Installation and Service Instructions

Low-temperature oil/gas boiler

Logano G615
Boilers for oil/gas-fired power burners

Read carefully prior to installation and maintenance

WARNING:
If installation, adjustment, modification, operation or maintenance of the heating system is carried out by an unqualified person, this may result in personal injury or property damage. The directions of this installation manual must be followed precisely. If support or additional information is required, contact a qualified service company, service provider or the gas company.

WARNING:
Observe the safety instructions of this installation manual before placing the heating appliance in operation. The operating manual is a component of the technical documentation and must be handed over to the operator of the heating system. Explain to the owner or operator how to use the heating system using the operating instructions. Make sure that he has been familiarized with all information required for the operation of the heating system.

This manual is available in the English and French language.

Please keep this manual for future reference.
About this manual

The appliance has been tested to meet all national requirements in effect on the date of manufacture. The certificates are on file with the manufacturer.

This installation and maintenance instructions contain important information for the safe and proper installation, initial start-up and maintenance of the oil/gas-fired boiler Logano G615.

These service and installation instructions are designed for specialists, who, due to their vocational training and experience, are knowledgeable in handling heating systems and oil and gas installations.

The oil/gas-fired boiler Logano G615 is available in two variants (disassembled and assembled).

These installation and service instructions explain the installation and service of both boiler types.
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1 Guideline to symbols and safety instructions

1.1 Guideline to symbols

Warnings

- **NOTICE** indicates that damage to property may occur.
- **CAUTION** indicates possible minor to medium personal injury.
- **WARNING** indicates possible severe personal injury.
- **DANGER** indicates a potential for loss of life.

Important Information

Additional symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>▶</td>
<td>Sequence of steps</td>
</tr>
<tr>
<td>➔</td>
<td>Cross-reference to other points in this document or to other documents</td>
</tr>
<tr>
<td>•</td>
<td>Listing/list entry</td>
</tr>
<tr>
<td>–</td>
<td>Listing/list entry (2nd level)</td>
</tr>
</tbody>
</table>

Table 1

1.2 Safety instructions

Danger from failing to consider your own safety in an emergency such as a fire

- Never risk your own life. Your own safety must always take the highest priority.

Risk due to oil leaks

- When using oil as the fuel, national regulations hold the operator responsible for immediately asking a specialist contractor to remedy oil leaks the moment they are discovered.

If you smell gas

- Close the gas shut-off valve.
- If you hear gas escaping, evacuate the affected area immediately.
- Open the windows.
- Do not operate any electrical switches or equipment such as telephones, power plugs and doorbells.
- Extinguish all open flames.
- Do not smoke.
- Do not use lighters.
- Warn all occupants of the building, but do not ring doorbells.
- Call your gas utility company and your local heating contractor from outside the building. If necessary, notify police or the fire department.

If you smell flue gas

- Switch OFF the appliance.
- Open windows and doors.
- Inform a trained and certified heating contractor.

Danger of electric shock when the control panel is open

- Always de-energize the control panel before working on electrical parts (circuit breaker).
- Take provisions against unintentional reconnection.

Danger of poisoning due to flue gas if supply of combustion air is insufficient

- Safeguard supply of combustion air.
- Do not cover or reduce the size of ventilation openings in doors, windows and walls.
- Safeguard sufficient supply of combustion air also for appliances installed at a later date, e.g. kitchen exhaust fans, clothes dryers, and air conditioning units with vent to the outside.
- Never operate the appliance if the supply of combustion air is insufficient.

Combustion air / room air

To prevent corrosion, keep the supply of combustion air / room air free of corrosive substances (e.g. halogenated hydrocarbons that contain chlorine or fluorine compounds).

Danger of explosion of flammable gases.

- Only employ a trained and certified contractor to carry out work on the gas train.

Explosive and easily combustible materials

Never use or store easily combustible materials (paper, thinners, paints, etc.) near the appliance.

Installation, conversion

Only have the appliance installed or modified by a trained and certified heating contractor.

Never modify any parts that carry flue gas.

Never close the outlet of safety valves. Water may be expelled from any safety valve during heat-up.

Inspection and maintenance

The operator is responsible for safety and environmental compliance of the heating system.

Sign a maintenance and inspection contract with a trained and certified contractor, covering an annual inspection and demand-dependent maintenance. This guarantees high efficiency and environmentally sound combustion.
2 Product description

The boiler is a low-temperature boiler for oil or gas power burners with constant or reset boiler water temperature control without minimum return temperature.

NOTICE: Risk of system damage from use of incorrect burner.

▶ Only use burners that meet the technical requirements of the oil/gas-fired boiler Logano G615 (→ Chapter 3, page 9).

The main components of the Logano G615 oil/gas-fired boiler are:

- The boiler heat exchanger transfers the heat generated by the burner to the boiler water.
- The boiler jacket and thermal insulation minimize energy loss.
- The control panel serves to monitor and control all electrical boiler components.

![Diagram of Oil/gas-fired boiler Logano G615](image)

Fig. 1  Oil/gas-fired boiler Logano G615

[1] Boiler shell (jacket)
[2] Thermal insulation
[3] Boiler heat exchanger
[4] Control panel assembly
The Logano G615 oil/gas-fired boiler is supplied with or without a burner. You can obtain undrilled or predrilled burner plates (hole pattern depends on burner) as accessories from Buderus.

The predrilled burner plate is included in the scope of delivery for the Logano G615 with oil or gas-fired fan-assisted burners.

### Designated use

The Logano G615 oil/gas-fired boilers have been designed for the heating of boiler water.

The Logano G615 can be operated with oil, gas, and combination burners. For a list of the approved burners, please contact Bosch Thermotechnology Corp.

This boiler can be operated with an aquastat, the Logamatic 4000, and other control systems.

### Fuels

<table>
<thead>
<tr>
<th>Logano G615</th>
<th>Heating oil</th>
<th>Liquid propane (LPG)</th>
<th>Natural Gas (NG)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Remark</strong></td>
<td>The Logano G615 boiler can be operated with the specified fuels. Select a burner suitable for use with the fuels specified for the Logano G615 boiler. The output figures shown in the Tab. “Technical Data” are nominal power figures. Carry out maintenance and cleaning procedures annually. Check that the entire system is functioning correctly. Immediately remedy faults. If heating oil is used, shorter maintenance intervals may be necessary depending on the operating time.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### During installation and operation of the heating system, observe all national standards and guidelines! Also observe the details on the boiler rating plate.

### To prevent boiler contamination, we recommend installing a dirt trap in the water system.

### As a basic rule, flush existing systems before connecting the boiler.

#### Fig. 2  Front jacket

[1] Burner door panel

#### Table 2  Fuels

2.1 Designated use

The Logano G615 oil/gas-fired boilers have been designed for the heating of boiler water.

The Logano G615 can be operated with oil, gas, and combination burners. For a list of the approved burners, please contact Bosch Thermotechnology Corp.

This boiler can be operated with an aquastat, the Logamatic 4000, and other control systems.
2.2 Operating conditions
Thermostream technology is a unique feature of Buderus cast iron boilers. Return water is preheated and mixed within the boiler before it comes in contact with the heating surface of the combustion chamber. The Thermostream technology ensures there is an even temperature distribution in the boiler and avoids condensate forming within the combustion chamber. This unique feature reduces thermal stress, the main cause of failure of traditional cast iron boilers. The advantage of this technology is the maintenance of the minimum operating temperature of the boiler (→ Tab. 3); this makes the installation of a shunt pump unnecessary. This way, the costs for the pump itself and its power consumption, as well as possible failure costs are saved. The minimum boiler operating temperature as shown in the table below must be reached within 10 minutes and then be maintained while the burner is running.

<table>
<thead>
<tr>
<th>Control of all heating zones with Buderus 4000</th>
<th>External controls (BMS) or with Buderus 4212 with ZM 427 or Aquastat control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum flow rate</td>
<td>none</td>
</tr>
<tr>
<td>Minimum return temperature °F (°C)</td>
<td>none</td>
</tr>
<tr>
<td>Minimum operating temperature oil boiler¹) °F (°C)</td>
<td>122 (50)</td>
</tr>
<tr>
<td>Minimum operating temperature gas boiler NOT DEFINED °F (°C)</td>
<td>122 (50)²</td>
</tr>
<tr>
<td>Maximum supply temperature °F (°C)</td>
<td>212³⁄248⁴</td>
</tr>
<tr>
<td>Maximum operating pressure PSI (bar)</td>
<td>87 (6)</td>
</tr>
<tr>
<td>For operation with two-stage oil and gas burners</td>
<td>–</td>
</tr>
<tr>
<td>Time constant of the temperature controller sec</td>
<td>40</td>
</tr>
<tr>
<td>Time constant of the monitor/limiter sec</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 3
1) This temperature has to be reached within ten minutes of the burner starting and has to be maintained whilst the burner is firing.
2) 65 with partial load < 60 % °C
3) The maximum supply temperature is 212 °F (100 °C), if the boiler is operated as hot water boiler.
4) The maximum supply temperature is 248 °F (120 °C), if the boiler is operated as a hot water generator.

A heating zone with a mixing valve improves controllability and is specifically recommended for systems with differing water temperature zones.

This operating condition can be easily achieved by the controls monitoring the boiler temperature and reducing the flow rate through the boiler until the required temperature is reached. This is then maintained by continuing to control flow based on the boiler water temperature. The controls can reduce the flow rate by closing the valves on the mixed heating circuits, modulating the boiler primary pumps, closing the motorized butterfly valves or by having a motorized valve in the boiler return on a single boiler installation. The Buderus 4000 series controls can manage this process or it can be completed by the BMS.

If it is not possible for the control panel to regulate the flow sufficiently to meet this operating condition, then a shunt pump circuit must be fitted to avoid the type of thermal stress that all boilers would experience in these conditions. This shunt pump circuit can be controlled either with a Buderus 4000 control or with a third-party controller. Failure to ensure that the operating condition is maintained may lead to thermal stress in the boiler and eventual failure of the sections which would be outside the scope of the warranty.

2.3 Compliance with standards and regulations
Installation and operation of the system must comply with all applicable codes, regulations and statutory requirements.
Installation, connection of the fuel supply and flue connector, commissioning, connection of the electrical power supply, servicing and repair may only be carried out by a trained and certified heating contractor. Only registered gas fitters may carry out work on the gas train.

The system must be cleaned and serviced once a year. The operation of the complete system must be tested at the same time. Any faults must be corrected immediately.

The design and mode of operation of this boiler comply with the American National Standard ANSI Z21.13/CSA4.9, latest edition for Gas Fired Low Pressure Steam and Hot Water Boilers.

Other confirmed approvals and certifications are indicated by labels on the boiler.

The heat exchanger has been designed and certified in accordance with the ASME Boiler and Vessel Code, Section IV.

Installation of the wall mounted condensing gas boiler must comply with all applicable codes and regulations imposed by the national, Federal or local authorities and bodies. If no specific requirements are defined, in the USA, the latest edition of the National Fuel Gas Code ANSI Z223.1/ NFPA 54 applies. In Canada, installation must comply in all respects with the latest edition of the Installation Code for Gas Burning Appliances and Equipment, CAN/CSA-B.149 and the applicable local regulations and requirements for the appliance category. The relevant authorities and regulatory bodies must be informed before installation starts.
Where required by local regulations, the system must comply with the American Society of Mechanical Engineers Safety Code for Controls and Safety Devices for Automatically Fired Boilers (ASME CSD-1).

The hot water distribution system must comply with all applicable codes and regulations. When replacing an existing boiler, it is important to check the condition of the entire hot water distribution system to ensure safe operation.

In the Commonwealth of Massachusetts, this appliance must be installed by a licensed plumber and gas fitter. Valves external to the boiler must be fitted with T-handles and condensate piping must be installed in accordance with the State Plumbing Code.

