

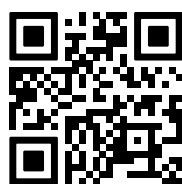
Metro 130XTL RCH

G20/G25/G25.3 (Natural gas), G30 (Butane) and G31 (Propane)



Installation manual

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1. Introduction

DRU, a manufacturer of gas-fired and electric stoves, develops and produces products that comply with the highest quality, performance and safety requirements. The information in this installation manual will ensure the appliance is installed in such a way that it will function safely and in a correct way.

Installation and maintenance of the appliance should be performed by a certified and competent professional person, hereafter referred to as the installer. Read the installation manual prior to installing the appliance and make sure the instructions contained therein are fully and carefully observed. If applicable, this also applies to the installation manuals for the DRU PowerVent® and the DRU CM system.

The appliance is supplied with an installation manual and a user manual. The installation manual discusses the installation of the appliance and the applicable instructions, includes the technical specifications of the appliance and provides information about its maintenance and any failures that might occur and what might cause these failures. The user manual contains all information that is relevant to the user in order to operate the appliance properly and safely. After final delivery, both manuals should be handed over to the user.

Where installation instructions are not clear, national/local legislation should be observed.

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



!Tip

Work to be performed

!Caution

Suggestions and recommendations

!Caution

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

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

After final delivery, the manuals should be handed over to the user.

2. EU/UKCA Declaration of conformity

This declaration of conformity is provided under the sole responsibility of DRU Verwarming, hereafter referred to as DRU. DRU declares that company internal measures guarantee that appliances produced by DRU meet the essential requirements and guidelines of the European regulation concerning gas-fired appliances and the accompanying standards. This declaration loses its validity if changes are made to the appliance without written permission from DRU. The instructions in the manuals must also be observed at all times. A copy of the EU test certificate can be downloaded via www.druservice.com.

| | |
|--------------------------------|--|
| Product: | Gas-fired heating appliance |
| Type: | Metro 130XTL RCH |
| Product identification number: | 0063CM3071 |
| EU test certificate: | 18GR0166/01 |
| Conformity assessment agency: | Kiwa Netherlands B.V. (0063) Wilmersdorf 50 Postbus 137 7300 AC, Apeldoorn |
| Regulations: | (EU) 2016/426, (EU) 2015/1186, (EU) 2015/1188 |
| Directives: | 2014/53/EU, 2014/35/EU, 2014/30/EU, 2009/125/EC |
| Standards: | EN 613:2021, EN 60335-1:2012, EN 60335-1:2012/A2:2019, EN 60335-1:2012/A11:2014, EN 60335-1:2012/A13:2017, EN 60335-1:2012/A14:2019, EN 60335-2-102:2016 |

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www.drufire.com

Signed for and on behalf of:


R.P. Zantinge, Managing director

Duiven, 02-12-2024

3. SAFETY

- !Caution**
- Observe the generally applicable regulations and precautions/safety instructions in this manual.
 - Read this manual carefully to ensure the proper and safe installation of the appliance.
 - Prior to starting the installation, check that the correct appliance has been delivered on the basis of Appendix 2, Table 2.

3.2 Regulations

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

3.3 Safety instructions

- !Caution** Carefully observe the following precautions/safety instructions:
- Installation and maintenance of the appliance should be performed by an installer.
 - The appliance was designed for atmospheric and heating purposes. This means that all visible surfaces, including the glass pane, can become hotter than 100°C. It is recommended to always place a guard grille in front of the appliance when children, older people or persons with reduced physical, sensory or mental capacities are in the same room as the appliance. If these vulnerable people are regularly present in the room without supervision, a fixed guard should be made around the appliance.
 - Keep combustible objects and/or materials outside the appliance's radiation range (see section 5).
 - Do not cover the appliance and/or do not wrap it in an insulation blanket or any other material.
 - Do not use the appliance when a pane is broken and/or cracked, until it has been replaced.
 - Only use the flue gas discharge / combustion air supply system (concentric system) supplied by DRU.
- !Caution** When installing the appliance, heed the following warnings:
- Do not make any changes to the appliance.
 - Only use the accompanying set, such as the wood or pebble set, and place it exactly as described.
 - Leave space around the ionisation pin and spark electrode and never place glow material around these pins.
 - Place a gas tap in accordance with applicable regulations.
 - Make sure there is no dirt in gas pipes and connections.
 - Check the complete installation for gas tightness prior to commissioning.
 - Do not ignite the appliance until it is fully installed in relation to the gas connections, discharge system and electrical components.
- !Caution** When installing a built-in appliance:
- Prevent the explosion hatch(es) on the top of the appliance (if present) from getting clogged and check that they properly fit on the sealing surface, before the appliance is built in.
 - Use non combustible and heat-resistant materials for the chimney breast, including the top of the chimney breast and the material in the chimney breast, such as the floor under the appliance and the back wall against which the appliance will be placed. For this you can use both special sheet material and stone-like materials.
 - Take sufficient measures to prevent excessive temperatures of a wall behind the chimney breast, including the materials and/or objects behind the wall.
 - Take the minimum required internal dimensions of the chimney breast into account. These are for the benefit of safety and for the prevention of excess heat accumulation in the chimney breast.
 - Ventilate the chimney breast by means of ventilation holes (see section 5.6). These are essential for safety and for the prevention of excess heat accumulation in the chimney breast.
 - Use heat resistant electrical connectors.
 - Place heat-resistant electrical wiring away from the appliance and as low as possible in the chimney breast. This has to do with the temperature development in the chimney breast.
- !Caution** When installing a free-standing appliance:
- Place the appliance at the indicated minimum distance from the back wall and side walls (see section 5).

3.4 Igniting the appliance

Igniting the appliance takes place as follows: the appliance is switched on by means of an ignition command. This can be done by means of the provided remote control, the DRU Fire App (iOS and Android) or a home automation system. The receiver in the appliance gets the signal to start the ignition process. The valves in the gas control are switched on and a reduced amount of gas flows to the main burner. The ignition mechanism sparks for 15 seconds, as a result of which the main burner ignites.

In the case of a PowerVent® system, the module switches on after an ignition command, as a result of which the fan of the system starts up. During starting up, a waiting time of 8 seconds applies. After this the appliance will ignite as described above.

After ignition of the main burner (half the capacity), the ionization is measured to check for a correct and full ignition of the burner. When no ionization is detected after 15 seconds, the ignition cycle is interrupted and the appliance will enter into a failure condition.

When ionization is detected, the main burner will switch to full capacity. In case of an appliance with a switching second burner, the gas valve is now opened to allow the second burner to ignite (shortly before ignition a click sound can be heard). The appliance is now in manual mode, runs at full capacity and is now ready for operation.

The second burner can be switched on and off manually by means of the remote control and/or DRU Fire App. After the second burner is switched on manually, the main burner first switches to full capacity to ensure a correct ignition.

!Tip The control unit of the appliance performs a safety check on the system every 24 hours. It is possible that this check is performed while the appliance is in operation. In that case, the appliance will extinguish and ignite again. Repetition at this particular time can be prevented by removing the plug from the socket and inserting it again at a time when the appliance is rarely or never burning.

4. Unpacking

When unpacking the appliance, please proceed as follows:

- Remove all packaging materials and dispose of them by means of the correct waste processing method.
- !Caution** Keep plastic bags and packaging materials away from children.
- Remove all supplied components in, on and/or at the appliance.
- Remove the screws, if the appliance is attached to a platform or pallet.
- Check the appliance and accessories for damages (during transport). In case of damage, contact your supplier.
- !Caution** Never install a damaged appliance.
- Use Appendix 2, Table 1 to check if all components have been delivered. Contact your supplier if this is not the case.

!Tip The glass panes are made of ceramic material, which means that minor irregularities in the surface cannot be prevented. These are within the imposed quality standards.

5. Installation

The appliance control unit consists of the following components (Appendix 3, Fig. 38):

- A: Distribution block; connection of the burners
- B: Main valve; controls the gas supply to the main burner and valve second burner.
- C: Valve second burner; switches the gas supply to the second burner (if applicable)
- D: Controller (ESYS); controls the ignition procedure and checks for a safe operation
- E: Receiver (DFGT); ensures the control of the appliance
- P1: Pressure gauge nipple 1; burner pressure
- P2: Pressure gauge nipple 2; line-pressure
- G(IN): Gas connection; connection from the gas control to the gas network

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 is located on the appliance or can be attached to a chain. The data plate must remain attached to the appliance by means of the chain at all times.

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

5.1.1 Gas type conversion

A gas type conversion should always be performed by a recognised gas installer. Contact the DRU service department to see what is possible.

5.2 Gas connection

This appliance is intended for use on a gas installation with a gas pressure regulator in the supply. In addition, a gas tap should be installed in the gas pipe, in conformity with the applicable regulations.

- !Caution**
- Make sure the gas pipes and connections are free from dirt.
 - No soldering work may be performed at the flexible gas hose(s).

For the gas connection (Appendix 3, Fig 38 (Gin)), the following requirements apply:

- Lay the gas pipe in such a way that no pressure loss can occur.
- The gas tap must be provided with the correct quality mark.
- The gas tap should be accessible at all times during and after installation.

5.2.1 Gas hose for gas outlet

If legally permitted, a gas hose for a gas outlet (according to EN14800) can be ordered with the appliance in various lengths (consult DRU Service for this). The gas hose is mounted to the appliance at factory and has been checked for leak-tightness.

!Caution

- The gas outlet should be accessible at all times during and after installation.
- The gas outlet may only be placed vertically (Appendix 3, Fig. 3).
- The gas outlet and gas hose may not be placed behind the appliance.
- The gas outlet should be placed next or under the appliance on the wall behind the appliance.
- Measured from the bottom of the adjustable foot holder, a maximum allowed placement height of 30 cm shall apply (Appendix 3, Fig. 3).
- A minimum radius of 40mm must be observed in case of a bend in the gas hose (Appendix 3, Fig. 3).
- A minimum distance of 20mm must be observed between gas hose and appliance.
- The gas hose must be placed as low as possible in the chimney breast. Place it as far away from the burner as possible.
- The input of the appliance control unit points towards the appliance. Due to the bend radius of the gas hose, the chimney breast width becomes larger on the side of the control hatch.

5.3 Electrical connection

Ensure a 230 Volt earthed electrical connection. Place this connection in such a way that it is free from the appliance. When using a chimney breast, the connection should be placed as low as possible, in connection with the temperature development during use.

- !Caution** Make sure the installation can be made free from voltage easily after installation, by disconnecting the plug or using a 2-pole switch placed by an installer in accordance with normal regulations.

- !Caution**
- Protect the appliance control unit and accompanying electrical components against building dust and building moisture.
 - When connecting the receiver and the control panel of the CM system, observe the instructions in the provided installation manual.

5.3.1 Connection switch contact (Eco Glow)

(if applicable)

Connection (B) is used for the Eco Glow glow lighting (Appendix 3, Fig. 36 (B)). When the appliance is not made with Eco Glow glow lighting, this contact can be used for other purposes. It is a potential-free contact and may be loaded to a maximum of 230V~ 1A (230W).

5.3.2 Switching/Dimmable power supply (Triac)

(if applicable)

With connection (C), it is possible, for example, to switch the lamps of DRU lux element or a ventilation system (Appendix 3, Fig. 36 (C)). This can be done by means of the provided remote control or DRU Fire App. The App can also be used to dim this contact. The power supply of this connection may only be loaded with up to 230V~ 0.35A (80 Watt).

5.4 Placing the appliance

- !Caution**
- Place the appliance in front of a heat-resistant and non-combustible wall and on a heat-resistant and non-combustible floor. The wall brackets on a built-in appliance ensure that the minimum distance to the wall is maintained.
 - Ensure there are no combustible objects or materials present in the fire's radiation range, within a distance of 500 mm, unless indicated otherwise.
 - Place the concentric system in such a way that no fire hazard is ever created (also see section 5.8).
 - Take sufficient measures to prevent temperatures of a possible wall behind the chimney breast, or the floor under the chimney breast from becoming too high; including the materials and/or objects located there.
 - Do not cover the appliance and/or do not wrap it in an insulation blanket or any other material.
 - Make sure that the appliance to be installed has a stable position. Fasten possible extending legs with the self-tapping screws.

- !Caution** When installing a built-in appliance, always take the following into account:
- The minimum construction measurements according to Appendix 3, Fig. 1 and 2.
 - The construction height of the appliance.

- Provide a gas connection at the location. For details, see section 5.2.
- Make a passage for the concentric system; for details, see section 5.8.3.

- !Caution** Additional instructions for the appliance to be installed can be found from section 5.10.

5.5 Placing a built-in appliance (if applicable)

Not all built in DRU appliances are supplied with a control hatch.

- !Caution** Built in appliances must be installed with the DRU control hatch. This is necessary to ensure a durable, safe and proper operation. The DRU control hatch can be ordered separately. Exceptions are:
Appliances with supplied DRU guard cabinet. The DRU guard cabinet is intended for installation with a suspended platform. If the appliance will be connected to the DRU PowerVent® system, the DRU control hatch has to be used after all.

The gas control is mounted to the appliance. It must be taken out and placed in the control hatch at a later time. For placing the gas control in the control hatch, see section 5.7.

Proceed as follows:

- Loosen the bracket with the gas control by loosening the self-tapping screws and screw the self-tapping screws back in the appliance.
- Place the bracket with gas control, together with the wiring of the ignition/ionisation cable(s), the flexible gas hose(s) and type plate with chain in the direction of the control hatch.

- !Caution** The data plate should remain connected to the chain.

- Set the height of the appliance using the adjustable feet.
- Make the appliance level at the same time.

- !Tip** The construction frame can be adjusted afterwards for most 2- or 3 sided appliances. This allows a good contact of the construction frame with the chimney breast. Adjustment should take place before the appliance is built in. After building in, adjustment is no longer possible. For 2- or 3-sided appliances that cannot be adjusted, we refer to section 5.10 'Additional instructions'.

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

5.6 Placing the chimney breast (if applicable)

For the benefit of a good heat discharge, operation of the appliance and general safety, there should be sufficient space around the appliance.

The chimney breast should be ventilated sufficiently by means of ventilation holes (incoming and outgoing). These are essential for safety and for the prevention of excess heat accumulation in the chimney breast.

!Caution When an appliance is built in the floor, please take into account the minimum distances from a combustible floor. If applicable, additional information about this is provided from section 5.10 'Additional instructions'.

- !Caution**
- In case of the minimum width dimension, a centred placement of the appliance is presumed in order to guarantee sufficient convection.
 - Use non-combustible and heat-resistant materials for the chimney breast, including the top of the chimney breast and the material in the chimney breast, including the back wall and floor.
 - 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 passage of the ventilation holes (outgoing), which are placed as high as possible, is stated in Appendix 2, Table 2.
 - If no control hatch is placed in the chimney breast, an air supply of at least 80 cm² should be attached as low as possible. If there is, the control hatch will suffice as air supply.

- !Caution** When placing the chimney breast, you should take the following into account (see Appendix 3, Fig. 2):
- Protection of components and pipes of the appliance control unit against building dust such as cement and lime.
 - A minimum 100 mm distance between the top of the ventilation hole (outgoing) and the ceiling of the room.
 - The location for the control hatch: this must be placed as low as possible.
 - The dimensions of the control hatch; see Placing the control hatch section 5.7.
 - The location of the ventilation holes (V) (outgoing).
 - The measurements of the glass pane, so that it can be placed/removed after placing the chimney breast.
 - If possible, you should place decorative strips, frames, etc., after any required structural work has been completed. 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.

!Tip You should preferably apply the ventilation holes (outgoing) on both sides of the chimney breast. Use the DRU ventilation elements.

Check the following issues, before the chimney breast is fully closed:

- Whether the discharge / concentric system is placed correctly.
- Whether the channels, fixing brackets and possible clip bindings, which cannot be reached after installation, are fastened by means of 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.

5.7 Placing the control hatch (if applicable)

The control hatch (also see paragraphs 5.5 and 5.6) is placed as low as possible in the chimney breast.

- !Caution**
- The bottom of the control hatch may not be placed higher in the appliance than the burner surface.
 - Place control hatch and bracket with gas control indoors in a dry place only!

