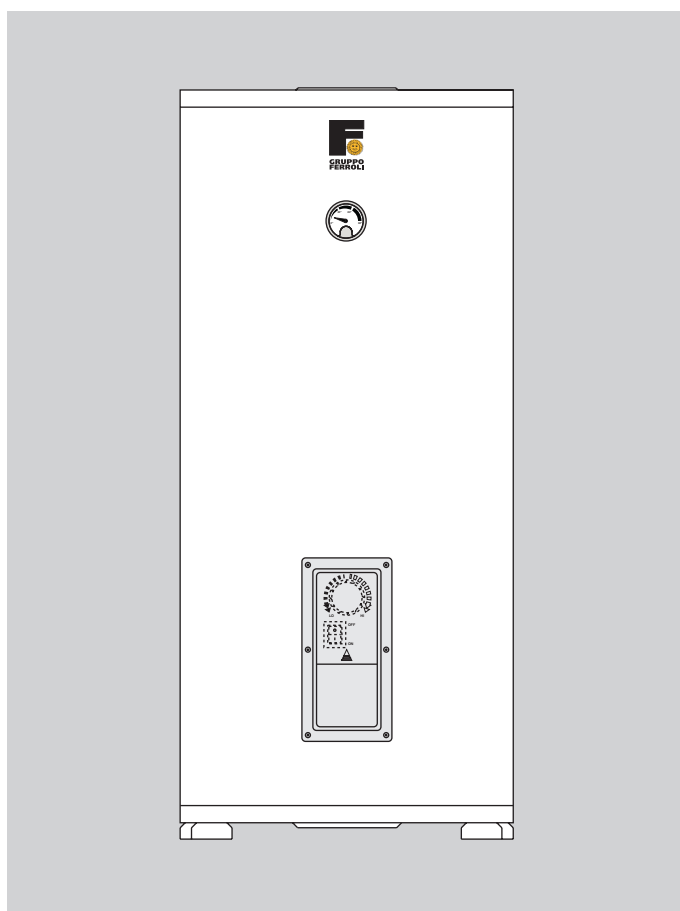


## ECOUNTIT F 1C / 2C



- IT** ISTRUZIONI PER USO, INSTALLAZIONE E MANUTENZIONE
- ES** INSTRUCCIONES DE USO, INSTALACIÓN Y MANTENIMIENTO
- EN** USE, INSTALLATION AND MAINTENANCE INSTRUCTIONS

**IT**

1. Avvertenze generali .....	3
2. Presentazione.....	3
3. Norme d'uso .....	4
4. Manutenzione e pulizia .....	5
5. Dati Tecnici .....	5

**ES**

1. Advertencias generales .....	13
2. Presentación.....	13
3. Normas de uso .....	14
4. Mantenimiento y limpieza .....	15
5. Datos técnicos .....	15

**EN**

1. General instructions.....	23
2. Introduction.....	23
3. Operating instructions.....	24
4. Maintenance and cleaning.....	25
5. Technical Data .....	25

## 1. General instructions

- Carefully read the instructions contained in this instruction booklet.
- After hot water tank installation, inform the user regarding its operation and give him this manual, which is an integral and essential part of the ECOUNTIT F and must be kept with care for future reference.
- Installation and maintenance must be carried out by professionally qualified personnel, according to current regulations and the manufacturer's instructions. Do not carry out any operation on the sealed control parts.
- Incorrect installation or inadequate maintenance can result in damage or injury. The Manufacturer declines any liability for damage due to errors in installation and use or failure to follow the instructions.
- Before carrying out any cleaning or maintenance operation, disconnect the unit from the electrical power supply using the system switch and/or the special cut-off devices.
- In case of a fault and/or poor operation, deactivate the unit and do not try to repair it or directly intervene. Contact professionally qualified personnel. Any repair/replacement of the products must only be carried out by qualified personnel using genuine parts. Failure to comply with the above can compromise the safety of the unit.
- This unit must only be used for its intended purpose. Any other use is deemed improper and therefore hazardous.
- The packing materials are potentially hazardous and must not be left within the reach of children.
- The unit must not be used by people (including children) with limited physical, sensory or mental abilities or without experience and knowledge of it, unless instructed or supervised in its use by someone responsible for their safety.
- The unit and its accessories must be appropriately disposed of, in compliance with the current regulations.
- The images given in this manual are a simplified representation of the ECOUNTIT F. In this representation there may be slight and insignificant differences with respect to the ECOUNTIT F supplied.

