LUNA GOLD+ COLLECTION

INSTRUCTION FOR INSTALLATION AND USE



VERY IMPORTANT

INSTALLATION INSTRUCTIONS FOR THE M-DESIGN GAS FIREPLACES

THE SUPPLIER TAKES NO
RESPONSBILITY FOR ANY
POSSIBLE DAMAGE, POOR WORKING
APPLIANCES AND ACCIDENT AS A
RESULT OF INCORRECT INSTALLATION



SUMMARY

1. GENERAL	4
1.1 TRANSPORT AND INSTALLATION	4
1.2 TYPES OF FUEL	4
1.3 STARTING THE FIRE	5
2. INSTALLATION	6
2.1 ACTIONS UPON INSTALLATION	6
2.2 POSITIONING THE FIREPLACE	6
2.3 INSULATION AND FNISHING	7
2.4 MOUNTING A 3-SIDED FRAME	8
2.5 AIR SUPPLY FOR COMBUSTION	9
2.6.1 Natural convection	10
2.7 FAN	12
2.8 FLUE	13
2.9 HOW TO REGULATE FIREPLACE IN SENSE OF DROUGHT 2.9.1 Baffle plate	14
2.9.1.1 First settng	14
2.9.1.2 Second setting	15
2.9.2 System with three deflectors	16
2.9.3 Secondary air flow for combustion	17
2.10 BAFFLE PLATE LUNA GOLD SEE-TROUGH	18
3. FUNCTIONNING	19
4 GENERAL RECOMMENDATIONS	20
4.1 MAINTENANCE	20 20
5. GUARANTEE	21
5.1 TERMS AND ITEMS COVERED	21
5.2 PROVISO	21
5.3 DISCLAIMER	21
6. SPARE PARTS	22
7-8. 3 SIDED AND 4th FRAME	23-24

1. GENERAL

1.1 TRANSPORT AND INSTALLATION

- Transport the Luna in an upright position, or, in encumbering circumstances, at an angle of 45°.
- The handles for transportation purposes have been attached inside the slots provided on the sides of the Luna (see Pic.1)
- A set of rubber straps that can be turned and a set of fixed rubber straps are available as an option.

This is to facilitate transport on-site and on the stairs.

• Check to see that the lifting door functions properly before fitting the Luna GOLD (see Pic.2).



Pic. 1

1.2 FUEL

1.2.1 Wood

The quality of the wood is extremely important for the optimal functioning of the stove (output, clear glass, etc.).

Good quality wood is wood that has been dried under an aerated shelter for at least 2 years (+ 18% moisture content). Damp wood gives off less heat and dirties the stove and the chimney less. You can also use briquettes (the effect is comparable with that of wood), and it is best to use them in combination with wood because burning only briquettes makes the temperature too high.

Never fill the stove with wood because when the chimney draws too much, it can make the temperature too high. Damage as a result of excessive temperature is not under guarantee. 3 wooden logs are equal to 12 kW.



The use of treated wood (painted, etc.) and all types of household waste, which can disperse hazardous gases, is FORBIDDEN and CANCELS OUT ANY CLAIM ON THE GUARANTEE. The use of fluid fuel (petrol, etc.) is also forbidden.



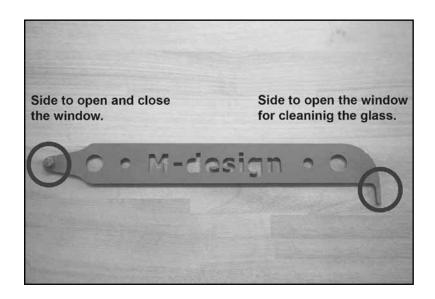


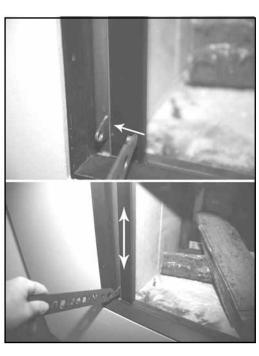
Pic. 2

1.3 STARTING THE FIRE

- Open the window (pic.3).
- Put a bed of tinder (paper or firelighters) with a little kindling (small twigs or pieces of wood) in the stove and light the tinder.
- Leave the door slightly ajar (+ 3 cm) to get a turbo stream of air that will make the kindling catch fire.
- After the kindling has caught fire and burns well, the logs may be placed on the fire. After the logs have caught fire, the window may be shut.

