Prextherm Rsw
High efficiency steel pressurised boilers
Prextherm RSW range consists in pressurised boilers with reversal flame technology. The historical experience of Ferroli Group in the design and production of steel boilers enabled the development of a solid and reliable appliance, featuring as well performances at the top of its category.

**PREXTHERM RSW RANGE**

- **RSW QUADRA RANGE | MOD. 92÷1890**
  18 models - output from 92 to 1890 kW

- **RSW TONDA RANGE | MOD. 2300÷6000**
  6 models - output from 2360 to 6000 kW

The technical features which have been privileged in the project are:

> The careful design of the boiler body geometry, to ensure an optimum ratio between the combustion volumes and the heat exchange surfaces.
> The choice of materials used, in order to grant quality and long-lasting operation.
> 6 bars maximum operation for a high thermal efficiency.
> Prextherm RSW can be supplied with a thermostatic control board or an evolved one, equipped with EBM system (Efficient Boiler Management), featuring a controller for the boiler and the circuits management.
The tube bundle has been positioned above the combustion chamber, in order for flues evacuation to occur through a hot environment, thus preventing the formation of condensate.

The burner is not aligned with the combustion chamber, but has been moved downwards. This choice helps the reversal of the flame, reduces the pressure drop on the flue gas side and as a consequence extends the operating range of the generator.

The combustion chamber is completely cooled (even in the back side); this implies a greater heat exchange surface and improves a uniform distribution of the thermal load onto combustion chamber’s walls.

The boiler body is fully insulated with a 80 mm thick layer of glass wool, which is externally lined by a sturdy layer of tearproof material.

A deflector has been positioned close to the circuit return connection. It improves circulation of colder water coming from the circuit towards the lower side of the boiler. This solution permits a uniform distribution of heating carrier fluid on the whole heating exchange surface of the boiler, combining the maximum heating exchange along with the minimum stress on the materials.

New turbulators have been studied specifically for Prextherm RSW. Besides improving flues thermal exchange, they grant smaller pressure drops than other solutions.
Boiler’s front door has been conceived with a new system for locking and centering mechanism, particularly solid in its construction. In this way high temperature flues outflows are prevented to occur, avoiding future consequences such as materials burning and deformations over time.

The thread of door’s hinge allows a **micrometric adjustment** which can be made in a very simple way, even by a single operator. The flue pipes protrudes from the rear plate by a few millimetres in order to increase the temperature near the welding. This prevents the formation of condensate and the consequent corrosion of the materials.

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**TECHNICAL FEATURES**

**PRODUCT PLUS**

Front door has been studied with a reversible opening, both righthand or left-hand. The purpose is improving flexibility in positioning the generator in the boiler room and moreover helping inspection and maintenance operation on the boiler’s combustion chamber. Besides sealing the combustion chamber, the door is an integral part of the flues path.

Special attention has been focused on the insulation, so as to guarantee the smallest heat loss and maximum resistance to high temperatures.

Up to RSW 940 burner is lined by a double layer insulation: the first in prefab fiber and the second in carbiool. On larger models the front door is insulated by refractory cement.
Prextherm RSW is supplied either with a thermostatic control panel or with an evolved version, featuring EBM system (Efficient Boiler Management), i.e. an electronic controller which offers a customisable management of the boiler and circuit.

> EBM / EVOLVED

- Handles single stage, two stages, modulating burners
- Manages high temperature or mixed circuits, with climatic compensation
- Handles domestic hot water production through storage tank, included legionella function
- Manages modular operation of generators via bus
- Heating and DHW planning, daily or weekly
- Management of solar system, solid fuel boiler
- Settable relays and probes connections, enabling numerous functions
- Boiler and circuit protection function
- Diagnostics on operation of burner and circuit components

> BASIC / THERMOSTATIC

- Compatible with one or two stages burners
- Display interface and LED diagnostics showing operating status and anomalies
- Pre-arrangement for connection of an electronic controller (optional)
- Simple adjustment and parameters reading, even for unskilful users

> INCLUDES: 1 Pump ON switch 2 Burner ON switch 3 Boiler ON switch 4 Test button 5 Safety button with manual reset 6 Boiler water temperature 7 Boiler ON LED 8 1st stage burner LED 9 2nd stage burner LED 10 Burner lockout LED 11 Safety pressure switch LED 12 2nd stage control thermostat TR1 13 1st stage control thermostat TR1 14 Housing for optional electronic controller (not supplied)
PREXTERM RSW 92÷1890
DIMENSIONS - TECHNICAL DATA

