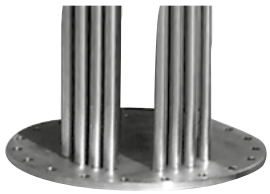
BV1XS - AISI 316L Stainless steel calorifier with PED certified steam removable heat exchanger

AISI 316L Stainless steel calorifier for the production and storage of domestic hot water (DHW).
The tank is equipped with an AISI 316L Stainless steel U tube bundle removable heat exchanger designed to be fed by steam.

The steam heat exchanger is provided by a PED compliance certification (according to EU Directive 2014/68/UE – Annex VII).
Cylinders are also prepared to host a backup immersion heater (not supplied).

HEAT SOURCE

APPLICATION



TECHNICAL FEATURES

DHW cylinder	**Material**	AISI 316L Stainless steel (1.4404)
	Internal protective treatment	Pickling and passivation
	External protective treatment	Pickling and passivation
	Rating (P max. / T max.)	6 bar / 95°C
	Cathodic protection	Magnesium anode
Heat exchanger	**Material**	AISI 316L Stainless steel (1.4404) over a stainless steel plate
	Internal protective treatment	Pickling and passivation
	External protective treatment	Pickling and passivation
	Type	U tube bundle (fed by steam) expanded over a removable plate
	Rating (P max. / T max.)	6 bar / 165 °C or 12 bar / 191,7 °C
General features	**Capacity**	500 - 5000 L
	Warranty	5 years (DHW cylinder) - 2 years (heat exchanger)
	Insulation	- Soft insulation with polyester + PVC: Fire retardant class B2 (DIN 4102) - Hard insulation: - up to 2000 L with polyurethane foam + PVC: Fire retardant class B3 (DIN 4102) - from 2500 to 5000 L with polyester (15 mm) + polystyrene (85 mm) + PVC: Fire retardant class B2 (DIN 4102)
	In compliance with	- Pressure Equipment Directive (PED) 2014/68/UE Art. 4 Para 3 - Italian MOH specifications (products suitable to contain potable water) - Energy related Products (Erp) Directive 2009/125/CE

ACCESSORIES (page 218)

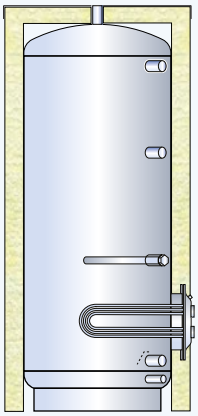
Impressed current electronic anode

Electronic control unit

Thermostat

Thermometer

1"½ electric immersion heater



BV1XS6 - Steam side working pressure Max. 6 bar / 165 °C
Hard insulation and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	REAL CAPACITY (L)	HEAT EXCHANGER (m^2) / (L) *
BV1XS6 00500 R	50	C	86,1	501,7	1,00 / 6,1
BV1XS6 00800 R	100	C	113,8	754,9	1,50 / 6,6
BV1XS6 01000 R	100	C	117,6	936,6	2,00 / 10,4
BV1XS6 01500 R	100	C	136,7	1478,0	3,00 / 15,7
BV1XS6 02000 R	100	C	149,2	1958,6	3,00 / 15,7
BV1XS6 02500 R	100	-	-	2502,1	3,00 / 15,7
BV1XS6 03000 R	100	-	-	2966,1	3,00 / 15,7
BV1XS6 04000 R	100	-	-	3903,0	4,00 / 21,7
BV1XS6 05000 R	100	-	-	5013,8	5,00 / 27,4

BV1XS6 - Steam side working pressure Max. 6 bar / 165 °C
Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	REAL CAPACITY (L)	HEAT EXCHANGER (m^2) / (L) *
BV1XS6 00800 F	130	C	132,6	754,9	1,50 / 6,6
BV1XS6 01000 F	130	C	143,9	936,6	2,00 / 10,4
BV1XS6 01500 F	130	C	169,2	1478,0	3,00 / 15,7
BV1XS6 02000 F	130	C	184,6	1958,6	3,00 / 15,7
BV1XS6 02500 F	100	-	-	2502,1	3,00 / 15,7
BV1XS6 03000 F	100	-	-	2966,1	3,00 / 15,7
BV1XS6 04000 F	100	-	-	3903,0	4,00 / 21,7
BV1XS6 05000 F	100	-	-	5013,8	5,00 / 27,4

BV1XS12 - Steam side working pressure Max. 12 bar / 191,7 °C
Hard insulation and PVC jacket

