

# ELEMENT **4**



## INSTALLATION MANUAL

DSE 70 - BIOETHANOL





DO NOT USE THIS PRODUCT AS A PRIMARY HEAT SOURCE

ALWAYS USE BIOETHANOL OF 85% TO 96,6% ALCOHOL

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## 1 CE STATEMENT

We hereby declare that the design and construction of the Element4 appliances are complying to the essential demands and regulations for gas products.

### Product:

Local spaceheater on bioethanol

### Models:

E4-42

- DSE 70 b

### Applicable harmonized norms:

- BS EN 16647:2015.

This declaration loses its validity when changes to the device are made without the written permission by Element4.



J. Kempers

CEO

## 2 IMPORTANT INFORMATION

### 2.1 SAFETY INFORMATION

The fireplace may only be installed by a qualified installer/dealer, following these installation instructions. We advise you to read these instructions properly, before commencing the installation of your device.

Before installation check the device for transport damage and inform your supplier immediately if damage is found.

This device may not be used as a primary heat source!

The settings and construction of the device must not be changed!

Parts are only to be changed with original parts by the original manufacturer.

Do not place additional imitation wood or glow material on the burner or in the combustion chamber.

This appliance is designed for use with Bioethanol of up to 96.6%.

Never use bioethanol of 100% purity! It can cause serious damage to the appliance!

This appliance is designed as a heating device and all parts, including the glass therefore become very hot during use (more than 100 degrees). Never touch the appliance during use.

Heat emitted from this appliance may affect nearby materials. Hang curtains at least 50 centimetres away.

Floors, walls and covers (ceilings) must be non-combustible in places where there is a fire risk due to heat radiating from the appliance and/or drainage device.

### 2.2 PACKAGING INFORMATION

The packaging of the device is recyclable. Packaging can contain:

- Cardboard
- CFC-free foam (soft)
- Wood
- Plastic
- Paper

These materials must be disposed of responsibly and in accordance with government regulations.

Batteries count as chemical waste. Batteries must be disposed of responsibly and in accordance with government regulations. Remove the batteries first before disposing of the remote control.

The government can also provide you with information on the responsible disposal of discarded devices.

### 3 WARRANTY

**NB:** Should a problem occur, that you are not able to fix yourself with the help of the support in **APPENDIX A to C**, **please** contact your installer or dealer.

The Element4 devices on which this warranty is applicable are made of high quality materials. Should any problem or defects still occur the following provision are in effect;

1. Before any installation, the installer will ensure himself of the good quality and operation of the flue channel. The gas fireplaces are to be installed by a competent installer, according to the rules and regulations that are applicable in the country (or even region) of installation and those as described in this manual.
2. There is a warranty period of two years for all Element4 devices, starting from the moment of purchase. The date of purchase should be mentioned clearly on the purchase invoice.
3. The ceramic glass is not included in the warranty, as are the physical or chemical outside influences during transport, storage or montage.
4. If a malfunction should occur during warranty period that is a consequence of an assembly error or material defect, Element4 will provide a free replacement part to the installer, without compensation for disassembly or montage.
5. In case the installer is not able to fix the problem himself, a request can be made to Element4 to do it for him, as long as the service can be done within the borders of the Benelux.
6. Only after consultation up front, the device or loose parts can be sent for check up or replacement. These goods should be sent with the necessary warranty documents and the date of purchase.
7. When a house visit should occur for service purposes by Element4 (within the borders of the Benelux) during warranty period, the right documentation (i.e. this page and a proof of purchase) should be available.

For a house visit for service, outside the warranty period, the following costs are being charged:

- Material costs
- Working hours
- Call-out costs

The warranty is not applicable in the following cases:

1. When one of the previous points is not met
2. When changes are made, of which Element4 is not made aware of / has approved of upfront
3. When device is not installed and/or used properly according to the installation manual.
4. When other than the prescribed decoration material is used.
5. When the device is installed (partially or fully) with other materials than prescribed in this manual.

## 4 REMOTE CONTROL AND IGNITION

### 4.1 REMOTE CONTROL

The device is operated by remote control (Figure 4.1) The remote control requires 4 type AAA batteries.

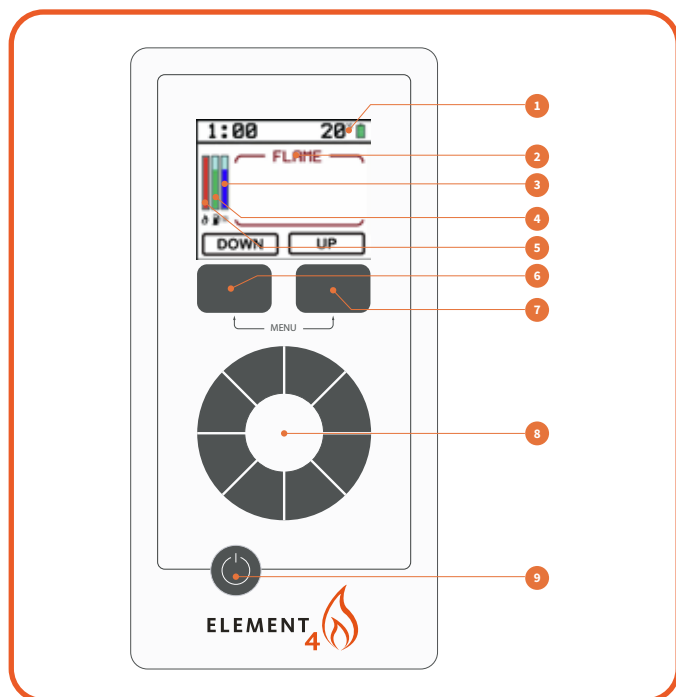


Figure 4.1 Remote control

1. Room temperature and battery level of remote control
2. Mode
3. Light intensity level
4. Tank level
5. Flame height
6. Increase flame setting
7. Decrease flame setting
8. Light control (optional)
9. ON-button

#### 4.1.1 PAIRING THE REMOTE CONTROL

To pair an (existing or new) handset with the device, the current paired device must be removed. Do this by selecting DEVICE in the MENU and then holding down the DELETE button. The display now shows NO PAIRED DEVICES.

1. Ensure appliance is switched OFF and isolated from mains power.
2. Touch power button on the remote panel.
3. Select PAIR option on remote.
4. Switch ON appliance by connecting to main 230V.
5. The remote screen will show STANDBY when successful.

### 4.2 FILLING THE TANK

**CAUTION:** Use bioethanol of 96.6% - 85% purity.

Under no circumstances should 100% bioethanol be used, this may cause serious damage to the fireplace.

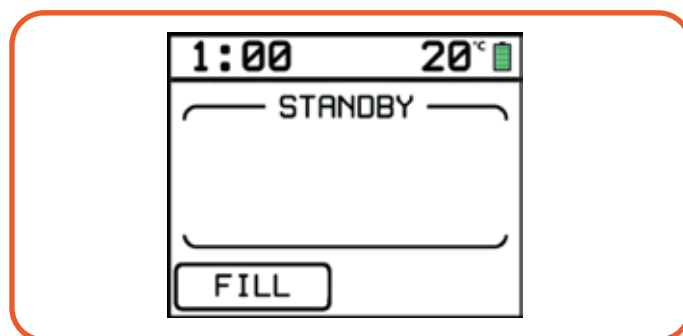


Figure 4.2 STANDBY mode

Before the fire can be lit, the tank must first be filled with bioethanol. Filling can only be done when the stove is in STANDBY mode. See Figure 4.2

**CAUTION:** If the fire has burned or burned shortly before and has not yet cooled down sufficiently, the tank cannot be filled.



Figure 4.3 Quick coupling of filling hose extender

1. Make sure that the fireplace is connected to 230V mains voltage.
2. Open the service hatch and take out the filling hose.
3. Connect the filling hose extender to the filling hose by connecting the quick couplings. See Figure 4.3
4. Insert the extended filling hose to the bottom of an opened bottle or jerry can of bioethanol. Make sure that the bottle or jerry can cannot fall over during the filling process.
5. Press the **ON-button** on the remote control to activate it.
6. Press **-FILL-** (left menu button) to start the filling process. The pump is programmed to run for **2 minutes** (safety system due to building regulations for filling liquid fuels indoors). However, the pump can be stopped by pressing the **-FILL-** again. It is recommended to stop the pump when using 1L bottles so that the filling hose can be safely inserted into another bottle.
7. The pump stops after **3 minutes** or as soon as the tank is full. To check if the tank is full, press **-FILL-** again, a beep will sound and the pump will stop when full.

8. The tank hose can be emptied by pressing the -FILL- button several times while holding the hose upright to prevent spillage. Make sure the hose is completely free of fuel before disconnecting it.
9. The hose can be detached with the quick release button.

### 4.3 IGNITING THE BURNER

When the tank is filled, the burner can be ignited. Do this by pressing the ON button until the red bar on the display fills and the fire goes into PRIMING mode. See Figure 4.4 and Figure 4.5. This will take about 30 -45 seconds.



Figure. 4.4 Burner in PRIMING mode



Figure. 4.5 PRIMING: Fuel is going to be ignited

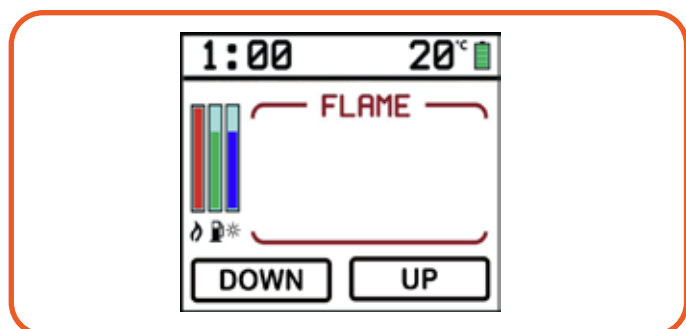


Figure. 4.6 FLAME-mode, burner is turned on

When the fire is burning, a beep will be heard and the fire will go into FLAME mode. See Figure 4.6

To increase the flame height, touch the ON button to activate the remote control and press the UP button.

To decrease the flame height, touch the ON button to activate the remote control and press the DOWN button.

### 4.4 TURNING THE FIRE PLACE OFF

To turn off the fire, touch the ON button to activate the remote control and then hold the ON button until the red bar is filled. The flames will not extinguish immediately, the remaining will have to be burn out first.

### 4.5 LIGHTING CONTROL

If your fireplace is fitted with LED lights, they can be operated whether the fire is on or off.

To **increase** the light intensity, turn the touch dial clockwise.

To **decrease** the light intensity, turn the touch dial counterclockwise.

If the light is on while the fire is turned off, it will remain on. To turn it off, rotate the dial counterclockwise until the display shows "OFF."

