

BOLLY® 1 ST FB - WITH ALIGNED FRONT / BACK CONNECTIONS

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER



APPLICATION

Production and storage of domestic hot water (DHW). All the connections are aligned on the front and on the back for quick and easy installation.

MATERIAL

Mild steel Polywarm® coated (Attestation ACS - SSICA - EN 16421 - WRAS).

HEAT EXCHANGER

Mild steel Polywarm® coated heat exchanger.

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.

CATHODE PROTECTION

Magnesium anode.

DRAIN

External confluence through drain connection. Models > 500 external confluence through drain connection.

GASKET- FLANGE PLATE

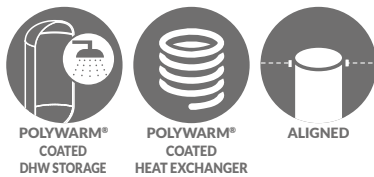
Silicone gaskets suitable for water intended for human consumption (tested according to 98/83/CE), max temperature up to 200°C. Mild steel inspection flange plate Polywarm® coated.

WARRANTY

5 years (See general sales conditions and warranty)

ACCESSORIES AND SPARE PARTS

See Accessories section for the entire list.



BOLLY® 1 ST FB WB

| Model | HARD FOAM INSULATION Art. Nr. | HEAT EXCHANGER SURFACE [m²] | ENERGY EFFICIENCY CLASS |
|-------------|----------------------------------|--------------------------------|-----------------------------|
| | | | |
| 200 | 3104162330042 | 0,8 | B |
| 300 | 3104162330043 | 1,2 | B |
| 400 | 3104162330044 | 1,5 | C |
| 500 | 3104162330045 | 1,8 | C |
| 800 | 3104162330046 | 2,7 | B |
| 1000 | 3104162330047 | 3,5 | B |
| 1500 | 3104162330048 | 3,8 | C |



BOLLY® 1 ST FB WC

| Model | DISMOUNTABLE SOFT FLEECE INSULATION Art. Nr. | HEAT EXCHANGER SURFACE [m²] | ENERGY EFFICIENCY CLASS |
|-------------|---|--------------------------------|-----------------------------|
| | | | |
| 1000 | 3103162321163 | 3,5 | C |
| 1500 | 3103162321164 | 3,8 | C |

ACCESSORIES

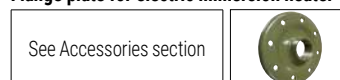
ELECTRIC IMMERSION HEATERS

| Mod. | MONOPHASE | | | THREEPHASE | | | | |
|------|---|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | 1,5 kW | 2 kW | 3 kW | 4 kW | 5 kW | 6 kW | 9 kW | 12 kW |
| | 5240000000051 | 5240000000052 | 5240000000053 | 5240000000047 | 5240000000048 | 5240000000049 | 5240000000050 | 5240000000031 |
| | Ignition time from 10 °C to 45 °C with electric immersion heaters [min] | | | | | | | |
| | 53 | 40 | 27 | 20 | // | // | // | // |
| | 100 | 75 | 50 | 38 | // | // | // | // |
| | 159 | 119 | 79 | 60 | 48 | // | // | // |
| | 245 | 184 | 123 | 92 | 74 | // | // | // |
| | 272 | 204 | 136 | 102 | 82 | 68 | // | // |
| | 500 | 375 | 250 | 187 | 150 | 125 | 83 | 62 |
| | 618 | 464 | 309 | 232 | 185 | 155 | 103 | 77 |
| | 914 | 686 | 457 | 343 | 274 | 229 | 152 | 114 |

