



Global 55 XT Cavity BF RCE

G20 (Natural gas)



Installation manual



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1. Introduction

DRU, a manufacturer of gas-fired heating appliances, develops and produces products that comply with the highest quality, performance and safety requirements. This appliance has a CE label, which means that it complies with the essential requirements of the European gas appliance directive. The appliance is supplied with an installation manual and a user manual. Installation and maintenance of the appliance should be performed by a professional certified expert with a proven knowledge and demonstrable competence in this field. A professional expert takes all technical aspects such as heat output, gas connection and electricity into account, as well as the flue gas discharge requirements. The information in this installation manual will ensure the appliance is installed in such a way that it will function properly and safely. If the installation instruction is not clear, national/local regulations must be observed.

This manual discusses the installation of the appliance and the regulations that apply to the installation. In addition, you will find the appliance's technical data as well as information on maintenance, possible malfunctions that might occur and what may cause them.

The figures can be found at the back of this booklet, in the appendix.

Please, read and use this installation manual carefully and completely, prior to installing this appliance.

The following symbols are used in the manual to indicate important information:

> Work to be performed

!Tip Suggestions and recommendations

!Caution You will need these instructions to prevent problems that might occur during installation and/or use.

!Caution You need these instructions to prevent fire, personal injury or other serious damages.

After delivery, you should give the manuals to the user.

2. CE declaration

Internal precautions at the company will guarantee that appliances produced by DRU comply with the essential requirements of the regulation concerning gas combustion appliances and the standards applied for that purpose. This declaration will lose its validity if adjustments are made to the appliance, without prior written permission by DRU. A copy of the CE test certificate can be downloaded via www.druservice.com.

Product:

Type:

Conformity assessment agency:

EC regulation:

Harmonized standards:

Gas-fired heating appliance Global 55 XT Cavity BF RCE

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3. SAFETY

3.1 General

!Caution • Please observe the generally applicable regulations and precautions/safety instruction in this manual.

• First check the exact technical version of the appliance to be installed in Appendix 2, Table 2.

3.2 Regulations

Please install the appliance in accordance with the applicable national, local and constructional (installation) regulations.

3.3 Precautions / safety instructions during installation

Carefully observe the following precautions/safety regulations:

- You should only install and maintain the appliance if you are a certified and competent installer in the field of gas-fired heating;
- Do not make any changes to the appliance;
- If you are installing an appliance that must be built in;
 - use non combustible and heat-resistant material for the chimney breast, including the top of the chimney breast, the material inside the chimney breast and the back wall against which the appliance will be placed.
 For this you can use both sheet material and stone-like materials;
 - take sufficient measures to prevent high temperatures of the wall behind the chimney breast, including the materials and/or objects that are behind the wall;
 - · comply with the minimum required internal measurements of the chimney breast;
 - · use heat-resistant electric connections and make sure that they do not make contact with the appliance;
- if you are installing an appliance with a closed combustion: only use the concentric systems supplied by DRU;
- do not cover the appliance and/or do not wrap it in an insulation blanket or any other material;
- unless stated otherwise: make sure that combustible objects and/or materials have a distance from the appliance of at least 500 mm;
- only use the accompanying wood/pebble set and place it exactly as described;
- the space surrounding the pilot burner, 2nd thermocouple or ionisation pins must remain free;
- make sure there is no dirt in gas pipes and connections;
- place a gas tap in accordance with applicable regulations;
- prior to putting into operation, check the complete installation for gastightness;
- if your appliance is provided with explosion hatches on its top, you must make sure that they cannot be blocked and check whether they fit well onto the sealing surface, prior to building in the appliance;
- do not ignite the appliance before the gas and discharge connections have been fully installed, first observe the procedure described in chapter 7.3.
- replace broken or torn glass panes.
- The appliance was designed for atmospheric and heating purposes. This means that all visible surfaces, including the glass pane, can become hotter than 100C°. It is recommended to always place a protective grating in front of the appliance when there are children, elderly people or handicapped persons in the same room as the appliance. If it is possible that vulnerable people are regularly present in the room with no supervision, a fixed guard should be mounted around the appliance.

!Caution In case of broken or torn glass panes, the application may not be used.

3.4 Second thermocouple safety (if applicable, see Appendix 2, Table 2)

It is possible, that the appliance to be installed has 2 thermocouples. Thermocouple 1 is always next to the pilot burner, thermocouple 2 is always elsewhere above the main burner.

If the appliance is provided with a second thermocouple safety on the main burner, you need to know that it will intervene if no proper transfer has taken place from the pilot burner to the main burner or from the main burner itself. The gas supply will be interrupted after 22 seconds. In order to solve a poor or non-existent transfer from the pilot burner to the main burner, please use the malfunction search diagram in Appendix 1.

4. Removing the packaging

Note the following items when removing the packaging:

- Remove all packaging materials.
- Remove all supplied components in, on and/or at the appliance.
- Check the appliance and accessories for damages (during transport).
- If necessary, contact your supplier.
- Never install an appliance that is damaged!
- Remove any screws that are used to fix the appliance to a platform or pallet.

!Caution The glass pane(s) is/are made of a ceramic material. Very small irregularities in the glass pane(s) cannot be avoided, but are within the required quality standards.

!Caution Keep plastic bags away from children.

In Appendix 2, Table 1 you can see which parts you should have after removing the packaging.

- Contact your supplier if you do not have all the parts after you finished removing the packaging.
- Dispose of packaging in accordance with local regulations.

5. Installation

Read this manual carefully to ensure the proper and safe installation of the appliance.

!Caution Install the appliance in the order described in this chapter.

- Please install the appliance in accordance with the applicable national, local and constructional (installation) regulations
- Observe the regulations/instructions in this manual.

5.1 Type of gas

The data plate indicates for which type of gas, gas pressure and for which country this appliance is intended. The data plate can be found on the appliance or can be attached to a chain to which it should remain attached.

!Caution Check whether the appliance is suitable for the type of gas and the gas pressure used at the location.

5.1.1 Reconstruction to different type of gas

If you want to convert this appliance into a different type of gas, please contact DRU's service department and ask what is possible. Reconstructions should only be performed by authorized gas installers.

5.2 Connection

5.2.1 Gas connection

Place a gas tap in the gas pipe in accordance with the applicable regulations.

!Caution • Make sure there is no dirt in the gas pipes and connections.

• No soldering may take place at the flexible gas hose(s), as this could cause leaks.

The following requirements apply to the gas connection:

- use a gas pipe with the correct dimensions, so that no pressure loss can occur;
- the gas tap must be approved (in the EU this will be the CE mark);
- you should always be able to reach the gas tap.

5.2.2 Electric connection

In case of a 230 Volt electrical connection, provide proper grounding, if applicable.

Place this electrical connection away from the appliance, as low as possible in the chmney breast.

This has to do with the temperature development in the chimney breast.

If possible, place the receiver after any building work has been completed.

If this is not possible:

!Caution Protect the receiver against dust and moisture created during the building process!

5.3 Placing the appliance

!Caution • Place the appliance in front of a heat-resistant and non-combustible wall. The wall brackets on the appliance ensure that the minimum distance to the wall is maintained.

