

BOLLY® 1 AP - HIGH PERFORMANCES

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER



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° 1 Mild steel Polywarm® coated heat exchanger.

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

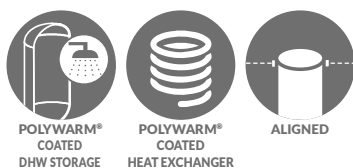
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.

WARRANTY

5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



BOLLY® 1 AP WB

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS ErP
150	3104162330031	1,1	B
200	3104162330032	1,3	B
300	3104162330033	1,8	B
400	3104162330034	2	C
500	3104162330035	2,6	C



BOLLY® 1 AP WB CLASS A

Model	HARD FOAM INSULATION Art. Nr.	HEAT EXCHANGER SURFACE [m²]	ENERGY EFFICIENCY CLASS ErP
200	3104162330054	1,3	A
300	3104162330055	1,8	A
500	3104162330056	2,6	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]								
150	1	125	223	167	112	//	//	//
	2	48	86	65	43	32	//	//
200	1	159	285	214	142	//	//	//
	2	62	111	83	56	42	//	//
300	1	235	421	316	210	158	//	//
	2	73	132	99	66	49	39	//
400	1	353	632	474	316	237	//	//
	2	132	237	178	119	89	71	//
500	1	413	741	555	370	278	222	//
	2	150	269	202	135	101	81	67

Electric immersion heaters



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



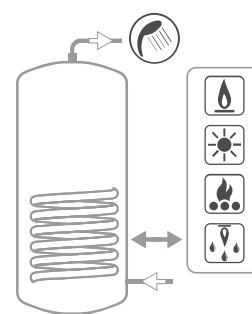
Titanium anode



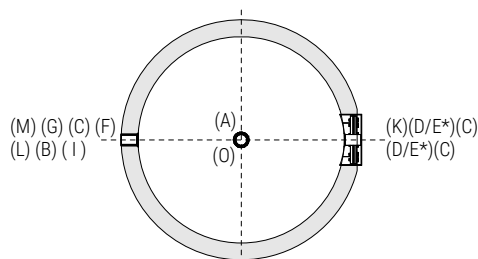
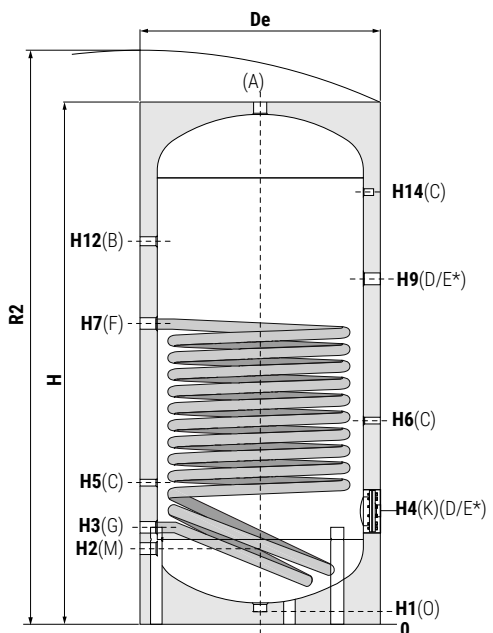
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STORAGE		HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax
10 bar	90 °C	12 bar	110 °C



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 1 1/4 G F- 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
K	Flange for inspection
M	Domestic cold water circuit inlet
O	Drain 1 1/4 F

BOLLY® 1 AP WB +AP WB CLASS A (HARD FOAM INSULATION)

Model	Volume		Weight	De	H	R2	H1	H2	H3	H4	H5	H6	H7	H9
	[lt]	[Kg]												
150	148	54		500	1416	1510	72	206	276	316	396	526	871	936
200	189	63		550	1436	1550	71	216	286	326	406	536	874	946
300	291	75		650	1486	1630	71	241	311	381	431	561	1021	1071
400	422	93		700	1766	1910	71	256	336	396	456	586	1116	1186
500	498	118		750	1786	1950	71	266	346	411	466	596	1136	1216

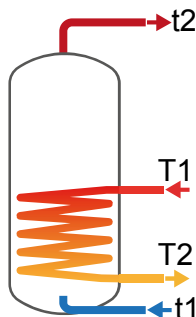
Model	H12	H14	K	O	M	D	B	A
150	1066	1186	Øi120/Øe180	1 1/4"	3/4"	1 1/2"	3/4"	1 1/4"
200	1116	1196	Øi120/Øe180	1 1/4"	3/4"	1 1/2"	3/4"	1 1/4"
300	1141	1231	Øi120/Øe180	1 1/4"	1"	1 1/2"	1"	1 1/4"
400	1386	1466	Øi120/Øe180	1 1/4"	1"	1 1/2"	1"	1 1/4"
500	1331	1476	Øi120/Øe180	1 1/4"	1"	1 1/2"	1"	1 1/4"



