



## AISI 316L Stainless steel calorifier with fixed coil Eco Line EC01 - With one heat exchanger

## EC02 - With two heat exchangers

ECO LINE series calorifiers are made of AISI 316L Stainless steel, designed for the production and storage of domestic hot water (DHW). They are equipped with one or two internal fixed coils of advanced design that can be fed by a solar system and/or a boiler.

Eco-Line is the best entry level solution for domestic use or small applications, thanks to their versatility and compactness. Cylinders are also prepared to host a backup immersion heater (not supplied).

HEAT SOURCE



APPLICATION



### TECHNICAL FEATURES

DHW cylinder

Heat exchanger

General features

|                                      |   |
|--------------------------------------|---|
| <b>Material</b>                      | AISI 316L Stainless steel (1.4404)  |
| <b>Internal protective treatment</b> | Pickling and passivation  |
| <b>External protective treatment</b> | Pickling and passivation  |
| <b>Rating (P max. / T max.)</b>      | 6 bar / 95°C  |
| <b>Cathodic protection</b>           | Magnesium anode   |
| <b>Material</b>                      | AISI 316L Stainless steel (1.4404)  |
| <b>Internal protective treatment</b> | Pickling and passivation  |
| <b>External protective treatment</b> | Pickling and passivation  |
| <b>Type</b>                          | Fixed coil  |
| <b>Rating (P max. / T max.)</b>      | 10 bar / 95°C   |
| <b>Capacity</b>                      | 150 - 500 L   |
| <b>Warranty</b>                      | 5 years   |
| <b>Insulation</b>                    | Rigid polyurethane foam + PVC: Fire retardant class B3 (DIN 4102)   |
| <b>In compliance with</b>            | - Pressure Equipment Directive (PED) 2014/68/UE Art. 4 Para 3<br>- Italian MOH specifications (products suitable to contain potable water)<br>- Energy related Products (Erp) Directive 2009/125/CE |