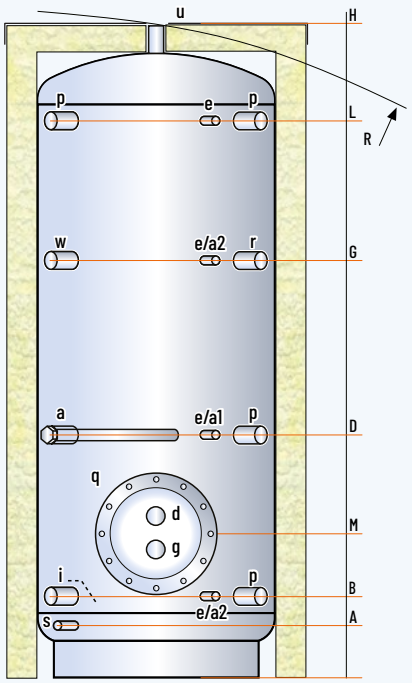
CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	REAL CAPACITY (L)	HEAT EXCHANGER (m^2) / (L) *
BV1XS12 00500 R	50	C	86,1	501,7	1,00 / 6,1
BV1XS12 00800 R	100	C	113,8	754,9	1,50 / 6,6
BV1XS12 01000 R	100	C	117,6	936,6	2,00 / 10,4
BV1XS12 01500 R	100	C	136,7	1478,0	3,00 / 15,7
BV1XS12 02000 R	100	C	149,2	1958,6	3,00 / 15,7
BV1XS12 02500 R	100	-	-	2502,1	3,00 / 15,7
BV1XS12 03000 R	100	-	-	2966,1	3,00 / 15,7
BV1XS12 04000 R	100	-	-	3903,0	4,00 / 21,7
BV1XS12 05000 R	100	-	-	5013,8	5,00 / 27,4

BV1XS12 - Steam side working pressure Max. 12 bar / 191,7 °C
Soft insulation with polyester and PVC jacket

CODE	INSULATION THICK. (mm)	ErP CLASS	HEAT LOSS S (W)	REAL CAPACITY (L)	HEAT EXCHANGER (m^2) / (L) *
BV1XS12 00800 F	130	C	132,6	754,9	1,50 / 6,6
BV1XS12 01000 F	130	C	143,9	936,6	2,00 / 10,4
BV1XS12 01500 F	130	C	169,2	1478,0	3,00 / 15,7
BV1XS12 02000 F	130	C	184,6	1958,6	3,00 / 15,7
BV1XS12 02500 F	100	-	-	2502,1	3,00 / 15,7
BV1XS12 03000 F	100	-	-	2966,1	3,00 / 15,7
BV1XS12 04000 F	100	-	-	3903,0	4,00 / 21,7
BV1XS12 05000 F	100	-	-	5013,8	5,00 / 27,4

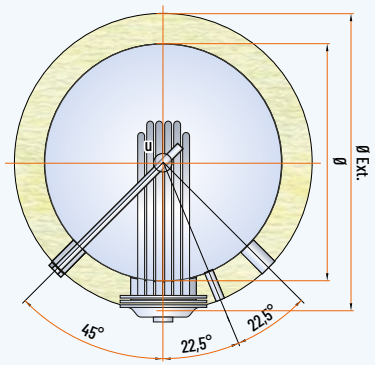
** Volume occupied by the heat exchanger and its support structure*

500 - 1500 L

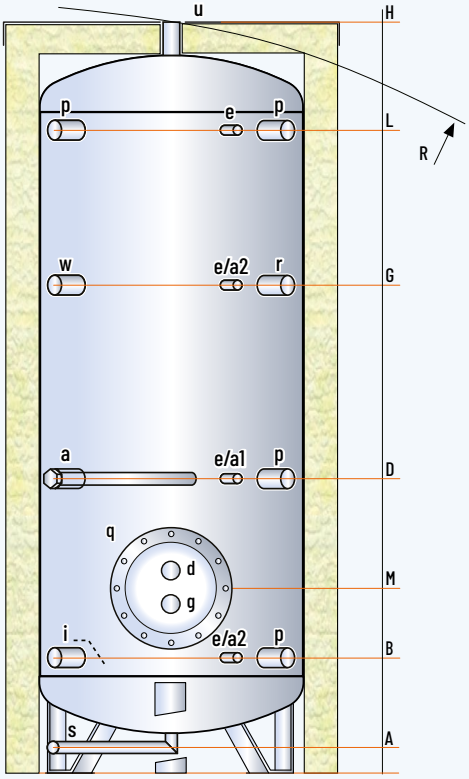


LEGEND

- **a .** Magnesium anode
- **a1-a2.** Opening for electronic anode
- **d .** Boiler flow
- **e .** Thermometer - Sensor
- **g .** Boiler return
- **i .** Domestic cold water inlet
- **p .** Free connection
- **q .** Heat exchanger flange
- **r .** Recirculation
- **s .** Drain
- **u .** Domestic hot water outlet
- **w.** Opening for immersion heater



