Installation manual
MatriX 450/500 III
MatriX 450/650 I,II,III
ENG

40011653-2402

faber

Commissioning gas fire			
Model:		Date:	
Installation performed by:			

I. Before starting the appliance, check:

1.□ If the front glass is taken out of the appliance and the decoration material has not been installed yet.

2.□ If the appliance is levelled.

3.□ If the safety hatches are cleaned and closed.

4.□ If there's a flue restrictor needed and is installed?

- □ Yes, _____ mm
- □ No, not needed.

5.□ If the position of the wall- or roof terminal is according to the correct operation and building regulations.

6.□ If the ventilation grids are installed and have in total min. 400cm^2 of free passage.

7.□ If all tie wraps are removed from the burner pipes and wiring.

8.□ Whether the ignition cable hang freely under the appliance and have no contact with any metal part.

9.□ If the service door is installed and gives access to the control unit.

II. Installation:

1.□ Check main gas connection for leakage.

2.□ Check the standing pressure unloaded and compare with the rating plate:

- □ Measured standing pressure unloaded: _____ mbar (min./max. 20%, chapter 7)
- □ Deviation with the rating plate: _____ mbar.

3.□ Start the fire with the remote control (or the optional I.T.C. APP).

4.□ Run the appliance on max. settings and all burners.

5.□ Check all gas connections for leakage.

6.□ Check the standing pressure loaded and compare with unloaded pressure:

- □ Measured standing pressure loaded: _____ mbar.

7.□ Measure the thermocouple voltage pilot flame side:

(interrupter (red) / ground gas control block). This value must be between the 12 and 15 mV.

- □ Measured value: _____ mV.

8.□ Measure the thermocouple voltage solenoid valve side:

(interrupter (black) / ground gas control block). Value min. voltage 4,5 mV).

- □ Measured value: _____ mV.

9.□ Optional: measure the 2nd thermocouple voltage main burner:

(5-pin plug (receiver) / ground gas control block). Value 2 mV within 20 seconds.

- □ Measured value: _____ mV.

10.□ Check the burner on high and low setting.

11.□ Close and check all measuring nipples on leakage.

12.□ Switch off the appliance and let it cool down. Place the decoration material.

III. Decoration:

1.□ The decoration material is placed according to the instructions (chapter 6 or the decoration instruction card).

2.□ Keep the pilot flame and if present the 2nd thermocouple, free from the decoration material.

IV. Representation of the flames and flue gas analysis:

1.□ The glass is cleaned on both sides (chapter 5, 8 and 9).

Please note! *Avoid fingerprints on the glass, these are no longer removable once the fire is used!*

2.□ Let the fireplace burn for at least 20 minutes at highest setting and check the flame for (chapter 7.1):

- □ Flame distribution;
- □ Colour of the flames.

3.□ Perform, when it's possible, a flue gas analysis (see chapter 7.2).

4.□ Close and check all the measuring nipples on leakage.

V. Information and material for the customer:

1.□ Inform the customer personally about the correct use of:

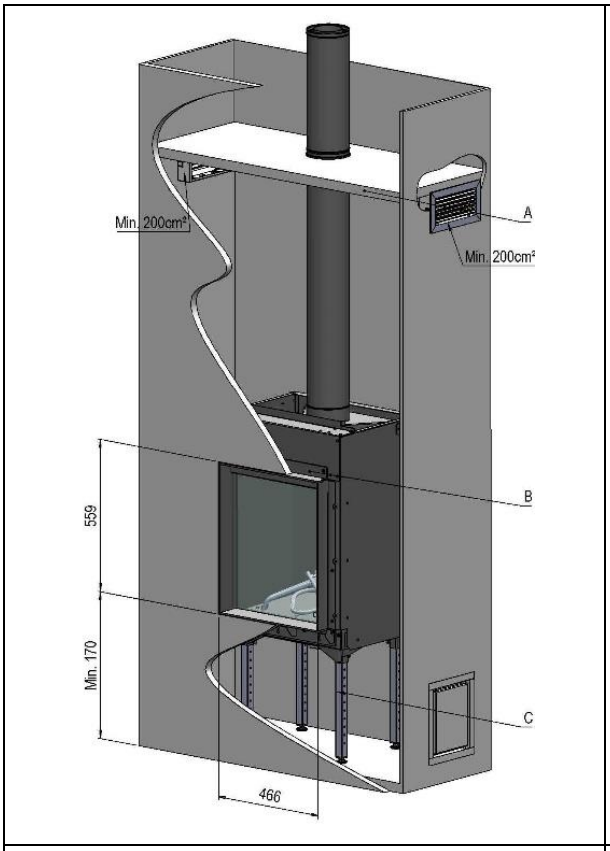
- □ the appliance;
- □ the remote control;
- □ if present, the APP and it's settings;
- □ the maintenance process.

1.□ Handover to the customer:

- □ the installation manual;
- □ the user manual;
- □ the decoration instruction card;
- □ the suction cups;
- □ the Faber glass polish sample.

Please note! *Before leaving the customer, save your company data in the Faber APP (if present).*

VI. Comments: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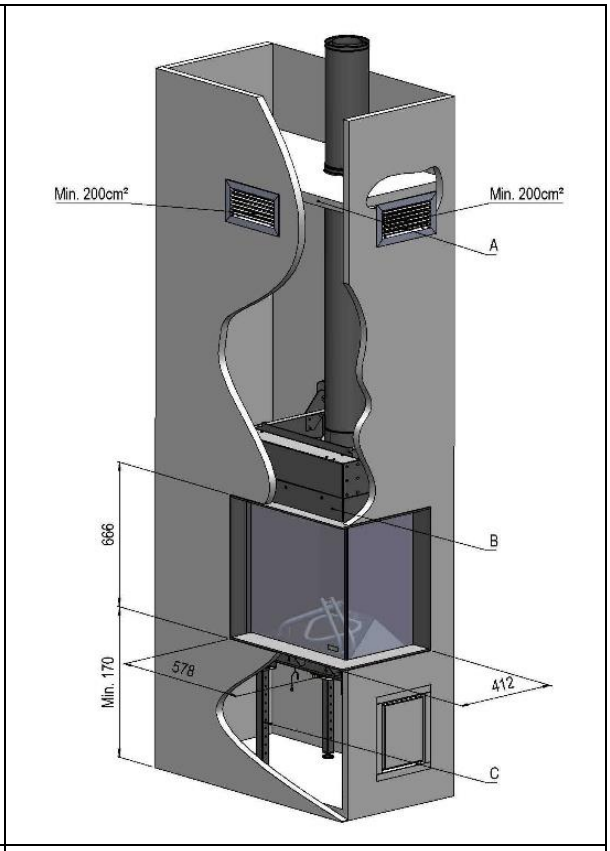
A
Min. 200cm²
B
559
Min. 170
C
466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Min. 200cm²
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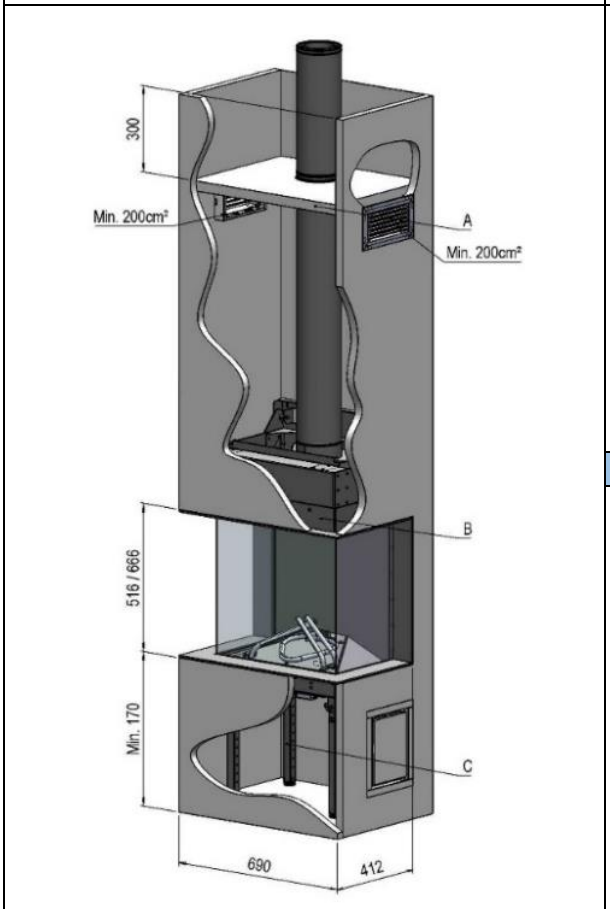
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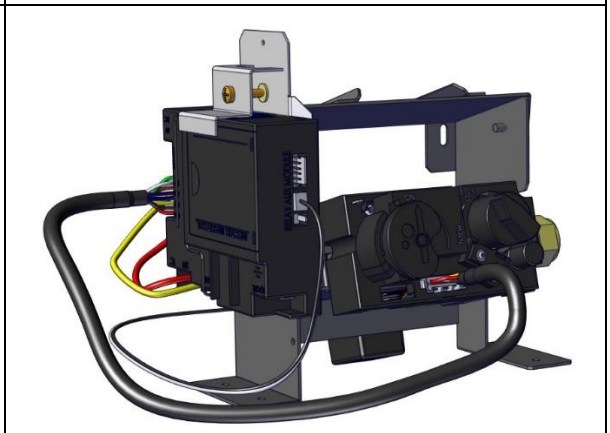
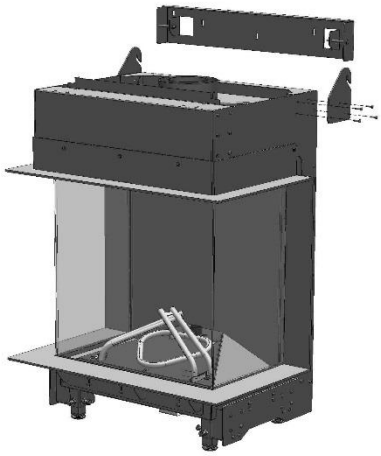
1.0

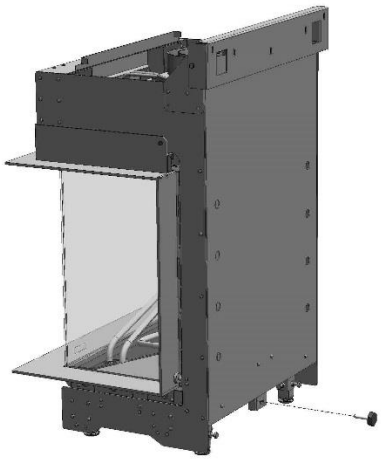


1.1


A
B
ON
OFF
MAN

1.2

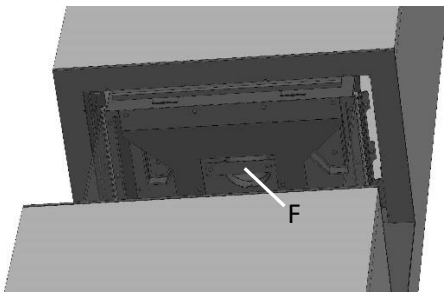


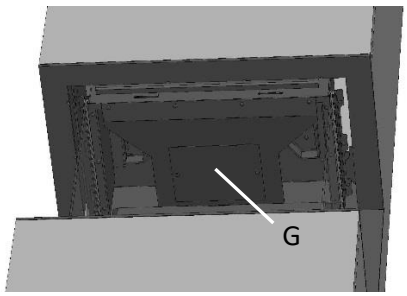


1.3

C_{11} C_{31} C_{91}

1.4





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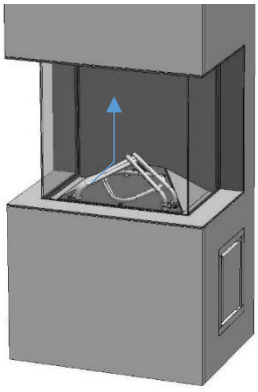

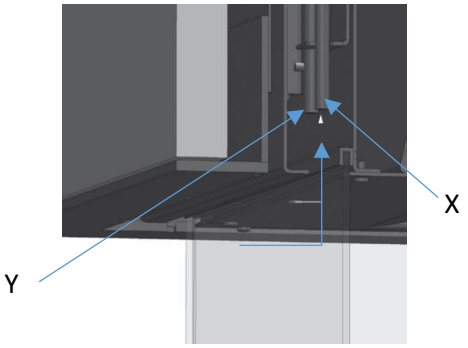

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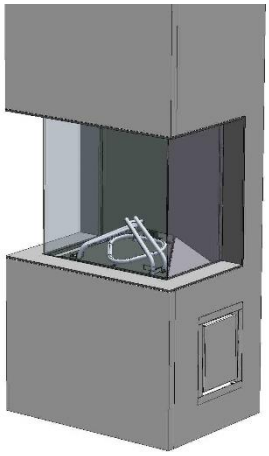