## 5 INSTALLATION PREPARATION AND INSTRUCTION

The device has been developed, tested and approved to conform with applicable standards for the usage, performance and safety of the product. The installation of your fire must be made to conform with local building regulation requirements. We strongly advise that an suitably qualified installer is used in the installation of this appliance. The installer can provide you will all the necessary information regarding the safety regulations of the installation

### 5.1 FLUELESS OR BALANCED FLUE

This appliance can be installed either as flueless fire (see [figure 5.1](#)) or as a closed appliances with balanced flue concentric flue pipe (see [figure 5.2](#)). With a flueless installation no flue is required. The chimney breast of the fireplace will require ventilation openings at the bottom and the top of at least 200cm<sup>2</sup> for the fire to draw in sufficient fresh air and to discharge the products of combustion. Extra ventilation into the room may be required to maintain the supply of fresh air – local regulations may apply depending on the country of installation. If installing using the balanced flued concentric option then it is recommended that the home is a fully enclosed or mechanically ventilated home

### 5.2 INSTALLATION

Determine the installation location for the device. The appliance must be fixed firmly and level to the floor using the fixings built into the base of the appliance. Do not make any adjustments to the device.

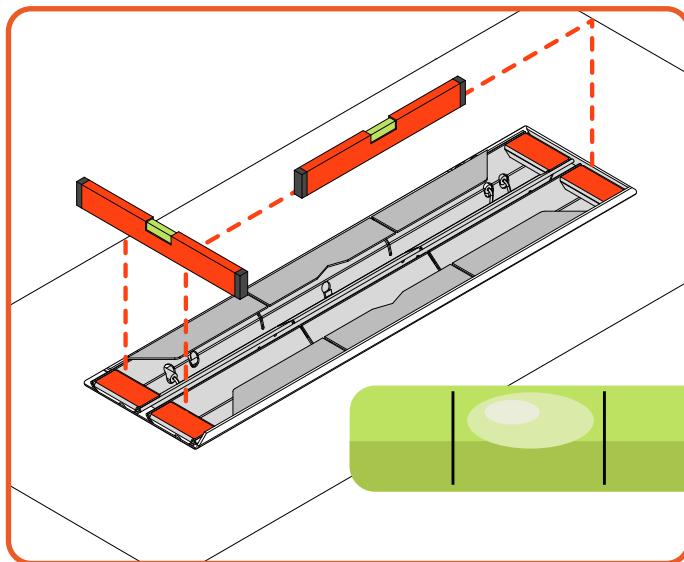


Figure 5.3 | Make sure the burner is level

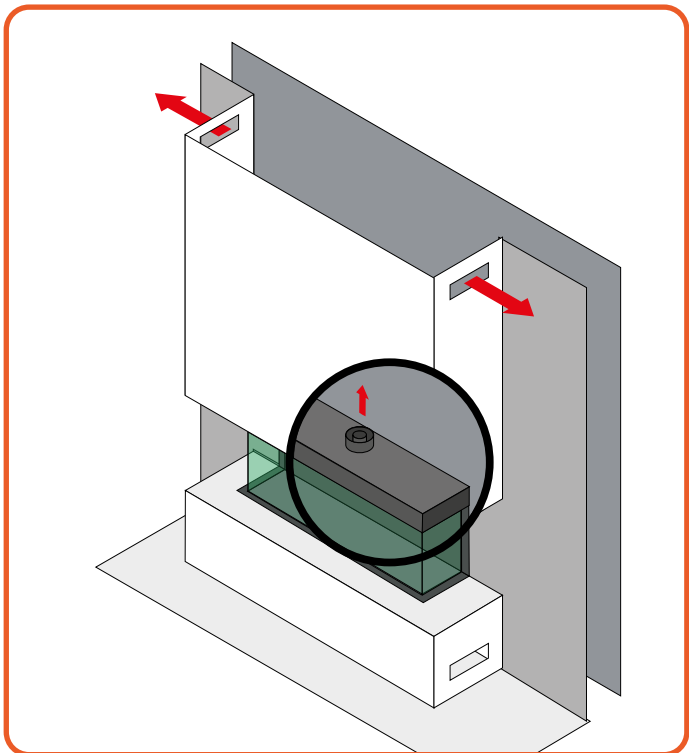


Figure 5.1 | Example of Flueless installation

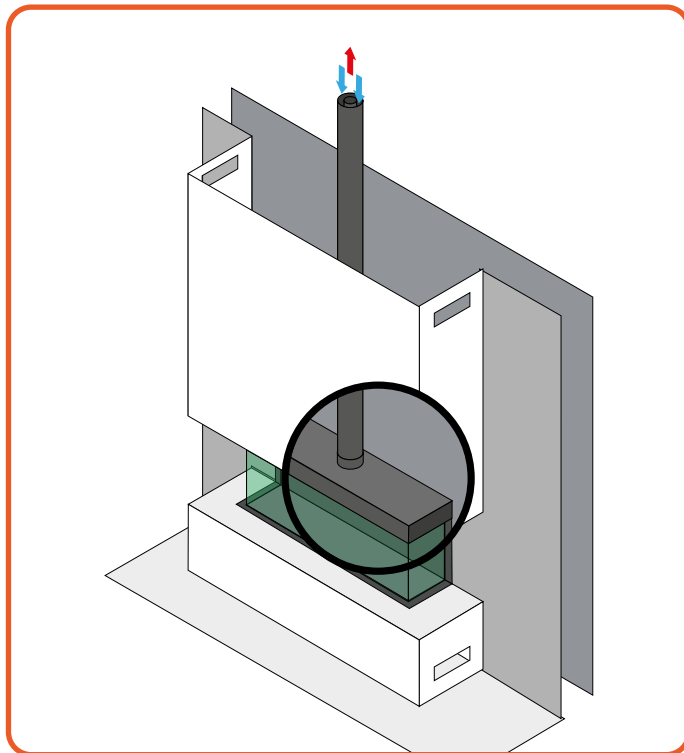


Figure 5.2 | Example of Balanced flue installation

## 6 FIRE SAFE INSTALLATION

This inset fireplace is designed to be installed by sliding the appliance into an existing fireplace opening with minimal construction work. The appliance may also be installed in a newly constructed fireplace enclosure, provided all fire safety and installation requirements described in this manual are met.

Unlike built-in fireplaces, the convection heat of this insert fireplace remains inside the appliance's convection mantle and is discharged exclusively at the front through the opening. No convection air circulation takes place inside the fireplace enclosure.

This part describes the requirements for a fire-safe installation, both for existing fireplaces and for newly constructed enclosures.

### 6.1 GENERAL FIRE SAFETY PRINCIPLES

The inset fireplace must be installed in an environment free of combustible materials within the heat-affected area. The appliance must never be placed directly against a rear wall or structure made of combustible material.

Combustible materials, such as wood, can ignite at temperatures as low as approximately 85 °C when exposed over a prolonged period. At higher temperatures (above approximately 200 °C), ignition may occur within minutes.

An inset fireplace can locally reach temperatures exceeding 200 °C. Therefore, only non-combustible materials may be used around the appliance and inside the fireplace enclosure.

If fire safety aspects are not sufficiently addressed in this manual, the requirements of **NPR 3378-20:2010** shall prevail.

### 6.2 WALL AND CEILING CONSTRUCTION

Two types of wall and ceiling constructions are distinguished:

#### 6.2.1 TYPE A – NON-COMBUSTIBLE CONSTRUCTIONS

Walls and ceilings constructed entirely of mineral building materials (e.g. aerated concrete, brick, calcium silicate) with a minimum thickness of 100 mm.

For installations with Type A constructions, refer to **CHAPTER 6.4**.

#### 6.2.2 TYPE B – COMBUSTIBLE CONSTRUCTIONS

Walls or ceilings that consist of, or contain, combustible materials, or walls on which combustible elements are mounted on the side facing away from the fireplace, such as:

- wooden cladding
- built-in furniture
- timber framing

For installations with Type B constructions, additional protective measures are required as described in section **CHAPTER 6.5**

### 6.3 ASSEMBLY REGULATIONS – GENERAL

Load-bearing walls and ceilings must be protected with a non-combustible, fire-resistant board in the area of the appliance.

Combustible materials are not permitted in the direct vicinity of the appliance or inside the fireplace enclosure.

The inset fireplace must not support any structural loads. The full weight of the enclosure must be carried by an independent supporting structure.

Non-combustible materials may be installed with zero clearance to the outer faces of the appliance frame, provided that:

- glass panels and service parts remain removable
- ventilation openings of the appliance are not obstructed

### 6.4 INSTALLATIONS WITH NON-COMBUSTIBLE MATERIALS

Adequate air circulation must be ensured at the front of the appliance. The temperature of the air leaving the appliance must not exceed 85 °C.

As the convection heat of this insert fireplace remains inside the appliance's convection mantle and exits exclusively at the front, no convection openings in the fireplace enclosure are required, provided that the specified clearances at the front are maintained.

### 6.5 INSTALLATIONS WITH COMBUSTIBLE MATERIALS

If combustible materials are present in the fireplace enclosure or surrounding construction, the following measures shall be applied:

- Cover all relevant walls and ceilings with a non-combustible, fire-resistant board classified at least **EN 13501-1: A2**.
- Install a second non-combustible board in front of the first board, creating an air gap of at least 20 mm.
- The two boards must not be mechanically connected to each other.

Metal fasteners can act as heat bridges due to thermal conductivity and may cause ignition after prolonged heat exposure.

### 6.6 HEAT TRANSFER AND CLEARANCE REQUIREMENTS

During operation, different types of heat are emitted by the insert fireplace. Each type requires specific safety distances.

#### 6.6.1 RADIANT HEAT

Radiant heat is emitted through the ceramic glass and the metal front of the appliance.

- The minimum distance between the ceramic glass and any combustible material in front of the appliance is **400 mm**.

### 6.7 FLOOR PROTECTION

- A minimum clearance of 100 mm must be maintained between the appliance and the floor.
- The temperature of the floor beneath the appliance must not exceed 85 °C.
- The floor directly surrounding the appliance must be constructed of non-combustible materials.
- If required, an additional insulation layer must be installed to limit heat transfer.

The insert fireplace may also be installed on an elevated platform, provided the platform meets all fire safety requirements.

### 6.8 CONVECTION HEAT AND AIR FLOW

In contrast to built-in fireplaces with a separate convection space, the convection heat of this insert fireplace circulates exclusively within the appliance's convection mantle.

Heated air is discharged at the front through the opening of the appliance. No heat accumulation occurs inside the fireplace enclosure when the appliance is installed correctly and the specified front clearances are maintained.

As a result:

- no convection grilles are required in the enclosure
- no false ceiling above the appliance is necessary

### 6.9 CONNECTION OF THE CONCENTRIC FLUE SYSTEM

The concentric flue pipe is connected from the inside of the appliance.

The correct installation procedure and positioning are shown in Figure X and Figure Y, which illustrate:

- the internal connection method
- the position of the flue relative to the appliance

All flue connections must be installed free of mechanical stress.