2000 - 5000 L



MODEL	DIMENSIONS (mm) Ø	H	Ø EXT ** (Hard/Soft ins.)	R *	HEAT EXCHANGER (m^2)	Electronic anode (optional)	WEIGHT (kg)
BV1XS_ 00500 R	650	1645	750	1820	1,00	a1 (EPS 375/125)	96
BV1XS_ 00800_	790	1750	990/1050	1745	1,50	a1 (EPS 375/125)	149
BV1XS_ 01000_	790	2110	990/1050	2095	2,00	a1 (EPS 375/125)	170
BV1XS_ 01500_	1000	2115	1200/1260	2145	3,00	a2 (EPS 375/125)	241
BV1XS_ 02000_	1100	2465	1300/1360	2465	3,00	a2 (EPS 375/125)	326
BV1XS_ 02500_	1200	2595	1400	2640	3,00	a2 (EPS 700/200)	372
BV1XS_ 03000_	1250	2795	1450	2835	3,00	a2 (EPS 700/200)	415
BV1XS_ 04000_	1400	2925	1600	2995	4,00	a2 (EPS 700/200)	572
BV1XS_ 05000_	1600	2955	1800	3090	5,00	a2 (EPS 700/200)	693

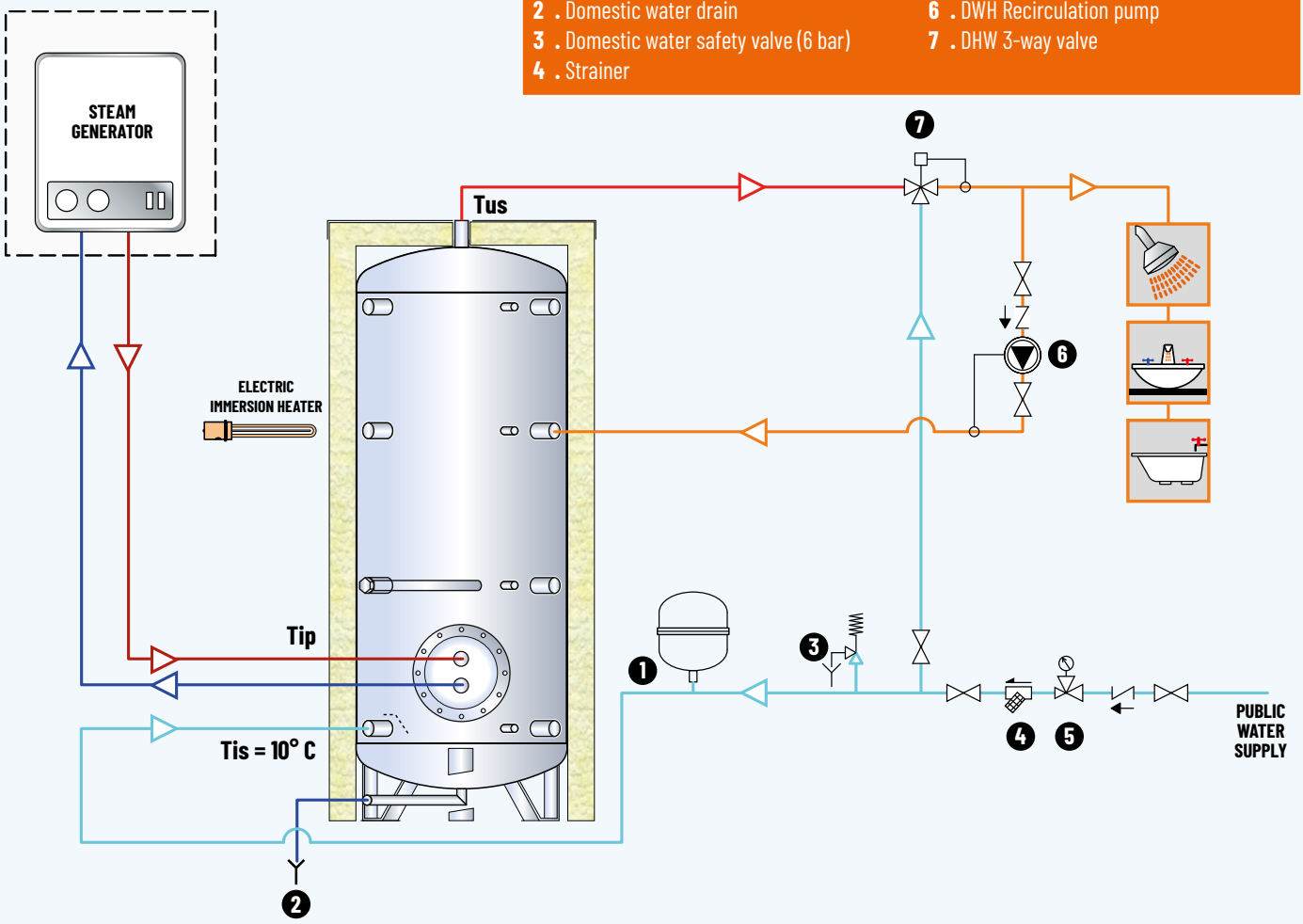
** For the 500 litres model, the tilt height refers to the insulated cylinder*
*** The insulation is removable except for the 500 litres model*

