

Boiler C-41 Datasheet



General information

Technical description

ODL boilers are designed and manufactured in Italy to heat water by means of electric heating elements. They are ideal for installation in machines used to prepare coffee or other hot beverages. Our boilers are available both in fully welded versions and in flanged versions, allowing inspection during maintenance. This feature is particularly important in applications where the water has a high limescale content.

We offer both boilers ready to be assembled with other components and fully tested assemblies complete with all accessories, including insulation, probes, solenoid valves, wiring harnesses and fittings, for simpler and faster installation.

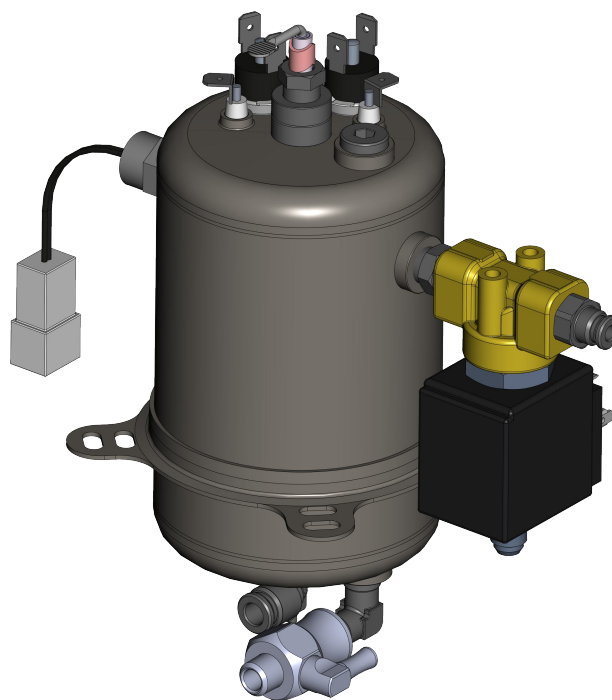
Technical information*

Working fluid	<i>Acqua</i>
Volume	<i>0.4 ÷ 3.4 L</i>
Maximum working pressure	<i>10 ÷ 20 bar</i>
Maximum temperature	<i>Fino a 100°C</i>

Thermal resistance data*

Power	<i>600 ÷ 2300 W</i>
Tension	<i>110 / 230 V</i>
Frequency	<i>50 / 60 Hz</i>

*Data may vary depending on the model, please contact ODL for further information.

