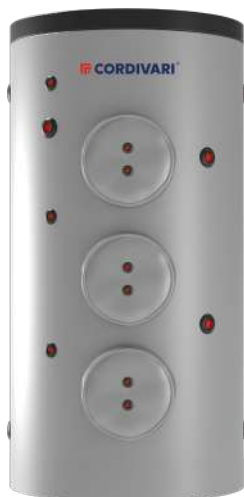


EXTRA 3 PLUS

POLYWARM® COATED CALORIFIERS WITH 3 EXTRACTABLE FINNED COPPER HEAT EXCHANGERS



APPLICATION

Production and storage of domestic hot water (DHW).

MATERIAL

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

HEAT EXCHANGER

Nr. 3 copper finned and tinned heat exchangers.

INSULATION

SOFT (DISMOUNTABLE): NOFIRE® polyester fleece 100% made of recyclable material, with high thermal insulation. Fire resistance class B-s2d0 according to EN 13501.

Grey PVC external lining.

CATHODE PROTECTION

Magnesium anode. Models > 1500 Nr. 2 magnesium anodes.

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.

Model	Art. Nr.	Heat exchangers surface			
		Lower	Middle	Upper	
		ENERGY EFFICIENCY CLASS			
[m²]					
500	3092162352340	1,58	0,76	0,76	C
1000	3092162352341	3,17	1,58	0,94	C
1500	3092162352342	4,54	2,63	1,58	C
2000	3092162352343	5,26	4,54	2,63	
3000	3092162352345	6,34	5,26	3,17	
5000	3092162352347	6,34	6,34	5,26	



EXTRA 3 PLUS WRC

DISMOUNTABLE SOFT FLEECE INSULATION

ACCESSORIES

FULL CONTROL electronic unit (mounted on tank)

Art. Nr.	for models
5220280000004	WRC



Thermometer

Art. Nr.
5032240000107
5 units box



Titanium anode

Art. Nr.	Model
5200000000011	1500
5200000000013	2000-5000



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

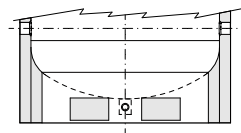
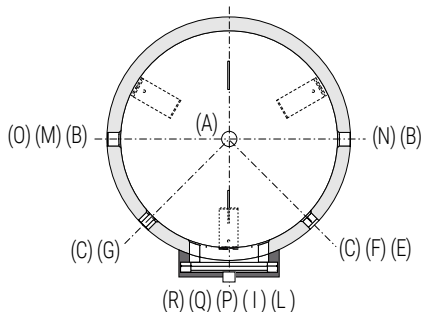
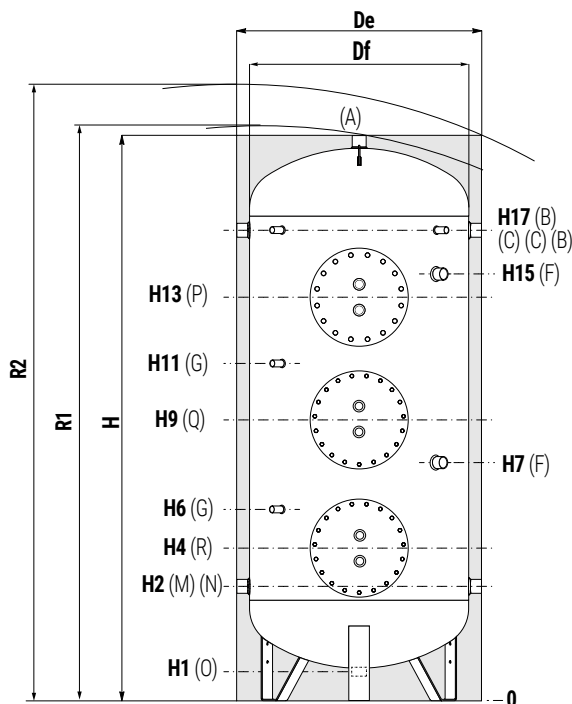
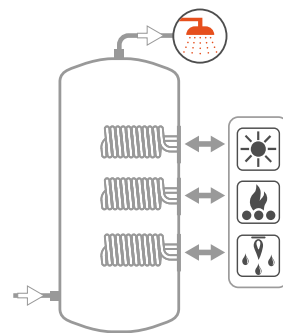
Art. Nr.	Output [kW]
5240000000074	1,5
5240000000075	2
5240000000076	3