### ACCESSORIES (page 218)



Impressed current electronic anode



Electronic control unit



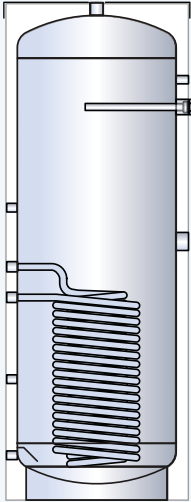
Thermostat



Thermometer

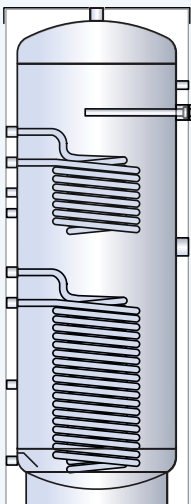


1 1/2 electric immersion heater



### EC01 - Hard insulation with rigid polyurethane foam and PVC jacket

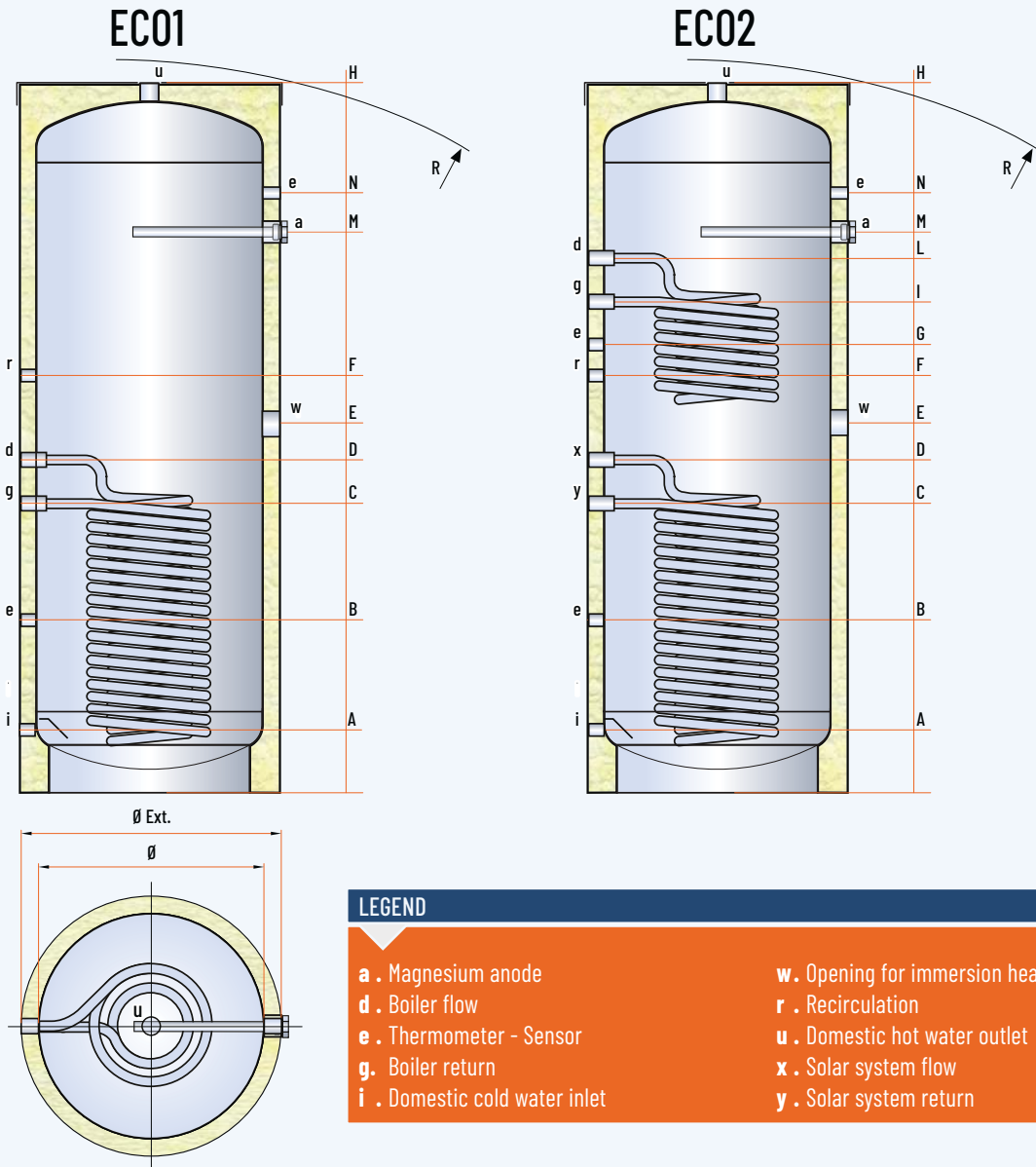
| CODE         | INSULATION THICK. (mm) | ErP CLASS | HEAT LOSS S (W) | REAL CAPACITY (L) | HEAT EXCHANGER (m <sup>2</sup> ) / (L) * |
|--------------|------------------------|-----------|-----------------|-------------------|--|
| EC01 00150 R | 50                     | B         | 46,9            | 148,0             | 0,80 / 7,8                               |
| EC01 00200 R | 50                     | B         | 53,9            | 189,8             | 0,80 / 7,8                               |
| EC01 00300 R | 50                     | B         | 65,5            | 290,3             | 1,20 / 11,8                              |
| EC01 00400 R | 50                     | B         | 69,2            | 414,9             | 1,35 / 12,2                              |
| EC01 00500 R | 50                     | B         | 77,8            | 500,3             | 1,70 / 16,7                              |



### EC02 - Hard insulation with rigid polyurethane foam and PVC jacket

| CODE         | INSULATION THICK. (mm) | ErP CLASS | HEAT LOSS S (W) | REAL CAPACITY (L) | LOWER HEAT EXCHANGER (m <sup>2</sup> ) / (L) * | UPPER HEAT EXCHANGER (m <sup>2</sup> ) / (L) * |
|--------------|------------------------|-----------|-----------------|-------------------|--|--|
| EC02 00150 R | 50                     | B         | 46,9            | 148,0             | 0,80 / 7,8                                     | 0,50 / 4,9                                     |
| EC02 00200 R | 50                     | B         | 53,9            | 189,8             | 0,80 / 7,8                                     | 0,50 / 4,9                                     |
| EC02 00300 R | 50                     | B         | 65,5            | 290,3             | 1,20 / 11,8                                    | 0,80 / 7,8                                     |
| EC02 00400 R | 50                     | B         | 69,2            | 414,9             | 1,35 / 12,2                                    | 0,80 / 7,8                                     |
| EC02 00500 R | 50                     | B         | 77,8            | 500,3             | 1,70 / 16,7                                    | 1,00 / 9,8                                     |

\* Volume occupied by the heat exchanger and its support structure



**LEGEND**

- a . Magnesium anode
- d . Boiler flow
- e . Thermometer - Sensor
- g . Boiler return
- i . Domestic cold water inlet
- w . Opening for immersion heater
- r . Recirculation
- u . Domestic hot water outlet
- x . Solar system flow
- y . Solar system return

