

PUFFERMAS® 3

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



APPLICATION

Storage of heating hot water and immediate production of D.H.W. high flow rate.

MATERIAL

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

D.H.W. HEAT EXCHANGER

Plate to plate stainless steel exchanger in external MACS® module for immediate D.H.W. production.

HEATING WATER HEAT EXCHANGER

2 fixed heat exchangers

TECHNICAL DESCRIPTION

The immediate and fast production of D.H.W. granted by the outside system steel plate exchange allow 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 boiler with similar capacity because heating hot water is stored at an higher temperature than DHW

INSULATION

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

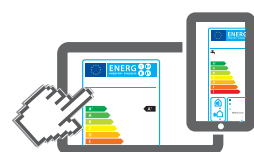
ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



PUFFERMAS® 3 VB

| Model | MACS® module maximum output | HARD FOAM insulation Art. Nr. | SLB heat exchanger model / plates nr. | HEAT EXCHANGERS SURFACE | | ENERGY EFFICIENCY CLASS |
|-------|-----------------------------|-------------------------------|---------------------------------------|-------------------------|------------|-------------------------|
| | | | | Upper [lt] | Lower [m²] | |
| 500 | 70 kW | 3251162314743 | SLB20 / 34 | 1,3 | 1,9 | C |
| 600 | | 3251162314744 | | 1,3 | 2,1 | C |
| 800 | | 3251162314745 | | 1,8 | 2,5 | C |
| 1000 | | 3251162314746 | | 2,5 | 3,1 | C |
| 1500 | 120 kW | 3251162314747 | SLB40/ 40 | 2,8 | 3,8 | C |
| 1000 | | 3251162314748 | | 2,5 | 3,1 | C |
| 1500 | | 3251162314749 | | 2,8 | 3,8 | C |



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On line ErP label tool

| Model | DHW Station max output (*) | DHW Station max flow rate (*) | Max DHW availability (10-45°C) with storage at 70°C |
|-------|----------------------------|-------------------------------|---|
| | [kW] | [l/min] | [litres] |
| 500 | 70 kW | 30 | 511 |
| 600 | | 30 | 614 |
| 800 | | 30 | 983 |
| 1000 | | 30 | 1100 |
| 1500 | | 30 | 1680 |
| 1000 | 120 kW | 50 | 1503 |
| 1500 | | 50 | 2254 |

(*)Data obtained under the following conditions:

- Primary water at 80°C
- DHW production from 10°C to 45°C.

Accessories on request

Thermometer

| Art. Nr. |
|---------------|
| 5032240000107 |
| 5 units box |



Recirculation kit

| Art. Nr. |
|-------------------------------------|
| 5221000000054 |
| Control display + pump (for D.H.W.) |



Buffer tanks connecting kit

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

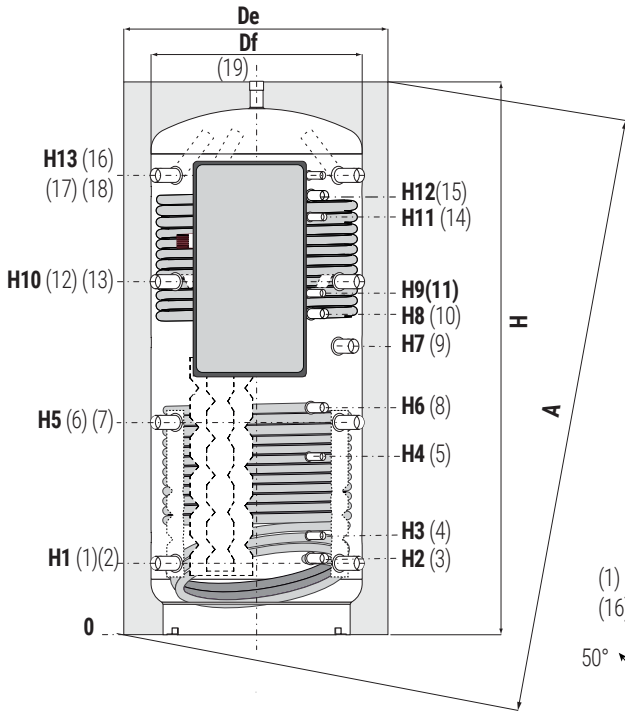
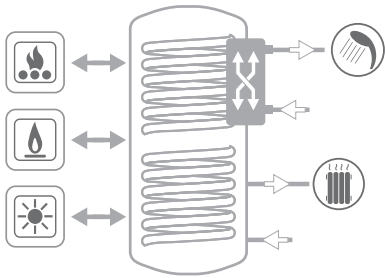