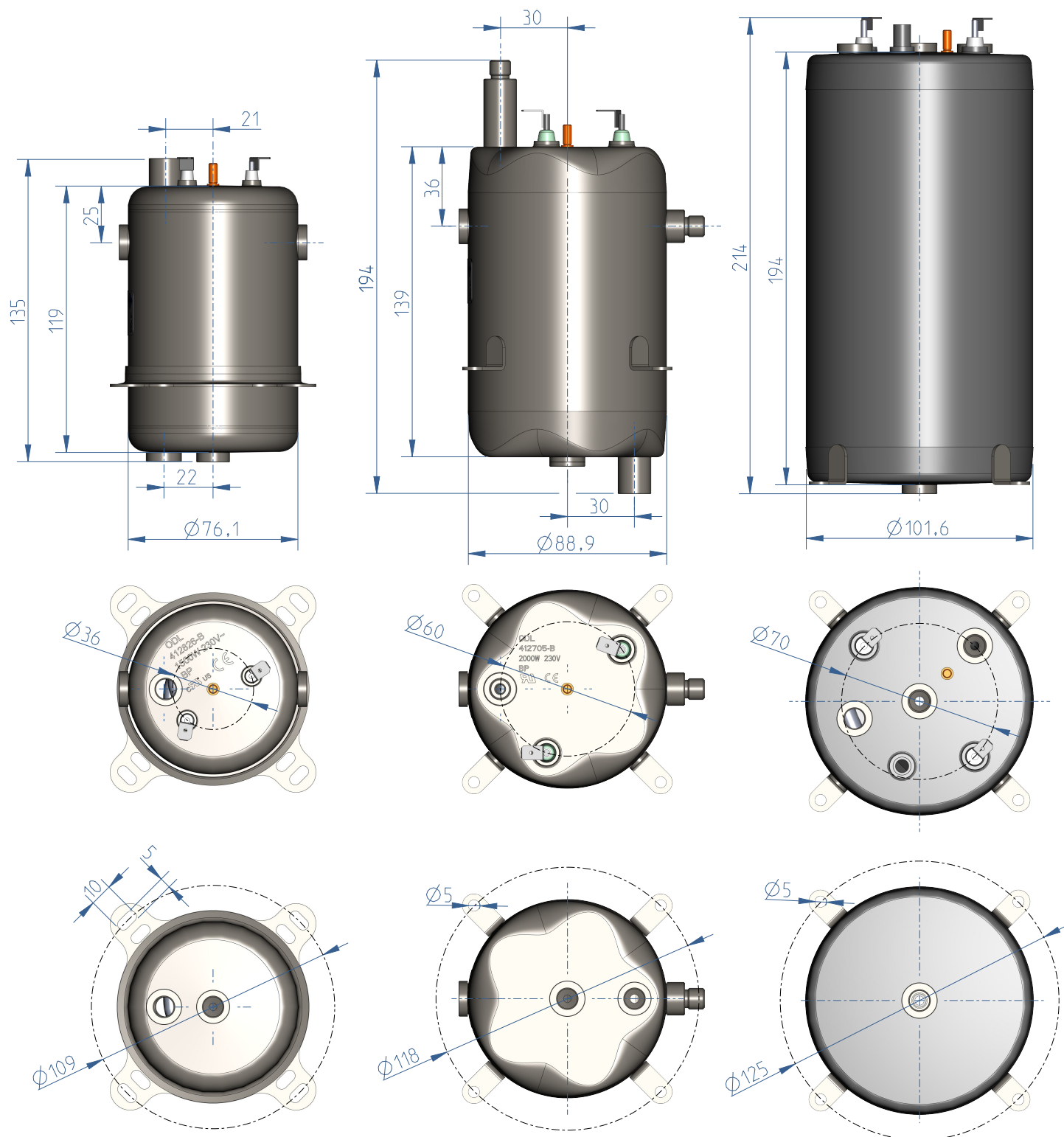


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Standard boiler body

The three standard bodies are shown below, mainly differing in diameter.



Diameter mm	Boiler Height mm	Total Height mm	Volume L	Connections
76.1	119	135	0.4	2 at bottom, 2 lateral, 1 at upper cover, all G1/8".
88.9	139	194	0.7	2 at bottom, 2 lateral, 1 at upper cover, all G1/8".
101.6	194	214	1.6	1 at bottom, 2 at upper cover, all G1/8" and 1 seat for thermostat bulb.

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Fittings weldable onto the boiler body

The table below lists the dimensions, recommended position and main use of all fittings that can be welded onto ODL boilers. For any additional information, please contact our offices.

Standard bushing with female thread



Standard bushing with G1/8" female thread. For different lengths, please contact ODL. It can be welded both onto the end caps and onto the side wall of the boiler. It is used for the installation of plugs, temperature probes and fittings.

Standard bushing with male thread



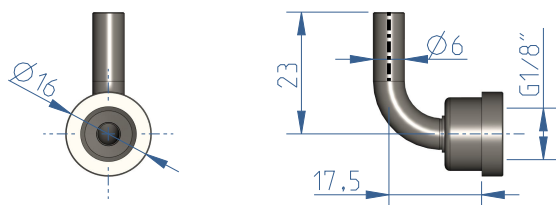
Standard bushing with G1/8" male thread. Available in two "L" lengths: 8 mm and 38 mm. It can be welded both onto the end caps and onto the side wall of the boiler. It is generally used on the upper part for connection to the soluble product solenoid valve assembly.

Standard bushing for level probe



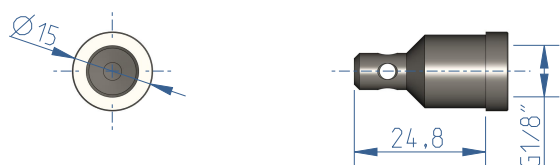
Standard bushing for ODL level probes, to be welded onto the upper end cap.

Bushing with welded and bent tube



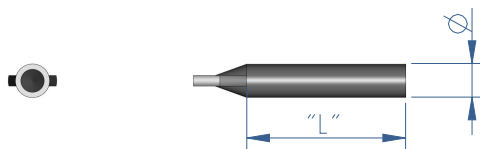
Bushing with welded and bent Ø6 mm tube. The standard bend geometry is shown in the figure; for different geometries, please contact ODL. When welded onto the side wall or upper part of the boiler, it is used as a coffee outlet point. When welded onto the end caps, it can be used as an alternative to the dedicated water inlet bushing. The version with a straight tube is available as an option for hot water outlet applications.

Standard bushing for water inlet



Standard ODL bushing for water inlet. Designed to be welded onto the lower part of the boiler, in a central position.

Thermostat bulb probe seat



Blind tube designed to accommodate thermostat bulb probes. Available in different "L" lengths and "Ø" diameters. It is generally welded onto the upper part of the boiler.

