

COMBI2

MULTI-HEAT ENERGY BUFFER WITH POLYWARM® COATED TANK IN TANK CALORIFIER FOR D.H.W. AND 1 FIXED HEAT EXCHANGER



APPLICATION

Heating hot water storage and D.H.W. production.

MATERIAL

Buffer tank: Mild steel construction with exterior paint. No anti-corrosion treatment required due to the buffer's closed circuit system.

D.H.W. storage: Mild steel Polywarm® coated (Attestation ACS - SSICA - DVGW - W270 - UBA - WRAS)

HEAT EXCHANGER

1 fixed heat exchanger.

TECHNICAL DESCRIPTION

Multi-Heat Energy tanks Combi2 are used in units with a typically discontinuous energy source for double use: heating systems and domestic hot water systems.

INSULATION

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

- SOFT: 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 complete with top cover

CATHODE PROTECTION

Chain magnesium anode

WARRANTY

5 years - See general sales conditions and warranty

ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



HARD FOAM INSULATION



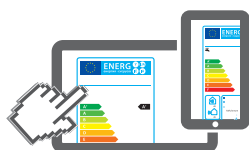
COMBI 2 WB

D.H.W. STORAGE

HEAT EXCHANGER

ENERGY EFFICIENCY CLASS

Model	HARD FOAM insulation	Volume		Surface		Energy Efficiency Class
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	
500	3270162314101	99	1,1	11,5	1,9	C
600	3270162314102	146	1,3	18	2,8	C
800	3270162314103	191	1,6	20	3,1	C
1000	3270162314104	226	1,8	24	3,7	C
1500	3270162314105	412	2,5	32	4,9	C
2000	3270162314106	566	3,1	35	5,4	C



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On line ErP label tool

SOFT FLEECE INSULATION



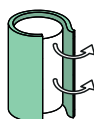
COMBI 2 WC

D.H.W. STORAGE

HEAT EXCHANGER

ENERGY EFFICIENCY CLASS

Model	DISMOUNTABLE SOFT FLEECE insulation	Volume		Surface		Energy Efficiency Class
	Art. Nr.	[lt]	[m²]	[lt]	[m²]	
800	3270162284112	191	1,6	20	3,1	C
1000	3270162284113	226	1,8	24	3,7	C
1500	3270162284114	412	2,5	32	4,9	C
2000	3270162284115	566	3,1	35	5,4	C



FOR 316L STAINLESS STEEL MODELS - SEE PAGE 136

Accessories on request

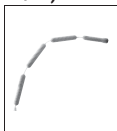
Thermometer

Art. Nr.
5032240000107
5 units box



Chain magnesium anode (connection 3/4")

Art. Nr.	For models
5200000041007	800÷2000
5200000041016	500,600
N° 2 chain anodes + insulated cap + gasket	