## 2. Introduction

ECOUNTIT F is a vertical hot water storage tank with single coil (vers. 1C) or with double coil (vers. 2C).

This unit is designed for heating domestic hot water to a temperature below boiling point at atmospheric pressure and must be connected to an energy source and a DHW system, compatibly with its performance characteristics and power.

### PLACE OF INSTALLATION

The place of installation must be protected against frost.

The hot water storage tank must be placed in the immediate vicinity of the heat generator, to avoid pointless heat loss. Suitably insulate the feed pipes.

### PLUMBING CONNECTIONS

Carry out the relevant connections according to the cover diagram and the symbols given on the unit.

It is advisable to install the unit near the main hot water drawing point, in order to avoid heat loss along the pipes, and possibly near a drain to facilitate any emptying operations.

The unit is arranged for connection to a recirculation pipe (**ref. 20** in fig. 5 and fig. 6): this pipe must be insulated. For recirculation, it is necessary to install a pump equipped with an operation timer or a minimum contact thermostat, to obtain its activation on cooling of the recirculation water.

If the union is not used, fit a suitable plug.

A relief valve (**ref. 11** in fig. 5 and fig. 6) with setting equal to or greater than the max. DHW pressure given in the **technical data tables** on pagina 26 must be installed on the cold water feed pipe upstream of the hot water tank.

The connection pipe between the hot water tank and relief valve must absolutely not be shut off, as damage to the hot water tank could occur due to overpressure.



The relief valve outlet must be connected to a funnel or collection pipe to prevent water spurting onto the floor in case of overpressure in the hot water tank circuit. Otherwise, if the discharge valve cuts in and floods the room, the boiler manufacturer cannot be held liable.

Slight dripping from the relief valve is normal in the heating phase; therefore it is advisable to connect it to a drain with trap.

In case of a mains pressure near the valve setting values, a suitable pressure reducer (**ref. 15** in fig. 5 and fig. 6) must be fitted as far away as possible from the unit.

### DHW expansion tank

The DHW expansion vessel must be sized according to the capacity of the hot water tank and the cold water pressure.

If the system has a pressure reducer, for the reason described above, and/or a check valve, it is necessary to install an expansion tank (**ref. 14** in fig. 5 and fig. 6) having a capacity not less than 5% of the hot water tank nominal capacity.

Do not install a check valve between the relief valve and the expansion tank. In general, to safeguard the unit and the system, it is advisable to install the expansion tank with the characteristics defined above.

Fill the special expansion tank diaphragm chamber according to the manufacturer's instructions.

**ELECTRICAL HEATING ELEMENT (1500W - 230V)**

The heating element can be used as an auxiliary DHW heating system or as an antifreeze system. In the latter case, set the heating element adjustment knob (“A” - “fig. 1”) to min. (15°). To use it for heating water, the thermostat knob “A” adjusts the heating temperature (set point) of the heating element, adjustable between 15 and 75 °C.

The electrical system must be installed by a qualified technician according to the local regulations and in accordance with the applicable regulations in the building.

**The system heating element must not be activated with the hot water tank empty! In this case the heating element warranty is voided.**

For the heating element electrical connection (see “fig. 1”):

- Remove the cover “D” by removing the screws.
- For the connection of the hot water tank heating element to the power supply, a cable “B” 3 x 2.5 mm<sup>2</sup> (for 1.5 kW heating element) is required.
- Run the end of the cable from the cable gland to the electrical part.
- Connect the wires to the terminals of the thermostat “C”. Reassemble everything.

**Make sure the thermostat is properly applied to the heating element.**

The thermostat temperature adjustment range is from 15°C to 75°C. The thermostat has a safety device which intervenes if the temperature exceeds 93°C.