2.4 Additional regulations for installations in the Commonwealth of Massachusetts

(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

• INSTALLATION OF CARBON MONOXIDE DETECTORS. At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gasfitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gasfitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.
  – In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.
  – In the event that the requirements of this subdivision cannot be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

• APPROVED CARBON MONOXIDE DETECTORS. Each carbon monoxide detector as required in accordance with the above provisions shall comply with NPA 720 and be ANSI/UL 2034 listed and IAS certified.

• SIGNAGE. A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (½) inch in size, “GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS”.

• INSPECTION. The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspections, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CRM 5.08(2)(a) 1 through 4.

(b) EXEMPTIONS: The following equipment is exempt from 248 CRM 5.08(2)(a) 1 through 4:
  • The equipment listed in Section 10 entitled “Equipment Not Required To Be Vented” in the most current edition of NFPA 54 as adopted by the board; and
  • Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) MANUFACTURERS REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM REQUIRED. When the manufacturer of Product Approved side wall horizontally mounted gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for the installation of the equipment and venting shall include:
  • Detailed instructions for the installation of the venting system or the venting system components; and
  • A complete parts list for the venting system design or venting system.

(d) MANUFACTURERS REQUIREMENTS - GAS EQUIPMENT VENTING SYSTEM NOT PROVIDED. When the manufacturer of Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for the venting of flue gases, but identifies “special venting systems”, the following requirements shall be satisfied by the manufacturer:
  • The referenced “special venting systems” shall be included with the appliance or equipment installation instructions; and
  • The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

(e) A copy of all instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or venting design instructions shall remain with the appliance or equipment at the completion of the installation.
3 Specifications

The technical data provides information about the output profile of the Logano G615.

**Fig. 3 Connections and dimensions**

- **[AA]** Flue gas spillage
- **[EL]** Drain valve (Rp ¾) 1)
- **[LK]** Boiler heat exchanger length
- **[LG]** Overall boiler length
- **[RK]** Return connection on the boiler 2)
- **[VK]** Supply connection on the boiler 3)

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1) With the drain valve (EL), you may only drain the system, not fill it.
2) The filling of the boiler and the system must be undertaken on a separate connector on the return line.
3) The flange corresponds to the order reduced to 212 (DN100), 176 (DN80) or 149 (DN65).
### Specifications

#### Logano G615

<table>
<thead>
<tr>
<th>Number of boiler sections</th>
<th>Unit</th>
<th>570</th>
<th>660</th>
<th>740</th>
<th>820</th>
<th>920</th>
<th>1020</th>
<th>1110</th>
<th>1200</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler capacity</td>
<td>Btu/hr</td>
<td>1951</td>
<td>2242</td>
<td>2532</td>
<td>2822</td>
<td>3112</td>
<td>3402</td>
<td>3692</td>
<td>3982</td>
</tr>
<tr>
<td>Gross output</td>
<td>(kW)</td>
<td>(570)</td>
<td>(660)</td>
<td>(740)</td>
<td>(820)</td>
<td>(920)</td>
<td>(1020)</td>
<td>(1110)</td>
<td>(1200)</td>
</tr>
<tr>
<td>Net AHRI rating water, gas</td>
<td>Btu/hr</td>
<td>1697</td>
<td>1950</td>
<td>2202</td>
<td>2454</td>
<td>2706</td>
<td>2958</td>
<td>3210</td>
<td>3463</td>
</tr>
<tr>
<td>Net AHRI rating water, oil</td>
<td>Btu/hr</td>
<td>1697</td>
<td>1950</td>
<td>2202</td>
<td>2454</td>
<td>2706</td>
<td>2958</td>
<td>3210</td>
<td>3463</td>
</tr>
<tr>
<td>Input rating gas</td>
<td>Btu/hr</td>
<td>2309</td>
<td>2670</td>
<td>3031</td>
<td>3392</td>
<td>3753</td>
<td>4113</td>
<td>4474</td>
<td>4835</td>
</tr>
<tr>
<td>Input rating oil</td>
<td>gph</td>
<td>9 (16)</td>
<td>10 (18.5)</td>
<td>11 (21)</td>
<td>12 (23.5)</td>
<td>13 (26)</td>
<td>14 (28.5)</td>
<td>15 (31)</td>
<td>16 (33)</td>
</tr>
<tr>
<td>Overall boiler length (L_o)</td>
<td>inches (mm)</td>
<td>75 53/64” (1926)</td>
<td>82 33/64” (2096)</td>
<td>89 7/32” (2266)</td>
<td>95 29/32” (2436)</td>
<td>102 19/32” (2606)</td>
<td>109 19/64” (2776)</td>
<td>115 63/64” (2946)</td>
<td>122 43/64” (3116)</td>
</tr>
<tr>
<td>Boiler block length (L_k)</td>
<td>inches (mm)</td>
<td>71 1/64” (1804)</td>
<td>77 23/32” (1974)</td>
<td>84 13/32” (2144)</td>
<td>91 7/64” (2314)</td>
<td>97 51/64” (2484)</td>
<td>104 31/64” (2654)</td>
<td>111 3/16” (2824)</td>
<td>117 7/8” (2994)</td>
</tr>
<tr>
<td>Single boiler section size (B × H × T)</td>
<td>inches (mm)</td>
<td>43 9/64” × 64 9/16” × 6 45/64” (1096 × 1640 × 170)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiler block transport size (B × H × L)</td>
<td>inches (mm)</td>
<td>43 9/64” × 64 9/16” × L_k (1096 × 1640 × L_k)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Combustion chamber length (L_F)</td>
<td>inches (mm)</td>
<td>60 1/32” (1525)</td>
<td>66 47/64” (1695)</td>
<td>73 27/64” (1865)</td>
<td>80 1/8” (2035)</td>
<td>86 13/16” (2205)</td>
<td>93 1/2” (2375)</td>
<td>100 13/64” (2545)</td>
<td>106 7/8” (2715)</td>
</tr>
<tr>
<td>Combustion chamber diameter</td>
<td>inches (mm)</td>
<td>26 49/64” (680)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burner door thickness</td>
<td>inches (mm)</td>
<td>5 45/64” (145)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight, net 1)</td>
<td>lbs. (kg)</td>
<td>5.523 (2505)</td>
<td>6.056 (2747)</td>
<td>6.592 (2990)</td>
<td>7.125 (3232)</td>
<td>7.661 (3475)</td>
<td>8.179 (3710)</td>
<td>8.715 (3953)</td>
<td>9.143 (4147)</td>
</tr>
<tr>
<td>Boiler water content</td>
<td>gal (l)</td>
<td>148.25 (561)</td>
<td>164 (621)</td>
<td>180 (681)</td>
<td>195.75 (741)</td>
<td>211.5 (801)</td>
<td>227.5 (861)</td>
<td>243.25 (921)</td>
<td>259.25 (981)</td>
</tr>
<tr>
<td>Gas capacity</td>
<td>gal (l)</td>
<td>243.5 (922)</td>
<td>271.25 (1027)</td>
<td>299 (1132)</td>
<td>326.75 (1237)</td>
<td>354.5 (1342)</td>
<td>382.25 (1447)</td>
<td>410 (1552)</td>
<td>437.75284 (1657)</td>
</tr>
<tr>
<td>Flue gas temperature partial load 60 %</td>
<td>°F (°C)</td>
<td>284 (140)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flue gas temperature full load</td>
<td>°F (°C)</td>
<td>338 – 356 (170 – 180)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flue gas mass flow rate, oil, partial load 60 %</td>
<td>°F (°C)</td>
<td>32.77 (0.1537)</td>
<td>32.32 (0.1778)</td>
<td>32.359 (0.1995)</td>
<td>32.397 (0.2207)</td>
<td>32.446 (0.2479)</td>
<td>32.495 (0.275)</td>
<td>32.539 (0.2992)</td>
<td>32.582 (0.3234)</td>
</tr>
<tr>
<td>Flue gas mass flow rate oil, full load2)</td>
<td>lbs./s (kg/s)</td>
<td>0.5115 – 0.5765 (0.232 – 0.2615)</td>
<td>0.5714 – 0.6676 (0.2592 – 0.3028)</td>
<td>0.6616 – 0.7487 (0.3001 – 0.3396)</td>
<td>0.7416 – 0.8296 (0.3364 – 0.3763)</td>
<td>0.8217 – 0.9308 (0.3727 – 0.4222)</td>
<td>0.9218 – 1.0313 (0.4181 – 0.4678)</td>
<td>1.0218 – 1.1228 (0.4635 – 0.5093)</td>
<td>1.1118 – 1.2136 (0.5043 – 0.5505)</td>
</tr>
</tbody>
</table>

Table 4 Technical data and dimensions
4 Scope of delivery

The boiler can be delivered either as a pre-assembled block or in loose sections.

▶ After delivery, check all packaging for perfect condition.
▶ Check the delivery for completeness.

4.1 Logano G615 – Delivery as a pre-assembled block

<table>
<thead>
<tr>
<th>Component</th>
<th>Qty</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiler heat exchanger</td>
<td>1</td>
<td>Pallet</td>
</tr>
<tr>
<td>Fittings</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Assembly parts</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Jacket pack A</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Jacket pack B</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Thermal insulation</td>
<td>1</td>
<td>Foil pouch</td>
</tr>
</tbody>
</table>

Table 5 Scope of delivery (block delivery)

4.2 Logano G615 – Delivery in loose sections

<table>
<thead>
<tr>
<th>Component</th>
<th>Qty</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front, rear, intermediate section with top supply connection and burner door</td>
<td>1</td>
<td>Pallet</td>
</tr>
<tr>
<td>Central sections (depending on boiler size)</td>
<td>2–5</td>
<td>Pallet</td>
</tr>
<tr>
<td>Fittings basic unit, 9 – 16 pieces</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Additional fittings (content depends on boiler size)</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Assembly parts</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Jacket pack A</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Jacket pack B</td>
<td>1</td>
<td>Crate</td>
</tr>
<tr>
<td>Thermal insulation</td>
<td>1</td>
<td>Foil pouch</td>
</tr>
<tr>
<td>Tie rods set with spring packages</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 6 Scope of supply (loose sections)
5 Transporting the boiler

Use suitable equipment to transport the individual boiler sections (delivery as loose sections) and other individual parts.

**WARNING:** Risk of injury from improperly secured boiler sections.
- Use only suitable means of transportation when handling the boiler sections, e.g. a sack truck with strap or heavy duty dolly.
- Secure the individual boiler sections to prevent them from sliding off when transporting them.

**NOTICE:** Risk of system damage from impacts.
- The standard delivery of the Logano G615 oil/gas-fired boiler contains components that are sensitive to shock.
- During handling protect all electronic and other components against impact.
- Please observe the transport instructions on the packaging.

Dispose of packaging in an environmentally responsible manner.

6 Positioning the boiler

This chapter describes how to properly position the Logano G615.

**NOTICE:** Risk of system damage from contamination.
- If you intend to keep the boiler in storage once it has been assembled, observe the following:
- Protect the boiler connections against contamination by sealing them off or covering them.

6.1 Tools and auxiliary materials

The following tools and auxiliary materials are required for the boiler assembly (the listed items are not contained in the scope of delivery).
- Boiler assembly tool 2.3
- Installation kit (accessory)
- Steel hammer and wooden or rubber mallet
- Half-round bastard file
- Screwdriver (Philips and flat head)
- Flat chisel, support wedge, flat iron
- Metric wrenches
- Cleaning rags and cloth
- Fine emery cloth
- Wire brush
- 3-in-1 oil
- Solvent (gasoline, mineral spirits)
- Level, tape measure, chalk, straight edge

**Boiler assembly tool size 2.3**

![Boiler assembly tool size 2.3](image)

**Fig. 4 Boiler assembly tool size 2.3 (dimensions in mm)**

- Mating flange
- Additional flange
- Compression unit
- Tie rod
- Extension
- Wedge (size 2.3)
- L₁ 121 1/4" (3080 mm)
- L₂ 31 1/2" (800 mm)

**Table 7 Boiler assembly tool size 2.3 (complete in the toolbox)**

<table>
<thead>
<tr>
<th>Boiler sections</th>
<th>Assembly tool(s) per boiler hub</th>
<th>Extension piece per boiler hub</th>
<th>Length (total) in inches (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 – 16</td>
<td>1</td>
<td>3</td>
<td>121 1/4 (3080)</td>
</tr>
</tbody>
</table>

For the correct arrangement of the flange when performing the assembly procedure, refer to page 17.
6.2 Recommended wall clearances

The burner door can be hung with the hinges on the right or left. The wall clearance on the hinge side must be at least the burner projection (AB). A distance of AB + 4" (AB + 100 mm) from the wall is recommended.