Electric immersion heaters



Flange plate for electric immersion heater



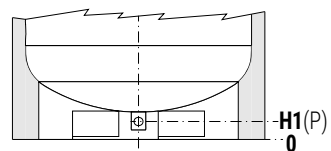
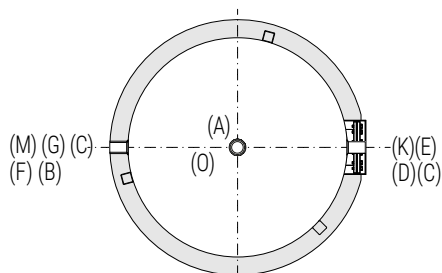
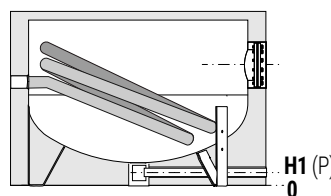
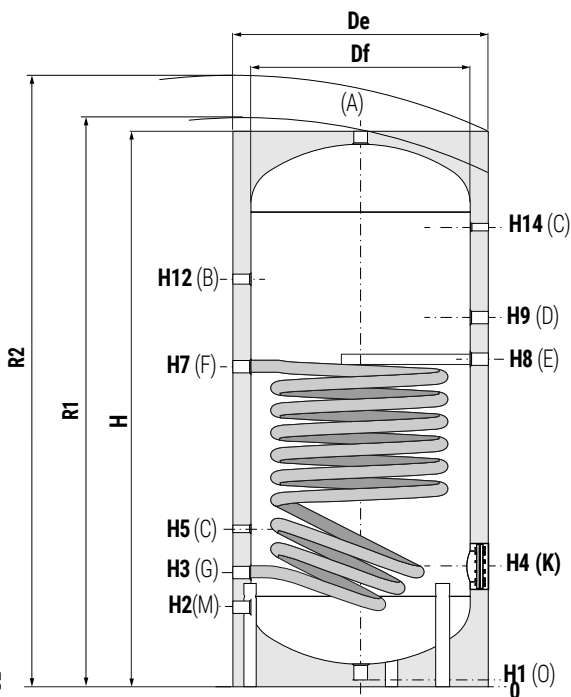
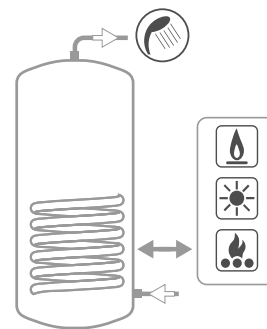
Titanium anode



BOLLY® 1 ST FB - WITH ALIGNED FRONT / BACK CONNECTIONS

POLYWARM® COATED DOMESTIC HOT WATER CALORIFIER WITH 1 FIXED HEAT EXCHANGER

| Model | STORAGE | | HEAT EXCHANGER | |
|-------------|---------|-------|----------------|--------|
| | Pmax | Tmax | Pmax | Tmax |
| 150 ÷ 800 | 10 bar | 90 °C | 12 bar | 110 °C |
| 1000 ÷ 1500 | 8 bar | | | |



| | |
|----------|--|
| A | Domestic hot water outlet |
| B | Recirculation |
| C | Connection for instrumentation 1/2" G F |
| D | Connection for electric immersion heater |
| E | Connection for magnesium anode 1"1/4 G F |
| F | Lower heat exchanger inlet 1"1/4 G F |
| G | Lower heat exchanger outlet 1"1/4 G F |
| K | Flange for inspection |
| M | Domestic cold water circuit inlet |
| O | Drain 1" 1/4 F For models ≤ 500 |
| P | Drain For models > 500 |

Models 1500 are equipped with a practical **skirt** support which facilitate the handling with transpallets and forklifts. Also, discharge piping already mounted to allow **total emptying**.