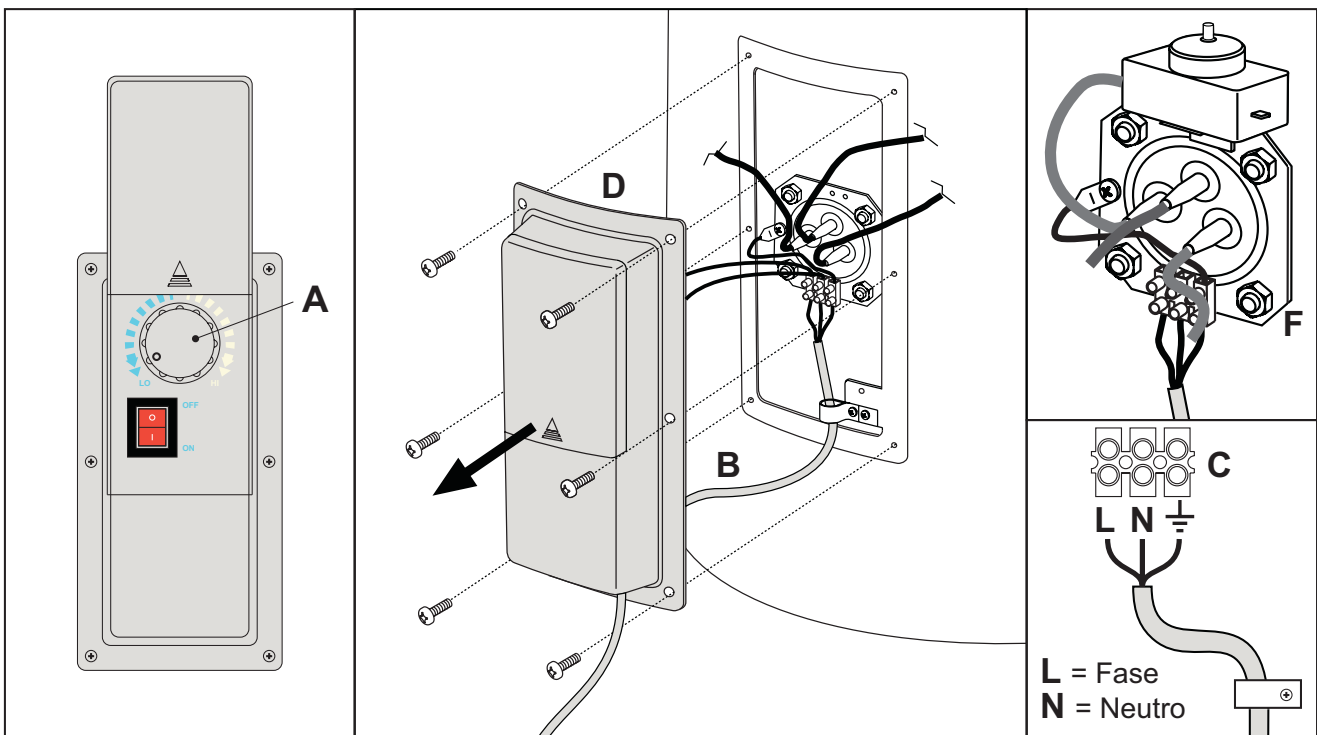


fig. 1

**3. Operating instructions**

**STARTUP**

After installation, fill the hot water tank with water for DHW use and for heating, proceeding as follows:

- Carry out filling of water for heating and vent the system
- Carry out filling of water for DHW use by means of the cold water inlet and vent by opening a hot water drawing point
- Install the thermostatic device in the special place on the hot water tank
- Start the boiler
- Emptying the unit
- To carry out emptying, close the cock for filling from the water system, connect a hose to the drain union and place the other end in an area provided with an external drain
- Open a drawing point and let the water run, then open the drain union and complete the emptying.

## 4. Maintenance and cleaning

Empty the unit before carrying out any maintenance operation.

### GENERAL INSTRUCTIONS

To clean the external parts of the hot water tank, just use a cloth moistened with water, with the addition of liquid soap if necessary. Do not use detergent powders and solvents (abrasives of any type, petrol and similar products).

Check the protection anode at least once a year (see next section).

If installed in places with risk of frost, the unit must be kept operating or completely emptied.

### INSPECTION AND CLEANING INSIDE THE TANK

To clean the inside of the tank, empty the unit, and remove the cover ("D" - "fig. 1") by undoing the screws.

Remove the flange ("F" - "fig. 1"). During cleaning be careful not to damage the tank and exchanger (coil) enamel.

Cleaning can be done with a jet of water and, if necessary, with the aid of a suitable tool in plastic and wood to eliminate stubborn sedimentation.

Refit the flanges on the inspection openings with respective seals, checking their condition (use a new seal if necessary).

Refill the unit according to the startup instructions and check its tightness.

### ANODE CHECK

The unit is protected against corrosion by a vitreous enamel coating of the inner surface and the exchange coil.