### 6.10 ELECTRICAL WIRING

The fireplace enclosure must be free of standard electrical conduits unless they are adequately protected against temperatures exceeding 30 °C.

Only electrical wiring systems specifically designed for increased temperature resistance are permitted within the heat-affected area.

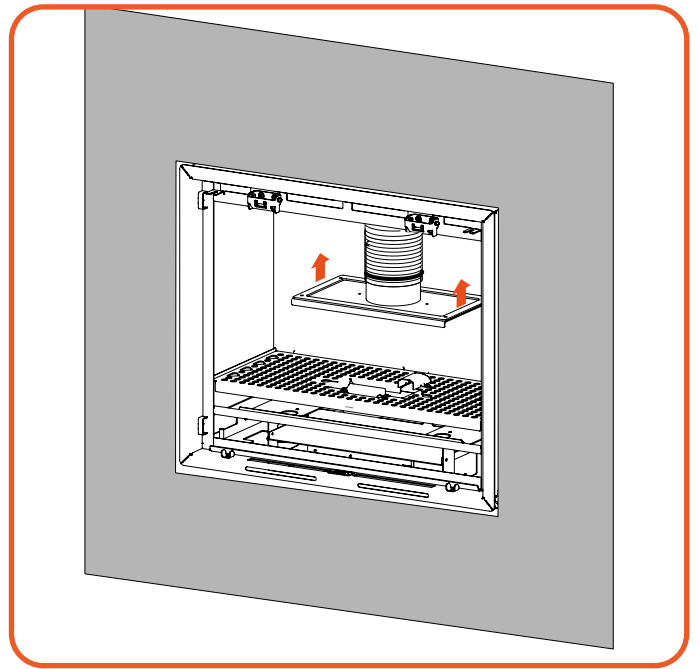


Figure 6.1 | Connect flexible exhaust pipe

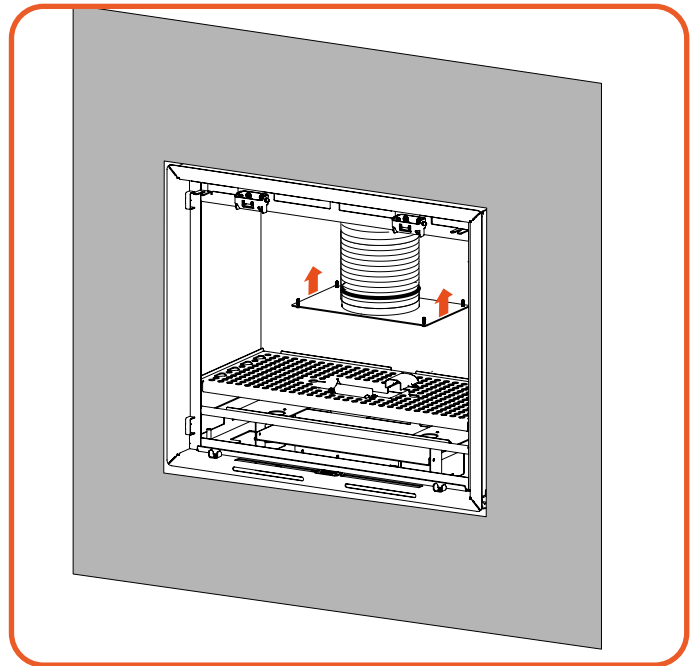


Figure 6.2 | Connect flexible air supply pipe



## 7 ATTENTION POINTS FLUE GAS EXTRACTION

To guarantee the fire safety regarding your flue gas configuration a casing is necessary. For this case non-combustible materials should be used. Make sure to ventilate a shaft and never to insulate it, to make sure the hot air is able to get away.

Every transit or terminal should be made such, that the warmth-insulation and non-combustability is guaranteed, according to the building regulation.

### 7.1 DETERMINING THE FLUE GAS EXTRACTION DIAMETER

The general rule is that you must always adhere to a flue diameter of your chosen fireplace. The spigots have a general size diameter of 200/130mm for the bigger models or 150/100mm on some smaller models.

For some fireplaces with the 200/130 spigot it is allowed to reduce the flue channel to a 150/100. **APPENDIX F** will tell you whether this is allowed or not for the fireplace of choice.

### 7.2 DETERMINING CORRECT FLUE FUNCTIONALITY

#### 7.2.1 DETERMINING FLUE SECTIONS

You always start with a vertical length of ½ meter.

- For a flue diameter of 200/130, your maximum **total vertical section** is 22 meters.
- For a flue diameter of 150/100, your maximum **total vertical section** is 11 meters.

#### Calculating the Total Vertical Section (TVS)

You calculate the Total Vertical Section by adding up all vertical upward sections in the extraction gradation.

#### Calculating the Total Horizontal Section (THS)

You calculate the Total Horizontal Section by adding up all horizontal parts in the extraction gradation.

#### 7.2.2 REFERENCE THE FLUE CALCULATION

In order to ascertain whether your intended extraction shall function properly, a stove category is determined.

After you have determined the applicable category i.e. a wall or a roof terminal (see **APPENDIX D**), you search for the corresponding calculation tables.

Each category refers to a set of tables:

1. A table for horizontal outlet.
2. A table for vertical outlet

You must use the table applicable to you. You calculate your **total vertical section (TVS)** as well as your **total horizontal section (THS)**. In the table you will find advice; TVS on the vertical axis and THS on the horizontal axis.

### 7.3 BENDS

Be aware of the bends in your flue. They provide extra resistance in the system and must therefore be included in the TVS and THS.

There are 2 bend types as per the example in **Figure 7.1**:

- Type N bends: 45° and 90° bends from vertical to horizontal and vice versa.
- Type Q bends: 45° and 90° bends from horizontal to horizontal.

The first 3 type N bends (from vertical to horizontal) do not need to be included in your calculations. The next type N bends are each calculated as 1 horizontal meter in the THS.

For a type Q bend (horizontal to horizontal) the following applies:

- 90° bend in the horizontal section counts as 2 horizontal meters in the THS.
- 45° bend in the horizontal section counts as 1 horizontal meter in the THS

Extraction sections in a 45° upward pipe:

- 45° upward sections are calculated both vertically and horizontally.

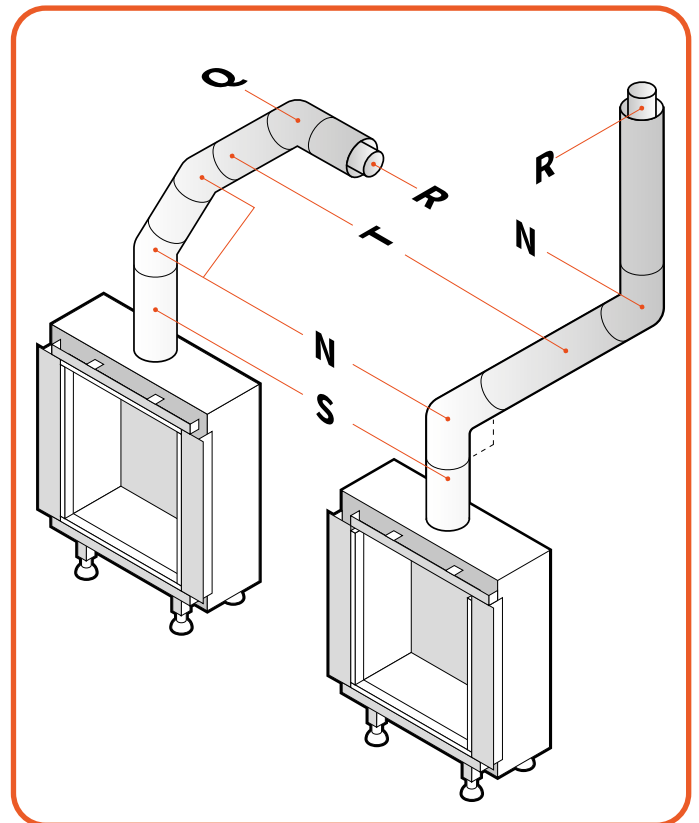


Figure 7.1 | Flue bends examples

R	Horizontal or vertical terminal
N	Bend 45° & 90° vertical to horizontal and vice versa
Q	Bend 45° & 90° horizontal to horizontal
T	Pipe section horizontal
S	Pipe section vertical

Table 7.1 |

### 7.3.1 CALCULATE FLUE LENGTH

Not all parts can be adjusted! To fit the drainage system correctly, you are to use an adjustable fitting. You can use an adjustable concentric pipe, wall or roof fitting. To get a sealed flue gasconnection, the inner pipe must always be 2 cm longer than the outer pipe. Always attach adjustable parts with a chuck parker.

For proper operation of the fireplace it is important that the flue pipe meets the requirements. To determine this, we prepared a chart. (See **APPENDIX E**)

The following outcomes can be found for each intersection of TVS and THS;

Result	Action
V	Suitable flue
X	No good operation guaranteed

### 7.4 INSTALLATION OF FLUE MATERIAL

Follow the following instructions for the installation of flue materials;

- Drill a hole of 160 mm for the wall or roof transit with a 150 mm diameter flue connection, and 210 mm with a flue with a diameter of 200 mm.
- In a situation of non-combustible materials keep a distance of at least 50 mm between the outside of the concentric pipes and the wall or ceiling.
- Provide a (fire) safe transit construction in wall, floor or roof sheeting. Whenever venting passes through a wall, an approved heat shield or 'wall thimble' must be installed.
- Build up the system from the fireplace.
- Assemble pipes in the correct direction! The inner pipe goes into and the outer pipe goes over the fireplace connection.
- Make sure the tubes are sufficiently braced, so the weight of the tubes are not supported on the fireplace.
- The concentric pipes could come loose due to expansion and cooling down. It is recommended that a chuck parker be used in places that are inaccessible after installation.
- The horizontal flue sections must be fitted sloping to the fireplace.
- In case of long horizontal stretches, it is advised to install a tap point into the flue, at its lowest point, to be able to drain the condensation formed during burning of bioethanol.

## 8 SAFETY

The Element4 bioethanol fireplace has several safety systems to ensure that it can be used in the safest way. Nevertheless, a few things must be taken into account:

- Never cover your fireplace;
- Keep flammable materials away from flames and sources of ignition;
- Keep children and animals away from the fireplace;
- In case of bioethanol spillage, wipe it up with a dry soft paper or cloth and avoid open flames nearby.
- Please note: the fireplace gets hot during use, so do not touch it for 15 minutes after the flame has completely extinguished.
- Do not fill the fuel tank while the burner is still hot, wait for it to cool down;
- Never pour bioethanol over active fire;
- After extinguishing the flames, wait at least 3 minutes before re-igniting;
- In case of uncontrolled flames, use a fire blanket or extinguisher.
- Do not use water to extinguish the fire;
- After extinguishing the fire, it takes a few minutes for the flames to be completely extinguished;
- In the event that bioethanol is spilled while filling the tank, all parts must be absorbed and dried before an ignition attempt is made;
- The construction elements above the appliance must be made of non-combustible material.
- Do not fill the device before installing it.