- Make sure there are no combustible objects or materials within the radiation range of the fire, as indicated in appendix 3, fig. 2.
- Place the concentric system in such a way that no fire hazard is ever created (also see section 5.5).
- Take sufficient measures to prevent temperatures of a possible wall behind the chimney breast becoming too high, including the materials and/or objects behind the wall.
- · Do not cover the appliance and/or do not wrap it in an insulation blanket or any other material.
- The data plate should remain connected to the chain.
- Provide a gas connection at the location. For details, see section 5.2.
- Make a passage for the concentric system. For details, see section 5.5.

!Caution Do not ignite the appliance before the gas, discharge and electric connections have been fully installed, first observe the procedure described in section 7.3.

!Caution When placing the chimney breast you should take the following into account (see appendix 3, fig. 3):

- The measurements of the glass pane, so that it can be placed/removed after placing the chimney breast.
- The protection of the gas control and the pipes against cement and plaster.
- If possible, place the decorative strips, frames and such like after the performance of any structural work. Prevent the use of painter's tape. If this is not possible: use a good quality painter's tape and remove it immediately after plastering or painting work.

This appliance is intended for placement in a cavity wall. When placing the appliance, proceed as follows (see appendix 3, fig. 1, 3):

- !Caution The appliance is not a support structure. Make sure the appliance does not have to bear the weight of the chimney breast for example.
 - The back wall and hearth or chimney breast must be made of non-combustible and heat-resistant material.
 - The appliance may be placed in the cavity wall up to maximum 200 mm.
 - If the front wall (inner wall) and/or insulation of the cavity wall are combustible or if there are large open spaces in the cavity wall, this must be guarded with non-combustible insulation material with a thermal resistance of 0.09 m²K/W or better.
- Make a hole in the cavity wall with the correct dimensions.
 - Minimum height is 985 mm measured from the foot of the appliance.
 - The minimum width of the hole is 760 mm.

!Caution The hole is not symmetrical in relation to the construction frame, it is placed 41 mm off-centre.

• When creating the hole, take into account the thickness of possible insulation material; this must be added on top of the above-mentioned dimensions.

!Caution The immediate space around the appliance must be kept free and may therefore NOT be filled up with insulation material or other building materials.

- Ensure the hole is sealed off from the cavity, otherwise there will be draughts into the room.
- Ensure a hole on the correct location for the discharge of the appliance.
- Place the appliance.
- Adjust the height of the appliance using the adjustable feet.
- Make the appliance level at the same time.
- Attach the appliance to the wall using wall brackets (B) (see appendix 3, fig. 1).
- !Tip Do not close the chimney breast until all gas, electricity and discharge connections have been installed.
- Check the following issues, before the chimney breast is fully closed:
 - · Is the discharge / concentric system placed correctly?
 - Have the channels, fastening brackets and possible clip bindings, that become inaccessible later, been secured with self-tapping screws?

- Do not plaster on or over the edges of the construction frame, because:
 - The heat of the appliance could cause cracks.
 - It will no longer be possible to remove/place the glass pane.
- When using stone-like materials and or plaster finishing, allow the chimney breast to dry for at least six weeks prior to taking the appliance into operation in order to prevent cracks.
- !Tip Make sure the bottom side of the hearth/chimney breast is removable by means of the magnets and connection plate. This will improve accessibility for service and maintenance.

5.4 Connecting the appliance

Connect the gas pipe to the gas tap under the burner plate (see appendix 3, fig. 6). Proceed as follows:

- !Tip If the front and/or bottom side are within easy reach, it is not necessary to remove the burner unit from the appliance.
- Remove the glass pane as described in section 5.6.
- Remove the 5 self-tapping screws from the plates (A) and remove the plates (see appendix 3, fig. 7).
- Unscrew the 7 self-tapping screws from the burner unit (B) and lift the burner unit out of the appliance. Caution, the burner unit is still attached to the appliance by means of the flexible gas hose.

!Caution If you take the burner out of the appliance, it is possible that the gas hose comes into contact with the construction frame. To prevent scratches to the construction frame, we recommend protecting it with a cloth.

Connect the gas pipe to the gas tap.

!Caution A gas tap must also be placed outside the appliance (see section 5.2.1).

- Check gas-tightness (see section 7.1).
- Check pre-pressure (see section 7.2).
- Connect electronics as described in section 6.1.
- Place the burner unit and plates back in the appliance.

5.5 Flue gas discharge / combustion air supply system

This appliance must be installed with a DRU Snorkel Ø150/100.

- Only use the concentric system supplied by DRU This system has been tested in combination with the appliance.

 DRU cannot guarantee proper and safe operation of other systems and does not accept any responsibility or liability for this.
 - Maintain a distance of at least 50 mm between the outside of the concentric system and the walls and/or the ceiling. If the system is built in (for instance) a cove, it should be made with non-combustible material all around it.
 - Create a passage for the concentric system with the following diameters:
 - The pipe diameter +25 mm for a passage through non-combustible material.
 - Use heat-resistant insulation material when passing through combustible material.

!Caution Some heat-resistant insulation materials contain volatile components that will spread an unpleasant smell for a prolonged time; these are not suitable.

Follow the procedure below when placing the Snorkel:

- The passage length is measured from the stop brackets on the rear of the appliance (see appendix 3, fig. 4).
- Determine the length of the Snorkel and cut it to size. The length of the Snorkel is the passage length + 28 mm.
- Attach the Snorkel from the outside by means of four screws.

Depending on the configuration of the concentric system, the appliance must be further adjusted with a possible restrictor slide and/or air inlet guide. See Table 3 for determining the correct adjustment and section 'Adjusting the appliance' for the method of working. When adjusting the appliance, the passage length is used.

5.6 Glass pane

After placing the wood set it will be possible to place the glass pane as described below.

!Caution • Avoid damaging the pane during removal/placing.

- Use the socket spanner supplied for loosening/tightening the self-tapping screws.
- · Avoid/remove fingerprints on the glass pane as they will burn into the glass.

5.6.1 Removing the glass pane

When removing the glass pane, you should follow the next instructions (see appendix 3, fig. 8):

- Unscrew the self-tapping screw from the side decorative strip (A) and remove the side decorative strip. Repeat this on the other side.
- Filt the lower decorative strip (B) upwards and remove it from the frame in a slanting position.
- Unscrew the 3 self-tapping screws for the lower pane clamping strip (C) from the frame and remove the lower pane clamping strip.
- Unscrew the middle 2 self-tapping screws from the frame and remove the upper pane clamping strip (D).

!Caution Hold the glass pane during the following procedure to prevent it from falling towards the front.

- Unscrew the self-tapping screws of the left and right pane clamp strips (E) from the frame and remove the pane clamp strips.
- Tilt the glass pane forward and remove it.

!Caution When removing, make sure the sealing tape on the edges of the glass pane is not damaged.

!Tip If the glass pane remains stuck, it is possible to use one of the side decorative strips (S) as a hook to pull the glass pane forward.

5.6.2 Placing the glass pane

Placing the glass pane takes place in reverse order from the removal as described above.

!Caution • Avoid/remove fingerprints on the pane, as they will burn into the glass.

- Do not overtighten the self-tapping screws to prevent them from breaking and/or stripping the thread.
- Place the glass pane with the logo at the bottom right.

5.7 Adjusting the appliance

The appliance has to be adjusted in such a way that it works correctly with the used concentric system. For that purpose, it is possible to place a restrictor slide. The conditions for using a wall terminal can be found in appendix 2, table 3.

