



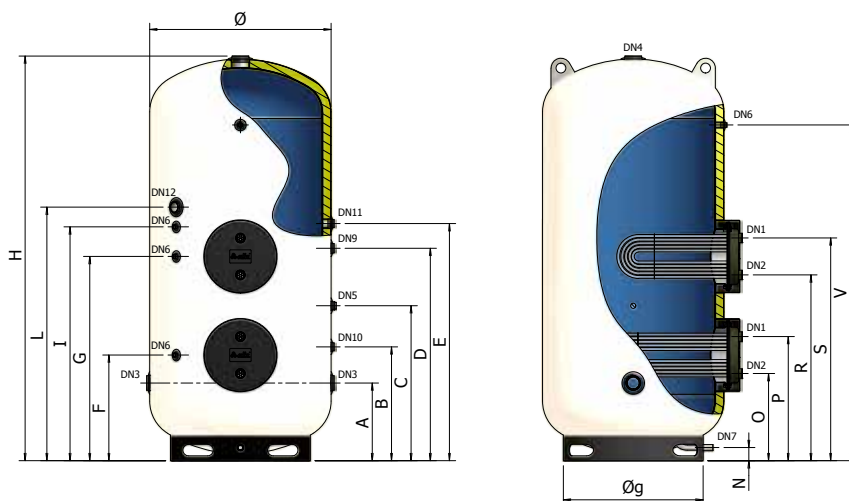
BF2

GLASSLINED CYLINDERS

WITH TWO REMOVABLE STAINLESS STEEL HEAT EXCHANGERS (1.500 - 5.000 LITRES)



BF2 1500 - 2000 - 3000 - 5000



KEYWORD

DN1: Primary fluid inlet (heating side); **DN2:** Primary fluid outlet (heating side); **DN5:** Sanitary cold water inlet; **DN6:** Sanitary hot water outlet; **DN7:** Magnesium anode; **DN8:** Probes (Thermometer, Thermostat); **DN9:** Tank drain; **DN11:** Recirculation.

- CYLINDER
- FOR SANITARY HOT WATER
- SUITABLE FOR SOLAR SYSTEMS
- MAGNESIUM ANODE
- INTERNAL, GLASSLINING ANTI-CORROSION TREATMENT
- POLYURETHANE INSULATION
- HEAT EXCHANGER IN STAINLESS STEEL AISI 304
- HANDLING BY FORKLIFT
- + 95°C WORKING TEMPERATURE
- +110°C HEAT EXCHANGER MAX TEMPERATURE
- P_{MAX}** 6 bar MAX WORKING PRESSURE
- P_{SCA}** 12 bar HEAT EXCHANGER MAX PRESSURE
- WARRANTY: 5 YEARS**

REFERENCE STANDARDS

CYLINDER:
Directive PED 97/23/EC - ART. 3.3, without CE marking
Standard EN 12897:2006

INTERNAL GLASSLINING:

DIN 4753
The glasslining treatment makes the cylinder suitable to contain hot water for sanitary and hygienic use and resistant to corrosive phenomena.

INSULATION:

Expanded, flexible polyurethane with open cells.

HEAT EXCHANGER:

Removable U pipe stainless steel heat exchanger.

INSTALLATION:

- traditional boilers (wall-hung and/or floor-standing)
- condensing boilers
- solar thermal systems

| MODEL | CODE | EXCHANGER | | | | | | | NOTES |
|-------------|---------------|-----------|----------------|---------|----------------|--------|------|------|-------|
| | | LOWER | | CENTRAL | | | mm | mm | |
| | | LITRES | m ² | LITRES | m ² | LITRES | | | |
| BF-2 / 1500 | A370H67 VW050 | 1500 | 4,00 | 18 | 3,00 | 15 | 1100 | 2465 | |
| BF-2 / 2000 | A370H70 VW050 | 2000 | 4,00 | 18 | 4,00 | 18 | 1200 | 2445 | |
| BF-2 / 3000 | A370H74 VW050 | 3000 | 6,00 | 24 | 6,00 | 24 | 1350 | 2840 | |
| BF-2 / 5000 | A370H80 VW050 | 5000 | 10,00 | 39 | 10,00 | 39 | 1700 | 3045 | |