### 8.1 LEAK DETECTION SENSORS

There are leak detection sensors under the burner on the lowest part of the sump and also on the bottom pan below the pumps as shown in [Figure 8.1](#) and [Figure 8.2](#). If there is a leak, the fire will go out by itself. A strong beep sounds through the safety system on the device..

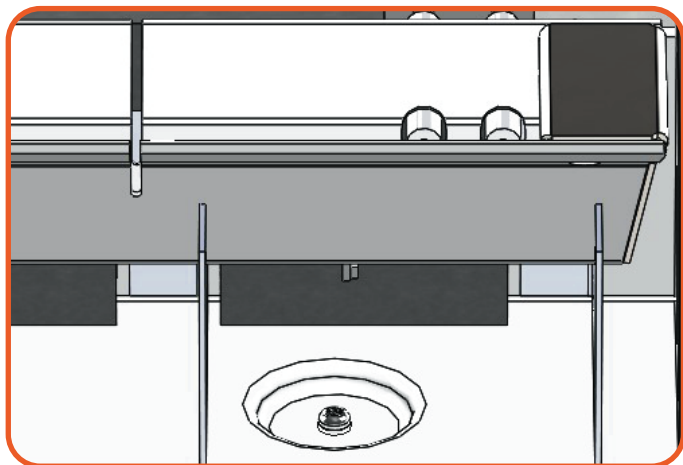


Figure 8.1 | Leak detection sensor underneath burner

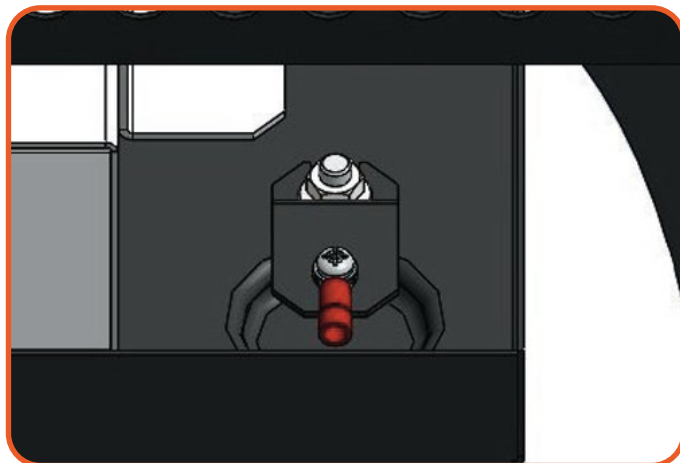


Figure 8.2 | Leak detection sensor on lowest point

### 8.2 OVERFLOW DETECTION SENSORS

The Bioethanol Fireplace is also equipped with overflow sensors designed to ensure user safety in the event of accidental damage to the pump or electronics. In the event that excess fuel is pumped into the burner, the sensor is activated to turn off the fire. The device will not light up until it is reset again by turning the main power source OFF and ON.

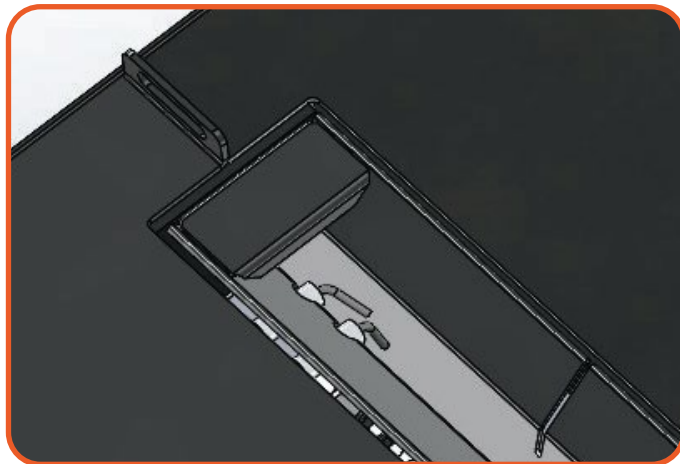


Figure 8.3 | Overflow detection sensor

## 9 MAINTENANCE INSTRUCTION

Regular maintenance is essential to ensure safe operation, reliable ignition, and a clean flame pattern. Insufficient maintenance may lead to reduced performance, increased glass contamination, malfunction, or damage to the appliance.

### IMPORTANT

Always switch off the appliance and allow it to cool completely before performing any maintenance.

Periodic inspection by a qualified service technician is required to ensure continued safe operation.

### 9.1 GENERAL MAINTENANCE

The appliance must be inspected regularly. The required inspection interval depends on usage intensity and installation conditions. During inspection, the following must be verified:

- Correct ignition and flame stability
- Condition and positioning of ignition and safety components
- Integrity of the combustion chamber
- Free movement of pressure-relief or safety panels (if applicable)
- Cleanliness of internal components
- Unobstructed airflow and ventilation openings

Any safety screen or protective component removed during servicing must be reinstalled before operating the appliance.

### 9.2 ACCESSING THE APPLIANCE

Access to the appliance is required for inspection, maintenance, or servicing. This procedure may only be carried out by a qualified service technician.

Before opening the appliance, ensure that:

- The appliance is switched off
- The appliance has cooled down completely
- All surrounding surfaces are at ambient temperature

Follow the steps shown in Figures 1–4 to open the appliance. The order of the steps must be respected.

Do not apply force. If resistance is felt, stop immediately and verify that all fasteners or locking mechanisms have been released correctly.

All removed components must be handled with care and placed on a clean, stable surface to prevent damage.

After servicing:

- Reinstall all components in reverse order
- Ensure that all panels, glass elements, and safety components are correctly positioned and secured
- Never operate the appliance while any protective component is removed

Failure to correctly close the appliance may result in unsafe operation, damage to components, or malfunction.

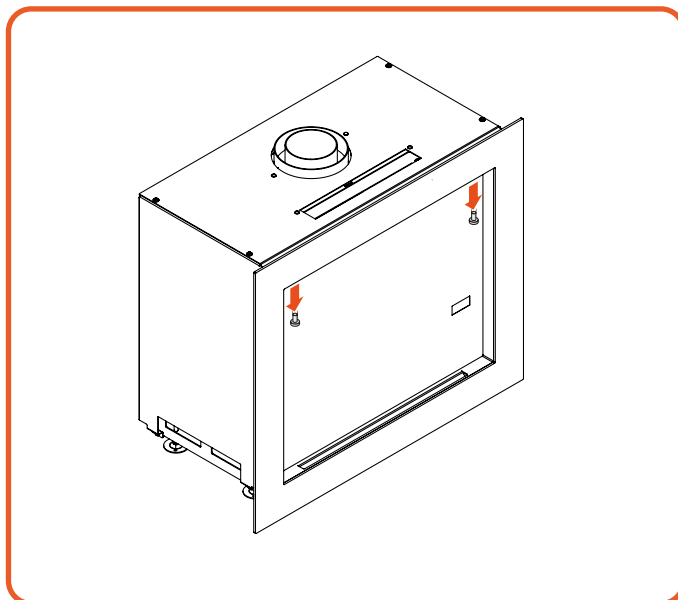


Figure 9.1 | Remove screws from the top side

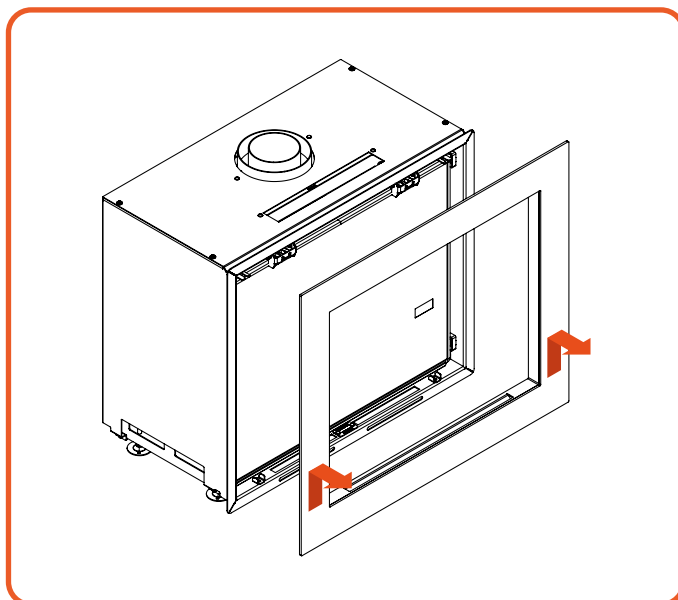


Figure 9.2 | Remove front frame

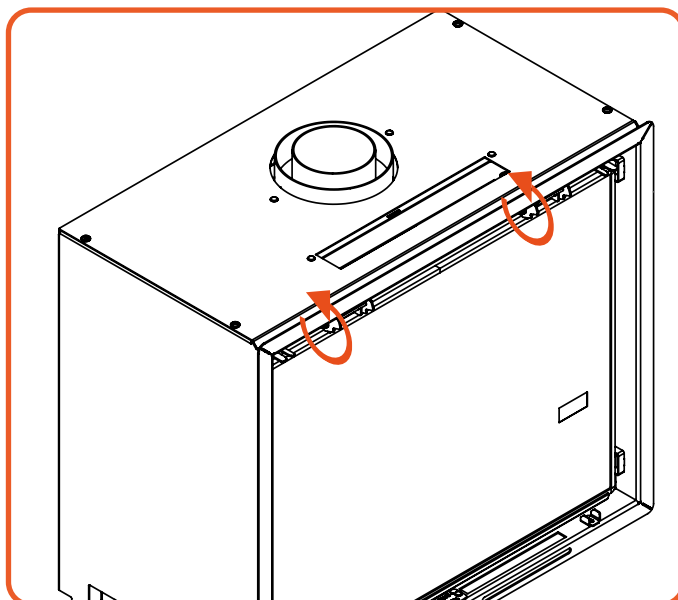


Figure 9.3 | Unclamp the glass clamps

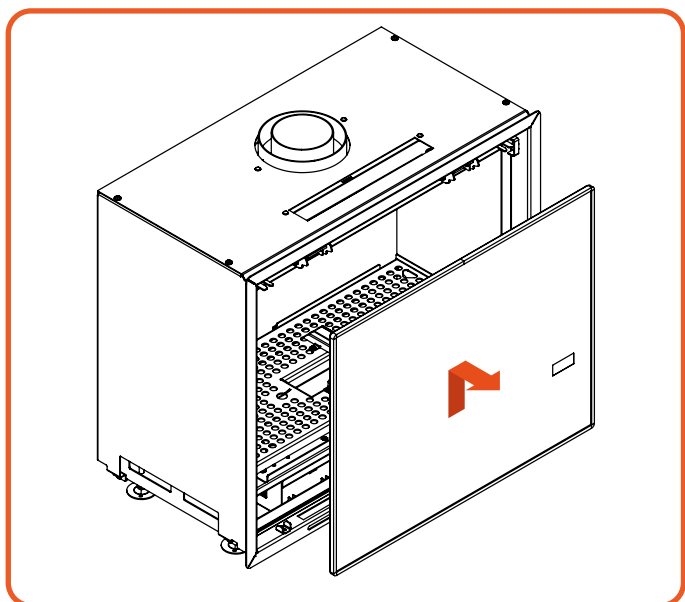


Figure 9.4 | Take out the glass

### 9.3 GLASS MAINTENANCE

The glass panel is part of the combustion enclosure and must always be installed correctly before operation

A light haze, streaks, or condensation residue on the glass are normal by-products of combustion, especially during startup. This does not indicate a defect.