For placing the air restrictor slide, proceed as follows:

- Remove the glass pane as described in section 5.6.1.
- Remove the 4 self-tapping screws from the plate (P) at the top of the combustion chamber (see appendix 3, fig. 9).
- Remove the plate (P).
- Unscrew the two self-tapping screws next to the discharge from the combustion chamber.
- Place the restrictor slide (R) and fasten it with the two self-tapping screws.
- Place plate (P) back in the combustion chamber and fasten it with the four self-tapping screws.

5.8 Placing the wood set

The appliance is supplied with a wood set.

!Caution The figures do not always show the correct colours.

!Caution Observe the instructions below to prevent unsafe situations:

- Only ever use the supplied wood set.
- Place the wood set exactly as described.
- Make sure the pilot burner and the surrounding space remain free (see Appendix 3, fig. 10).
- Make sure thermocouple 2 and the surrounding space remain free (see appendix 3, fig. 11).

!Caution Place the logs exactly as described, otherwise:

- The main burner will not ignite properly; which could result in unsafe situations.
- The appliance will become filthy more quickly, as a result of soot.
- The flame picture may be affected.

5.8.1 Wood set

The wood set consists of chips (see appendix 3, fig. 12), glow material (see appendix 3, fig. 13) and a number of logs.

Fill the plates with chips, evenly distribute the chips and keep sections that are marked red free from chips (see appendix 3, fig. 14).

!Caution • Do not place chips over the burner pattern.

- The plates are provided wit square holes, these holes supply air. Do not place more than one layer of chips over these holes.
- Identify logs A to E (see appendix 3, fig. 15).
- Place log A over the positioning cam. The positioning cam should fall in the slot of log A (see appendix 3, fig. 16).

- Place logs B and C as indicated.
- Place log D over the right standing burner (see appendix 3, fig. 17).
- Place log E over the standing burner to the right.
- Pull the glowing material into separate pieces and distribute them over the section on the lying burner that is marked green.

6. Control

The appliance is supplied with a wireless remote control.

Controlling the flame height, igniting and switching off take place through a remote control controlling a receiver. Chapter 4, Wireless remote control, in the User Manual describes the operation of the appliance and how you should use the remote control.

!Caution Do not ignite the appliance before the gas and discharge connections have been fully installed, first observe the procedure described in chapter 7.3;

Below, we will describe how the receiver is connected.

6.1 Connecting the receiver

Your appliance is equipped with an electronic ignition through the remote control.

The receiver should be connected to the appliance, before the batteries are installed.

- If necessary, remove the burner unit from the appliance as described in section 5.4.
- Connect the receiver according to appendix 3, fig. 18.
- Bend the antenna (N) out of the clips and place it erect by 40 mm (appendix 3, fig. 6).
- Place the receiver in the tray with connection adapter connection (C) to the front.
- Place the battery holder in the intended tray (appendix 3, fig. 6) and connect the cable to the receiver (C).

• The plugs have different sizes that correspond with the connectors.

- The size of the eye corresponds with the size of the screw.
- The colours of eye and screw also correspond.
- Place the batteries as described below in section 6.1.1.

!Caution • Do not place the ignition cable over and/or along metals, stone or concrete parts: this will weaken the spark. Make sure the cable is hanging freely.

- If applicable, make sure that the wires of thermocouple 2 cannot come into contact with hot parts.
- Keep the ignition cable at least 10 cm away from the antenna, in order to avoid damaging the receiver.
- Avoid accumulation of dust on or in the receiver: cover it when performing work.
- If you want to use an adapter, only an adapter supplied by DRU will guarantee a proper operation of the receiver.

This appliance is provided with an ON/OFF switch. This switch can be used to switch off the appliance at all times (see appendix 3, fig. 5).

!Caution Check that the 'ON/OFF' switch is in the 'ON' position when starting the appliance.

6.1.1 Placing / replacing the receiver's batteries

The batteries should be placed in the special battery holder and not in the receiver.

!Caution Strictly observe this, to avoid damages to the receiver.

The battery holder is placed below the lower decorative strip. Replace the batteries as follows:

- Unscrew the self-tapping screw of the vertical decorative strip and remove the decorative strip by tilting the top towards the side and lifting it upwards. Repeat this on the other side (see appendix 3, fig. 8).
- Remove the lower decorative strip by grabbing it in the slot and lifting it upwards.
- Remove the battery holder from the holder (see appendix 3, fig. 6).
- Unscrew the screw of the cover from the battery holder.
- Slide the cover off.
- Remove and/or place the 4 penlite (AA type) batteries.

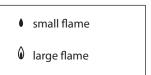
!Caution Avoid a short circuit between the batteries and metal objects/parts. Observe the "+" and "-" poles of the batteries and the holder. Use alkaline batteries. Batteries are regarded as "small chemical waste" and may therefore not be disposed with the household rubbish.

- Slide back the cover.
- Fasten the cover with the screw.
- Place back the battery holder.
- Place back the lower decorative strip.
- Place back the vertical decorative strips and fasten them with the self-tapping screws.

6.2 Setting the communication code

Prior to putting the application into operation, a communication code must be set between the remote control and the receiver. If the receiver or the remote control are replaced, a new code will have to be set. Follow the procedure described below:

- If necessary, place the batteries in the receiver's battery holder; see section 6.1.1.
- If necessary, place the 9V block battery in the remote controle; see User Manual.
- Hold down the reset button on the receiver, until you hear two consecutive sound signals (see Appendix 3, fig. 19).
- After the second, longer signal, let go of the reset button.
- Press the 'small flame' button on the remote control for 20 seconds, until you hear two short sound signals: this is the confirmation of a good communication.



6.3 Alternative operation

Appliances made with an electronic ignition and radio remote control can be connected to an alternative external control system (e.g. Domotics). For this purpose, there are 4 connection points at the side of the receiver (see Appendix 3, fig. 23). For connecting an external control unit, you will need a "Domotics connection cable for GV60". Consult DRU's service website.

The following contacts are possible:

- Ignition: connect both contacts 1 + 3, for one second (if there is a 2nd thermocouple, the appliance should burn at full power for at least 20 sec. before the required position can be chosen).
- Flame high(er): briefly close contact 1 once per step, or 12 seconds for the highest position.
- Flame low(er) until switch-off (pilot flame remains on): briefly close contact 3 once per step, or 12 seconds for the lowest position.
- Completely switching off the appliance (pilot flame included): close all three contacts 1 + 2 + 3, for one second.

The appliance will always continue to respond to the radio remote control supplied with it. The external control system is able to use one of the two modes of this remote control.

1. Manual mode

This mode of the remote control is passive and will not take any action unless it is operated. The external control system is able to control the functions for high/low position, ignition and switching off.

!Tip If the external control system has an intelligent clock function and/or thermostat function, the remote control supplied with the appliance should have the manual mode in order to prevent interruption of these functions.

2. Clock/thermostat mode

This mode of the remote control is active and will be responsible for the clock function and thermostat function. The external control system is able to control the functions for high/low position, ignition and switching off.

- If the appliance is switched off (the pilot flame included) manually or by one of the safeguards, ignition of the appliance will be blocked for a period of 3 minutes for reasons of safety.
 - If it is no longer possible to operate the appliance with the external control system, you must switch it off and then switch it on again with the supplied remote control.