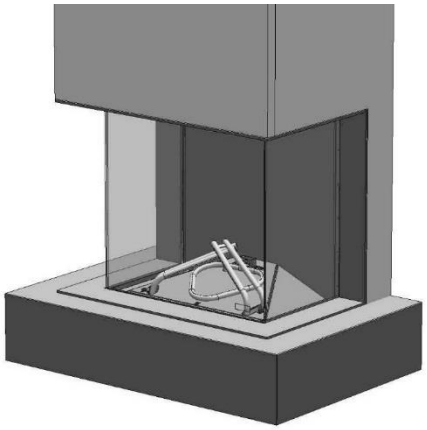

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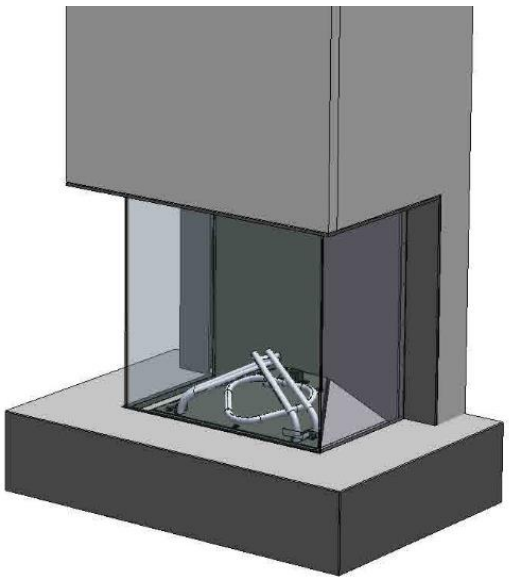

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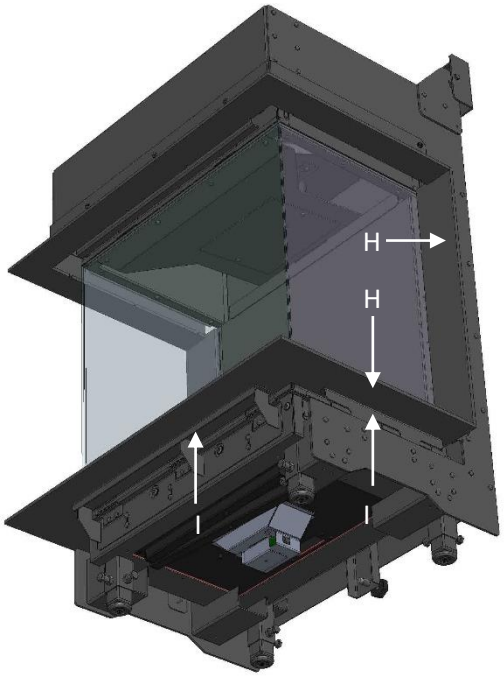

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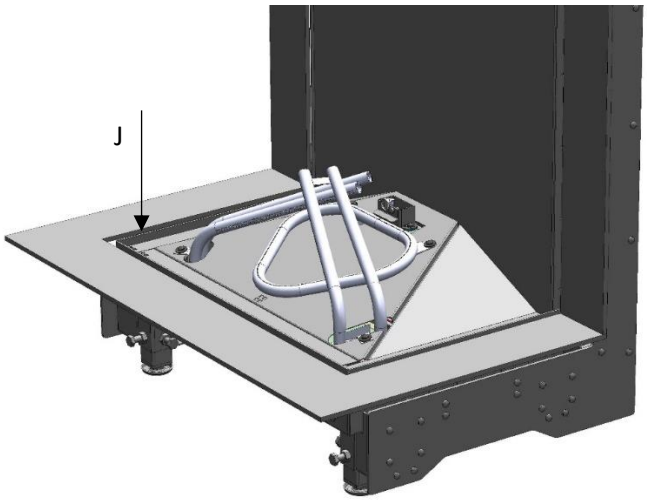

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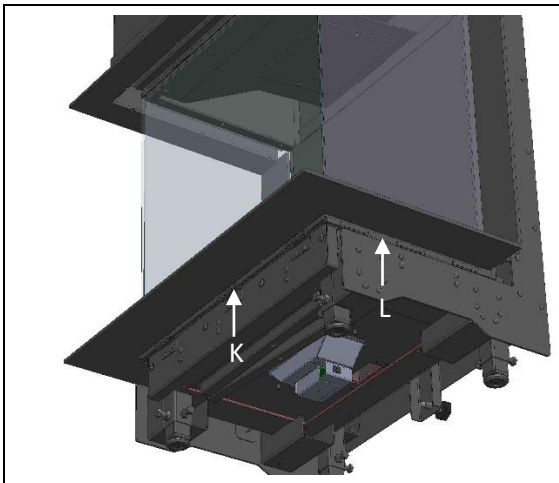

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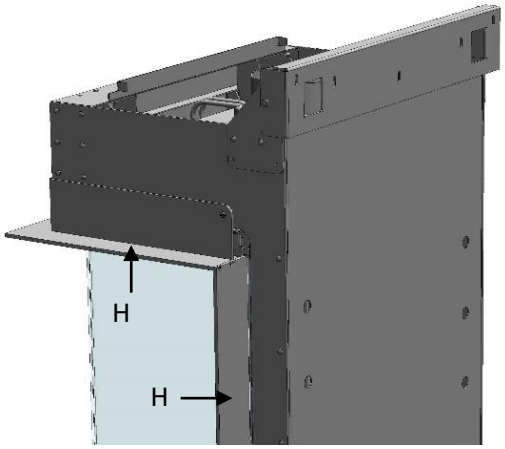
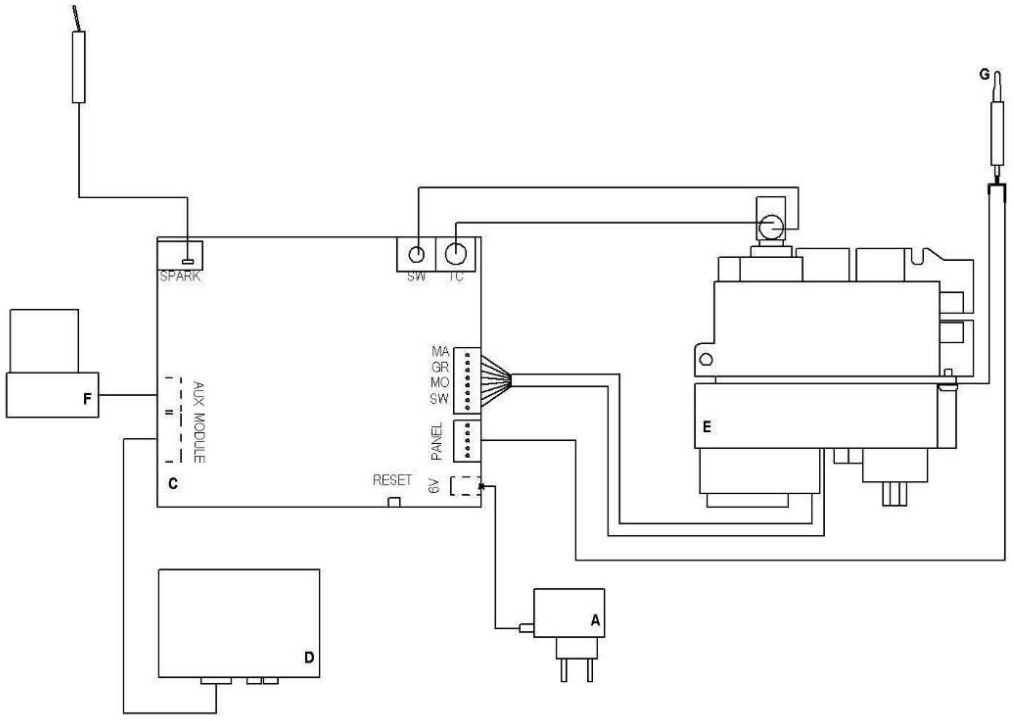


2.7

Wire diagram Symax



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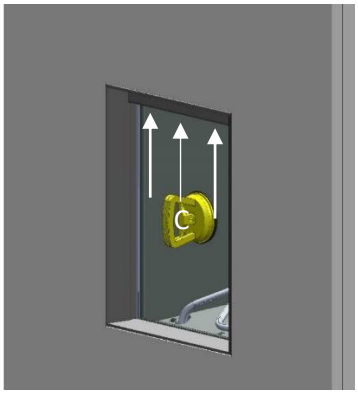

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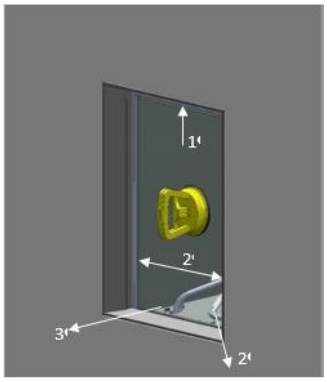

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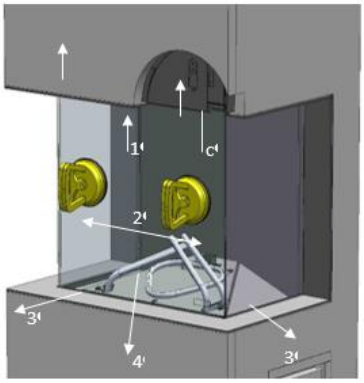

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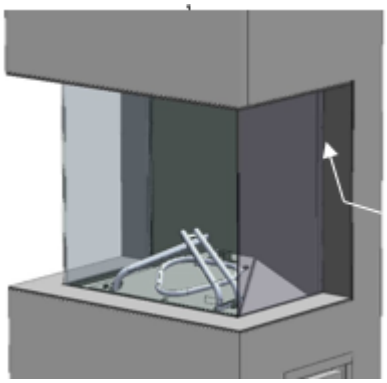

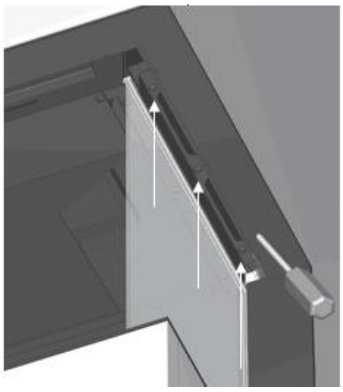

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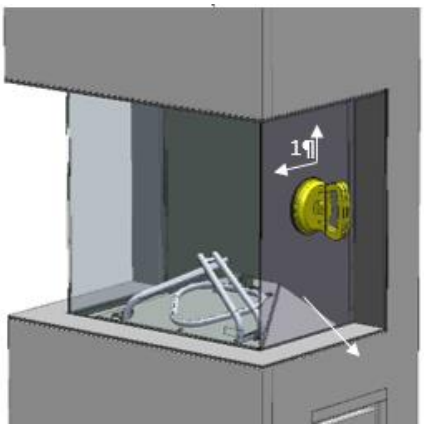

3.5

1 Dear user

Congratulations on your purchase of a Faber fire! A quality product from which you will experience warmth and atmosphere for many years. We recommend that you read this manual carefully before using the fireplace. If any problem arises despite our strict quality control, you can always contact your dealer or Glen Dimplex Benelux B.V.

For any warranty claims, it is essential you first register your fireplace.

➢ **Please note!**
The details of your fireplace can be found in the user manual.

You can register your fire at: www.faberfires.com

Glen Dimplex Benelux B.V.
Address: Saturnus 8
NL-8448 CC
Heerenveen
Tel: +31 (0)513 656 500
Email: contact@faberfires.com
Info: www.faberfires.com

1.1 Introduction

Installation and maintenance of the appliance must be carried out by a professional with proven knowledge and competence. A professional takes into account all technical aspects such as heat radiation and gas connection as well as flue gas exhaust requirements.

Where the installation instructions are not clear, national/local regulations must be followed.

1.2 Check

Check the fireplace for transport damage and immediately report any damage to your supplier.

1.3 CE Declaration

We hereby declare that Glen Dimplex Benelux B.V. released Faber gas-atmosphere heating appliance by its design and construction method complies with the Regulation (EU): 2016/426 and (EU) 2015/1188.

Product: gas room heater
Model: MatriX 450/500 III
MatriX 450/650 I,II,III

This declaration will become null and void as soon as the unit is in any way modified without written authorization of Glen Dimplex Benelux B.V.