BOLLY® 1 ST FB WB - HARD FOAM INSULATION

| Model | Volume Weight | | De | H | R2 | H1 | H2 | H3 | H4 | H5 | H7 | H8 | H9 | H12 | H14 | K | P | M | D | B | A |
|-------------|---------------|------|------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|-------------|------|-------|-------|------|-------|
| | [t] | [kg] | | | | | | | | | | | | | | | | | | | |
| 150 | 148 | 49 | 500 | 1414 | 1505 | 71 | 210 | 275 | 315 | 395 | 888 | 956 | 1086 | 1065 | 1185 | Øi120/Øe180 | - | 3/4" | 1"1/2 | 3/4" | 1"1/4 |
| 200 | 189 | 55 | 550 | 1434 | 1540 | 71 | 220 | 285 | 325 | 405 | 811 | 855 | 985 | 1089 | 1195 | Øi120/Øe180 | - | 3/4" | 1"1/2 | 3/4" | 1"1/4 |
| 300 | 291 | 67 | 650 | 1486 | 1630 | 71 | 246 | 311 | 381 | 431 | 832 | 871 | 1006 | 1101 | 1221 | Øi120/Øe180 | - | 1" | 1"1/2 | 1" | 1"1/4 |
| 400 | 422 | 88 | 700 | 1766 | 1905 | 71 | 261 | 326 | 396 | 446 | 988 | 1033 | 1170 | 1286 | 1486 | Øi120/Øe180 | - | 1" | 1"1/2 | 1" | 1"1/4 |
| 500 | 498 | 120 | 750 | 1786 | 1945 | 71 | 271 | 346 | 411 | 466 | 1036 | 1076 | 1211 | 1331 | 1476 | Øi120/Øe180 | - | 1" | 1"1/2 | 1" | 1"1/4 |
| 800 | 789 | 184 | 900 | 2162 | 2350 | 101 | 338 | 428 | 483 | 548 | 1181 | 1243 | 1378 | 1598 | 1788 | Øi170/Øe240 | 3/4" | 1" | 2" | 1" | 1"1/4 |
| 1000 | 1038 | 215 | 1000 | 2217 | 2440 | 89 | 359 | 439 | 499 | 559 | 1279 | 1309 | 1444 | 1584 | 1819 | Øi170/Øe240 | 3/4" | 1"1/4 | 2" | 1" | 1"1/2 |
| 1500 | 1443 | 389 | 1100 | 2415 | 2660 | 109 | 340 | 425 | 575 | 545 | 1403 | 1450 | 1585 | 1825 | 2065 | Øi300/Øe380 | 1" | 1"1/2 | 2" | 1" | 2" |

BOLLY® 1 ST FB WC - DISMOUNTABLE SOFT FLEECE INSULATION

| Model | Volume Weight | | DF | DE | H | R1 | R2 | H1 | H2 | H3 | H4 | H5 | H7 | H8 | H9 | H12 | H14 | K | P | M | D | B | A |
|-------------|---------------|------|-----|------|------|------|------|-----|-----|-----|-----|-----|------|------|------|------|------|-------------|------|-------|----|----|-------|
| | [t] | [kg] | | | | | | | | | | | | | | | | | | | | | |
| 800 | 789 | 184 | 750 | 950 | 2158 | 2194 | 2365 | 101 | 493 | 428 | 483 | 368 | 1181 | 1243 | 1378 | 1598 | 1788 | Øi170/Øe240 | 3/4" | 1" | 2" | 1" | 1"1/4 |
| 1000 | 1038 | 215 | 850 | 1050 | 2192 | 2258 | 2435 | 89 | 524 | 439 | 499 | 389 | 1279 | 1309 | 1444 | 1584 | 1819 | Øi170/Øe240 | 3/4" | 1"1/4 | 2" | 1" | 1"1/2 |
| 1500 | 1443 | 389 | 950 | 1150 | 2440 | 2483 | 2705 | 109 | 450 | 425 | 575 | 375 | 1403 | 1450 | 1585 | 1825 | 2065 | Øi300/Øe380 | 1" | 1"1/2 | 2" | 1" | 2" |

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

BOLLY® 1 ST FB

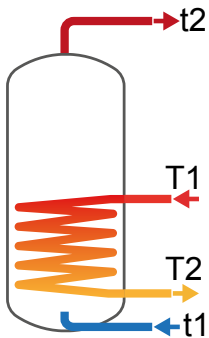
HEAT EXCHANGERS TECHNICAL DATA



Data have been calculated on following basis:

- 1) Primary circuit at T1 and proper energy source;
- 2) Production of DHW in continuous from 10 °C to t2;
- 3) DHW that can be taken in the first 10' and in the first hour from storage at t2, input 10 °C and output 45 °C;
- 4) Non-scaling sanitary water

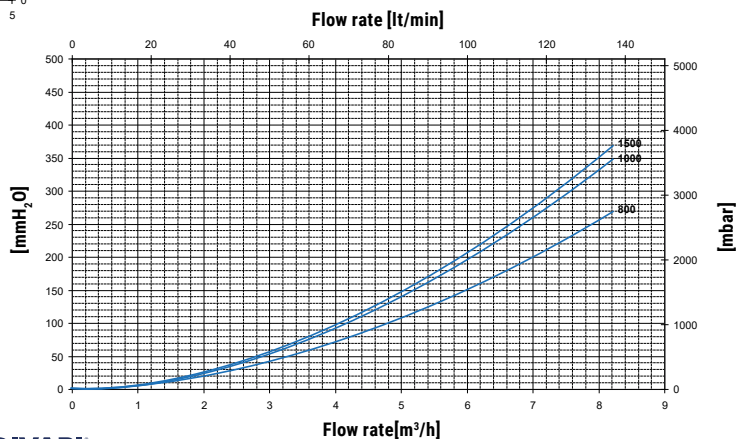
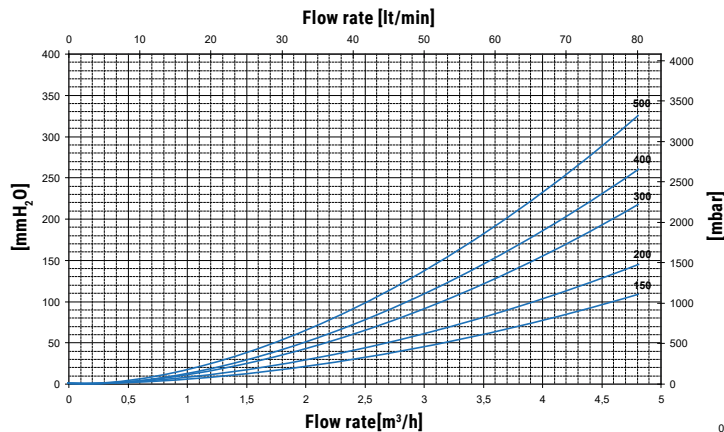
LOWER
HEAT EXCHANGER