A number of components are placed in the control hatch, such as data plate, gas control and, if applicable, the components belonging to the DRU PowerVent® system.

Place the control hatch as follows, see Appendix 3, Fig. 4 for details:

➤ Make an opening in the chimney breast, as described in the manual for the control hatch.

- !Tip** The opening in the chimney breast may be made horizontal and vertical.
- Place the inner frame (A); unscrew bolts (D and F) for this.
- !Caution** The inner frame should be placed in the correct way. Two positions are possible. Placing the inner frame with a rotation of 180° is not allowed (see Appendix 3, fig. 4).
- !Tip**
- When the chimney breast is made of bricks, the inner frame can be built with bricks at the same time.
 - In case of a different material, the inner frame can be glued or fastened with four countersunk screws.
- Remove the bracket with the gas control (B) from the appliance and place these self-tapping screws back in the appliance.
- Attach the bracket with gas control to the inner frame (A). Proceed as follows:
- Unwind the cables. This will, amongst other things, prevent a poor operation of the ignition.
 - Unwind the flexible gas pipe(s).
 - Mount the bracket with the gas control to the inner frame (A). The slotted hole falls in allen screw (C); the hole at the bottom falls over the head of allen screw (D).
 - Fix the bracket with allen screw (C).
- !Caution**
- Avoid kinks in the pipes.
 - Do not lay the cables of the ionisation and ignition pins along metal parts, wiring and other components.
- Connect the gas pipe with gas tap (see section 5.2).
- Bleed the gas pipe.
- !Tip** If the gas tap is closed, the bracket with gas control can be easily removed by loosening the clamp coupling under the gas control and loosening the allen screw (C) by a few turns. The bracket with the gas control can now be lifted and removed towards the front out of the control hatch.
- Connect the 230V mains voltage with protective earth using the correct type of plug. The other side of the power cable can be easily connected to the universal 230V plug in the control hatch. Use this universal 230V plug to disconnect the appliance from the power supply, if necessary.
- !Caution** If the 230V power cable is damaged, replace it by a similar power cable or a power cable that is available from your dealer.
- Place the data plate in its intended clamp (G).
- Mount the outer frame with door (E) to the inner frame using two allen screws (D and F).
- !Tip** The outer frame can be placed in such a way that the door turns to the left or right.
- !Caution** Always close the control hatch with the lock (H) because of the electricity behind the door (230V). You can operate the lock with a fitting flat object.

5.8 Concentric system

5.8.1 General

The appliance is connected to a flue gas discharge / combustion air supply system delivered by DRU, hereafter referred to as the concentric system. The diameter for this connection is indicated in appendix 2, table 2. The passage to the outside can be created with a wall terminal (C11) or a roof terminal (C31). If necessary, an existing chimney can be used (see section 5.8.4).

- !Caution**
- Only use the concentric system supplied by DRU. This system has been tested in combination with the appliance. DRU cannot guarantee a proper and safe operation of other systems and does not accept any responsibility or liability for this.
 - Use a chimney set for the connection to the chimney, DRU will be able to supply it.
 - DRU's concentric system is intended for indoor use and may therefore not be used outdoors, with the exception of the sections intended for that purpose such as roof and wall terminals.

The concentric system is constructed from (the flue spigot of) the appliance.

If, due to constructional circumstances, the concentric system is placed first, it is possible to connect the appliance by means of a telescopic pipe piece.

5.8.2 Construction of the concentric system

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 Tables 4 and 6 for determining the correct adjustment and section 'Adjustment of the appliance' for the method of working.

!Tip My Flue Assist ist eine DRU-Webanwendung, mit der überprüft werden kann, ob ein beabsichtigtes konzentrisches System zulässig ist, und die Ratschläge zum Einstellen des Geräts gibt. Besuchen Sie die DRU Service-Website für My Flue Assist. Die Informationen aus dem Installationshandbuch sind immer führend.

The concentric system with wall or roof terminal has to comply with the following conditions:

- In appendix 2, table 4 or 5 you can find whether a concentric pipe should be connected and what the minimum vertical length would have to be.
- Determine the permissibility of the required configuration.

When using a **wall terminal (C11)** the following applies:

- The total vertical pipe length, when using a wall terminal, may have a maximum length that can be found in appendix 2, table 4.
- The minimum vertical pipe length, when using a wall terminal, can be found in appendix 2, table 4.
- The total horizontal pipe length, when using a wall terminal, may have a maximum length that can be found in appendix 2, table 4 (excluding wall terminal; see appendix 3, fig. 5).

!Caution In appendix 2, Table 4, 1 bend has been included in the concentric system. It is possible, however, to add extra bends. For each additional bend, the maximum allowed horizontal length of the concentric system is reduced. This is done as follows:

- An additional 90° bend shortens the maximum allowed length of the concentric system by 2 metres.
- An additional 45° bend shortens the maximum allowed length of the concentric system by 1 metre.

!Caution At least 1 metre should always be placed on the appliance vertically, unless stated otherwise in the table.

When using a **roof terminal (C31)** the following applies:

- The construction of the chosen system, when using a roof terminal, must be permissible according to Appendix 2, Table 5 (See the method of working described below).

The working method below indicates how the permissibility is determined of a concentric system when using a roof terminal.

- 1) Count the number of 45° and 90° bends required (15° and 30° bends are also allowed).
- 2) Count the total number of whole metres of horizontal pipe length.
- 3) Count the total number of metres of vertical and/or sloping pipe length (roof terminal excluded).
- 4) In the first 2 columns of Table 5, look for the number of bends required and the total horizontal pipe length.
- 5) In the top row of Table 5, look for the required total vertical and/or sloping pipe length.
- 6) A box with a letter means that the chosen concentric system is permitted.
- 7) Use Table 6 to determine how the appliance should be adjusted.

5.8.3 Placing the concentric system

- !Caution**
- Maintain a distance of at least 50 mm between the outside of the concentric system and the walls and/or the ceiling (see section 5.4). If the system is built in (for instance) a cove, it should be made with non combustible, heat-resistant material all around it.
 - Use heat-resistant insulation material when passing through combustible material.
 - Create a terminal for the concentric system with the following diameters:
 - The pipe diameter +25 mm for a passage through non combustible material (see Appendix 3, fig. 40).
 - The pipe diameter +200 mm for a passage through combustible material. Insulate the surrounding free space with at least 60 mm mineral wool (see Appendix 3, fig. 41).
 - The rosette of the wall terminal is too small to seal the opening in case of passage through combustible material. That is why a heat-resistant intermediate plate of sufficient size should first be mounted to the wall. Then, the rosette is mounted on the intermediate sheet.

The roof terminal can end in a sloping and a flat roof.

The roof terminal can be supplied with an adhesive plate for a flat roof or with a universally adjustable tile for a sloping roof.

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

Place the concentric system as follows:

- Build the system up from (the flue spigot of) the appliance.
 - Connect the concentric pipe pieces and, if necessary, the bend(s).
 - On each connection, apply a clip binding with silicon sealing ring.
 - Use a self-tapping screw to fix the clip binding to the pipe on locations that cannot be reached after installation.
 - Attach the concentric system with sufficient fastening brackets, so that the weight is not resting on the appliance.
- Observe the following;
- Place the first fastening bracket 0.5 metre from the appliance, at the most.
 - Place a fastening bracket maximum 0.1 metre from each bend, if the bends are more than 0.25 metre away from each other. If two bends are closer to one another than 0.25 metre, 1 fastening bracket between these bends will be sufficient.
 - At least every 1 metre, place a fastening bracket at slanted and horizontal sections.
 - At least every 2 metres, place a fastening bracket at vertical sections.
- Fasten a roof terminal with anchor cables, if it protrudes more than 1,5 metres above the terminal.
 - Determine the remaining length for the wall or roof terminal and cut it to size, make sure the correct insertion length is maintained.
 - Place the wall terminal with the (groove/folded) seam at the top.
 - Attach the wall terminal from the outside by means of four screws.

!Caution When using the wall terminal, place the terminal with a downward slope of 1 cm / metre towards the outside, in order to prevent rain water from raining in.

5.9 Connection to an existing chimney (C91)

The appliance can be connected to an existing chimney. A 100 mm diameter flexible SS pipe is placed in the chimney for discharging flue gases. The surrounding space is used as combustion air supply.

For a ø200/130 mm appliance connection, the concentric system must be updated to a diameter of 150/100 mm, following which it can be connected to an existing chimney flue.

The following requirements apply when connecting to an existing chimney:

- Only allowed when used in combination with the special DRU chimney set. The installation regulation is part of the delivery.
- The internal size should be at least 150 x 150 mm.
- The vertical length has a maximum of 12 meters.
- The total horizontal pipe length may have a maximum length that can be found in appendix 2, table 4.
- The existing chimney should be clean.
- The existing chimney should be tight.

For setting the appliance, the same conditions/instructions apply as for the concentric system described above.

5.10 Additional instructions

For adjusting Profile C (see Appendix 3, fig. 6) in relation to the construction frame, proceed as follows:

- Loosen the self-tapping screws by one stroke. Slide the profile to the required distance in relation to the construction frame (15-30 mm). Then retighten the screws.
- Attach the appliance to the wall, using the 4 supplied key bolts (see Appendix 3, fig. 7).
- Use the hook to connect the threaded rods to the corners of the construction frame (see Appendix 3, fig. 8).

!Caution Adjust the threaded rod in such a way with the tensioning nut that you have sufficient setting space.

- Determine the height of the eye nut against the wall.
- Attach the eye to the wall using the supplied key bolt.
- Use hook to connect the threaded rod to the tensioning nut. Connect the other hook to the threaded rod using the connection nut.
- Connect the hook to the eye nut against the wall.
- Adjust everything, using the tensioning nut.

5.11 Glass panes

- !Caution**
- Avoid damaging the glass panes during removal/placing.
 - Avoid/remove fingerprints on the glass panes, as they will burn into the glass.
 - Always first remove the side glass pane.

5.11.1 Removing the side glass pane

- Remove the vertical decorative strips by first pushing them upwards with the lip at the top and tilting them parallel to the glass pane and then loosening them at the bottom (see Appendix 3, fig. 9).
- Remove the horizontal decorative strip by lifting it on one side and taking it out (see Appendix 3, fig. 9).
- At the top and bottom of the side glass pane you will find springy window strips (see Appendix 3, fig. 10).
- First remove the lock bolts from these strips (1).
- Take the window strip by the handles and position it in relation to the upper or lower brackets (parking position) (2).
- Tilt the top of the glass pane towards you and grab the glass pane at both sides (3). Lift the glass pane and tilt its bottom out of the appliance and remove it (4).

5.11.2 Removing the front glass pane

- Loosen the bolts of the lower and the vertical glass strip by a number of strokes, using the socket spanner supplied (see Appendix 3, fig. 11).

!Caution Do not remove the bolts: leave them in place in the lower glass strip.

- Unscrew the self-tapping screws from the upper glass strip, by using the socket spanner supplied (see Appendix 3, fig. 12).
- Remove the upper glass strip.
- Slide the glass pane to the side for approx. 20 mm (see Appendix 3, fig. 13 (1)).
- Slightly tilt the top of the glass pane towards you (1).
- Grab the glass pane at both sides.
- Lift up the glass pane and tilt the bottom of the glass pane towards you (2).
- Remove the glass pane.

5.11.3 Removing the rear glass pane

Loosen the bolts of the vertical glass strip by a number of strokes. Do not remove the strip! The remainder of the procedure is identical to that of the front glass pane.

5.11.4 Placing glass panes

Placing the glass panes will take place in reverse order of the removal procedure described above.

- !Caution**
- The DRU logo should be in the bottom right corner.
 - The self-tapping screws should not be over-tightened, since otherwise they could break or strip the thread: tight=tight.
 - Make sure that the glass panes fit well together.

When mounting the side glass pane, you must proceed in reverse order.

- !Caution** When mounting the side glass pane, you must carefully place the springy window strips in front of the glass pane again, in order to avoid damaging the glass pane.

5.12 Adjustment of the appliance

The appliance has to be set in such a way that it works correctly in combination with the discharge system applied. For that purpose, a restrictor slide is placed and/or the air inlet guide is removed. The conditions for application with wall terminal and roof terminal are stated in Appendix 2, Tables 4, 5 and 6.

5.12.1 Restrictor slide

The restrictor slide (R) is supplied separately (see Appendix 3, fig. 14).

It is mounted as follows:

- Unscrew the 10 self-tapping screws (S) from the middle plate (T) and remove them.
- Place the restrictor slide.
- Adjust the distance of the restrictor.
 - in case of a 40 mm setting, the restrictor slide is closed to a maximum level;
 - in case of a 55 mm setting, the distance must be set by means of a gauge (see Appendix 3, fig. 15).
- Fix the restrictor slide by using the allen screw (U).
- Remount the middle plate by using the self-tapping screws.

5.12.2 Air inlet guide

The air inlet guide (L) is at the back, below the combustion chamber (see Appendix 3, fig. 16a). In order to reach it, you must remove the vermiculite tray. Ex works, the air inlet guide is mounted with an opening of 13 mm.

If table 4 and 6 in Appendix 2 indicate that the air inlet guide must be changed, please proceed as follows;

- First remove the vermiculite tray.
 - Unscrew the self-tapping screws around the burner.
 - Remove the vermiculite tray.
- Remove the air inlet guide (L).
 - Unscrew the self-tapping screws of the air inlet guide.
 - Remove the air inlet guide (L).

- !Caution** Screw the self-tapping screws of the air inlet guide back in the appliance.

5.13 Placing the wood/pebble set

The appliance is supplied with a wood set or a pebble set.

The vermiculite that is used to fill the burner is black when using the wood set and has a natural colour when using the pebble set.

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

!Caution Strictly observe the following instructions to prevent unsafe situations:

- only ever use the supplied wood/pebble set;
- only use the glow material (see appendix 3, fig. 23) in combination with the wood set;
- place the wood/pebble set exactly as described;
- make sure the ionization and spark electrodes and the surrounding space remain free (see Appendix 3, fig. 17 up to 20);
- make sure that the slot between the burner tray and the tray surrounding the burner is kept free from objects;
- make sure there is no vermiculite's dust on the burner.

5.13.1 Wood set

The wood set consists of vermiculite (see Appendix 3, fig. 21), chips (see Appendix 3, fig. 22), glow material (see Appendix 3, fig. 23) and a number of branches (see Appendix 3, fig. 24).

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

- Remove the frame from the vermiculite tray (see Appendix 3, fig. 25).
- Fill the burner with vermiculite; spread the vermiculite evenly (see Appendix 3, fig. 25). The vermiculite may not come higher than the edge of the burner.

!Caution

- You can influence the flame picture by moving the vermiculite, yet
- the burner deck has to remain covered with vermiculite in order to prevent that the life span of the burner is reduced.

- Fill the vermiculite tray with chips; spread the chips evenly (see Appendix 3, fig. 25).
- Identify branches A up to H (see Appendix 3, fig. 24).

!Tip Use the burn stains on the branches for identification.

- Place branch A across the burner, place the ridge of the branch on the positioning bracket (see Appendix 3, fig. 26a).
- Proceed with branches B, C, D and E (see Appendix 3, fig. 26b).
- Then place branches F up to H (see Appendix 3, fig 26c).

!Caution The branches may not completely cover the burner pattern (see Appendix 3, fig. 27a + 27b), because:

- 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 will be affected.

- If required, spread the glow material over the burner.

!Caution The areas around the ionization and ignition should remain free from glow material.

!Tip Fasten the glow material under chips and/or wood set.

5.13.2 Pebble set

The pebble set consists of vermiculite (see Appendix 3, fig. 21) and pebbles.

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

- Remove the positioning bracket for the vermiculite tray (see Appendix 3, fig. 28).
- Fill the burner with vermiculite; spread the vermiculite evenly (see Appendix 3, fig. 29a).

!Caution

- You can influence the flame picture by moving the vermiculite, yet
- the burner deck has to remain covered with vermiculite in order to prevent that the life span of the burner is reduced.

- Fill the burner and the vermiculite tray with pebbles.
- Spread the pebbles evenly over one layer (see Appendix 3, fig. 29b and 29c).

!Caution Incorrect placement of the pebbles, e.g. on top of each other, could have the following consequences:

- the main burner will not ignite properly, which could result in unsafe situations;
- the flame picture will be affected.