2 Safety instructions

➢ **Please note!**
It is advisable to always install a screen for the fireplace if children, elderly or disabled people are present in the same room as the fireplace. **If regularly vulnerable persons can be present in the room without supervision, sufficient protection must always be placed around the fireplace.**

- This appliance must be installed according with the rules in force and used only in a sufficiently space.
- The appliance must be checked annually in accordance with this installation manual and the applicable national and local regulations.
- Ensure that the data on the type label matches the local gas type and pressure.
- The appliance is designed for atmosphere and heating purposes. This means that all visible surfaces, including the glass, can become hotter than 100°C. An exception by free standing models is the underside of the fireplace and the control buttons.
- The settings and the construction of the fireplace must not be changed!
- Do not place extra imitation wood or other material on the burner or in the combustion chamber.
- Do not place any combustible materials within 0,5m of the radiation area of the fire.
- Through the natural air circulation of the fireplace moisture and uncured volatile components from paint, building materials and carpeted floors, etc. are attracted. These parts can settle as soot on cold surfaces. Therefore do not light the fireplace shortly after installation.

2.1 Using the fire for the first time

Provide extra ventilation and open all the windows of the room during the initial start-up of the fire. Let the fire burn at the highest setting for a few hours so that the paint gets the chance to harden and any released vapours are safely removed. Keep vulnerable people and pets out of this room during this process.

3 Installation requirements

3.1 Appliance

- This appliance may not be installed in a chlorine-containing environment. (Pools etc.).
- This appliance must be built into an existing or new false chimney.
- For appliances with flexible gas pipes, the control unit (fig. 1.1) is placed on the right side of the crate for transport reasons. Detach and mount it together with the remote access door in as low as possible position in the false chimney.
  (To prevent damage to cables and pipes during transport, they are bound together by tie wraps. Remove these to ensure proper operation of the appliance.)
- If desired, a 2 meter pipe set is available (article number 20901530).

3.2 False chimney

- The false chimney should be of non-combustible material.
- The space above the fire should always be ventilated using grids with minimal free passage of 200cm² per grid.
- The false chimney construction should not rest on the built-in frame of the fireplace.

3.3 Discharge and outlet requirements

First, carry out a flue calculation (see chapter 11) and place the right flue restrictor before installing the outlet! (Generally a 30mm flue restrictor is installed).

- For supply and discharge always use the prescribed and to be supplied Faber flue materials. Please contact Glen Dimplex Benelux B.V.. Only with use of these materials Faber can guarantee proper performance.
- The distance to combustible materials must be min. 50mm, calculated from outside of the flue material (EN 1856-1 T600 N1 D Vm – L20040 O(50)).

Outlets (fig. 1.4)
The balanced flue pipe for combined air supply and discharge can use a wall terminal or a roof terminal. Verify that the desired outlet meets the local regulations regarding pollution and ventilation openings.

➢ **Please note!**
For proper functioning, the outlet must at least be 0,5m away from:

- Corners of the building;
- Roof overhangs and balconies;
- Roof edges (with the exception of the ridge edge, see chapter 15).

C11, outlet via facade
Through a wall or façade, use a Faber wall outlet. Depending on the flue calculation this can be 100/150mm or 130/200mm.

C31, outlet via roof
For a (flat) roof, use a Faber roof outlet with a diameter of 100/150mm.

C91, existing chimney
For an existing chimney, use a Faber chimney outlet with a diameter of 100/150mm.
In this case the existing chimney acts as air inlet an inserted flexible stainless steel pipe discharges the flue gas. The top (Faber chimney cover plate) and the bottom (Faber chimney connection set) should be airtight.
Depending on the calculated flue diameter, you must use a flexible stainless steel pipe of Ø100mm (article number AJ005503) or Ø130mm (article number AJ005603) as specified by Faber. For this, contact Glen Dimplex Benelux B.V.

➢ **Please note!**

- The minimum chimney diameter for a 130mm flexible stainless steel pipe must be 200x200mm and for a 100mm flexible stainless steel pipe and 150x150mm.
- Don't connect more than one fire at the existing chimney.
- The chimney must be in good condition:
  - No leakage;
  - Well cleaned.

For more information about the connections to existing chimney ducts, please request the installation instructions "Chimney Connection Set".

4 Preparation and installation instructions

4.1 Gas connection

The gas connection must comply with the applicable local standards.

➢ **Please note!**

- Calculate the gas pipe so that no pressure drop occurs.

We advise using a gas connection directly from the gas meter to the appliance, with a shut-off valve in the proximity of the appliance, which must always be freely accessible. Position the gas connection so that it is easily accessible for service and the burner unit can be disassembled at any time.

4.2 Electrical connection

Install a 230VAC/50Hz wall socket near the fireplace for connecting the control unit.

See fig. 2.8 for the wiring diagram:

A= Adapter (6V)
C = Receiver
D = LED Symbio module (optional)
E = Gas valve
F = Solenoid valve
G = 2nd thermocouple

4.3 Preparing the fireplace

- Remove the fireplace from its packaging. Ensure that the gas supply pipes under the appliance are not damaged.
- Prepare the gas connection on the regulator. Provide a flexible gas connection with at least 0,5m extra length, so that the control unit can be removed for installation and service!

4.4 Positioning the fireplace

Take into account the installation requirements (see chapter 3). Place the fireplace at the right place and level it.
Rough height adjustment:

- With the adjustable (optional) legs.

Accurate height adjustment:

- With the adjustable feet.

Hanging on the wall

The fireplace can also be mounted on the wall using the optional wall bracket set, see Appendix 17.3 (article number A9323296). Therefore, remove the existing fittings and use the provided spacer for vertical alignment, see fig. 1.3.

4.5 Installing the flue pipes

Install the flue pipes according to the installation manual supplied with the appliance (article number 40011968)!

- The distance to combustible materials must be min. 50mm, calculated from the outside of the flue pipe.
- Never start immediately with length-adjustable concentric flue pipe on the appliance.
- Horizontal sections should be installed to allow a slope towards the appliance (3 degrees).
- Built the system from the appliance. If this is not possible you can make use of an extendable adapter section.
- For fitting of the flue system, the 0,5m length-adjustable pipe must be used. Make sure that the inner pipe is always 15mm longer than the outer pipe. Wall- and roof terminal can also be cut. These components must be secured with a self-tapping screw.

4.6 Constructing the false chimney

Before positioning the false chimney, we advise to perform a functional test with the fireplace as defined in chapter 7 “Checking the installation”.

False chimney

- Construct the false chimney of non-combustible material in combination with metal profiles or of masonry/concrete blocks.
- Always use a lintel or reinforcing bars while bricking the false chimney. They should not be placed directly on the fireplace.
- Make sure that the fireplace never functions as a load-bearing construction, because of the expansion of the fireplace through warmth.

Ventilation

Correct ventilation prevents damaging overheating of the gas control block and its electronics and also limits the temperature of the convection air. Use the (optional) Faber ventilation grids (article number A9296400) or a similar alternative with a minimum free passage of 200cm² per grid, in the space above the fire, when building the false chimney. Within the false chimney, an horizontal screen plate, made of non-combustible material, must be installed just above the ventilation openings. (see “A” in fig. 1.0).

Installation and finishing

➢ **Please note!**
- Take into account a minimum distance of 2mm due to expansion of the fireplace.
- Take into account the thickness of any finishing layer!

The following points are important for installation and finishing.

H. = Cover trim (fig. 2.4 and 2.7)
I. = Spacer (fig. 2.4)
J. = Upper flange of the combustion chamber (fig. 2.5).
K. = Spacer / glass support (fig. 2.6)
L. = Spacer / glass support (fig. 2.6)

Method I: Installation WITH the cover trim (fig. 2.2)
Build the false chimney or platform against the decorative strips "**H**" and the spacers "**I**" (see fig. 2.4 and 2.7).

Method II: Installation WITHOUT the cover trim (fig. 2.3).
Remove the distance profiles "**I**" (see fig. 2.4).

➢ **Please note!**
Make sure that the distance profile screws "**I**" are replaced at the front to ensure that the appliance is air tight.

- Build the platform against the glass supports "**K**" and "**L**" (see fig. 2.6)
- Hold point "**J**" for the height off the platform.

5 Removing glass

5.1 Front glass

MatriX 450 I:
- Disassemble cover strip "A" on both sides (fig. 3.0).
- Turn side clamp "B" upwards on the left and right side (fig. 3.0).
- Place the suction cups on the glass, slide frame "C" upwards (fig. 3.1) and disassemble the front glass (fig. 3.2).

For replacing the glass repeat the steps in reverse order.

➢ **Please note!**
Avoid fingerprints on the glass, these are no longer removable once the fire is used.

MatriX 450 II:
- Disassemble cover strip "A" left or right (fig. 3.0).
- Turn side clamp "B" upwards on the left or right (fig. 3.0).
- Place suction cups on the glass and slide up top frame "C" (fig. 3.3).
- Disassemble the front glass (fig. 3.3).

For replacing the glass repeat the steps in reverse order.

➢ **Please note!**
Avoid fingerprints on the glass, these are no longer removable once the fire is used.

MatriX 450 III:
- Place the suction cups on the glass and slide frame "C" upwards (fig. 3.3).
- Disassemble the front glass (fig. 3.3).

For replacing the glass repeat the steps in reverse order.

➢ **Please note!**
Avoid fingerprints on the glass, these are no longer removable once the fire is used.

5.2 Side glass

For cleaning only it's not necessary to remove the side glass.
- Disassemble the front glass (section 5.1).
- Disassemble the glass strip at the top (fig. 3.4).
- Place a suction cup and disassemble the side glass (fig. 3.5).

For replacing the glass repeat the steps in reverse order.

➢ **Please note!**
Avoid fingerprints on the glass, these are no longer removable once the fire is used.

6 Placing decoration material

It is not permitted to use other or to add more material in the combustion chamber.

See the supplied decoration instruction card or chapter 18:

- Divide the glass granulate on the perforated bottom plate.
- Place the 2 large wood blocks and make sure there is no glass granulate underneath.
- Place the other wood blocks.
- Divide the ash material over the entire bottom.

➢ **Please note!**
Keep the pilot flame and both burners free from glass granulate and ash material!

- Start the fireplace as described in the user manual.
- Assess whether the flame distribution and if present, the Symbio effect (glow bed), is good. Move or remove any ash material/glass granulate to create a nice glow bed.
- Install the front glass and check the fire image.

7 Checking the installation

Checking for gas leaks
Check with a gas leak finder all connections and pipes for gas leakage.

Check primary- and burner pressure
Check if the primary pressure correspond to the data on the rating plate.

Measuring the primary pressure:

- Close the shutoff valve. Turn the measuring nipple "**A**" (fig. 1.2) a few turns to open and connect a measuring hose to the gas valve.
- Take this measurement when the fireplace runs at high and low settings.
- Do not connect the unit if the pressure is too high (+20% and -20%).

Measuring the burner pressure:
Check the burner pressure only with proper primary pressure.

- Turn measuring nipple "**B**" (see fig. 1.2) some turns open and connect a measuring hose to the gas valve.
- The pressure must correspond to the value indicated in the technical specifications of this manual. In case of deviation contact the manufacturer.

➢ **Please note!**
Close both pressure measuring nipples and check for gas leakage.

Check ignition and burner
Ignite the fireplace by using the remote control as described in the user manual and test all burner possibilities.

Check the ignition of the burner at high and small settings. (The ignition must be smooth and quiet).

7.1 Checking the flame image

Let the fireplace burn for at least 20 minutes at highest setting and check the flame for:

- flame distribution;
- colour of the flames.

If one or both points are not acceptable then check:

- The position of the logs and/or the amount of chips/glass granulates.
- The pipe connections for leaks.
  (in case of blue flames);
- That the correct flue restrictor is fitted (see fig. 2.0-F);
- The outlet:
  - Wall terminal has the correct position and side up;
  - Roof terminal has the correct position.
- If the maximum lengths of the flue gas outlet is not exceeded.
- If possible, carry out a flue gas analysis (see section 7.2).

7.2 Flue gas analysis

It is possible to check the combustion gases and supply air with a CO/CO_2 flue gas analyser.
There are two measuring pipes between the built-in frame and the front glass (fig. 2.1).

X = measuring pipe air supply
Y = measuring pipe flue gas

The ratio CO2 and CO must not be greater than 1:100.

Example:
CO2 is 4% and CO is 400ppm, measured at the highest point. If the ratio is greater than 1:100 or

flue gases are measured in the air supply, check the points in section 7.1.

8 Instructions for client

- Recommend that the fire should be checked annually by a qualified specialist to ensure the safe use and to guarantee a long service life.
- Provide instructions on the operation of:
  - the appliance;
  - the remote control;
- Give advice and instructions on care and cleaning of the glass:

- Emphasize the danger of fingerprint burns at the glass.
- Handover to customer:
  - installation manual;
  - user manual;
  - decoration instruction card;
  - suction cups;
  - sample Faber glass polish.