Buffer tanks connecting kit

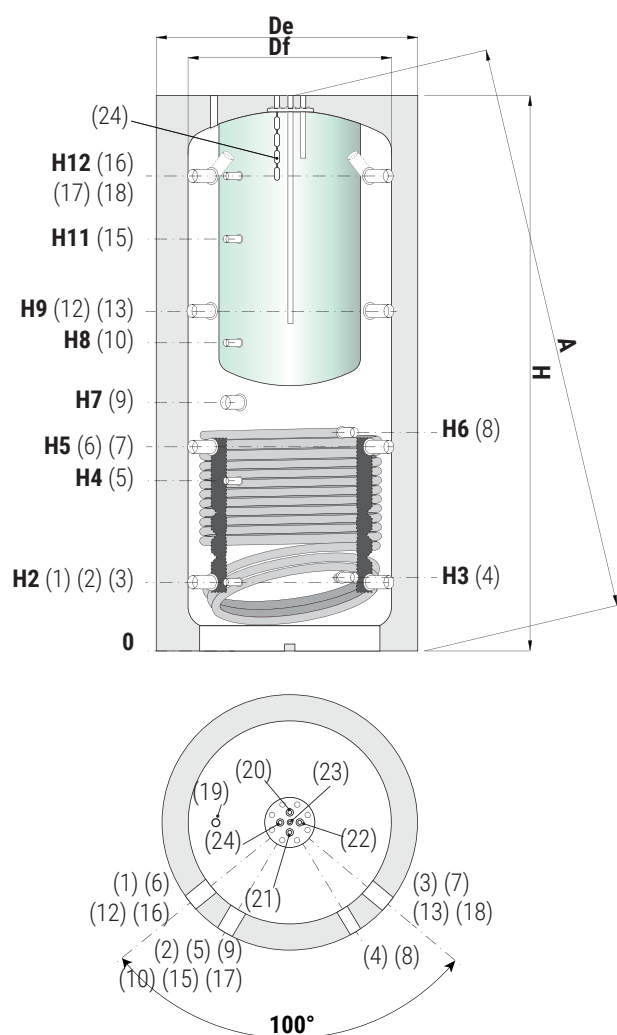
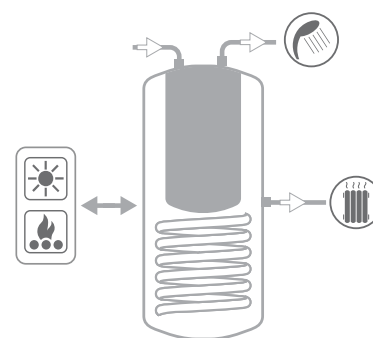
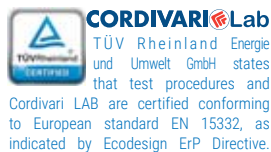
Art. Nr.	Connection
5006170001001	1" 1/2
Stainless steel extensible connecting kit - (200 ÷ 400 mm)	



COMBI2

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AND 1 FIXED HEAT EXCHANGER

TECHNICAL STORAGE		D.H.W. STORAGE		FIXED HEAT EXCHANGER	
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax
3 bar	99 °C	6 bar	90 °C	12 bar	110 °C



1-3 Heating return/To Generator 1" 1/2 Gas F

2 Connection for instrumentation 1/2" Gas F

4 Lower fixed heat exchanger outlet 1" Gas F

5 Connection for instrumentation 1/2" Gas F

6-7 Heating return/To Generator 1" 1/2 Gas F

8 Lower fixed heat exchanger inlet 1" Gas F

9 Electrical immersion 1" 1/2 Gas F

10 Connection for instrumentation 1/2" Gas F

12-13 Heating return/To additional generator/Heating delivery 1" 1/2 Gas F

15 Connection for instrumentation 1/2" Gas F

16-18 Heating return/Heating delivery 1" 1/2 Gas F

17 Connection for instrumentation 1/2" Gas F

19 Air purge 1/2" Gas F

20 Domestic hot water inlet 3/4" Gas F

21 Domestic hot water outlet 3/4" Gas F

22 Recirculation 3/4" Gas F

23 Connection for instrumentation 1/2" Gas F

24 Chain magnesium anode 3/4" Gas F



Model	Volume [lt]	Df (vers. WC)	De (vers. WC)	De (vers. WB)	H	A	H2	H4	H5	H7	H9	H11	H12
[mm]													
500	478	//	//	750	1670	2108	247	533	629	841	1011	1231	1343
600	560	//	//	750	1920	2061	247	582	695	915	1144	1382	1593
800	803	790	1010	950	1890	2111	265	584	690	823	1115	1332	1541
1000	944	790	1010	950	2180	2374	265	656	787	998	1309	1588	1831
1500	1431	950	1210	1100	2300	2550	313	736	845	1061	1377	1653	1909
2000	1961	1100	1360	1300	2370	2703	347	770	879	1060	1411	1687	1943

