

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 - SSICA - EN 16421 - WRAS).

HEAT EXCHANGER:

N° 2 Mild steel Polywarm® coated heat exchangers.

INSULATION

- HARD: High thermal insulation with ecological polyurethane hard foam.

- HARD FOAM (CLASS "A" MODELS): rigid 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

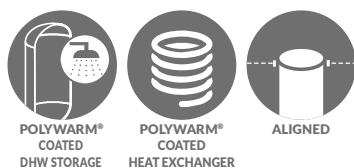
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.

WARRANTY

5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



BOLLY® 2 AP WB

HEAT EXCHANGER SURFACE

ENERGY EFFICIENCY CLASS

Model	HARD FOAM INSULATION	Upper	Lower	
	Art. Nr.	[m ²]		
200	3134162320006	0,4	1,4	B
300	3134162320007	0,9	1,4	B
500	3134162320008	1,3	2,2	C

BOLLY® 2 AP WB CLASS A

HEAT EXCHANGER SURFACE

ENERGY EFFICIENCY CLASS

Model	HARD FOAM INSULATION	Upper		Lower		
		Art. Nr.	[m²]			
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]
200	1	159
	2	58
300	1	235
	2	112
500	1	413
	2	185

MONOPHASE		
1,5 kW	2 kW	3 kW
52400000000051	52400000000052	52400000000053
Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
285	214	142
104	78	52
421	316	210
201	151	100
741	555	370
331	248	165

THREEPHASE		
4 kW	5 kW	6 kW
52400000000047	52400000000048	52400000000049
Ignition time from 10 °C to 45 °C with electric immersion heaters [min]		
//	//	//
39	//	//
158	//	//
75	60	//
278	222	//
124	99	83

HEAT MANAGER + electric immersion heater 1,5 kW + probe +3m cable

Art. Nr.	ELECTRIC IMMERSION HEATER
52400000000074	1,5 kW
52400000000075	2 kW
52400000000076	3 kW



Titanium anode

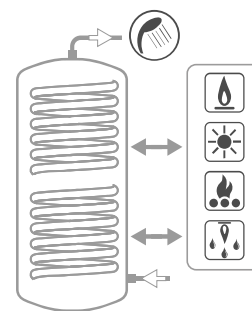
Art. Nr.	Model
52000000000008	200, 300
52000000000009	500



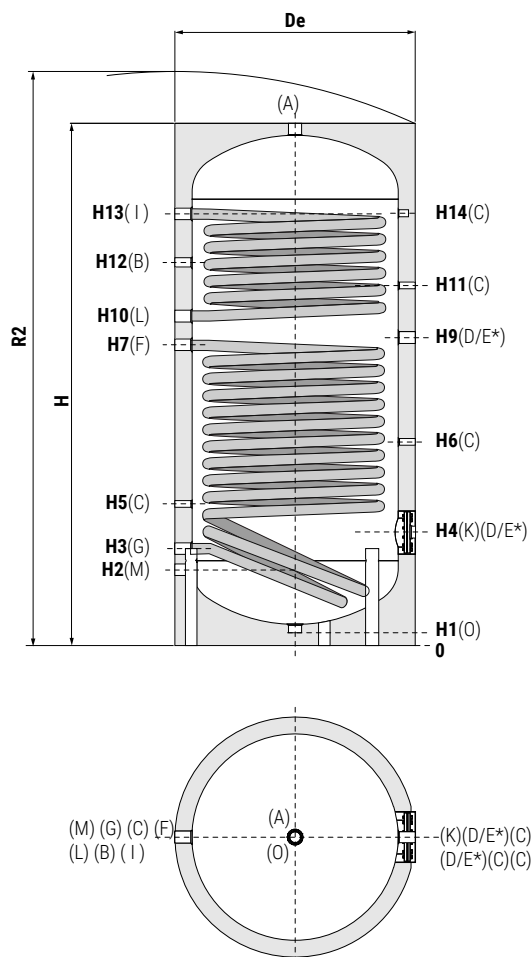
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POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 2 FIXED HEAT EXCHANGERS