EXTRA 3 PLUS

POLYWARM® COATED CALORIFIERS WITH 3 EXTRACTABLE FINNED COPPER HEAT EXCHANGERS

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



A	Domestic hot water outlet
B	Recirculation / Domestic hot water outlet 1" 1/2 F
C-G	Connection for instrumentation G 1/2" F
E	Connection for 2nd magnesium anode 1" 1/4 F (only for models > 1500)
F	Connection for magnesium anode 1" 1/4 F
I	Primary circuit inlet
L	Primary circuit outlet
M	Domestic cold water circuit inlet
N	Alternative domestic cold water circuit inlet or connection for more tanks in series
O	Drain
P	Upper heat exchanger flange
Q	Middle heat exchanger flange
R	Lower heat exchanger flange

Models are equipped with a practical skirt support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow total emptying.

Mod.	Volume [lt]	Weight [kg]	De	Df	H	R1	R2	H1	H2	H4	H6	H7
[mm]												
500	500	120	870	650	1891	1990	2090	126	416	501	611	801
1000	1360	220	1070	850	2198	2240	3140	89	454	562	649	989
1500	1455	227	1210	950	2440	2495	2730	109	440	675	825	1075
2000	1991	278	1360	1100	2492	2570	2850	91	467	692	867	842
3000	2933	377	1350	1250	2811	2950	3130	140	551	836	1011	1036
5000	4996	634	1700	1600	2915	3130	3380	94	580	855	1030	1035

Mod.	H9	H11	H15	H16	H17	R-Q	P	A-B-M-N	O	I-L Lower	I-L middle	I-L upper
[mm]								Connections F				
500	951	1061	1401	//	1526	Ø220/Øe300	Ø220/Øe300	1"1/4	1"1/4	1"	1"	1"
1000	1112	1249	1612	//	1760	Ø300/Øe380	Ø300/Øe380	1"1/2	1"1/2	1"	1"	1"
1500	1250	1400	1875	//	2050	Ø300/Øe380	Ø300/Øe380	2"	1"	1"1/4	1"	1"
2000	1262	1437	1817	1592	2057	Ø350/Øe430	Ø300/Øe380	2"	1"	1"1/4	1"1/4	1"
3000	1476	1651	2176	1926	2391	Ø350/Øe430	Ø300/Øe380	2"	1"	1"1/4	1"1/4	1"
5000	1505	1680	2115	1855	2420	Ø350/Øe430	Ø350/Øe430	2"	1"	1"1/4	1"1/4	1"1/4

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

EXTRA 3 PLUS

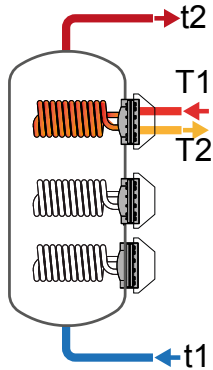
HEAT EXCHANGERS TECHNICAL DATA



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

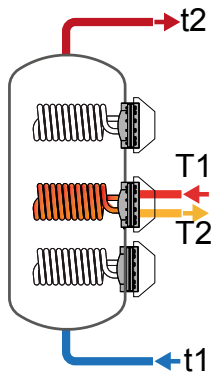
UPPER
HEAT EXCHANGER



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 within 10-45 °C and constant use of DHW production				DHW continuous production lt/h within 10-45 °C and primary at T1 HW production			
		T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
500	1,4	175	175	115	70	7	11	14	19	172	270	342	467
	0,7	192	193	127	79	6	10	12	17	147	246	295	418
1000	1,4	247	248	162	99	9	14	17	24	214	353	428	586
	0,7	274	276	182	112	8	13	16	21	203	329	396	535
1500	1,4	122	122	81	50	14,1	22,9	27,6	37,4	562	900	1076	1443
	0,7	142	144	96	60	13	21	25	33	510	789	931	1222
2000	1,4	122	123	83	52	23	36	44	56	668	1062	1265	1688
	0,7	148	151	103	66	21	32	38	49	602	921	1082	1409
3000	1,4	128	129	87	56	27	43	51	68	668	1062	1265	1688
	0,7	156	159	110	71	24	37	44	57	602	921	1082	1409
5000	3	154	156	105	66	46	74	88	118	1349	2150	2564	3428
	1,5	183	186	127	81	42	65	77	101	1221	1876	2206	2881