If you do not observe the recommended minimum wall clearances, you will not be able to use the cleaning kit. Alternatively shorter cleaning devices or wet cleaning may be used.

Table 8  Recommended and minimum wall clearances

<table>
<thead>
<tr>
<th>Boiler capacity</th>
<th>Clearance A inch (mm)</th>
<th>Sections</th>
<th>Recommended</th>
<th>minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,944,921 – 2,797,956 (570 – 820)</td>
<td>9 – 12</td>
<td>90 35/64&quot; (2300)</td>
<td>59 1/8&quot; (1500)</td>
<td></td>
</tr>
<tr>
<td>3,139,170 – 4,094,570 (920 – 1200)</td>
<td>13 – 16</td>
<td>118 7/64&quot; (3000)</td>
<td>59 1/16&quot; (1500)</td>
<td></td>
</tr>
</tbody>
</table>

6.3 Installing the boiler on a boiler base or foundation

Place the boiler on a 2 – 4 inch (450 – 100 mm) tall base (observe wall clearances). The base must be flat and level. The front edge of the boiler should be flush with the edge of the base.

When pouring a foundation for the boiler, use the steel inserts with the following dimensions:

3 15/16 × 1 31/32 × 5/16 inches (100 × 50 × 8 mm) or sheet metal with the dimensions 3 15/16 × 13/64 inches (100 × 5 mm).

Table 9  Base dimensions for angle or sheet metal steel lengths

<table>
<thead>
<tr>
<th>Number of boiler sections</th>
<th>L1 (base) inch (mm)</th>
<th>L2 (steel section) inch (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>65 3/4&quot; (1670)</td>
<td>57 7/8&quot; (1470)</td>
</tr>
<tr>
<td>10</td>
<td>72 7/16&quot; (1840)</td>
<td>64 9/16&quot; (1640)</td>
</tr>
<tr>
<td>11</td>
<td>79 9/64&quot; (2010)</td>
<td>71 1/4&quot; (1810)</td>
</tr>
<tr>
<td>12</td>
<td>85 53/64&quot; (2180)</td>
<td>77 61/64&quot; (1980)</td>
</tr>
<tr>
<td>13</td>
<td>92 33/64&quot; (2350)</td>
<td>84 41/64&quot; (2150)</td>
</tr>
<tr>
<td>14</td>
<td>99 7/32&quot; (2520)</td>
<td>91 11/32&quot; (2320)</td>
</tr>
<tr>
<td>15</td>
<td>105 29/32&quot; (2690)</td>
<td>98 1/32&quot; (2490)</td>
</tr>
<tr>
<td>16</td>
<td>112 19/32&quot; (2860)</td>
<td>104 23/32&quot; (2660)</td>
</tr>
</tbody>
</table>
7 Boiler block assembly

### 7.1 Assembly of a boiler block from sections

**WARNING:** Risk of injury from insufficiently secured boiler sections.  
- Secure boiler sections during assembly and take measures to prevent them from tipping over. The installation aid (accessory) is available from Buderus on request.

---

**Fig. 7** Assembled boiler block

1. Boiler base or foundation  
2. Draft diverter  
3. Rear section  
4. Intermediate section with supply connection  
5. Intermediate section  
6. Tie rod  
7. Sequence of installation  
8. Front section  
9. Burner door with burner plate

A distinction is made between delivery as a pre-assembled block and delivered as disassembled sections. When delivered as a block, the boiler sections are already fully assembled and checked for leaks prior to delivery. If the assembled boiler is too large or too heavy to be brought to its final installation location in the building, delivery of the disassembled boiler in sections offers a solution.

The assembly of the boiler block from individual sections is described below.

For details on final assembly of the remainder of the boiler, see Chapter 7.3, page 19.
7.2 Joining the boiler block assembly (delivery as loose sections)

Preparing boiler sections

► Remove nuts and washers from the studs on the hubs of the boiler sections before attaching the rear section and front section.
► Put the rear section in place and secure during assembly taking measures to prevent tipping over (Fig 8 and separate instructions for installation).
► File down any burrs on the hubs if necessary.

Fig. 9 Filing down burrs on the hub
► Clean the packing grooves where required using a wire brush and cloth.

![Fig. 9 Filing down burrs on the hub](image)

Fig. 10 Coating the hub sealing faces
[1] Sealing face of top hub
[2] Sealing face of bottom hub
[3] Packing groove
► Clean nipple with a rag soaked in solvents or gasoline and coat evenly with sealant.

![Fig. 10 Coating the hub sealing faces](image)

**WARNING:** Danger of fire from combustible cleaning agents.
► When using solvents, avoid open flames, ambers and sparks.
► Please observe the safety instructions regarding any solvents used.

► Clean the hub sealing faces with a rag soaked in solvents or gasoline.
► Evenly coat the hub sealing faces with sealant.

The next step involves preparing the nipples that will eventually seal the boiler sections.

**WARNING:** Health hazard from noxious vapors released during material handling, such as solvents, primers or sealant.
► Ensure adequate ventilation of the installation area.
► Please note the handling and safety instructions of the product used.

► Insert nipple directly into the top (size 4, 181/70) and bottom (size 2, 119/50) hub on the rear section.
► Strike the nipple with hefty hammer strokes in a cross pattern.

The top nipple must protrude approx. 1 3/4" (43 mm) and the bottom nipple approx. 1 1/4" (32 mm) out of the corresponding hubs.

► Remove any burrs with a file.

The packing grooves must be clean and dry for the sealant rope to adhere properly.
Boiler block assembly

Fig. 11  Driving nipples home
▶ Coat the packing grooves with adhesive (primer).

Fig. 12  Coat the packing grooves with adhesive (primer)
[1] Packing grooves
[2] Sealant rope
[3] Butt joints

Prepare the first intermediate section (with top supply connection):
▶ File down any burrs on the hub.
▶ The packing springs must be clean and dry. Clean if necessary.
▶ Clean the hub sealing faces with a rag soaked in mineral spirit or gasoline.

Fig. 13  Inserting sealant rope
[1] Packing grooves
[2] Sealant rope
[3] Butt joints

Do not let sealant rope overlap at the left and right of the butt joints (➔ Fig. 13, [3]).

Fig. 14  Preparing the center section
[1] Sealing face of the hub
[2] Packing springs
▶ Evenly coat the hub sealing faces with sealant.
▶ Coat the packing springs with primer.
▶ Position the intermediate section with the supply connection so that the top and bottom hubs fit onto the nipples in the rear section. The directional arrow must point towards the rear.

Unroll the required length of sealant rope from the spool supplied. Peel the backing paper from the sealant rope when inserting into the packing groove (do not stretch).
To make installation easier, place the boiler section to be fitted onto the nipple on the top hub first. Then it is easier to align the boiler section on the bottom hub.

- Drive first intermediate section onto the rear section using a wooden or a rubber mallet.

Before the nipples are inserted in the next intermediate section, the partly-assembled boiler block must be compressed using the boiler assembly tool.

Use boiler assembly tool 2.3 (→ Fig. 4, page 12).

- Push pressure flange with clamping nuts onto the tie rods.
- Push a tie rod through the top and bottom hubs on the boiler block.
- Push mating flanges onto the tie rods and secure each with wedge.
- Hold the tie rod in the center of the hubs and slightly draw together the compression tools using the clamping nut.

**NOTICE:** The boiler can be damaged by pulling the boiler sections together incorrectly or due to excessive compression.

- Ensure that the nipples are positioned straight in the boiler hubs after being pounded in and that they have not been compromised.
- Never compress more than one nipple joint at a time.
- Stop compressing the sections when the boiler hubs meet.

**CAUTION:** Danger of accident from material fatigue. Improperly used or poorly maintained assembly tools may fail.

- Never work directly in front of the assembly tool while it is being tensioned.
- Ensure that no one is standing in front of the assembly tool.

**NOTICE:** Assembly tool damage due to loose screw connections of the tie rods.

- Always check the tie rods before each use and retighten as necessary. The tie rod is correctly positioned if it is fully inserted and no threads are showing (→ Fig. 17, [2]).
- Always keep the threads (→ Fig. 17, [1]) clean. Dirty threads may damage the assembly tool during compression.

- Place ratchet wrench onto clamping nut and compress boiler sections by tightening evenly.
- Release and remove the boiler assembly tool.
- Check nipples are seated correctly.
Boiler block assembly

Fig. 17  Boiler assembly tool 2.3

1. Screw connection of the tie rods (disassembled)
2. Screw connection of the tie rods (correctly positioned)

Fig. 18 shows the intermediate section with supply connection. The nipples for mounting of the next intermediate section are inserted into the corresponding hubs. The sealant rope has already been inserted into the packing groove. As shown for the rear section (Fig. 13, page 16), here too, the flexible sealant rope is interrupted. The boiler section has been equipped with foot wedges for ease of installation. The boiler section foot wedges are also used later for final leveling of the boiler block.

Fig. 18  Using the boiler section foot wedges

1. Sealant rope (interrupted)
2. Boiler section foot wedge

Assemble all other boiler sections as described. The front section is fitted last.

After the front section is attached, loosen the assembly tool but do not remove it. First insert the tie rods.

Fig. 19  Inserting the tie rods

1. Tie rods (bottom)
2. Tie rods (top)
3. Tie rod with spring package

The next step describes the installation of the supply pipe (see Chapter 7.4, page 19).

NOTICE: Damage to system through excessively low contact pressure.
- Do not compress the spring pack. Only use the spring pack in its original state.

- Insert the tie rods (with spring packages fitted) into the cast lugs on the top left and right, and bottom left and right, next to the boiler block hubs.
- Turn and tighten each nut on the tie rods by hand.
- Now tighten the nuts on the tie rods 1 to 1½ turns.
- Level the boiler block vertically and horizontally on the base/foundation (see Chapter 6.3, page 13). Use the boiler section foot wedges provided for this purpose (Fig. 18, page 18).
- Remove boiler assembly tool.
7.3 Setting up the boiler block – (assembled block)

DANGER: Risk of fatal injury from falling objects.
- Provide a suitable means of supporting the load.
- Observe all locally applicable occupational health & safety regulations regarding lifting equipment.

- Cut the straps.
- Remove pallet.

Fig. 20 Boiler block on pallet
[1] Securing straps
[2] Pallet
- Level the boiler block vertically and horizontally on the base/foundation. Use the boiler section foot wedges provided for this purpose.
- After leveling the boiler block, remove the transport safety brace from the top and bottom hub.

The following pages describe the installation of the supply pipe and sensor well. You must do both irrespective of whether the boiler is supplied pre-assembled or in separate sections.

Fig. 21 Removing the transport safety brace
[1] Top hub
[2] Bottom hub

7.4 Inserting the supply pipe (parts crate)

For boilers with 9 – 11 sections, the supply pipe consists of 2 pieces, and 12 – 16 sections 3 pieces.
- Push the flat gasket over the supply pipe.
- Push the supply pipe from the front into the top boiler hub.
- Close off with flange cover.