| MODEL | ANODE ø x ø conn. x L | DN 1 | DN 2 | DN 3 | DN 4 | DN 5 | DN 6 | DN 7 | DN 8 | DN 9 | DN 10 | DN 11 | DN 12 |
|-------------|--------------------------|-------------|-------------------|--------|--------|--------|------|--------|------|--------|--------|--------|--------|
| | | BF-2 / 1500 | 32 x 1.1/4" x 670 | 1.1/2" | 1.1/2" | 2.1/2" | 3" | 1.1/4" | 1/2" | 1" | - | 1.1/2" | 1.1/4" |
| BF-2 / 2000 | 32 x 1.1/4" x 670 | 1.1/2" | 1.1/2" | 2.1/2" | 3" | 1.1/4" | 1/2" | 1" | - | 1.1/2" | 1.1/4" | 1.1/4" | 2" |
| BF-2 / 3000 | 32 x 1.1/4" x 700 | 1.1/2" | 1.1/2" | 3" | 3" | 1.1/2" | 1/2" | 1" | - | 1.1/2" | 1.1/4" | 1.1/4" | 2" |
| BF-2 / 5000 | 40 x 1.1/2" x 640 | 1.1/2" | 1.1/2" | 3" | 3" | 1.1/2" | 1/2" | 1" | - | 1.1/2" | 1.1/4" | 1.1/4" | 2" |

| MODEL | A mm | B mm | C mm | D mm | E mm | F mm | G mm | I mm | L mm | M mm | N mm | O mm | P mm | Q mm | R mm | S mm | T mm | U mm | V mm |
|-------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| BF-2 / 1500 | 475 | 695 | 945 | 1295 | 1445 | 645 | 1245 | 1425 | 1545 | - | 80 | 530 | 755 | - | 1130 | 1355 | - | - | 2045 |
| BF-2 / 2000 | 465 | 685 | 935 | 1285 | 1435 | 635 | 1235 | 1415 | 1535 | - | 80 | 520 | 745 | - | 1120 | 1345 | - | - | 2035 |
| BF-2 / 3000 | 530 | 730 | 980 | 1480 | 1630 | 680 | 1280 | 1520 | 1730 | - | 80 | 565 | 790 | - | 1165 | 1390 | - | - | 2380 |
| BF-2 / 5000 | 635 | 835 | 1085 | 1585 | 1735 | 785 | 1385 | 1625 | 1835 | - | 80 | 670 | 895 | - | 1270 | 1495 | - | - | 2485 |



TECHNICAL CHARACTERISTICS

| HEAT EXCHANGER | CODE | MAXIMUM WORKING PRESSURE / MAXIMUM WORKING TEMPERATURE | | PRESSURE DROP OF HEAT EXCHANGERS |
|---------------------|---------------|---|-----------------------------------|-------------------------------------|
| | | HOT WATER 12 BAR / 110 °C | SATURATED STEAM 2 BAR / 134 °C | |
| 3,0 m ² | 2950300 V0010 | • | • | 200 mbar |
| 4,0 m ² | 2950400 V0010 | • | • | 220 mbar |
| 6,0 m ² | 2960600 V0010 | • | • | 350 mbar |
| 10,0 m ² | 2964000 V0010 | • | • | 400 mbar |

N.B. If using the heat exchanger with temperatures over 100 °C, ask for steam seals

| MODEL | INSULATION TYPE | INSULATION THICKNESS | INSULATION DENSITY | INITIAL THERMAL CONDUCTIVITY | (*) INSULATION THERMAL LOSS | EXTERNAL FINISH |
|-------------|---|-------------------------|-----------------------|------------------------------------|-----------------------------------|------------------------|
| BF-2 / 1500 | Flexible, expanded polyurethane with open cells | 50 mm | 15 kg/m ³ | 39 mW/m K | 6,53 kWh / 24h | Skay white RAL 9001 |
| BF-2 / 2000 | | | | | 7,15 kWh / 24h | |
| BF-2 / 3000 | | | | | 9,18 kWh / 24h | |
| BF-2 / 5000 | | | | | 12,27 kWh / 24h | |

(*) Thermal loss calculated with an accumulation temperature equal to 60 °C and with an external temperature equal to 15 °C.

