ECO-COMBI 2 DOMUS

MULTI-HEAT ENERGY BUFFER WITH 1 FIX COIL AND 1 STAINLESS STEEL 316L D.H.W. CORRUGATED PIPE

Capacity	ECO-COMBI DOMUS	Solar exchanger surface	DHW Heat exchanger surface	Maximum solar panels surface	Continous production of DHW 10/45°C with storage at 60°C	Continous production of DHW 10/45°C with storage at 50°C	Weight
[liters]	ART. NR.	[m²]	[m²]	[m²]	[lt/min.]	[lt/min.]	[Kg]
200	3270162282501	1	1,4	5	11	8	60
300	3270162282502	1,2	2,5	6	23	16	75
500	3270162282503	2	3,5	10	38	26	120

PROMPT DELIVERY
Grey highlighted products are dispatched in 1-5 working days. (Delivery time excluded)

BUFFER		CORRUGATED D.H.W. STAINLESS STEEL PIPE	FIX COIL	
Pmax	Tmax	Pmax	Pmax	Tmax
3 bar	99°C	6 bar	12 bar	110°C

Application
Production and storage of sanitary heating hot water.
Instant production of DHW.
They are mainly used to improve reaction flexibility of stoves, burner and woodstoves.

Technical descriptions
Eco Combi Domus range has been developed to satisfy combined solar system needs for medium and small areas.
Application suggested for:
• Combined heating and sanitary hot water system with two Energy sources (i.e. a biomass generator with thermal solar) hydraulically separated and with the possibility to produce hot water for sanitary use .
In this case the storage heating volume allows the generator to regularly work, limiting number of interruption due to the inadeguate energy request of the heating system, limiting also the smoking issues and corrosive condensation of smoking side.
• Combined heating and hot sanitary water systems , where you want to install a solar panel on traditional heating system: the heating can be managed with " increasing backflow temperature" and the production of hot sanitary water can be supported by the instantaneous boiler.
• Sanitary hot water production systems for domestic and sanitary use where only the heating water is stored supplied by two energy sources .
In this system, the high performance of the sanitary exchanger allows to obtain good production of hot sanitary water even with low temperatures of the primary system (i.e using heating pumps)

Material
- Buffer in carbon steel , raw inside, painted outside .
- DHW corrugated coil in stainless steel 316L.

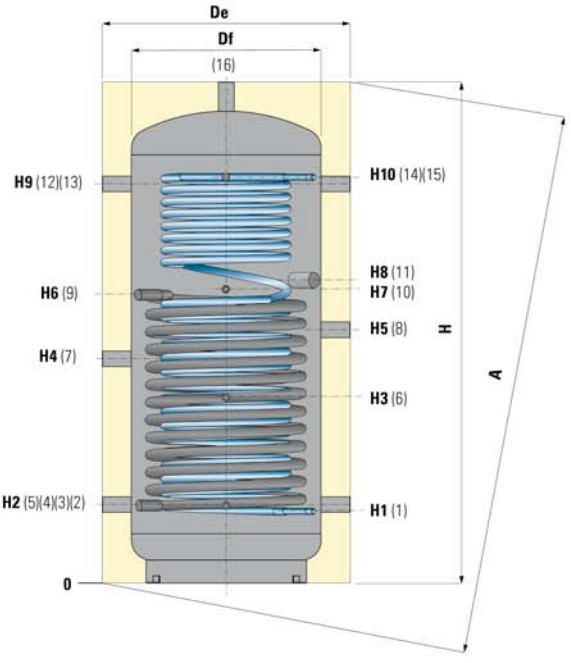
Insulation
Ecological hard polyurethane foam, thickness 70 mm with high thermal insulation and thermal conductivity 0,023 W/mK.

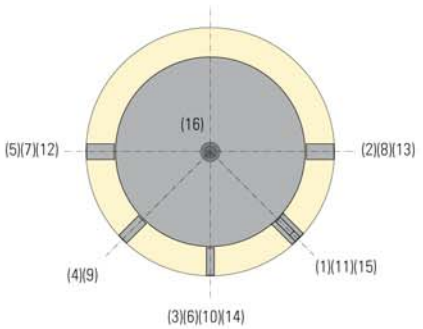
External lining
Grey PVC with top cover.