6. Control

The appliance is supplied with a remote control. In addition, it is possible to operate the appliance via the DRU Fire App (available for iOS and Android). The user manual describes how the appliance is operated and how the remote control and DRU Fire App work.

The appliance can be operated by means of a home automation system, see section 9.6.

For the installer, there is a service menu in the DRU Fire App (available for iOS and Android) in which data of the appliance can be read (see section 6.1.3).

- !Caution**
- Never ignite the appliance until it is fully installed in relation to the gas connections, discharge system and electrical components.
 - For an appliance made with the CM system, the regulations from the accompanying installation manual shall also apply.

6.1 Operation

6.1.1 Remote control

Proceed as follows to make the remote control ready for use:

- Place two AA type batteries in the battery compartment of the remote control.
- !Tip After placing the batteries, the version number of the software on the remote control is briefly shown on the display.
- The display of the remote control now shows the message 'BND' and the Bluetooth symbol flashes. The remote control is now ready to be coupled with the appliance. See the user manual if the remote control is not in 'BND' mode.
- Make the appliance free from voltage for a short while by removing the plug from the appliance control unit and placing it back again.
- !Tip After briefly making the appliance free from voltage, it is possible to couple the remote control with the appliance for 5 minutes.
- Simultaneously press buttons 'ignition' and 'switch off' for 1 second.
- When coupling has been successful, the Bluetooth symbol lights up continuously and the current room temperature and possibility of ignition are shown.
- !Tip All functions of the remote control are explained in the user manual.

6.1.2 DRU Fire App - User

The DRU Fire App is available for both iOS and Android devices. Proceed as follows to couple the App with the appliance:

- !Tip There should always be an active coupling with the remote control before a device with App can be coupled with the appliance.
- Download the App and make sure Bluetooth is activated on the device to be coupled.
- Open the DRU Fire App and follow the steps in the App.
- !Tip For the thermostat function, the App will use the temperature sensor of the remote control. For a correct operation, the remote control should be within range and in the same room as the appliance.

6.1.3 DRU Fire App – Service

In addition to normal operation options, the App also has a service menu for dealers and service technician, in which the current status of the fire, the number of burning hours, the total number of error messages and the last 20 error messages can be read.

For this function you will need an account. For this, please contact DRU Customer Service.

6.2 Wired home automation system

(if applicable)

In addition to operation by means of the remote control and DRU Fire App, the appliance can also be operated via an external source. A wired home automation system can be directly connected to the receiver (Appendix 3, fig. 36 (D)).

- !Tip**
- Wired connection of a home automation system to the receiver takes place via a 0-10V direct current (Appendix 3, fig. 37). By measuring the height of the voltage, the receiver knows to which position the appliance should be switched. Graph 9.1 shows the relationship between voltage, the height of the flame and the number of burners (1 or 2).
 - When the appliance is controlled by means of a home automation system, operation can be taken over by the remote control and/or DRU Fire App at any time. After having been taken over by the remote control and/or App, the home automation system should be reset to the zero position (0V) to allow operation of the appliance with this system again.

!Caution A higher voltage than 10V will damage the receiver.

Proceed as follows when connecting the home automation system to the receiver:

- Connect the 0-10VDC signal to connection (D), to which a black (-) and yellow (+) wire are connected.
- Activate home automation in the service menu of the DRU Fire App before using it by changing the parameters of function '42003 Activate home automation' from 0 to 14.
- Switch off the burners using the home automation system.
- Measure the voltage on contact D. If $\geq 1,0V$ is measured, a $2200\Omega \geq 0.25W$ resistor (D^R) must be placed across contact D.

!Caution Do not connect the resistor if $< 1,0V$ is measured.

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 put into operation.

7.1 Gastightness

!Caution All connections must be gastight. Check the connections for gastightness. The gas control may 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 38 (P1) for the measuring nipple on the gas control.
 - Contact the gas company if the line-pressure is too high.
 - If the line-pressure is too low, check this at the gas meter. Contact the gas company if the line-pressure is also too low at the gas meter.

7.3 Ignition main burner

For igniting the main burner, see the User Manual.

7.3.1 First ignition of the appliance after installation or adjustments

- !Caution**
- For inspection purposes, ignite the appliance without a glass pane after installation or after having performed work.
 - If necessary, bleed the gas pipe.

Proceed as follows:

1. Remove the glass pane from the appliance (see section 5).
2. Ignite the appliance by means of the remote control or DRU Fire App. See section 3.4 for a step-by-step description of the ignition process. (Go to step 11 if the burner continues to burn).

If the main burner does not ignite:

3. Reset the system by means of the remote control or DRU Fire App.
4. Repeat the ignition procedure until the main burner ignites successfully.

- !Caution** If the appliance does not ignite after three failed attempts, it will enter into a hard lock-out for 30 minutes in order to avoid a dangerous accumulation of gas. Make sure there is no more gas present in the appliance, before a new ignition attempt is made.

- Consult the diagram with error messages when ignition fails after a number of attempts (see appendix 1: Malfunctions).
- 5. Check the flame transfer on the main burner and check that the main burner continues to burn (go to step 11 if the burner continues to burn).

If the main burner does NOT continue to burn:

6. Mount the glass pane.
7. Reset the system by pressing the buttons 'Ignition' and 'switch off' on the remote control simultaneously.
8. Now ignite the main burner and check that it continues to burn (go to step 11 if the burner continues to burn).

- !Caution** Limit the ignition attempts with mounted glass pane to a MAXIMUM of 1 ignition attempt. Make sure there is no more gas present in the appliance, before a new ignition attempt is made.

If the main burner again does NOT continue to burn:

9. Switch off the appliance.
10. Consult the diagram with error messages (see appendix 1: Malfunctions) (Go to step 1 once the malfunction has been resolved).

If the main burner DOES continue to burn:

11. Clean the glass pane after taking into operation for the first time, as described in the user manual. Then mount the glass pane as described in section 8.
12. Repeat the ignition procedure a few times and perform checks as described in section 7.3.2.
13. The main burner should ignite smoothly at each attempt and should continue to burn.
14. Clean the glass pane after burning for the first time, as described in the user manual.

- !Caution** Wait 5 minutes before you re-ignite the appliance.

When stoking up for the first time, set the appliance at full position. When the appliance is stoked up, the flame picture can be affected and an unpleasant smell may occur as volatile components evaporate. This process may take a number of hours. Properly aerate the room and remove pets from the room (see section 3 of the User Manual).

7.3.2 Igniting the burner(s)

- !Caution**
- The ignition mechanism should ignite the main burner(s) within a few seconds and without popping.
 - The main burner(s) must ignite smoothly, without popping and across the entire burner, and continue to burn.
 - The second burner (if applicable) should ignite smoothly across the entire length of the burner(s) and continue to burn.
 - If the appliance does not ignite after three failed attempts, it will enter into a hard lock-out for 30 minutes in order to avoid a dangerous accumulation of gas. Make sure there is no more gas present in the appliance, before a new ignition attempt is made. Ignite the appliance in the same way as the first ignition as described in section 10.3.1.

➤ Check the correct ignition of the main burner from cold condition.

!Tip If sparks are observed between the electrodes of the ignition mechanism, the main burner should ignite within a few seconds.

!Caution If NO sparks are determined, it is NOT permitted to continue the procedure. Consult the diagram with error messages (appendix 1: Malfunctions).

7.4 Flame picture

When stoking up for the first time, the flame picture is affected by the evaporation of, for instance, volatile components from paint and other materials. In case of a cold start, the appliance should first reach the correct temperature before the flame picture can be assessed.

!Tip The flame picture and a good flame transfer can only be assessed when the glass pane is mounted and/or closed.

➤ Check that the flame picture is in order.

➤ Consult the diagram with error messages (appendix 1: Malfunctions) if the flame picture is not correct.

8. Maintenance

Once per year, the appliance must be checked, cleaned and, if necessary, repaired by a competent installer in the field of gas heating and electricity.

- !Caution**
- Close the gas tap prior to starting maintenance work.
 - Make the appliance free from voltage prior to starting maintenance work.
 - Check the gas tightness after repair.

!Caution Under no circumstances may a stainless steel concentric system be cleaned (internally) with a steel brush or metal sponge, for example. This will damage the oxide skin, as a result of which pit corrosion and/or system leakage could occur.

➤ Clean the glass pane(s), if necessary.

- !Caution**
- Only clean a glass pane once it has reached room temperature.
 - Never use the appliance in case of a broken and/or cracked glass pane.

- !Caution**
- Avoid damage to the glass pane(s).
 - Avoid/remove fingerprints on the glass pane(s), as these can 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.

➤ Inspect the flue gas discharge system.

!Caution You must always perform a final inspection.

➤ Perform the inspection as described in section 7.3.1.

8.1 Parts

Parts to be replaced are available via the DRU service website, dealer or importer.

9. Delivery

During delivery, familiarise the user with the appliance and its operation. The user manual explains all aspects that are relevant to the user step by step, but this will never surpass a careful and personal instruction.

!Caution Tell the user to close the gas tap immediately and contact a competent installer in case of malfunctions/poor operation. This to prevent unsafe situations.

- Provide the user with instructions for the appliance, remote control and DRU Fire App.
- Give the manuals to the user (all manuals should be stored near the appliance).
- Important aspects for the benefit of the user's safety that the user must be familiarised with:
 - Opening and closing the control hatch
 - The operation and location of the gas tap
 - The location of the 230 Volt connection.
- Inform the user about the following:
 - In order to prevent cracks, a chimney breast made of stone-like materials or finished with plaster, must dry at least 6 weeks prior to taking the appliance into operation.
 - Cleaning the glass pane(s).
 - In case of delivery of an appliance equipped with a DRU CM system, the Installation Manual will contain additional information about this.

10. Malfunctions

Appendix 1 provides an overview of malfunctions that might occur, their possible causes and remedies.

Appendix 1 Malfunctions

| Error messages | | | |
|-----------------|--|--|---|
| Error code | Problem | Possible cause | Remedy |
| F01 E00 | Communication loss between receiver (DFGT) and controller (ESYS) | Communication cable does not make contact | Properly connect the communication cable |
| | | Communication cable defective | Replace communication cable |
| F01 E00 | Malfunction Eco Glow® component(s) | Defective LED unit | Replace LED unit |
| | | Defective LED driver | Replace LED driver |
| F02 E00 | Receiver (DFGT) overheated (>70°C) | Poor ventilation at receiver | Improve ventilation at receiver |
| | | Receiver makes contact with hot parts | Remove contact between the receiver and hot parts |
| F03 E00 | Malfunction NTC sensor | NTC sensor incorrectly connected | Connect the NTC sensor in the correct way |
| | | NTC sensor defective | Replace the NTC sensor |
| F08 E01 E27 | No ionization | No sparks | Check the distance between the electrodes (3-4 mm) |
| | | | Replace the electrodes |
| | | No gas | Check gas supply |
| | | | In case of PowerVent®: check that gas valve opens |
| | | Poor flame transfer main burner | Check the positioning of the logs and/or chips |
| | | | Remove dust that is present from burner openings |
| | | No good flame under ionization pin (suffocating flame) | Check that the glass pane(s) is/are mounted correctly |
| | | | Mount the restrictor and air inlet guide as described |
| | | | In case of PowerVent®: Check pressure settings |
| F08 E01 E02 E27 | No ionization / false ionization | Ionization pin positioned incorrectly | Position in the correct way |
| | | Ionization pin blocked | Measure ionization current > 0,8 < 1,8 µA Remove possible blockage with vermiculite and/or chips |
| | | Ionization pin defective | Measure ionization current Replace ionization pin when 0 µA |
| F08 E03 | High limit error | High limit bridge defective | Place High limit bridge on the controller |
| F12 E12 | EEPROM error | Controller defective | Replace controller |
| F12 E13 | Appliance is in lock-out | 6 reset attempts within 15 minutes | Can be reset after 30 minutes |
| F13 F14 E01 E27 | Flame loss (no ionization) Only main burner (F13) / Main burner + 2nd burner (F14) | Short circuit on the ionization pin | Make the ionization pin free from chips, vermiculite or glow material |
| | | Ionization current critical (18 µA) | Increase ionisation current to ≥ 1,8 µA by rearranging vermiculite and removing chips and dust from the burner openings |
| | | Suffocation in the concentric system | Check the concentric system |
| | | | Check the setting of the appliance |
| | | Suffocation when using PowerVent® | Check the pressure setting of the PowerVent® system |
| | | | |

Error messages

| Error code | Problem | Possible cause | Remedy |
|---------------|---|---|---|
| | | 24 hour check control (only F13) | Reset with remote control |
| | | Gas has fallen away | Restore the gas supply |
| | | Gas control defective | Replace the gas control |
| F15 E09 | No connection between control (ESYS) and gas control | Controller shot loose/mounted incorrectly | Mount controller correctly |
| | | Controller mounted incorrectly | Mount controller correctly |
| | | Pins on the connector on the gas control are bent | Bend them straight |
| F15 E04 | APS malfunction | APS bridge defective | Place APS bridge on the controller |
| F15 E99 | Error in wire connection | Controller connected incorrectly | Connect the wiring of the controller correctly |
| F15 E04 | Fan PowerVent® does not start, appliance does not spark | Fan is defective | Replace the fan |
| | Fan PowerVent® does start, appliance does not spark | Leaking differential pressure hoses | Replace/repair connections and/or hoses |
| | | Differential pressure sensor defective | Replace differential pressure sensor |
| | | Control signal cable defective | Replace the control signal cable |
| | | Defect and/or leak in the concentric system | Check the concentric system for leaks and defects. Repair if necessary |
| F16 E21 E25 | Hardware Error controller (ESYS) | Controller defective | Replace controller |
| F17 | Hardware Error controller (ESYS) | Controller defective | Replace controller |
| F18 E30 | Controller (ESYS) is not released | Controller is in hard lockout | After 30 min. with mains voltage on the appliance, F18/E30 can be reset |
| LOST F05 | Communication loss between transmitter and receiver (DFGT) | Transmitter is out of the receiver's range | Bring the transmitter within the range of the receiver |
| | | Obstacles between transmitter and receiver | Remove obstacles between transmitter and receiver |
| | | Transmission strength is too weak. | Check transmission strength (see User Manual chapter 5.2) |
| BND | No communication between remote control and receiver (DFGT) | Remote control and receiver have not been coupled | Couple the remote control with the receiver |
| | | Remote control defective | Replace remote control. |
| No error code | The home automation system does not switch off the burners completely | Floating voltage ($\geq 1,0V$) on contact D | Connect a resistor across contact D (Installation manual H6.2) |
| | | | |

Appendix 2 Tables

Table 1: Parts included with the delivery

| Part | Number |
|--|--------|
| Wood set / pebble set | 1x |
| Control hatch | 1x |
| Control hatch manual | 1x |
| Installation manual | 1x |
| User manual | 1x |
| Decorative strip left | 1x |
| Decorative strip right | 1x |
| Decorative strip below | 1x |
| Gauge for restrictor slide | 1x |
| Restrictor slide | 1x |
| Key bolts M8x 140x50 | 6x |
| Hexagonal nut M8 | 6x |
| Wire hose with spanner, hooks and eye nuts | 2x |
| Spare self-tapping screws for mounting the glass panes | 6x |
| Socket spanner 8 mm | 1x |
| Remote control | 1x |
| Compression fitting 15 mm x G3/8" | 1x |
| Mains cable NL or UK | 1x |
| Glow material | 1x |
| | |