**MODEL**
- Heat Output
  - min kW: 60
  - max kW: 92
- Heat Input
  - min kW: 64.3
  - max kW: 99.5
- Water content dm³
  - 120
- Efficiency at Pn max Tm 70°C %
  - 92.48
- Efficiency at Pn min Tm 70°C %
  - 93.33
- Efficiency at 50% Pn max Tm 50°C %
  - 93.95
- Max operating pressure bar
  - 6
- Pressure drop water side
  - Δt 10°C Δt mbar
  - 8
- Pressure drop flue gas side
  - Δt mbar
  - 0.5
- Flue gas flow-rate max
  - kg/h
  - 150
- Light oil kg/l
  - 159
- Empty weight (complete boiler) kg
  - 258
- Dimensions
  - A mm
    - 760
  - B mm
    - 764
  - C mm
    - 866
  - D mm
    - 165
- System flow
  - T1 DN
    - 2
  - T2 DN
    - 2
  - T3 DN
    - 3/4
  - T4 DN
    - 3/4
- Flue gas stack
  - T5 Ø mm
    - 200

In case of matching with heavy oil burner the indicated heat output has to be reduced around 10%
### Prextherm RSW 2360÷6000

#### Dimensions - Technical Data

<table>
<thead>
<tr>
<th>MODEL</th>
<th>2360</th>
<th>3000</th>
<th>3600</th>
<th>4000</th>
<th>4500</th>
<th>5000</th>
<th>6000</th>
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<tr>
<td>Heat Output min kW</td>
<td>1535</td>
<td>1950</td>
<td>2340</td>
<td>2600</td>
<td>2926</td>
<td>3251</td>
<td>3802</td>
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<tr>
<td>max kW</td>
<td>2360</td>
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<td>3600</td>
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<tr>
<td>Heat Input min kW</td>
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<td>max kW</td>
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<td>3250</td>
<td>3900</td>
<td>4334</td>
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<td>Water content dm³</td>
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<td>3515</td>
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<tr>
<td>Efficiency at Pn max Tm 70°C %</td>
<td>92,30</td>
<td>92,31</td>
<td>92,45</td>
<td>92,47</td>
<td>92,55</td>
<td>92,40</td>
<td>93,30</td>
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<tr>
<td>Efficiency at Pn min Tm 70°C %</td>
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<td>92,31</td>
<td>92,45</td>
<td>92,47</td>
<td>92,55</td>
<td>92,40</td>
<td>93,30</td>
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<tr>
<td>Efficiency at 30% Pn max Tm 50°C %</td>
<td>92,30</td>
<td>92,31</td>
<td>92,45</td>
<td>92,47</td>
<td>92,55</td>
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<tr>
<td>Efficiency at 30% Pn min Tm 50°C %</td>
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<td>92,31</td>
<td>92,45</td>
<td>92,47</td>
<td>92,55</td>
<td>92,40</td>
<td>93,30</td>
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<tr>
<td>Max operating pressure bar</td>
<td>2360</td>
<td>3000</td>
<td>3600</td>
<td>4000</td>
<td>4500</td>
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<td>Pressure drop water side at 10°C Δt mbar</td>
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<td>200</td>
<td>250</td>
<td>300</td>
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<td>at 20°C Δt mbar</td>
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<td>50</td>
<td>60</td>
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<td>80</td>
<td>90</td>
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<td>8,2</td>
<td>9,5</td>
<td>10,5</td>
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<td>Flue gas flow-rate max gas kg/h</td>
<td>3670</td>
<td>4794</td>
<td>5884</td>
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<td>light oil kg/h</td>
<td>4108</td>
<td>5205</td>
<td>6246</td>
<td>7041</td>
<td>8046</td>
<td>9051</td>
<td>11000</td>
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<td>Empty weight (complete boiler) kg</td>
<td>3550</td>
<td>4490</td>
<td>4900</td>
<td>5784</td>
<td>6795</td>
<td>8660</td>
<td>10383</td>
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</tbody>
</table>

#### Dimensions

| Dimensions | 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 | O mm | P mm | Q mm | R mm | S mm | T1 DN | T2 DN | T3 DN | T4 DN | T5 Ø mm |
|------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| System flow | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| System return | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 |
| Safety pipe connection | 100 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 | 125 |
| Boiler drain | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 |

In case of matching with heavy oil burner the indicated heat output has to be reduced around 10%.

**Key**

1. Boiler body
2. Front door
3. Rear flues chamber
4. Jacket frame
5. Control board
6. Turbulators
7. Data label
8. Return connection label
9. Flow connection label
10. Front door label
11. Burner door label
12. Check label
13. Sheath
14. Operating thermostat
15. Front door hinges
16. ID label
17. System flow
18. System return
19. Expansion tank connection
20. Boiler drain
21. Chimney stack
22. Burner connection

**Notes**

- System flow and system return labels are not included in the boiler.
NOTICE FOR DEALERS:
As part of its efforts to constantly improve its range of products, with the aim of increasing the level of customer satisfaction, the company stresses that the appearance, dimensions, technical data and accessories may be subject to variation.

Consequently, ensure that the customer is provided with up-to-date technical and/or sales documents.

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