7. Final inspection

In order to check whether the appliance is working properly and safely, you must perform the following inspections before the appliance is used.

7.1 Gastightness

!Caution All connections must be gastight. Check the connections for gastightness.

The gas control can be subjected to a maximum pressure of 50 mbar.

7.2 Gas pressure/line-pressure

The burner pressure is set at the factory; see data plate.

!Caution The line-pressure in house installations must be checked, because it can be wrong.

- Check the line-pressure; see Appendix 3, fig. 20 for the measuring nipple on the gas control.
- Contact the gas company if the line-pressure is not correct.

7.3 Ignition pilot and main burner

For igniting the pilot and main burner, see the User Manual, chapter 4, section 4.2, Remote control.

7.3.1 First ignition of the appliance after installation or adjustments

!Caution After installation, or after work has been performed, you should ignite the appliance for the first time without the glass window. If necessary, bleed the gas pipe.

Follow the procedure described below:

- If required, remove the glass window;
- Start the ignition procedure according to chapter 4 in the User Manual;
- If the pilot flame does not ignite:
 - · repeat the ignition procedure until the pilot burner ignites;
 - consult the malfunction search diagram (Appendix 1) if this does not happen after a few attempts;
- After igniting the pilot flame, the main burner will ignite during the ignition procedure;
- Check whether the main burner continues to burn;
- If the main burner does not continue to burn:
 - · repeat the ignition procedure until the main burner continues to burn
 - consult the malfunction search diagram (Appendix 1) if this does not happen after a few attempts;
- Switch off the appliance;
- Clean the glass pane before using it for the first time, as described in the user manual;
- Then mount the glass window as described in chapter 5.6;
- Repeat the ignition procedure a few times and perform the checks described in chapter 7.3.2;
- From now on, the pilot flame should ignite smoothly.
- Clean the glass pane after burning for the first time, as described in the user manual.

!Tip When checking whether the main burner continues to burn, it is possible that it still switches off after 22 seconds.

This happens because the appliance is equipped with a second thermocouple and the glass window has not been placed. In this case you may presume that the main burner will continue to burn.

!Caution • During the ignition process, you are not allowed to operate control button B on the gas control manually.

- Always wait 5 minutes after the pilot flame has gone out, before you re-ignite the appliance.
- You are not allowed to turn the pilot flame lower by using the settings on the gas control.

7.3.2 Main burner

!Caution • The pilot burner should ignite the main burner within a couple of seconds, and without popping.

- The main burner(s) must cross the full burner smoothly and without popping and continue to burn.
- Check operation of the main burner from a cold condition (pilot flame off):
- After opening the gas valve, the main burner should burn within a few seconds.
- !Tip When the gas valve is opened, the motor will start to run; this is audible.

 The flame picture and a good flame transfer can only be properly judged if the glass window is installed.

Use the malfunction search diagram (Appendix 1) if the ignition of the main burner does not comply with the abovementioned requirements.

7.4 Flame picture

The flame picture can only really be assessed when the appliance has been burning for several hours. Volatile components from paint, materials, etc., which evaporate in the first hours, will affect the flame picture.

!Caution If the chimney breast has been made of stone-like materials or has a plaster finish, the appliance may only be put into operation 6 weeks after the chimney breast has been placed, in order to prevent shrinkage cracks.

- Check whether the flame picture is acceptable.
- Consult the malfunction search diagram (Appendix 1) if the flame picture is not acceptable.

8. Maintenance

The appliance must be inspected once per year by a skilled installer in the field of gas-fired heating, and repaired if necessary.

Check at least whether the appliance is working properly and safely.

!Caution • Always close the gas tap during maintenance work;

- · Check the gastightness after repair;
- After replacing thermocouple 1 you should first tighten the gland nut by hand and then give it another quarter turn with a suitable spanner;
- You are not allowed to turn the pilot flame lower by using the settings on the gas control.
- SS-absolutely do not clean the concentric system (internally) with a steel brush or metal sponge, for example. This will damage the oxide skin and could lead to leaks in the system as a result of pitting corrosion.
- If required, clean the following components:
 - the pilot burner (malfunction search diagram, Appendix 1);
 - the space surrounding the pilot burner;
 - the glass pane(s).

 $\hbox{!} \textbf{Caution} \, \bullet \, \, \, \textbf{Avoid damage to the glass pane} (\textbf{s}).$

- Avoid/remove fingerprints on the glass pane(s), as they will burn into the glass.
- Clean the glass pane(s) as described in the user manual.
- Regularly remove accumulated dirt, as it can burn into the glass.
- Do not use the appliance when a glass pane is broken and/or cracked, until it has been replaced as described from section 5.6.

!Caution If necessary, replace the wood or pebble set correctly; for this, see section 5.8.

Inspect the flue gas discharge system.

!Caution You must always perform a final inspection.

Perform the inspection as described in chapter 7.

8.1 Parts

Parts requiring replacement can be obtained from your supplier.

9. Delivery

You must explain to the user how to operate the appliance. You must give him/her instructions on putting it in operation, the safety measures, the operation of the remote control and annual maintenance (see the User Manual).

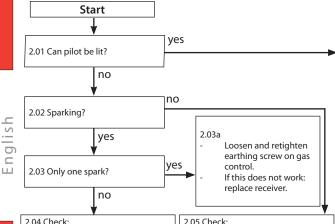
- !Caution Tell the user to close the gas tap immediately and contact the installer in case of malfunctions/poor operation. This to prevent unsafe situations;
 - Indicate the location of the gas tap;
 - · Point out the precautions in the user manual against unintended ignition by other wireless remote controls such as car keys and garage door openers.
- Instruct the user about the appliance and the remote control.
- When the appliance is started for the first time, point out that
 - · In order to avoid cracks in a chimney breast made of stone-like materials or finished with plaster, it should dry for at least 6 weeks prior to putting the appliance into operation.
 - · When the appliance is stoked up for the first time, volatile components evaporate from paint, materials, etc. (First read chapter 3 of the User Manual as well!);
 - When evaporating, the appliance should preferably be set to the highest level;
 - The room should be well ventilated.
- Give the manuals to the user (all manuals should be stored near the appliance).

10. Malfunctions

In Appendix 1 you will find an overview of malfunctions that might occur, the possible causes and the remedies.

Appendix 1 Diagnosis of malfunctions

Fires with electronic ignition, fault finding: Ignition and burning



Receiver

Replace missing, weak or rechargeable batteries (not enough power to open thermoelectric

Presence of gas on pilot burner

Check pilot on presence of gas at normal ignition cycle or in Manual Mode (turn oval knob on gas control to MAN and keep safety shut off valve opened with a screwdriver) and ignite pilot with a lighter.

- Pilot flame not on: Step 1.
- Pilot flame on: Step 2.