NOTE: When a fire is made for the first time, the paint will harden and that give off smoke and a smell, which starts after the fire has burned for about 10 minutes and lasts for about 15 minutes. See to it that there is ample ventilation in the room.







pic. 3

CAUTION:

It is not necessary to overload the fireplace with wood.

1 kg dry wood gives a 4 kW power.

Example: a fireplace with a 78% return gives a power for about $4\text{kw} \times 78\% = \pm -3 \text{ kW}$ for 1 kg dry wood.

If you want a power of +/-12 kW , it is just enough to put 4 kg wood in the fireplace. This is like two normal pieces of wood.

Be carefull not to use palletwood (this gives an enormous heat) for continuous heating. This can lead to fire hazard. We are not responsible for the bad use of the fireplaces and any consequence for not following this guideline.

2. INSTALLATION

2.1 ACTIONS TO BE TAKEN UPON INSTALLATION

Your supplier is the specialist who chose to represent M-design in your area. For your own safety and satisfaction, we advise you to entrust him with the installation. The appliance has to be installed according to certain prescribed rules and local regulations.

In the absence of the correct regulations in Belgium, the French regulations in respect of

In the absence of the correct regulations in Belgium, the French regulations in respect of installation will be (D.T.U. 24.2.2) applicable.

However, if you decide to carry out the work on your own, we advise you to do the following:

- Refer to the terms and conditions of our contract of guarantee.
- Ask your supplier for advice.

2.2 POSITIONING THE FIREPLACE

Place the fireplace on a stable surface using the adjustable feet. Adjust the height of the fireplace by turning the bolt (pic 1)



The stove may not be placed direct ont the floor to allow natural convection. The appertures for the air supply (IN) is situated underneath the appliances.

Regulating the height of the appliance:

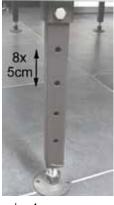
This can be made in two ways.

A regulation by 8 times 5 cm (pic. 1) and a fine regulation by screw (pic. 2).

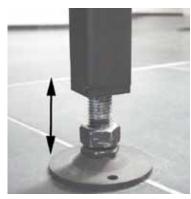
The minimal height as from ground to the 4th side frame is 3,5 cm (A min).

The minimal height "C min" will be 18 cm, measured as from the ground to 4th side frame (pic.3).

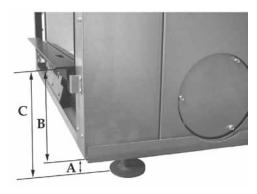
The maximal height as from the ground to the 4th side frame is 45 cm.



pic. 1



pic. 2



A min = 3,5 cm B = 14,5 cm

C min = 18 cm

pic. 3

2.3 INSULATION AND FINISHING



Please, follow this instruction. The appliance can overheat if you not apply those instructions.

Once installation is complete, the appliance can be fitted. Once you have checked everything, you can perform the final insulating and finishing operations.

The built-in part of the furnace tends to be very warm. Please check that the furnace is not too narrowly fitted and that there is adequate space for the elimination of hot air. For insulation of the furnace, we advise you to use M Design insulating plates. You are advised against using any other insulation product. Inflammable materials as well may not be used for the finishing.



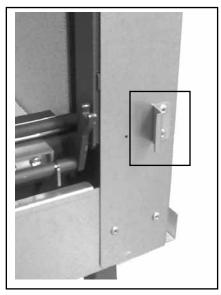
The masonry must be raised around the furnace. Because of the expansion of the furnace during combustion, an interstice of at least 5 mm must be provided on each side of the appliance. The masonry must not lean against the furnace.

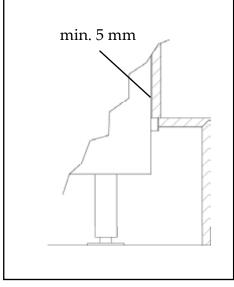
THE APPLIANCE MUST BE SET FREE.

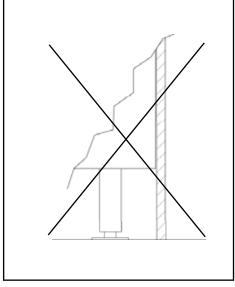
Please pay attention to leave approx. 2 mm inbetween the finishing frame and maconry (see p.17, mounting a 3-sided frame)

REFERENTIAL DISTANCES IN REGARDS TO FINISHING THE MANTLEPIECE

A very essential point when setting up the Luna Gold is that the distance has to be respected inbetween fireplace and the finishing material for the mantlepiece such as marble, gipsum,... For this, a small bended metal sheet that is provided ont the fireplace (pic.1), is to be used as the minimal reference for the distance. The finishing can only ga oas far as this meteal sheet (pic.2). Don't remove this (pic.3)! This allows you to take out the 4th side frame and to let the airflow in the mantlepiece for natural convection.