The hot water tank also has an anticorrosion magnesium anode to protect against the effect of eddy currents which could damage it: the duration depends on operation and the quality of the water.

The anode can be inspected (it is advisable to do this at least once a year) and is replaceable.

To check and/or replace it, firstly empty the hot water tank as described above, then remove the black plastic cover on the upper end-plate of the hot water tank.

To remove the anode, it is necessary to unscrew the flange "F" - "fig. 1" (tightening torque 25-30 Nxm). After inspection and/or replacement, the tightness of the hot water tank must be checked.

Replacement must be done with original parts.

## 5. Technical Data

### DIMENSIONS AND CONNECTIONS

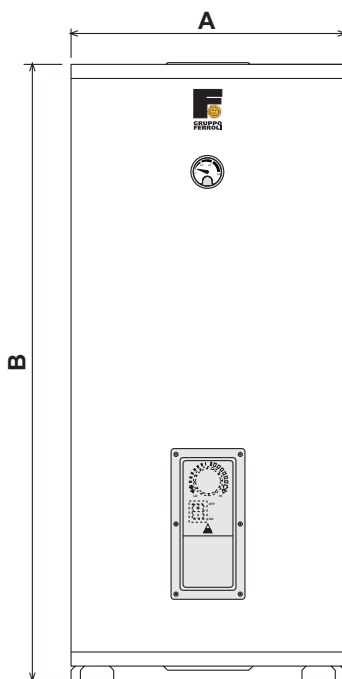


fig. 2

Model	A mm	B mm
ECOUNT F 100-1C	500	978
ECOUNT F 120-1C	500	1117
ECOUNT F 150-1C	500	1325
ECOUNT F 200-1C	540	1453
ECOUNT F 300-1C	620	1535
ECOUNT F 400-1C	750	1469
ECOUNT F 500-1C	750	1769