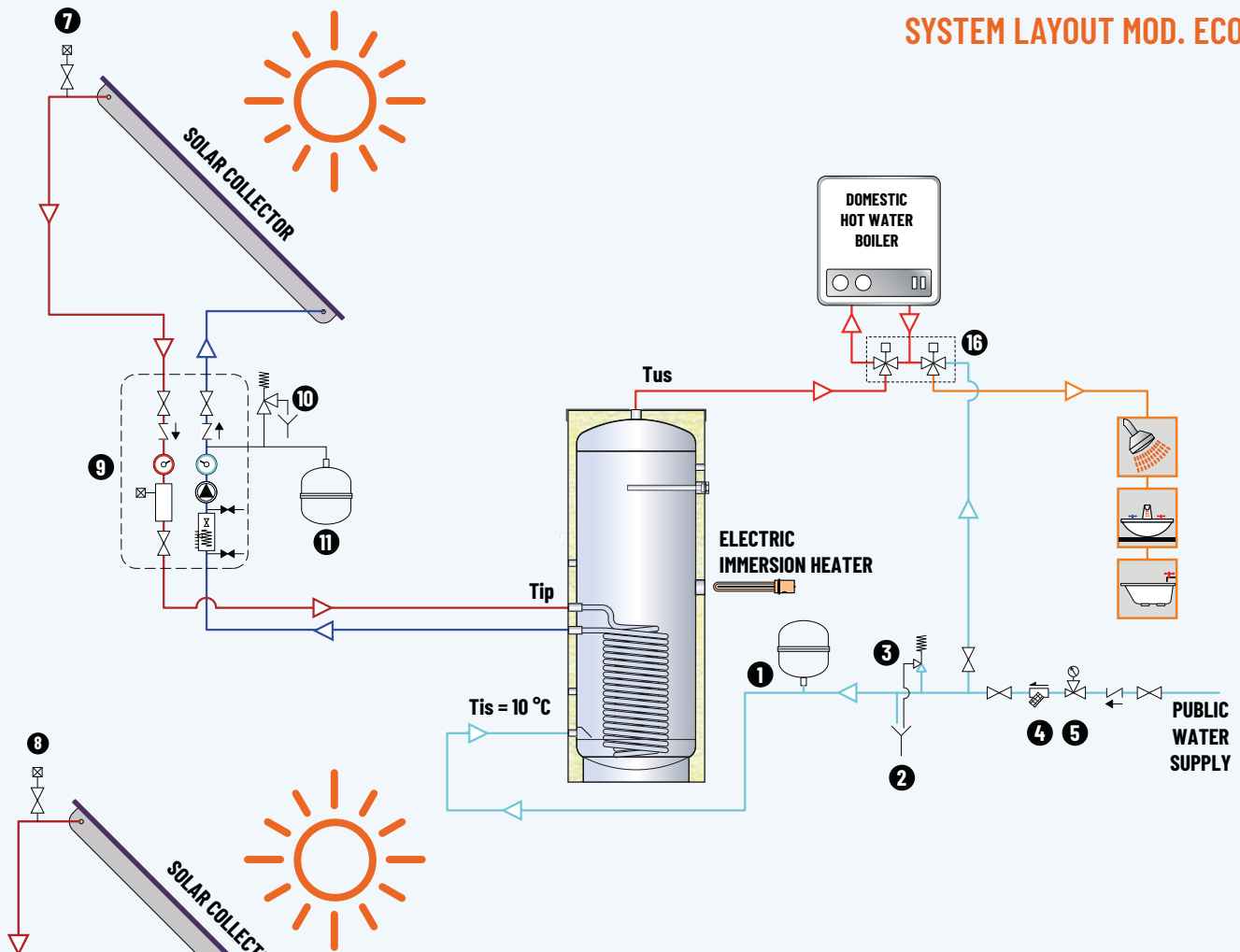
| MODEL       | DIMENSIONS (mm) |      | Ø EXT | R *  | LOWER HEAT EXCHANGER (m <sup>2</sup> ) | UPPER HEAT EXCHANGER (m <sup>2</sup> ) | WEIGHT ECO1 (kg) | WEIGHT ECO2 (kg) |
|-------------|-----------------|------|-------|------|--|--|------------------|------------------|
|             | Ø               | H    |       |      |  |  |                  |                  |
| ECO_00150 R | 450             | 1050 | 550   | 1190 | 0,80                                   | 0,50                                   | 43               | 46               |
| ECO_00200 R | 450             | 1305 | 550   | 1430 | 0,80                                   | 0,50                                   | 49               | 52               |
| ECO_00300 R | 500             | 1595 | 600   | 1720 | 1,20                                   | 0,80                                   | 63               | 68               |
| ECO_00400 R | 650             | 1395 | 750   | 1600 | 1,35                                   | 0,80                                   | 72               | 77               |
| ECO_00500 R | 650             | 1645 | 750   | 1820 | 1,70                                   | 1,00                                   | 85               | 91               |

\* The tilt height refers to the cylinder insulated. The insulation is not removable.