Pic. 1 Pic. 2 Pic. 3

2.4 MOUNTING A 3-SIDED FRAME (see page 23 and 24 drawings 3-sided frame and 4th side)

First remove the profile that is delivered with the fireplace (pic. 1)

The 3 sided frame consist of 3 parts and are assembled to the Luna (pic. 2)

Fixing to frame with the included screws (pic.3)



the 3 sides frame and his 3 parts



pic.1



pic.3



PLEASE PAY ATTENTION TO LEAVE APPROX 2 MM INBETWEEN THE FRAME AND THE FINISHING MATERIAL (HEAT = EXPANSION)

Example:

Finished size of the Luna 1150H+ Gold is 450 x 1080 mm

Thickness 3-sided frame: 3mm

Calculate as follow: 1080 mm + 2x3 mm (3-sided frame) + 2x2 mm (expansion) = 1090 mm.

This is now the measurement you need to have when using a 3-sided frame in combination with marble, gyproc, or othet materials.

For the height you start calculate from just underneath the 4-sided frame to the top of the 3-sided frame: this is 450mm. For the finishing measurement calculate 450mm + 2mm.

2.5 AIR SUPPLY FOR COMBUSTION

Every form of combustion uses air. In the case of a thermally sealed room supplementary air supply is essential. One must at all times avoid creating under-pressure in the room. If a cooking hood appears to be absolutely essential in the adjoining room, sufficient

air supply will have to be provided to avoid every form of under-pressure.

You need an airlet with dia. 150mm coming from outisde, or a ventilated shelter. This airinlet you have to connect to the Luna.



For a double sided LUNA and the LUNA 1000V+ and 1150V+, you need two air inlets dia. 150mm.

With the Luna Gold+, the fresh air for combustion is supplied directly from outside through a flexible (dia. 150mm) that is connected to one of the 4 entrances that are provided on the left, right or lower side of the fireplace (pic. 4 & 5). Use for this purpose one of five connection pieces (pic. 6 & 7)

Thanks to this new system, the air that is required for combustion is completely separated from the convection air stream in the room (see further at point 2.3. Convection current). The appliance is always delivered with an open air inleet at the left side. If you want to change, you can remove the plate on the side you wish to connect en replace the plate on the side that was open before.





pic. 5



	ø150
Luna Gold 700 H+	1 x ø150
Luna Gold 850 H+	1 x ø150
Luna Gold 1000 H+	1 x ø150
Luna Gold 1150 H+	1 x ø150
Luna Gold 1300 H+	1 x ø150
Luna Gold 550 V+	1 x ø150
Luna Gold 850 V+	1 x ø150
Luna Gold 1000 V+	2 x ø150
Luna Gold 1150 V+	2 x ø150
Luna Gold 1150 DH+	2 x ø150
Luna Gold 1000 DV+	2 x ø150
Luna Gold 850 DH+	2 x ø150
Luna Gold 850 DV+	2 x ø150



pic. 4





pic. 7

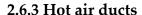
2.6.1 Natural convection

It is compulsory to open 2 or 4 hot air vents (see table 1) at the top of the appliance. The entrance for the air supply convection are situated at the lower backside of the Luna Gold+ and also through the opening that is provided for the fan. These have been constructed in such a way that no air can be blown out along here, not even with a fan. The stove is placed at least 20 mm above the floor (if placed on the floor) to allow for natural convection.

A clearance of at least $4\,dm3$, excluding the measurements of a dust filter, or at least $6\,dm3$, including the measurements of a filter, must be provided for in the masonry. (Note: Remember to take the measurements of the clearance of the grids into account.) (Pic.7a)

2.6.2 Convection by means of a fan (optional)

It is compulsory to open at least 2 hot air vents (see table 1). It is essential to separate the air supply ducts and the air vents correctly in the masonry. Some insulation material gets damaged in time, and it is essential to separate it from the ventilation air supply, otherwise one runs the risk that it is sucked in and spread in the house. It is therefore also advisable to use fixed insulation plates (Promatec, HT-platen or promatec). The fan may be mounted either on the outside or on the inside, which even makes it possible to install a fan afterwards.



Thermally insulated ducts are essential for the optimal functioning of the appliance (these cause 'draught' in the convection air current). By using the maximum number of ducts (at least 2), the output is improved and the noise (that is caused by the displacement) is reduced.

