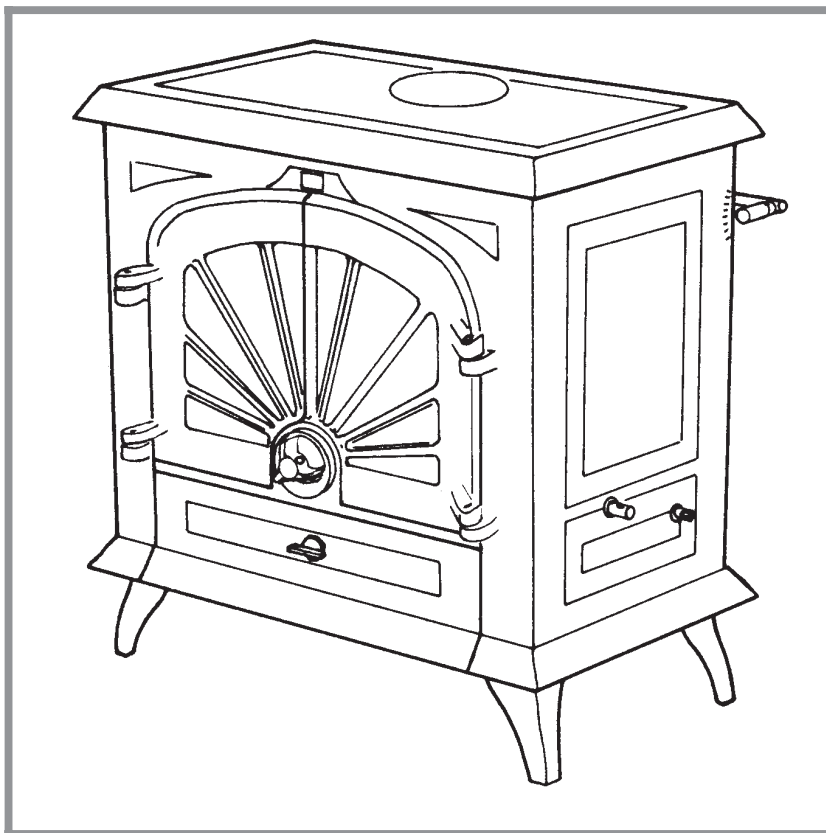

Lorraine MF

Multifuel stove

Model : 121 13 01

Output : 12 kW



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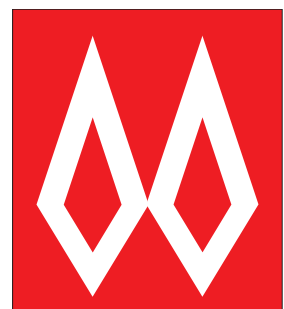
Document n° 280-3GB ~ 17/12/1997

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Technical manual

to be saved
by the user
for future
reference



FRANCO BELGE

Les Fonderies Franco-Belges
F 59660 MERVILLE
Téléphone : 03.28.43.43.43
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RC Hazebrouck 445750565B
Matériel sujet à modifications sans préavis
Document non contractuel.

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WARNING

The appliance must be installed in compliance with Current Building Regulations. Incorrectly installed, this appliance can be dangerous and possibly cause serious accidents. The manufacturer's responsibility shall be limited to the supply of the equipment. □

1. Description of the unit

1.1. Package

- 1 package : Stove complete.

1.2. General characteristics

Reference	121 13 01
Maximum heat output kW	11,7
with sunbrite doubles Btu/hr	40 000
Heat output to room KW	4,1
. Btu/hr	14 100
Heat to water KW	7,6
. Btu/hr	25 900
Boiler capacity litres	9
Maximum working temperature ° C	85
Weight Kg	150
Fire box dimensions	
- width mm	460
- depth mm	260
- useful height mm	180
ashpan capacity litres	6
overnight solid fuel loading Kg	8

1.3. Descriptif

- Multifuel stove.
- Fuel burnt on grate.
- Enclosed combustion chamber with steel walls.
- De-ashing and ash-dumping devices.
- Large ash-pan.
- Adjustable air controls with thermostat.
- Detachable flue spigot for rear or top chimney connection.
- Boiler with water connections.

1.4. Principle of operation

The " Lorraine MF " is designed for operation with the door closed.

Heat is mainly diffused by radiation, through the window and body of the appliance.

Adjustable air controls with thermostat for controlling the burning rate.

Combustion occurs on the grates in a hot enclosed combustion chamber. The thermostat regulates the draught entry under the grates. □