#### 9.3.1 CLEANING FREQUENCY

- Before first use: remove fingerprints and installation residue
- After initial operation: clean once the appliance has cooled
- During normal use: clean when contamination becomes visible

#### 9.3.2 CLEANING INSTRUCTIONS

- Only clean the glass when completely cool
- Use a soft cloth or microfiber cloth
- Do not use abrasive pads, scouring agents, ammonia-based cleaners, or solvents
- For anti-reflective (AR) glass, only use approved cleaning products

Excessive pressure or unsuitable cleaning agents may permanently damage coated glass surfaces.

#### WARNING

Glass removal may only be carried out by a qualified person. Always wear protective gloves when handling the glass.

### 9.4 BURNER AND COMBUSTION CHAMBER MAINTENANCE

Dust, debris, or incorrect placement of decorative media may interfere with proper combustion and flame detection.

During servicing, the technician must:

- Remove and inspect decorative media
- Check burner openings and flame outlets for blockage
- Verify correct flame distribution and ignition behavior
- Inspect safety-related components exposed to heat
- Reinstall decorative media strictly according to the applicable instructions

Never add extra decorative elements or fuels that are not specified for the appliance. Unauthorized materials can obstruct flames, cause overheating, or result in unsafe operation.

### 9.5 VENTILATION AND AIRFLOW

All ventilation openings, air inlets, and convection outlets must remain free of obstruction at all times.

Restricted airflow may lead to:

- Incomplete combustion
- Excessive glass contamination
- Elevated internal temperatures
- Safety shutdown or malfunction

Regular visual inspection of ventilation paths is required.

### 9.6 SERVICE RESPONSIBILITY

User maintenance is limited to:

- Cleaning accessible glass surfaces
- Visual inspection of the appliance exterior
- Keeping ventilation openings unobstructed

All technical maintenance, adjustments, repairs, or component replacements must be performed by a qualified service technician using approved parts only. Use of non-approved components or fuels voids the warranty.

## 10 BURNER MAINTENANCE

Inspect the fuel reservoir, seals, and fittings at least twice per year for signs of leakage, hardening, cracking, or fuel odor.

Replace seals only with manufacturer-approved parts.

Do not use alcohol, acetone, or solvent-based cleaners on gaskets or sealing surfaces, as these may degrade sealing materials.

APPENDIX A has an overview for burner malfunctions. The burner can be reached via the maintenance access.

The starter and thermocouple can be reached through the combustion chamber.

#	Part
1	Starter
2	Thermocouple
3	Fill pump
4	Fuel pump

Table 10.2 |

### 10.6.1 BURNERS

The flames of the burners must be checked visually. The flames must be equal in both burner trays. If this is not the case, check whether decorative material has entered the burner.

### 10.6.2 STARTER

For the proper functioning of the fireplace, the starter must be checked. The starter must start both burner trays and the glowing part must be evenly distributed over the burners. The area around the starter must be kept clean. Decoration materials and dirt can impede ignition. When inspecting the starter, you should also check for damage to the components.

### 10.6.3 THERMOCOUPLE

The Element4 bioethanol fireplace has a thermocouple that checks whether a fire is burning. It is important that it is clean so that the flame properly heats up the thermocouple. Make sure there is no decorative material between the flame and thermocouple.

### 10.6.4 FUEL PUMP

The fuel pump pumps bioethanol from the tank to both burner trays. It must be checked whether this is done equally over both gutters. It must also be checked that there is no bio-ethanol leakage in the fuel lines.

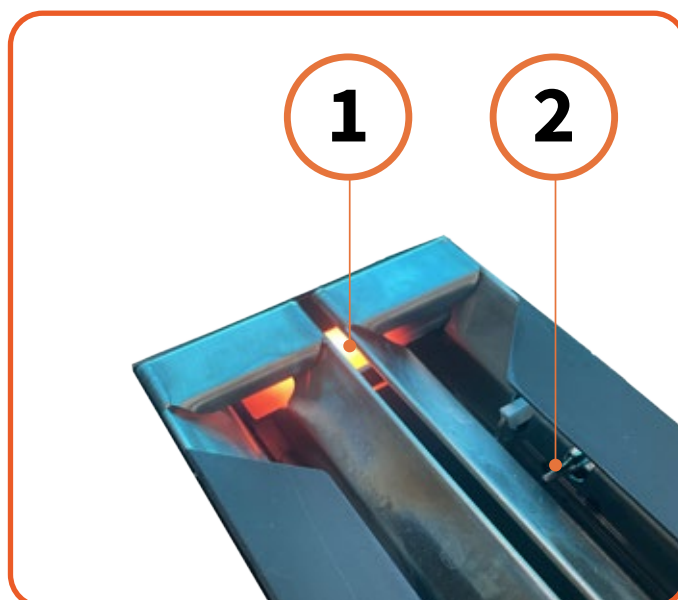


Figure 10.1 | Location of starter and thermocouple

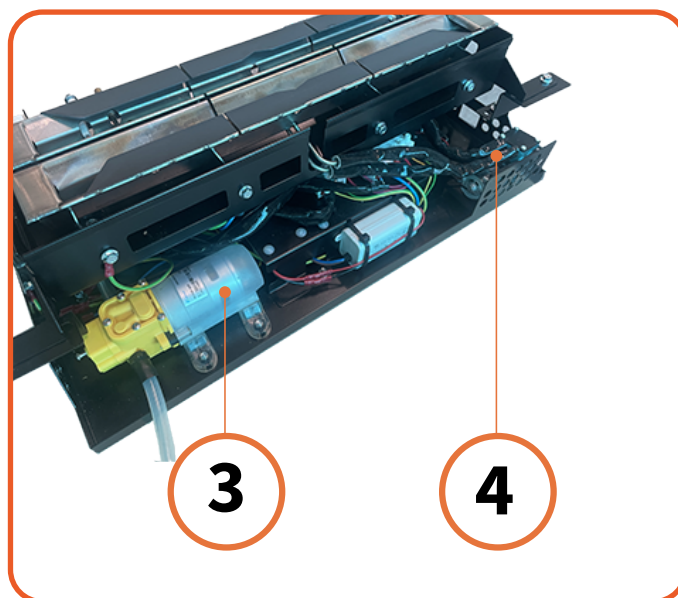


Figure 10.2 | Location of fill pump en fuel pump

## 11 DECORATIVE (CERAMIC) PARTS

This appliance is equipped with a ceramic fire bed with heat-resistant ceramic fibers, or artificial glassy silicate fibres. Excessive exposure to this material may cause irritation to the eyes, skin and respiratory tract. We therefore recommend that the dust emission is reduced as much as possible when handling these materials.

### 11.1 DECORATION ARRANGEMENT

Only the decoration ceramics supplied with this appliance are to be used. The ceramics must be laid only as shown on this page. Replacement parts are available from your dealer, but should only be installed by a qualified installation engineer.

Position the decoration logs as shown on the following steps.

Make sure there is no decoration material directly in the flame when the fire is turned in.

Make sure the burner grate is still open enough to supply the combustion chamber with fresh air.



Figure 11.1 | Logset Bio 70 models



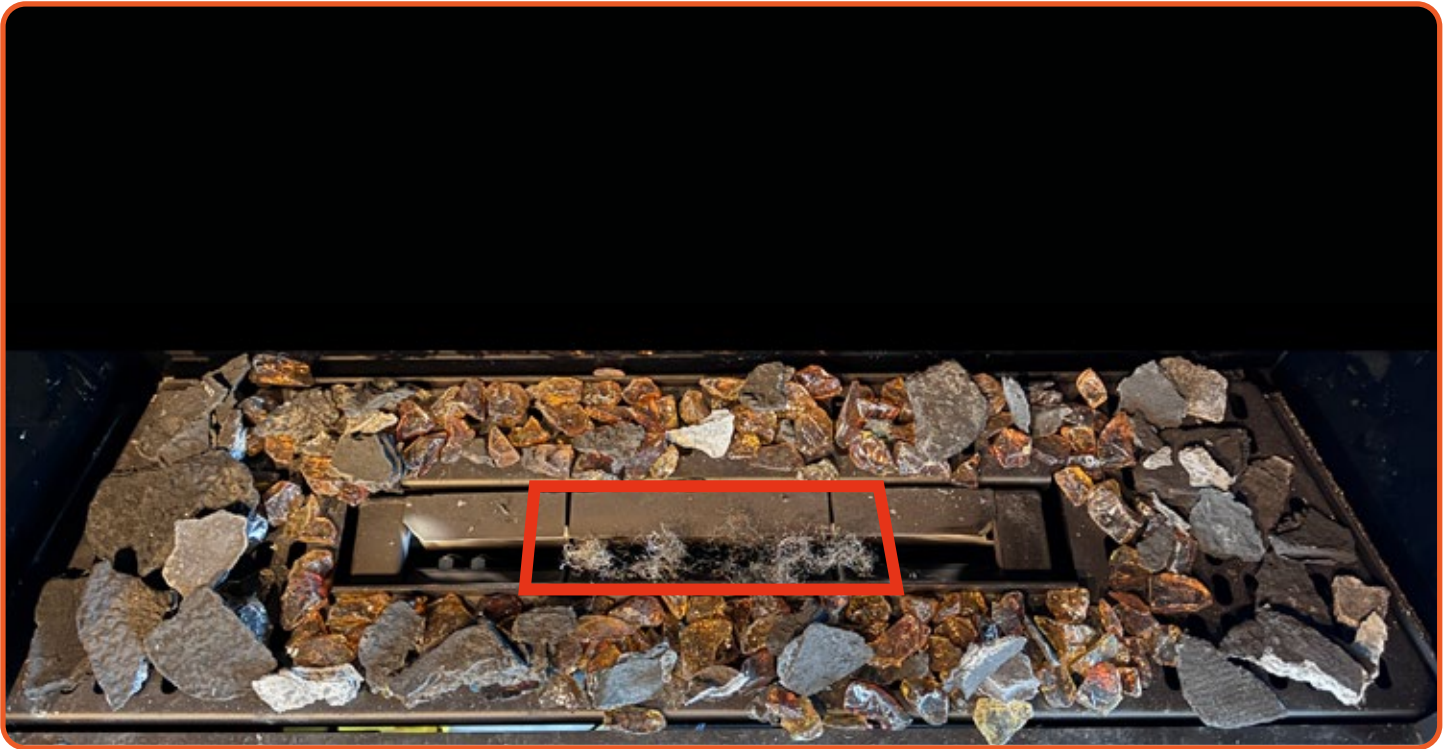
Spread the amber glass evenly above and below the burner, directly above the LED lights. Ensure no glass pieces fall into the burner.