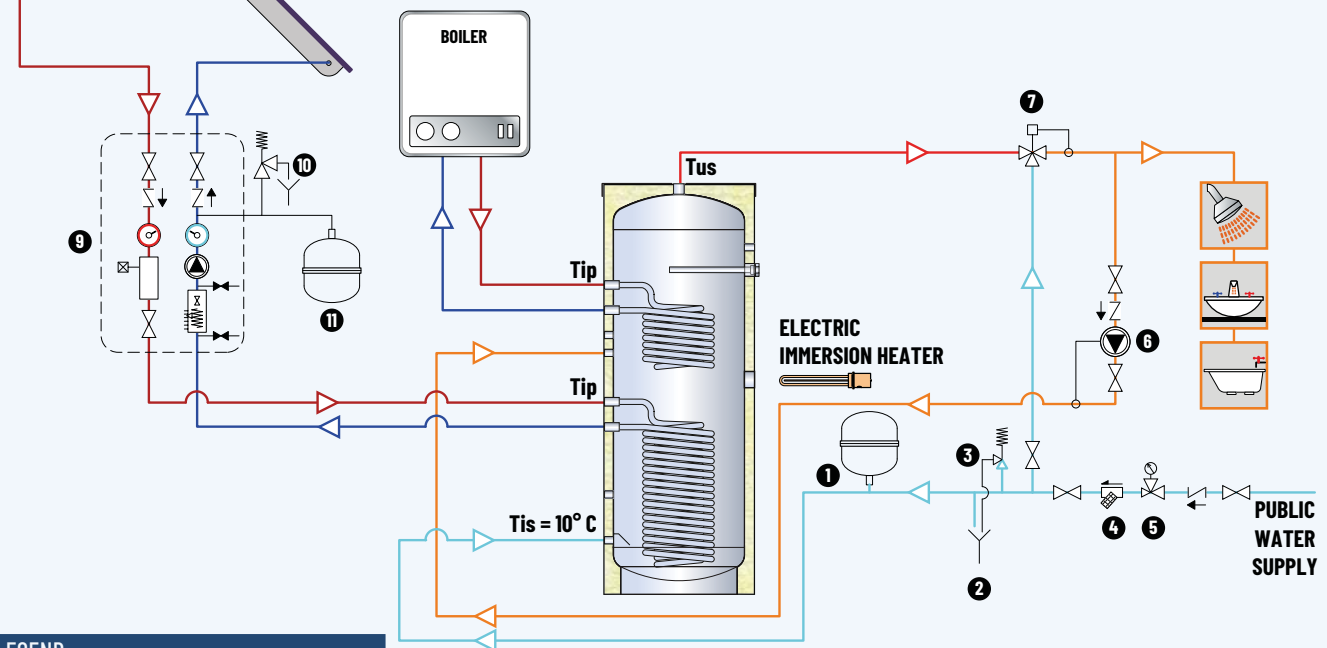
| MODEL       | HEIGHTS (mm) |     |     |     |     |     |      |      |      |      |      | CONNECTIONS (GAS) |     |     |         |     |
|-------------|--------------|-----|-----|-----|-----|-----|------|------|------|------|------|-------------------|-----|-----|---------|-----|
|             | A            | B   | C   | D   | E   | F   | G    | I    | L    | M    | N    | a                 | e r | i u | d g x y | w   |
| ECO_00150 R | 110          | 260 | 345 | 445 | 495 | 540 | 635  | 730  | 830  | 750  | 850  | 1"¼               | ½"  | 1"  | ¾"      | 1"½ |
| ECO_00200 R | 110          | 280 | 385 | 485 | 570 | 610 | 715  | 830  | 930  | 980  | 1090 | 1"¼               | ½"  | 1"  | ¾"      | 1"½ |
| ECO_00300 R | 120          | 355 | 510 | 610 | 715 | 770 | 925  | 1085 | 1185 | 1240 | 1370 | 1"¼               | ½"  | 1"  | ¾"      | 1"½ |
| ECO_00400 R | 145          | 385 | 550 | 650 | 700 | 775 | 885  | 1030 | 1130 | 1050 | 1145 | 1"¼               | ½"  | 1"  | ¾"      | 1"½ |
| ECO_00500 R | 145          | 455 | 680 | 780 | 845 | 940 | 1095 | 1255 | 1355 | 1280 | 1395 | 1"¼               | ½"  | 1"  | ¾"      | 1"½ |

Disclaimer: this layout is purely indicative. It does not replace consultant's design

**SYSTEM LAYOUT MOD. EC01**

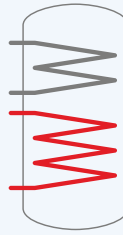


**SYSTEM LAYOUT MOD. EC02**



**LEGEND**

- |   |                             |   |
|---|-----------------------------|---|
| 1 . Domestic water expansion vessel     | 5 . Pressure reducing valve | 9 . Solar system control unit             |
| 2 . Domestic water drain                | 6 . DWH Recirculation pump  | 10 . Solar system safety kit (6 bar)      |
| 3 . Domestic water safety valve (6 bar) | 7 . DWH 3-way valve         | 11 . Solar system expansion vessel        |
| 4 . Strainer                            | 8 . Vent with valve         | 16 . Thermostatic valve boiler-calorifier |