Step 1: Pilot has no gas Check:

- Gas tap open?
- $\begin{tabular}{ll} \dot{\ensuremath{\text{Gas}}} & \dot{\ensuremath{\text{Gas}}} & \dot{\ensuremath{\text{control}}} & \dot{\ensuremath{\text{(line pressure at } })} \\ \ensuremath{\ensuremath{\text{Gas}}} & \dot{\ensuremath{\text{Gas}}} & \dot{\ensuremath{\text{ga$ measuring point on gas control).
- Gas flowing out of gas control? (by loosening pilot tube at gas control). If not: check adjustment screw pilot flame (under black cover): sealing not to be broken.
- Sealing broken: screw should be fully open.
- Blocking of pilot tube (kink or dirt).
- If this does not help: replace gas

Step 2: Pilot has gas, but no ignition

- Electrode with 90° bended tip: bend tip 1 mm higher.
- Spark too weak (thin and reddish). Act as if 'no spark' in box 2.05 and perform actions described for ignition cable and ignition electrode.
- Pilot flame too weak (dirty). Remove injector (remove gland nut and the pilot tube). See that it does not fall away. Clean with compressed air. Rectify, Retry.

Ignition cable

- Present and connected.
- Being free from metal parts or concrete
- Too long: cut away all excessive length at receiver end, and reconnect.
- Shorting out to earth: replace ignition cable.
- Spark in wrong position:
- slide rubber sleeve on ignition cable over ceramic of electrode.
- Replace electrode if neccessary.

Ignition electrode

- Straight electrode:
- oxidation (roughen electrode with file or sand paper);
 - position (4 mm from pilot burner).
- Cracks in ceramic (not always visible): replace electrode.

Starting procedure

After switching off/going out the remote is locked for 120 sec. (older versions 60 sec)

Wait 2 minutes before reigniting.

2.07

2.06 Pilot can be lit.

Does it stay alight?

Pilot out when servomotor starts to run? Check the thermocouple

no

ves

- Measure thermocouple voltage in mV just after servomotor starts to run and the voltage goes down.
- Measure between red dot on receiver and earth point on gas control (fig. 21).
- 0 mV
- 2-3 mV
- 3-5 mV
- 6 mV and higher
- Requirement: after rectification actions thermocouple voltage should be 6 mV at least, just after motor starts running!

Voltage 0 mV

- Thermocouple defective. Check by replacing or measuring voltage at end whilst heating (tip: with a lighter).
- Short circuiting or interruptions in circuit: Check:
- thermocouple tight in interruptor;
- interruptor tight in gas control: - black wires (yellow/red end) connected to interruptor + receiver:
- interruptor (mount thermocouple directly in gas control and ignite in Manual Mode (see 2.04).
- If pilot stays on: interruptor defective.

Voltage 2-3 mV

- Check pilot flame. Too small:
- pilot dirty. Clean up (see 2.04).
- check for pilot gas tube tightness;
- pilot tube kinks or dirt inside;
- line pressure too low. - Tip: thermo couple not in (cor-
- rect!) pilot flame. Bend into flame.

Voltage 3-5 mV

Appliance may work, but is too critical. Perform actions as described for 2-3 mV.

Voltage 6 mV and higher

Voltage OK, so different cause.

- Receiver defective. Check by dismounting black-red and vellow control cables from receiver and link together. Ignite fire in Manual Mode (see 2.04). Pilot stays on: receiver defective.
- Gas control defective if receiver is not defective. Replace gas control.

2.09 Ignition procedure

2.08 Does main burner ignite

immediately?

Oval knob on gas control is on "MAN". Set to "ON" and restart.

no

Retarded ignition of main burner(s)

Gas to main burner opens ca. 3-5 seconds after servo motor, operating the gas valve, starts running (sound of motor!). After this the main burner is to ignite (at least partially) within 10 seconds and not with a firm noise WHOOF. If not: no or delayed cross lighting of main burner.

Hazardous situation.

Stop ignition procedure straight away and first check for:

- Position of logs or pebbles.
- Burner holes (locally) blocked. Remove vermiculité dust.
- Vermiculite missing.
- Chips on burner.
- Vermiculite not distributed evenly across burner(s).

PowerVent® (if present)

Burner does not light. Consult PowerVent® installation manual how to carry out the checks below. Check:

- 230 V to fan controller unit and fan.
- Silicon pressure measurement hoses:
- swapped;
- leaking or barred.
- Pressure difference set too high.
- Resistance of flue system too high: - adjustment (of appliance
- damper and air inlet guides);
- flue length or number of bends too large;
- dirty (e.g. cobwebs).
- Operation of the fan.
- Operation of solenoid gas valve. Operation of fan controller unit.
- Operation of pressure
- measurement gauge.

2.11 No proper cross lighting of main burner(s).

<u>L</u> no

Go to box 2.09 and take actions act as described for 'retarded ignition of main burner'.

2.10 Do(es) main burner(s)

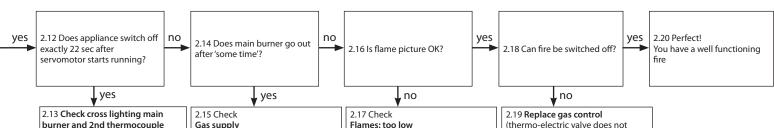
ignite smoothly and across

its/their full length after first

ignition by pilot burner?

ves

yes



burner and 2nd thermocouple

Measure voltage of 2nd thermocouple

- Check voltage in mV, 22 sec after servomotor starts to run, c.q. just before fire goes out. Glass window to be mounted!
- Measure between black wire + earth point on gas control.
- Requirement: voltage >5 mV after rectification actions.

Voltage 0 mV

- 2nd couple defective.
- Cross ligting main burner very slow. Take actions "Cross lighting too slow" (see below), before taking any further action!!

Voltage <1,8 mV

- Cross ligting main burner too slow. Take actions "Cross lighting too slow" (see below), before taking any further action!
- 2nd couple barred. Check:
- 2nd couple free of vermiculite, chips or pebbles;
- position of logs or pebbles; - burner holes under 2nd couple
- 2nd couple defective (cross lighting
- OK, but voltage creeps up too slow). Flames instable, see 2.15. Rectify,
- before any other action is taken!! Burner pressure (too high or too
- low). 2nd couple not positioned cor rectly in flame. Bend into correct position (see fig.
- 2nd thermocouple positioned correctly (see manual). Bend into flame (only if cross lighting and

flame picture are OK!! See 2.17). Voltage > 1.8 mV

Receiver defective, Replace, Cross lighting of main burner too slow

Measure the time in sec from start running of servomotor till the flame reaches the 2nd couple.

Requirement: the flame must be in position at the 2nd couple <10 sec. . If not, check:

- 2nd couple free from vermiculite, chips or pebbles; position of logs or pebbles;
- burner holes (locally) blocked. Remove vermiculite dust.
- vermiculite missing or not evenly distributed across burner(s);
- chips on burner; lack of combustion air. See 2.15.
- cross lighting in low setting (possible when thermostat function is used).

Gas supply

- Supply pressure does not drop away as main burner (or other appliance) lights, causing pilot flame to shorten.
- Burner pressure (too high or too low).

Flames instable (suffocating, lack of air).

Dancing flames on burner. Lack of combustion air. Check:

- flue system permissible;
- proper flue terminal used, make should be 'DRU':
- terminal correctly sited on roof or wall relative to obstructions;
- integrity of flueing system (no interruptions, not barred, cobwebs);
- air inlet guides;
- flue restrictor/damper;
- throttle rings. See manual for specific requirements.

PowerVent®

Possibly not enough draught. Check if pressure difference set too high. Consult PowerVent® installation manual.

Pilot burner

Pilot burner dirty. Weak pilot flame being drawn away by flames main burner. Clean with compressed air. See 2.04.