| Model | Primary flow rate [m³/h] | Ignition time (minutes) from 10 °C to t2 and primary at T1 | | | | Maximum power exchange (kW) with primary at T1, secondary within 10-45 °C and constant use of DHW production | | | | DHW continuous production lt/h within 10-45 °C and primary at T1 | | | |
|-------|-----------------------------|--|-------|-------|-------|--|------|------|------|--|------|------|------|
| | | T1/t2 | | | | T1 | | | | T1 | | | |
| | | 55/50 | 65/60 | 70/60 | 80/60 | 55 | 65 | 70 | 80 | 55 | 65 | 70 | 80 |
| 150 | 2 | 99 | 102 | 71 | 46 | 6,6 | 10 | 11,7 | 15,2 | 162 | 246 | 288 | 371 |
| | 1 | 111 | 116 | 81 | 53 | 6,1 | 9,1 | 10,6 | 13,2 | 149 | 223 | 260 | 336 |
| 200 | 2,5 | 92 | 95 | 66 | 43 | 9 | 13,5 | 15,8 | 20,5 | 220 | 332 | 389 | 506 |
| | 1,25 | 103 | 107 | 75 | 49 | 8,3 | 12,3 | 14,4 | 18,5 | 203 | 303 | 354 | 456 |
| 300 | 3 | 97 | 101 | 70 | 45 | 13,5 | 20,2 | 23,6 | 30,6 | 331 | 498 | 583 | 756 |
| | 1,5 | 106 | 111 | 78 | 51 | 12,5 | 18,5 | 21,5 | 27,5 | 307 | 455 | 529 | 680 |
| 400 | 3,5 | 105 | 110 | 76 | 50 | 16,9 | 25,4 | 29,6 | 38,3 | 416 | 625 | 731 | 947 |
| | 1,75 | 117 | 122 | 86 | 57 | 15,4 | 23,2 | 26,9 | 34,5 | 387 | 571 | 664 | 853 |
| 500 | 3,5 | 111 | 116 | 81 | 53 | 20,2 | 30,1 | 35,1 | 45,3 | 496 | 742 | 867 | 1121 |
| | 1,75 | 126 | 131 | 93 | 61 | 18,7 | 27,3 | 31,7 | 40,6 | 459 | 674 | 782 | 1000 |
| 800 | 6 | 116 | 120 | 84 | 55 | 30,3 | 45,4 | 53 | 68,6 | 746 | 1120 | 1309 | 1695 |
| | 3 | 131 | 136 | 96 | 64 | 28,2 | 41,4 | 48,1 | 61,6 | 692 | 1021 | 1186 | 1521 |
| 1000 | 6 | 114 | 119 | 84 | 56 | 38,9 | 57,9 | 67,5 | 87 | 958 | 1429 | 1667 | 2151 |
| | 3 | 132 | 138 | 98 | 65 | 35,5 | 52,2 | 60,4 | 77 | 882 | 1288 | 1492 | 1903 |
| 1500 | 6 | 162 | 168 | 119 | 78 | 41 | 61 | 71 | 91,5 | 1009 | 1504 | 1753 | 2261 |
| | 3 | 189 | 197 | 139 | 92 | 37,7 | 54,9 | 63,4 | 80,7 | 927 | 1352 | 1564 | 1993 |

| Model | Primary flow rate [m³/h] | DHW produced in the first 10 minutes in lt/10' input 10 °C output 45 °C, storage at t2 and primary at T1 | | | | DHW produced in the first hour in lt/60' input 10 °C output 45 °C, storage at t2 and primary at T1 | | | | Heat exchanger pressure drop | |
|-------|-----------------------------|--|-------|-------|-------|--|-------|-------|-------|------------------------------|--------|
| | | T1/t2 | | | | T1/t2 | | | | [mmH₂O] | [mbar] |
| | | 55/50 | 65/60 | 70/60 | 80/60 | 55/50 | 65/60 | 70/60 | 80/60 | | |
| 150 | 2 | 195 | 251 | 258 | 272 | 298 | 407 | 440 | 507 | 218,85 | 21,46 |
| | 1 | 193 | 247 | 253 | 266 | 287 | 388 | 418 | 479 | 60,62 | 5,95 |
| 200 | 2,5 | 253 | 325 | 335 | 354 | 392 | 536 | 581 | 675 | 441,12 | 43,26 |
| | 1,25 | 250 | 321 | 329 | 346 | 378 | 512 | 553 | 635 | 122,19 | 11,98 |
| 300 | 3 | 388 | 499 | 513 | 542 | 597 | 814 | 882 | 1021 | 927,45 | 90,95 |
| | 1,5 | 384 | 492 | 504 | 529 | 578 | 780 | 839 | 960 | 256,91 | 25,19 |
| 400 | 3,5 | 550 | 706 | 723 | 759 | 814 | 1101 | 1186 | 1359 | 1480,67 | 145,20 |
| | 1,75 | 546 | 697 | 712 | 744 | 791 | 1058 | 1133 | 1284 | 410,16 | 40,22 |
| 500 | 3,5 | 651 | 834 | 855 | 897 | 965 | 1304 | 1404 | 1607 | 1850,84 | 181,50 |
| | 1,75 | 645 | 822 | 840 | 877 | 935 | 1249 | 1336 | 1510 | 512,70 | 50,28 |
| 800 | 6 | 1026 | 1314 | 1345 | 1410 | 1499 | 2023 | 2174 | 2483 | 1538,50 | 150,87 |
| | 3 | 1017 | 1297 | 1325 | 1381 | 1455 | 1944 | 2076 | 2344 | 426,18 | 41,79 |
| 1000 | 6 | 1345 | 1720 | 1759 | 1840 | 1952 | 2625 | 2815 | 3202 | 1994,35 | 195,58 |
| | 3 | 1332 | 1696 | 1730 | 1799 | 1891 | 2512 | 2675 | 3004 | 552,45 | 54,18 |
| 1500 | 6 | 1870 | 2378 | 2419 | 2504 | 2509 | 3330 | 3530 | 3936 | 2108,31 | 206,75 |
| | 3 | 1856 | 2352 | 2388 | 2459 | 2443 | 3209 | 3378 | 3722 | 584,02 | 57,27 |