Data related to the lower heat exchanger

| MODEL                            |   | ECO_00150R |     |     |     | ECO_00200R |     |     |     | ECO_00300R |     |      |      |
|----------------------------------|---|------------|-----|-----|-----|------------|-----|-----|-----|------------|-----|------|------|
| DHW FROM<br>10 TO 45 °C          | HEAT EXCHANGER (m <sup>2</sup> ) [L] <sup>1</sup> | 0,8 [3,6]  |     |     |     | 0,8 [3,6]  |     |     |     | 1,2 [5,4]  |     |      |      |
|                                  | PRIMARY FLOW (m <sup>3</sup> /h)                  | 1,8        |     |     |     | 1,8        |     |     |     | 1,8        |     |      |      |
|                                  | PRIMARY TEMP. (°C)                                | 50         | 60  | 70  | 80  | 50         | 60  | 70  | 80  | 50         | 60  | 70   | 80   |
|                                  | LITRES 10' (L/10') <sup>2</sup>                   | 172        | 194 | 273 | 292 | 212        | 234 | 330 | 349 | 321        | 352 | 498  | 524  |
|                                  | LITRES FIRST HOUR <sup>2</sup>                    | 329        | 460 | 636 | 747 | 368        | 499 | 693 | 804 | 549        | 735 | 1018 | 1176 |
|                                  | CONTINUOUS DRAW (L) <sup>3</sup>                  | 198        | 336 | 458 | 575 | 198        | 336 | 458 | 575 | 287        | 484 | 657  | 823  |
|                                  | POWER (kW)  | 8          | 14  | 19  | 23  | 8          | 14  | 19  | 23  | 12         | 20  | 27   | 34   |
|                                  | PREHEATING <sup>3</sup> (min)                     | 47         | 27  | 20  | 16  | 60         | 35  | 25  | 20  | 65         | 38  | 28   | 22   |
|                                  | LITRES 10' (L/10') <sup>2</sup>                   | -          | -   | 177 | 192 | -          | -   | 216 | 231 | -          | -   | 328  | 349  |
|                                  | LITRES FIRST HOUR <sup>2</sup>                    | -          | -   | 358 | 447 | -          | -   | 397 | 487 | -          | -   | 590  | 718  |
| CONTINUOUS DRAW (L) <sup>3</sup> | -   | -          | 228 | 323 | -   | -          | 228 | 323 | -   | -          | 331 | 465  |      |
| POWER (kW)                       | -   | -          | 13  | 19  | -   | -          | 13  | 19  | -   | -          | 19  | 27   |      |
| PREHEATING <sup>3</sup> (min)    | -   | -          | 40  | 28  | -   | -          | 52  | 36  | -   | -          | 56  | 39   |      |
| NL <sup>4</sup>                  |   | 1,4        |     |     |     | 2          |     |     |     | 4          |     |      |      |

| MODEL                            |   | ECO_00400R |     |      |      | ECO_00500R |      |      |      |  |  |  |  |
|----------------------------------|---|------------|-----|------|------|------------|------|------|------|--|--|--|--|
| DHW FROM<br>10 TO 45 °C          | HEAT EXCHANGER (m <sup>2</sup> ) [L] <sup>1</sup> | 1,4 [6,1]  |     |      |      | 1,7 [7,7]  |      |      |      |  |  |  |  |
|                                  | PRIMARY FLOW (m <sup>3</sup> /h)                  | 2,2        |     |      |      | 2,2        |      |      |      |  |  |  |  |
|                                  | PRIMARY TEMP. (°C)                                | 50         | 60  | 70   | 80   | 50         | 60   | 70   | 80   |  |  |  |  |
|                                  | LITRES 10' (L/10') <sup>2</sup>                   | 446        | 481 | 681  | 711  | 539        | 582  | 823  | 860  |  |  |  |  |
|                                  | LITRES FIRST HOUR <sup>2</sup>                    | 703        | 916 | 1273 | 1453 | 856        | 1114 | 1545 | 1763 |  |  |  |  |
|                                  | CONTINUOUS DRAW (L) <sup>3</sup>                  | 326        | 550 | 747  | 936  | 401        | 673  | 912  | 1141 |  |  |  |  |
|                                  | POWER (kW)  | 13         | 22  | 30   | 38   | 16         | 27   | 37   | 46   |  |  |  |  |
|                                  | PREHEATING <sup>3</sup> (min)                     | 82         | 47  | 35   | 27   | 82         | 47   | 34   | 27   |  |  |  |  |
|                                  | LITRES 10' (L/10') <sup>2</sup>                   | -          | -   | 454  | 478  | -          | -    | 548  | 578  |  |  |  |  |
|                                  | LITRES FIRST HOUR <sup>2</sup>                    | -          | -   | 751  | 896  | -          | -    | 913  | 1090 |  |  |  |  |
| CONTINUOUS DRAW (L) <sup>3</sup> | -   | -          | 375 | 528  | -    | -          | 461  | 647  |      |  |  |  |  |
| POWER (kW)                       | -   | -          | 22  | 31   | -    | -          | 27   | 38   |      |  |  |  |  |
| PREHEATING <sup>3</sup> (min)    | -   | -          | 70  | 49   | -    | -          | 70   | 49   |      |  |  |  |  |
| NL <sup>4</sup>                  |   | 7          |     |      |      | 9          |      |      |      |  |  |  |  |