For the purposes of the installation of these ducts it is best to go vertically upwards first for at least 1m and then to change direction, making a rather wide bend and avoid using a flue terminal grid with a small clearance because the speed loss that this causes reduces the efficiency of the hot air vents.

M-design has developed its ideal hot air grids which have many advantages (Pic 7b and 7c)

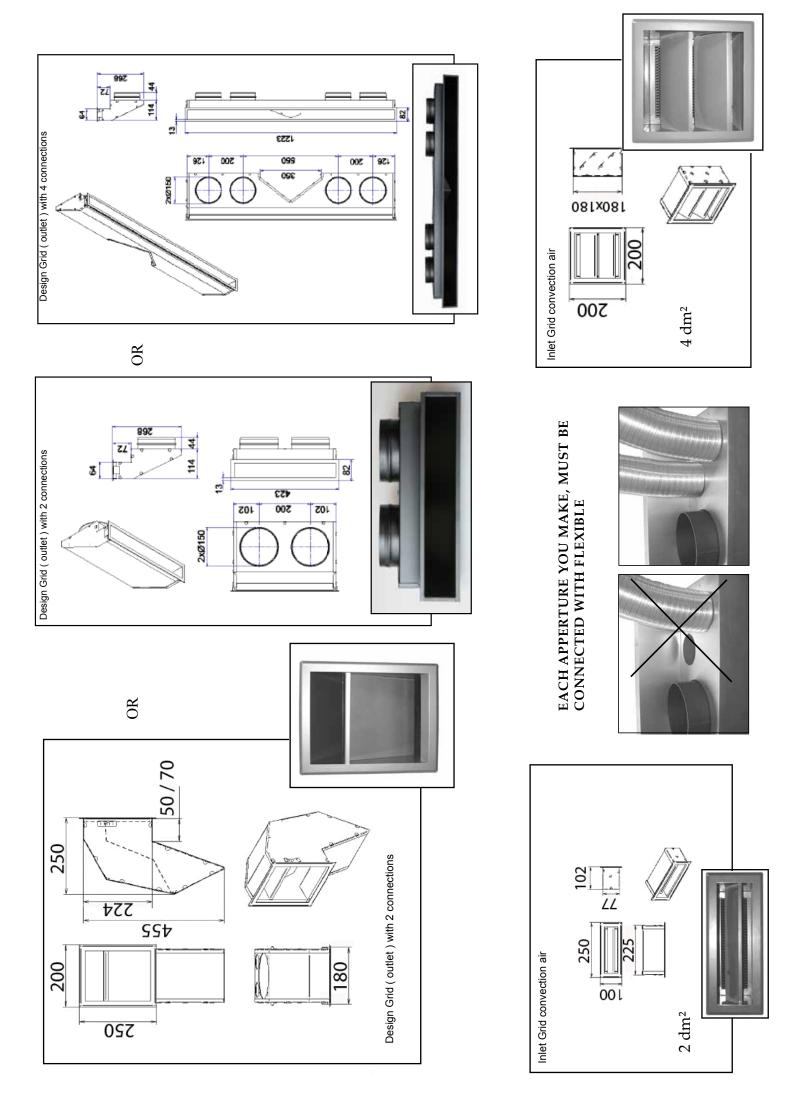


Pic. 7a



Pic. 7b

Tabel N°1. Warm air outlet				
	with fan	without fan		
Luna Gold 700 H	2	2		
Luna Gold 850 H	2	2		
Luna Gold 1000H	2	4		
Luna Gold 1150 H	2	4		
Luna Gold 1300 H	2	4		
Luna Gold 550 V	2	2		
Luna Gold 850 V	2	4		
Luna Gold 1000V / 1150V	2	4		
Luna Gold 850 DV / DH		2		
Luna Gold 1150 DH		2		
Luna Gold 1000DV		2		

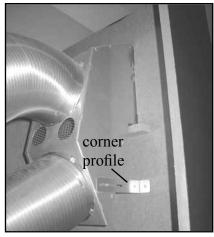


The grids are provided with two connections. 2 flexibles for one grid! Two holes between the two connection provides ventillation in the maconry.

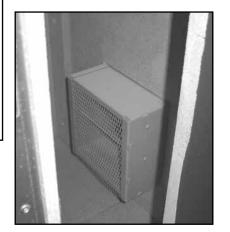
To simplify the mounting of the grids you can use the corner profile wich is furnished with the grid. This profile is can be mounted on the side of the grid (two little wholes en screws are provided).