Model	A mm	B mm
ECOUNT F 200-2C	540	1453
ECOUNT F 300-2C	620	1535
ECOUNT F 400-2C	750	1469
ECOUNT F 500-2C	750	1769

**Model ECOUNTIT F 1C**

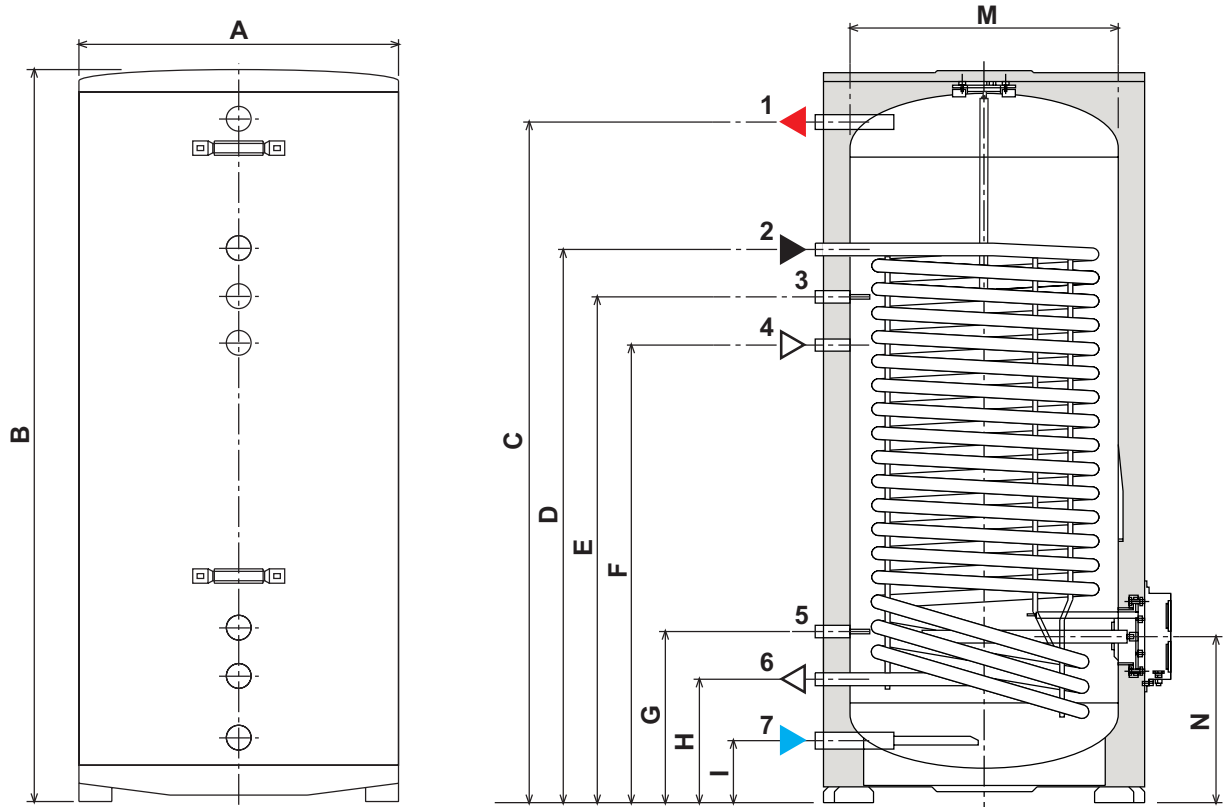


fig. 3 - ECOUNTIT F 1C

**Legend**

- 1 Hot water outlet
- 2 Boiler inlet
- 3 Probe
- 4 Recirculation
- 5 Probe
- 6 Boiler outlet
- 7 Cold water inlet

**Dimensions**

Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	M mm	N mm
ECOUNTIT F 100-1C	500	978	870	736	636	536	336	236	126	400	326
ECOUNTIT F 120-1C	500	1117	1008	736	636	536	336	236	126	400	326
ECOUNTIT F 150-1C	500	1325	1216	1088	988	888	336	236	126	400	326
ECOUNTIT F 200-1C	540	1453	1344	1084	984	884	334	234	124	440	324
ECOUNTIT F 300-1C	620	1535	1431	1161	1061	961	361	261	131	520	351
ECOUNTIT F 400-1C	750	1469	1326	985	885	785	441	341	155	650	418
ECOUNTIT F 500-1C	750	1769	1626	1261	1161	1061	441	341	155	650	418

**Plumbing connections**

Model	DHW connections	Coil connections	Recirculation connection
ECOUNTIT F 100-1C	3/4	3/4	3/4
ECOUNTIT F 120-1C	3/4	3/4	3/4
ECOUNTIT F 150-1C	3/4	3/4	3/4
ECOUNTIT F 200-1C	3/4	3/4	3/4
ECOUNTIT F 300-1C	1	1	1
ECOUNTIT F 400-1C	1	1	1
ECOUNTIT F 500-1C	1	1	1