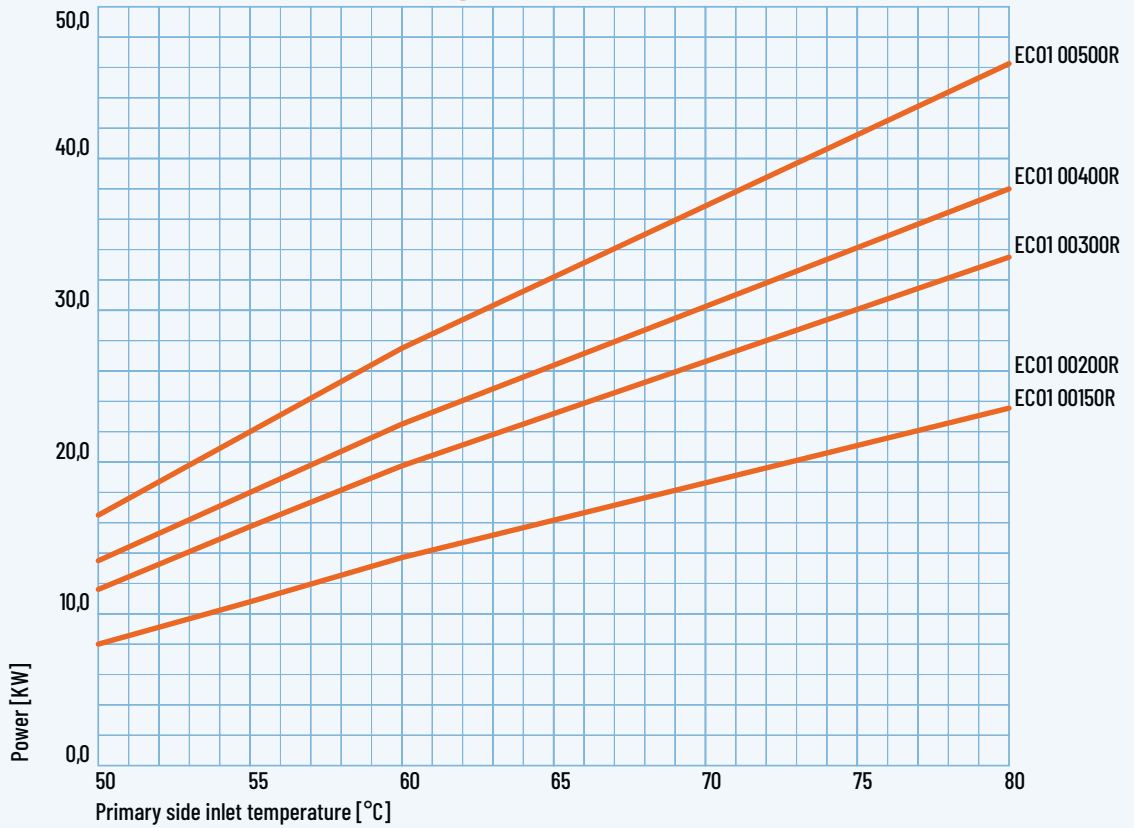
(1) Volume of fluid contained in the heat exchanger

(2) Obtainable with pre-heated cylinder (at 45 °C with primary side set at 50 or 60 °C and pre-heated at 60 °C in the other cases) and a running heat source

(3) With a proper power heat source generator

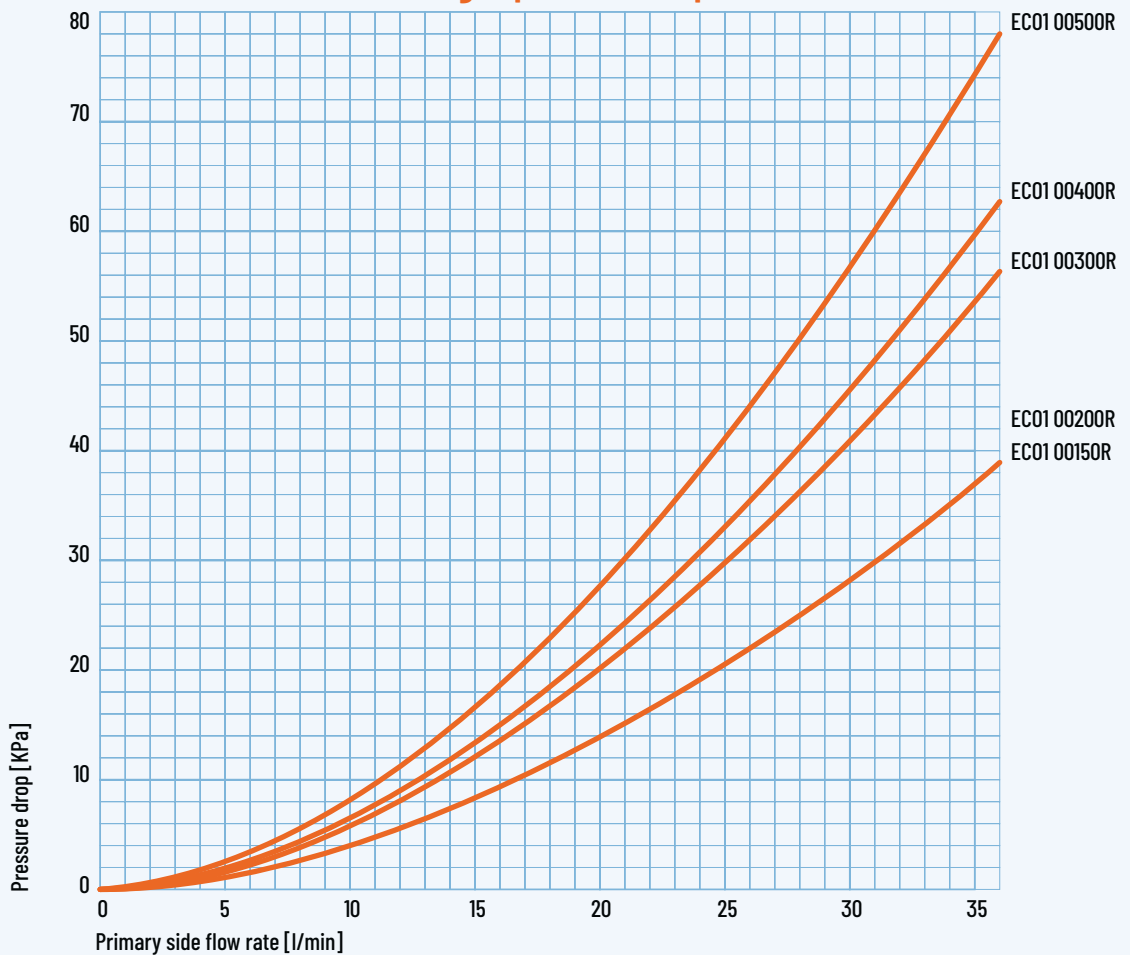
(4) Primary side 80 °C - Secondary side 10-45 °C

