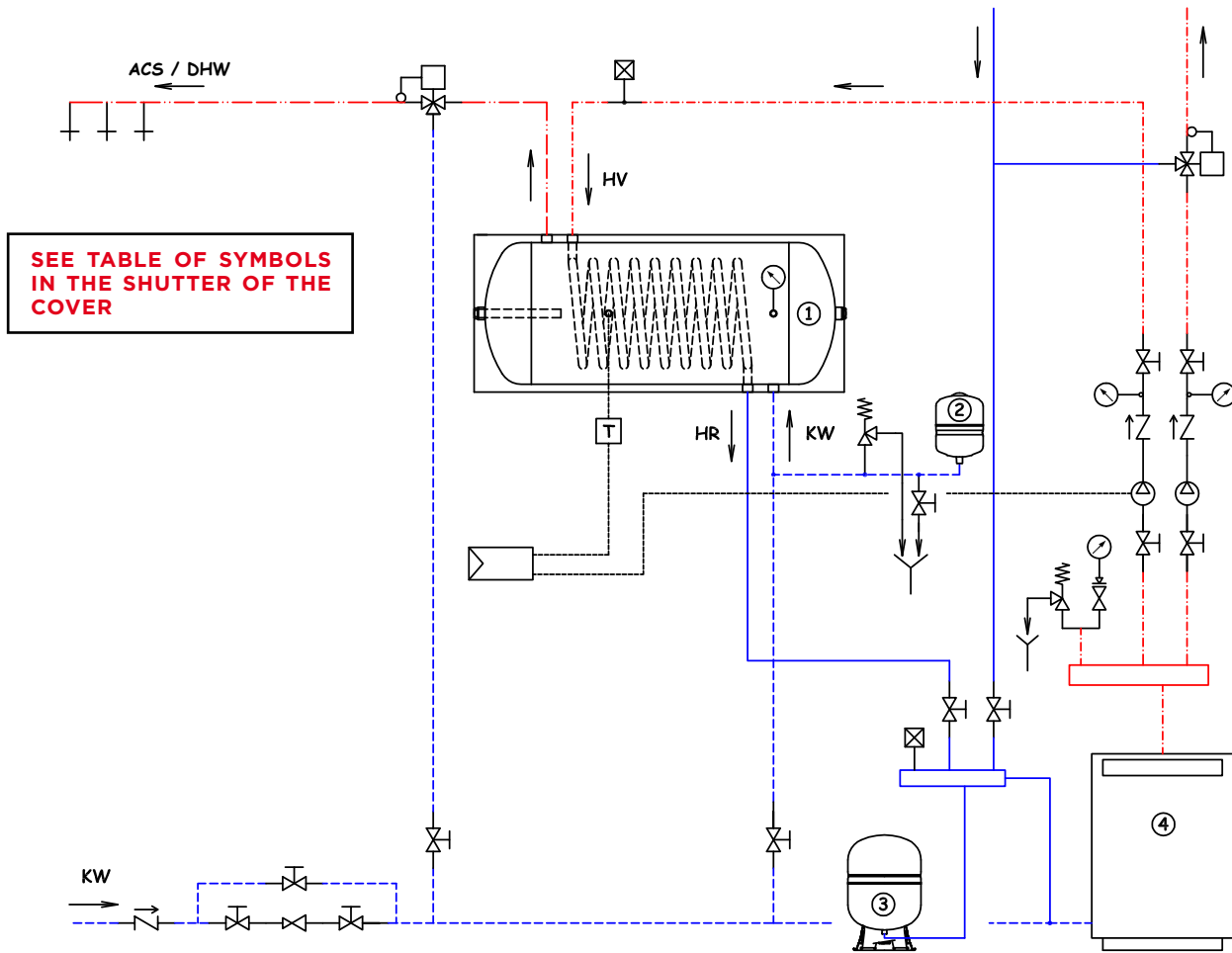
**TABLE OF HEATING ELEMENT APPLICABILITY TO CYLINDERS**

Heating element model*					Water heating time from 15° C to 60 °C (expressed in minutes) / The heating times outlined are approximate			
CODE	Power (kW)	Voltage (Volt)	Connection	Length mm	BSH-100	BSH-150	BSH-200	BSH-300
8601000	1	220 V / MF	G 1.1/4"	295	320 min.	480 min.	640 min.	960 min.
8601650	1.65	220 V / MF	G 1.1/4"	450	200 min.	290 min.	390 min.	580 min.
8602000	2	220 V / MF	G 1.1/4"	515	165 min.	240 min.	320 min.	480 min.
8602600	2.6	220 V / MF	G 1.1/4"	675	n.a.	190 min.	250 min.	370 min.
8602601	2.6	220 V / MF	G 1.1/4"	360	130 min.	190 min.	250 min.	370 min.
8603300	3.3	220 V / MF	G 1.1/4"	825	n.a.	n.a.	190 min.	290 min.
8603301	3.3	220 V / MF	G 1.1/4"	435	100 min.	150 min.	190 min.	290 min.
8604001	4	220 V / MF	G 1.1/4"	510	85 min.	120 min.	160 min.	240 min.

n.a.= Heating element not applicable

\* In the BSH model heating element must be assembled only with the tank installed in horizontal position.

# HYDRAULIC DIAGRAM 1 (BSH IN HORIZONTAL POSITION)



# HYDRAULIC DIAGRAM 2 (BSH IN VERTICAL POSITION)