9 Annual maintenance

Check
Check and clean if necessary:

- the combustion chamber;
- the burner
- the pilot flame;
- the wooden logs for breakage;
- the glass(es);
- the outlet.

Replace chips and/or glass granulate if necessary.

Cleaning
Remove the front glass (see chapter 5).
You can clean the glass with Faber glass polish. This is a specially formulated cleaning agent that can be ordered at authorized Faber dealers.
Never use aggressive cleaning agents or abrasive products.

➢ **Please note!**
Avoid fingerprints on the glass; these are no longer removable once the fire is used.

Now carry out check-up as described in chapter 7.

For an extensive maintenance instruction "maintenance protocol gas fires" see:

10 Conversion to other gas type

This can only be done by replacing the burner. To do so, please contact your dealer. Always provide the type and serial number of the appliance when ordering.

11 Flue calculation

A simple way to calculate whether the exhaust configuration is possible in combination with your fireplace, use the “Faber Flue App V2”:

This is available free of charge and can be downloaded via:

Internet:
Android and PC (Windows Store, (Windows 10)).
App Store:
iPhone, iPad and Mac.
Google Play:
Android smart phones and Android tablets.

Alternatively, you can use the calculation sheet (see chapter 13).

The options for flue lengths and any flue restrictors are defined in a restrictor table, see 11.1. Start Length (STL), Total Vertical Height (TVH) and Total Horizontal Length (THL) are used in the table.

- Start length (STL):
  The first part that is placed on the fireplace and represents a certain value (fig. 12.1, 12.2 and 12.3 A, N and F). You can find this value in the upper row of the restrictor table.

- Total Vertical Height (TVH):
  TVH is the height difference measured from the top of the appliance to the outlet. This can be measured or determined in the building plan. For clarification, see also the TVH indication in the drawings (fig. 12.1, 12.2 and 12.3).

- Total Horizontal Length (THL):
  THL is the Total Horizontal Length and consists of elbows and pipes entirely in the horizontal plane. See elbows I, K and Q and the elements H, J, L, M, P and R (fig. 12.1 and 12.2).

- Horizontal length:
  The Horizontal Length consists of the elements H, J, L, M, P and R (fig. 12.1 and 12.2).

- Elbows 90° in the horizontal plane:
  Horizontal elbows are elbows entirely in the horizontal plane (fig. 12.1, 12.2 and 12.3 I, K and Q).

- Elbows 45° or 30° in the horizontal plane.
  Horizontal elbows are elbows entirely in the horizontal plane.

- Elbows 90° vertical to horizontal:
  These are 90° elbows, which proceed from horizontal to vertical (fig. 12.2 and 12.3 G, O and S).

- Elbows 45° or 30° vertical to horizontal plane:
  These are 30° or 45° elbows vertically offset less than 45° (fig. 12.1 B and D).

- Pipes at an angle of inclination:
  These are pipes vertically ascending at an angle of 30° or 45° (fig. 12.1 C). Fill in only in combination with at least two 30° or 45° elbows in the vertical part.

- Restrictor table:
  See restrictor table for the correct vertical (TVH) and horizontal length (THL).

In case of an “X” or if the values are outside the restrictor table, the combination is not permitted. Then adjust TVH or THL.
If a value is indicated, check that the calculated STL value is not lower than indicated in the restrictor table. In this case STL must be adjusted.

The value found indicates the width of the flue restrictor to be placed (“0” means no flue restrictor). Generally a 30mm flue restrictor is installed (fig. 2.0-F), first remove hatch **“G”**.

11.1 Restrictor table (100/150) MatriX 450/500 III and MatriX 450/650 I,II,III

Start length (STL) Vertical (TVH) and Horizontal (THL)

STL		0,1	0,2	0,5	0,5	1	1	1				
THL		0	1	2	3	4	5	6	7	8	9	10
TVH	0	x	x	x	x	x	x	x	x	x	x	x
	0,5	30	x	x	x	x	x	x	x	x	x	x
	1	40	0	0,5	0,5	0,5	0,5	x	x	x	x	x
	1,5	40	0	0	0	0	0	0	x	x	x	x
	2	45	0	0	0	0	0	0	x	x	x	x
	3	50	30	0	0	0	0	0	x	x	x	x
	4	50	30	30	0	0	0	0	x	x	x	x
	5	50	40	30	30	0	0	0	x	x	x	x
	6	60	40	40	30	30	0	0	x	x	x	x
	7	60	50	40	40	30	30	0	x	x	x	x
	8	60	50	50	40	40	30	0	x	x	x	x
	9	60	50	50	50	40	30	30	x	x	x	x
	10	60	60	50	50	40	30	30	x	x	x	x
	11	60	60	60	50	40	40	30	x	x	x	x
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	13	60	60	60	50	50	40	30	x	x	x	x
	14	60	60	60	50	50	40	30	x	x	x	x
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	18	60	60	60	50	50	40	30	x	x	x	x
	19	60	60	60	50	50	40	30	x	x	x	x
	20	60	60	60	50	50	40	30	x	x	x	x
	21	60	60	60	50	50	40	30	x	x	x	x
	22	60	60	60	50	50	40	30	x	x	x	x
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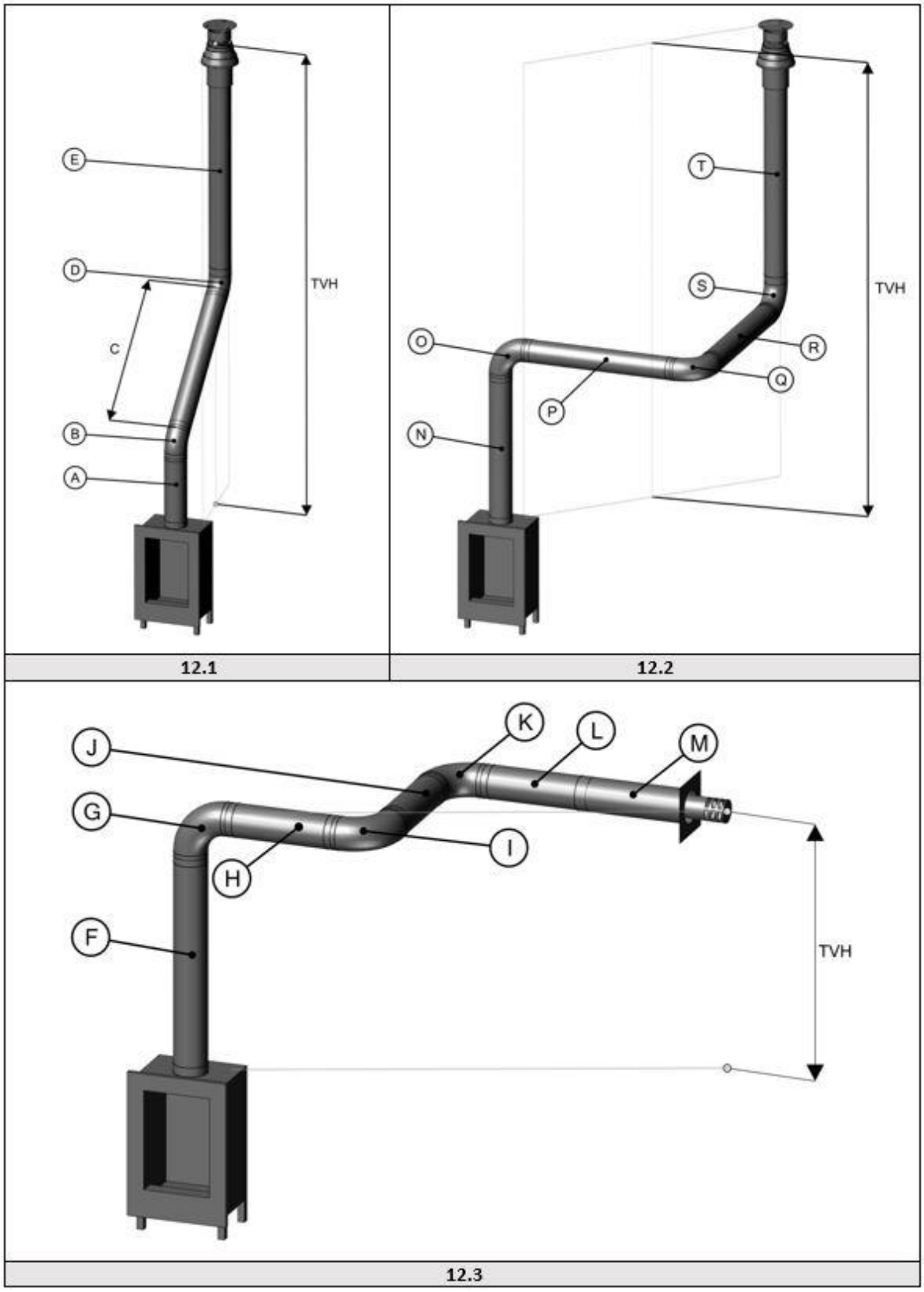
	26	60	60	60	50	50	x	x	x	x	x	x
	27	60	60	60	50	x	x	x	x	x	x	x
	28	60	60	60	x	x	x	x	x	x	x	x
	29	60	60	x	x	x	x	x	x	x	x	x
	30	60	x	x	x	x	x	x	x	x	x	x

12 Examples flue materials



12.1 | 12.2

12.3

13 Calculation sheet

Starter length (STL)		
First part on top of the appliance	**Value**	
Flue length from 0,1m till 0,45m	**0,2**	
Flue length from 0,5m till 0,90m	**0,5**	
Flue length from 1m till 1,4m	**1**	
Flue length from 1,5m till 2m	**1,5**	
Flue length 2m or more	**2**	
Bend 90°	**0,1**	
Bend 45°, 30° or 15°	**0,2**	
Roof terminal	**1**	
Wall terminal	**0**	**Value**
		.....

Total Vertical Height (TVH)	
measured height	**rounded value**
..... meter	..... meter

Total Horizontal Length (THL)					
Calculation					
Part	**number**	**x**	**value**	**result**	
Total Length in meters	.....	x	**1**	.....	
90° Bend, vertical to horizontal	.....	x	**0,4**	.....	
45° Bend, vertical to horizontal	.....	x	**0,2**	.....	
90° Bend in horizontal direction	.....	x	**1,5**	.....	
45° Bend in horizontal direction	.....	x	**1**	.....	
flue pipes at an angle in meters	.....	x	**0,7**	.....	**rounded value**
			Total	.....+	..... meter

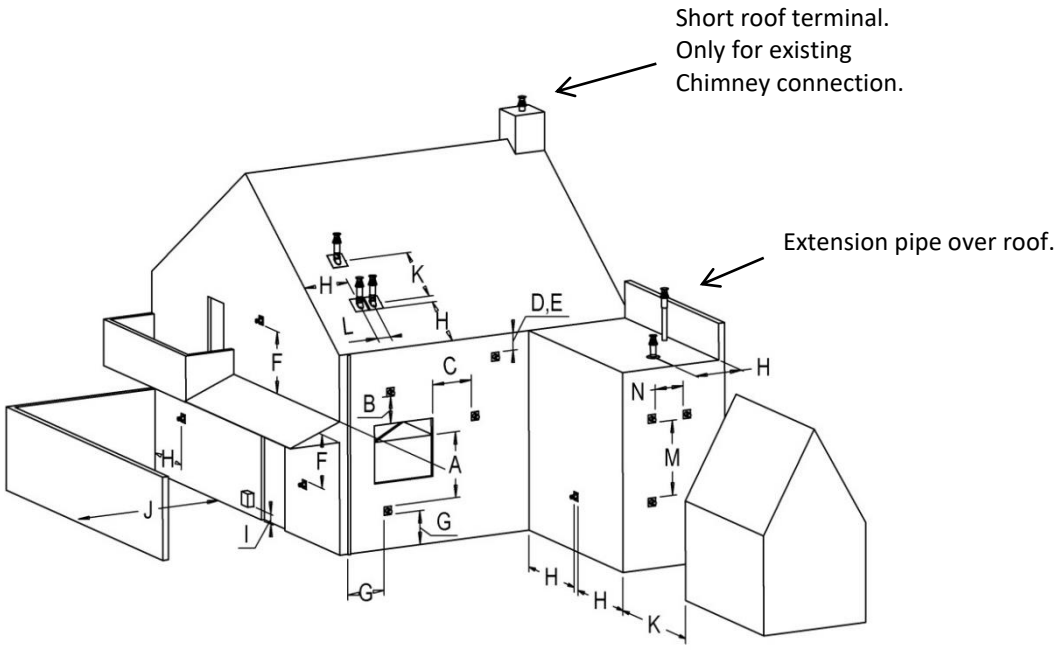
Search in the table at TVH and THL and enter the value that is found.		**found value** ……
If the detected value is a number, check whether the completed STL is higher or equal to the value in the table.		
Is the STL value lower as specified in the table then the installation is not possible. Solution: Start length to low, see for the minimum length in the top row of the table.		
Is the found value X, then the installation is not possible. Solution: Change the TVH or THL.		
Results		
Restrictor size = Value for the comma		…… mm
Extra information = Value behind the comma		**mark**
Install the air restrictor plate, see installation manual	**0,1**	☐
Install adapter 100/150 direct on top of the fire	**0,2**	☐
In case of wall terminal, install adapter 100/150 before the last bend, in case of roof terminal just before the terminal.	**0,3**	☐
In case of roof terminal (always size 100/150) install the 100/150 adapter just before the terminal. Wall terminal 130/200	**0,4**	☐
From the fire first an adjuster to 130/200 and 1 meter 130/200, after that reduce to 100/150 and everything 100/150.	**0,5**	☐