D.H.W. STORAGE PERFORMANCES

Model	COMPLETE HEATED STORAGE VOLUME				UPPER PART HEATED STORAGE VOLUME	
	DHW Volume	DHW exchanger surface	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[litres]	[m ²]	[lt/min]	[litres]	[lt/min]	[litres]
500	99	1,1	2,5	10 lt/min: 198 lt	1,57	10 lt/min: 148 lt
				25 lt/min: 176 lt		25 lt/min: 132 lt
600	146	1,3	3,0	10 lt/min: 239 lt	1,86	10 lt/min: 179 lt
				25 lt/min: 213 lt		25 lt/min: 160 lt
800	191	1,6	3,5	10 lt/min: 320 lt	2,17	10 lt/min: 240 lt
				25 lt/min: 280 lt		25 lt/min: 210 lt

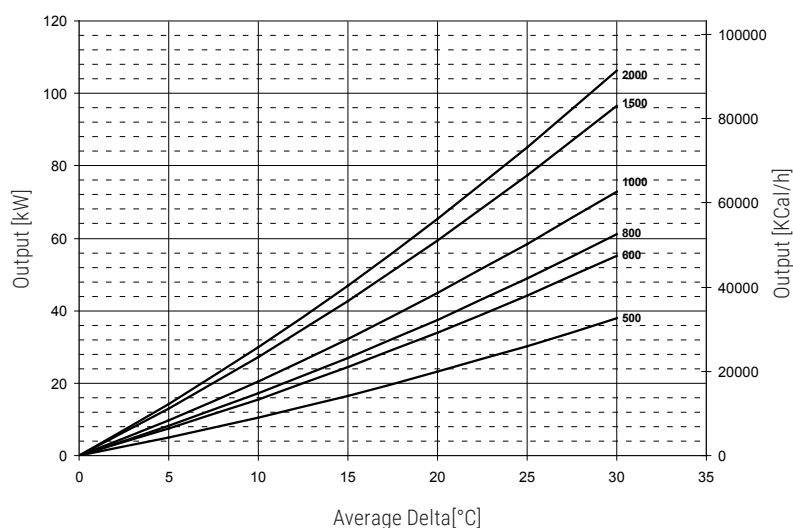
COMBI 2 - COMBI 3 - LOWER FIXED HEAT EXCHANGERS POWERS CHART

Output of the Combi 2 - Combi 3 lower heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h.

Thermal output is given in both kW or kcal/h in terms of average temperature difference between primary and secondary circuit, all for a range of primary 3 m³/h.

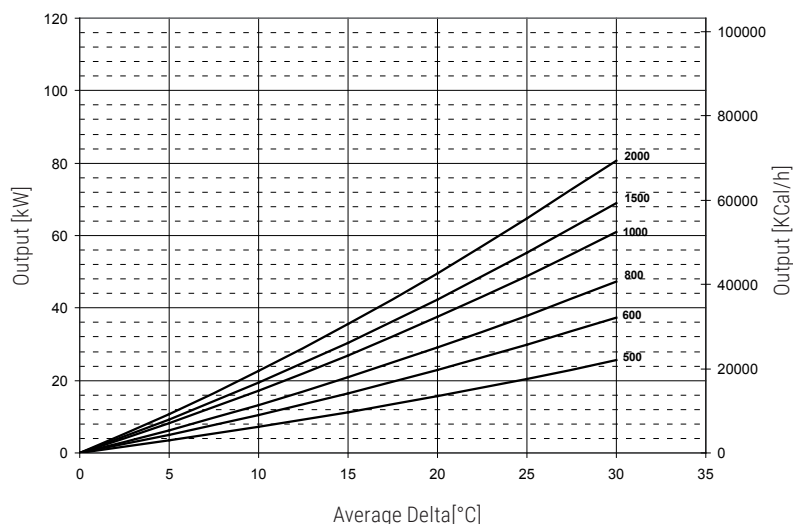
For example, a 1000 liters COMBI 2 with a water flow of 3 m³/h at 80 °C inlet and outlet at 70 °C, has on the storage of water an average temperature of 60 °C, the mean difference of temperature will be:

$(80 + 70) / 20 - 60 = 15$ °C and therefore you can exchange up to approximately 32 kW.