## Model ECOUNTIT F 2C

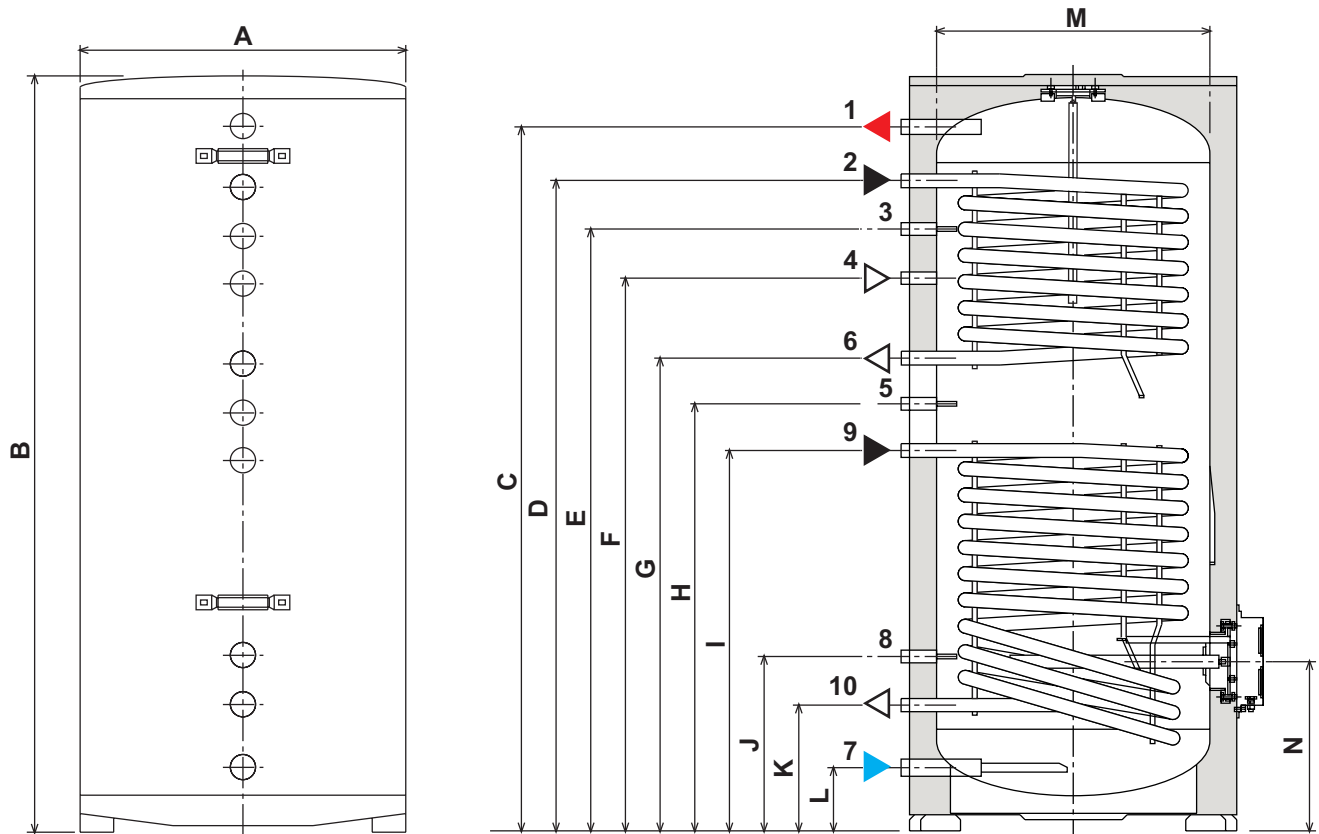


fig. 4 - ECOUNTIT F 2C

### Legend

- |                      |                      |
|----------------------|----------------------|
| 1 - Hot water outlet | 7 - Cold water inlet |
| 2 - Boiler inlet     | 8 - Probe            |
| 3 - Probe            | 9 - Solar inlet      |
| 4 - Recirculation    | 10 - Solar outlet    |
| 5 - Probe            |                      |
| 6 - Boiler outlet    |                      |

### Dimensions

Model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	I mm	J mm	K mm	L mm	M mm	N mm
ECOUNTIT F 200-2C	540	1453	1344	1234	1134	1034	934	834	734	234	124	324	440	324
ECOUNTIT F 300-2C	620	1535	1431	1311	1211	1111	961	861	761	261	131	351	520	351
ECOUNTIT F 400-2C	750	1469	1326	1174	1074	974	852	752	661	391	291	155	650	418
ECOUNTIT F 500-2C	750	1769	1626	1474	1374	1274	1152	1052	898	398	298	155	650	418

### Plumbing connections

Model	DHW connections	Upper coil connections	Lower coil connections	Recirculation connection
ECOUNTIT F 200-2C	3/4	3/4	3/4	3/4
ECOUNTIT F 300-2C	1	3/4	3/4	3/4
ECOUNTIT F 400-2C	1	1	1	3/4
ECOUNTIT F 500-2C	1	1	1	3/4