Figure 11.2 | Adding Amber glass



Fill the remaining open areas with black chips. Use smaller chips to put on top of the amber glass. Ensure that no chips fall into the burner.

Figure 11.3 | Adding black chips



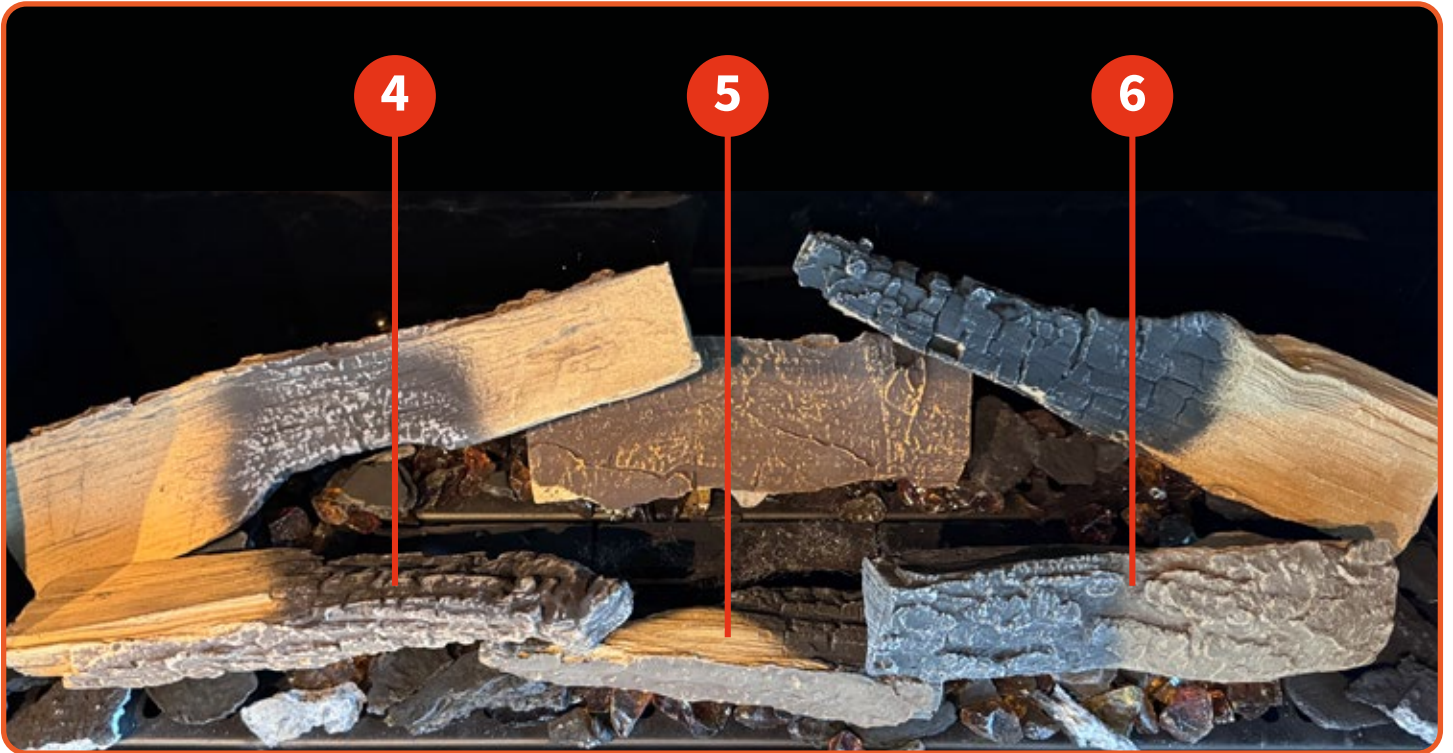
Take a small portion of the supplied Premium Glow material and stretch it into long, thin strands. Carefully position the strands over the burner inside the orange box, ensuring they do not come into contact with any of the sensors.

Figure 11.4 | Adding Premium glow



Place the logs as shown above.

Figure 11.5 | Add logs



Place the logs as shown above.

Figure 11.6 | Add logs

## 12 OPERATING THE FIREPLACE

### 12.1 BEFORE THE FIRST FIRE

1. Make certain that all construction materials have been removed from inside and around the fireplace and the fireplace has been cleaned of any construction dust.
2. Clean the glass BEFORE and AFTER the first fire on both sides of the glass.
3. Properly place, clamp and seal the glass panels.
4. Place the four (4) AAA batteries into the remote control and confirm that it will communicate with the receiver by pressing the ON/OFF button.
5. Check the starter and thermocouple for obstructions
6. Check the air tightness of the system.

### 12.2 THE FIRST FIRE

See **CHAPTER 4** for more information about the remote control and ignition. When the fireplace is fired for the first time, one should check the behaviour of the fireplace to see if all is functioning well.

Should any problems occur during first firing a troubleshooter can be found in **APPENDIX A** for the gas parts and **APPENDIX B** provides an overview of possible error codes in the remote control.

### 12.3 SENSORY CHECKS

#### 12.3.1 VISUAL CHECKS

##### Flames and soot

Examine the logs for sooting. Too yellow (near orange) flames indicate a problem with the combustion air. Clear black soot may then settle on the decoration material. When this is the case, you may contact your dealer.

This fireplace has a thermocouple safety system, which senses the burner flame. The system will turn itself off if the system does not sense the thermocouple output.

##### Coating

When firing up the device for the first time, make sure the device burns for several hours on the highest level, to ensure the lacker to harden. If an enclosure has not yet been constructed, these fumes may also be visible around the fireplace.

**Caution:** Because a fireplace is a heat source, natural convection will occur around it. Solid particles in the circulating air may burn and settle down on cold surfaces, causing discoloration. Discoloration is an annoying problem and it is difficult to solve once happened.

These particles can come from construction moisture or cigarette smoke, but also they might be volatile components in paint, construction materials or carpeting. For newly constructed chimneys or after a big reconstruction, it is advised to wait a minimum of six weeks before firing a fireplace. After this burn-off period, turn off the fireplace and let it cool completely to room temperature and once again clean both sides of the glass as well as the interior panels.

#### 12.3.2 SMELL CHECK

When the fireplace is first heated, an odour may be given off by the hot metal. Make sure the device and enclosure are ventilated enough, so the possible released fumes are being abducted. The fumes are the result of the 'burn off' of the lubricants and sealants used when manufacturing the fireplace.

We advice to be as little in the room as possible during this process. It is recommended that you open the nearby windows for extra ventilation and then operate the fireplace for at least four hours.

#### 12.3.3 SOUND CHECK

Since the product is a metal fireplace, the heat-up and cool-down cycles may produce some (initial) noises caused by the expansion and contraction of these metals. These are normal but should not be audible at more than a meter distance from the fireplace.

## A TROUBLESHOOTER

### A.A FIRST AID FOR MALFUNCTION

Below you will find an overview of the possible cause and solution in the event of a failure.

Problem	Possible Cause	Solution
<b>A There is smoke or a strange smell coming from the burner during burning</b>	1 Waste may be burning that is not supposed to be in the burner.	Remove the waste
	2 You are using the wrong fuel (it is essential that you use ONLY prescribed bioethanol).	Check whether you have used the correct bioethanol, if in doubt contact your dealer.
	3 You have placed something around/above the flame that is not approved or recommended.	Remove the object placed in the flame
	4 If the burner is empty (the flame goes out) or you have just turned the fire OFF, this is normal. Like extinguishing candles.	-
<b>B When I try to ignite the burner, it will not start.</b>	5 The quality of the bioethanol you use is not good enough.	Check whether you have used the correct bioethanol, if in doubt contact your dealer.
	1 You have not put enough fuel in the burner.	Fill the tank with bioethanol
	2 You have not used the correct fuel (it is imperative that you ONLY use bioethanol).	Check whether you have used the correct bioethanol, if in doubt contact your dealer.
	3 The air opening of the burner is clogged, there must be sufficient ventilation for the flame to develop.	Check that the flue gas outlet and air supply are not blocked.
<b>C The remote control does not respond to touch</b>	4 The bioethanol is cold and needs time to ignite.	Repeat the starting procedure. In case of structural occurrence, please contact your dealer.
	5 One of the two burners has not ignited, causing the safety system to be activated.	Repeat the starting procedure. In case of structural occurrence, please contact your dealer.
	1 Batteries are empty	Replace the batteries
<b>D When I turn off the fireplace, the fire does not stop immediately</b>	2 Your finger is wet	Dry your finger and try again
	3 You touch the ON button too short.	Try touching the ON button longer.
	1 This is normal, the bioethanol already present must first burn up. The flames will extinguish on their own.	Check plug connections Repair the wiring if necessary
<b>E When I want to fill the tank, the pump does not turn on</b>	1 Tank is already full	-
	2 The fireplace is still in FLAME mode	The fireplace can only be filled in STANDBY mode (See <a href="#">figure 4.6</a> )
	3 The sensor in the tank is defective	Contact your dealer
<b>F When I fill the tank, the pump does not stop automatically when the tank is full</b>	1 You have not used the correct bioethanol	DO NOT START THE FIRE! Use a cloth to clean up the overflowing Bioethanol and contact your dealer.
	2 Sensor is defective	DO NOT START THE FIRE! Use a cloth to clean up the overflowing Bioethanol and contact your dealer.

**A.B NECESSARY TOOLS**

To help out the installers, mechanics and others who need to do work on our fireplaces e.g. during maintenance, a list is compiled of tools Element4 expects are being carried during said services.

When all these tools are available during service, Element4 guarantees all problems, apart from part failure can be solved.

**Please note**

If a problem is found, that cannot be solved on site, always contact your dealer or directly contact Element4 via our credentials which can be found on the back page of this manual.