**ECO - Lower heat exchanger powers with secondary side at 10/45 °C**



CALORIFIERS  
WITH FIXED COIL

**ECO - Lower heat exchanger pressure drops**





**Data related to the upper heat exchanger**

The performance values in the chart refer to the partial volume of water affected by the heat exchanger

| MODEL                            |   | EC02 00150R                     |     |     |     | EC02 00200R |     |     |     | EC02 00300R |     |     |     |     |
|----------------------------------|---|---------------------------------|-----|-----|-----|-------------|-----|-----|-----|-------------|-----|-----|-----|-----|
| DHW FROM<br>10 TO 45 °C          | HEAT EXCHANGER (m <sup>2</sup> ) [L] <sup>1</sup> | 0,5 [2,3]                       |     |     |     | 0,5 [2,3]   |     |     |     | 0,8 [3,6]   |     |     |     |     |
|                                  | PRIMARY FLOW (m <sup>3</sup> /h)                  | 1,8                             |     |     |     | 1,8         |     |     |     | 1,8         |     |     |     |     |
|                                  | PRIMARY TEMP. (°C)                                | 50                              | 60  | 70  | 80  | 50          | 60  | 70  | 80  | 50          | 60  | 70  | 80  |     |
|                                  | LITRES 10' (L/10') <sup>2</sup>                   | 80                              | 180 | 132 | 144 | 105         | 119 | 168 | 180 | 163         | 185 | 261 | 279 |     |
|                                  | LITRES FIRST HOUR <sup>2</sup>                    | 94                              | 265 | 367 | 439 | 205         | 291 | 403 | 475 | 320         | 451 | 624 | 735 |     |
|                                  | CONTINUOUS DRAW (L) <sup>3</sup>                  | 127                             | 217 | 296 | 373 | 127         | 217 | 296 | 373 | 198         | 336 | 458 | 575 |     |
|                                  | POWER (kW)  | 5                               | 9   | 12  | 15  | 5           | 9   | 12  | 15  | 8           | 14  | 19  | 23  |     |
|                                  | PREHEATING <sup>3</sup> (min)                     | 31                              | 18  | 13  | 10  | 43          | 25  | 18  | 15  | 44          | 26  | 19  | 15  |     |
|                                  | DHW FROM<br>10 TO 60 °C                           | LITRES 10' (L/10') <sup>2</sup> | -   | -   | 83  | 93          | -   | -   | 108 | 118         | -   | -   | 168 | 183 |
|                                  |   | LITRES FIRST HOUR <sup>2</sup>  | -   | -   | 199 | 257         | -   | -   | 224 | 283         | -   | -   | 349 | 439 |
| CONTINUOUS DRAW (L) <sup>3</sup> |   | -                               | -   | 147 | 208 | -           | -   | 147 | 208 | -           | -   | 228 | 323 |     |
| POWER (kW)                       |   | -                               | -   | 9   | 12  | -           | -   | 9   | 12  | -           | -   | 13  | 19  |     |
| PREHEATING <sup>3</sup> (min)    |   | -                               | -   | 26  | 18  | -           | -   | 37  | 26  | -           | -   | 38  | 27  |     |
| NL <sup>4</sup>                  | 1   |                                 |     |     | 2   |             |     |     | 2   |             |     |     |     |     |

