

# PUFFERMAS® 3 CTS

HEATING WATER BUFFER TANK WITH STRATIFICATION DEVICE, 2 FIXED HEAT EXCHANGERS AND MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



## APPLICATION

Storage of heating hot water with stratification device and D.H.W. immediate production with high flow rate. Ideal for solar thermal solutions and for heating systems with mixed energy sources such as biomass and solar and even allowing the integration of a third energy source.

## MATERIAL

Mild steel painted on the outside. Buffer intended for closed circuit installation, so no anti-corrosion treatment is provided.

## D.H.W. HEAT EXCHANGER

External MACS® module with Stainless steel 316L brazed plate exchanger for immediate D.H.W. production.

## HEATING WATER HEAT EXCHANGER

N° 2 fixed heat exchangers and CTS® stratificator system, suitable for solar thermal systems and other generator.

## TECHNICAL DESCRIPTION

The immediate and fast production of D.H.W. granted by the MACS® module allows the following benefits:

- to reduce dimensions of the water heater needed
- easy maintenance
- maximum hygiene for anti-legionellosis bacteria's
- to produce more DHW than the quantity obtained by calorifier with similar capacity because hot water is stored at a higher temperature

than DHW.

Puffermas 3 CTS® is characterized by multiple thermal stratification system based on the combination of Cordivari Labyrinth spreader for returning heating water (both from heating installation and from MACS® DHW station) with a new stratification device that conveys in the upper part of the tank the heated water up by the lower fixed coil. This combination ensures a perfect natural stratification inside the tank with no valve or additional external device.

The lower fixed coil allows the possibility of connecting with a solar system. Being positioned at the bottom lower part of the buffer tank and with very small footprint, it increases the volume available for the storage. Puffermas® 3 CTS is able to integrate the use of a third separate heat source in addition to solar and biomass.

## INSULATION

**Buffer tank:** High thermal insulation with ecological hard polyurethane foam. Models 800-1000 available with dismountable hard foam insulation

**MACS® module:** insulating PPE cover. Grey PVC external lining.

## WARRANTY

5 years (tank)

See general sales conditions and warranty for electrical parts.

## ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



## PUFFERMAS® 3 CTS VB

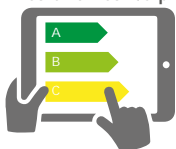
Model	MACS® module model	HARD FOAM insulation Art. Nr.	SLB heat exchanger model / plates nr.	HEAT EXCHANGER SURFACE		ENERGY EFFICIENCY CLASS 
				Upper [lt]	Lower [m²]	
500	70	3251162316543	SLB20 / 34	1,3	1,9	C
600		3251162316544		1,3	2,1	C
800		3251162316545		1,8	2,5	B
1000		3251162316546		2,5	3,1	C
1500		3251162316547		2,8	3,8	C
1000	120	3251162316548	SLB40/ 40	2,5	3,1	C
1500		3251162316549		2,8	3,8	C



Electronic MACS® module

PATENTED

cordivari.com/erp



On line ErP label tool

Model	MACS® module model	DHW production (10-45°C) with accumulation at 80°C	Maximum availability of DHW (10-45°C) with accumulation at 80°C
		[l/min]	[l/min]
500	70	37	680
600		37	800
800		37	1150
1000		37	1350
1500		37	2080
1000	120	61	1680
1500		61	2580