Table 2: Technical data

| | | | | | | |
|--|---------------------|--|------------|------------|------------|-------------------------------|
| Model identifier(s) | | Metro 130XTL RCH | | | | |
| Type of appliance | | Built-in | | | | |
| Combustion | | Closed combustion | | | | |
| Type | | C11, C31, C91, C12, C32***** | | | | |
| Categorie | | I _{2E} , I _{2E+} , I _{2EK} , I _{2ELL} , I _{2H} , II _{2H3+} , II _{2E+3+} , II _{2H3B/P} , II _{2E3B/P} , II _{2EK3B/P} | | | | |
| Concentric appliance connection | | 200/130 | | | | |
| Applicable concentric systems | | DRU LAS ES-I 200/130, DRU LAS ES-E 200/150/100, DRU LAS ES-I 150/100, DRU PV-I 100/60 | | | | |
| Flame protection version | | Separated ignition / ionization plugs | | | | |
| Atmosphere safety | | No | | | | |
| Pressure equalisation | | Explosion hatch | | | | |
| Ventilation hole chimney breast | | 200 cm ² | | | | |
| Gastype: | Symbol | G25/G25.3* | G20 | G30 | G31 | Unit |
| Indirect heating functionality | | No | No | No | No | |
| Direct heat output | | 10,2 | 10,8 | 12,1 | 10,6 | kW |
| Indirect heat output | | - | - | - | - | kW |
| Space heating emissions NO _x | | 94,5 | 97,0 | 95,6 | 72,3 | mg/kWh _{input} (GCV) |
| Heat output | | | | | | |
| Nominal heat output | P _{nom} | 10,2 | 10,8 | 12,1 | 10,6 | kW |
| Minimum heat output (indicative) | P _{min} | 4,1 | 5,1 | 6,5 | 5,6 | kW |
| Technical data | | | | | | |
| Nominal heat input (Hs) | | 14,0 | 14,6 | 15,7 | 14,0 | kW |
| Nominal heat input (Hi) | | 12,6 | 13,1 | 14,5 | 12,9 | kW |
| Consumption max | | 1500 | 1390 | 440 | 512 | L/h |
| Consumption min | | 690 | 720 | 251 | 291 | L/h |
| Burner pressure max | | 18,5 | 14,5 | 24,8 | 25,0 | mbar |
| Burner pressure min | | 3,8 | 3,8 | 8,0 | 8,2 | mbar |
| Main burner injector | | 3x Ø1,75 | 3x Ø1,75 | 3x Ø1,20 | 3x Ø1,20 | mm |
| Low setting injector | | A**** | A**** | A**** | A**** | mm |
| Efficiency class (EN613) | | 1 | 1 | 1 | 1 | |
| Useful efficiency (NCV)** | | | | | | |
| Useful efficiency at nominal heat output | η _{th,nom} | 88,8 | 89,6 | 88,7 | 87,8 | % |
| Useful efficiency at minimum heat output (indicative) | η _{th,min} | 84,2 | 86,1 | 84,8 | 83,5 | % |
| Auxiliary electricity consumption | | | | | | |
| At nominal heat output | el _{max} | 0,0236 | 0,0236 | 0,0236 | 0,0236 | kW |
| At minimum heat output | el _{min} | 0,0125 | 0,0125 | 0,0125 | 0,0125 | kW |
| In standby mode | el _{sb} | 0,0026 | 0,0026 | 0,0026 | 0,0026 | kW |
| Permanent pilot flame power requirement | | | | | | |
| Pilot flame power requirement (if applicable) | P _{pilot} | - | - | - | - | kW |
| Energy efficiency*** | | | | | | |
| Energy efficiency index | EEl | 88 | 89 | 88 | 87 | |
| Energy efficiency class | | A | A | A | B | |
| Type of heat output / room temperature control | | | | | | |
| Single stage heat output, no room temperature control | | | | | | No |
| Two or more manual stages, no room temperature control | | | | | | No |
| With mechanic thermostat room temperature control | | | | | | No |
| With electronic room temperature control | | | | | | Yes |
| With electronic room temperature control plus day timer | | | | | | Yes |
| With electronic room temperature control plus week timer | | | | | | Yes |
| Other control options | | | | | | |
| Room temperature control, with presence detection | | | | | | Yes*** |
| Room temperature control, with open window detection | | | | | | Yes*** |
| With distance controle option | | | | | | Yes |

* This appliance is suitable for G25.3 with the composition according NTA 8837.

** System efficiency.

*** (achieved) using home automation.

**** Adjusting screw.

***** Categories C12 and C32 only in combination with DRU PV-1 100/60 (PowerVent®).

| Table 3: Line-pressure when using G31 | | | | |
|---------------------------------------|------|--|--|--|
| Country | mbar | | | |
| NL / DK / FI / NO / SE / HU / BA / GR | 30 | | | |
| FR / BE / IT / PT / ES / GB / IE | 37 | | | |
| D | 50 | | | |
| | | | | |

Permissibility and conditions concentric system with wall terminal

| Table 4: Conditions for setting the appliance | | | | | |
|---|---|------------|-----------------|------------------|-------------------------------|
| G20/G25/G25.3/G30/G31 | | | | | |
| Total number of meters vertical pipe length | Total number of meters horizontal pipe length (excluding wall terminal) | See Figure | Air inlet guide | Restrictor slide | Distance of restriction in mm |
| 0,8 ¹⁾ - 4 | 0 - 1 ²⁾ | 5 | YES | NO | OPEN |
| 0,8 ¹⁾ - 4 | 2 - 5 | 5 | NO | NO | OPEN |
| | | | | | |

1) minimum length

2) factory setting

!Caution In case of a wall terminal, you should always use a diameter of 200/130.

Table 5: Determining permissibility concentric system with roof terminal

| G20/G25G25.3 G30/G31 | Total number of meters horiz. pipe length | Total no. of meters vertical and/or sloping pipe length | | | | | | | | | | | |
|-------------------------|---|---|---|---|---|---|---|---|---|---|----|----|----|
| | | 1 ¹⁾ | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| no bends | 0 | B | B | B | C | C | C | C | C | D | D | D | D |
| 2 bends | 0 | A | A | B | B | B | C | C | C | C | C | D | D |
| | 1 | A | A | A | B | B | B | C | C | C | C | C | |
| | 2 | A | A | A | A | B | B | B | C | C | C | | |
| | 3 | A | A | A | A | A | B | B | B | C | | | |
| | 4 | A | A | A | A | A | A | B | B | | | | |
| | 5 | A | A | A | A | A | A | A | | | | | |
| 3 bends | 0 | A | A | A | B | B | B | C | C | C | C | C | D |
| | 1 | A | A | A | A | B | B | B | C | C | C | C | |
| | 2 | A | A | A | A | A | B | B | B | C | C | | |
| | 3 | A | A | A | A | A | A | B | B | B | | | |
| | 4 | A | A | A | A | A | A | A | B | | | | |
| | 5 | | A | A | A | A | A | A | | | | | |
| 4 bends | 0 | A | A | A | A | B | B | B | C | C | C | C | C |
| | 1 | A | A | A | A | A | B | B | B | C | C | C | |
| | 2 | A | A | A | A | A | A | B | B | B | C | | |
| | 3 | A | A | A | A | A | A | A | B | B | | | |
| | 4 | | A | A | A | A | A | A | A | | | | |
| | 5 | | | A | A | A | A | A | | | | | |
| 5 bends | - | | | | | | | | | | | | |

■ = Situation is not permissible

¹⁾ minimum length

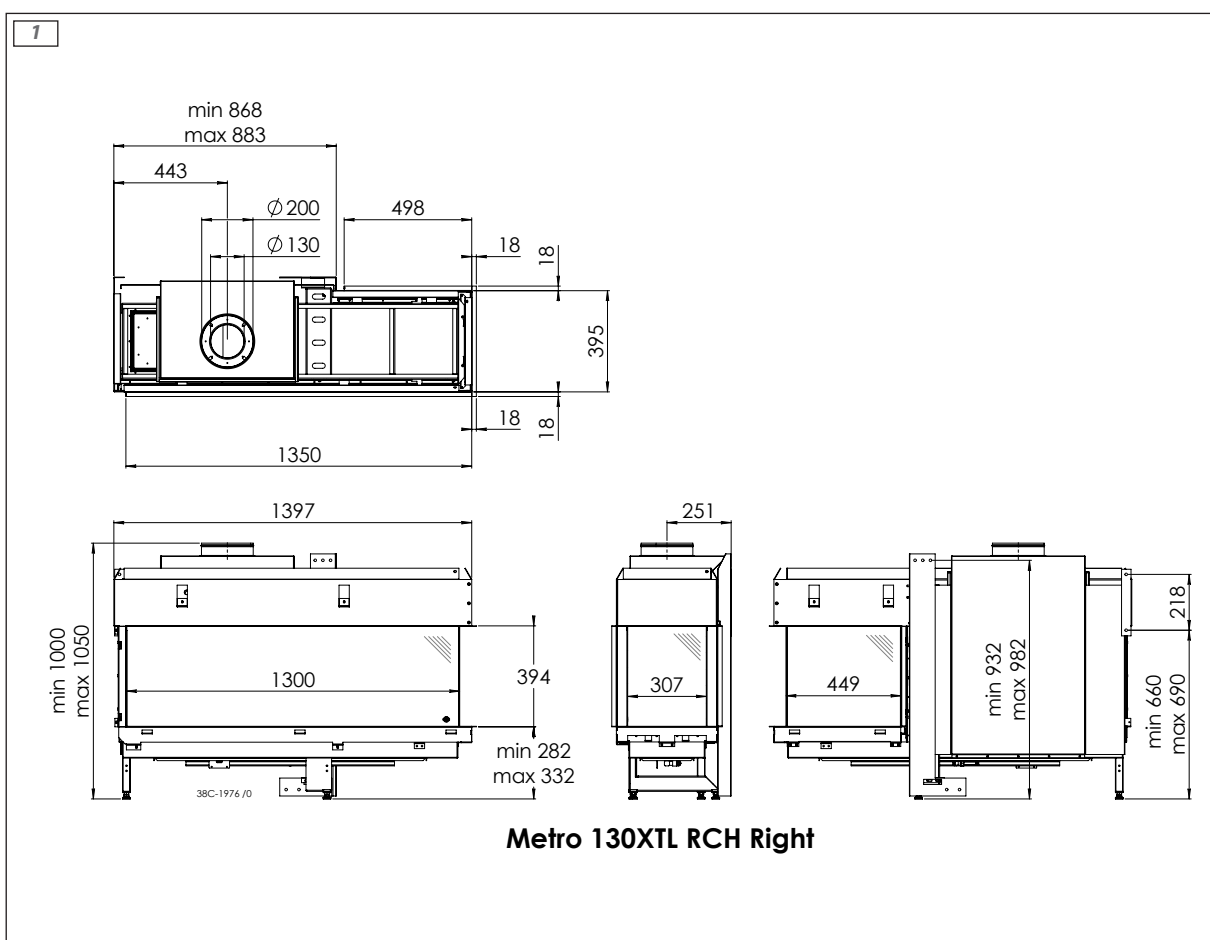
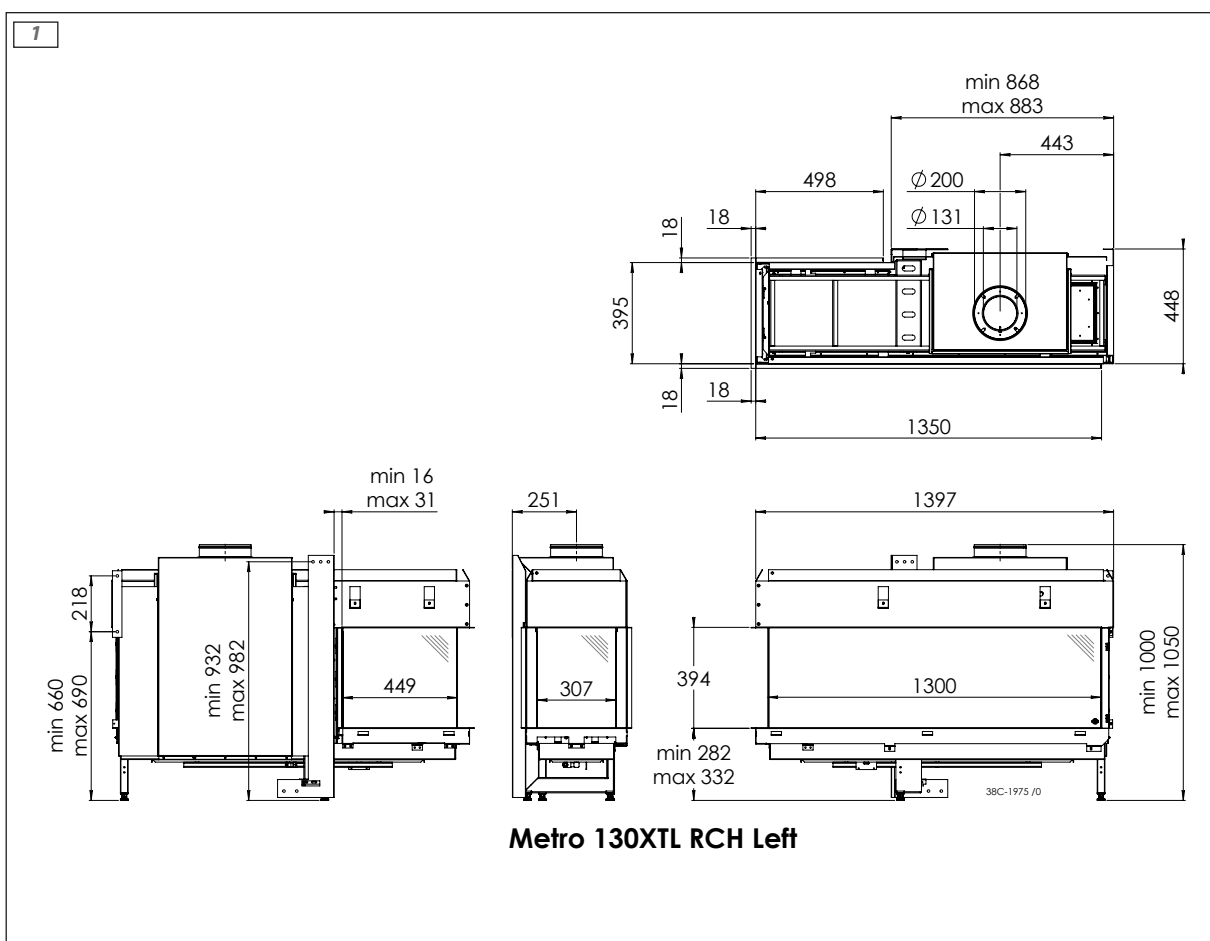
Table 6: Conditions for the adjustment of the appliance with a roof terminal