The supply pipe must be fixed in such a way that the holes on the supply pipe are positioned at the correct angle. This ensures optimum distribution of water in the area of the top boiler hub (Thermostream principle).
- Make sure that the cam [3] on the end plate of the supply pipe (Fig. 22, [3]) fits in the notch in the top boiler hub (Fig 22, [5]).
7.5 Installing sensor well (fittings crate)

Sensor well R ¾ "
- Seal and install sensor well R ¾ " from the front (length: 4 21/64" (110 mm)) into the top R ¾ " tapped hole of the supply connection.

Sensor well R ½ "
- Seal and install sensor well R ½ " from the front (length: 4 21/64" (110 mm)) into the lower R ½ " tapped hole of the supply connection.

7.6 Inserting the lower distribution tube (fittings crate)

- Mount the tapped hole for the drain connection on the bottom boiler hub behind the flange (edge length 5 – 1/8" (130 mm)) with R ¾ ".
- Fit customer-supplied boiler drain valve.

The customer-supplied boiler fill and drain valve is only used as a drain valve here.

The length and number of the lower distribution tube elements depends on the boiler size and can be determined using Table 10 below.

<table>
<thead>
<tr>
<th>Elements</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>L₁</td>
<td>18 29/32&quot; (480 mm)</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25 19/32&quot; (650 mm)</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>L₂</td>
<td>20 5/64&quot; (510 mm)</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>26 49/64&quot; (680 mm)</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>L₃</td>
<td>17 23/32&quot; (450 mm)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 10 Length and number of the lower distribution tube elements

- Push the lower distribution tube element with spring (L₃) into the bottom boiler hub first.
- Hook the other lower distribution tube elements (L₂) into one another according to the detailed drawing.
- As the last lower distribution tube element, hook in the one with the handle (L₁).
- Close off bottom boiler hub with flat gasket and flange cover.

Fig. 23 Installing sensor wells

[1] Sensor well R ¾ "
[2] Sensor well R ½ "

Fig. 24 Fitting the flange

[1] Fill and drain connection
[2] Bottom boiler hub (rear)

Fig. 25 Inserting the lower distribution tube

[1] Lower distribution tube element L₃
[2] Lower distribution tube element L₁
[3] Flat gasket
[4] Flange cover
[5] Lower distribution tube element L₂
7.7 Leak test
Conduct a leak test of the boiler block only when the boiler was delivered disassembled. Pre-assembled blocks are leak tested at the factory.

For details of assembling the remainder of the boiler if the block is delivered pre-assembled see Chapter 7.9.4, page 24.

7.7.1 Carrying out leak test

**WARNING:** Danger of life from neglecting to follow safety regulations.
- Observe the applicable national standards, occupational safety provisions and regulations for executing leak tests.

**NOTICE:** Risk of system damage from overpressure.
- Ensure that no pressure, control or safety equipment is fitted during leak tests.

The leak test must be performed with a test pressure of 125 psi (8.6 bar). Use a suitable pressure gauge to measure the pressure.
- Drain the water from the fill and drain valve (Fig. 24, [1], page 20), at the water supply connection, or at a leaky hub connection.
- Close off supply and return connections (supply connection flange with air vent valve).
- Slowly fill the boiler block with water via the fill and drain connection. Purge the air from the boiler block via the boiler supply connection with purger.

7.7.2 Seal leaks.
If leaky hub connections are discovered during the pressure test, proceed as follows.
- Remove supply pipe and lower distribution tube.
- Undo nuts on tie rods and remove tie rods.
- Separate the boiler block at the leak location by driving (knocking) in flat wedges or chisels between the sections at the points provided at the top and bottom (Fig. 26).

---

**WARNING:**
Danger of life from neglecting to follow safety regulations.

**NOTICE:**
Risk of system damage from overpressure.

Use new nipples and new sealant rope for the reassembly.
- Pull the boiler back together and repeat the leak test.
7.8 Boiler water connections

Please observe the following information regarding the boiler connection to the system of pipes. These instructions are important for trouble-free operation.

**NOTICE:** Risk of system damage from leaking connections.
- All pipe connections to the boiler must be free of stress and tension.

**NOTICE:** System damage due to deposits, local overheating, and corrosion.
- As a basic rule, clean and flush existing systems thoroughly before connecting new boiler.
- Install a desludging unit in the boiler return to prevent damage to the boiler.

The weld neck flange is fitted to the top boiler hub if the return is connected at a later stage.

The weld neck flange and flat gasket are shown.
- The supply connection flange is required for connecting the supply at a later stage.

![Fig. 27 Fitting a flange](image)

**Fig. 27 Fitting a flange**

[1] Supply connection flange
[2] Flat gasket
[3] Top boiler hub (return connection)
[4] Flat gasket

The supply and return manifolds are included in the Buderus scope of delivery.

7.9 Installing draft diverter, baffles, and burner door

The next step in the assembly process is to install the burner door and draft diverter. The pre-assembled boiler comes with these components already installed.

7.9.1 Positioning the draft diverter

The GP sealant rope (fiberglass cord with silicone casing) which forms a seal is inserted in the draft diverter at the factory.
- Glue GP sealant rope (approx. 59 1/16 inches (1500 mm) long) into the groove on the rear section using adhesive.
- Insert the sealant rope in such a way that its joint is at the top of the groove.
- Place the draft diverter onto the four threaded studs on the rear section and secure using washers and nuts.

![Fig. 28 Positioning the draft diverter](image)

**Fig. 28 Positioning the draft diverter**

[1] Sealant rope joint at the top of the groove
[2] Sealant rope
[3] Draft diverter
[5] Rear section
[6] Threaded studs

**NOTICE:** Risk of system damage from leaking connections.

- All pipe connections to the boiler must be free of stress and tension.

**NOTICE:** System damage due to deposits, local overheating, and corrosion.
- As a basic rule, clean and flush existing systems thoroughly before connecting new boiler.
- Install a desludging unit in the boiler return to prevent damage to the boiler.

**NOTICE:** Risk of system damage from temperature stresses.
- Install a fill valve on the system side.
- When the heating system is in operation, do not fill it via the boiler fill & drain valve. Instead, fill it on the system side.

**NOTICE:** Risk of system damage from temperature stresses.
- Install a fill valve on the system side.
- When the heating system is in operation, do not fill it via the boiler fill & drain valve. Instead, fill it on the system side.
7.9.2 Screwing cleanout cover onto rear section

Fig. 29 shows the fully equipped rear section with the cleanout covers on the draft diverter and the cleanout covers on the rear section.

▶ GP10Glue GP sealant rope (approx. 31 1/2 inches (800 mm) long) into the groove on the rear section with Silastic adhesive (sealant rope joint at top).
▶ Secure the cleanout covers on the rear section with washers and nuts.

![Fig. 29 Securing the cleanout covers](image)

[1] Cleanout cover on the draft diverter
[2] Cleanout cover on the draft diverter
[3] Cleanout cover on the rear section
[4] Cleanout cover on the rear section

7.9.3 Fitting burner door

In the factory, the burner door is mounted with the hinges on the right hand side. For left-hand closing, remove the hinges from the right-hand side and reinstall them on the left-hand side of the burner door.

▶ Place a few drops of Silastic adhesive, 6 – 8 inches (15 – 20 cm) apart in the packing grooves on the front section.
▶ Insert GP sealant rope into the packing groove on the front section with the joint on the right or left hand side. Position the sealant rope on the side.
▶ Screw the hinge pins (right-hand) to the boiler front section with M12 × 55 machine screws in each case. For left-hand closing, secure accordingly on the left-hand side.
▶ Hook the burner door with the hinge lobes into the hinge pins.

![Fig. 30 Fitting burner door panel](image)

[1] Hinge pins (top)
[2] Sealant rope (side)
[3] Hinge pins (bottom)
[4] Hinge lobe (bottom)
[5] Holes in the burner door
[6] Hinge lobe (top)
7.9.4 Inserting the flue gas baffles

In pre-assembled boilers, the flue gas baffles are already fitted
▶ Remove the cardboard transport protectors from the pre-assembled boiler.

The boiler consisting of 16 boiler sections does not contain any flue gas baffles.

Flue gas baffles with sickle profile and wave profile are being used in these boilers.
The flue gas baffles with sickle profile consist of two pieces, and it is very important that both parts are connected securely when inserting the baffle into the boiler. When fitting a hot gas flue with sickle profile baffles, make absolutely certain that both partial plates are hooked into one another.
→ Fig. 32, page 24 shows sectional and interconnected baffles.
▶ Remove the flue gas baffles from the crate and insert into the flue gas passages as indicated by their inscription (→ Fig. 31, Fig. 32, Fig. 33, and Tab. 11).

Fig. 31 Insert the flue gas baffles (boiler block with 9 sections)
[1] Flue gas baffles with sickle profile (sectional baffle)
[2] Flue gas baffles with sickle profile (interconnected)

Fig. 32 Insert the flue gas baffles (boiler block with 13 sections)
[1] Flue gas baffles with sickle profile (sectional baffle)
[2] Flue gas baffles with sickle profile (sectional baffle)
[3] Flue gas baffle with wave profile

Fig. 33 Insert the flue gas baffles (boiler block with 15 sections)
[1] Flue gas baffle with wave profile
7.10 Installation of the boiler jacket

7.10.1 Fitting the thermal insulation

The thermal insulation provided corresponds to the boiler size.

- Arrange the thermal insulation on the boiler block as shown in the diagram in Fig. 35 (the figures to the left of the boiler blocks represent the number of boiler sections).
- Push thermal insulation under the boiler block. The boiler feet are placed in the cut-outs in the thermal insulation.

<table>
<thead>
<tr>
<th>Number of sections</th>
<th>top left</th>
<th>top right</th>
<th>bottom left</th>
<th>bottom right</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
</tr>
<tr>
<td>10</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
</tr>
<tr>
<td>11</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
<td>2 × sickle profile</td>
</tr>
<tr>
<td>12</td>
<td>1 × wave profile</td>
<td>1 × wave profile</td>
<td>2 × sickle profile</td>
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<tr>
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<td>2 × sickle profile</td>
<td>1 × wave profile</td>
<td>1 × wave profile</td>
</tr>
<tr>
<td>14</td>
<td>1 × wave profile</td>
<td>1 × wave profile</td>
<td>1 × wave profile</td>
<td>1 × wave profile</td>
</tr>
<tr>
<td>15</td>
<td>–</td>
<td>–</td>
<td>1 × wave profile</td>
<td>1 × wave profile</td>
</tr>
<tr>
<td>16</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

Table 11 Number of flue gas baffles

**Fig. 34** Boiler block with thermal insulation

[1] Thermal insulation
### Boiler block assembly

**Fig. 35  Thermal insulation for the various boiler sizes**

<table>
<thead>
<tr>
<th>Item</th>
<th>Number of boiler sections</th>
<th>( L_V ) in inch (mm)</th>
<th>( L_M ) in inch (mm)</th>
<th>( L_{V,H} ) in inch (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9</td>
<td>45 43/64&quot; (1160)</td>
<td>-</td>
<td>16 17/32&quot; (420)</td>
</tr>
<tr>
<td>2</td>
<td>10</td>
<td>-</td>
<td>23 15/64&quot; (590)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>-</td>
<td>29 59/64&quot; (760)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>12</td>
<td>-</td>
<td>36 39/64&quot; (930)</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>13</td>
<td>26 49/64&quot; (680)</td>
<td></td>
<td>16 17/32&quot; (420)</td>
</tr>
<tr>
<td>6</td>
<td>14</td>
<td>-</td>
<td>23 15/64&quot; (590)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>15</td>
<td>-</td>
<td>29 59/64&quot; (760)</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>16</td>
<td>-</td>
<td>36 39/64&quot; (930)</td>
<td></td>
</tr>
</tbody>
</table>

*Table 12*
7.10.2 Fitting the profile rails

▶ Place top front profile rails onto the cast lugs and screw in place with machine screws (M8 × 12). The folded edge on the front profile rail must face forward.