| MODEL                            |   | EC02 00400R                     |     |     |     | EC02 00500R |     |     |      |     |  |
|----------------------------------|---|---------------------------------|-----|-----|-----|-------------|-----|-----|------|-----|--|
| DHW FROM<br>10 TO 45 °C          | HEAT EXCHANGER (m <sup>2</sup> ) [L] <sup>1</sup> | 0,8 [3,6]                       |     |     |     | 1,0 [4,5]   |     |     |      |     |  |
|                                  | PRIMARY FLOW (m <sup>3</sup> /h)                  | 2,2                             |     |     |     | 2,2         |     |     |      |     |  |
|                                  | PRIMARY TEMP. (°C)                                | 50                              | 60  | 70  | 80  | 50          | 60  | 70  | 80   |     |  |
|                                  | LITRES 10' (L/10') <sup>2</sup>                   | 205                             | 228 | 322 | 341 | 279         | 306 | 433 | 456  |     |  |
|                                  | LITRES FIRST HOUR <sup>2</sup>                    | 364                             | 498 | 691 | 804 | 475         | 638 | 886 | 1025 |     |  |
|                                  | CONTINUOUS DRAW (L) <sup>3</sup>                  | 200                             | 341 | 466 | 585 | 247         | 419 | 571 | 718  |     |  |
|                                  | POWER (kW)  | 8                               | 14  | 19  | 24  | 10          | 17  | 23  | 29   |     |  |
|                                  | PREHEATING <sup>3</sup> (min)                     | 57                              | 33  | 24  | 19  | 64          | 37  | 27  | 22   |     |  |
|                                  | DHW FROM<br>10 TO 60 °C                           | LITRES 10' (L/10') <sup>2</sup> | -   | -   | 210 | 226         | -   | -   | 285  | 304 |  |
|                                  |   | LITRES FIRST HOUR <sup>2</sup>  | -   | -   | 394 | 485         | -   | -   | 511  | 623 |  |
| CONTINUOUS DRAW (L) <sup>3</sup> |   | -                               | -   | 231 | 328 | -           | -   | 285 | 403  |     |  |
| POWER (kW)                       |   | -                               | -   | 13  | 19  | -           | -   | 17  | 23   |     |  |
| PREHEATING <sup>3</sup> (min)    |   | -                               | -   | 49  | 34  | -           | -   | 55  | 39   |     |  |
| NL <sup>4</sup>                  | 3   |                                 |     |     | 4   |             |     |     |      |     |  |

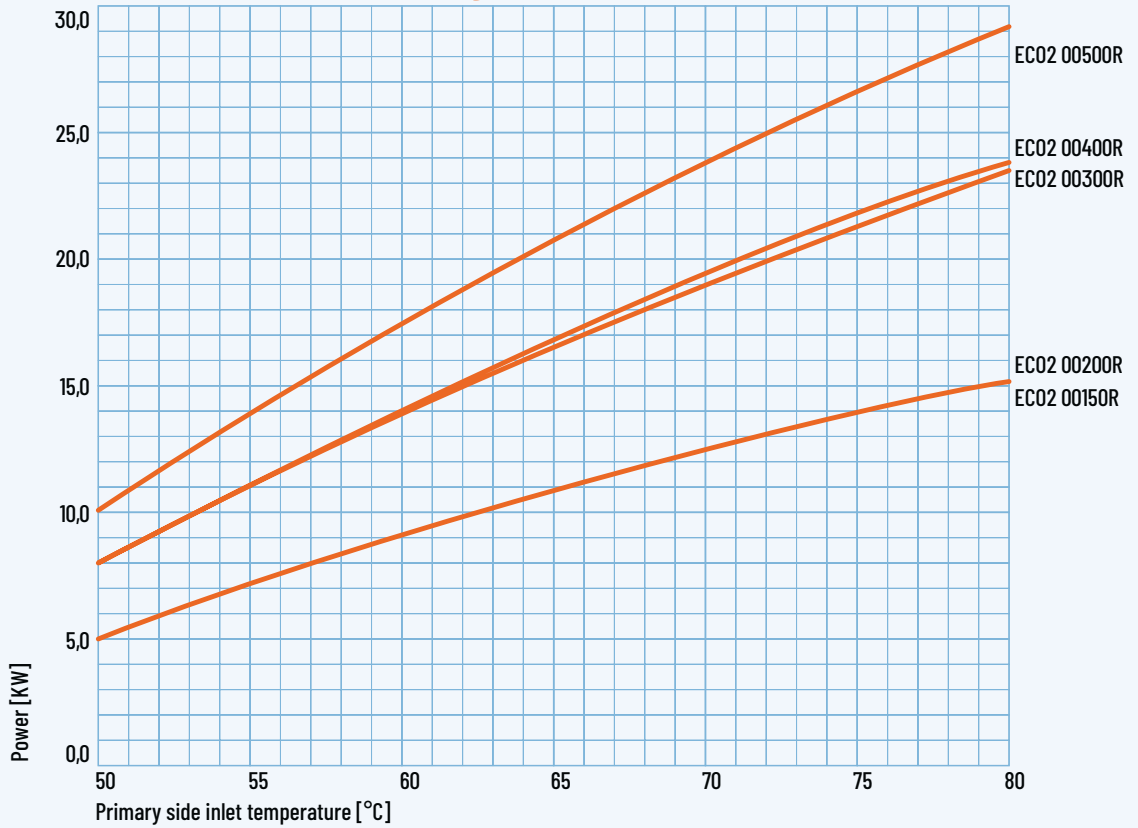
(1) Volume of fluid contained in the heat exchanger

(2) Obtainable with pre-heated cylinder (at 45 °C with primary side set at 50 or 60 °C and pre-heated at 60 °C in the other cases) and a running heat source

(3) With a proper power heat source generator

(4) Primary side 80 °C - Secondary side 10-45 °C

**EC02 - Upper heat exchanger powers with secondary side at 10/45 °C**



**EC02 - Upper heat exchanger pressure drops**

