

BOLLY® 2 AP - HIGH PERFORMANCES

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS



APPLICATION

Production and storage of domestic hot water (DHW).
All the connections are aligned on the front and on the back for quick and easy installation.

MATERIAL

Mild steel Polywarm® coated (Attestation ACS - EN 16421)

HEAT EXCHANGER

Nr. 2 Mild steel Polywarm® coated heat exchangers.

INSULATION

HARD: High thermal insulation with ecological polyurethane hard foam.

HARD FOAM (CLASS "A" MODELS): hard polyurethane foam for high thermal insulation with a vacuum sheet of highly insulating material.

Grey PVC external lining.

CATHODE PROTECTION

Magnesium anode.

DRAIN

External confluence through drain connection.

GASKET- FLANGE PLATE

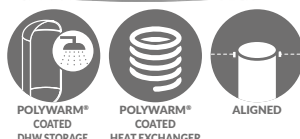
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated and connection for electric immersion heater.

WARRANTY

5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



	Model	Art. Nr.	Heat exchangers surface [m²]		ENERGY EFFICIENCY CLASS
			Upper	Lower	
	200	3134162320006	0,4	1,4	B
	300	3134162320007	0,9	1,4	B
	500	3134162320008	1,3	2,2	C
	200	3134162330024	0,4	1,4	A
	300	3134162330025	0,9	1,4	A
	500	3134162330026	1,3	2,2	A

ACCESSORIES

ELECTRIC IMMERSION HEATERS

Mod.	Position electric immersion heater	Heated volume by electric immersion heater [lt]	MONOPHASE			THREEPHASE		
			1,5 kW	2 kW	3 kW	4 kW	5 kW	6 kW
			52400000000051	52400000000052	52400000000053	52400000000047	52400000000048	52400000000049
			Ignition time from 10 °C to 45 °C with electric immersion heaters [min]					
			285	214	142	//	//	//
			104	78	52	39	//	//
			421	316	210	158	//	//
			201	151	100	75	60	//
			741	555	370	278	222	//
			331	248	165	124	99	83

FULL CONTROL electronic unit (mounted on tank)

Art. Nr.	for models
5220280000005	WB

For Class A models, only the version not pre-assembled on the tank is available.

Thermometer

Art. Nr.
5032240000107
5 units box

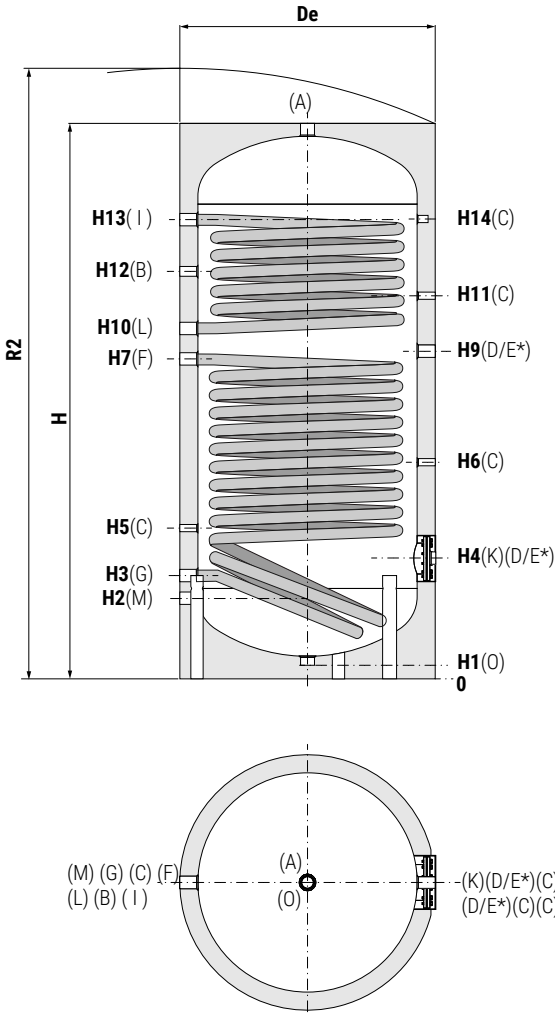
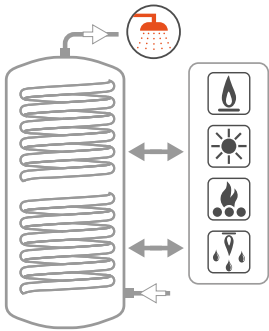
Titanium anode