▶ Place top rear profile rails onto the cast lugs and screw in place with machine screws (M8 × 12). The folded edge of the rear profile rail must face rearward.

▶ Place the side profile rails from the side on the front and rear profile rails and screw on with self-tapping screws. The folded edge of the side profile rails must point towards the rear, while the oval holes must be positioned towards the center of the boiler.

▶ Attach the bottom front and rear profile rails onto the feet of the end sections using machine screws.

Fig. 36 Fitting front, rear, and side profile rails

[1] Cast lugs
[2] Side profile rail
[3] Front profile rail (top front)
[4] Rear profile rail (top rear)
[5] Side profile rail
[6] Cast lugs

Fig. 37 Fitting the lower profile rails

[1] Front profile rail (bottom front)
[2] Rear profile rail (bottom rear)

▶ Place the bottom side profile rails with the folded edges towards the inside and the oval hole towards the rear of the boiler from the side on the front and rear profile rails and screw on using self-tapping screws.

▶ Push rear section thermal insulation onto the breach. The cut-out for the boiler return must point upward.

▶ Attach the rear section thermal insulation to the rear profile rail with two spring hooks.
Close the slot below the flue outlet with spring hooks.

---

**Fig. 38**  Fitting lower side profile rails and thermal insulation

1. Rear profile rail  
2. Rear section thermal insulation  
3. Spring hooks  
4. Bottom side profile rail  
5. Bottom side profile rail

- Push rectangular thermal insulation onto the front top profile rail.  
- Fasten thermal insulation with 3 spring hooks.  
- If a burner cable is used, now would be the time to route it on the outside of the insulation.

---

There are advantages to routing the burner cable underneath the boiler jacket. To prevent damage to the burner cable while opening the burner door, the burner cable must always be fed down the hinge side.

---

**Fig. 39**  Fitting the rectangular thermal insulation and burner cable (installation optional)

1. Thermal insulation  
2. Spring hooks  
3. Burner cable (installation optional)

- Attach strain relief for the burner cable depending on the door hinges left or right, to the bottom profile rail (→ Fig. 40 – for burner door hinge right).  
- Push the front base panel from the front onto the bottom side profile rail and screw together.  
- Mount rear base panel in the same way.

---

**Fig. 40**  Installation of the burner cable strain relief and base plates

1. Burner cable strain relief  
2. Bottom front profile rail  
3. Front base panel
Push the first side panel with the lower folded edge behind the bottom side profile rail, lift slightly and slide the hook into the slots in the top side profile rail.

![Diagram of side panel mounting](image1)

**Fig. 41  Mounting the side panel**

[1] First side panel  
[2] Top side profile rail  
[3] Bottom side profile rail  

Push the remaining side panels with the lower folded edge behind the bottom side profile rail, lift slightly and slide the upper folded edge into the slots in the upper side profile rail.

![Diagram of remaining side panels](image2)

**Fig. 42  Fitting the remaining side panels**

[1] Top side profile rail  
[2] Bottom side profile rail

For the arrangement of the side panels and covers, please see Fig. 43, page 30.
7.10.3 Fitting side panels and top covers

Fit all side panels as shown in the diagram.

[Fig. 43] Arrangement of side panels for the various boiler sizes (dimensions in inches (mm))

1. 9 boiler sections
2. 10 boiler sections
3. 11 boiler sections
4. 12 boiler sections
5. 13 boiler sections
6. 14 boiler sections
7. 15 boiler sections
8. 16 boiler sections

1. 11 1/32" (280 mm)
2. 13 15/32" (850 mm)
3. 30 33/64" (775 mm)
4. 33 15/32" (850 mm)
5. 20 5/64" (510 mm)
6. 26 49/64" (680 mm)
7. 30 33/64" (775 mm)
8. 30 33/64" (775 mm)
> Fit all top covers as shown in the diagram.

Fig. 44  Arrangement of top covers for the various boiler sizes

[1] 9 boiler sections  
[2] 10 boiler sections  
[3] 11 boiler sections  
[4] 12 boiler sections  
[5] 13 boiler sections  
[6] 14 boiler sections  
[7] 15 boiler sections  
[8] 16 boiler sections

- Push front top cover marked “A” with the hook in the slots of the side profile rail and push forward.

 LA  11 1/32” (280 mm)
 LB  13 25/64” (340 mm)
 LC  15 3/4” (400 mm)
 LD  15 3/4” (400 mm)
 LE  19 15/16” (485 mm)
 LF  20 5/64” (510 mm)
 LG  22 7/16” (570 mm)
Boiler block assembly

- Screw back of top cover “A” to each side profile rail using one self-tapping screw.

![Diagram showing fitting the front top cover “A”](image1)

**Fig. 45** Fitting the front top cover “A”

1. Hook
2. Slots in side profile rail

- Push 15 3/4 inches (400 mm) wide top cover marked “D” with the folded edge under the front top cover.

![Diagram showing fitting top cover “D”](image2)

**Fig. 46** Fitting top cover “D”

1. Front top cover
2. Top cover “D”

- Screw the bottom rear boiler with the cut-out for the fill and drain connection down onto the side panels.

![Diagram showing fitting the top and bottom boiler rear panels](image3)

**Fig. 47** Fitting the top and bottom boiler rear panels

1. Top rear boiler
2. Bottom rear boiler

- Screw the left or right front panel with four machine screws to the cast lugs of the burner door.
- Hook burner door panel into the cut-outs in the front cover.

![Diagram showing fitting the left and right front panels](image4)

**Fig. 48** Fitting the left and right front panels

1. Burner door panel

Before the remaining top covers are put in place, the control panel must be fitted, the capillary tubes fed to the sensor wells and the sensors placed in the sensor wells (see Chapter 9.1, page 34).
8 Connecting the boiler on the flue gas side

This chapter describes how the boiler connections are made on the flue gas side.

8.1 Fitting the vent pipe sealing collar (accessory)

▶ Push the vent pipe (Fig. 49, [4]) as far as possible onto the draft diverter outlet (Fig. 49, [6]).
▶ Place the vent pipe sealing collar (Fig. 49, [1]) around the vent pipe (Fig. 49, [4]) and draft diverter (Fig. 49, [6]) outlet so that it overlaps at the top.
▶ Place hose clamps (Fig. 49, [5]) over the vent pipe sealing collar (Fig 49, [1]). One of the hose clamps (Fig. 49, [5]) must press onto the draft diverter outlet (Fig. 49, [6]) and one onto the vent pipe (Fig. 49, [4]).
▶ Tighten hose clamps (Fig. 49, [5]). The vent pipe sealing collar (Fig. 49, [1]) must fit smoothly and firmly in place.

8.2 Installing a flue gas temperature sensor (option)

▶ Weld a sleeve (Fig. 49, [3]) at a distance of two (2) × vent pipe diameters (A) from the draft diverter (Fig. 49, [6]) in the vent pipe (Fig. 49, [4]).
▶ Fit the flue gas temperature sensor (Fig. 49, [2]) as described in the separate installation manual.

Retighten the hose clamps if needed.

Fig. 49  Sealing the vent pipe

[1] Vent pipe sealing collar
[2] Flue gas temperature sensor
[3] Sleeve
[4] Vent pipe
[5] Hose clamps
[6] Draft diverter
[A] 2 × Vent pipe diameter, at least 28 22/64 inches (720 mm)
9 Installing the control panel

This section explains how to install a Logamatic 4000 series control panel and its set of temperature sensors.

9.1 Installing the control panel

Fig. 50 shows the control panel and front top cover “A” from behind.

- Loosen both screws on top of the control panel and remove the cover. Lift off the terminal cover toward the top.

Mounting the control panel

- Fit the control panel at the front by inserting the alignment tabs into the oval holes in the front top boiler cover.
- Tilt the control panel forward and then tip back. The flexible hooks must engage with the rectangular openings at the rear of the front boiler cover.
- Attach the base of the control panel to the top cover using two self-tapping screws.

Connecting power supply

Hard wire the control panel to the building power supply following recognized standards such as EN 50165 and local code, rules, and regulations.

DANGER: Risk to life from electric shock.

- Electrical work may only be performed by professionals with appropriate qualifications.
- Before opening the appliance, isolate all poles of the mains power supply and secure against unintentional reconnection.
- Please observe all installation instructions.

Secure all cables with cable strain reliefs.

- Insert cable strain relief with cable inside into the clip frame and secure by closing the lever.

Fig. 50 Installing the control panel

[1] Terminal cover
[3] Rectangular cutouts in the front top boiler cover
[5] Oval holes in the front top boiler cover
[6] Cable duct
[7] Front top boiler cover
Mounting rear panel and terminal cover

- If necessary, break away section from the rear panel.
- Engage the lower hook of the rear panel section with the frame at an angle and tilt upward until the upper hooks engage with the side panels.
- Put the top cover in place and tighten the screws.

![Fig. 52 Mounting the rear wall section](image)

[1] Side hooks  
[2] Rear panel section (control panel)

9.2 Installing set of temperature sensors

![NOTICE] Appliance damage from damaged capillaries.

- Make sure that the capillaries are not crushed or otherwise compromised during unrolling and routing.

- Route the capillaries through the cable duct and unroll to the required length.
- Guide the capillaries to the corresponding sensor wells and secure with the clips (magnified view in Fig. 53 is rotated by 180°).
- Attach cable entry (Fig. 52) to the left and right of the boiler rear panel.

![Fig. 53 Fastening the connecting cables](image)

[1] Sensor wells  
[2] Sensor retaining clip  
[3] Cable entry  
[4] Cable strain relief

Both sensor wells have already been installed in the supply (Chapter 7.5, page 20).

The sensors (control panel sensor TRK, manual reset high limit and Logamatic sensor FK or thermostat sensor) are installed in the sensor wells.

- The manual reset high limit (STB) can be distinguished from the control panel sensor.

The sensors must be arranged as follows:
Installing the control panel

- Push the control panel sensor TRK out of the sensor spacer by pressing it lightly.

![Fig. 54 Temperature sensor set](image1)

- Insert the control panel sensor in the sensor well R ½ " and secure with a screw.

- Insert the manual reset high limit (STB) and Logamatic FK plus the two sensor spacers in the sensor well R ¾ " and secure with a clip.

![Fig. 55 Installing set of temperature sensors](image2)
10 Mounting the burner

This chapter explains how to install the burner.

**NOTICE:** Damage to boiler due to incorrect burner.
- Only use burners that conform to the technical requirements of the boiler (see → Chapter 3, page 9).

- Close the burner door and secure with 4 machine screws (M16 × 140) in the positions shown. Tighten the machine screws evenly crosswise.

You can obtain undrilled or predrilled burner plates (hole pattern depends on burner) as accessories from Buderus.

If you have ordered an undrilled burner plate, you will have to machine this on site:
- Drill or cut the burner plate (→ Fig. 56, [1]) to match the required burner tube diameter Ø 10 5/8 inches (270 mm).
- Drill burner attachment holes using the burner flange as a template.
- Screw burner plate onto the burner door (seal with GP sealant rope; diameter Ø 25/64 inches (10 mm)).
- Screw the burner to the burner plate.
- Cut insulating rings to match the burner tube diameter (→ Fig. 56, [2]).
- Fill the remaining gap between the burner door thermal insulation and the burner tube (→ Fig. 56, [4]) using the appropriate insulating rings or boiler packing insulation (→ Fig. 56, [3]).
- Connect the vent blower connection to the burner to ensure the inspection window remains free of deposits.

![Fig. 56 Mounting the burner](image)

The pH value of the boiler water increases after the heating system has been filled. After 3 – 6 months (at the time of the first service), check whether the pH value of the boiler water has stabilized.

11 System start-up

You can connect control panel of the 4000 series to the Logano G615. The commissioning process for the different types of control panels is the same.

- Complete the commissioning log during the start-up process (→ Chapter 11.5, page 40).

