

1 kW solar immersion heater

Solar power directly for hot water.



Made in Germany

0 – 1,000 W

continuously variable heating power

G 1½ "

standard thread

1,500 – 2,500 Wp

recommended PV capacity

More sunshine. Lower energy costs.

Use solar power directly

No inverter and no 230 V mains connection – 100 percent direct current.

Reduce hot water costs

Solar heat reduces the load on your gas, oil or pellet boiler or heat pump.

Retrofit your existing cylinder

For suitable cylinders with a G 1½ " connection. Check installation space.

Easy to install and use

Screw into a suitable cylinder, connect the PV modules and set the temperature. Read the water temperature on the display.

Technical specifications

All ROD-1000 specifications.

Heating operation and PV input

Technical specification	ROD-1000
Product model	ROD-1000
Heating power	0 – 1,000 W, continuously controlled
Max. open-circuit voltage (Voc)	50 V DC
Min. module voltage (Vmpp)*	36 V (max. 800 W heating power)
Recommended module voltage (Vmpp)*	38 - 43 V (max. 1,000 W heating power)
Max. input current	23 A DC, automatic current limiting
Max. connected PV capacity	3,000 Wp
Recommended connected PV capacity	1,500 – 2,500 Wp
PV wiring	Parallel connection only; no series connection
DC input	1
MPP trackers	1
Water temperature range	5 – 65 °C; max. 85 °C in limescale-free water

* The maximum heating power depends primarily on the module voltage. To achieve the maximum heating power of 1,000 W, photovoltaic modules with an MPP voltage of 38 - 43 V are required.

Surplus output

Technical specification	ROD-1000
Max. output power	1,000 W
Max. output current	23 A; automatic shutdown if exceeded
Output voltage	0 – 50 V, depending on PV module voltage
DC output	1

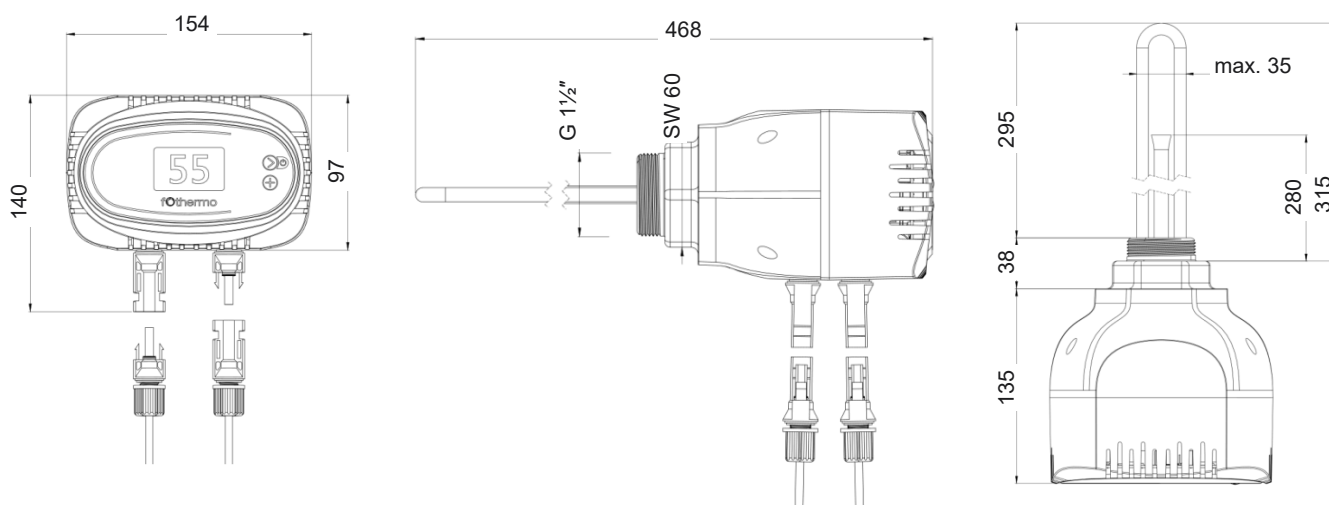
Product and equipment

General specifications

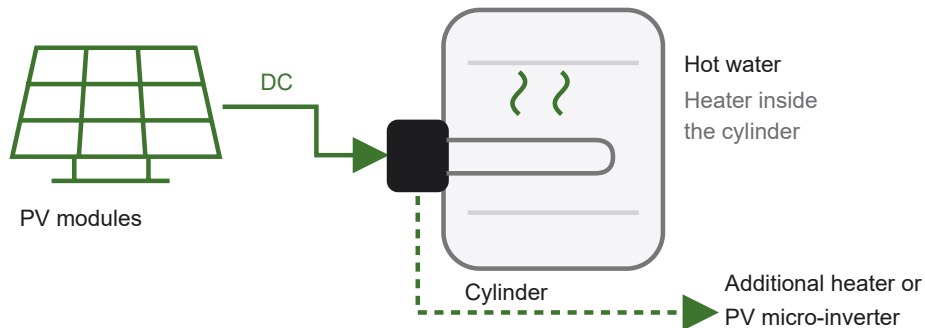
Technical specification	ROD-1000
Dimensions (L × H × W)	468 × 140 × 154 mm
Heating element length / immersion depth	315 mm / 295 mm
Unheated element length	50 mm
Screw-in thread	G 1½" (6/4")
Installation orientation	Horizontal
Operating temperature range	–10 to +35 °C
Storage temperature	–10 to +35 °C
IP rating	IP20
Weight	0.9 kg
Warranty	2 years

Dimensions and installation space

All dimensions in mm



Solar power becomes heat.



Schematic diagram, not to scale

Dashed line: switching when the maximum temperature is reached.
Operating principle, not a wiring diagram. Additional devices required separately.

Keep using solar power after heating the water.

Once the set maximum temperature is reached, the ROD-1000 switches to the surplus output. You have two options:

Additional solar immersion heater



The first heater's output can supply the PV input of another heater. Switching to the downstream heater takes place only after the set maximum temperature has been reached.

PV micro-inverter



To feed power into the household electrical system, use only compatible devices on the fothermo whitelist and follow the connection requirements. Plan additional devices and the grid-side installation separately.

During heating, PV power above the usable heating capacity is curtailed. PV power is not split simultaneously between the heater and an inverter.

Easy to retrofit.

Key requirements for your solar solution.

Use your solar power where you need heat every day. The ROD-1000 adds solar water heating to your existing cylinder – without an inverter or a 230 V mains connection for heating.

PV modules: check voltage and wiring

Recommended: 38 – 43 V Vmpp and 1,500 – 2,500 Wp. Maximum open-circuit voltage: 50 V. Connect PV modules in parallel only.

Check before installation

01 Cylinder and installation space

Check the G 1½ " connection and space for 295 mm immersion depth. Install the heater horizontally.

02 PV modules and cabling

Connect modules in parallel only. Use suitable solar and parallel connectors. Extensions: at least 6 mm² cable cross-section and a maximum distance of 25 m, as specified in the manual.

03 Installation and commissioning

Installation by qualified persons in accordance with the manual. Ensure earthing and protective devices are provided. Fill the cylinder completely before connecting PV modules. Do not operate dry.

Included in delivery

- 1 × ROD-1000 solar immersion heater
- Safety and quick-start guide
- Quick installation guide
- Crimping instructions / PV warning notice
- 2 × pairs of solar connectors

Additionally required

PV modules, a suitable hot water cylinder, solar cables and parallel connectors. Optional devices for surplus energy use are supplied separately.

This datasheet does not replace the installation, operating and maintenance manual. Follow all installation, operating and safety instructions in the manual.