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



BOLLY®
AND BOLLYTERM®



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

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

Model	Volume [lt]	Weight [Kg]	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9
			[mm]											
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

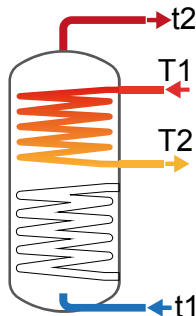
Model	H10	H11	H12	H13	H14	K	O	M	D	B	A
	[mm]						Connections F				
200	1015	1080	1115	1205	1195	Øi120/Øe180	1"1/4	3/4"	1"1/2	3/4"	1"1/4
300	981	1021	1101	1221	1221	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4
500	1186	1246	1331	1476	1476	Øi120/Øe180	1"1/4	1"	1"1/2	1"	1"1/4



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

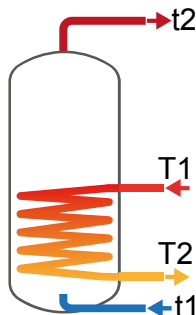
UPPER HEAT EXCHANGER



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	234	297	302	311		302	400	422	468		150	15
	1	232	294	298	307		294	387	406	447		50	5
300	3	373	477	488	509		527	710	761	865		830	81
	1,5	370	471	481	500		511	682	727	818		243	24
500	3,5	628	800	815	846		852	1137	1210	1359		1264	124
	1,75	623	792	805	832		830	1097	1161	1291		371	36

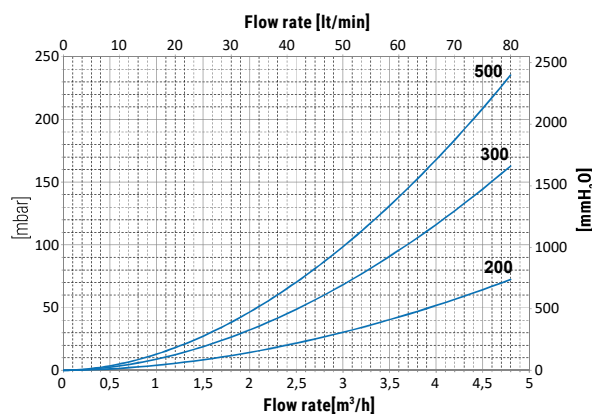
LOWER HEAT EXCHANGER



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 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	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

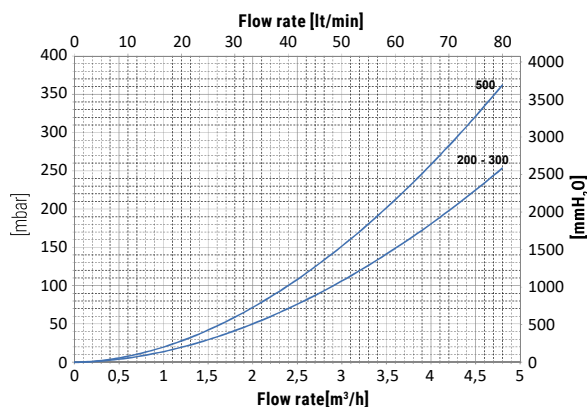
HEAT EXCHANGERS PRESSURE DROP



UPPER

Heat exchangers surface [m²]

200	0,4
300	0,9
500	1,3



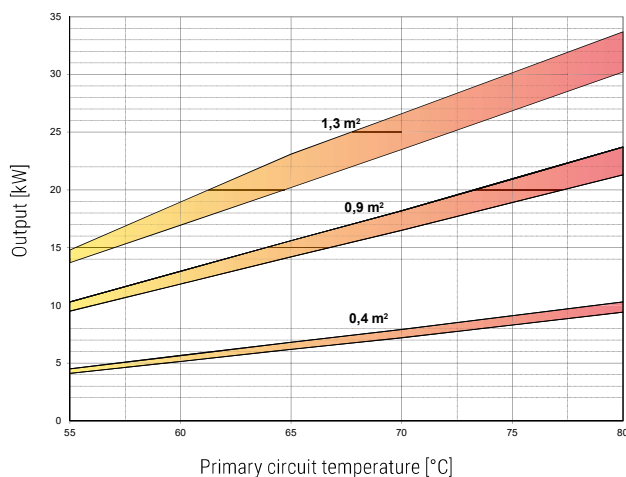
LOWER

Heat exchangers surface [m²]