MODEL	HEIGHTS (mm) A	B	D	G	L	M	CONNECTIONS (GAS) a p r	d g	e	i u	s	w	q
BV1XS_ 00500 R	135	240	615	1105	1375	445	1"¼	1"	½"	1"¼	1"	1"½	220/290
BV1XS_ 00800_	170	275	655	1145	1410	450	1"¼	2"	½"	1"½	1"	1"½	300/380
BV1XS_ 01000_	170	275	810	1355	1755	455	1"¼	2"	½"	1"½	1"	1"½	300/380
BV1XS_ 01500_	235	340	765	1400	1720	520	1"¼	2"	½"	2"	1"	1"½	300/380
BV1XS_ 02000_	100	475	1010	1515	1975	655	1"¼	2"	½"	2"	1"	1"½	350/430
BV1XS_ 02500_	100	505	1040	1600	2105	690	1"¼	2"	½"	2"	1"	1"½	350/430
BV1XS_ 03000_	90	515	1100	1730	2300	675	1"¼	2"	½"	3"	1"	1"½	350/430
BV1XS_ 04000_	120	595	1190	1815	2380	755	1"¼	2"	½"	3"	1"	1"½	350/430
BV1XS_ 05000_	100	600	1185	1815	2385	825	1"¼	2"	½"	3"	1"	1"½	350/430

Disclaimer: *this layout is purely indicative. It does not replace consultant's design*

LEGEND

1 . Domestic water expansion vessel
2 . Domestic water drain
3 . Domestic water safety valve (6 bar)
4 . Strainer
5 . Pressure reducing valve
6 . DWH Recirculation pump
7 . DHW 3-way valve



Heat exchanger performance at different steam working pressures (P)

CODE	HEAT EXCHANGER m² (L)	P = 1 bar Tip = 120,4 °C Power * (kW)	P = 1 bar Tip = 120,4 °C Flow rate * (L/h)	P = 3 bar Tip = 143 °C Power * (kW)	P = 3 bar Tip = 143 °C Flow rate * (L/h)	P = 6 bar Tip = 165 °C Power * (kW)	P = 6 bar Tip = 165 °C Flow rate * (L/h)	P = 12 bar Tip = 191,7 °C Power * (kW)	P = 12 bar Tip = 191,7 °C Flow rate * (L/h)	First 10 minutes rating ** (L/10')
BV1XS_ 00500 R	1,0 (4,7)	89,8	2205	111,9	2751	133,5	3280	159,5	3920	985
BV1XS_ 00800_	1,5 (7,7)	133,3	3274	166,2	4083	198,1	4868	236,8	5818	1508
BV1XS_ 01000_	2,0 (9,5)	177,7	4366	221,6	5444	264,1	6490	315,7	7757	1866
BV1XS_ 01500_	3,0 (13,0)	266,5	6548	332,3	8166	396,2	9735	473,5	11635	2668
BV1XS_ 02000_	3,0 (13,0)	272,0	6684	339,3	8338	404,6	9943	483,7	11886	3211
BV1XS_ 02500_	3,0 (13,0)	272,0	6684	339,3	8338	404,6	9943	483,7	11886	3791
BV1XS_ 03000_	3,0 (13,0)	272,0	6684	339,3	8338	404,6	9943	483,7	11886	4320
BV1XS_ 04000_	4,0 (17,2)	355,3	8731	443,1	10888	528,3	12980	631,4	15513	5623
BV1XS_ 05000_	5,0 (20,8)	434,9	10685	542,1	13319	646,0	15874	772,0	18968	6786

** Tus = 45°C*
*** The above are values calculated with heat exchanger fed by steam at 6 bar (Storage temperature at 60 °C)*