- Supply pressure does not drop away as main burner or other appliances in the building light. causing flames to shorten.
- Burner pressure (too low).
 - False air: Check soundness glass window gasket/ soundness of the connection of the glass panes of two/three sided appliances (no slots allowed).

Flames: too high

- Line pressure
- Burner pressure.

Flames: no even distribution or

- out on part of the burner(s)Position of logs or pebbles.
- Burner holes (locally) blocked. Remove vermiculité dust.
- Vermiculite not distributed evenly across burner(s).
- Adjustment of throttle ring(s).

Flames: too blue/too yellow or sooting

- Air inlet guides.
- Flue restrictor/damper. Adjustment of throttle ring(s).
- Flames: suffocating: lack of air You see dancing flames on burner,

seeking for air. See 2.15.

Flame picture 'restless' Indication of too much draught.

- adjustment of appliance damper
- and air inlet guides); vertical flue length allowed (<12
- window glass not mounted gas tight.

PowerVent®? Check:

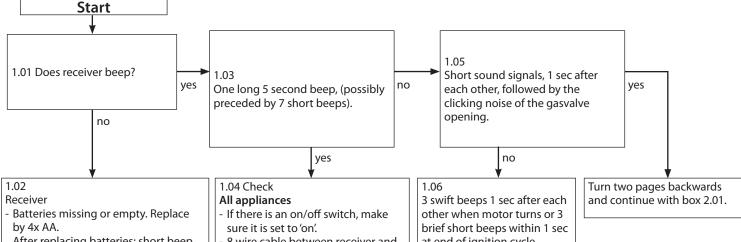
Possibly too much draught. Check:

- Pressure difference set too high.
- Silicon pressure measurement hoses leaking. Consult PowerVent® installation

manual for more info.

(thermo-electric valve does not shut down quick enough because of some permanent magnetism).

Malfunction search diagram atmospheric gas-fired heating appliance with electronic ignition: Starting up cycle.



After replacing batteries: short beep. No beep: receiver defective. Replace by new one.

- Replace rechargeables by alkaline batteries.
- Communication code between remote and receiver has to be (re)set: - Press reset button on receiver until
- brief beep, followed by long beep. - Release reset button and press 'flame low' button on remote within 20 seconds. Then 2 short beeps and brief noise of servomotor to confirm that communication code was set succesfully.

Remote control

- Battery 9V empty (see indication on display).

Several

After switching off/going out the remote set is locked for 120 sec. (older versions 60 sec).

Wait 2 minutes before reigniting.

- 8 wire cable between receiver and gas control not connected, poor contact or one wire loose in
- connector (check by pulling wire by wire).
- Wiring of thermocouple circuit interrupted, or poor contact. Check thermocouple, thermocouple interrupter and wiring. Sie box 2.05.
- Microswitch on gascontrol defective.
- The on/off switch is defective. Check by bridging the connection points.

Appliances with 2nd thermocouple only

- 2nd thermocouple not cooled down sufficiently. Wait till cooled down (voltage < 0.8 mV), measure between black extension wire and earth).
- Wiring of 2nd couple interrupted. Check black and red extension wire of 2nd couple to be connected to:
- 2nd thermocouple (both wires);
- receiver (black wire, can be forgotten at installing);
- earth (red wire).
- Else: receiver defective. Replace.

at end of ignition cycle.

yes

1.07

Replace batteries

Measure battery voltage:

<5.5V: replace preventative. <4.8V: appliance works no longer. Replace batteries.

Appendix 2 Tables

Table 1: Parts included with the delivery		
Part	Number	
Wood set	1x	
Installation manual	1x	
User manual	1x	
Glow material	1x	
Spare self-tapping screws for mounting the glass panes	nx	
Socket spanner 8 mm	1x	
Remote control with receiver	1x	
9V block battery	1x	
Penlite battery (AA type)	4x	
Key bolts M8	2x	
Hexagonal nut M8	4x	
Washer M8	4x	
Battery holder	1x	
Snorkel Ø150/100	1x	

	Table 2: Te	chnical data	
Model identifier(s):		Global 55XT Cavity BF RCE	
Type of appliance		Cavity wall	
Combustion		Closed combustion	
Supply and discharge system	,	Concentric 150/100 Snorkel	
Flame protection version		Pilot flame with thermocouple	
2nd thermocouple safety		Yes	
Atmosphere safety		No	
Explosion hatch		Yes	
Ventilation hole chimney breast		-	
Type		C11/C31/C91	
Category		I _{2H}	
Gastype:	Symbol	G20	Unit
Indirect heating functionality	Syllibol	No No	Offic
			LAA
Direct heat output		3,2	kW
Indirect heat output		-	kW
Space heating emissions NO _x		112,3	mg/kWh _{input} (GCV)
Heat output			
Nominal heat output	P _{nom}	3,2	kW
Minimum heat output (indicative)	P _{min}	1,8	kW
Technical data			
Nominal heat input (Hs)		4,6	kW
Nominal heat input (Hi)		4,1	kW
Consumption max		437	L/h
Consumption min		264	L/h
Burner pressure max		12,1	mbar
Burner pressure min		4,1	mbar
Main burner injector		1x Ø 0,80 2x Ø 1,10	mm
Low setting injector		Ø 1,35	mm
Efficiency class (EN613)		2	
Useful efficiency (NCV)*		_	
Useful efficiency at nominal heat output	η _{th,nom}	77,4	%
Useful efficiency at minimum heat output (indicative)	η _{th,min}	73,0	%
Auxiliary electricity consumption			
At nominal heat output			LAA
·	el _{max}	-	kW
At nominal heat output	el _{min}	-	kW
In standby mode	el _{SB}	-	kW
Permanent pilot flame power requirement			
Pilot flame power requirement (if applicable)	P _{pilot}	-	kW
Energy efficiency			
Energy efficiency index	EEI	77	
Energy efficiency class		С	
Type of heat ou	tput / room ter	nperature control	
5 5		temperature control	No
Two or more manua	l stages, no rooi	m temperature control	No
With mechanic thermostat room temperature control No		No	
With electronic room temperature control Yes			Yes
With electronic room temperature control plus day timer Yes			Yes
With electronic roon	With electronic room temperature control plus week timer Yes**		
Ot	ther control opt	ions	
Room temperature control, with presence detection Yes**			
Room temperature control, with open window detection Yes**			Yes**
With distance controle option Yes**			Yes**

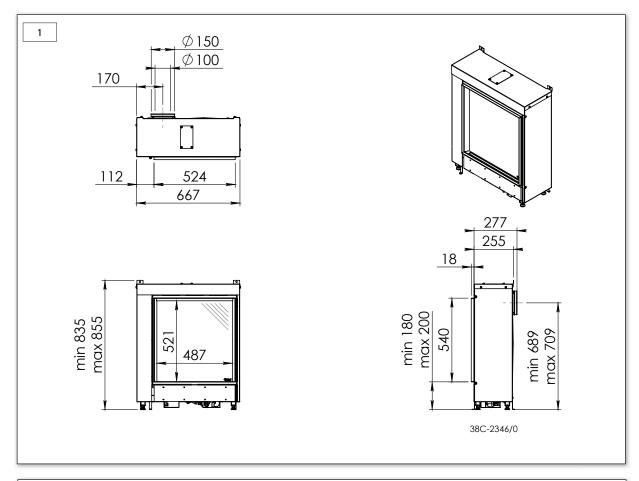
^{*} System efficiency.
** To be used by means of home automation.