**NOTICE:** Boiler damage from contaminated combustion air supply.
- Ensure there is sufficient air supply.
- Do not use or store any chlorine-containing cleaning agents or halogenated hydrocarbons (e.g. in spray cans, solvents and cleansers, paints, adhesives) in the boiler room.
- Do not operate the boiler when heavy dust is present, e.g. caused by construction work.

- If the burner got contaminated as a result of construction work, it must be cleaned before being commissioned.

11.1 Filling the system

Refer to the table below for information about correct use and treatment of the fill and make-up water.

**NOTICE:** Risk of system damage from temperature stresses.
- During operation, only fill the heating system via the fill valve on the system side.
### System start-up

<table>
<thead>
<tr>
<th>Overall boiler output Q/MBH (kW)</th>
<th>Ca (HCO₃)₂ concentration / grains per gallon¹) (ppm m³)</th>
<th>Maximum fill and make-up water quantity Vmax/ft³ (m³)</th>
<th>Boiler water pH value</th>
</tr>
</thead>
<tbody>
<tr>
<td>341 &lt; Q ≤ 1,194 (100 &lt; Q ≤ 350)</td>
<td>≤ 11.7 (≤ 2.0)</td>
<td>Vmax = three times system volume</td>
<td>8.2–9.5</td>
</tr>
<tr>
<td>1,194 &lt; Q ≤ 3,412 (350 &lt; Q ≤ 1,000)</td>
<td>≤ 8.8 (≤ 1.5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>341 &lt; Q ≤ 1,194 (100 &lt; Q ≤ 350)</td>
<td>&gt; 11.7 (&gt; 2.0)</td>
<td>Vmax = 0.0243 · (\frac{Q(\text{MBH})}{\text{Ca}(\text{HCO}_3)_2\text{gr gal}^{-1}})</td>
<td>8.2–9.5</td>
</tr>
<tr>
<td>1,194 &lt; Q ≤ 3,412 (350 &lt; Q ≤ 1,000)</td>
<td>&gt; 8.8 (&gt; 1.5)</td>
<td>Vmax = 0.0313 · (\frac{Q(\text{kW})}{\text{Ca}(\text{HCO}_3)_2\text{mol m}^{-3}})</td>
<td></td>
</tr>
</tbody>
</table>

Table 13 Requirements for fill, make-up and boiler water

1) ft³ = 7.48 gal
11.2 Commissioning the system

▶ For commissioning, establish the required normal operating pressure.
▶ Check that the flue gas baffles have been inserted correctly.

Details about the quality of the boiler water → operator's log

NOTICE: Boiler damage due to temperature stresses.
If you fill the heating system when it is hot, the resulting temperature stress can cause stress cracks causing the boiler to leak. The boiler will then leak.
▶ Only fill the heating system when cold. (max. supply temperature 104 °F (40 °C)).
▶ During operation, only fill the heating system via the fill valve on the system side.

Fig. 57 Checking that flue gas baffles are seated correctly

11.3 Start up the control panel

Please see the accompanying technical documentation for the 4000 series control panel for information about on how to start it up.

11.4 Initial burner start-up

▶ When commissioning the burner, follow the instructions in the technical documentation enclosed with the burner.
▶ Complete the commissioning log for the burner.
11.5 Commissioning log

The Logano G615 can be used with an oil- or gas-fired burner. Fill in the commissioning log for the appropriate type of oil or gas burner carefully. ▶ Sign all start-up work as completed and enter the relevant date.

<table>
<thead>
<tr>
<th>Commissioning operations</th>
<th>Individual steps</th>
<th>Comments (signature)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perform leak test of the entire system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Fill the heating system with water</td>
<td>⇒ page 37</td>
<td></td>
</tr>
<tr>
<td>3. Air purge the heating system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Perform the leak test if the boiler was assembled on site</td>
<td>⇒ page 21</td>
<td></td>
</tr>
<tr>
<td>5. Record the filling water quantity and composition in the operator’s log (included with the technical documentation).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Check position of the flue gas baffles (do not install baffles in the 16-section boiler)</td>
<td>⇒ page 24</td>
<td></td>
</tr>
<tr>
<td>7. Check the fuel line for leaks.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Start up the control panel</td>
<td>⇒ page 39</td>
<td></td>
</tr>
<tr>
<td>9. Initial burner start-up</td>
<td></td>
<td>See burner documentation</td>
</tr>
<tr>
<td>10. Check the flue gas temperature</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Check vent pipe for leaks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Check boiler and flue gas side for leaks</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Enter the fuel used in the table provided in the operating instructions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. Inform the owner and operator and hand over technical documentation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Confirm properly-completed commissioning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Company stamp/signature/date
12 Shutting down the system

12.1 Shutting down the heating system via the control panel
► Turn off the ON/OFF switch on the controls (position “0”). This switches off the boiler and all its components (e.g. burner).
► Close the main fuel shutoff valve.

Fig. 58 Turning the heating system off
[1] ON/OFF switch

12.2 Shutting down the system in an emergency
► In an emergency disconnect electrical power to the boiler and heating system by shutting off the emergency shut-off switch on the boiler or outside the boiler room, or disengage the heating system circuit breaker.

In other dangerous situations, immediately close the main fuel shut-off valve.
► Shut off the fuel supply to the burner.

13 System inspection and maintenance

13.1 General information
Offer your customer a maintenance contract covering annual inspection and servicing work as required. To find out what a contract for annual inspection and demand-based servicing covers, refer to Chapter 13.7, page 45.

DANGER: Risk of fatal injury from the explosion of flammable gases.
► Work on gas components must be carried out by trained and certified personnel only.

Spare parts can be ordered from the Buderus spare parts catalog.

13.2 Why is regular maintenance important?
Heating systems must be serviced regularly for the following reasons:
• to achieve a high level of efficiency and to operate the system economically (low fuel consumption),
• to achieve a high level of operational safety and reliability,
• to maintain a clean and environmentally friendly combustion.

13.3 Cleaning the boiler with cleaning brushes
► Shut down the heating system (→ Chapter 12.1, page 41).

DANGER: Risk to life from electric shock.
► Before opening the appliance, isolate all poles of the mains power supply and secure against unintentional reconnection.

DANGER: Risk of fatal injury from the explosion of flammable gases.
► Work on gas components must only be carried out by trained and certified gas fitters.

Opening the boiler door

NOTICE: Damage to the jacket parts from opening of the burner door.
► Before opening the burner door, remove the front side panels.
System inspection and maintenance

- Lift the side panels (with hand hole → Fig. 59, [2]) slightly and remove. Do not remove the front panels (burner door jacket → Fig. 59, [1 and 3]).

Fig. 59 Opening the boiler door
[1] Front side panel (left)
[2] Front side panel (right)
[3] Front panel sections (burner door jacket)
- Loosen the fastening screws of the burner door with a flat wrench from the side.
- Swing out burner door.
The boiler can be cleaned with brushes and/or by a wet method.
Cleaning accessories are available from the manufacturer
- Remove the flue gas baffles from the heat exchanger (→ Fig. 60).

The boiler consisting of 16 boiler sections does not contain any flue gas baffles (→ Chapter 7.9.4, page 24).

Fig. 60 Flue gas baffles, removing
- Remove bottom boiler rear panel.
- Loosen spring hooks below the flue outlet (→ see Fig. 38, page 28).
- Fold both ends of the thermal insulation upward and fasten with the spring hooks.
- Remove the cleanout covers from the draft diverter.

Fig. 61 Removing the cleanout cover
[1] Thermal insulation (folded upwards)
[3] Cleanout cover on the rear section
[4] Cleanout cover on the draft diverter
- Clean the top and bottom flue gas passages with cleaning brushes #4 and #5 [→ Fig. 63].
- Clean the combustion chamber with cleaning brush 8.
- Remove debris from the front and the cleanout openings on the rear section and on the draft diverter (→ Fig. 61, page 42).
- Check sealant ropes on the cleanout openings and burner door.
Replace damaged or hardened sealant ropes.
Appropriate sealant ropes are available from your local Buderus wholesaler.

Fig. 62  Heat exchanger flue gas passages, cleaning

[1] Bottom flue gas passages
[2] Combustion chamber
[3] Top flue gas passages

▶ Clean flue gas baffles with the cleaning brushes.
▶ Insert flue gas baffles into flue gas passages (→ Fig. 31, page 32 and Fig. 33 and Fig. 24, page 24).

Reinstall front side panels. Reinstall any plugs.
Fold the rear section thermal insulation down and pull together under the flue outlet using spring hooks.
Remount bottom boiler panel.

With the use of the cleaning brushes, optimal cleaning of the boiler can be achieved.
The various brush types available are shown in Fig. 63.

For brush sizes as well as usage locations for the brushes, consult Table 14.

Fig. 63  Cleaning brushes

Table 14  Brush sizes and usage locations

<table>
<thead>
<tr>
<th>Number of sections</th>
<th>Brush designation</th>
<th>Brush size inch (mm)</th>
<th>Application</th>
<th>Rod designation</th>
<th>Length of the rods inch (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 - 11</td>
<td>4</td>
<td>2 61/64 × 4 21/64 (75 × 110)</td>
<td>Flue gas passages</td>
<td>A + K</td>
<td>78 47/64 (2000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 23/64 × 2 7/8 (60 × 73)</td>
<td></td>
<td></td>
<td>98 27/64 (2500)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7 7/8 × 3 5/32 (200 × 80)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 - 14</td>
<td>5</td>
<td></td>
<td>Combustion chamber</td>
<td>A + G + K</td>
<td>78 47/64 + 39 3/8 (2000 + 1000)</td>
</tr>
<tr>
<td>15 - 16</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Follow the operating instructions of the cleaning agent and the cleaning brushes!
Under some circumstances, it may be necessary to deviate from the procedure described here.

▶ Cover the control panel with plastic to prevent spray from entering the control panel.
▶ Spray cleaning agent evenly into the heat exchanger flue gas passages.
▶ Close burner door and start up the heating system.

13.4  Wet-cleaning the boiler
When wet cleaning, pick the cleaning agent based on the degree of contamination (encrustations or soot).
Proceed in the same sequence as if cleaning with cleaning brushes (→ see Chapter 13.3, page 41).

Heat the boiler water temperature to at least 158 °F (70 °C).
Shut down the boiler.
Allow boiler to cool down, then open burner door.
Brush out the heat exchanger heater.

Follow the operating instructions of the cleaning agent and the cleaning brushes!
13.5 Checking the operating pressure
The operating pressure must be at least 15 psi (1 bar).
▶ Read the current operating pressure (psi) and temperature (°C or °F) from the temperature/pressure gauge.
▶ If the operating pressure drops below 15 psi (1 bar), refill boiler water.

![Pressure/temperature gauge](image)

**Fig. 64 Pressure/temperature gauge**

13.6 Refilling boiler water and purging the system

**NOTICE:** Risk of system damage from temperature stresses.
▶ When the heating system is in operation, do not fill it via the boiler fill & drain valve. Instead, fill it on the system side.

Bring the system up to the required operating pressure.

▶ Slowly fill the heating system via the on-site fill valve. During filling, observe the display (pressure gauge).
▶ Once the desired operating pressure is reached, stop the procedure.
▶ Purge the heating system via the purge valves on the system.
▶ Fill with water again if the operating pressure drops as a result of purging the system.

**NOTICE:** Risk of system damage due to frequent refilling.
▶ The system may be damaged, depending on water quality, by corrosion or scaling, if you frequently need to re-fill your system with make-up water.
▶ Ensure that your heating system is bled.
▶ Check the heating system for leaks and the function of the expansion vessel.
13.7 Inspection and maintenance logs

The inspection and maintenance logs provide an overview of the required inspection and maintenance work.

The inspection and maintenance logs can also be used as templates.