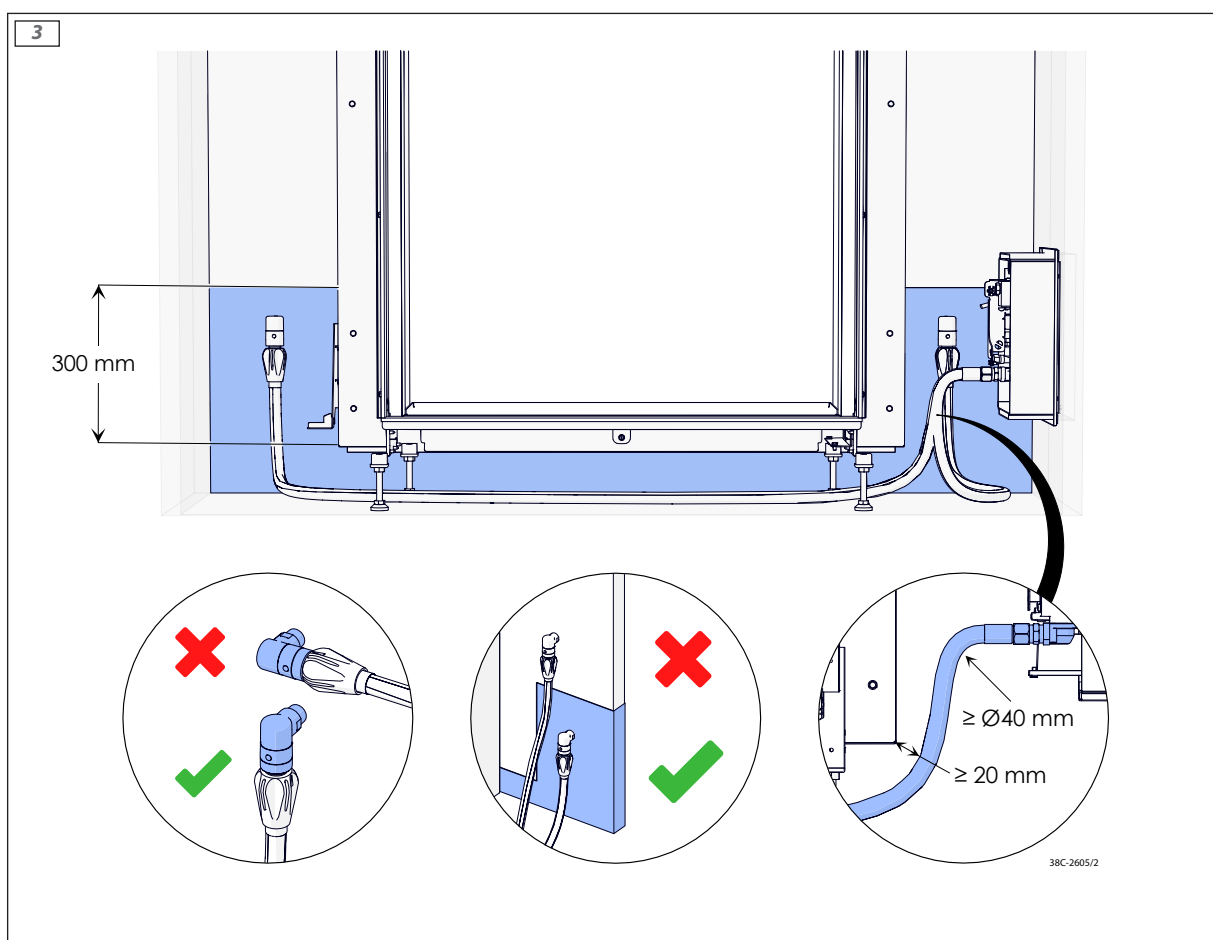
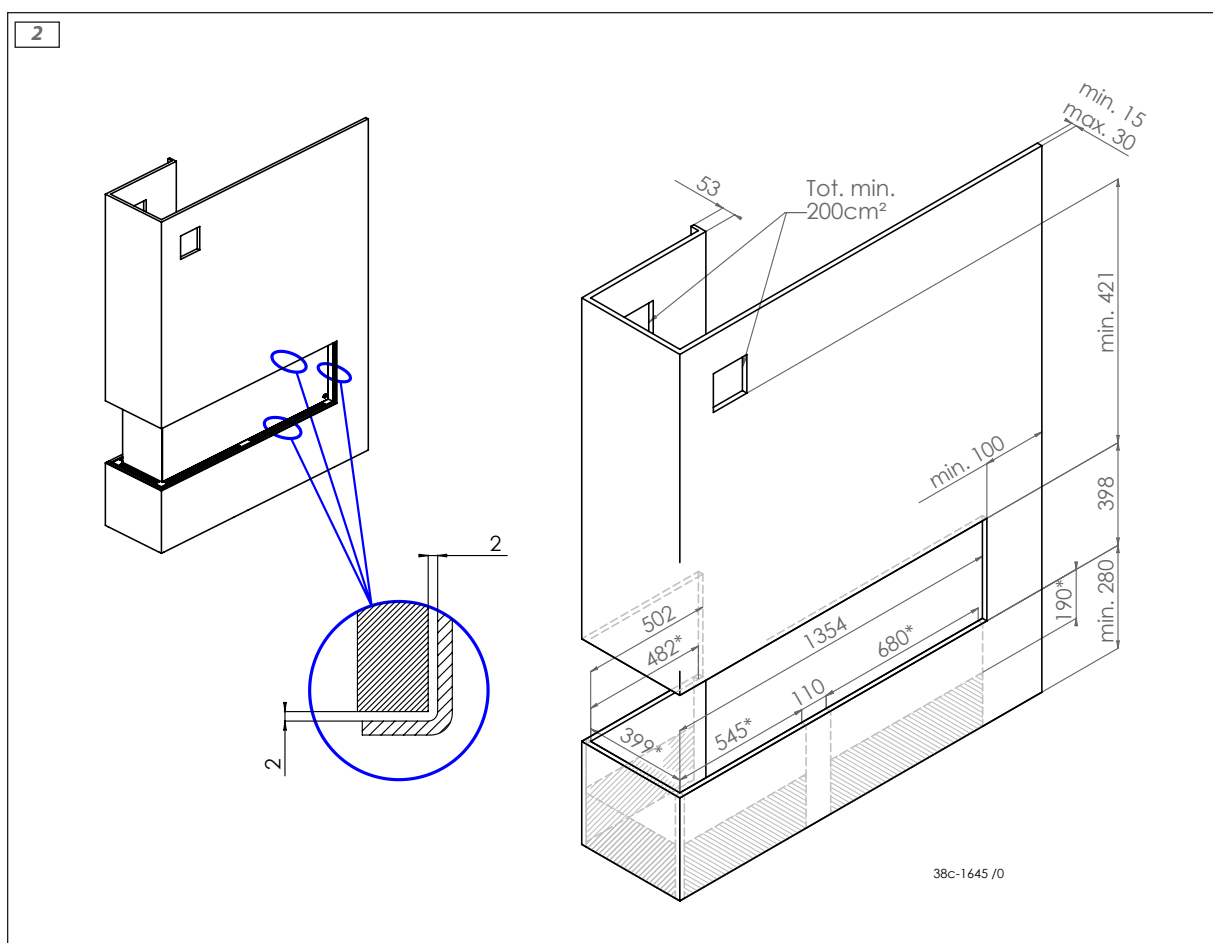
| G20/G25/G25.3/G30/G31 | | | |
|-----------------------|-----------------|------------------|----------------------------|
| Situation | Air inlet guide | Restrictor slide | Distance restrictor. in mm |
| A | NO | NO | OPEN |
| B | YES | NO | OPEN |
| C | YES | YES | 50 |
| D | YES | YES | 40 |

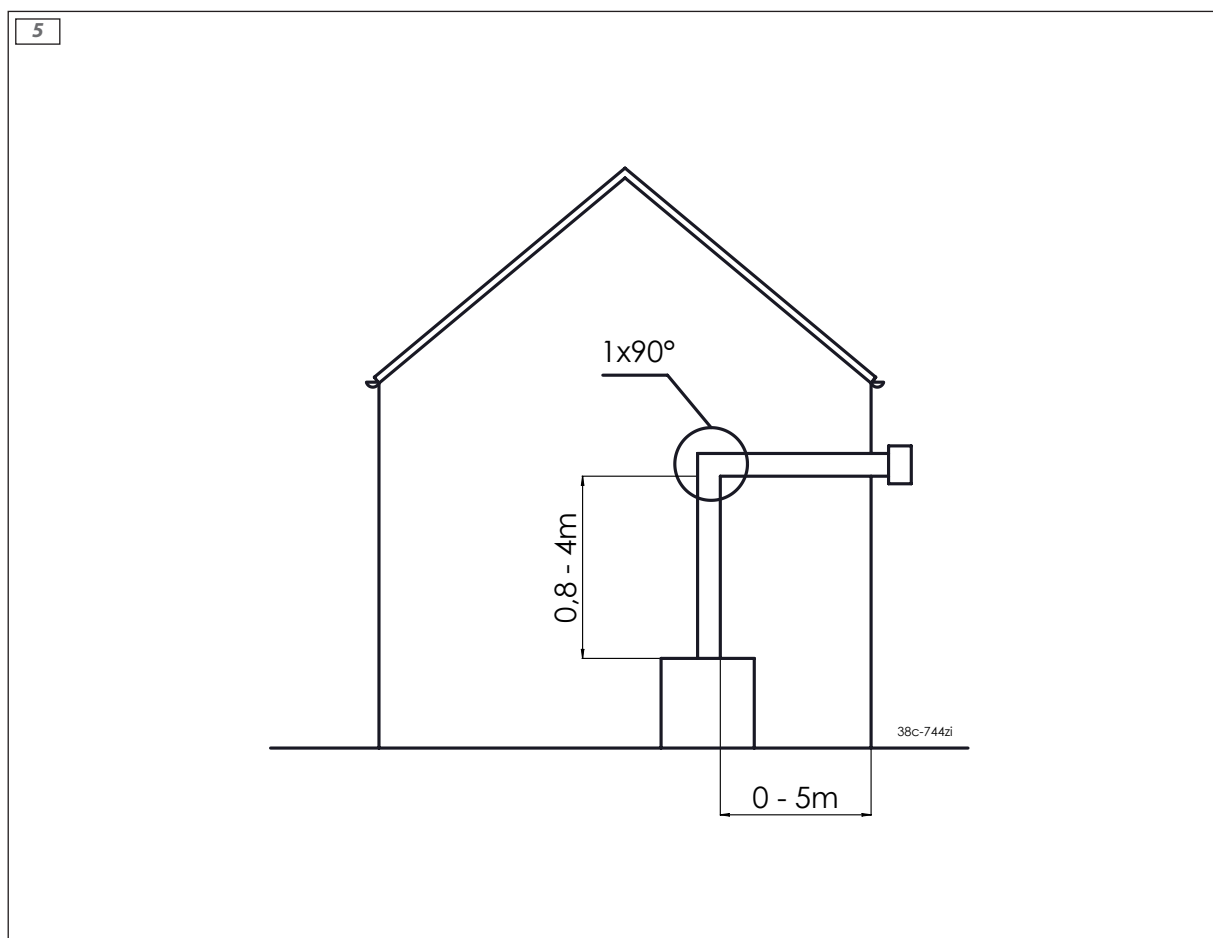
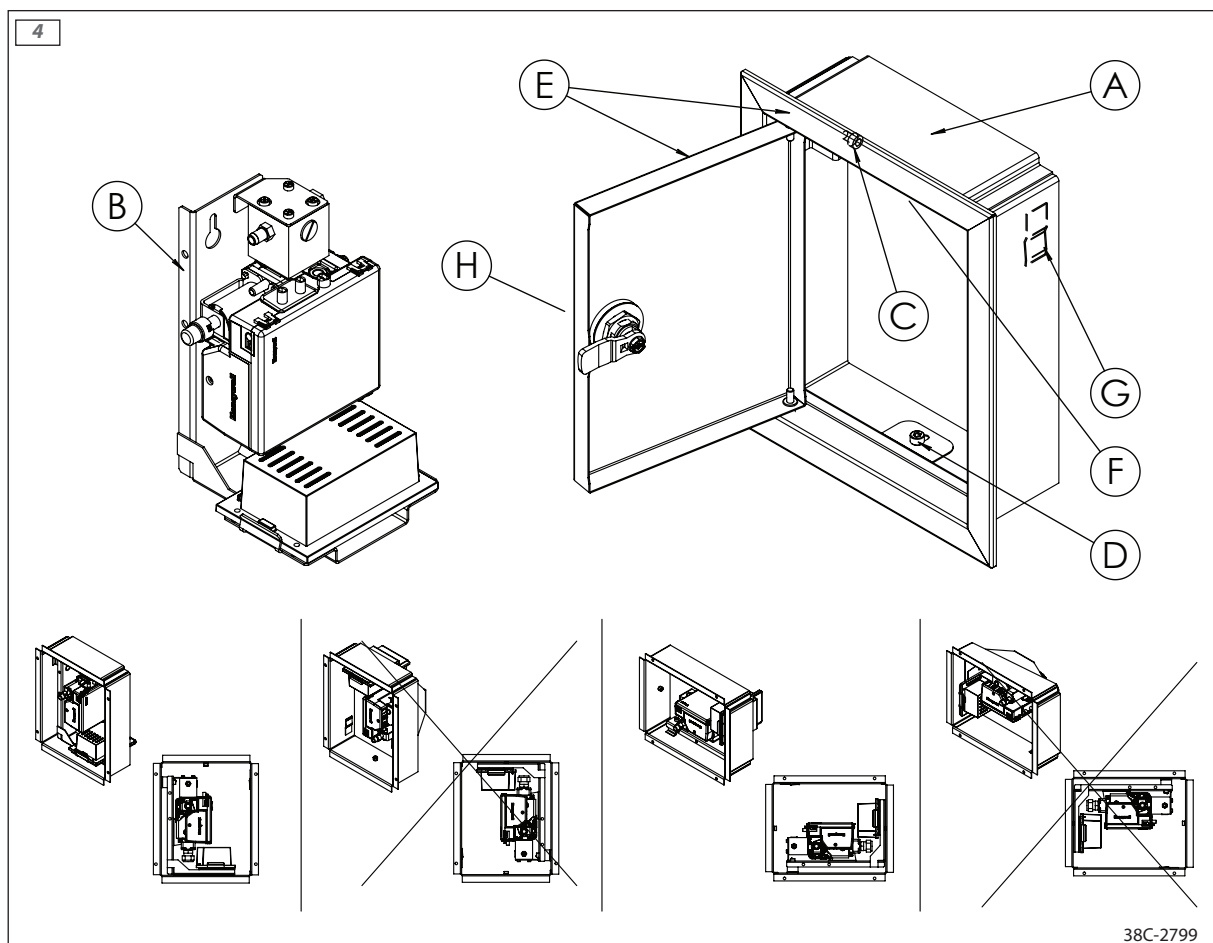
!Caution If a roof terminal **without bends** is used, you must first connect a 0.8 metre concentric pipe with a 200/130 mm diameter vertically to the appliance. After the first 0,8 metre, reduce the diameter to 150/100 mm, including 150/100 mm roof terminal.