14 Technical data

Technical data						
Type indication(s)		MatriX 450x500 I,II,III MatriX 450x650 I,II,III				
Type appliance		C11/C31/C91				
Diameter outlet/inlet		130/200				
Gas connection		3/8"				
Indirect heating functionality		no				
Category		II2H3+, II2H3P				
	Symbol					Unit
Reference gas/inlet pressure			G20-20	G30-30	G31-37	mbar
Emissions in space heating	NOx		82	90	90	mg/kWh_{input} (GVC)
Direct heating output						
Nominal heat output	P_{nom}		6,8	6,8	6,8	kW
Minimum heat output (indicative)	P_{min}		3,2	3,2	3,2	kW
Useful efficiency (NCV)						
At nominal heat output	$\eta_{th,nom}$		93,2	93,2	93,2	%
At minimum heat output (indicative)	$\eta_{th,min}$		90,1	90,1	90,1	%
Appliance input data						
Input	Hi		7,3	7,3	7,3	kW
Gas rate at full mark			0,78	0,22	0,29	m^3/h
				0,55	0,54	kg/h
Burner pressure at full mark			12,8	20	28,3	mbar
Power requirement for permanent pilot light						
Power requirement for permanent pilot light (if applicable)	P_{pilot}		0,15	0,15	0,15	kW
Additional electricity consumption						
At nominal heat output	el_{max}		0	0	0	kW
At minimum heat output	el_{min}		0	0	0	kW
In standby mode	el_{SB}		0	0	0	kW
Energy-efficiency						
Energy-efficiency class			A	A	A	
Energy-efficiency index	EEI		90	90	90	
Type heating output/control room temperature			Other control options			
One step heat output, no control of room temperature		no	Control of room temperature, with presence detection			no
Two or more manually adjustable stages, no control of room temperature		no				
With mechanical control of the room temperature by thermostat		no	Control of room temperature, with open window detection			no
With electronic control of the room temperature		no				
With electronic control of the room temperature plus day-time switch		no	With optional remote control			yes
With electronic control of the room temperature plus week-time switch		yes				
Glen Dimplex Benelux Saturnus 8 Heerenveen The Netherlands						

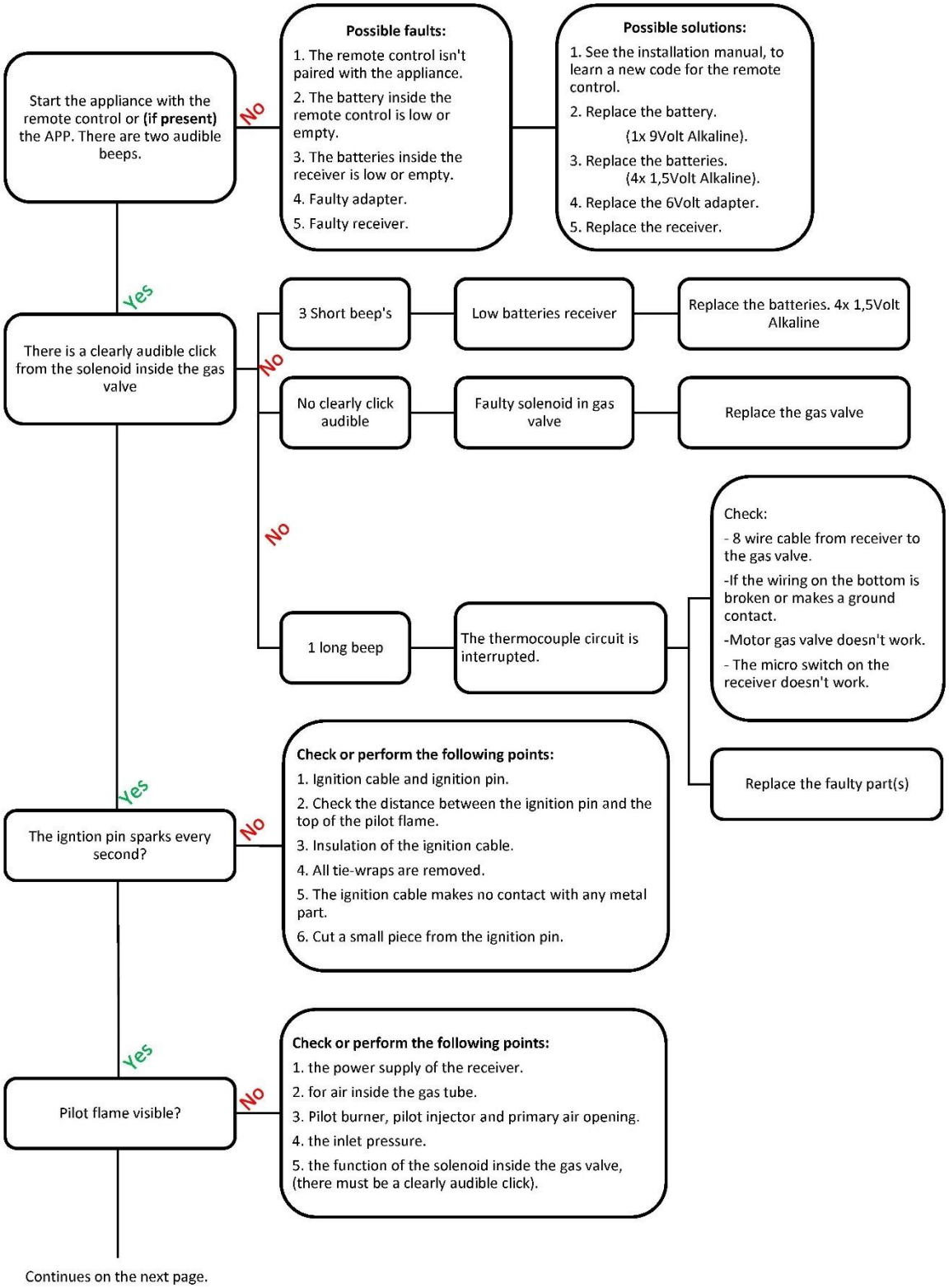
15 Outlet position

➢ **Please note!**
These rules apply only for the proper functioning of the unit, for ventilation and environmental protection you need to comply with the applicable rules as defined in the building regulations.



Location	Position outlet	Distance mm
D	Under a gutter	500
E	Under a roof edge	500
F	Under a carport or balcony	500
G	Vertical downpipe	300
H	Inside and outside corners	500
J	From wall surface to a wall outlet	1000
K	Two gable outlets against over each other	1000
L	Distance between two roof outlets	450
M	Two roof outlets above each other on a pitched roof	1000
N	Two gable outlets next to each other	1000

16 Troubleshooting guide



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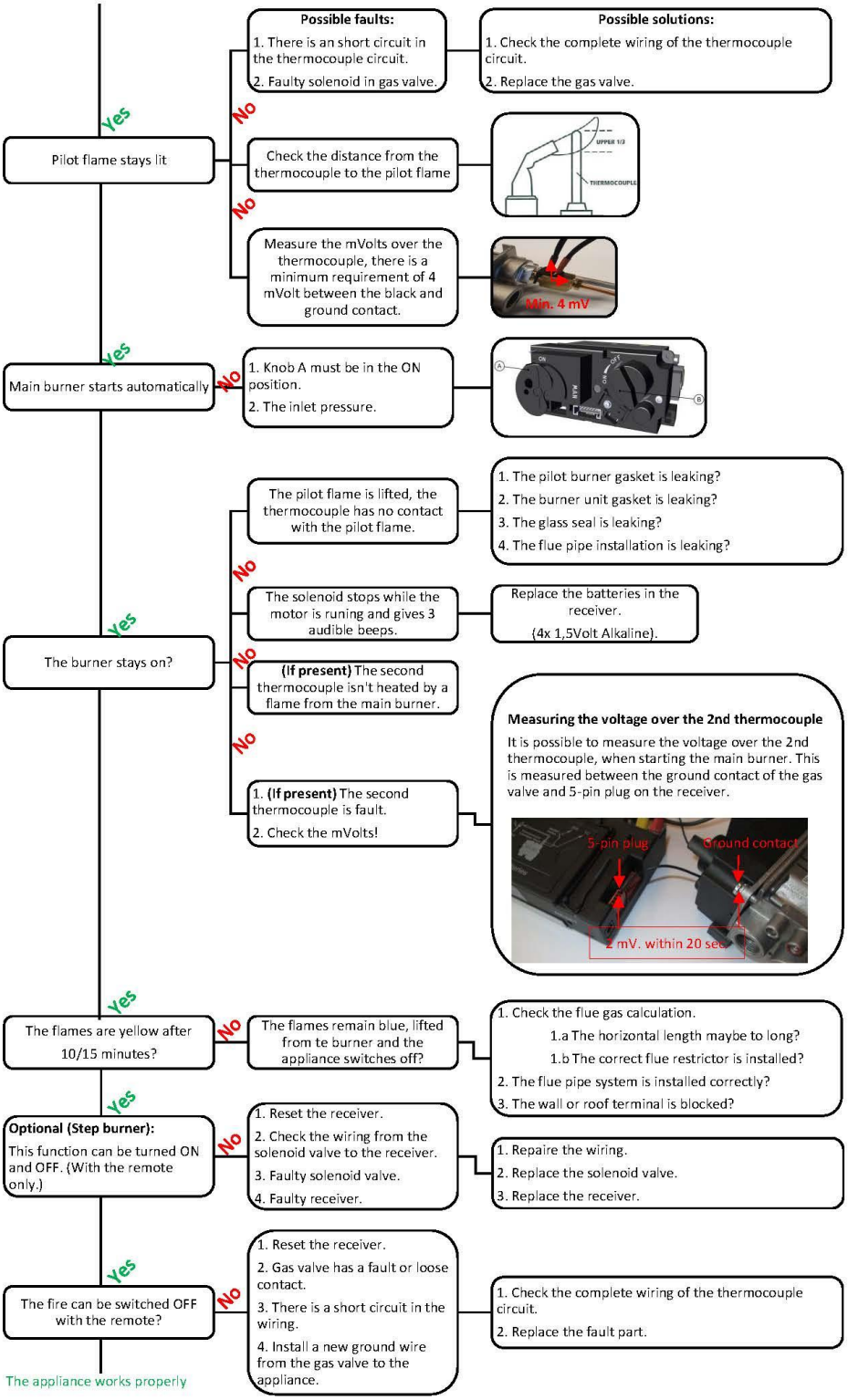
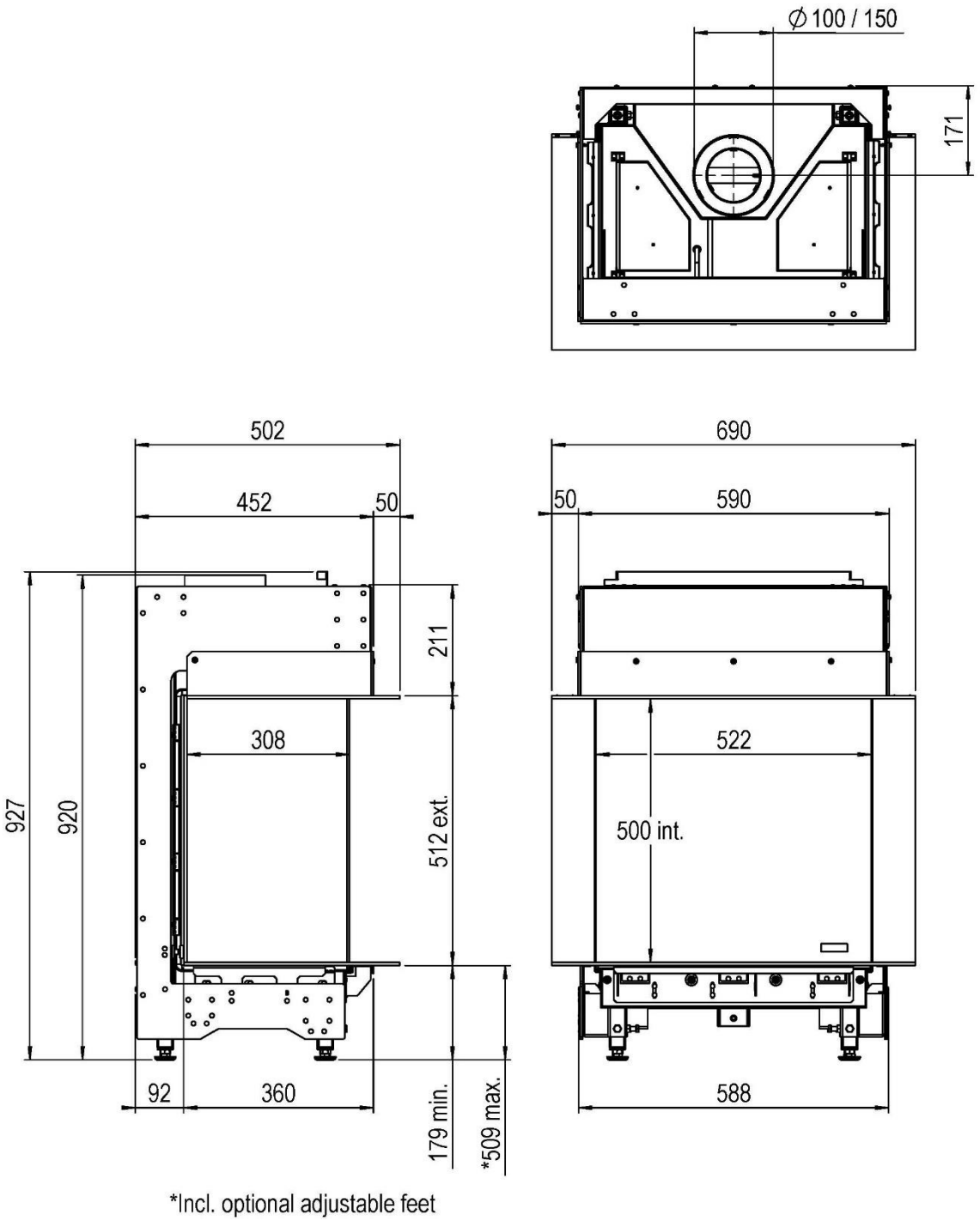