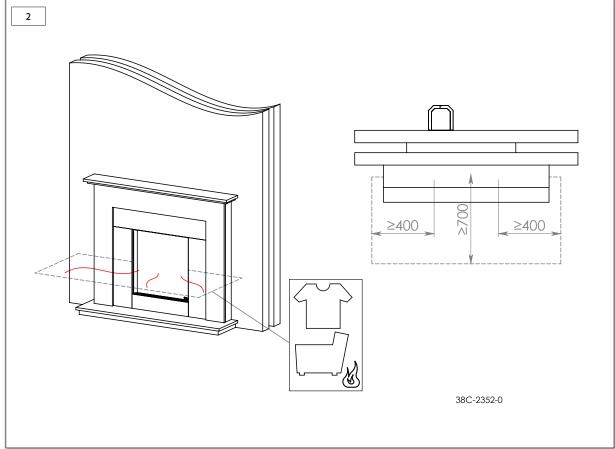
Permissibility and conditions concentric system with Snorkel Ø 150/100 $\,$

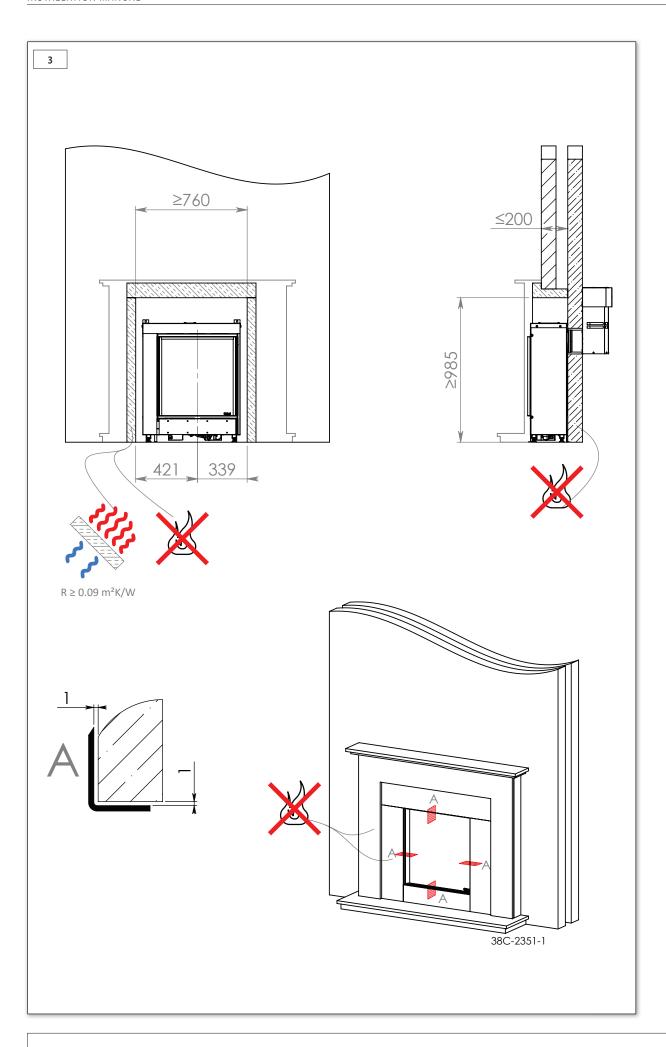
Table 3: Conditions for setting the appliance		
G20		
Total number of meters horizontal pipe length	See Figure	Restrictor slide
0,10 ¹⁾ - 0,15	4a	Yes
0,15 - 0,64	4b	No ²⁾