HEAT EXCHANGERS PRESSURE DROP

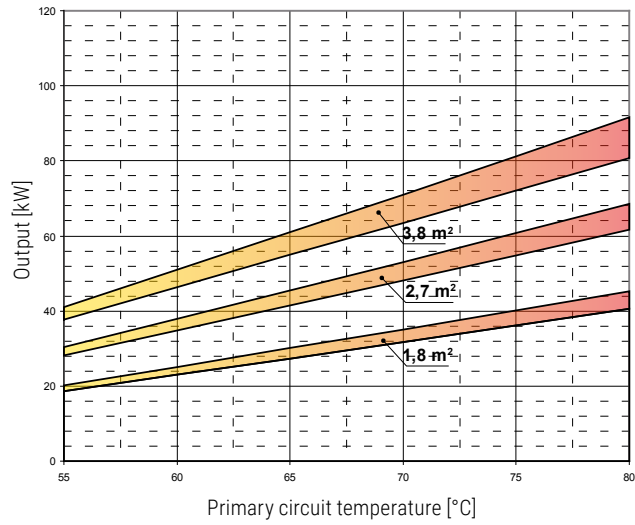
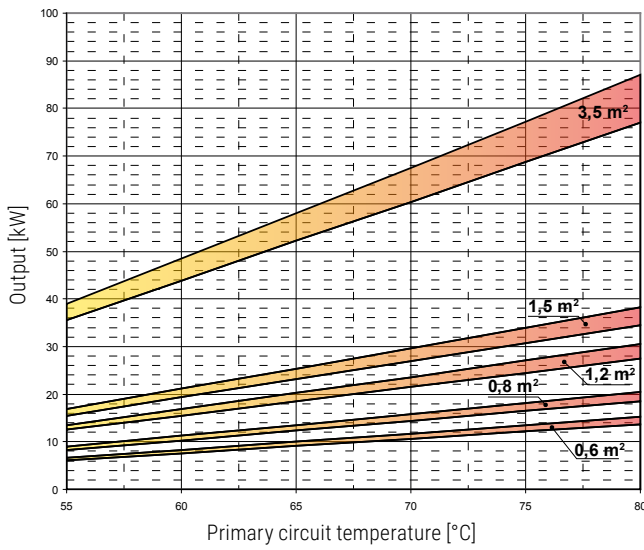