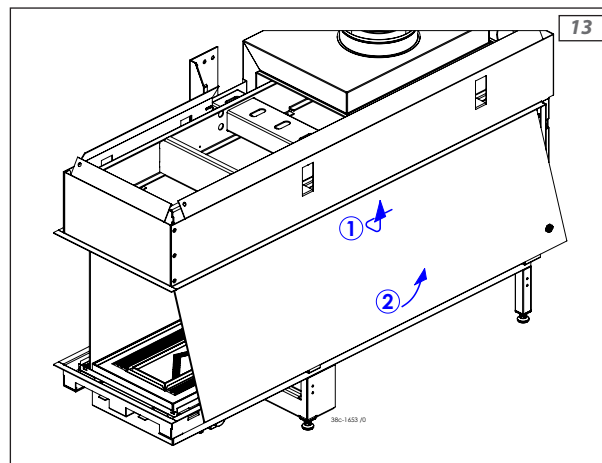
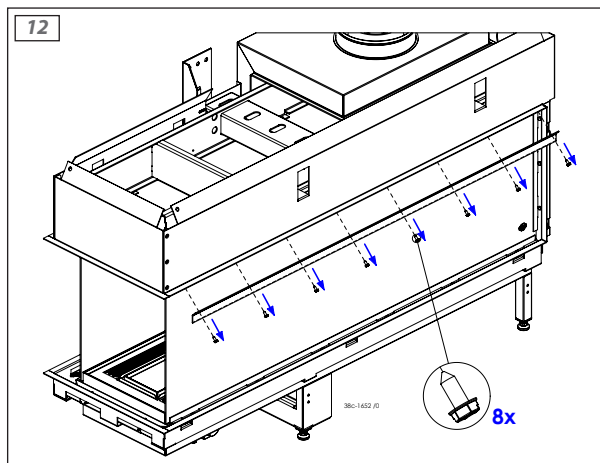
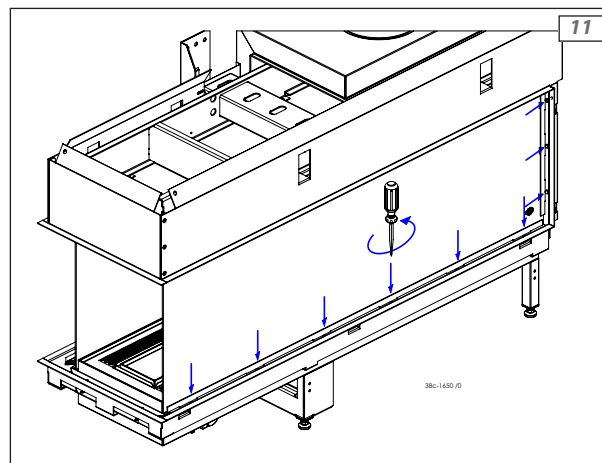
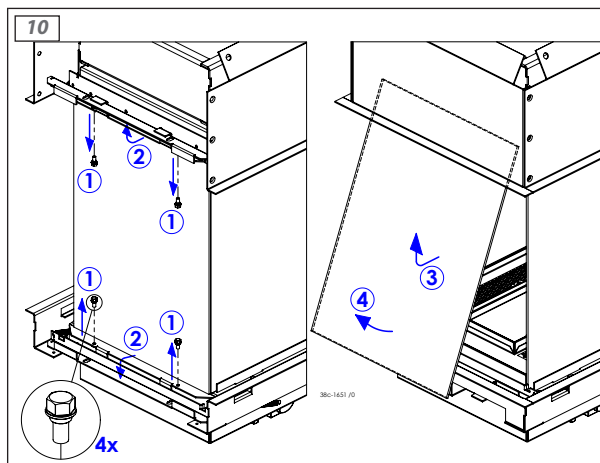
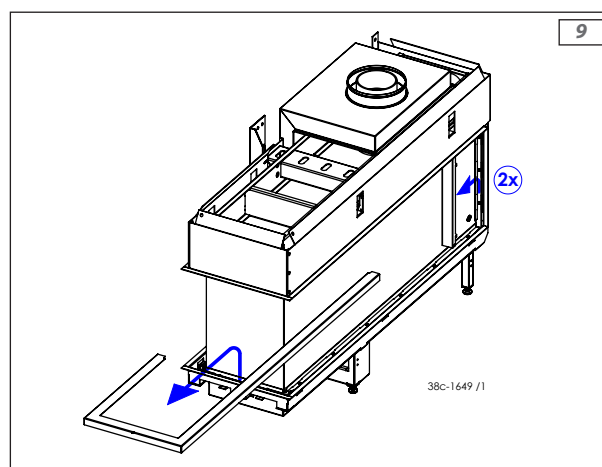
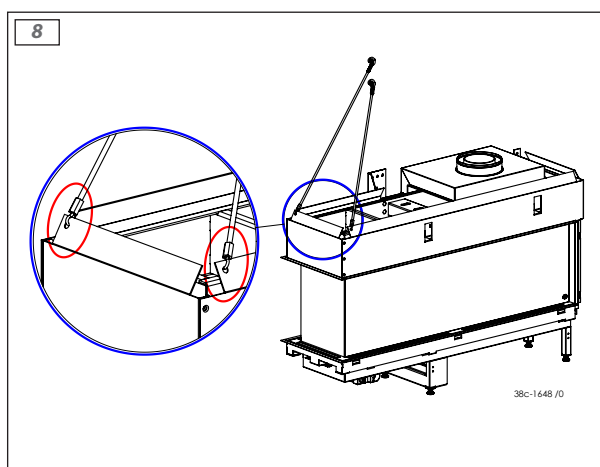
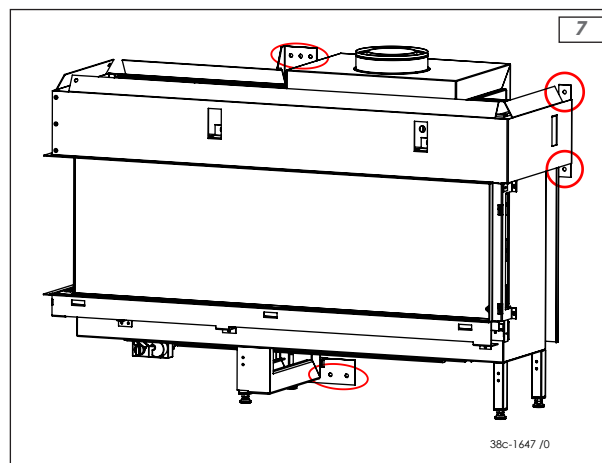
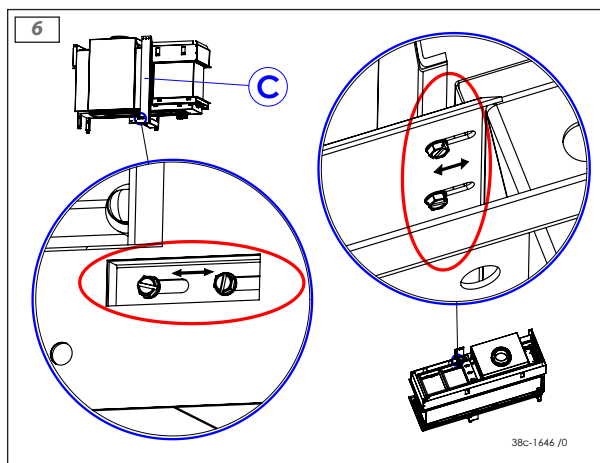
!Caution If a roof terminal **with bends** is used; you must first connect a 0.8 metre concentric pipe with a 200/130 mm diameter vertically to the appliance. Make the system with a 200/130 mm diameter, and reduce the diameter to 150/100 mm after the last bend, including 150/100 mm roof terminal.

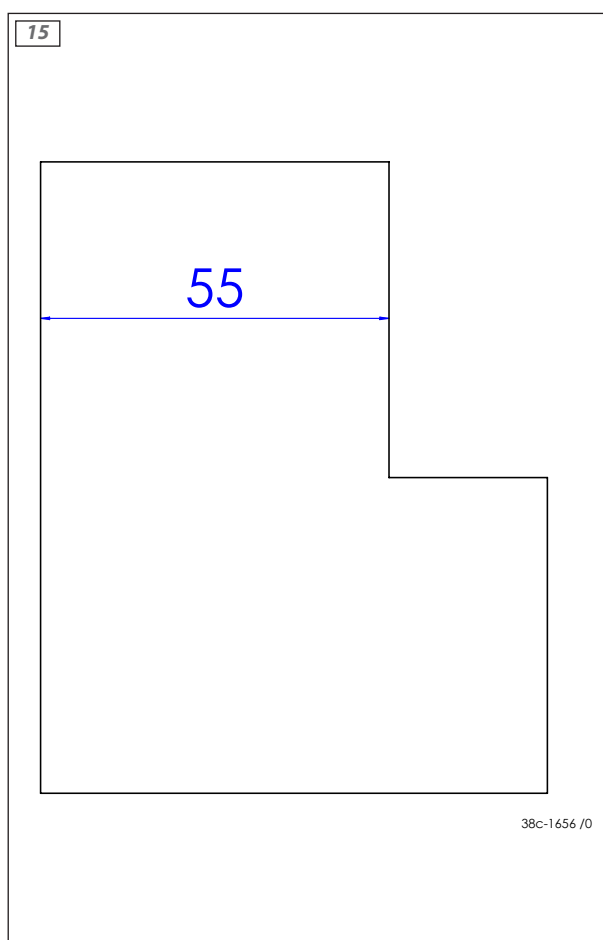
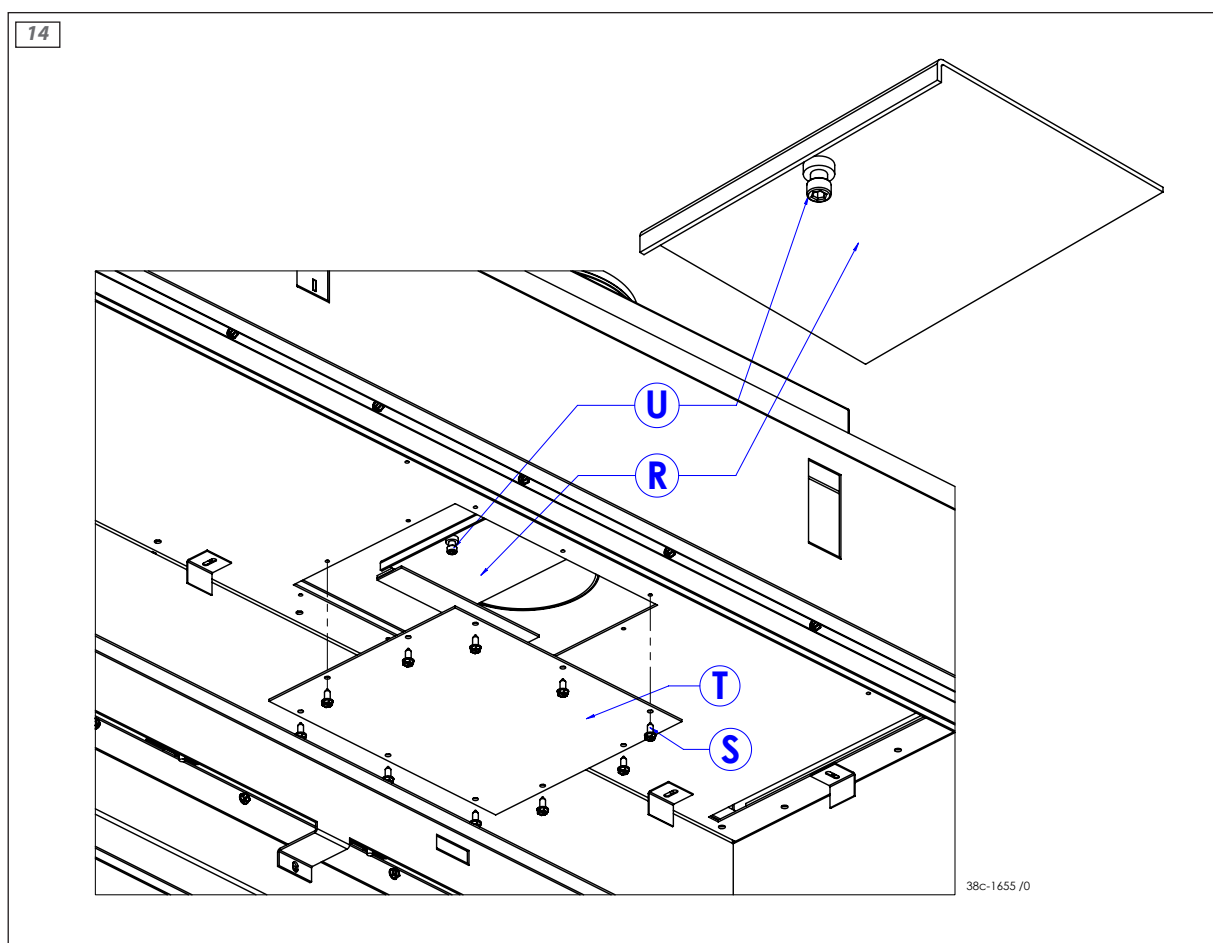
Appendix 3 Figures



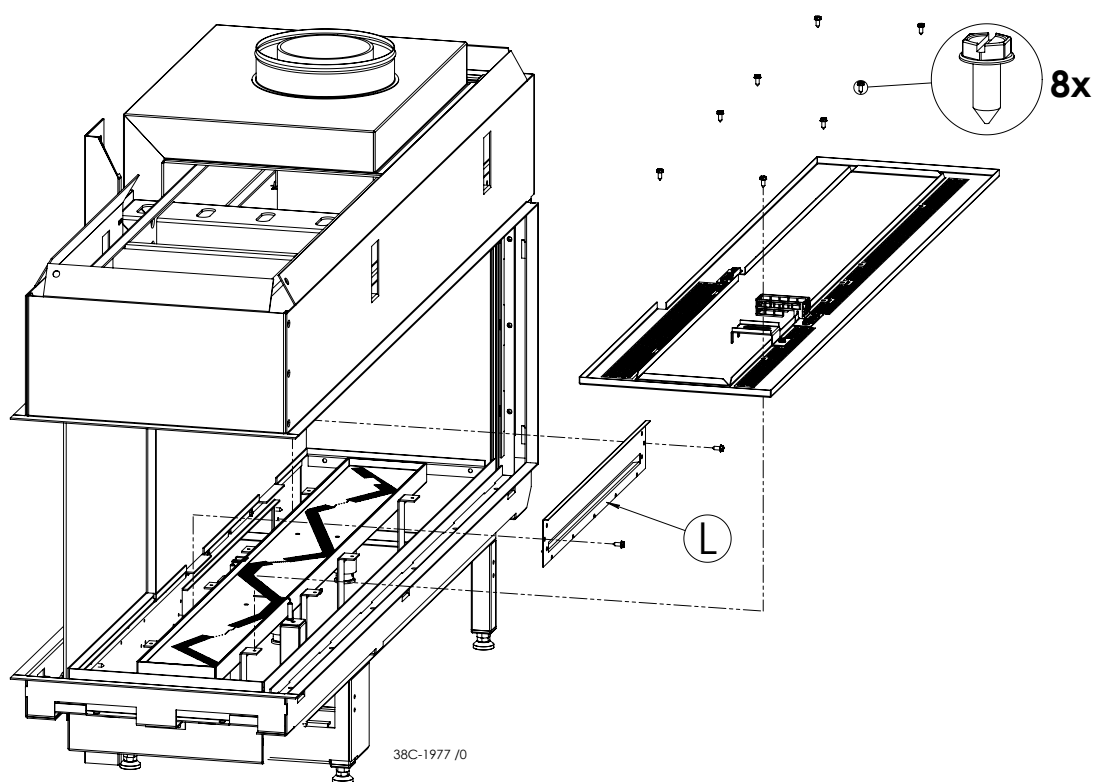


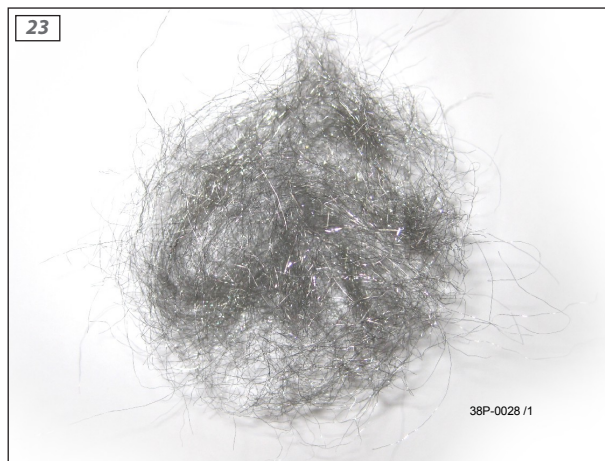
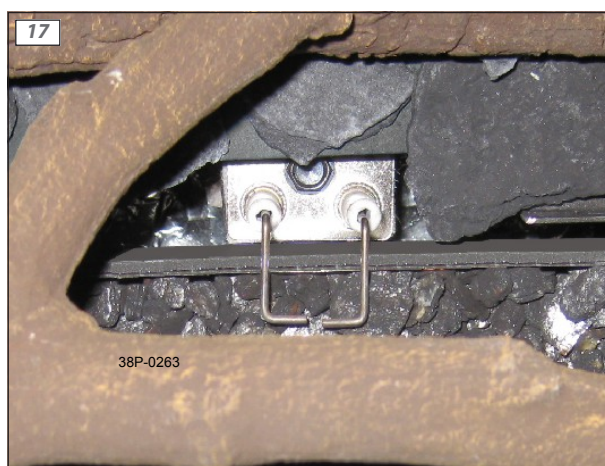