Possible faults:
1. There is an short circuit in the thermocouple circuit.
2. Faulty solenoid in gas valve.
Possible solutions:
1. Check the complete wiring of the thermocouple circuit.
2. Replace the gas valve.
Yes
No
Pilot flame stays lit
Check the distance from the thermocouple to the pilot flame
UPPER 1/3
THERMOCOUPLE
No
Measure the mVolts over the thermocouple, there is a minimum requirement of 4 mVolt between the black and ground contact.
Min. 4 mV
Yes
Main burner starts automatically
No
1. Knob A must be in the ON position.
2. The inlet pressure.
The pilot flame is lifted, the thermocouple has no contact with the pilot flame.
1. The pilot burner gasket is leaking?
2. The burner unit gasket is leaking?
3. The glass seal is leaking?
4. The flue pipe installation is leaking?
No
The solenoid stops while the motor is runing and gives 3 audible beeps.
Replace the batteries in the receiver.
(4x 1,5Volt Alkaline).
Yes
The burner stays on?
No
(If present) The second thermocouple isn't heated by a flame from the main burner.
No
1. (If present) The second thermocouple is fault.
2. Check the mVolts!
Measuring the voltage over the 2nd thermocouple
It is possible to measure the voltage over the 2nd thermocouple, when starting the main burner. This is measured between the ground contact of the gas valve and 5-pin plug on the receiver.
5-pin plug
Ground contact
2 mV. within 20 sec
Yes
The flames are yellow after 10/15 minutes?
No
The flames remain blue, lifted from te burner and the appliance switches off?
1. Check the flue gas calculation.
1.a The horizontal length maybe to long?
1.b The correct flue restrictor is installed?
2. The flue pipe system is installed correctly?
3. The wall or roof terminal is blocked?
Yes
Optional (Step burner):
This function can be turned ON and OFF. (With the remote only.)
No
1. Reset the receiver.
2. Check the wiring from the solenoid valve to the receiver.
3. Faulty solenoid valve.
4. Faulty receiver.
1. Repaire the wiring.
2. Replace the solenoid valve.
3. Replace the receiver.
Yes
The fire can be switched OFF with the remote?
No
1. Reset the receiver.
2. Gas valve has a fault or loose contact.
3. There is a short circuit in the wiring.
4. Install a new ground wire from the gas valve to the appliance.
1. Check the complete wiring of the thermocouple circuit.
2. Replace the fault part.
The appliance works properly