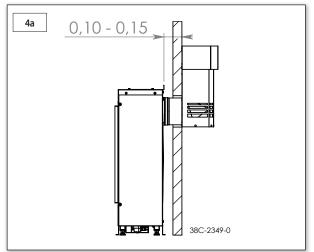
¹⁾ minimum length 2) factory setting

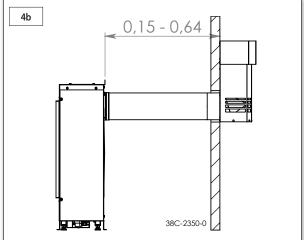
Appendix 3 Figures

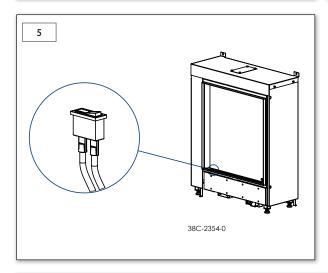


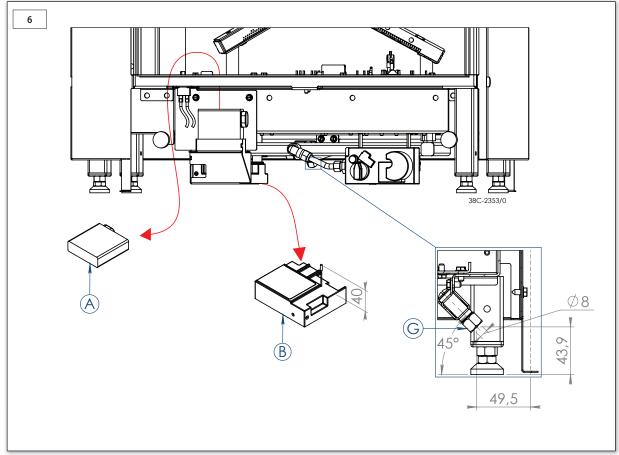


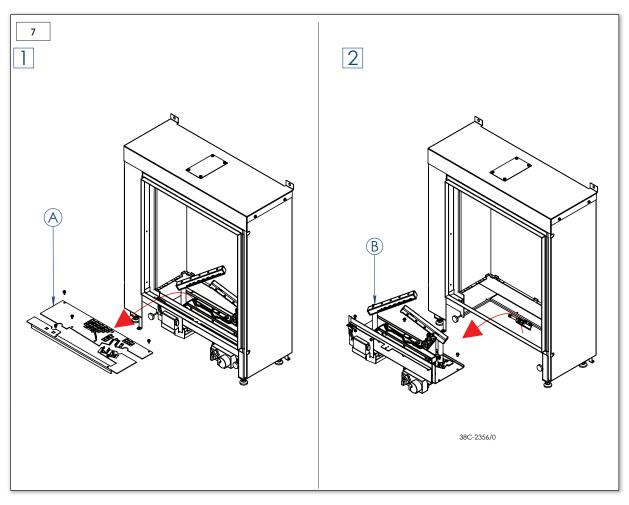


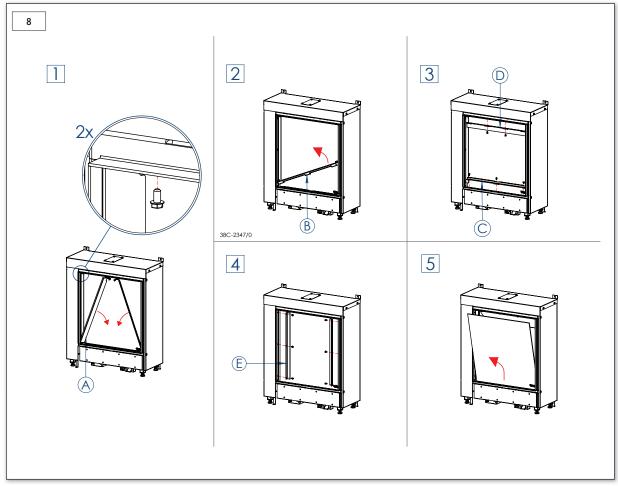


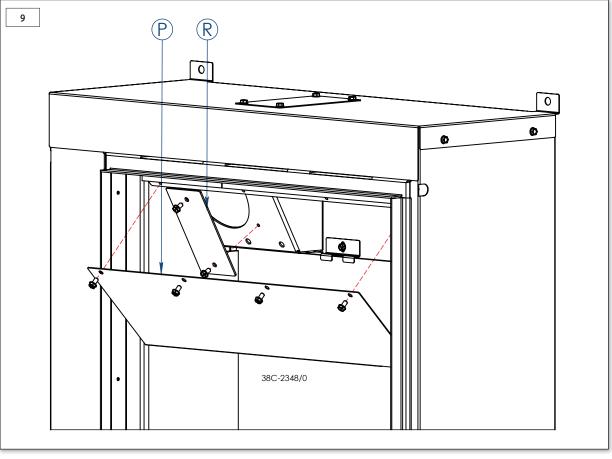








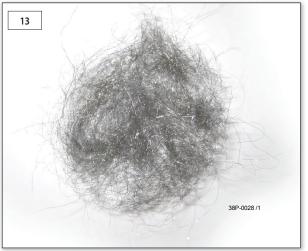




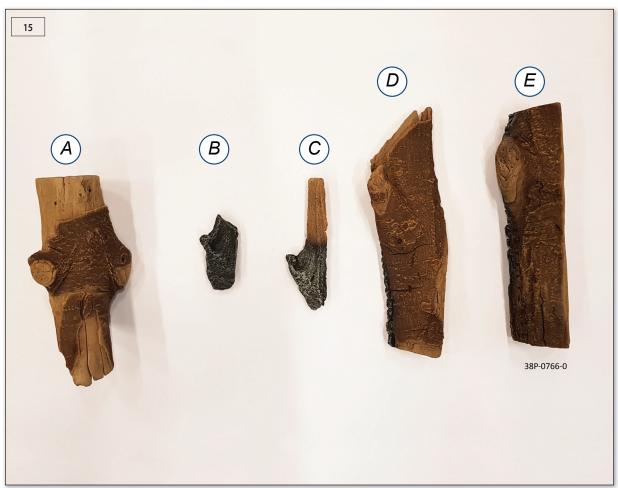


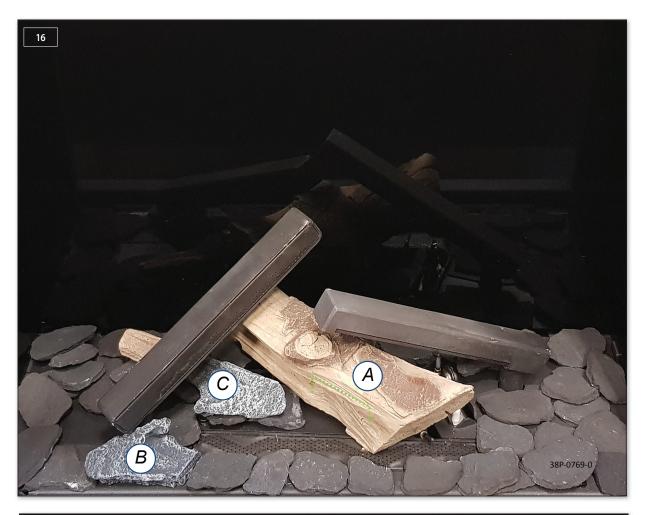


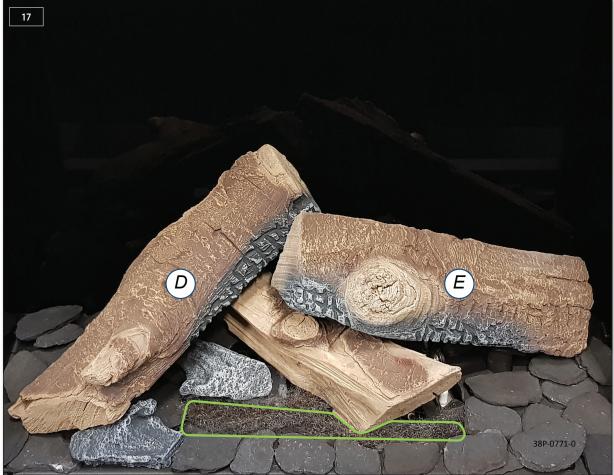


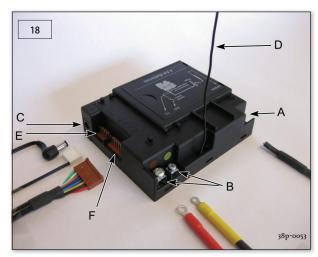


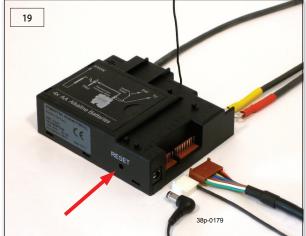


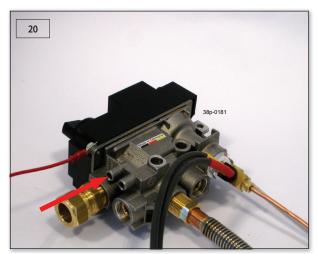


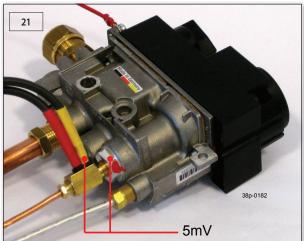


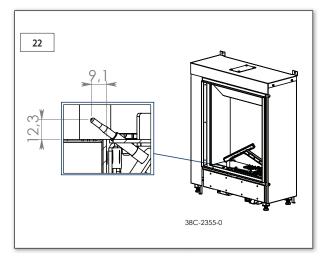


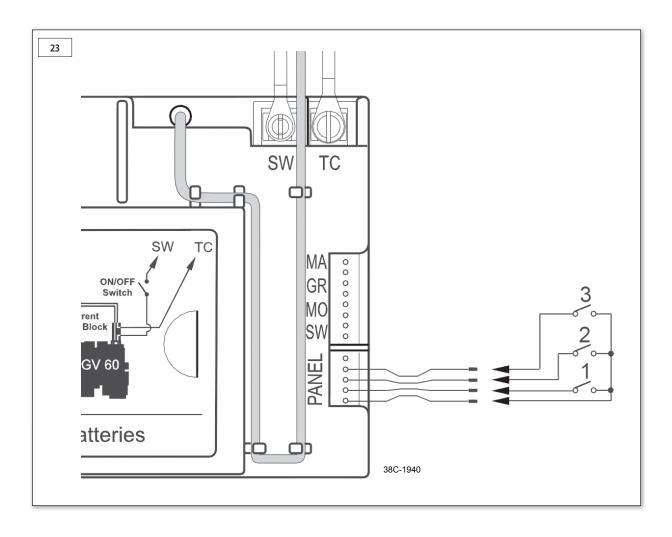












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