BOLLY® 1 ST FB

HEAT EXCHANGERS TECHNICAL DATA



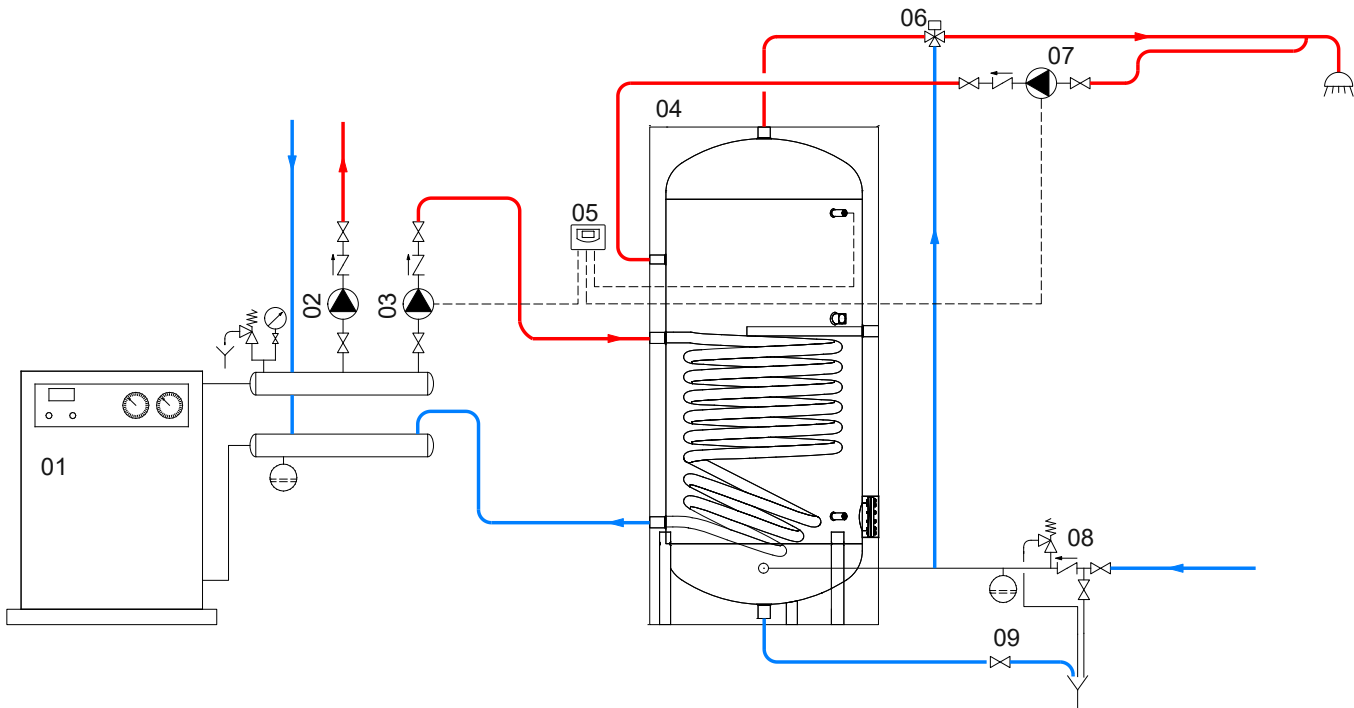
Heat Exchanger output referred to temperature and flow rate of primary circuit and with secondary at 10/45°C at maximum withdrawal of producible DHW (Upper limit of the curves referred to maximum primary flow rate in the heat exchanger, while the lower limit in the curves refer to the minimum primary flow rate).



| Heat exchanger | 0,6 m ² | | 0,8 m ² | | 1,2 m ² | | 1,5 m ² | | 3,5 m ² | |
|-------------------------------|--------------------|-----|--------------------|------|--------------------|-----|--------------------|------|--------------------|-----|
| Flow rate [m ³ /h] | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN | MAX | MIN |
| | 2 | 1 | 2,5 | 1,25 | 3 | 1,5 | 3,5 | 1,75 | 6 | 3 |

| Heat exchanger | 1,8 m ² | | 2,7 m ² | | 3,8 m ² | |
|-------------------------------|--------------------|------|--------------------|-----|--------------------|-----|
| Flow rate [m ³ /h] | MAX | MIN | MAX | MIN | MAX | MIN |
| | 3,50 | 1,75 | 6 | 3 | 6 | 3 |

EXAMPLE OF INSTALLATION WITH BOLLY® 1 ST FB



| | | | | | |
|----|----------------------------------|----|-------------------------------|----|----------------------------|
| 01 | Generator | 04 | BOLLY® 1 ST FB | 07 | D.H.W. recirculation group |
| 02 | Heating system circulation group | 05 | Electronic Control/thermostat | 08 | Hydraulic safety group |
| 03 | D.H.W. circulation group | 06 | Thermostatic mixing valve | 09 | Blowdown valve |

The following schemes are purely illustrative. To realize the installation, always refer to a qualified technician.