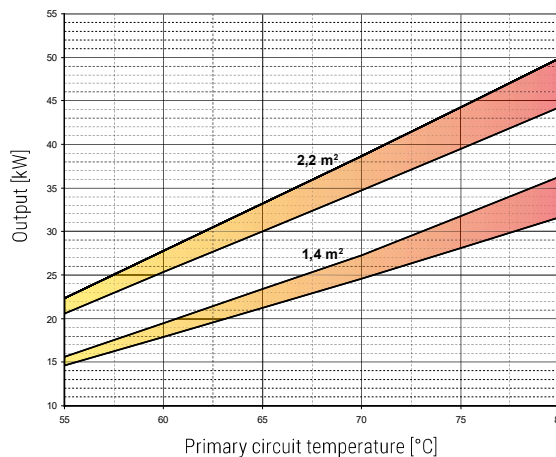
200	1,4
300	1,4
500	2,2



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)



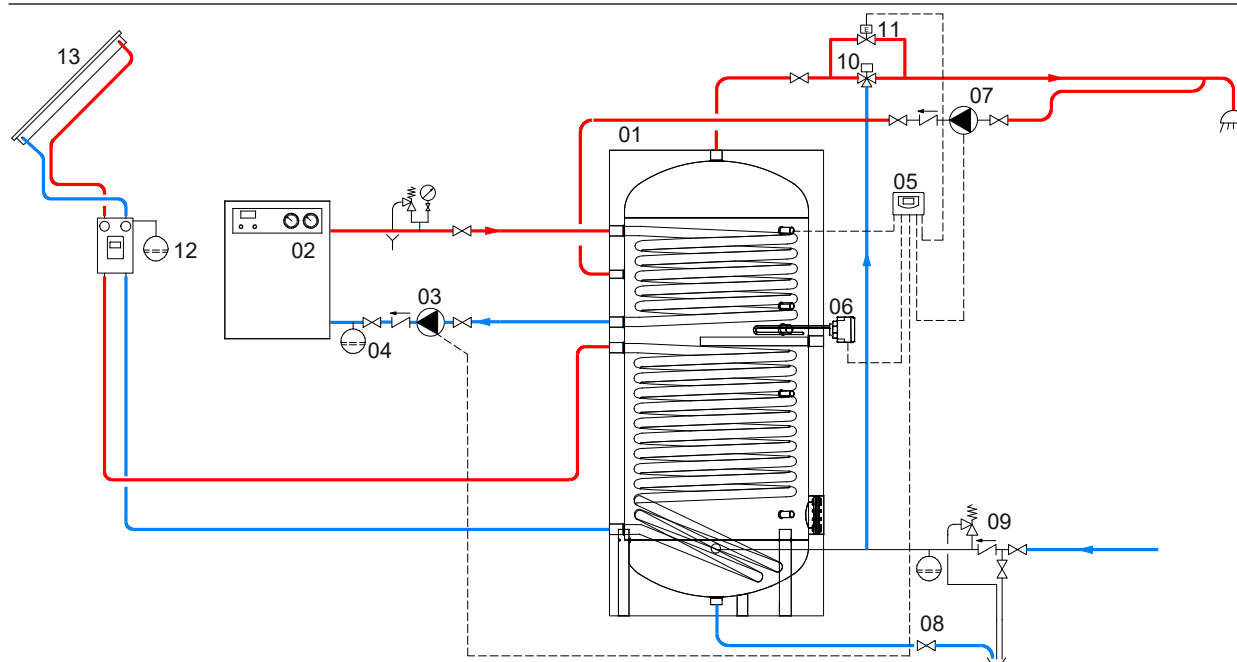
Heat exchanger	0,4 m²		0,9 m²		1,3 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	3	1,5	3,5	1,75



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	Electronic Control/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.