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		
500	1,4	178	232	244	265	287	403	460	561	895	88
	0,7	174	228	236	257	268	384	423	521	223	22
1000	1,4	325	420	433	459	460	644	704	830	1936	190
	0,7	323	416	427	451	452	625	678	789	484	47
1500	1,4	456	603	632	693	812	1173	1314	1607	1861	182,5
	0,7	447	584	608	657	770	1084	1198	1430	465	45,6
2000	1,4	694	906	939	1010	1117	1578	1741	2079	3097	303,7
	0,7	683	882	909	963	1064	1465	1594	1856	774	75,9
3000	1,4	902	1166	1199	1270	1325	1838	2001	2339	3733	366
	0,7	891	1142	1169	1223	1272	1725	1854	2116	933	91,5
5000	3	1831	2365	2434	2578	2685	3727	4058	4750	2878	282,2
	1,5	1809	2320	2375	2487	2583	3508	3772	4312	720	70,6

MIDDLE
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 HW production			
		T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
500	1,4	175	175	115	70	7	11	14	19	172	270	342	467
	0,7	192	193	127	79	6	10	12	17	147	246	295	418
1000	1,4	187	187	125	77	14	23	28	37	347	565	680	923
	0,7	213	216	145	91	13	21	25	33	321	509	606	809
1500	1,4	168	170	115	72	23	36	44	56	562	900	1076	1443
	0,7	204	208	142	91	21	32	38	49	510	789	931	1222
2000	3	136	134	91	57	40	65	77	104	988	1594	1910	2577
	1,5	162	165	113	71	37	57	68	90	906	1417	1678	2218
3000	3	160	161	109	69	46	74	88	118	1133	1820	2177	2925
	1,5	190	193	132	85	42	65	77	101	1033	1605	1895	2493
5000	3	234	236	160	101	55	87	104	139	1349	2150	2564	3428
	1,5	282	288	198	127	50	76	89	117	1221	1876	2206	2881

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		
500	1,4	346	442	454	475	455	613	670	771	1861	183
	0,7	342	438	446	467	436	594	633	731	465	46
1000	1,4	684	877	896	937	904	1235	1327	1521	3733	366
	0,7	680	868	884	918	883	1190	1268	1430	933	91
1500	1,4	1033	1324	1354	1415	1389	1894	2035	2329	3097	303,7
	0,7	1024	1306	1329	1378	1347	1805	1919	2152	774	75,9
2000	3	1476	1904	1957	2068	2101	2914	3167	3700	2878	282,2
	1,5	1462	1875	1918	2008	2036	2772	2981	3413	720	70,6
3000	3	2081	2669	2729	2853	2799	3822	4107	4706	2878	282,2
	1,5	2065	2633	2682	2781	2719	3650	3882	4360	720	70,6
5000	3	3441	4378	4447	4591	4295	5740	6071	6762	5530	542,3
	1,5	3420	4333	4388	4500	4193	5521	5785	6325	1382	135,5