**HYDRAULIC CIRCUITS**  
**Model ECOUNTIT F 1C**

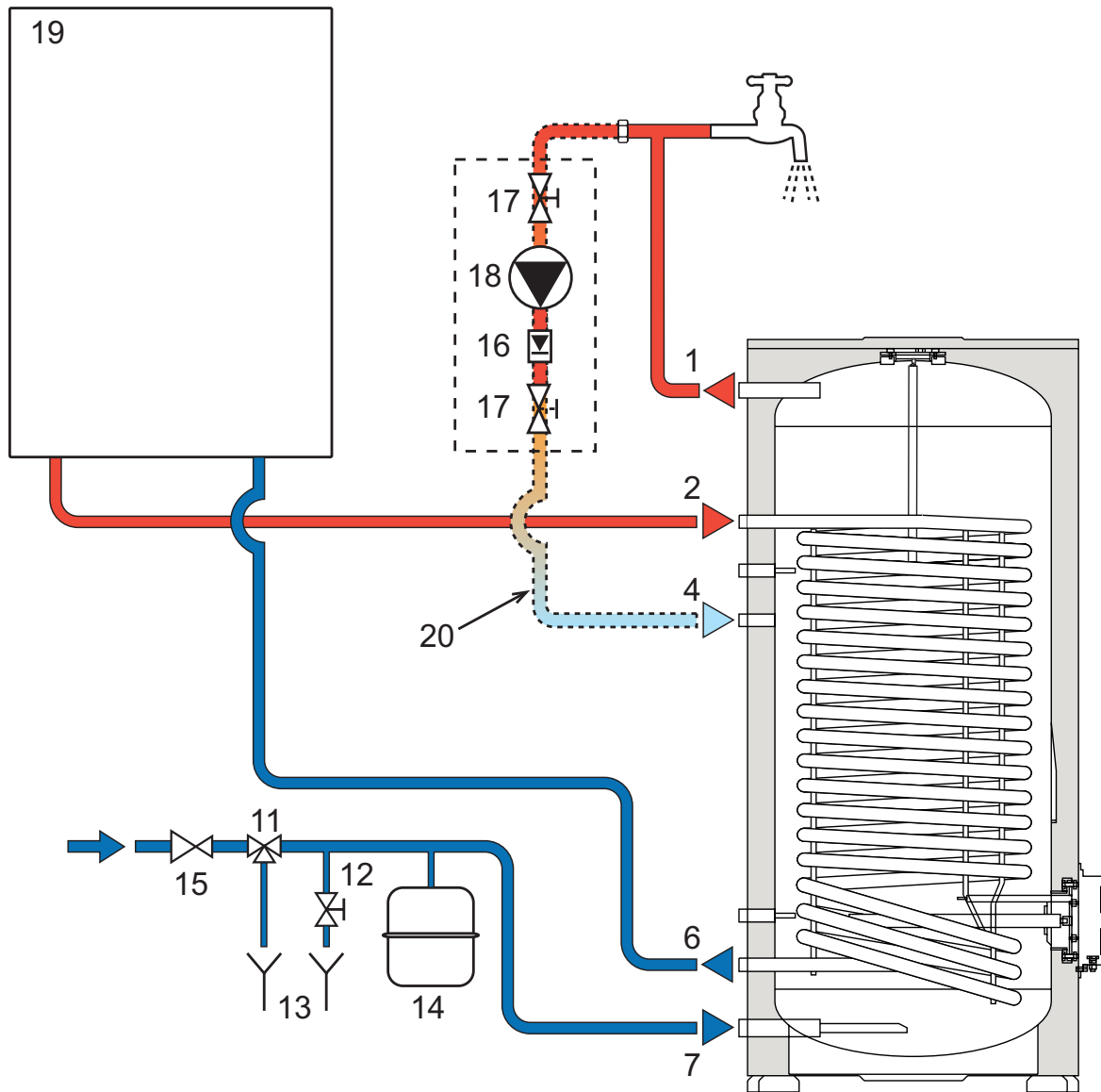


fig. 5 - Hydraulic circuit ECOUNTIT F 1C

- |  |   |
|--|---|
| 1 Hot water outlet                       | 13 Discharge pipe (not supplied)                  |
| 2 Boiler inlet                           | 14 Expansion tank (not supplied)                  |
| 3 Probe                                  | 15 Pressure reducer (not supplied)                |
| 4 Recirculation                          | 16 Non-return valve (optional - not supplied)     |
| 5 Probe                                  | 17 Shutoff valve (optional - not supplied)        |
| 6 Boiler outlet                          | 18 Pump (optional - not supplied)                 |
| 7 Cold water inlet                       | 19 Boiler (not supplied)                          |
| 11 Hydraulic safety valve (not supplied) | 20 Recirculation piping (optional - not supplied) |
| 12 Emptying cock (not supplied)          |   |