Note: a circulation of hot air requires that no under-pressure be created in the room. A grid that is near the floor (pic 7d) sees to it that cold air can be drawn in. Don't connect those with a flexible. Air will find the way to get at the right place. Place all the fittings that you use at the same lengths and angles if possible, otherwise it is possible that some grids give off more heat than others and, seeing that a hot air pipe functions in a manner similar to a chimney, the one that is hot first has the most draught and therefore becomes hot even more quickly.



Pic. 7c



Pic. 7d

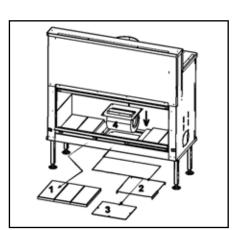
2.7 FAN

2.7.1 Installation

- Remove the Chamotflex plates, the bottom plates and the opening to the fan. See pic.8.
- Now slide the fan downwards to just under the stove.
- Make the necessary electrical connections.

2.7.2 Fan dimmer

- •Leave the adjustment of the fan speed closed.
- Fuse 1.5A (Take the knob off, unscrew the little plate, take it out if it is to be replaced.)
- The adjustment screw for the minimum speed is under the knob. (M-design has developed a new induction dimmer which lets the fan run noiselessly and which may be bought as an option.)
- The fan (optional) may be started after the fire has burned for 15 minutes.
- Let the fan turn at the maximum speed for 12 hours the first time to let it run in.



Pic. 8

2.8 FLUE

2.8.1 Flue

The construction of chimney must comply with strict conditions:

All the Luna stoves have a standard flue opening of 250 mm. in diameter. Certain chimney configurations may require different standard diameters. In that case, look at table for the height of the flue and the possibility of reducing the diameter with the help of a reduction piece. Note: per 45° change of direction, one must keep to within 1m of this table.

• The flue must be thermally insulated.

The opening into the flue and its position are very important.

• One individual flue does not have more than two changes of direction.

The angle of the corner of these changes of direction may not be greater than $45\,^\circ$ with the perpendicular.

- The existing obstacles in the vicinity of the opening into the flue must be taken into account.
- Do not connect more than one stove to a chimney flue.

Table N°2 / MINIMUM HEIGHT OF THE FLUE IN TERMS OF ITS REDUCTION.

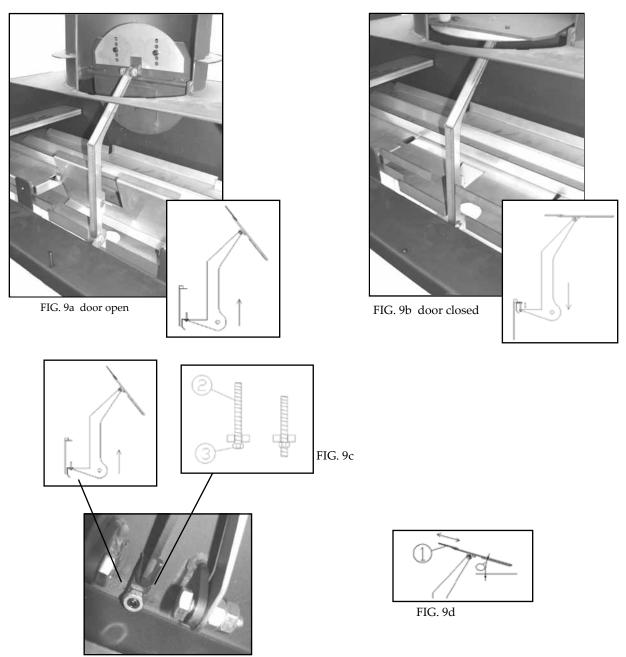
	ø 300	ø 250	ø 200	ø 180
Luna Gold 700 H+			>4m	>7m
Luna Gold 850 H+		≥ 4m	>4m	>7m
Luna Gold 1000 H+		≥ 4m	>5m	
Luna Gold 1150 H+		≥ 4m	>6m	
Luna Gold 1300 H+		≥ 5m	>8m	
Luna Gold 550 V+		≥ 4m	> 4m	>7m
Luna Gold 850 V+		≥ 4m	>7m	
Luna Gold 1000 V+		≥ 4m	>8m	
Luna Gold 1150 V+		> 5m		
Luna Gold 1150 DH+	≥ 5 m	>7m		
Luna Gold 1000 DV+	≥ 5 m	>8m		
Luna Gold 850 DH+		≥5m	>7m	
Luna Gold 850 DV+		≥ 5m	>8m	

2.9. HOW TO REGULATE FIREPLACE IN SENSE OF DROUGHT

2.9.1 Baffle plate

The stoves have all been provided with an automatically adjustable baffle plate. This can be adjusted according to the chimney draught. In this way, all stoves are suited to every chimney and draught. The baffle plate is automatically opened when the window is slid open, so that no smoke escapes into the living room. The plate may be adjusted in 2 ways.