PRESSURE DROP AND PERFORMANCE CHARTS AT PAGE 170-171

EXTRA 3 PLUS

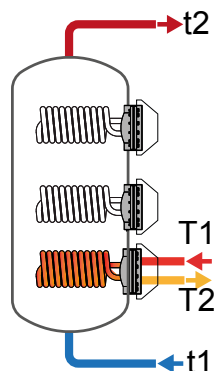
HEAT EXCHANGERS TECHNICAL DATA



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

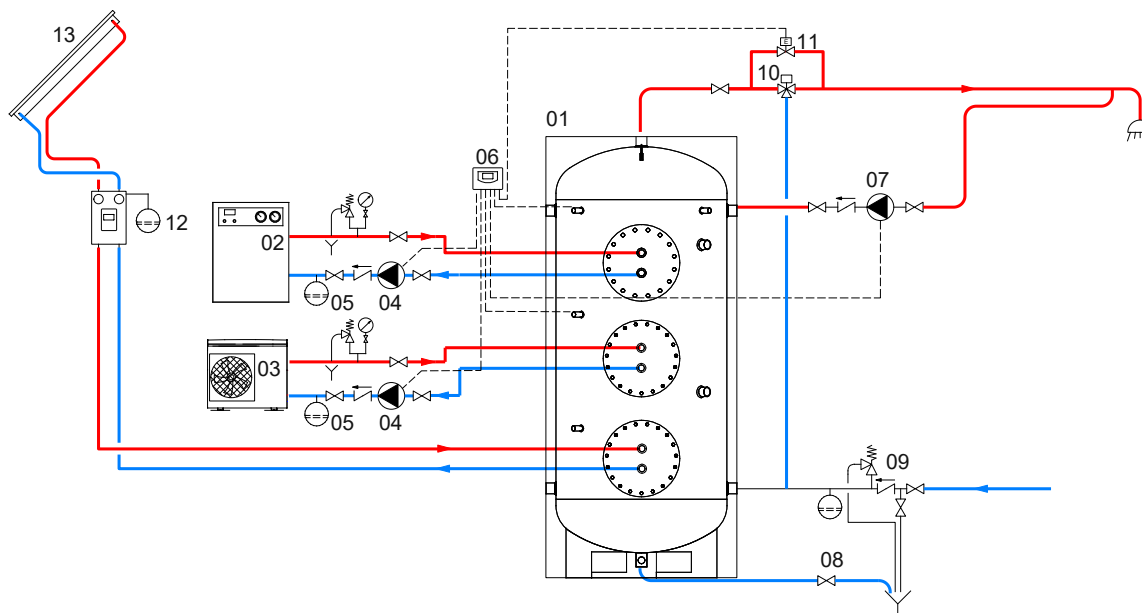
LOWER
HEAT EXCHANGER



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 HW production			
		T1/t2				T1				T1			
		55/50	65/60	70/60	80/60	55	65	70	80	55	65	70	80
500	1,4	132	132	89	55	14	23	28	37	347	565	680	923
	0,7	150	151	103	65	13	21	25	33	321	509	606	809
1000	1,4	154	155	105	67	27	43	51	68	668	1062	1265	1688
	0,7	187	191	132	85	24	37	44	57	602	921	1082	1409
1500	3	139	140	95	59	40	65	77	104	988	1594	1910	2577
	1,5	162	164	113	72	37	57	68	90	906	1417	1678	2218
2000	3	168	169	115	72	46	74	88	118	1133	1820	2177	2925
	1,5	199	202	139	89	42	65	77	101	1033	1605	1895	2493
3000	3	214	216	147	93	55	87	104	139	1349	2150	2564	3428
	1,5	258	263	181	117	50	76	89	117	1221	1876	2206	2881
5000	3	361	364	247	156	55	87	104	139	1349	2150	2564	3428
	1,5	436	445	305	196	50	76	89	117	1221	1876	2206	2881