Art. Nr.	Model
52000000000008	200,300
52000000000009	500

BOLLY® 2 AP - HIGH PERFORMANCES

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS

STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C



A	Domestic hot water outlet
B	Recirculation
C	Connection for instrumentation G 1/2" F
D	Connection for electric immersion heater
E*	Connection for magnesium anode (use a reducing fitting 1"1/2 => 1"1/4)
F	Lower heat exchanger inlet G 1"1/4 F
G	Lower heat exchanger outlet G 1"1/4 F
I	Upper heat exchanger inlet G 1"1/4 F
K	Flange for inspection
L	Upper heat exchanger outlet G 1"1/4 F
M	Domestic cold water circuit inlet
O	Drain G 1" 1/4 F

BOLLY® 2 AP WB +AP WB CLASS A (HARD FOAM INSULATION)

Model	Volume	Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9
	[lt]	[Kg]												
200	189	65	550	1434	1540	71	215	285	325	405	535	925	//	970
300	291	83	650	1486	1630	71	241	311	381	431	561	832	//	906
500	498	134	750	1786	1950	71	266	346	411	466	586	1036	//	1111

Net volume data according to EN 15332 available on product label.

Model	H10	H11	H12	H13	H14	K	O	M	D	B	A
	[mm]						Connections F				
200	1015	1080	1115	1205	1195	Ø1120/Ø180	1"1/4	3/4"	1"1/2	3/4"	1"1/4
300	981	1021	1101	1221	1221	Ø1120/Ø180	1"1/4	1"	1"1/2	1"	1"1/4
500	1186	1246	1331	1476	1476	Ø1120/Ø180	1"1/4	1"	1"1/2	1"	1"1/4

Net volume data according to EN 15332 available on product label.

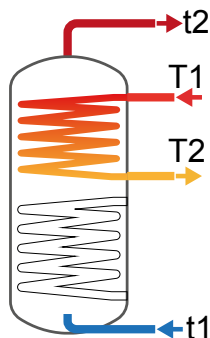
Products designed and manufactured for using within temperature and pressure limits in accordance to Art. 4.3 Directive 2014/68/EU (P.E.D.)



Data have been calculated on following basis:

- 1) Primary circuit at T1 and proper energy source;
- 2) Production of DHW in continuous from 10 °C to t2;
- 3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
- 4) Non-scaling sanitary water

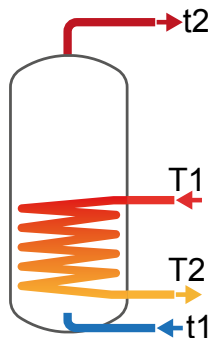
UPPER HEAT EXCHANGER



Model	Primary flow rate [m³/h]	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
		T1/t2				T1/t2					T1/t2				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
200	2	54	56	39	25	4	7	8	10	8	107	162	190	247	145
	1	61	63	44	29	4	6	7	9	8	97	146	170	221	131
300	3	41	43	30	20	10	15	18	23	17	243	368	432	562	290
	1,5	47	48	34	22	9	14	16	20	15	223	333	389	503	267
500	3,5	49	51	35	23	14	23	26	32	24	353	532	623	809	419
	1,75	55	57	40	26	13	20	23	29	22	326	482	562	724	385

Model	Primary flow rate [m³/h]	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
		T1/t2				T1/t2				[mmH ₂ O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	2	76	100	104	114	144	202	225	270	150	15
	1	74	97	101	109	136	189	209	249	50	5
300	3	149	197	208	229	303	430	481	585	830	81
	1,5	146	191	201	220	287	402	447	538	243	24
500	3,5	242	317	332	363	465	654	727	876	1264	124
	1,75	237	309	322	349	444	614	678	808	371	36