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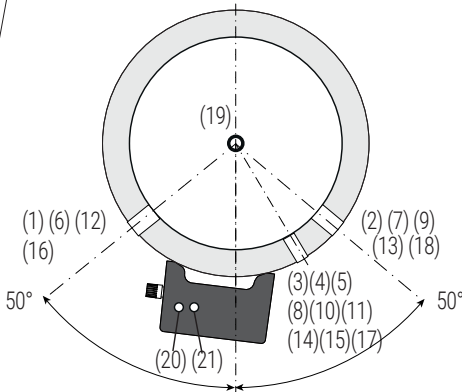
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| STORAGE | | FIXED HEAT EXCHANGER | | STAINLESS STEEL PLATE HEAT EXCHANGER (MACS®) | | D.H.W. HARDNESS |
|---------|-------|----------------------|--------|--|-------|-----------------|
| Pmax | Tmax | Pmax | Tmax | Pmax | Tmax | F max |
| 3 bar | 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.

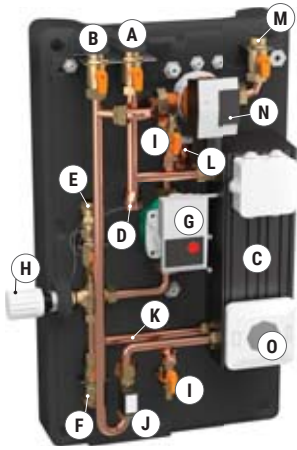


| | | | |
|----------------|---|--------------------|--|
| 1-2-6-7 | Heating return/To Generator1"1/2 Gas F | 12-13-16-18 | Heating delivery/ Heating return 1"1/2 Gas F |
| 3 | Lower heat exchanger outlet 1" Gas F | 14 - 17 | Connection for instrumentation 1/2" Gas F |
| 4 - 5 | Connection for instrumentation 1/2" Gas F | 15 | Upper heat exchanger inlet 1" Gas F |
| 8 | Lower heat exchanger inlet 1" Gas F | 19 | Heating delivery 1"1/2 Gas F |
| 9 | Electrical immersion 1"1/2 Gas F | 20 | Domestic cold water circuit inlet 3/4" Gas M (1" Gas M for models 120kW) |
| 10 | Upper heat exchanger outlet 1" Gas F | 21 | Domestic hot water circuit outlet 3/4" Gas M (1" Gas M for models 120kW) |
| 11 | Connection for instrumentation 1/2" Gas F | | |



| Model | Volume [lt] | De | H | A | H1 | H2 | H3 | H4 | H5 | H6 | H7 | H8 | H9 | H10 | H11 | H12 | H13 |
|-------------|-------------|------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| | | [mm] | | | | | | | | | | | | | | | |
| 500 | 478 | 750 | 1619 | 1784 | 247 | 260 | 360 | 533 | 629 | 744 | 870 | 930 | 1025 | 1011 | 1130 | 1231 | 1343 |
| 600 | 560 | 750 | 1870 | 2015 | 247 | 260 | 360 | 582 | 695 | 855 | 970 | 1090 | 1200 | 1144 | 1485 | 1391 | 1593 |
| 800 | 805 | 950 | 1840 | 2066 | 265 | 278 | 378 | 584 | 690 | 762 | 918 | 1003 | 1115 | 1115 | 1442 | 1347 | 1541 |
| 1000 | 946 | 950 | 2130 | 2328 | 265 | 284 | 384 | 656 | 787 | 953 | 1145 | 1188 | 1388 | 1309 | 1588 | 1661 | 1831 |
| 1500 | 1454 | 1100 | 2250 | 2504 | 313 | 336 | 432 | 736 | 845 | 1006 | 1236 | 1286 | 1396 | 1377 | 1783 | 1673 | 1909 |

MACS® MODULE FOR IMMEDIATE D.H.W. PRODUCTION



| | |
|--|---|
| A | Domestic Hot Water exit |
| B | Domestic Water entry |
| C | Stainless Steel Plate Exchanger |
| D | Control for thermostatic head |
| E | Heating water inlet from the buffer |
| F | Heating water back to the buffer |
| G | "Energy Saving" Circulation Pump |
| H | Thermostatic Valve |
| I | Valves In/Out for DHW |
| J | Flow switch for DHW |
| K | Return to primary circuit |
| L | Purge valve |
| D.H.W. recirculation kit (optional) | |
| M | Connection for D.H.W. recirculation (optional) |
| N | Recirculation pump (optional) |
| O | D.H.W. recirculation control display (optional) |

MACS® module is an external unit that immediately produces hot domestic water, using the heat energy stored in the Buffer thanks to the stainless steel plate exchanger, granting safety and comfort with the possibility to regulate outlet temperature.

MACS® module is equipped with a thermostatic mixer in the heating water inlet (primary) from the buffer avoiding the plate exchanger to overheat reducing risk of formation of calcium deposit.