## ACCESSORIES

### Thermometer

Art. Nr.
5032240000107
5 units box



### Recirculation kit

Art. Nr.
5221000000073
DHW recirculation group



### Buffer tanks connecting kit

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



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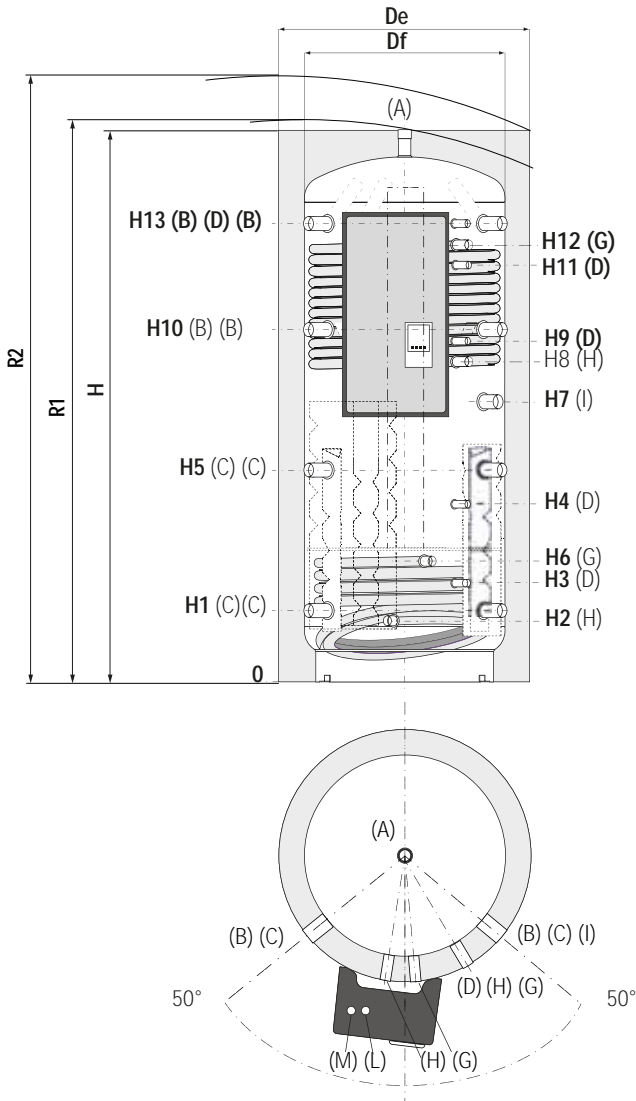
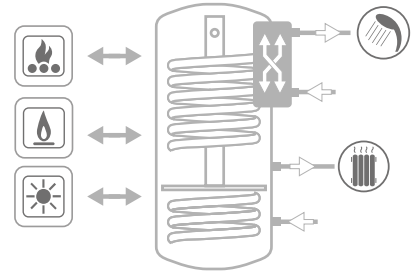
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STORAGE		FIXED HEAT EXCHANGER		STAINLESS STEEL 316L BRAZED PLATE EXCHANGE® (MACS®)		D.H.W. HARDNESS
Pmax	Tmax	Pmax	Tmax	Pmax	Tmax	F max
3 bar	99 °C	12 bar	110 °C	6 bar	99 °C	30 °f



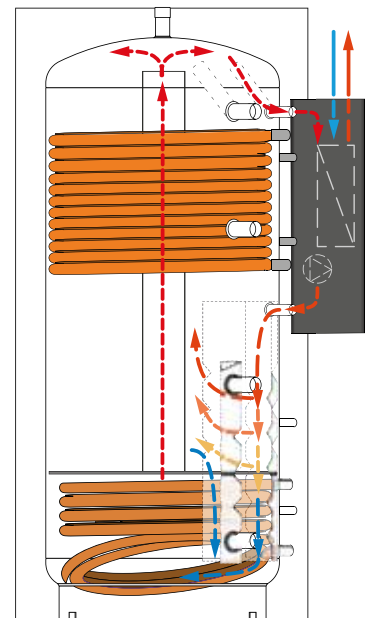
**CORDIVARI® Lab**

TÜV Rheinland Energie und Umwelt GmbH states that test procedures and Cordivari LAB are certified conforming to European standard EN 15332, as indicated by Ecodesign ErP Directive.



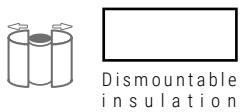
<b>A</b>	Heating delivery/From generator / vent 1"1/2 G F
<b>B</b>	Heating delivery/From generator 1"1/2 G F
<b>C</b>	Heating return/to generator 1"1/2 G F
<b>D</b>	1/2" G probe F
<b>G</b>	Fixed heat exchanger inlet 1" G F
<b>H</b>	Fixed heat exchanger outlet 1" G F
<b>I</b>	Connection for for electric immersion heater 1"1/2 F
<b>L</b>	Domestic hot water outlet 3/4" G M (1" G M for models with MACS® 120)
<b>M</b>	Domestic cold water circuit inlet 3/4" G M (1" G M for models with MACS® 120)

P.E.D. product designed and produced in conformity to the article 4.3 of directive 2014/68/UE - ErP Ecodesign directive 2009/125/CE



## SUITABLE FOR SOLAR THERMAL SYSTEMS

THE ILLUSTRATION UNDERLINES THE STRATIFICATION PROCESS (FROM TOP TO BOTTOM) THAT ALLOWS TO HAVE ALL NEEDED ENERGY RAPIDLY AVAILABLE



Dismountable insulation

Model	Volume [lt]	De	Df	H	R1	R2	H1	H2	H3	H4	H5	H6	H7	H8	H9	H10	H11	H12	H13
		[mm]																	
<b>500</b>	478	750	650	1619	//	1785	247	215	360	533	629	425	870	930	1025	1011	1130	1231	1343
<b>600</b>	560	750	650	1870	//	2015	247	215	360	582	695	425	970	1090	1200	1144	1485	1391	1593
<b>800</b>	805	940	790	1840	1880	2067	265	233	378	584	690	443	918	1003	1115	1115	1442	1347	1541
<b>1000</b>	946	940	790	2130	2165	2329	265	233	384	656	787	443	1145	1188	1388	1309	1588	1661	1831
<b>1500</b>	1454	1100	950	2250	//	2505	313	281	432	736	845	491	1236	1286	1396	1377	1783	1673	1909