2.9.1.1 FIRST SETTING: ANGLE BAFFLE PLATE WITH CLOSED DOOR

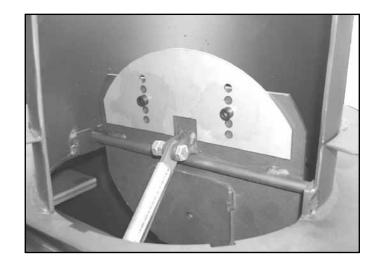


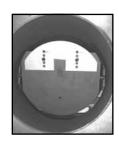
Setting the inclination (a) of the trottle when the door is closed (fig. 9a). Screw in or screw out the screw spindle nr.2 (When necessary: completely remove the nut nr.3 and don't forget to put back afterwards)

When the door is closed, the trottle will be completely horizontally when you're screwing out the screw spindle to the highest position (fig 9b).

2.9.1.2 SECOND SETTING:

Remove screws to adjust the moving plate nr 1 (fig 9e) in sence of drough





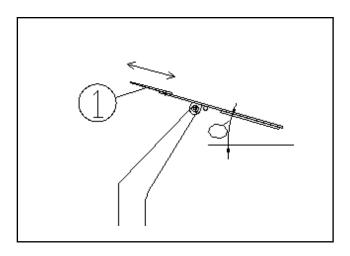


FIG. 9e

IMPORTANT:



IF YOU THINK THE DROUGHT IS NOT ENOUGH AND YOU HAVE SOME SMOKE RETURN IN THE LIVINGROOM, THEN YOU HAVE TO CHECK FIRST POINTS 2.9.1.1 AND 2.9.1.2.

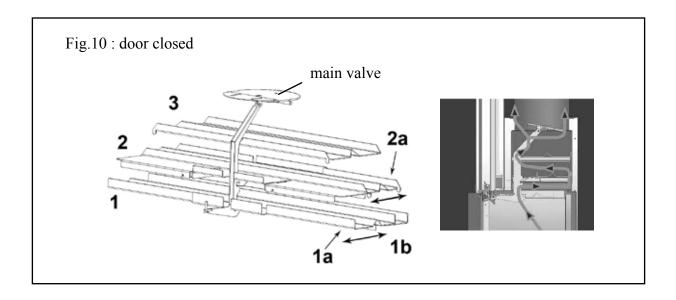
THIS IS IMPORTANT BEFORE YOU DO ANY OTHER REGULATION.

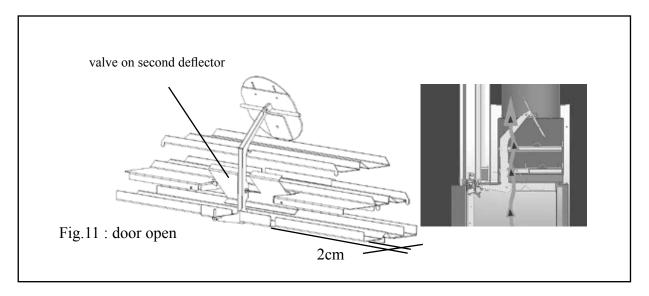
2.9.2 SYSTEM WITH THREE DEFLECTORS AND TWO AUTOMATIC VALVES

With a closed door (fig 10), we have a minimal evacuation for the combustion gaz. The main valve is closed (fig.10)

The second deflector has a valve too (fig.11).

When opening the liftdoor, the main valve and the second valve in the second deflector are opening simultaniously (fig.11). The combustion gaz is going out quickly when the window is open and is not going into the livingroom.





Installing the deflectors:

The first deflector (1) exists of two parts. A movable part (1a) and a fix part (1b).

Plate (1a) leans on plate (1b).

Plate (1b) has some trenches (see picture 13 and 14).

The minimal opening to remove the gaz is about 2cm along the width of the first deflector (fig.11). When there is to less draught, you can make this gap bigger by lifting up plate nr. 1a. Put this plate more to the backside in the trenches of plate (1b).

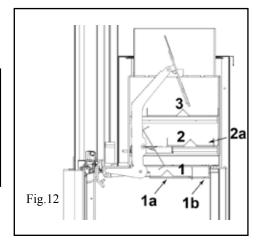
You can move plate (2a) in the same way as plate (1a).