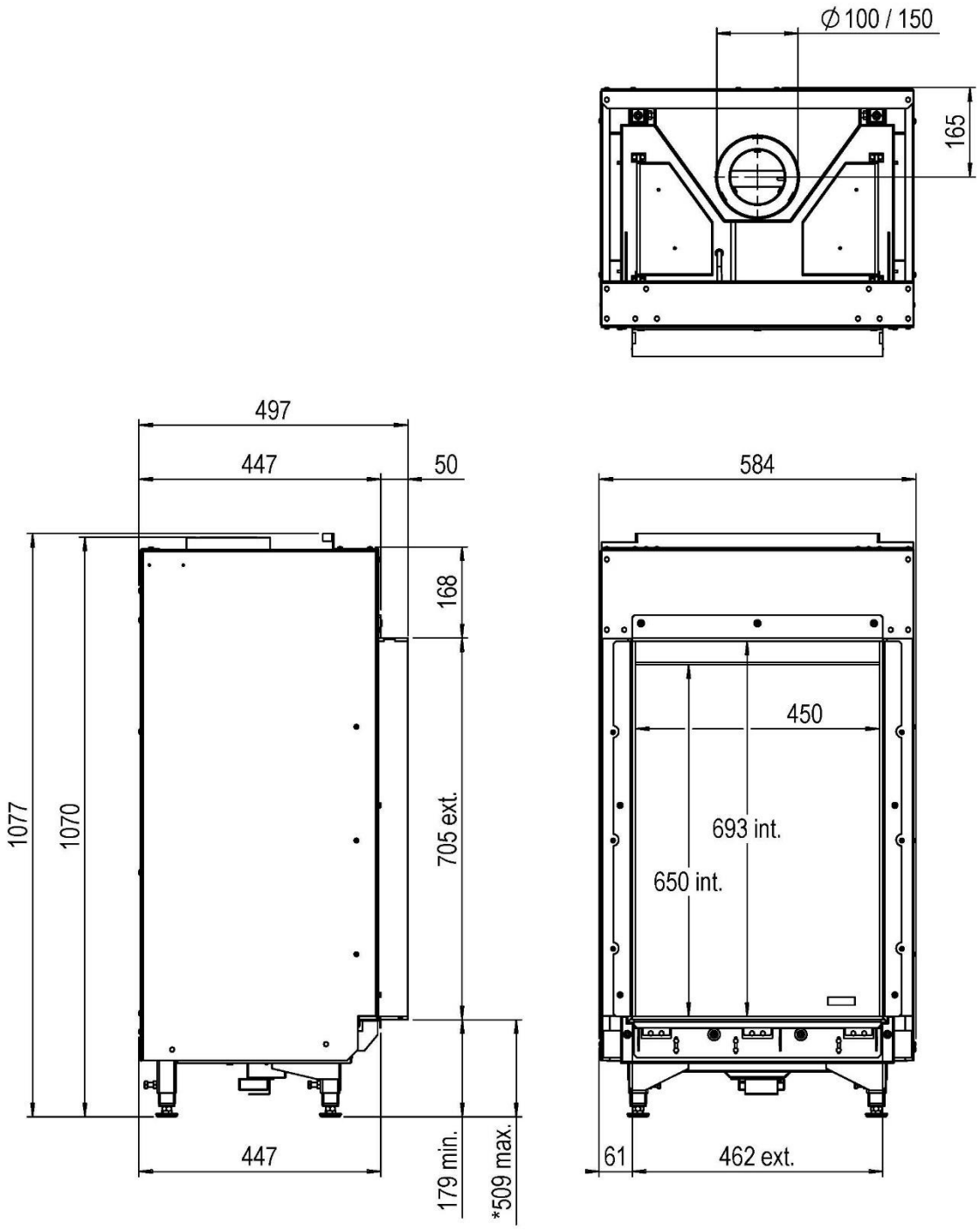
17 Dimensional drawings

17.1 MatriX 450/500 III



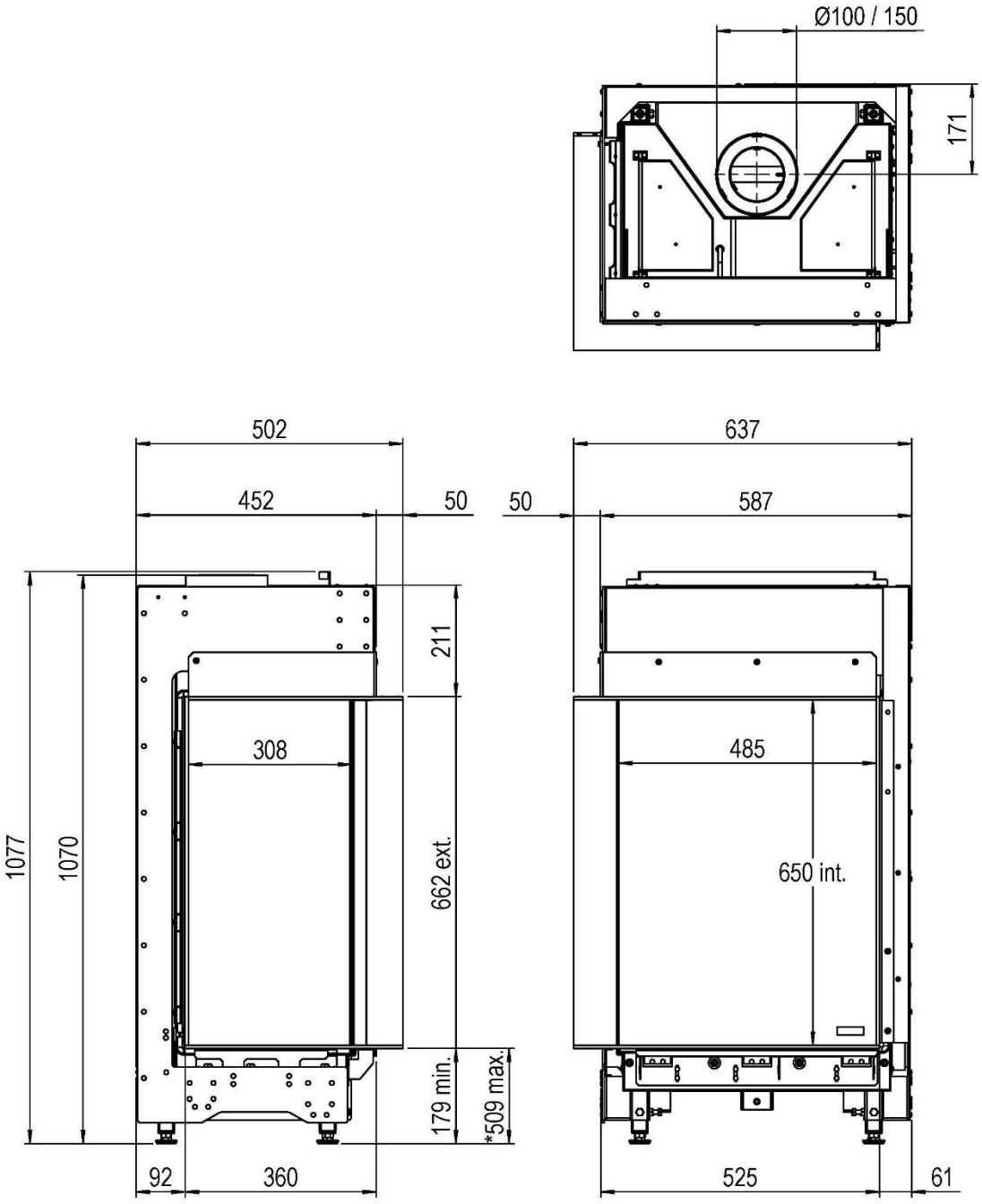
*Incl. optional adjustable feet

17.2 MatriX 450/650 I



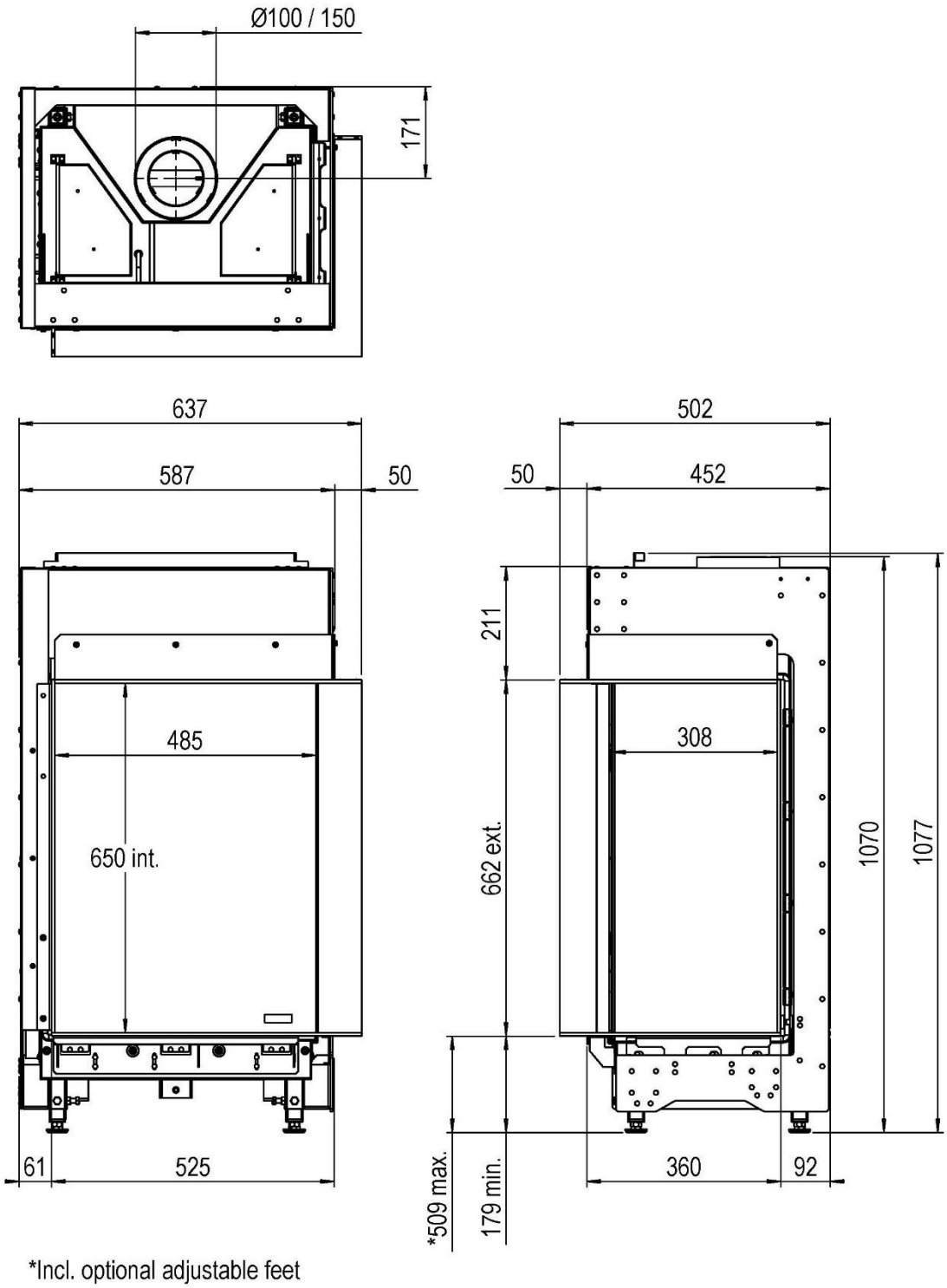
*Incl. optional adjustable feet

17.3 MatriX 450/650 IIL



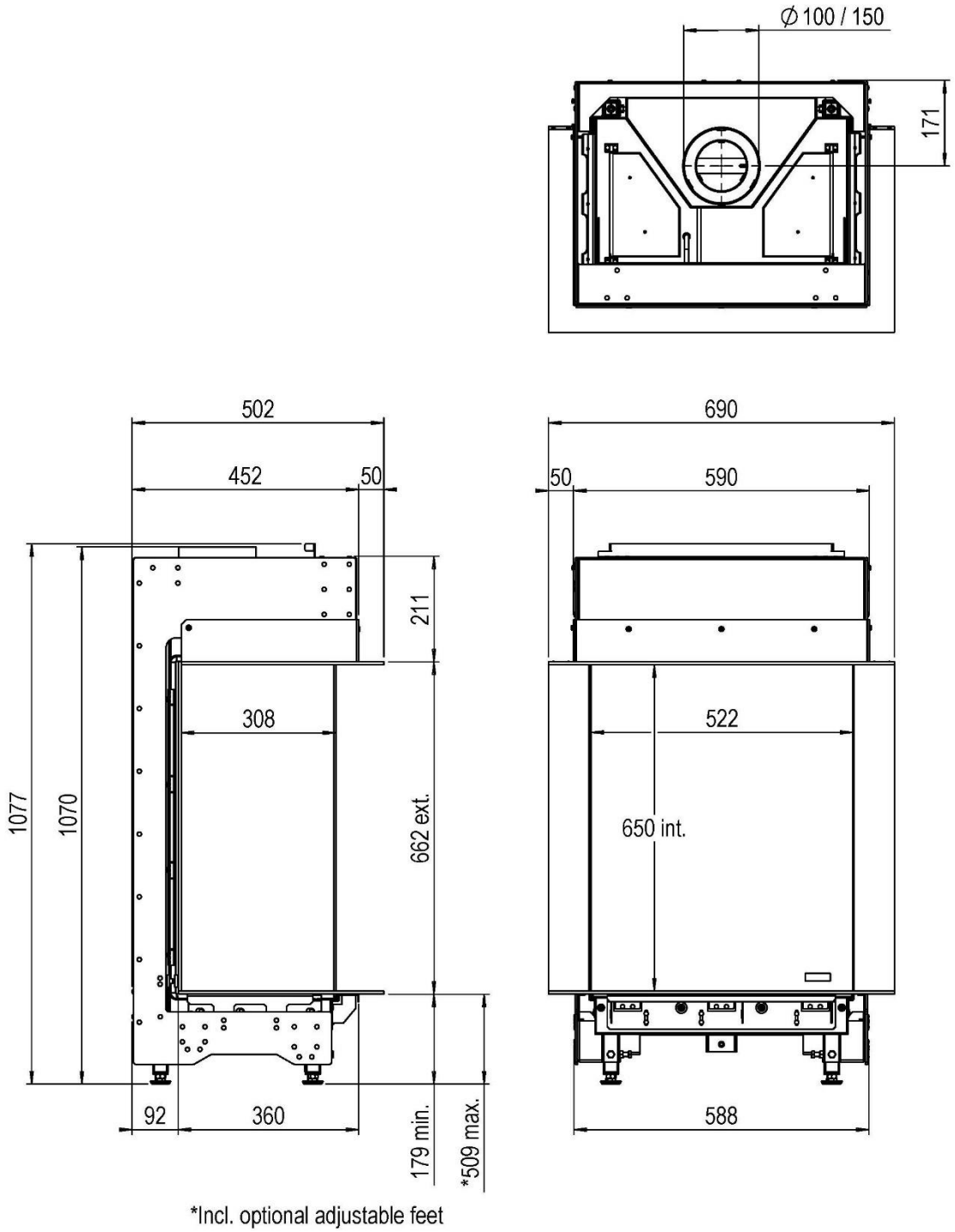
* Incl. optional adjustable feet

17.4 MatriX 450/650 IIR



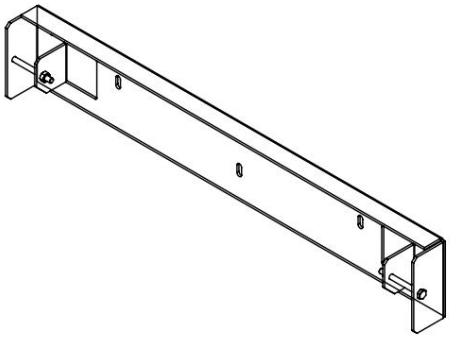
*Incl. optional adjustable feet

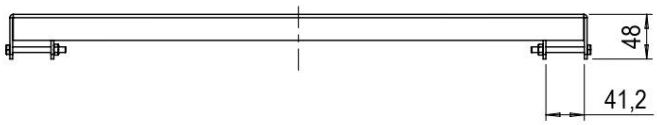
17.5 MatriX 450/650 III

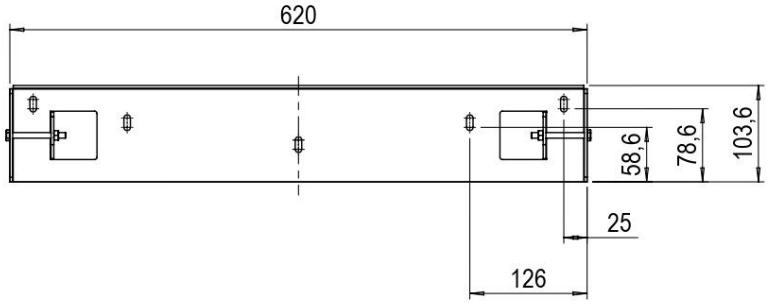


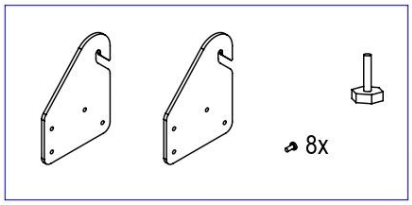
*Incl. optional adjustable feet