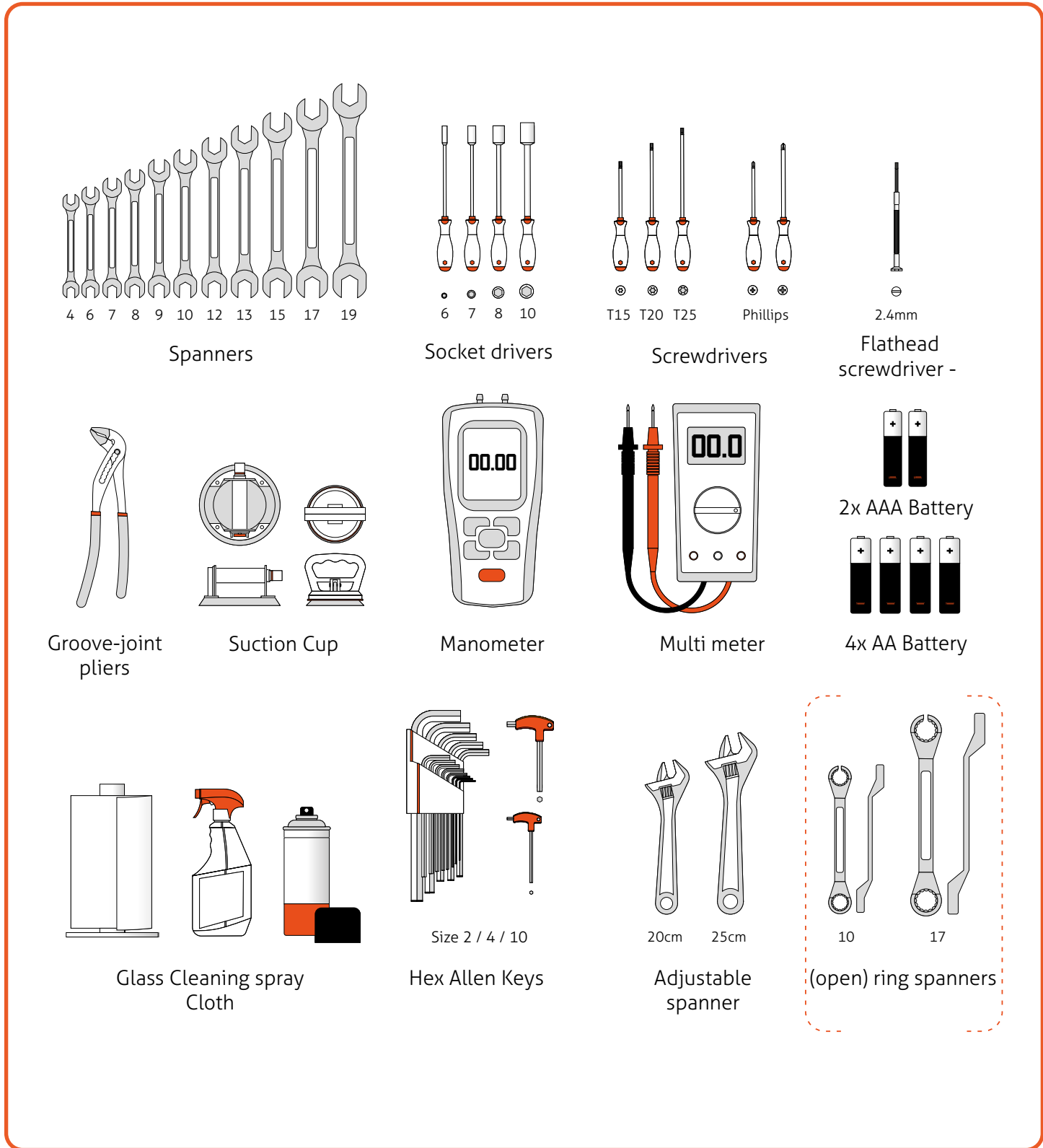


Figure A.A | Tool overview for service

## B ERROR CODES

### B.A MESSAGES SHOWN ON REMOTE CONTROL

The installed software will give an error/stop code if the bioethanol fire has stopped or not started for any reason. When the bioethanol fire stops, a code is generated, which can be read on the remote control.

By means of the code number you can see in which phase of the ignition process or operation the error occurred.

To view this code, the following steps must be taken:

Open the menu by pressing both buttons below the display.

Select DEVICE

The display shows the version number and stop code as follows:

Display "Rxxx.Dxxx.SCx".

R = receiver software version number.

D = version number of the device software.

SC= stop code in hexadecimal format (as shown opposite).



Figure 12.7 | Error code is displayed on remote control

Foutcode	Omschrijving	Mogelijke redenen	Mogelijke oplossing
SC2	Bioethanol does not reach tank sensor (ignition process)	<ul style="list-style-type: none"> <li>• Too little bioethanol in tank</li> <li>• Sensor defective</li> <li>• Wrong fuel in tank</li> </ul>	<ul style="list-style-type: none"> <li>• Fill tank</li> <li>• Replace or reconnect sensor</li> <li>• Extract wrong fuel from tank</li> </ul>
SC3	Thermocouple hot - HOT TRAY (ignition process)	<ul style="list-style-type: none"> <li>• Fire was recently put out</li> </ul>	<ul style="list-style-type: none"> <li>• Wait a few minutes before trying again</li> </ul>
SC4	Two minute safety break (ignition process)	<ul style="list-style-type: none"> <li>• The thermocouple has not warmed up sufficiently during the ignition process</li> </ul>	<ul style="list-style-type: none"> <li>• Wait two minutes before trying again</li> </ul>
SC5	Low level sensor not reached, pump timed out	<ul style="list-style-type: none"> <li>• Bioethanol is running out and can no longer reach the low level sensor.</li> <li>• Fuel line is clogged or leaking</li> <li>• Pump is defective</li> </ul>	<ul style="list-style-type: none"> <li>• Fill tank</li> <li>• Check for blockages or leaks. If this is the case, please contact your dealer</li> <li>• Check the operation of the pump, contact your dealer if the pump appears to be defective.</li> </ul>
SC6	High level sensor not reached, pump timed out	<ul style="list-style-type: none"> <li>• Bioethanol is running out and can no longer reach the high level sensor.</li> <li>• Fuel line is clogged or leaking</li> <li>• Pump is defective</li> </ul>	<ul style="list-style-type: none"> <li>• Fill tank</li> <li>• Check for blockages or leaks. If this is the case, please contact your dealer</li> <li>• Check the operation of the pump, contact your dealer if the pump appears to be defective.</li> </ul>
SC7	Timeout, waiting for fuel at low level sensor (ignition process)	<ul style="list-style-type: none"> <li>• Bioethanol is running out and can no longer reach the low level sensor.</li> <li>• Fuel line is clogged or leaking</li> <li>• Pump is defective</li> </ul>	<ul style="list-style-type: none"> <li>• Fill tank</li> <li>• Check for blockages or leaks. If this is the case, please contact your dealer</li> <li>• Check the operation of the pump, contact your dealer if the pump appears to be defective.</li> </ul>
SC8	Timeout, waiting for fuel at high level sensor (ignition process)	<ul style="list-style-type: none"> <li>• Bioethanol is running out and can no longer reach the low level sensor.</li> <li>• Fuel line is clogged or leaking</li> <li>• Pump is defective</li> </ul>	<ul style="list-style-type: none"> <li>• Fill tank</li> <li>• Check for blockages or leaks. If this is the case, please contact your dealer</li> <li>• Check the operation of the pump, contact your dealer if the pump appears to be defective.</li> </ul>

Erro code	Description	Possible causes	Possible solutions
<b>SCA</b>	Time out, waiting for high level after flame.	<ul style="list-style-type: none"> <li>The fuel did not reach the high sensor in the burner after the flame lit during the ignition process..</li> </ul>	<ul style="list-style-type: none"> <li>Fill the tank</li> </ul>
<b>SCB</b>	Flame off	<ul style="list-style-type: none"> <li>The flame has gone out for external reasons.</li> <li>Thermocouple is defective</li> </ul>	<ul style="list-style-type: none"> <li>Rule out any possibilities that affect the flame.</li> <li>Try to restart the fireplace. If this does not work, contact your dealer</li> </ul>
<b>SCC</b>	Ignition program failed	<ul style="list-style-type: none"> <li>Software problem, the program has become corrupted.</li> </ul>	<ul style="list-style-type: none"> <li>Contact your dealer.</li> </ul>
<b>SCD</b>	Stop-command received	<ul style="list-style-type: none"> <li>Normal situation, the user has switched off the fire with the remote control</li> </ul>	<ul style="list-style-type: none"> <li>Restart fireplace with remote control</li> </ul>
<b>SCE</b>	Bioethanol does not reach tank level sensor	<ul style="list-style-type: none"> <li>Insufficient fuel in tank to sustain flame.</li> </ul>	<ul style="list-style-type: none"> <li>Fill the tank</li> </ul>

### C CALCULATION TABLES FLUEGAS RESTRICTION

In the calculation table below you can see when your flue is suitable for this fire or not.

**Attention:** For information on how to calculate bends see CHAPTER 7

Result	Action
✓	Suitable flue
✗	No good operation guaranteed*

#### C.A HORIZONTAL TERMINAL FLUE DIAMETER 150/100

Total vertical Section	11	✓	✓	✓	✓	✓	✓	✓	✓
	10	✓	✓	✓	✓	✓	✓	✓	✓
	9	✓	✓	✓	✓	✓	✓	✓	✓
	8	✓	✓	✓	✓	✓	✓	✓	✓
	7	✓	✓	✓	✓	✓	✓	✓	✓
	6	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓
	3.5	✓	✓	✓	✓	✓	✓	✓	✓
	3	✓	✓	✓	✓	✓	✓	✓	✓
	2.5	✓	✓	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓	✓	✓	
1.5	✓	✓	✓	✓	✓	✓	✓	✗	
1	✓	✓	✓	✓	✓	✗	✗	✗	
0.5	✓	✓	✓	✗	✗	✗	✗	✗	
		0	1	2	3	4	5	6	7
		Total Horizontal Section							

#### C.B VERTICAL TERMINAL FLUE DIAMETER 150/100

Total vertical Section	11	✓	✓	✓	✓	✓	✓	✓	✓
	10	✓	✓	✓	✓	✓	✓	✓	✓
	9	✓	✓	✓	✓	✓	✓	✓	✓
	8	✓	✓	✓	✓	✓	✓	✓	✓
	7	✓	✓	✓	✓	✓	✓	✓	✓
	6	✓	✓	✓	✓	✓	✓	✓	✓
	5	✓	✓	✓	✓	✓	✓	✓	✓
	4	✓	✓	✓	✓	✓	✓	✓	✓
	3.5	✓	✓	✓	✓	✓	✓	✓	✓
	3	✓	✓	✓	✓	✓	✓	✓	✓
	2.5	✓	✓	✓	✓	✓	✓	✓	✓
2	✓	✓	✓	✓	✓	✓	✓	✓	
1.5	✓	✓	✓	✓	✓	✓	✓	✗	
1	✓	✓	✓	✓	✓	✗	✗	✗	
0.5	✓	✓	✓	✗	✗	✗	✗	✗	
		0	1	2	3	4	5	6	7
		Total Horizontal Section							

**D TERMINAL LOCATION**

**D.A TERMINAL LOCATION WITH VERTICAL EXHAUST (C11)**

Distance	Exhaust 1,2 of 3	
At the same roof level	> 6m	*
At a different roof level	> 3m	* & **
On a lower wall	> 2m	*
On a higher sloping surface	> 6m	***

"Distance" = minimum distance required to position the exhaust in order to prevent adverse effects in relation to;

1. A ventilation opening of a used room, toilet or bathroom
2. Supply of heated air when the supply flows through a used room.
3. A window that can be opened and located in the vicinity of a used room, toilet or bathroom.