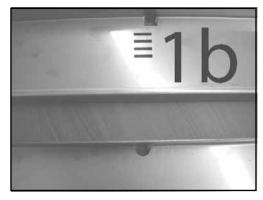
In some exceptional situation, when the draught is very poorly, you can remove the plate nr 1a.

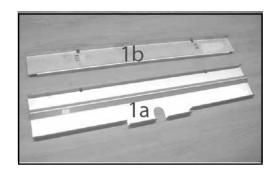
IMPORTANT:



THIS MUST BE DONE IF YOU DIDN'T FOUND SATISFACTION WITH 2.9.1.1 AND 2.9.1.2







Pic..13

ATTENTION: FOT THE LUNA 550V YOU DON'T FIND A PLATE nr 1a AND nr 3. THIS IS BECAUSE OF THE NARROW ARCHITECTURE OF THIS MODEL. IN ANY CIRCUMSTANCES THIS WILL NOT GIVE A BAD FUCNTION OF THE APPLIANCE.

2.9.3. SECUNDARY AIR FLOW FOR COMBUSTION

At the top of the window, across the whole witdh, a secondary air flow for combustion is provided. The gap between the main frame of the appliance and the window is regulated automatically with two bimetallic strips. At each of the superior corners of the window, you'll find two circular magnets. Those ensures that the window is closing well against the bimetals situated on the main frame of the applliance.

When the aplliance is still in cold situation, the gap between the window and the main frame is made in that way the fire gets enough oxygen. When the appliance gets warmer, bimetals comes in action and pulls the window in their direction to reduce the gap and in this way reduces automatically the intesity of the fire.

If you are feeling the combustion is a less controlable, it is possible to remove a ring (pic.15), even two if necessary. Remove first the magnet and you will find the rings behind it.



Pic.15

2.10 AUTOMATICALLY ADJUSTABLE DOUBLE PLATE

(Luna Gold see-trough)

In the illustrated figure, the first lift door and the first plate will drive the second lift door and second plate. The lift doors have been provided with a mechanical transmission to drive the different plates.

Seeing that the plates are driven by two independent lift doors, the smoke flue tube will only be partly closed off by one plate when burning with only one lift door open, with the result that the fire will keep burning much more mildly.

When there is a fire with two lift doors open, both the plates will automatically open up completely and therefore there will be no more smoke in the living room. When there is a fire with both lift door closed, both plates will also close and, therefore, partly close off the smoke flue tube. This will cause the temperature in the stove to be higher, wich will result in an improved combustion and a substantially higher output, much less pollution of the environment and much less wood or fuel consumption. The windows of the lift doors, wich make the see-trough stove so interesting will stay clear for much longer.





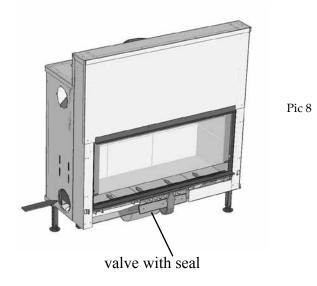
FIG. 15

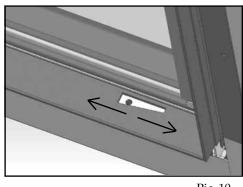
3. FUNCTIONNING

When burning this fireplace with a closed door, the air clapet with seal is closed and so the fire takes the air through the channel connected with the flexibel from outside. The air is then spread underneath the spoiler over the entire width of the fireplace. **It is important to clean** out the fireplace from the ashes and to free the space under the spoiler to let the air coming into the fireplace (Pic.9).

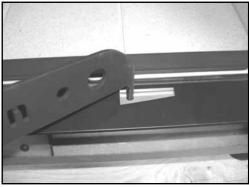
When the door is opened, the air clapet is also being opened. Extra air is going in the fireplace trough apertures situated in the 4th side frame direct from the air channels (see arrows into the fireplace on pic. 8). Of course air is also taken from the livingroom.

The primary air supply can be regulated manually. Use the key (pic. 10 & 11) to slide the regulator to the left for opening primary air and on the right to close primary air. When door is open this regulation will not have an effect on the fire.