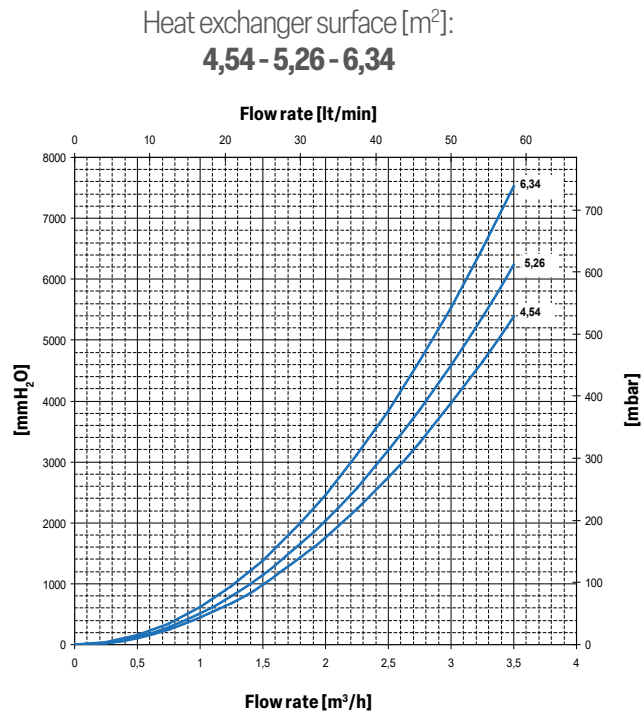
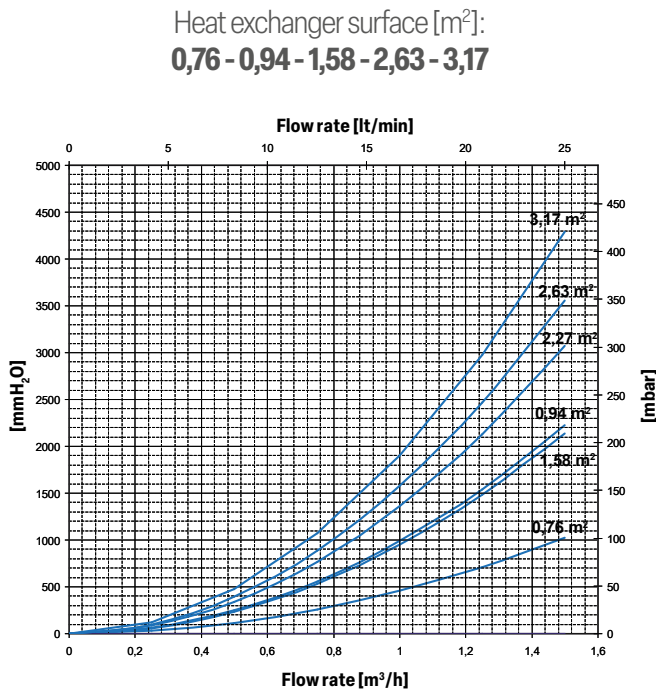
Model	Primary flow rate [m³/h]	DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1				DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1				Heat exchanger pressure drop	
		T1/t2				T1/t2				[mmH ₂ O]	[mbar]
		55/50	65/60	70/60	80/60	55/50	65/60	70/60	80/60		
500	1,4	549	708	728	768	769	1066	1158	1353	1861	183
	0,7	545	699	715	749	748	1021	1099	1261	465	46
1000	1,4	1096	1408	1442	1513	1520	2081	2243	2582	3733	366
	0,7	1085	1385	1412	1466	1467	1968	2097	2359	933	91
1500	1,4	1622	2087	2140	2251	2248	3097	3349	3883	2878	282,2
	0,7	1608	2058	2101	2191	2182	2955	3164	3596	720	70,6
2000	1,4	2185	2799	2859	2983	2903	3952	4237	4836	2878	282,2
	0,7	2169	2763	2812	2911	2823	3780	4012	4490	720	70,6
3000	1,4	3189	4064	4133	4277	4044	5426	5757	6448	5530	542,3
	0,7	3168	4018	4073	4186	3941	5207	5471	6011	1382	135,5
5000	3	5193	6568	6637	6781	6047	7930	8261	8952	5530	542,3
	1,5	5172	6523	6578	6690	5945	7711	7975	8515	1382	135,5

EXAMPLE OF INSTALLATION WITH EXTRA 3 PLUS



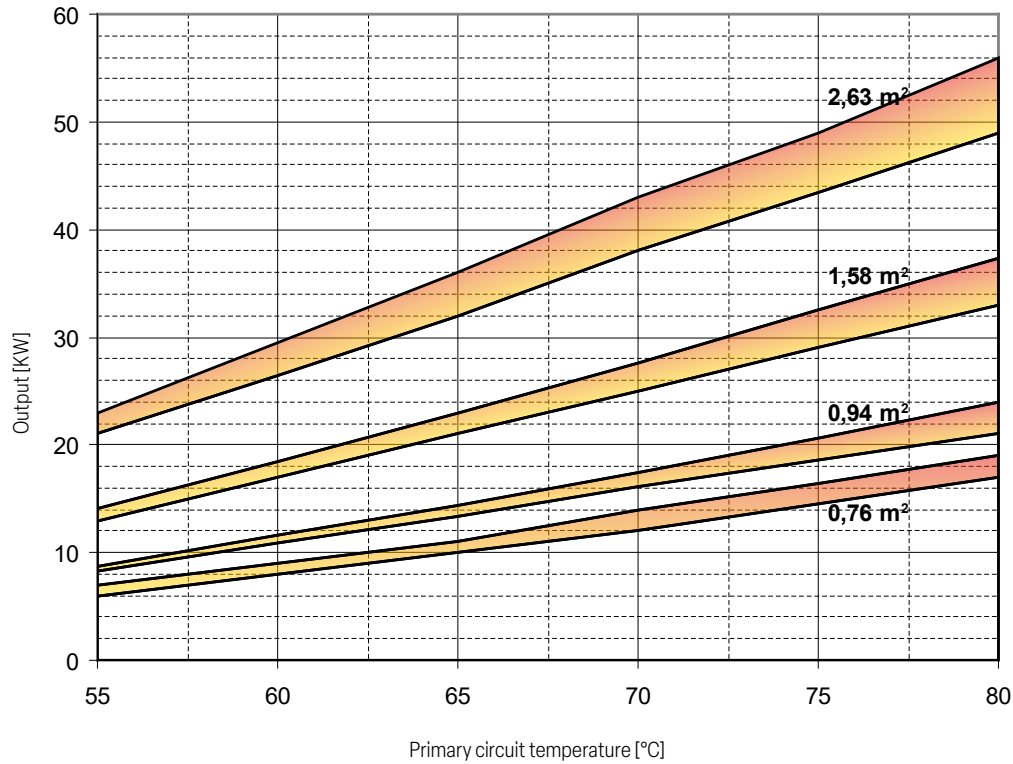
1 Extra 3 Plus	5 Expansion vessel	9 Hydraulic safety group	13 Solar panels
2 Generator	6 FULL CONTROL electronic unit / thermostat	10 Thermostatic mixing valve	
3 Generator (Heat pump)	7 D.H.W. recirculation group	11 By-pass solenoid valve	
4 Circulation group	8 Blowdown valve	12 Solar system circulation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