<table>
<thead>
<tr>
<th>Inspection work</th>
<th>Page</th>
<th>Date:__________</th>
<th>Date:__________</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Check general condition of heating system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Visual inspection and function check of the heating system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Check fuel and water-carrying components of the system for:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Leaks during operation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Visible signs of corrosion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Signs of aging</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Check the combustion chamber and heating surfaces for contamination.</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shut down the heating system first.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Check the burner (burner documentation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Check the flue gas and venting system for proper operation and safety (see</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Check the operating pressure and inlet pressure of the diaphragm</td>
<td>44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>expansion vessel for heating systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Check the function of indirect-fired water heater tank and anode rod</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(tank documentation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Check the control panel setting (see control panel documentation)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Record the final checks of the inspection work, incl. measurements and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>test results</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 15 Inspection log

If during inspection work conditions are identified that require additional service and maintenance, perform this work on an as-needed basis. If make-up water is added, the quality of this water must correspond to the specifications in the enclosed operating manual.
## System inspection and maintenance

<table>
<thead>
<tr>
<th></th>
<th>Date:_________</th>
<th>Date:_________</th>
<th>Date:_________</th>
<th>Date:_________</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Shut down the heating system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Remove and clean heat exchanger baffles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Clean the flue gas passages (heating surfaces) and flue gas baffles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Clean the combustion chamber</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Clean the draft diverter</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Insert the flue gas baffles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Check gaskets/sealant ropes on the burner and burner door and replace if required</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Commissioning the heating system</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Record the final checks of the maintenance work, incl. measurements and test results</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Check safe and proper operation</td>
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</table>

**Table 16 Continuation**

<table>
<thead>
<tr>
<th>Additional maintenance work as-needed</th>
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<th>Date:_________</th>
<th>Date:_________</th>
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</thead>
<tbody>
<tr>
<td>1. Shut down the heating system</td>
<td>41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Remove and clean heat exchanger baffles</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Clean the flue gas passages (heating surfaces) and flue gas baffles</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Clean the combustion chamber</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Clean the draft diverter</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Insert the flue gas baffles</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Check gaskets/sealant ropes on the burner and burner door and replace if required</td>
<td>43</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Commissioning the heating system</td>
<td>37</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 17 Maintenance log book**
### Troubleshooting burner faults

Heating system faults are shown on the display of the control panel. You will find detailed information regarding fault displays in the service instructions for the relevant control panel. The burner fault is also indicated by a fault lamp on the burner.

**NOTICE:** Risk of system damage from freezing.

The heating system can freeze up in cold weather if it has been disabled due to a fault shutdown.

- Rectify the fault immediately and restart the heating system.
- If this is not possible, drain the heating and DHW system of pipes at the lowest point.

**NOTICE:** Risk of system damage due to too many resets.

- The burner ignition transformer may be damaged if you press the reset button more than three times in succession when the burner refuses to start.
- Do not attempt to remedy the fault by pressing the reset button more than three times in succession.

If the burner does not restart after three attempts, refer to the technical documentation provided with the burner to find out how to reset it.

<table>
<thead>
<tr>
<th></th>
<th>Date:________</th>
<th>Date:________</th>
<th>Date:________</th>
<th>Date:________</th>
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<tbody>
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<tr>
<td>4.</td>
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<tr>
<td>9.</td>
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</tr>
<tr>
<td>10.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 18 Continuation*
15  Spare parts

Request spare parts with name and part number using the spare parts list.

NOTICE: Damage caused by use of spare parts not supplied by Buderus may not be covered under the manufacturer’s warranty.

Fig. 65  Spare part groups Logano G615

<table>
<thead>
<tr>
<th>Item (→ Fig. 65)</th>
<th>Designation</th>
<th>Spare parts list</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Group 1 – boiler block - front</td>
<td>→ page 49</td>
</tr>
<tr>
<td>2</td>
<td>Group 2 – boiler block - rear</td>
<td>→ page 51</td>
</tr>
<tr>
<td>3</td>
<td>Group 3 – boiler block - accessories</td>
<td>→ page 53</td>
</tr>
<tr>
<td>4</td>
<td>Group 4 – burner door</td>
<td>→ page 55</td>
</tr>
<tr>
<td>5</td>
<td>Group 5 – jacket - fastening</td>
<td>→ page 57</td>
</tr>
<tr>
<td>6</td>
<td>Group 6 – sheetmetal parts front/rear</td>
<td>→ page 59</td>
</tr>
<tr>
<td>7</td>
<td>Group 7 – sheetmetal parts</td>
<td>→ page 61</td>
</tr>
<tr>
<td>8</td>
<td>Group 8 – sheetmetal parts carriers</td>
<td>→ page 63</td>
</tr>
</tbody>
</table>

Table 19  Spare part groups Logano G615
Fig. 66  Group 1 – boiler block - front Logano G615

6720906689.aa.RS-Kesselblock GE615
<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Front section G615</td>
<td>8 718 572 185 0</td>
</tr>
<tr>
<td>2</td>
<td>Threaded stud DIN939 M16x45 5.6</td>
<td>3719328</td>
</tr>
<tr>
<td>3</td>
<td>Hexagon nuts ISO4032 M16 8 A3K</td>
<td>82585200</td>
</tr>
<tr>
<td>4</td>
<td>Sealant rope 18x3800 GP</td>
<td>63020975</td>
</tr>
<tr>
<td>5</td>
<td>Intermediate section G615</td>
<td>8 718 572 186 0</td>
</tr>
<tr>
<td>6</td>
<td>Intermediate section G615 VLO</td>
<td>8 718 572 187 0</td>
</tr>
<tr>
<td>7</td>
<td>Gasket D160x206x1.5mm</td>
<td>8 718 572 754 0</td>
</tr>
<tr>
<td>8</td>
<td>Sensor well R3/4&quot; (100 mm) long BD</td>
<td>5446160</td>
</tr>
<tr>
<td>9</td>
<td>Sensor well R 1/2&quot; 4&quot; (100 mm) long BD</td>
<td>5446065</td>
</tr>
<tr>
<td>10</td>
<td>Rear section G615</td>
<td>8 718 572 216 0</td>
</tr>
<tr>
<td>11</td>
<td>Boiler nipple 181/70 Sz 4</td>
<td>7 747 024 979</td>
</tr>
<tr>
<td>12</td>
<td>Boiler nipple 119/50 Sz 2</td>
<td>7 747 024 966</td>
</tr>
<tr>
<td>13</td>
<td>Sealant graphite treated with linseed oil 450 g can</td>
<td>8 718 571 927</td>
</tr>
<tr>
<td>14</td>
<td>Sealant rope D15x4300 20 KMVª Pack A=2</td>
<td>7 747 013 784</td>
</tr>
<tr>
<td>15</td>
<td>Adhesive base 181, 12.5 oz (370 ml) in 17 oz (500 ml) can</td>
<td>5909922</td>
</tr>
<tr>
<td>16</td>
<td>Section foot wedge</td>
<td>5503802</td>
</tr>
<tr>
<td>17</td>
<td>Tie rod M16x1510 cpl</td>
<td>5128020</td>
</tr>
<tr>
<td>18</td>
<td>Spring package for tie rod</td>
<td>5526300</td>
</tr>
<tr>
<td>19</td>
<td>Hexagon nuts ISO4032 M16 8 A3K</td>
<td>82585200</td>
</tr>
<tr>
<td>20</td>
<td>Washer DIN125-A17-A3K</td>
<td>3869840</td>
</tr>
<tr>
<td>21</td>
<td>Supply pipe G615 compl. (1532 mm, 9 seg.)</td>
<td>67902740</td>
</tr>
<tr>
<td>22</td>
<td>Flange cover square 170mm</td>
<td>5428121</td>
</tr>
<tr>
<td>23</td>
<td>Gasket D125x170x1.5mm (2x)</td>
<td>8 718 572 753 0</td>
</tr>
<tr>
<td>24</td>
<td>Lower distribution tube G615 compl. 1553 long (9 seg.)</td>
<td>67900510</td>
</tr>
<tr>
<td>25</td>
<td>Hinge G615 cpl 70003789</td>
<td>3377460</td>
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<tr>
<td>26</td>
<td>Hex-head bolt ISO4017 M12x55 8.8</td>
<td>5090262</td>
</tr>
<tr>
<td>27</td>
<td>Washer DIN125-A17-A3K</td>
<td>5883276</td>
</tr>
</tbody>
</table>

Table 20  Group 1  – boiler block - front Logano G615
Fig. 67  Group 2 – boiler block - rear Logano G615

View "A" turned 90°
<table>
<thead>
<tr>
<th>Item</th>
<th>Designation</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Rear section compl. G615</td>
<td>63011551</td>
</tr>
<tr>
<td>2</td>
<td>Threaded stud DIN939 M16x45 5.6</td>
<td>3719328</td>
</tr>
<tr>
<td>3</td>
<td>Washer DIN125-A17-A3K</td>
<td>3869840</td>
</tr>
<tr>
<td>4</td>
<td>Hexagon nuts ISO4032 M16 8 A3K</td>
<td>82585200</td>
</tr>
<tr>
<td>5</td>
<td>Threaded stud DIN939 M12x35 5.6</td>
<td>3719184</td>
</tr>
<tr>
<td>6</td>
<td>Hexagon nuts EN1661 M12 8.8 A3K</td>
<td>5834420</td>
</tr>
<tr>
<td>7</td>
<td>Threaded stud DIN939 M12x45 5.8</td>
<td>3719192</td>
</tr>
<tr>
<td>8</td>
<td>Gasket D160x206x1.5mm</td>
<td>87185727540</td>
</tr>
<tr>
<td>9</td>
<td>Weld neck flange, round, steel PN 6 DN150 DIN2631</td>
<td>5663034</td>
</tr>
<tr>
<td></td>
<td>Weld neck flange, round, steel DN100 DIN2631</td>
<td>5663160</td>
</tr>
<tr>
<td></td>
<td>Flange PN 6 DN125 for G615</td>
<td>5663162</td>
</tr>
<tr>
<td>10</td>
<td>Draft diverter G615 cpl 70003785</td>
<td>5321806</td>
</tr>
<tr>
<td>11</td>
<td>Rear panel G615 70003786</td>
<td>5932680</td>
</tr>
<tr>
<td>12</td>
<td>Sealant rope GP14x1650mm long</td>
<td>63020965</td>
</tr>
<tr>
<td>14</td>
<td>Cleanout cover compl. for the draft diverter</td>
<td>5371906</td>
</tr>
<tr>
<td>15</td>
<td>Sealant rope GP10x1070mm long</td>
<td>63020962</td>
</tr>
<tr>
<td>16</td>
<td>Hex-head bolt ISO4017 M12x55 8.8</td>
<td>5090262</td>
</tr>
<tr>
<td>17</td>
<td>Locking plate 14x22.5x22x0.6</td>
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<tr>
<td>18</td>
<td>Hexagon nuts EN1661 M12 8.8 A3K</td>
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<tr>
<td>19</td>
<td>Sealing compound brown</td>
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<td>20</td>
<td>Cleanout cover G615 cpl 70003794</td>
<td>5371876</td>
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<td>21</td>
<td>Sealant rope GP10x1070mm long</td>
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<td>22</td>
<td>Thermal insulation cleanout cover G615</td>
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<td>Protective plate D G615 70003796</td>
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<td>24</td>
<td>Flange RP3/4 Mod11306470, square 130 Exc</td>
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<td>25</td>
<td>Gasket D94x120x1.5mm (2x)</td>
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<td>Sealing material Silastic 732 90ml tube</td>
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<td>31</td>
<td>Sealant rope GP10x1070mm long</td>
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Table 21 Group 2 – boiler block - rear Logano G615
### Number of sections and Number of flue gas baffles