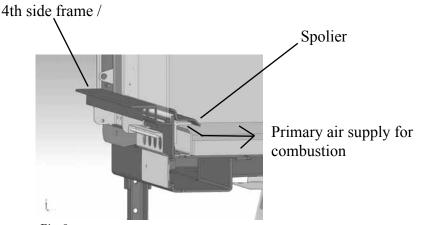








Pic. 11



4. GENERAL RECOMMENDATIONS

The appliance must be connected to the flue pipe and tested before the material is cemented in. In order to ensure that the appliance functions optimally, one must insulate the hot air ducts completely, comply with the minimum of the diameter measurements for the hot air ducts and hot air vents and the chimney must be adjusted. Do not put any inflammable materials in the immediate vicinity of the stove.

Note: If you leave the door open, little burning pieces of wood may be projected onto the floor. Insulating materials: it is preferable to use "high temperature" materials.

It is strongly advisable to position the chimney and to connect the stove in such a way that no humidity or water can enter the stove. Humidity and water are the greatest enemies of the Chamot-flex in the appliance because it can swell and burst after the fire has been lit.

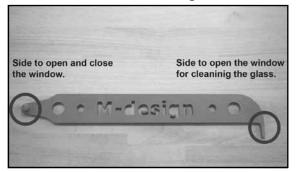
4.1 MAINTENANCE

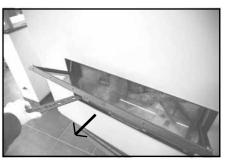
- Besides regularly cleaning the window, you must have your chimney swept at least once a year for optimal
- functioning of the Luna. (Not only is this a legal requirement, but it is also meant for your own safety.)
- A fire brick (Chamotte) can still work perfectly, even if it is cracked, but if pieces are missing the brick must be replaced to effectively protect the combustion chamber.
- Remove the remainder of the ash in time, take the ash pan and remove a great part of the ashes from the Luna.

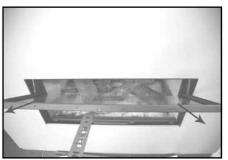
Note: Never remove all the ashes because a fire always burns better with its own ashes.

4.1.1Cleaning the window:

- Close the window
- Open the window to 45°. (Pic. 16)
- Once you have done this, you can slide it up and down to clean it.
- We advise you to use M-design's "Bio-Clean" to clean the window, which is available from your supplier. It is one of the few products that do not harm the lacquer (Pic.17).
- It is necessary to grease the convection mechanism with heat-resistant silicone oil if you use the stove frequently. DO NOT USE ANY OTHER type of grease or oil. This Teflon-based grease is also available from the M-design dealers. The mechanism could otherwise dry out and the window could be blocked when the temperature is constantly high.







Pic. 16



Pic 1



5. GUARANTEE

5.1 TERMS AND ITEMS COVERED

- 8 years' guarantee on the general structure.
- 2 years' guarantee on the parts and on the baffle plate
- 1 year's guarantee on the fans and the speed variator.
- No guarantee on glass, seals or Chamotflex plates

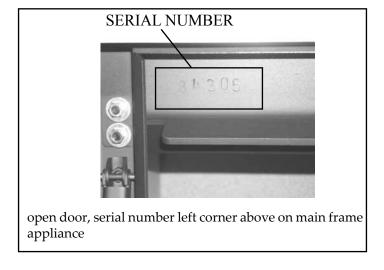
5.2 PROVISO

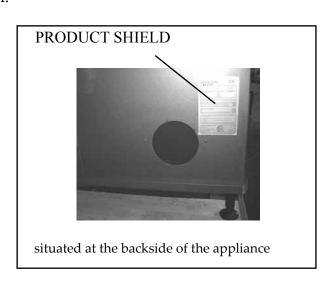
This contract ceases to be valid if the instructions and guidelines of these operating instructions were not followed. Indemnification during the guarantee period will take place only through the supplier's mediation upon presentation of the invoice of purchase. Parts will be delivered only in replacement of defect parts.

5.3 DISCLAIMER

Damage, loss and malfunctions linked to:

- Incorrect installation of incorrect connection.
- Chimney draught that has not been adjusted.
- Transport and installation.
- Incorrect usage.
- Insufficient maintenance.
- Unsuitable, hazardous and damp fuel.
- Every internal adjustment to or reconstruction of the stove.
- Burning at extremely high temperature, more than 12 kw.
- Costs for packaging and transport.
- All costs not pre-arranged with M-design.
- Costs linked to the misuse and/or abuse of the appliance.
- Elke interne wijziging of ombouw van de haard.
- Branden met extreem hoge temperatuur, meer dan 12 kw.
- Kosten voor vervoer en verpakking.
- Alle niet op voorhand aangenomen kosten door M-design.
- Kosten verbonden aan het misbruiken van het toestel.





Your Serial number