SAFETY DEVICES

The cylinders must be protected against the effects of over pressure by installing:

- A **SAFETY VALVE** calibrated to pressure below the max pressure of the cylinder
- A **SANITARY EXPANSION TANK** mod. ELBI **D - DV series**

| MODEL | RECOMMENDED SANITARY EXPANSION TANK (mod. ELBI D-DV series) |
|-------------|--|
| BF-2 / 1500 | DV - 150 |
| BF-2 / 2000 | DV - 150 |
| BF-2 / 3000 | DV - 300 |
| BF-2 / 5000 | n°2 pcs DV - 200 |

Sized using the following parameters: T. accumulation= 85 °C / T. inlet = 15 °C / Pre-charge pressure = 3 bar / Max pressure = 6 bar
The recommended capacity must be verified on the basis of the actual dimensions of the system implemented.

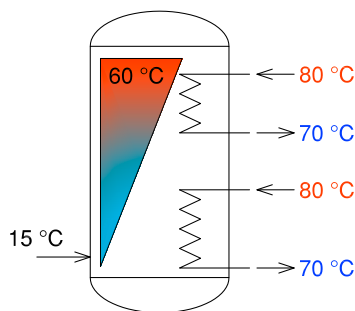
| MODEL | MAGNESIUM ANODE SUPPLIED | CATHODIC PROTECTION APPLICABLE |
|-------------|----------------------------|---|
| BF-2 / 1500 | 1,1/4" x 670 / Cod.8560070 | Cathodic protection for cylinders 1500/2000 l. Code 8560180 |
| BF-2 / 2000 | 1,1/4" x 670 / Cod.8560070 | |
| BF-2 / 3000 | 1,1/4" x 700 / Cod.8560080 | Cathodic protection for cylinders 3000/5000 l. Code 8560185 |
| BF-2 / 5000 | 1,1/2" x 640 / Cod.8560100 | |

ACCUMULATION AT 60 °C

HEAT EXCHANGER: T.inlet = 80°C; ΔT = 10°C.

STORAGE WATER HEATER: T.inlet =15°C; T. accumulation = 60°C

OPERATION WITH HOT WATER



| MODEL | HEAT EXCHANGER [m ²] | THERMAL POWER [kW] | PUMP CAPACITY [l/hour] | HEATING TIME ⁽¹⁾ [min] | PRODUCTION DHW AT 60°C [l/hour] | Quantity DHW AT 45°C in first 10 min ⁽²⁾ [l] |
|-------------|----------------------------------|--------------------|------------------------|-----------------------------------|---------------------------------|---|
| BF-2 / 1500 | 3,0 | 72,00 | 6400 | 30 | 3203 | 1822 |
| | 4,0 | 98,00 | 8500 | | | |
| BF-2 / 2000 | 4,0 | 98,00 | 8500 | 32 | 3656 | 2230 |
| | 4,0 | 98,00 | 8500 | | | |
| BF-2 / 3000 | 6,0 | 159,30 | 14100 | 29 | 6088 | 3607 |
| | 6,0 | 159,30 | 14100 | | | |
| BF-2 / 5000 | 10,0 | 250,70 | 22000 | 31 | 9580 | 5715 |
| | 10,0 | 250,70 | 22000 | | | |

(1) Time required to bring the temperature of the cylinder from 15 °C to 60 °C.

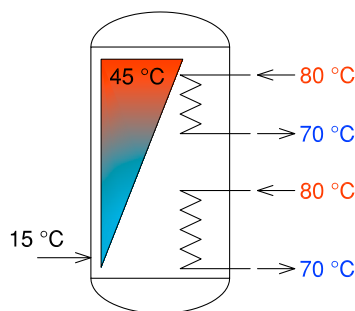
(2) Quantity of DHW (Sanitary Hot Water) at 45°C available in the first 10 minutes with DHW accumulation at 60° C.