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



EXTRA PLUS
HEAT EXCHANGERS TECHNICAL DATA

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 curve refers to the minimum primary flow rate)

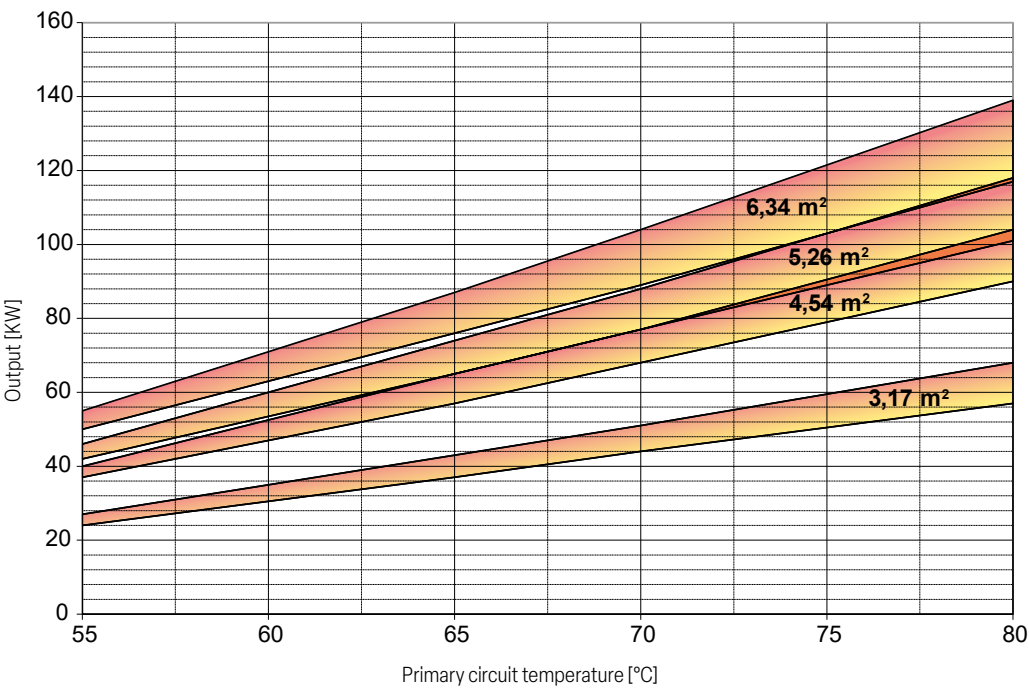


Heat exchanger [m ²]	0,76 m ²		0,94 m ²		1,58 m ²		2,63 m ²	
Flow rate [m ³ /h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	1,4	0,7	1,4	0,7	1,4	0,7	1,4	0,7

EXTRA PLUS

HEAT EXCHANGERS TECHNICAL DATA

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 curve refers to the minimum primary flow rate)



Heat exchanger surface	3,17 m²		4,54 m²		5,26 m²		6,34 m²	
Flow rate [m³/h]	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	1,4	0,7	3	1,5	3	1,5	3	1,5