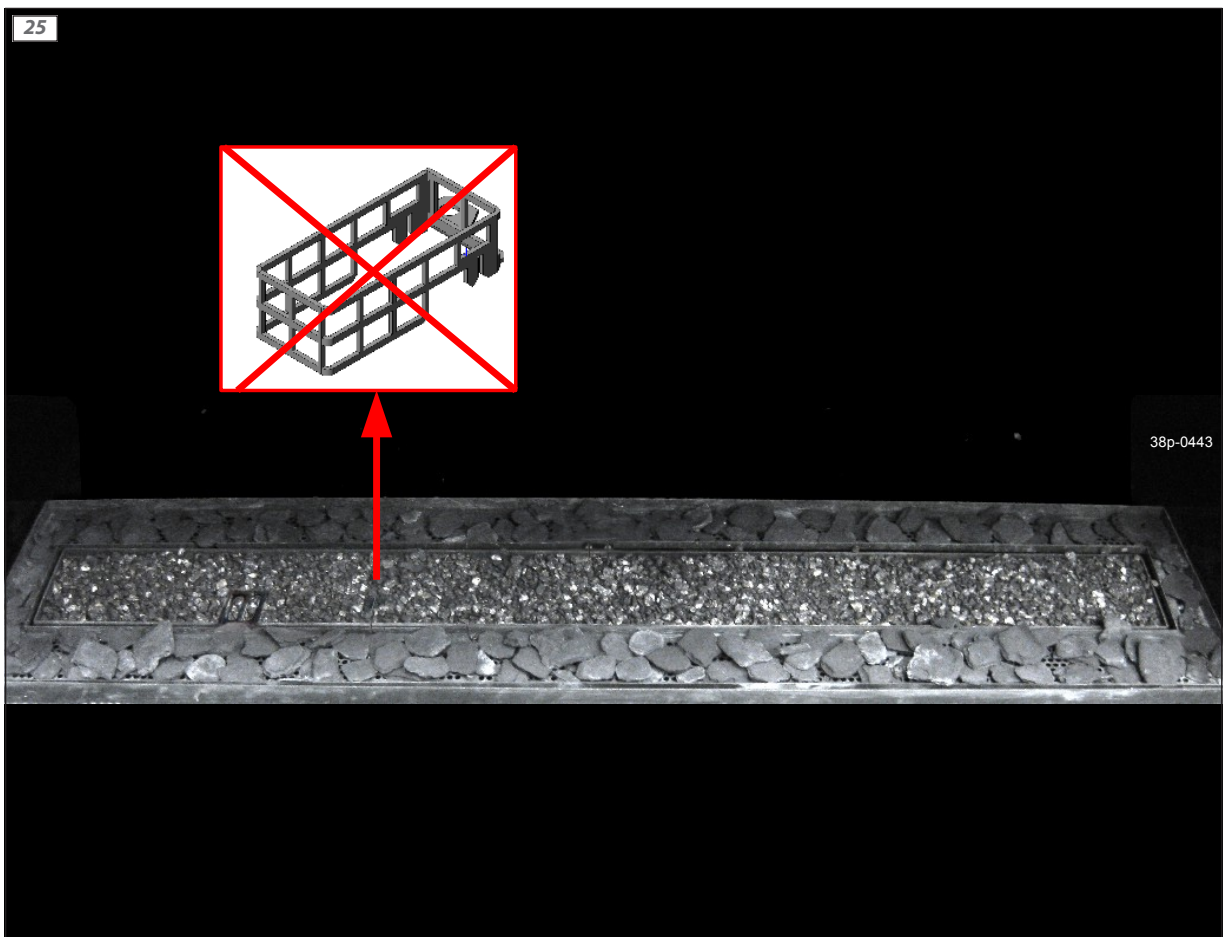
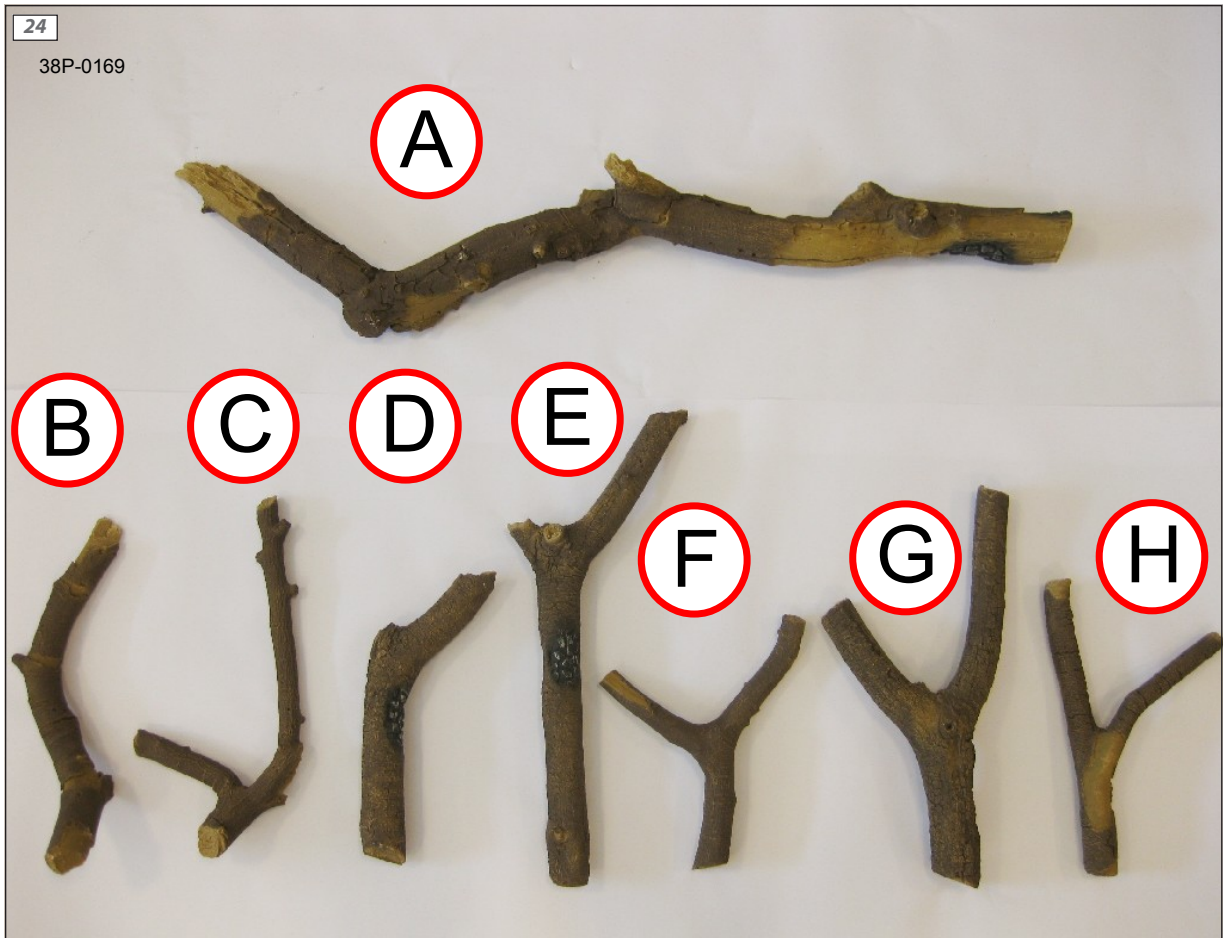


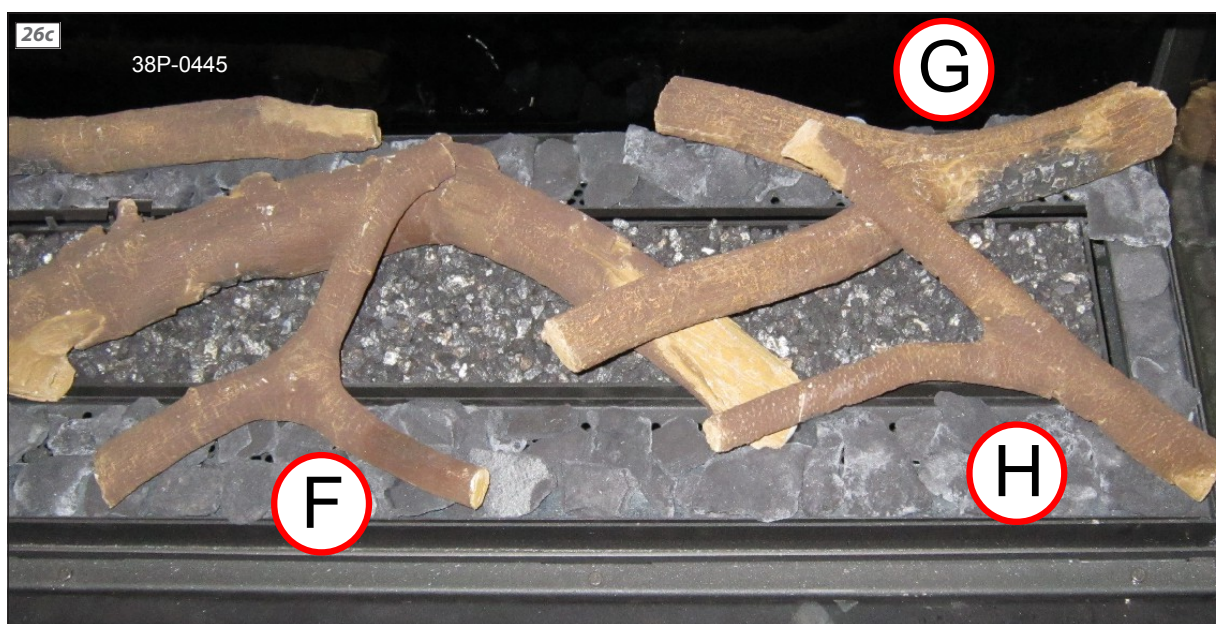
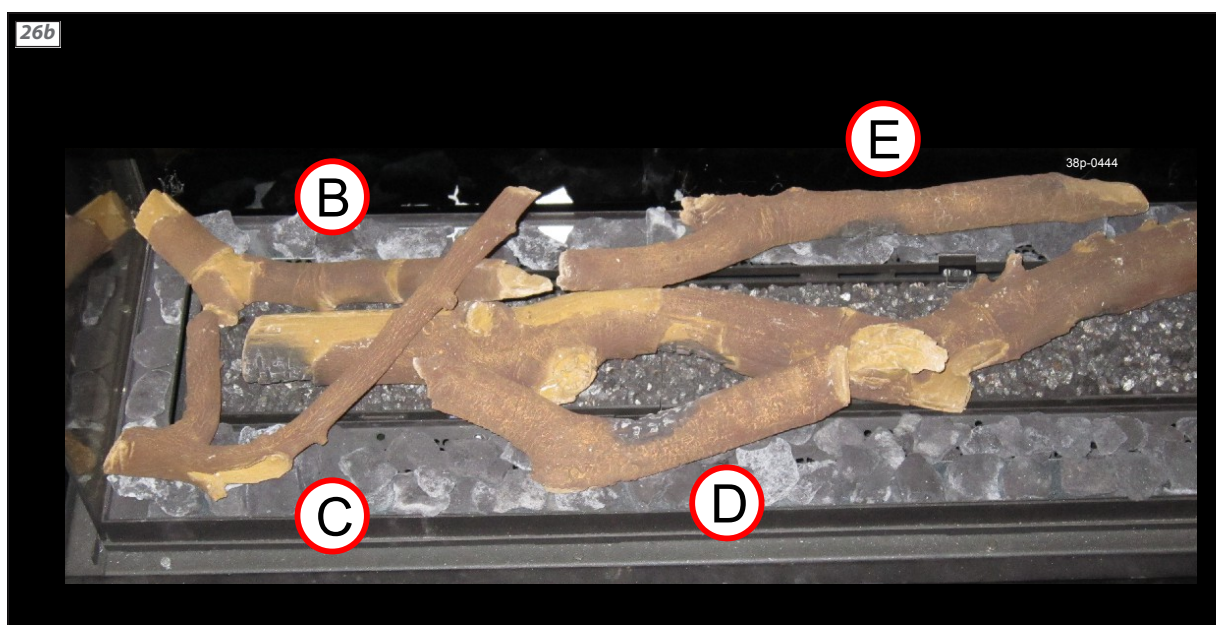
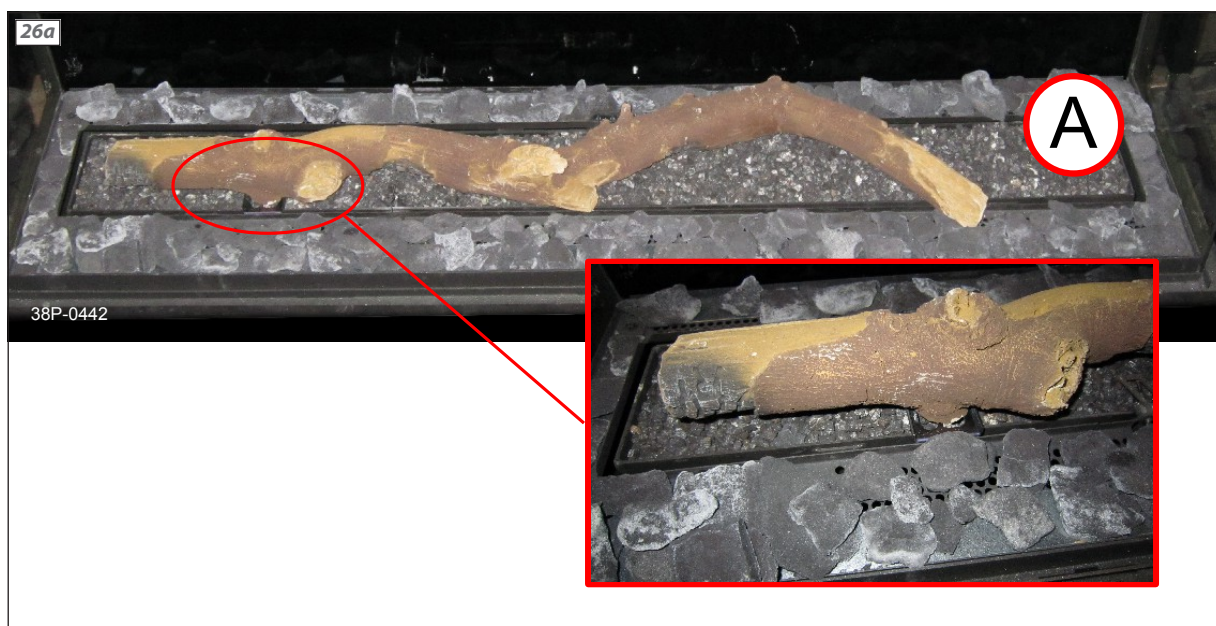