ACCUMULATION AT 45 °C

HEAT EXCHANGER: T.inlet = 80°C; ΔT = 10°C.

STORAGE WATER HEATER: T.inlet =15°C; T. accumulation = 45°C

OPERATION WITH HOT WATER



| MODEL | HEAT EXCHANGER [m ²] | THERMAL POWER [kW] | PUMP CAPACITY [l/hour] | HEATING TIME ⁽¹⁾ [min] | PRODUCTION DHW AT 60°C [l/hour] |
|-------------|----------------------------------|--------------------|------------------------|-----------------------------------|---------------------------------|
| BF-2 / 1500 | 3,0 | 92,00/ | 8100 | 16 | 6135 |
| | 4,0 | 131,60 | 11600 | | |
| BF-2 / 2000 | 4,0 | 131,60 | 11600/ | 16 | 7540 |
| | 4,0 | 131,60 | 11600 | | |
| BF-2 / 3000 | 6,0 | 223,60 | 19710 | 14 | 12820 |
| | 6,0 | 223,60 | 19710 | | |
| BF-2 / 5000 | 10,0 | 339,00 | 29900 | 16 | 19440 |
| | 10,0 | 339,00 | 29900 | | |

(1) Time required to bring the temperature of the cylinder from 15 °C to 45 °C

TABLE OF HEATING ELEMENT APPLICABILITY TO CYLINDERS

| Heating element model* | | | | | Water heating time from 15° C to 60 °C (expressed in minutes) <i>The heating times outlined are approximate</i> | | | |
|------------------------|------------|----------------|------------|-------------|---|-----------|-----------|------------|
| CODE | Power (kW) | Voltage (Volt) | Connection | Length (mm) | BF-2 1500 | BF-2 2000 | BF-2 3000 | BF-2 5000 |
| 8601000 | 1 | 220 V / MF | G 1.1/4" | 295 | 4720 min. | 6300 min. | 9420 min. | 15750 min. |
| 8601650 | 1.65 | 220 V / MF | G 1.1/4" | 450 | 2870 min. | 3820 min. | 5740 min. | 9550 min. |
| 8602000 | 2 | 220 V / MF | G 1.1/4" | 515 | 2370 min. | 3150 min. | 4740 min. | 7875 min. |
| 8602600 | 2.6 | 220 V / MF | G 1.1/4" | 675 | 1830 min. | 2450 min. | 3660 min. | 6125 min. |
| 8602601 | 2.6 | 220 V / MF | G 1.1/4" | 360 | 1830 min. | 2450 min. | 3660 min. | 6125 min. |
| 8603300 | 3.3 | 220 V / MF | G 1.1/4" | 825 | 1450 min. | 1940 min. | 2900 min. | 4850 min. |
| 8603301 | 3.3 | 220 V / MF | G 1.1/4" | 435 | 1450 min. | 1940 min. | 2900 min. | 4850 min. |
| 8604001 | 4 | 220 V / MF | G 1.1/4" | 510 | 1200 min. | 1600 min. | 2400 min. | 4000 min. |
| 8705000 | 5 | 380 V / TF | G 1.1/2" | 445 | 950 min. | 1300 min. | 1900 min. | 3250 min. |
| 8706000 | 6 | 380 V / TF | G 1.1/2" | 510 | 800 min. | 1060 min. | 1600 min. | 2650 min. |
| 8708000 | 8 | 380 V / TF | G 1.1/2" | 670 | 610 min. | 800 min. | 1220 min. | 2000 min. |
| 8710000 | 10 | 380 V / TF | G 1.1/2" | 820 | 490 min. | 640 min. | 980 min. | 1600 min. |
| 8712000 | 12 | 380 V / TF | G 1.1/2" | 970 | 410 min. | 540 min. | 820 min. | 1350 min. |

n.a. =Heating element not applicable

SEE TABLE OF SYMBOLS
IN THE SHUTTER OF THE
COVER