Heat exchangers:
- 1 fixed coil in carbon steel for primary water.
- 1 D.H.W. corrugated coil in stainless steel 316L.

Warranty
Buffer 2 years
Stainless steel coil : 5 years
See general sales terms and conditions.

	CONNECTIONS
1	Domestic Cold Water Circuit Inlet 1/2" Gas F
2-5	Heating return/To Generator 1"1/2 Gas F
3	Connection for instrumentation 1/2" Gas F
4	Heat exchanger outlet 1" Gas F
6	Connection for instrumentation 1/2" Gas F
7	Heating return/To Generator / Heating delivery 1"1/2 Gas F
8	
9	Heat exchanger inlet 1" Gas F
10	Connection for instrumentation 1/2" Gas F
11	Connection for electrical integration 1"1/2 Gas F
12	Heating delivery/From Generator 1"1/2 Gas F
13	
14	Connection for instrumentation 1/2" Gas F
15	Domestic Hot Water Circuit Outlet 1/2" Gas F
16	Heating delivery/From Generator 1"1/2 Gas F



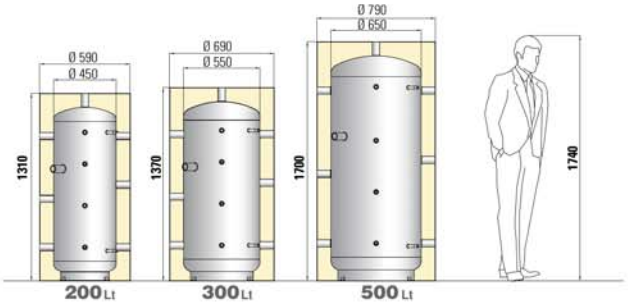


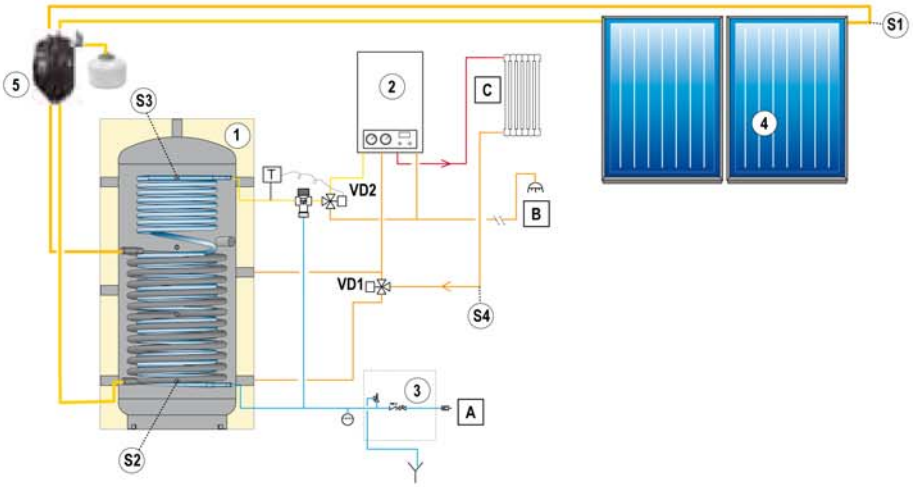
Capacity	Df	De	H	A	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10
[liters]	[mm]													
200	450	590	1310	1497	216	241	541	591	691	811	841	811	1041	1068
300	550	690	1370	1579	240	255	555	605	705	795	855	795	1055	1067
500	650	790	1700	1918	250	270	640	770	870	990	1010	1040	1370	1392