\* If the required distance is not feasible, the rules regarding the exit position have priority.

\*\* If the exhaust is placed at least one meter higher than the inlet opening, or a window that can be opened.

\*\*\* If the required distance is not feasible, the exhaust must be placed at least one meter above the highest façade / roof.

(4) The terminal may not be placed closer than 300 mm to an opening in the building such as a window frame.

**D.B TERMINAL LOCATION WITH HORIZONTAL EXHAUST (C31)**

	Position terminal	dist. (mm)
<b>A*</b>	Directly below an opening, ventilation stone, casement window etc.	600
<b>B</b>	Above an opening, ventilation stone, casement window etc.	300
<b>C</b>	In addition to an opening, ventilation stone, casement window etc.	400
<b>D</b>	Under gutters or drain pipes	300
<b>E</b>	Under eaves	300
<b>F</b>	Under balconies or roofs of open garages	600
<b>G</b>	From a vertical drain pipe	300
<b>H</b>	From an inside or outside corner	600
<b>I</b>	Above ground roof or balcony level	300
<b>J</b>	From a surface opposite the tip	600
<b>K</b>	From an end opposite the tip	600
<b>L</b>	From an opening in the open garage (e.g. door, window in the house)	1200
<b>M</b>	Vertically from one end to the same wall	1500
<b>N</b>	Horizontally from one end to the same wall	300
<b>P</b>	From a vertical structure on the roof	600
<b>Q</b>	Above the intersection with the roof	150

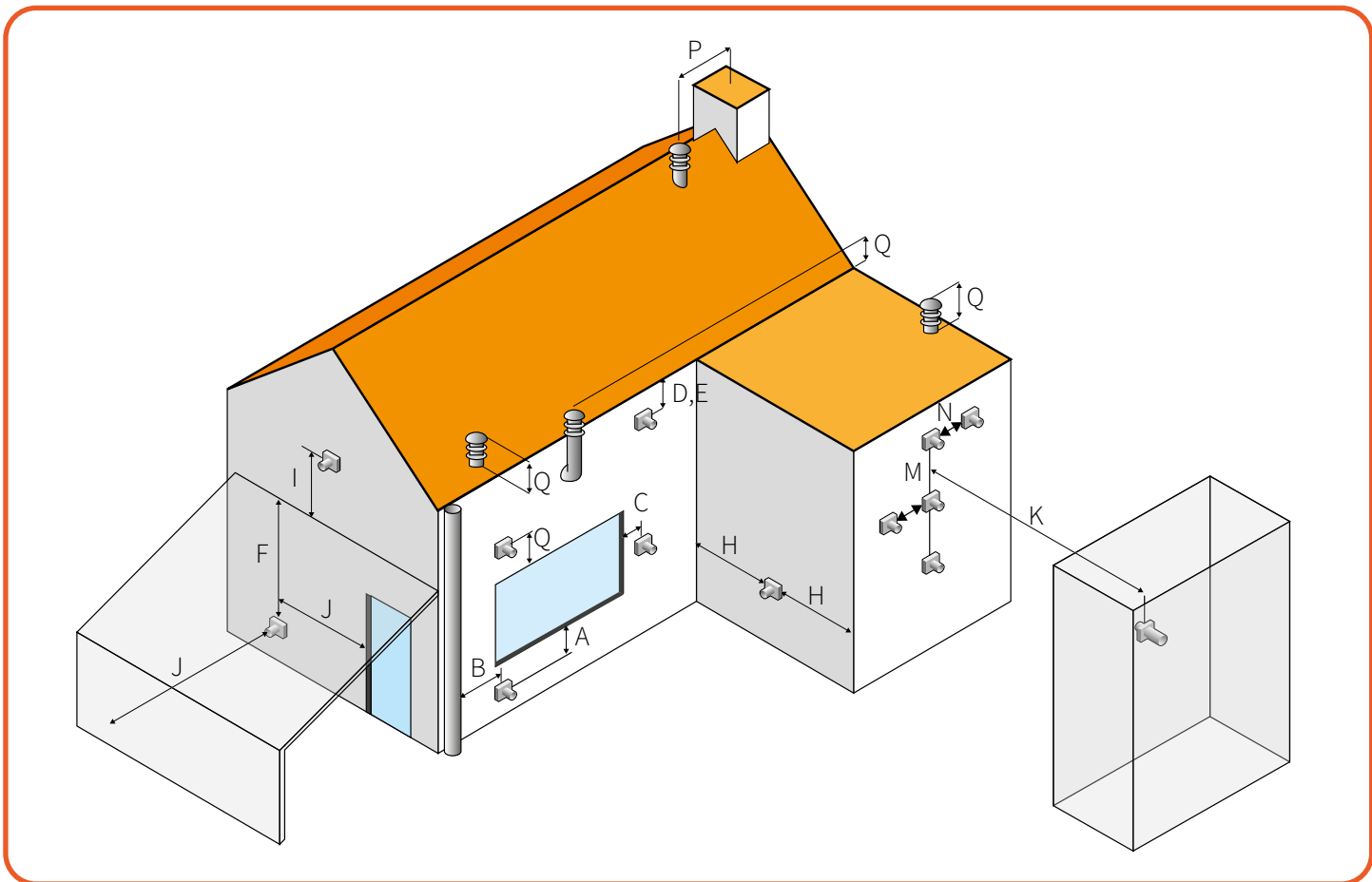


Figure D.A | Terminal Location

## E TECHNICAL DATA

The values below depend on the type of Bioethanol used and the way in which the fire is built in.

**Note:** Always use Bio-Ethanol with 85% to 96.6% alcohol. If in doubt, contact your dealer.

### Values for Bio 70 models

GROSS output on HIGH* <sup>1</sup>	3.5	kW
Consumption on HIGH	0.65	L/u
GROSS output on MEDIUM	3.25	kW
Consumption on MEDIUM	0.6	L/u
GROSS output on LOW	3	kW
Consumption on LOW	0.5	L/u
Minimal room volume	41	m <sup>3</sup>
Air renewal rate	1 room vol. per hour	
Rated supply voltage	230	V
Maximum rated power consumption* <sup>2</sup>	800	W

**F DIMENSIONAL DRAWINGS**

On this page you will find the dimensional drawings of the fireplace with some of the important dimensions that you have to take into account when installing and installing your fireplace.

**DSE 70**

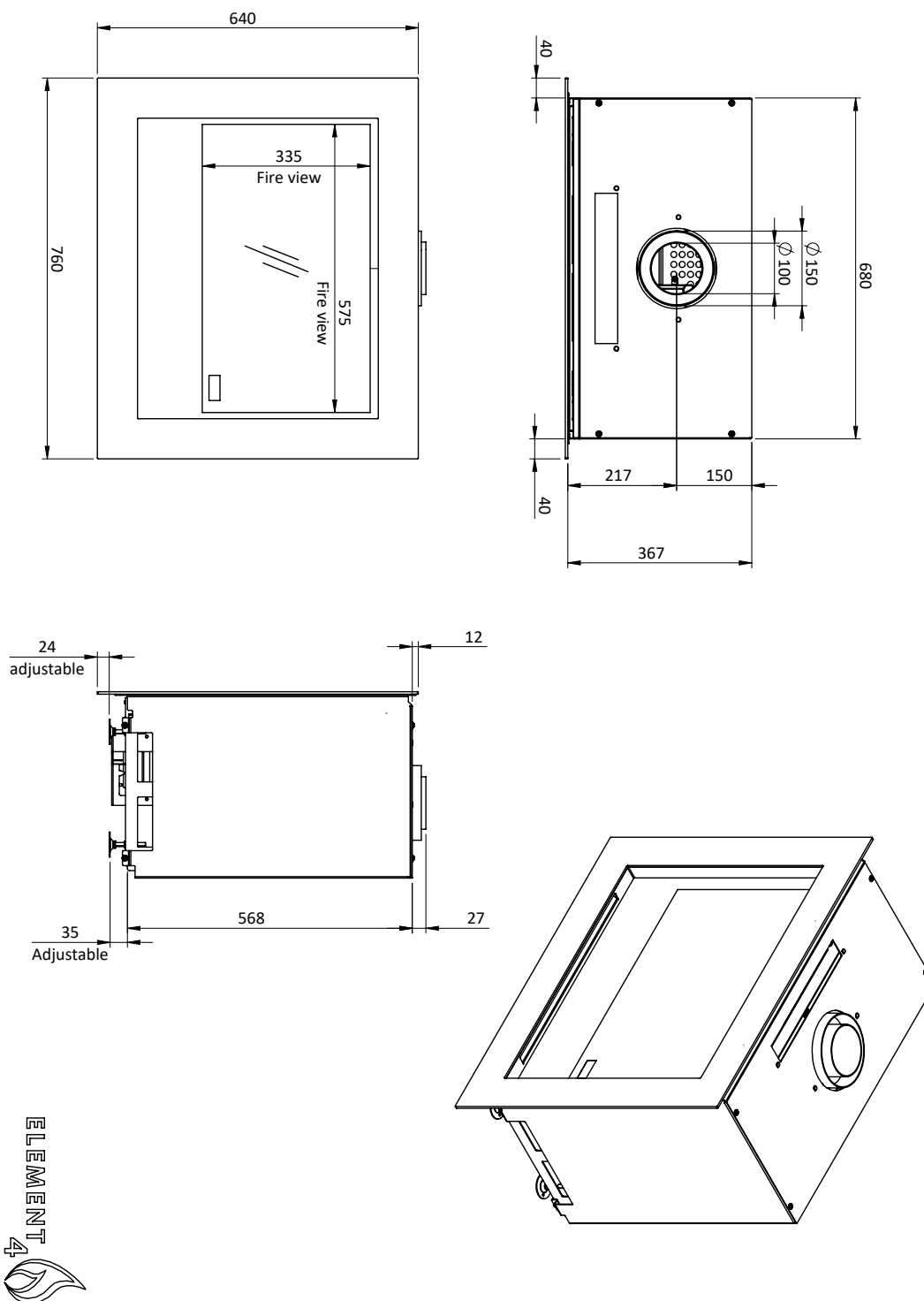


Figure F.A | Technical drawing of the Cupido 70

# ELEMENT 4

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