## TECHNICAL DATA TABLE ECOUNTIT F 1C

ECOUNTIT F 1C		ECOUNTIT F 100 1C	ECOUNTIT F 120 1C	ECOUNTIT F 150 1C	ECOUNTIT F 200 1C	ECOUNTIT F 300 1C	ECOUNTIT F 400 1C	ECOUNTIT F 500 1C
Capacity	litres	90	107	130	180	277	387	480
Exchanged power t 35 K	kW	18.5	18,5	31.25	35.00	45.75	59.25	84.75
DHW flow rate t 35 K	litres/h	450	450	790	860	1120	1440	2060
DHW flow rate t 50 K	litres/h	318	318	537	606	774	1020	1458
Preparation time t 35 K	min.	13	16	11.5	14	16	17	14.5
Preparation time t 50 K	min.	19	23	17	20	23	24	21
Max. working pressure in hot water production	bar	8	8	8	8	8	8	8
Max. working temperature in hot water production	°C	95	95	95	95	95	95	95
Loss for maintaining	kWh x 24h	1.6	1.7	1.8	2.2	2.7	2.9	3.5
Coil exchange surface	m <sup>2</sup>	0.74	0.74	1.25	1.4	1.83	2.37	3.39
Coil length	m	9.3	9.3	15.8	17.7	23.3	22.8	32.6
Coil pressure loss	mbar	228	228	386	432	565	118	167
Coil nominal flow rate	m <sup>3</sup> /h	2	2	2	2	2	2	2
Protection rating	IP	X0D	X0D	X0D	X0D	X0D	X0D	X0D
Power supply voltage	V/Hz	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Electrical power input	W	1500	1500	1500	1500	1500	1500	1500
Empty weight	kg	45	49	64	73	102	126	155

## TECHNICAL DATA TABLE ECOUNTIT F 2C

ECOUNTIT F 2		ECOUNTIT F 200 2C	ECOUNTIT F 300 2C	ECOUNTIT F 400 2C	ECOUNTIT F 500 2C
Capacity	litres	178	275	385	478
UPPER COIL					
Exchanged power t 35 K	kW	12.5	18	29.6	29.6
DHW flow rate t 35 K	litres/h	306	444	726	726
DHW flow rate t 50 K	litres/h	216	310	510	510
Preparation time t 35 K	min.	39	41	33	41
Preparation time t 50 K	min.	56	58	47	59
Coil exchange surface	m <sup>2</sup>	0.5	0.72	1.19	1.19
Coil length	m	6.38	9.17	11.43	11.43
Coil pressure loss	mbar	155	220	58	58
Coil nominal flow rate	m <sup>3</sup> /h	2	2	3	3
LOWER COIL					
Exchanged power t 35 K	kW	20.75	25	38.1	55
DHW flow rate t 35 K	litres/h	510	618	936	1350
DHW flow rate t 50 K	litres/h	357	430	655	945
Preparation time t 35 K	min.	24	29	26	22
Preparation time t 50 K	min.	34	42	37	32
Coil exchange surface	m <sup>2</sup>	0.83	1	1.52	2.2
Coil length	m	10.52	12.72	14.7	21.2
Coil pressure loss	mbar	254	308	75	109
Coil nominal flow rate	m <sup>3</sup> /h	2	2	3	3
Max. working pressure in hot water production	bar	8	8	8	8
Max. working temperature in hot water production	°C	95	95	95	95
Loss for maintaining	kWh x 24h	2.2	2.7	2.9	3.5
Protection rating	IP	X0D	X0D	X0D	X0D
Power supply voltage	V/Hz	230/50	230/50	230/50	230/50
Electrical power input	W	1500	1500	1500	1500
Empty weight	kg	73	103	126	155
With the following reference temperature values: boiler water 85°C, hot water outlet at 45°C, cold water inlet at 10°C					
With boiler water temperature of 85°C and at max. output					

### Reference temperatures:

- Primary circuit = 85°C
- DHW outlet = 45°C
- Cold water inlet = 10°C

## ErP product fiche

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 100-1C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	66
Storage volume	V	L	90

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 120-1C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	70
Storage volume	V	L	107

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 150-1C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	75
Storage volume	V	L	130

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 200-1C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	92
Storage volume	V	L	180

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 200-2C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	92
Storage volume	V	L	178

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 300-1C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	112
Storage volume	V	L	277

Trademark: <b>FERROLI</b>		Model: <b>ECOUNTIT F 300-2C</b>	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	112
Storage volume	V	L	275

Trademark: FERROLI		Model: ECOUNTIT F 400-1C	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	121
Storage volume	V	L	387

Trademark: FERROLI		Model: ECOUNTIT F 400-2C	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	121
Storage volume	V	L	385

Trademark: FERROLI		Model: ECOUNTIT F 500-1C	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	143
Storage volume	V	L	480

Trademark: FERROLI		Model: ECOUNTIT F 500-2C	
Address: FERROLI S.p.A. via Ritonda 78/A - 37047 SAN BONIFACIO (VR) - Italy			
Item	Symbol	Unit	Value
Standing loss	S	W	143
Storage volume	V	L	478



**FERROLI S.p.A.**  
Via Ritonda 78/a  
37047 San Bonifacio - Verona - ITALY  
[www.ferroli.it](http://www.ferroli.it)