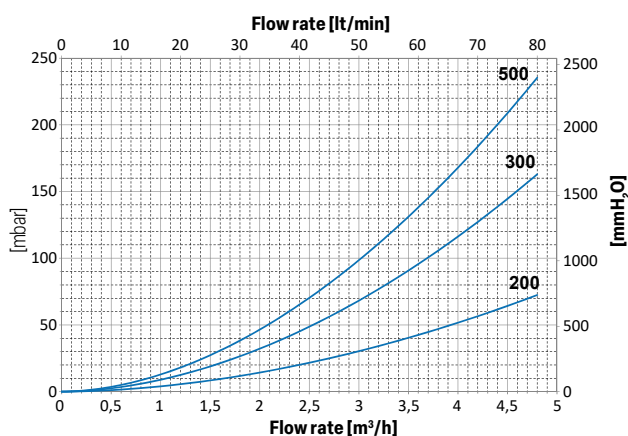
LOWER HEAT EXCHANGER



Model	Primary flow rate [m³/h]	Ignition time (minutes) from 10 °C to t2 and primary at T1				Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production					DHW continuous production lt/h within 10-45 °C and primary at T1HW production				
		T1/t2				T1/t2					T1/t2				
		55/50	65/60	70/60	80/60	55/45	65/45	70/45	80/45	80/60	55/45	65/45	70/45	80/45	80/60
200	3	54	56	40	26	16	23	27	36	29	384	576	673	871	500
	1,5	62	65	46	31	15	21	25	32	26	354	522	607	778	455
300	3	82	85	60	39	16	23	27	36	29	384	576	673	871	500
	1,5	94	98	69	45	15	21	25	32	26	354	522	607	778	455
500	3,5	100	104	73	48	22	33	39	50	41	549	820	956	1234	711
	1,75	115	120	85	56	21	30	35	44	37	506	741	858	1095	643

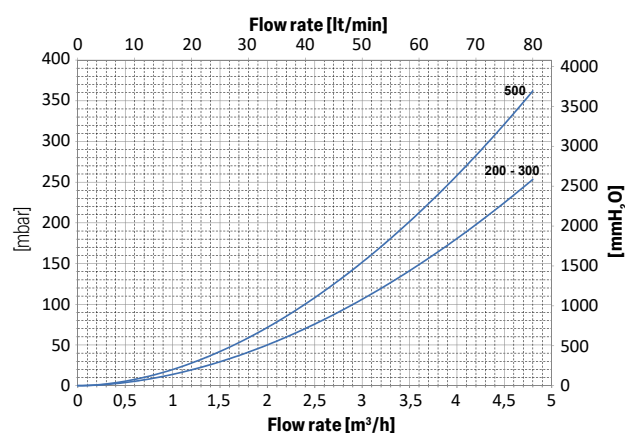
Model	Primary flow rate [m³/h]	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
		T1/t2				T1/t2				[mmH ₂ O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
200	3	280	366	382	415	523	731	808	967	830	81
	1,5	275	357	371	400	499	688	756	892	243	24
300	3	397	512	528	561	640	877	954	1113	830	81
	1,5	392	503	517	545	616	833	901	1038	243	24
500	3,5	661	848	871	917	1008	1367	1476	1699	1264	124
	1,75	653	835	854	894	974	1304	1398	1587	371	36

HEAT EXCHANGERS PRESSURE DROP



UPPER

Heat exchangers surface [m²]	
200	0,4
300	0,9
500	1,3

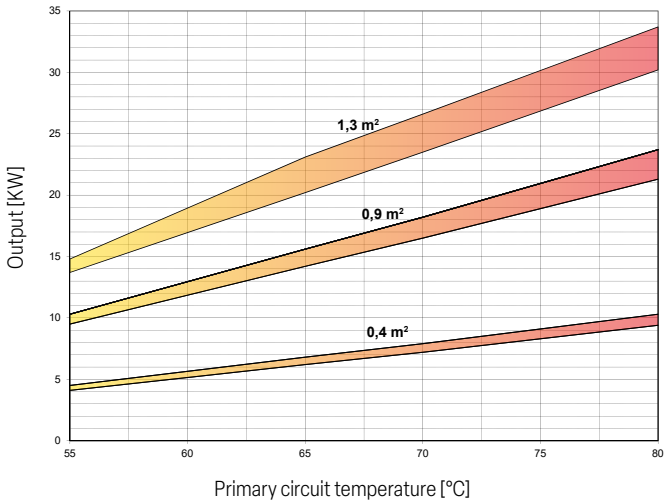


LOWER

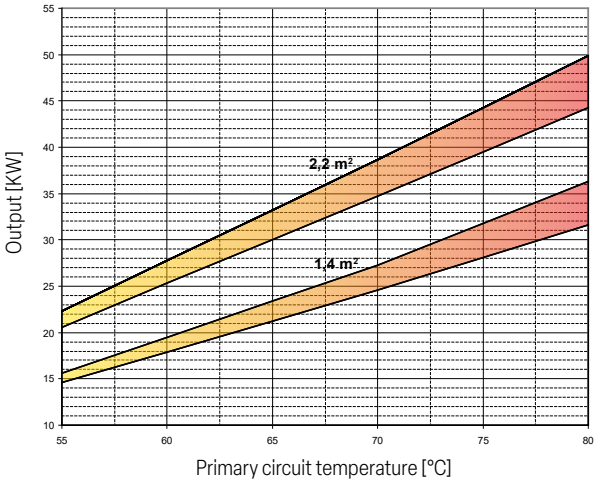
Heat exchangers surface [m²]	
200	1,4
300	1,4
500	2,2



Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate)



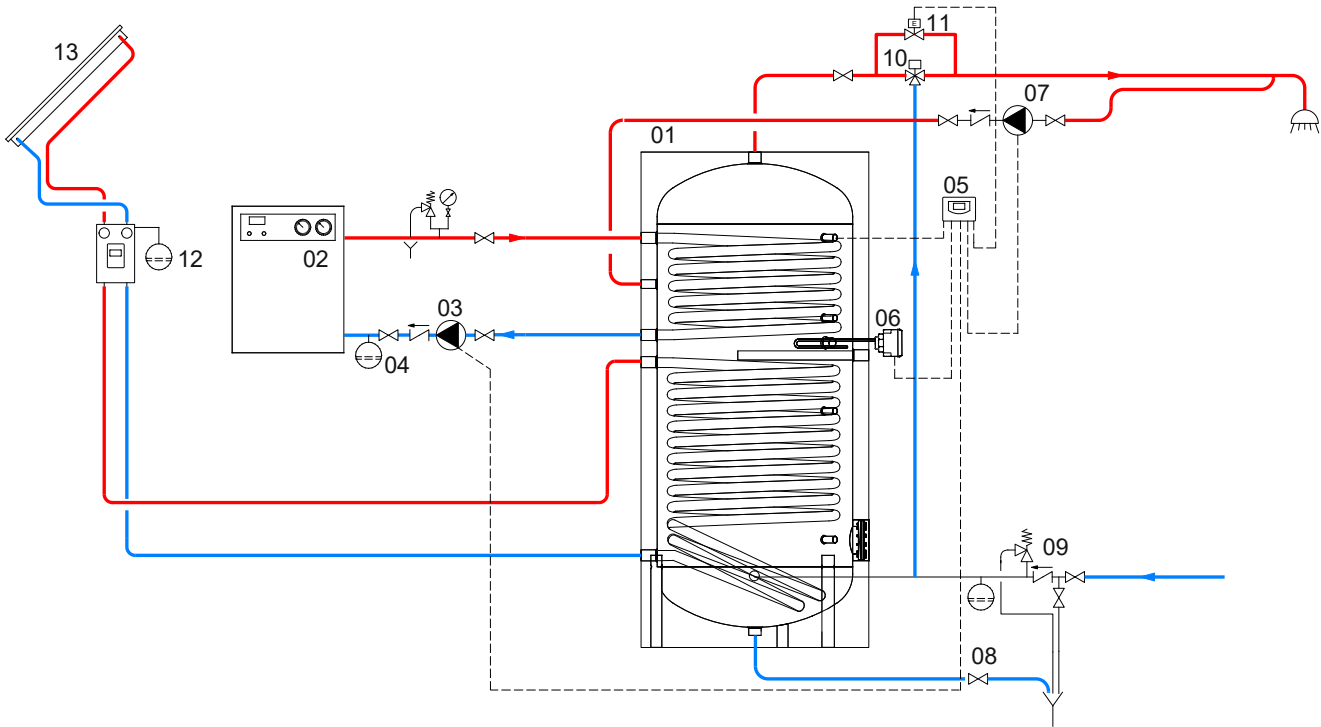
Heat exchanger	0,4 m²		0,9 m²		1,3 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	3	1,5	3,5	1,75



Heat exchanger	1,4 m²		2,2 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN
	3	1,5	3,5	1,75



EXAMPLE OF INSTALLATION WITH BOLLY® 2 AP



1	Bolly® 2 AP	5	FULL CONTROL electronic unit / thermostat	9	Hydraulic safety group	13	Solar panels
2	Generator	6	Electric immersion heater (optional)	10	Thermostatic mixing valve		
3	Circulation group	7	D.H.W. recirculation group	11	By-pass solenoid valve		
4	Expansion vessel	8	Blowdown valve	12	Solar system circulation group		

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.