17.6 Wall bracket MatriX 450/500 III and 450/650 II,III (article number A9323296)

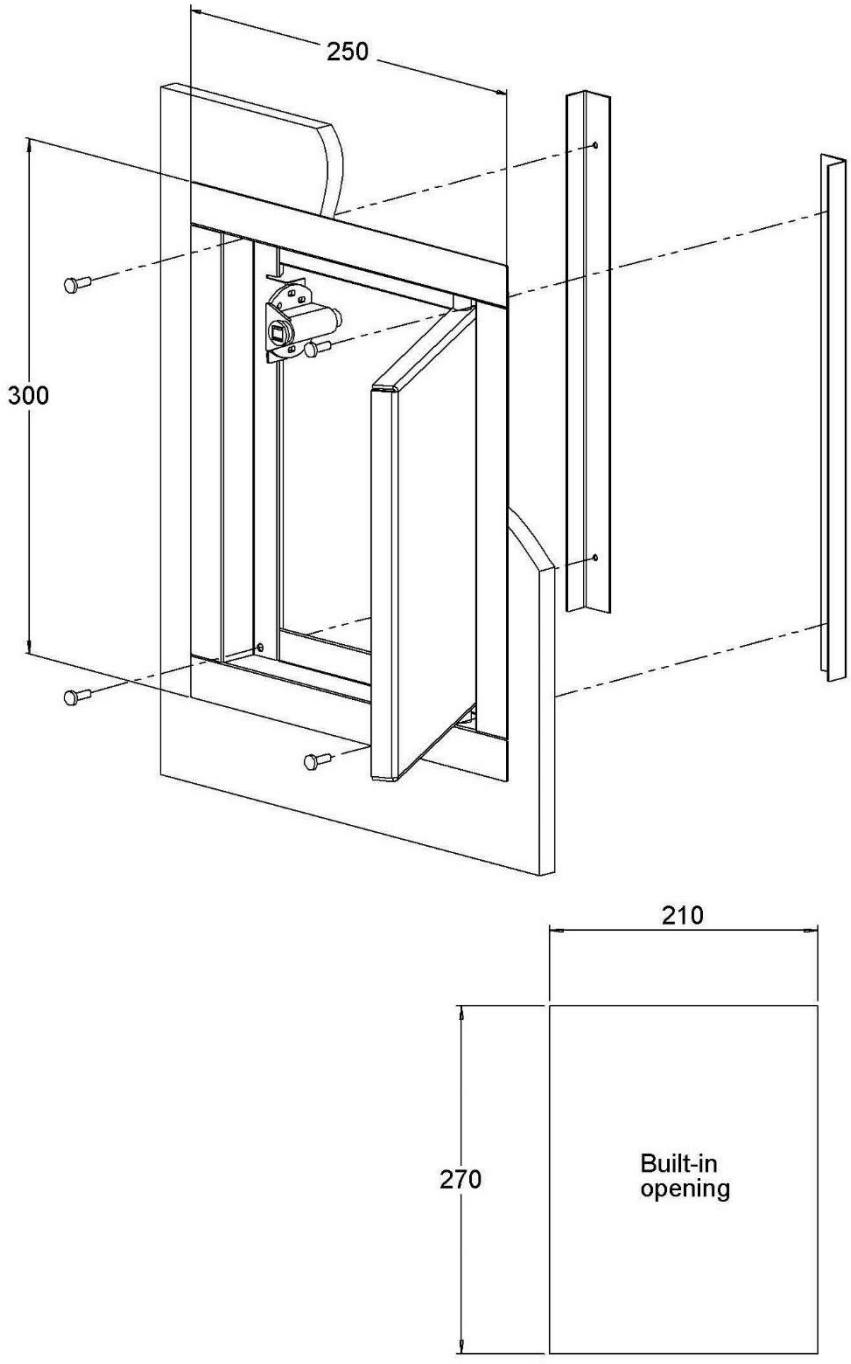




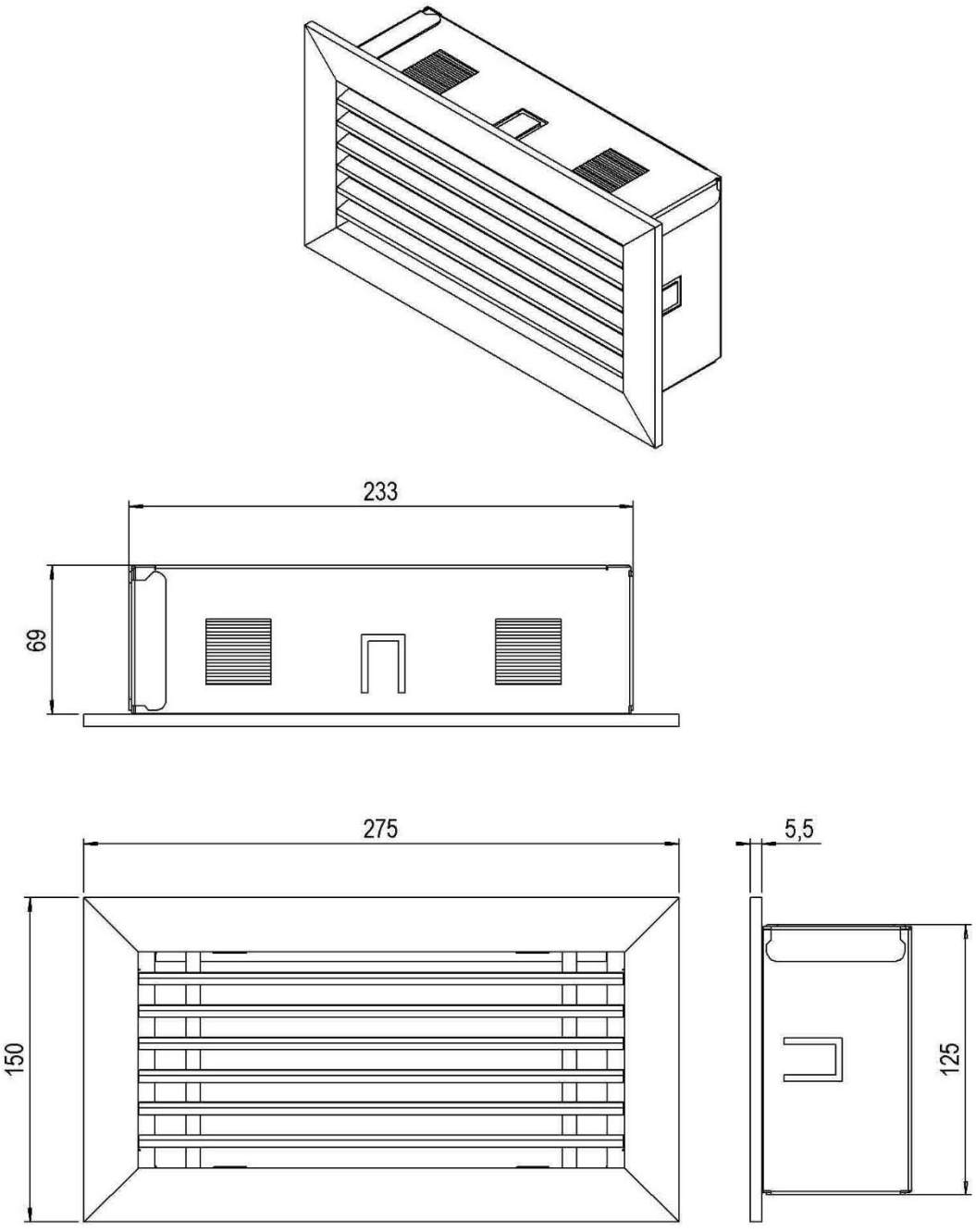




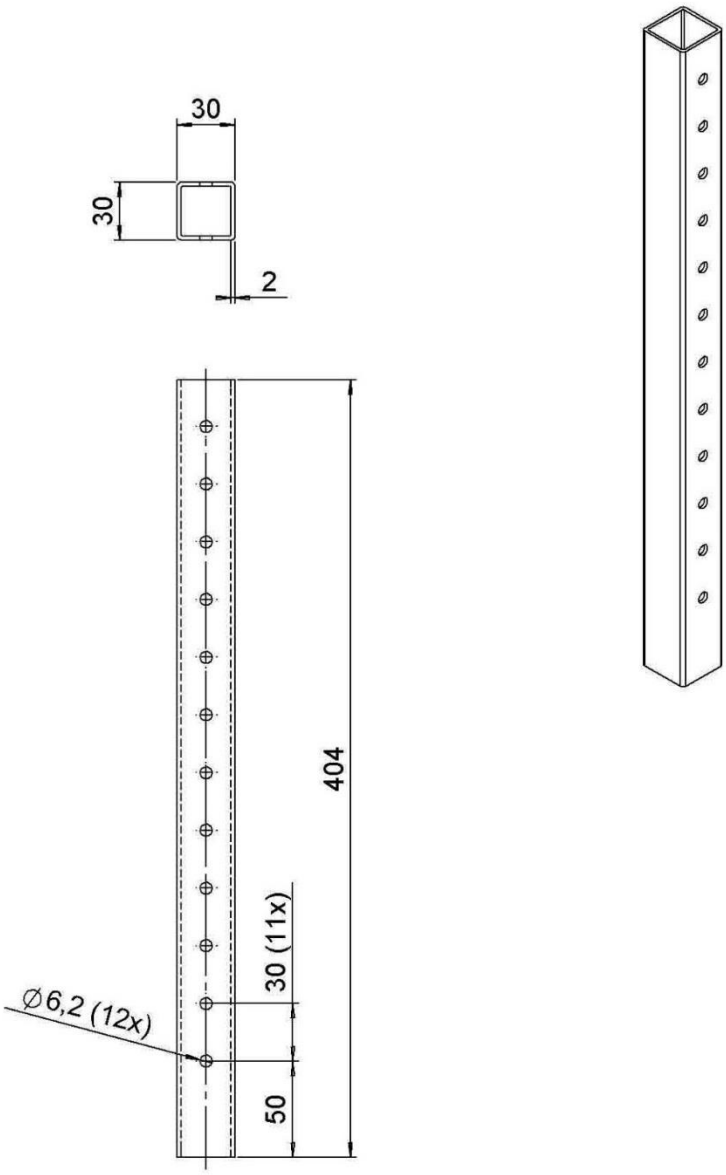
17.7 Remote access door (article number 20879500)



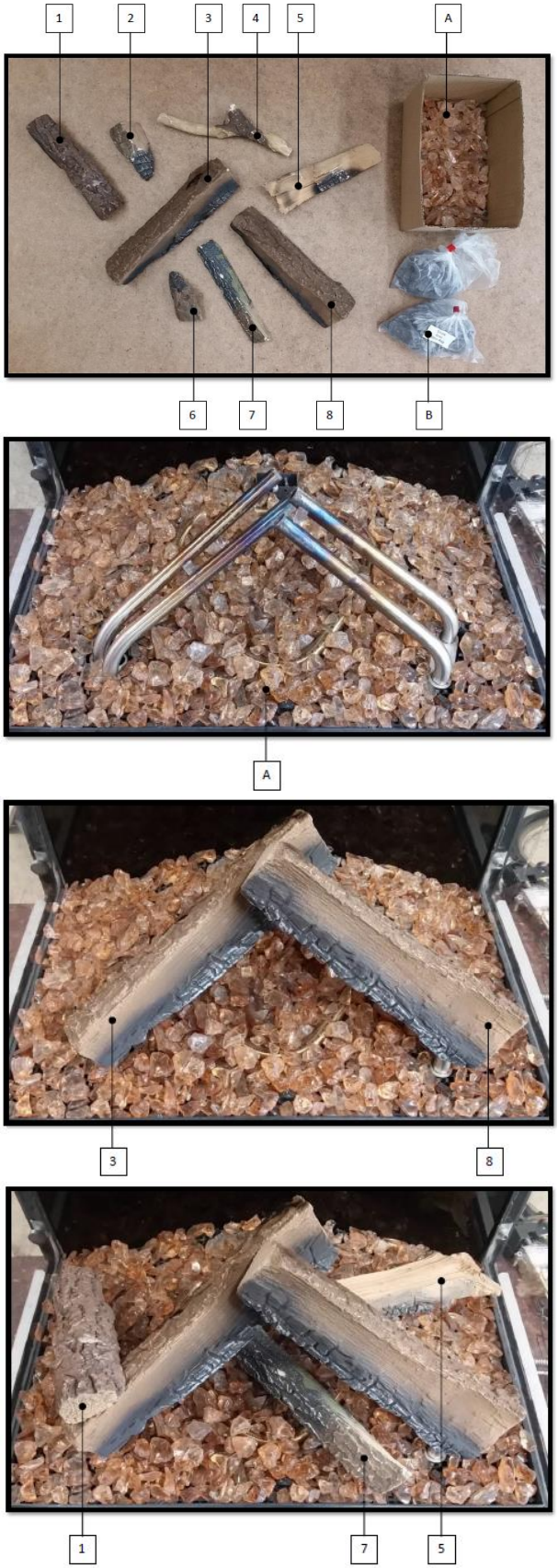
17.8 Ventilation grid (article number A9296400)

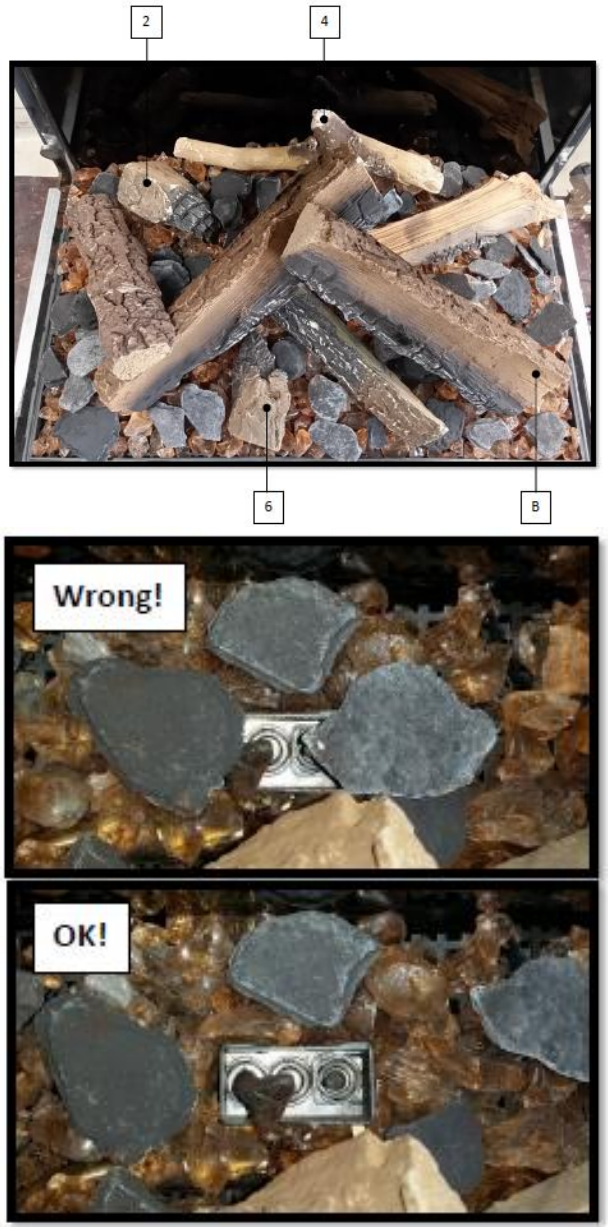


17.9 Adjustable feet (article number A9319696)



18 Decoration instruction card




2
4
6
B
Wrong!
OK!

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Postbus 219

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NL 8448 CC Heerenveen
NL 8440 AE Heerenveen