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<tr>
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<th>bottom left</th>
<th>bottom right</th>
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<tr>
<td>9</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
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<td>10</td>
<td>2x sickle profile</td>
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<td>2x sickle profile</td>
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<tr>
<td>11</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
</tr>
<tr>
<td>12</td>
<td>1x wave profile</td>
<td>1x wave profile</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
</tr>
<tr>
<td>13</td>
<td>2x sickle profile</td>
<td>2x sickle profile</td>
<td>1x wave profile</td>
<td>1x wave profile</td>
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<tr>
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<td>1x wave profile</td>
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Fig. 68  Group 3 – boiler block - accessories Logano G615
### Table 22 Group 3 – boiler block - accessories Logano G615

<table>
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<tr>
<th>Item</th>
<th>Designation</th>
<th>Order number</th>
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<tbody>
<tr>
<td>1</td>
<td>Flue gas baffle top sickle profile T1</td>
<td>67902699</td>
</tr>
<tr>
<td>2</td>
<td>Flue gas baffle top sickle profile T2</td>
<td>67902700</td>
</tr>
<tr>
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<td>Flue gas baffle bottom sickle profile T1</td>
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</tr>
<tr>
<td>4</td>
<td>Flue gas baffle bottom sickle profile T2</td>
<td>67902702</td>
</tr>
<tr>
<td>5</td>
<td>Flue gas baffle with wave profile</td>
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</tr>
<tr>
<td>6</td>
<td>Vent pipe G615-wt70S2</td>
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</tr>
<tr>
<td>7</td>
<td>Thermal insulation vent pipe part 1+2</td>
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<td>8</td>
<td>Thermal insulation vent pipe part 3+4</td>
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<td>Vent pipe seal sleeve set DN360</td>
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<td>Gasket for flue collar DN360 compl.</td>
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<td>Maintenance package G615 verp</td>
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Fig. 69  Group 4  – burner door Logano G615
### Table 23 Group 4 – burner door Logano G615

<table>
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<th>Item (→ Fig. 69)</th>
<th>Designation</th>
<th>Order number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Burner door compl. G615</td>
<td>63015445</td>
</tr>
<tr>
<td>2</td>
<td>Insulation ring burner door cpl. G615/SB735</td>
<td>5335835</td>
</tr>
<tr>
<td>3</td>
<td>Thermal insulation br door G615 Board607</td>
<td>63002425</td>
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<tr>
<td>4</td>
<td>Hex-head bolt M16x140 (DIN931), black</td>
<td>80080136</td>
</tr>
<tr>
<td>5</td>
<td>Washer DIN125-A17-A3K</td>
<td>3869840</td>
</tr>
<tr>
<td>6</td>
<td>Washer 6.4x20x1.25 A3K (10x)</td>
<td>7 747 030 742</td>
</tr>
<tr>
<td>7</td>
<td>Burner plate 10x430x430 V1 ungeb verp</td>
<td>8 718 575 172</td>
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<tr>
<td>8</td>
<td>Sealant rope 10x2000 GP</td>
<td>63020963</td>
</tr>
<tr>
<td>9</td>
<td>Inspection hole cover plate cpl.</td>
<td>63037570</td>
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<tr>
<td>10</td>
<td>Gasket D42x52x1.5mm</td>
<td>5752520</td>
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<tr>
<td>11</td>
<td>Threaded pipe adapter GE 10-Ir Ermeto</td>
<td>5802753</td>
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<tr>
<td>12</td>
<td>Gasket D13.5x1mm</td>
<td>5752220</td>
</tr>
<tr>
<td>13</td>
<td>Seal ring 13x18x1.5</td>
<td>5883094</td>
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<tr>
<td>14</td>
<td>Hinge eyelet G615 70003791</td>
<td>5327464</td>
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<tr>
<td>15</td>
<td>Washer DIN125-A13-A3K</td>
<td>5883276</td>
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<tr>
<td>16</td>
<td>Sealant rope 18x3800 GP</td>
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<tr>
<td>17</td>
<td>Sealing compound brown</td>
<td>63014361</td>
</tr>
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</table>
Fig. 70  Group 5 – jacket - fastening Logano G615

6720906693.aa.RS-Verkleidung GE615 Grundbegestigung
<table>
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<tr>
<th>Item (⇌ Fig. 70)</th>
<th>Designation</th>
<th>Order number</th>
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<tr>
<td>1</td>
<td>Thermal insulation 80x280x1250mm</td>
<td>67902651</td>
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<tr>
<td>2</td>
<td>Thermal insulation 100x4700x420mm</td>
<td>67902659</td>
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<tr>
<td></td>
<td>Thermal insulation 100x4700x590mm</td>
<td>67902660</td>
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<td>Thermal insulation 100x4700x760mm</td>
<td>67902661</td>
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<tr>
<td></td>
<td>Thermal insulation 100x4700x930mm</td>
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<tr>
<td>3</td>
<td>Thermal insulation 100x4700x680</td>
<td>6932818</td>
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<td>4</td>
<td>Thermal insulation 100x4700x1160mm</td>
<td>67902650</td>
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<tr>
<td>5</td>
<td>Retaining spring (10x)</td>
<td>7 747 016 084</td>
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<tr>
<td>6</td>
<td>Thermal insulation front cover left G615</td>
<td>67902658</td>
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<td>7</td>
<td>Thermal insulation front cover right G615</td>
<td>63014989</td>
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<td>8</td>
<td>Rear panel insulation G615</td>
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<td>9</td>
<td>Profile rail compl. 1720mm long G615</td>
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<tr>
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<td>Profile rail compl. 1890mm long G615</td>
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<td>Profile rail compl. 2060mm long G615</td>
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<td>Profile rail compl. 2230mm long G615</td>
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<td>Profile rail compl. 2400mm long G615</td>
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<td>Profile rail compl. 2570mm long G615</td>
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<td>Profile rail compl. 2740mm long G615</td>
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<td>Profile rail compl. 2910mm long G615</td>
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<td>10</td>
<td>Top profile rail G615</td>
<td>5932702</td>
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<td>13</td>
<td>Bottom profile rail G615</td>
<td>5932700</td>
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<tr>
<td>14</td>
<td>Base panel compl. G615</td>
<td>67902663</td>
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<td>15</td>
<td>Flat-head screw ST3.9x9.5 A3T (10x)</td>
<td>7 747 026 999</td>
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Table 24  Group 5 – jacket - fastening Logano G615
Fig. 71  Group 6 – sheetmetal parts front/rear Logano G615
### Table 25  Group 6 - sheetmetal parts front/rear Logano G615

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<thead>
<tr>
<th>Item (⇒ Fig. 71)</th>
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<tr>
<td>1</td>
<td>Front cover G615 left cpl</td>
<td>67902647</td>
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<td>2</td>
<td>Front cover G615 right cpl</td>
<td>67902648</td>
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<tr>
<td>3</td>
<td>Cover G615 cpl</td>
<td>67902642</td>
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<tr>
<td>4</td>
<td>Logano G615 name plate</td>
<td>67902828</td>
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<td>Rear panel top G615</td>
<td>67902851</td>
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<td>7</td>
<td>Rear panel bottom G615</td>
<td>5932732</td>
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<tr>
<td>8</td>
<td>Flat-head screw ST3.9x9.5 A3T (10x)</td>
<td>5932734</td>
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<td>9</td>
<td>Burner connection cable 170° (4300 mm) long compl.</td>
<td>7 747 026 999</td>
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<td>12</td>
<td>Connection terminal 7-pin green BR 1 burner</td>
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<td>13</td>
<td>Connector part ST18/7 silver-plated</td>
<td>7 747 023 989</td>
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<td>14</td>
<td>Cover clamp strain relief</td>
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<td>Cable clamp</td>
<td>5340450</td>
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<td>17</td>
<td>Flat-head screw ST3.9x9.5 A3T (10x)</td>
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<td>18</td>
<td>Front cover G615 left cpl</td>
<td>7 747 026 999</td>
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<td>Boiler capacity</td>
<td>Side panels</td>
<td>Covers</td>
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<tr>
<td>570/9 (645/9)</td>
<td>280 680 775</td>
<td>280 400 570 485</td>
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<tr>
<td>660/10 (745/10)</td>
<td>280 850 775</td>
<td>280 400 340 400 485</td>
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<tr>
<td>740/11 (845/11)</td>
<td>280 510 510 775</td>
<td>280 400 340 570 485</td>
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<tr>
<td>820/12 (-)</td>
<td>280 510 680 775</td>
<td>280 400 340 400 340 485</td>
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<tr>
<td>920/13 (970/13)</td>
<td>280 680 680 775</td>
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<td>1020/14 (1065/14)</td>
<td>280 680 850 775</td>
<td>280 400 340 570 510 485</td>
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<td>1110/15 (-)</td>
<td>280 850 850 775</td>
<td>280 400 340 340 340 570 485</td>
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<tr>
<td>1200/16 (1150/16)</td>
<td>280 510 850 510 775</td>
<td>280 400 340 570 340 510 485</td>
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</table>

Fig. 72  Group 7 – sheet metal parts Logano G615
### Table 26  Group 7 – sheet metal parts Logano G615

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<th>Item</th>
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<tr>
<td>1</td>
<td>Side panel G615 280br left cpl (parts A-I)</td>
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<td>Side panel G615 510br left cpl (part B)</td>
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<td>Side panel G615 680br left cpl (part C)</td>
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<td>3</td>
<td>Side panel G615 850br left cpl (part D)</td>
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<td>4</td>
<td>Side panel G615 775br left cpl (parts E-I)</td>
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<td>5</td>
<td>Top cover front G615 cpl (part A)</td>
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<td>Top cover cpl 340br G615 (part B)</td>
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<td>6</td>
<td>Top cover cpl 400br G615 (part C)</td>
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<td>Top cover G615 400br cpl (part D)</td>
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<td>8</td>
<td>Top cover G615 485br cpl (part E)</td>
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<td>9</td>
<td>Top cover cpl 510br G615 (part F)</td>
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<td>Top cover cpl 570br G615 (part G)</td>
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<td>11</td>
<td>Side panel G615 280br left cpl (parts A-I)</td>
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<td>Side panel G615 510br left cpl (part B)</td>
<td>67902634</td>
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</table>
Fig. 73  Group 8 – sheetmetal parts carriers Logano G615
<table>
<thead>
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<th>Item</th>
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<th>Order number</th>
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<tr>
<td>1</td>
<td>Side control panel bracket</td>
<td>5097580</td>
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<td>2</td>
<td>Base carrier for control panel</td>
<td>7079670</td>
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<tr>
<td>3</td>
<td>Cover for control panel carrier</td>
<td>63045232</td>
</tr>
<tr>
<td>4</td>
<td>Flat-head screw ST3.9x9.5 A3T (10x)</td>
<td>7 747 026 999</td>
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<td>5</td>
<td>Cover plate for control panel carrier</td>
<td>63045231</td>
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<td>8</td>
<td>Conduit shield (blue)</td>
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<td>9</td>
<td>Conduit slotted (blue) (1x)</td>
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<td>10</td>
<td>Top cover for HS 4311/4312</td>
<td>63045225</td>
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<td>Burner cable 8M</td>
<td>7079690</td>
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<td>Installation material for control panel carrier</td>
<td>63045180</td>
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*Table 27 Group 8 – sheetmetal parts carriers Logano G615*
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T
Temperature control.................................................. 7
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Appendix

Data and system handover

Type ______________________ User ______________________
Manufacturer no. ______________________ Location ______________________
System installer ______________________

The system named above has been installed and commissioned according to standard engineering practice, as well as provisions of the buildings inspectorate and any legislative requirements. The technical documentation has been handed over to the user. He has been familiarized with the safety instructions, operation and maintenance of the system.

Date, signature (system installer) ______________________ Date, signature (user) ______________________

For use by system installer

Type ______________________ User ______________________
Manufacturer no. ______________________ Location ______________________

The technical documentation has been handed over to the user. He has been familiarized with the safety instructions, operation and maintenance of the system.

Date, signature (user) ______________________
United States and Canada

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Londonderry, NH 03053
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Fax 603-584-1681
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engineering and technological advances.