Weld studs



Weld studs available in different lengths and thread sizes. The standard configuration is shown in the figure. They are generally used to secure thermostats onto the upper part of the boiler.

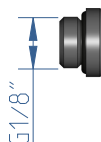
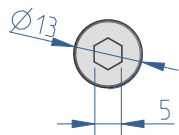
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External optionals

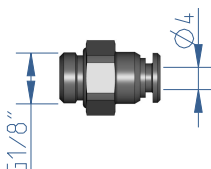
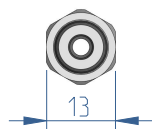
The table below lists the dimensions, recommended position and main use of the optional components that can be connected to ODL boilers. For any additional information, please contact our offices.

Plug with OR



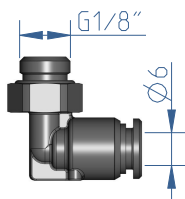
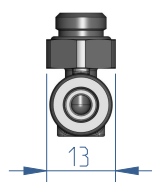
Steel plug with EPDM O-ring.
Usually screwed onto a bushing on the bottom end cap to drain the boiler during maintenance.

"Push-in" straight fitting



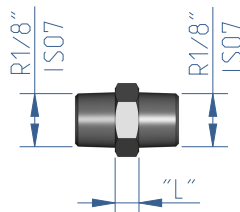
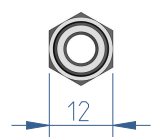
Straight fitting with push-in outlet connection, available in nickel-plated brass and stainless steel. Standard outlet diameter $\varnothing 4$ mm; other diameters available on request. Used either for cold water inlet or hot water outlet applications.

Elbow and swivel "push-in" fitting



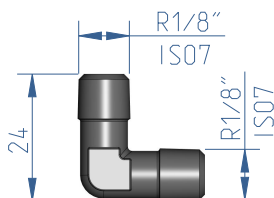
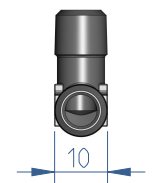
Swivel elbow fitting with push-in outlet connection, available in nickel-plated brass and stainless steel. Standard outlet diameter $\varnothing 6$ mm; other diameters available on request. It is usually mounted on the lower surface to avoid bending the inlet tube.

Straight threaded fitting



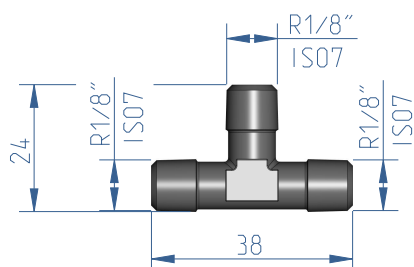
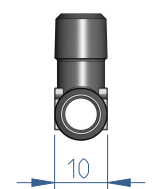
Straight male-to-male G1/8" fitting, available in different lengths. Suitable for use in all positions.

Elbow threaded fitting



Available in both nickel-plated brass and stainless steel, and with all combinations of male and female threads. It is usually mounted on the lower surface to avoid bending the inlet tube.

"T" threaded fitting



Available in both nickel-plated brass and stainless steel, and with all combinations of male and female threads. Usually mounted on the upper part of the boiler, with one branch dedicated to the safety valve and the other to the soluble product solenoid valve assembly.

Caldaie

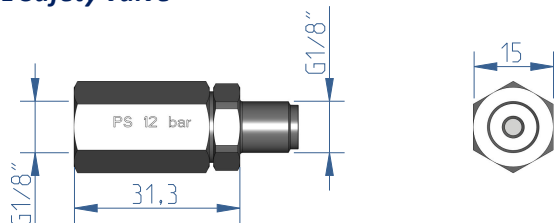
C-41 Scheda tecnica



Optionals esterni al corpo caldaia

La tabella sottostante raccoglie le dimensioni, la posizione consigliata e l'utilizzo principale degli optional che possono essere collegati alle caldaie ODL, per qualsiasi informazione aggiuntiva contattare il nostri uffici.

ODL Safety valve

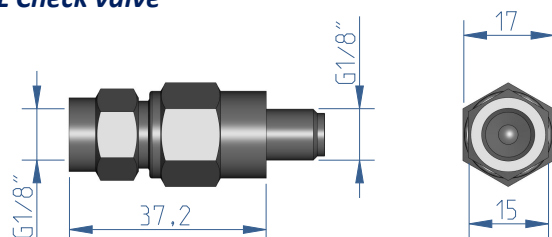


ODL design safety valve. If it is not requested, the customer must still provide a safety valve in their own system or machine.

The standard version is set at 12 bar; for different pressure settings, please contact ODL.