COMBI 3 - UPPER FIXED HEAT EXCHANGERS POWERS CHART

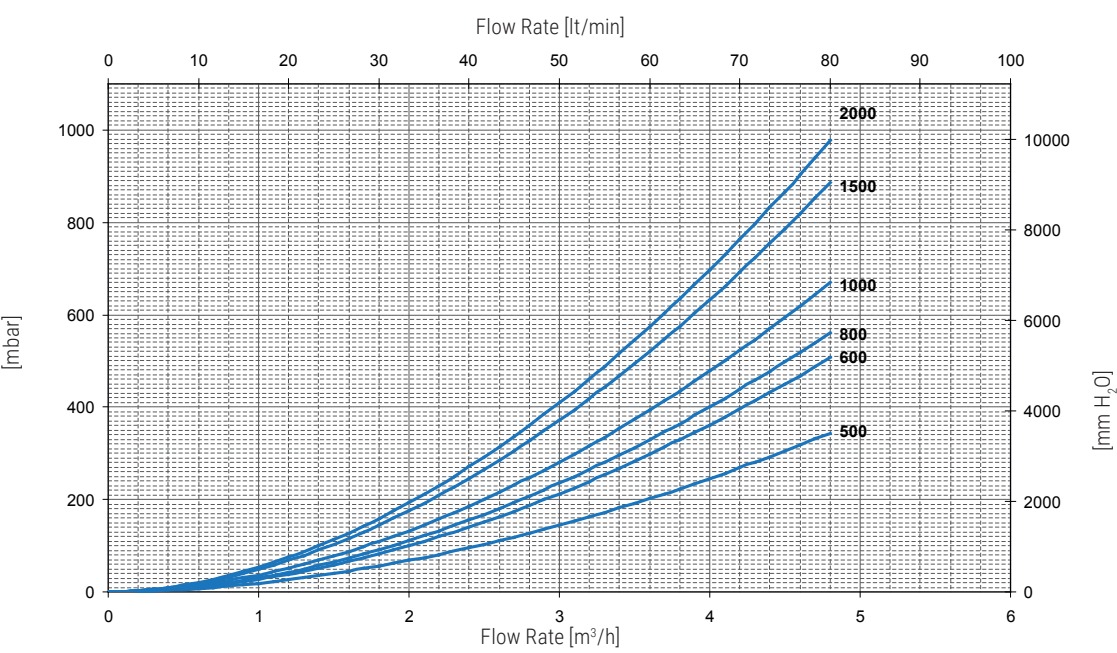
Output of the Combi 3 upper heat exchangers depending on the average DeltaT between primary and accumulation considering flow rate 3 m³/h



D.H.W. STORAGE PERFORMANCES

Model	COMPLETE HEATED STORAGE VOLUME				UPPER PART HEATED STORAGE VOLUME	
	DHW Volume	DHW exchanger surface	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler on	Max sanitary water produced from 10°C to 45°C with storage at 65°C and boiler off
	[litres]	[m²]	[lt/min]	[litres]	[lt/min]	[litres]
1000	226	1,8	4,1	10 lt/min: 389 lt	2,26	10 lt/min: 291 lt
				25 lt/min: 330 lt		25 lt/min: 250 lt
1500	412	2,5	5,6	10 lt/min: 753 lt	3,36	10 lt/min: 565 lt
				25 lt/min: 614 lt		25 lt/min: 461 lt
2000	566	3,1	6,8	10 lt/min: 1083 lt	4,08	10 lt/min: 812 lt
				25 lt/min: 852 lt		25 lt/min: 639 lt

PRESSURE LOSS - LOWER FIXED HEAT EXCHANGER COMBI 2 - COMBI 3



PRESSURE LOSS - UPPER FIXED HEAT EXCHANGER COMBI 3