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

LOWER
HEAT EXCHANGER



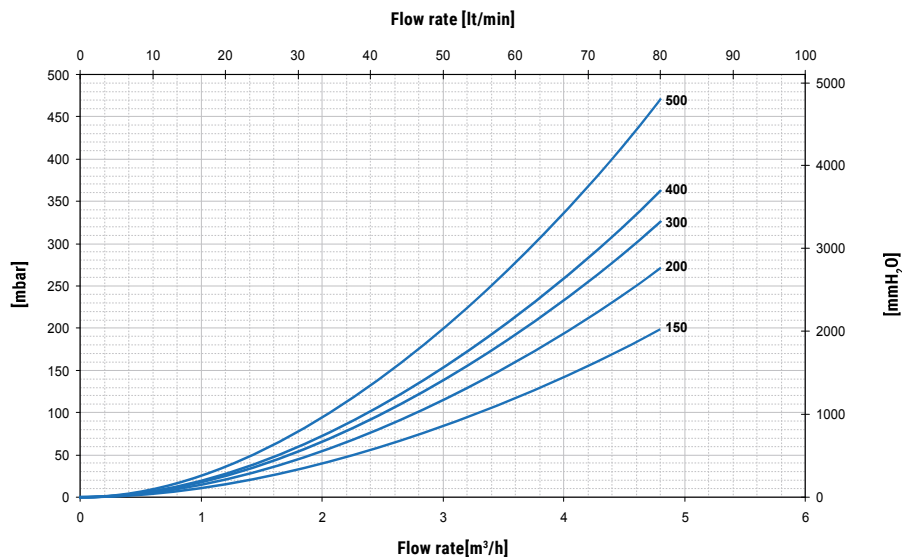
Mod.	Primary flow rate	Ignition time (minutes) from 10 °C to t2 and primary at T1					Maximum power exchange (kW) with primary at T1, secondary from 10°C to t2 constant use of DHW production					DHW continuous production lt/h from 10°C to t2 and primary at T1				
		T1/t2					T1/t2					T1/t2				
	[m³/h]	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	
150	2	56	58	41	27	12	18	21	27	22	294	439	512	662	378	
	1	65	68	48	32	11	16	18	23	19	266	390	452	577	334	
200	2,5	62	65	46	30	13	20	23	30	25	327	488	569	735	439	
	1,25	72	76	54	35	12	18	20	26	23	433	433	503	644	393	
300	3	65	67	48	31	20	30	35	44	38	490	731	852	1099	666	
	1,5	75	79	56	37	18	27	31	39	34	449	656	759	968	596	
400	3,5	80	83	58	38	22	33	39	50	43	549	820	956	1234	745	
	1,75	92	96	68	45	21	30	35	44	39	506	741	858	1095	672	
500	3,5	79	82	58	38	29	42	49	63	54	705	1045	1216	1563	948	
	1,75	93	98	69	46	26	38	44	55	49	645	933	1076	1365	847	

Mod.	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		
150	2	218	285	297	322	404	563	621	741	401	39
	1	213	276	287	308	382	523	573	673	11	11
200	2,5	271	351	365	393	478	660	725	858	827	81
	1,25	288	342	354	377	562	616	672	785	229	22
300	3	414	538	558	599	725	1001	1097	1295	1391	136
	1,5	407	525	542	577	692	941	1023	1190	385	38
400	3,5	574	740	762	809	921	1259	1368	1590	2056	202
	1,75	567	726	746	785	887	1196	1289	1479	570	56
500	3,5	687	886	914	972	1133	1547	1684	1962	262	2673
	1,75	677	867	891	939	1085	1458	1572	1803	73	741