ECO-COMBI 2 DOMUS INSTALLATION

This layout is used for existing installation as the buffer connection to DHW and the heating systems are really simple and easy .
It simply works and it allows you to use solar energy for DHW production (the wide exchanging area allows to work also with a low Delta T value) or in case it will not reach the temperature needed, the flow is delivered to the burner entrance in order to use solar energy as pre-heating
Furthermore the connection of "high back flow temperature" to the heating systems let you use solar energy also for room temperature . In this case the heating backflow temperature is compared with the temperature inside the buffer and if this will be higher then heating backflow temperature, 3-way bypass valve will work so that the pre-heating water taken from the buffer will come back to the burner.
Connecting the heating outlet to the buffer middle connection you can choose to store part or the energy produced only for sanitary use.
This installation is mainly suitable for heating systems with low backflow temperatures such as low Delta T radiators, electrical stoves, heating panels
The particular connection of "high backflow temperature", in case of an high solar energy contribution, doesn't allow to take benefit of a condensing boiler. This installation can be regulated with a top power control that manage the solar systems and the " high backflow temperature" through the motorized diverting valve VD1

Motorized diverting valve VD2 that handle sanitary water can be managed by a simple thermostat , and to regulate your room temperature you don't need nothing more than what you normally use (i.e. on-off or modulating thermostat the act on the burner)



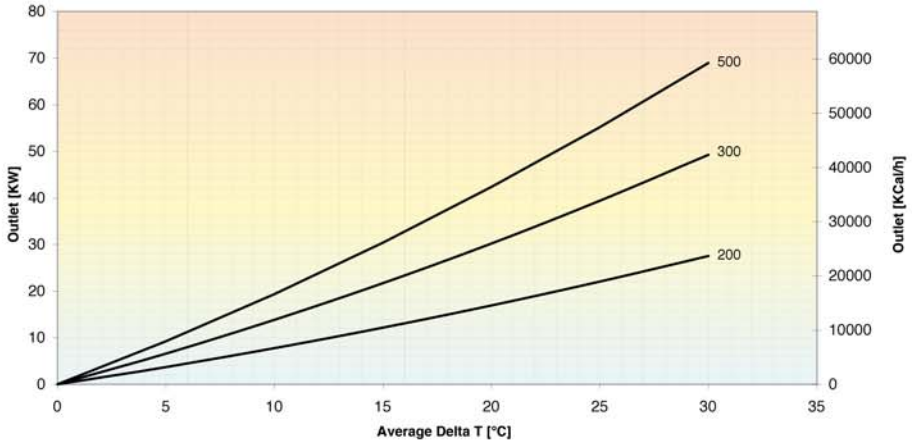


	LEGEND
A	Sanitary water Inlet
B	Sanitary water users
C	Heating System
1	Buffer
2	Gas Burner
3	Hydraulic safety group
4	Solar panels
5	Top solar circulation group
S1, S2, S3, S4	Power probe TOP
VD1	Sanitary diverting valve
VD2	Heating diverting valve

ECO-COMBI 2 DOMUS D.H.W. HEAT EXCHANGER TECHNICAL PERFORMANCES

			COMPLETE HEATED STORAGE VOLUME		UPPER PART HEATED STORAGE VOLUME	
Capacity	Sanitary Circuit Volume	DHW corrugated pipe 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
[lt]	[lt]	[m²]	[lt/min]	[lt]	[lt/min]	[lt]
200	2,9	1,4	12,5	10 lt/min: 67 lt	7,5	10 lt/min: 36 lt
				25 lt/min: 42 lt		25 lt/min: 23 lt
300	5,1	2,5	26,7	10 lt/min: 115 lt	16,0	10 lt/min: 63 lt
				25 lt/min: 65 lt		25 lt/min: 35 lt
500	7,2	3,5	43,7	10 lt/min: 192 lt	26,5	10 lt/min: 105 lt
				25 lt/min: 107 lt		25 lt/min: 58 lt

Output of the upper heat exchangers **ECO COMBI 2 DOMUS** depending on the average Delta T between primary and accumulation (considering flow rate at 3 m3/h)



P.E.D. product planned and produced in conformity to the article 3.3 of directive 92/23/CE