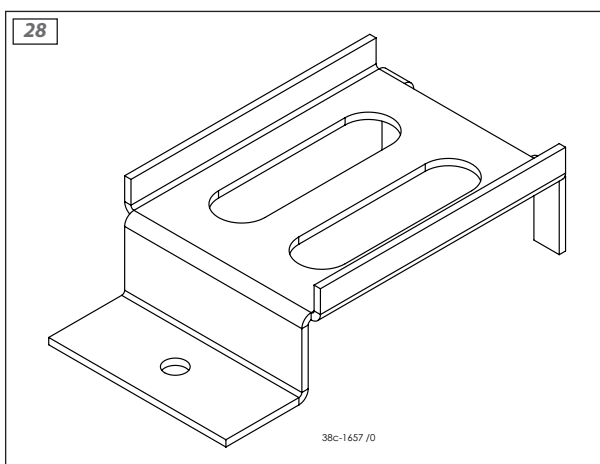
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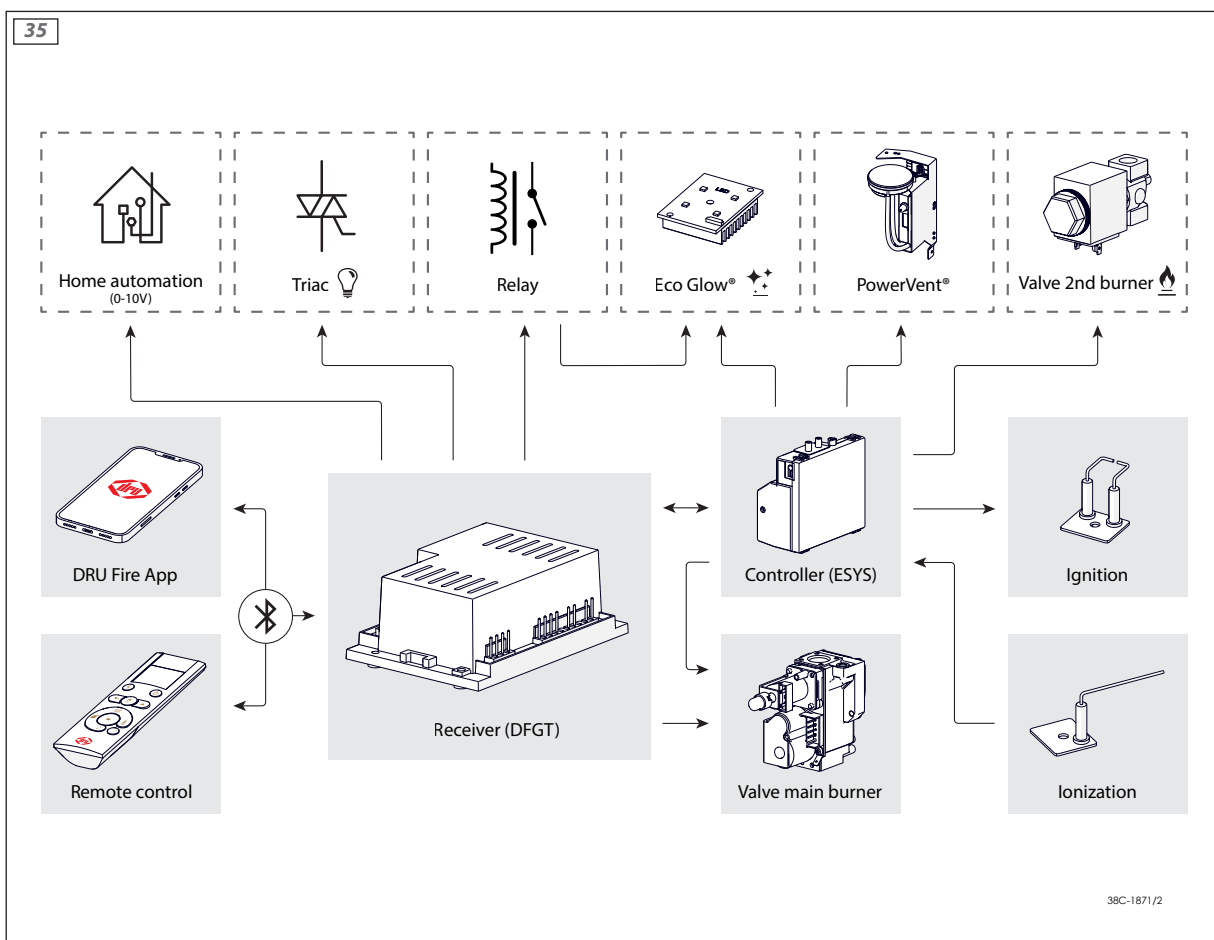
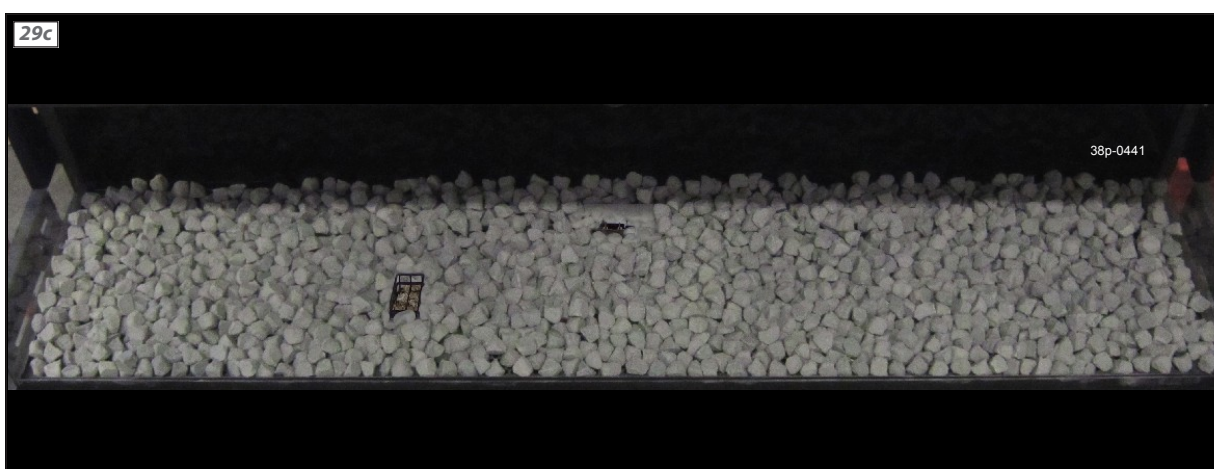


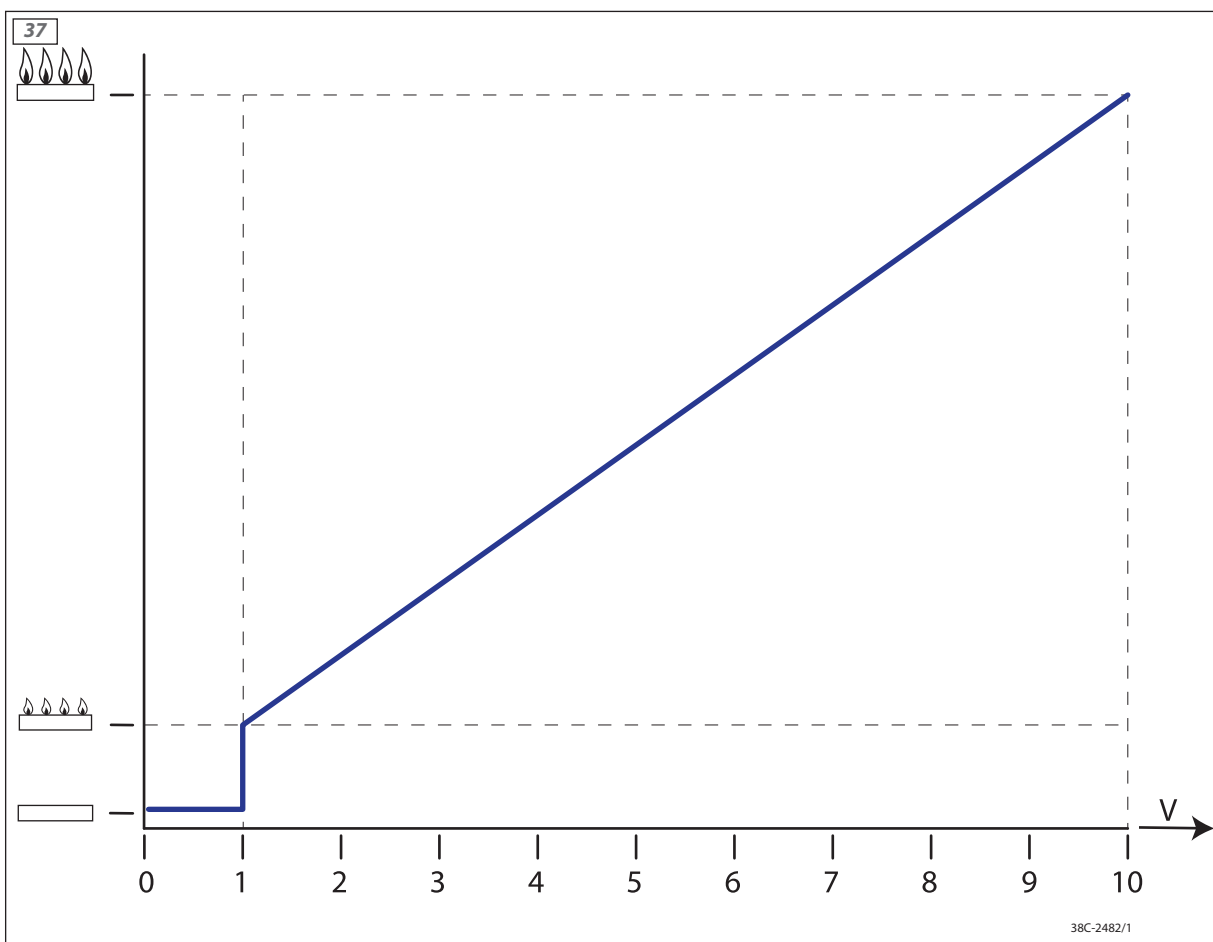
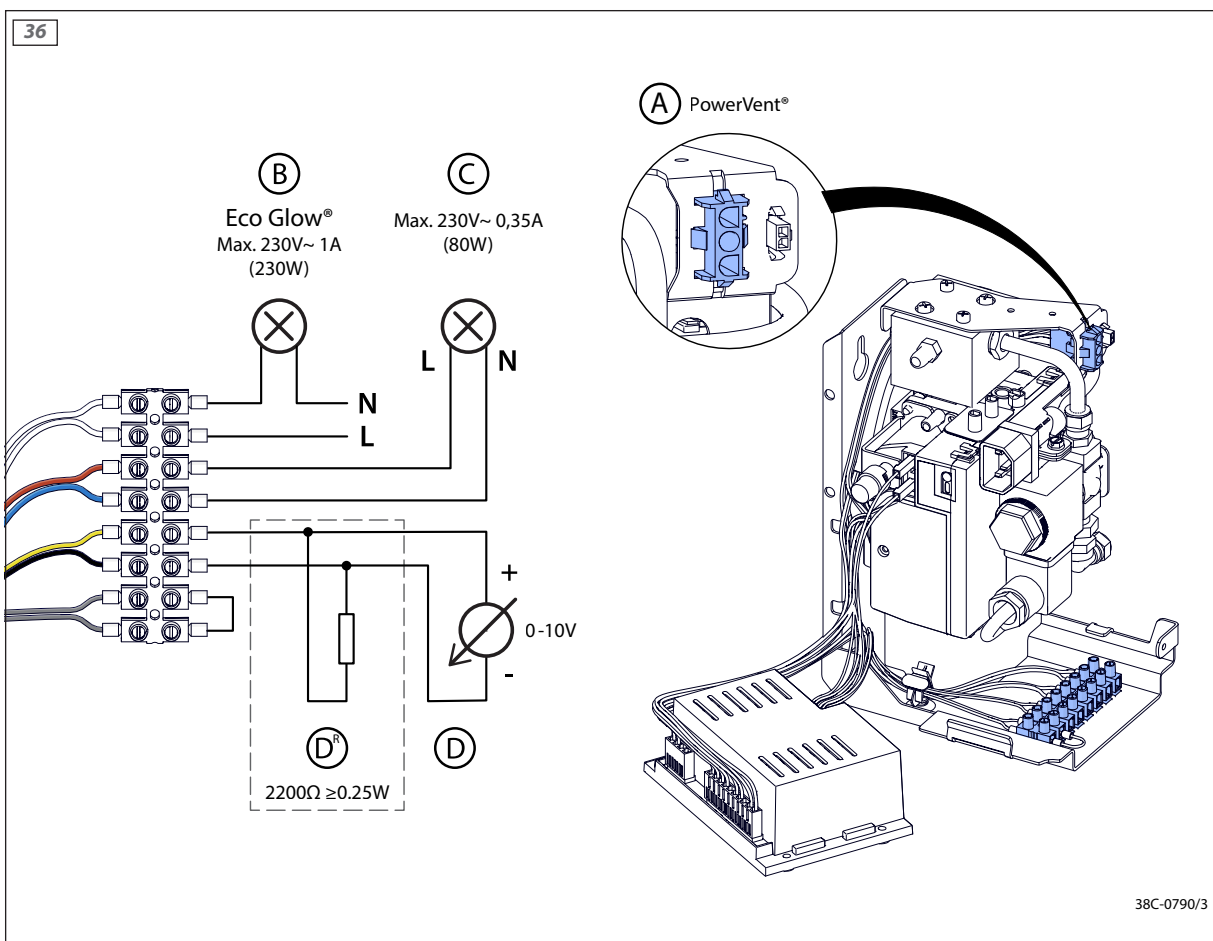


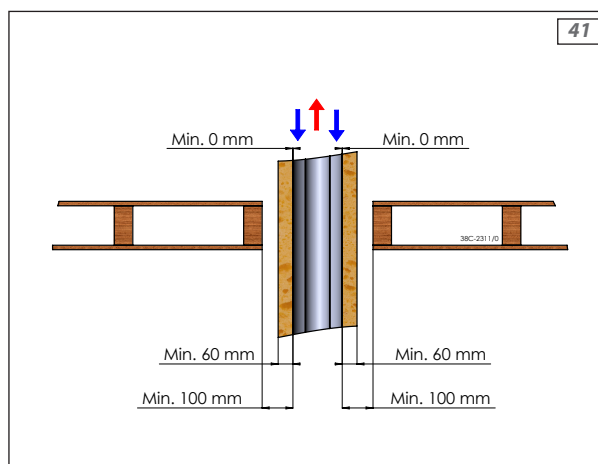
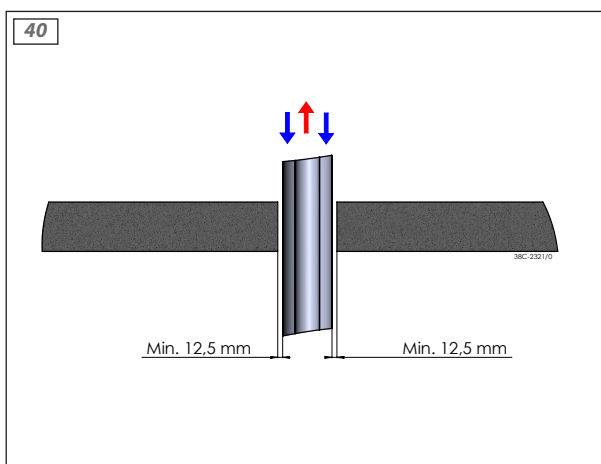
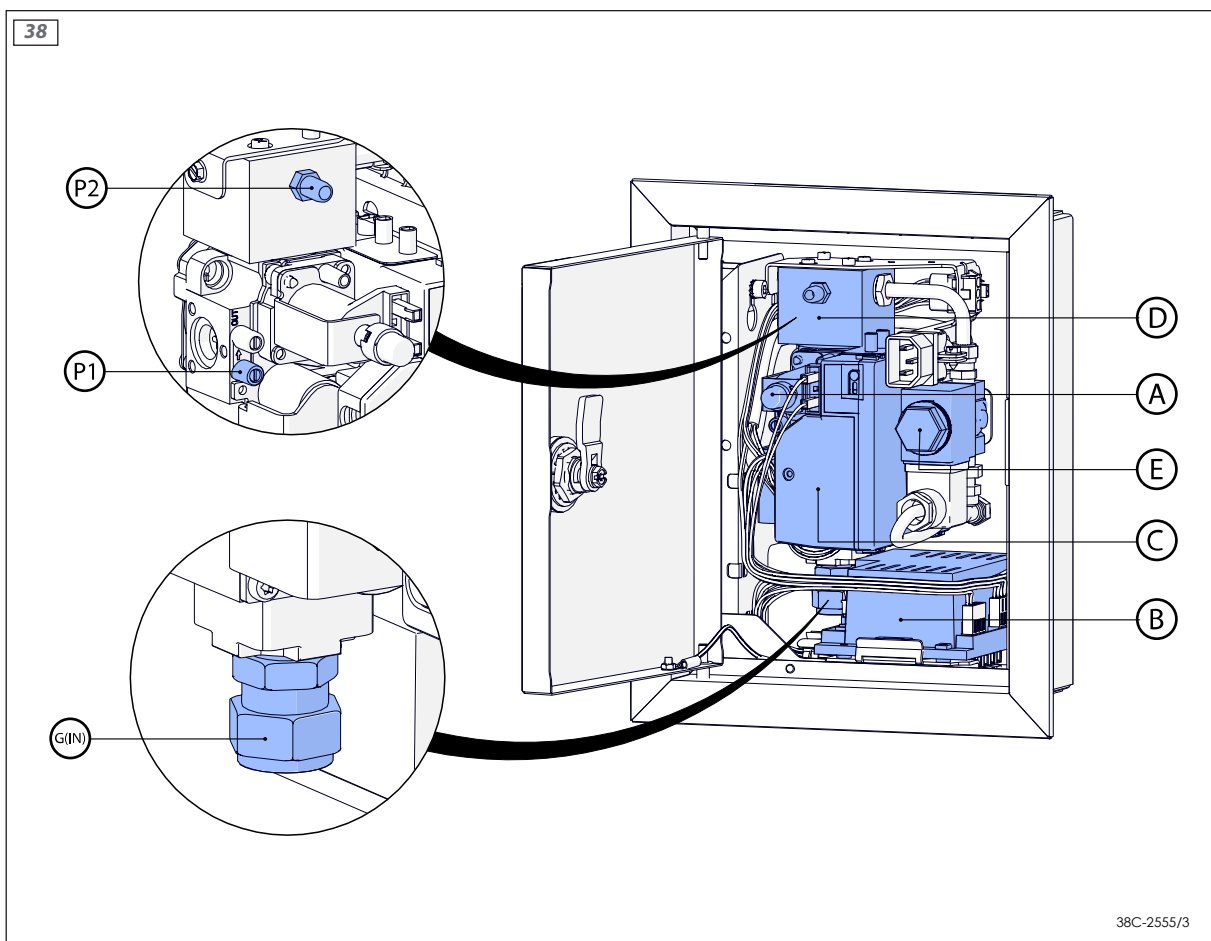














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