It is generally connected to the upper part of the boiler and requires a connection in the machine for discharge.

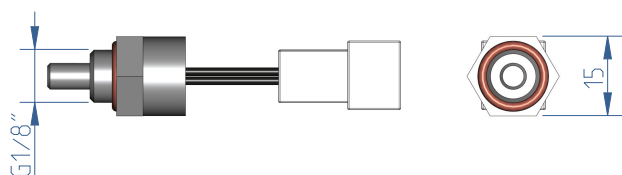
ODL Check valve



ODL design check valve. The metal components are made of AISI 316 and AISI 304; the sealing elements are made of PA6 and silicone.

It is generally connected to the water inlet.

Temperature

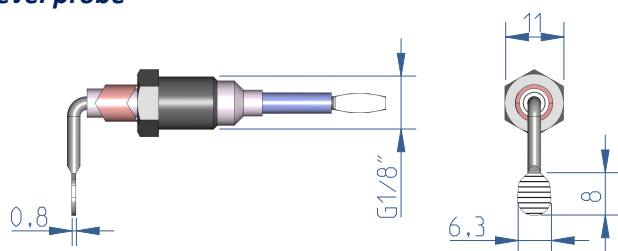


Immersion NTC probe for temperature measurement, generally screwed laterally into the upper part of the boiler. For specifications, please contact ODL.

The capsule is made of AISI 316, with silicone sealing O-ring and epoxy resin coating.

Available with connections via two 6.35 x 0.81 mm male Faston terminals and male connector housing.

Level probe

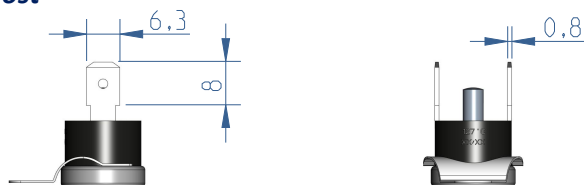


Level probes are available in different lengths, to be screwed into the dedicated bushing.

Level probes are used as an alternative to a volumetric meter external to the boiler to determine the filling level.

The probe is made of AISI 316; the sheath and sealing gasket are made of PTFE.

Thermost

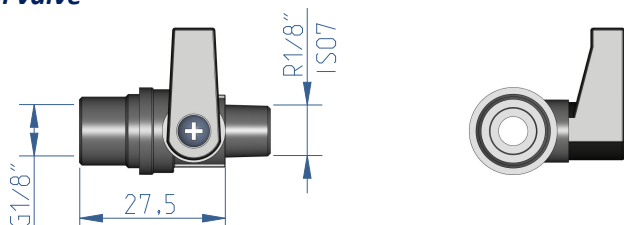


Thermostat generally secured to the upper surface of the boiler by means of a weld stud.

It performs a safety function by interrupting the power supply to the heating element when the lower surface of the thermostat reaches the set temperature.

Available with set temperatures of 127 °C or 100 °C. Reset can be either manual or automatic.

Ball valve



Ball valve with G1/8" threads.

Available in both nickel-plated brass and stainless steel.

It is installed on the bottom of the boiler and opened, when necessary, to allow the boiler to be drained during maintenance operations.

Caldaie

C-41 Scheda tecnica



Heating elements

The table below lists the main information for the principal models of electric heating elements that are welded or mounted on our boilers. For any additional information, please contact our offices.

Model	Power W	Tension V	Frequency Hz	Superficial load W/m ²	Ø boiler mm	Boiler volume V	Ø resistance mm
<i>Small</i>	1500	230	50	11	76.1	0.4	52
<i>Medium</i>	2000	230	50	9.7	88.9	0.7	58
<i>Big</i>	1500	230	50	7	102	1.6	69.5
<i>With flange</i>	1800	230	50	13.1	129	3.4	61
<i>US small</i>	1300	120	60	9.5	76.1	0.4	52
<i>US medium</i>	1500	120	60	7	88.9	0.7	58

Descaling Instructions

The information provided below is for guidance only. For complete details, please refer to the product Warning and Instruction Manual.

For internal descaling, ODL recommends checking the chemical compatibility of the selected descaling liquid with the materials present in the boiler. For information on the maximum temperatures and pressures to be used during the process, please contact ODL.

Food Standards and Certifications

This boiler family complies with the following European and Italian regulations, their relevant updates and amendments, as well as other international standards:

- Regulation (EC) No. 1935/2004;
- Regulation (EC) No. 2023/2006;
- Regulation (EU) No. 10/2011;
- Italian Ministerial Decree of 21/03/1973;
- Decree of the President of the Italian Republic No. 777/82;
- Directive 2014/68/EU.