HEAT EXCHANGERS PRESSURE DROP

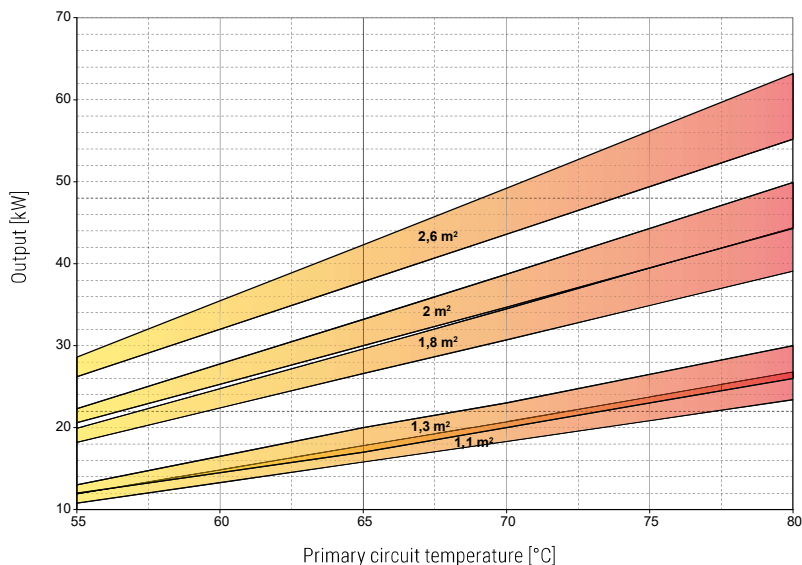
Heat exchangers surface
[m²]

150	1,1
200	1,3
300	1,8
400	2
500	2,6



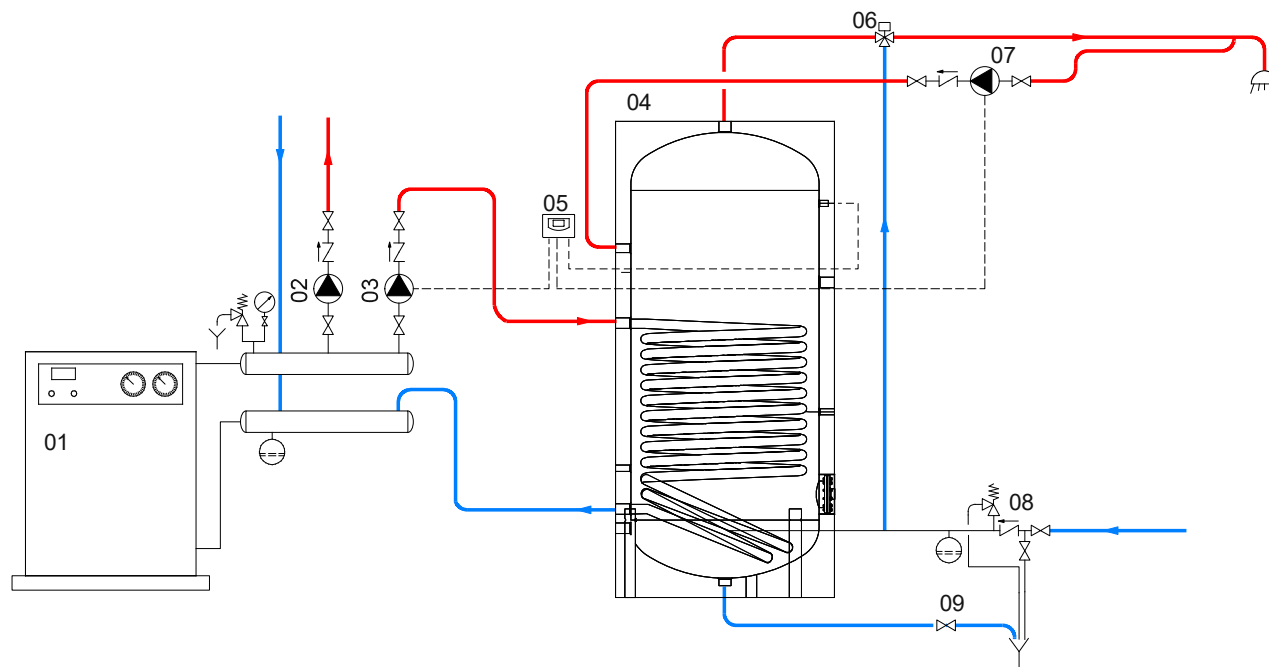


Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary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



Heat exchanger	1,1 m²		1,3 m²		1,8 m²		2 m²		2,6 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	2	1	2,5	1,25	3	1,5	3,5	1,75	3,5	1,75

EXAMPLE OF INSTALLATION WITH BOLLY® 1 AP



01 Generator	04 Bolly® 1 AP	07 D.H.W. recirculation group
02 Heating system circulation group	05 Electronic Control/thermostat	08 Hydraulic safety group
03 D.H.W. circulation group	06 Thermostatic mixing valve	09 Blowdown valve

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