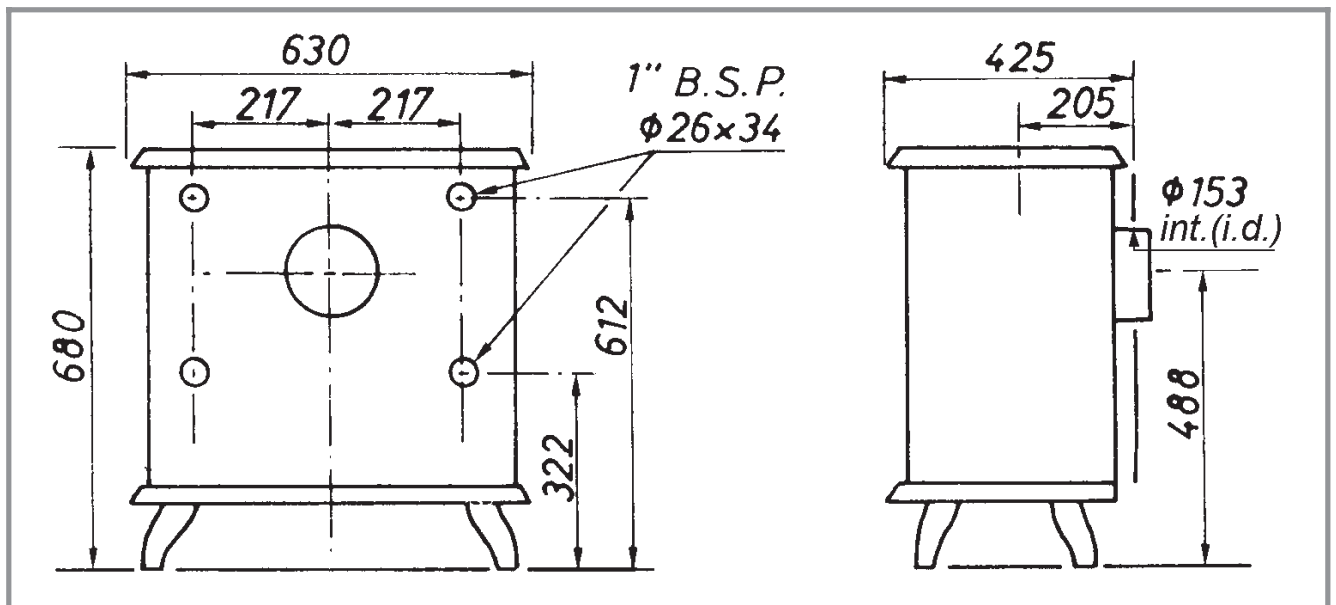
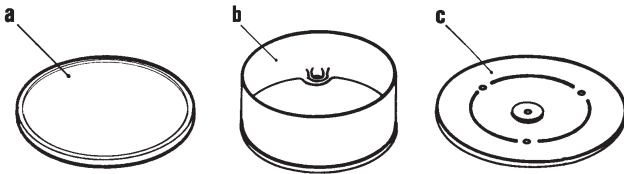


Figure 1 - Dimensions in mm

2. Installation instructions

2.1. Assembly of the flue collar and the blanking plates



The flue collar and the 2 blanking plates are assembling deliver on the stove for smoke exit at rear.

Smoke exit at rear (fig. 3) :

The blanking plates are fitted on the top plate from factory, fit the flue collar (3 bolts) with fire cement. Lift the top plate (2 bolts) and remove the rear heat shield.

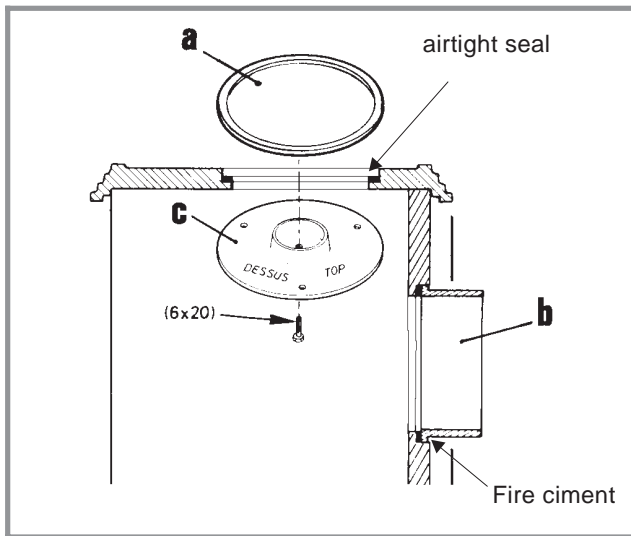


Figure 3 - Rear flue outlet

For installation smoke exit on the top (fig. 4):

- Lift the top plate (2 bolt) and remove the rear heat shield.
- Remove the flue baffle (# 50, p. 11).
- Exchange the blanking plates with the flue collar, ensuring that it is leaktight.
- Replace the flue baffle.
- Reinstall the rear covering and closed the exit position with an iron plate.
- Refit the top plate.

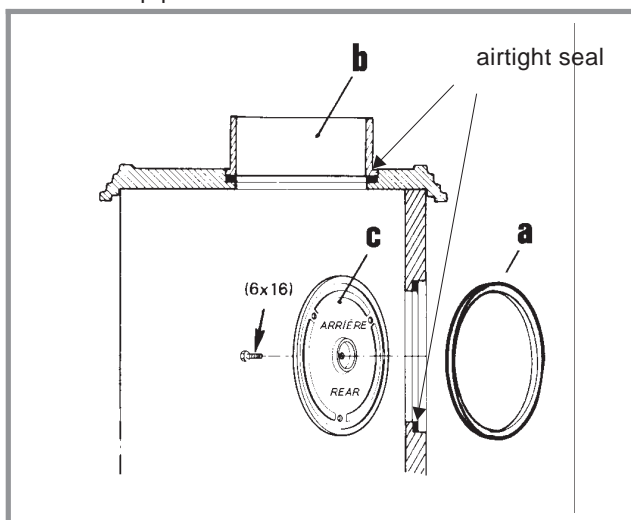


Figure 4 - Top flue outlet

2.2. Installation

Important : Before commencing the installation of your new appliance it is recommended that the instructions are read and understood.

Health and safety at work act 1974 :

The installer should comply with the Health and Safety at Work Act 1974 and with particular reference to the following.

Handling :

Adequate facilities should be provided for handling the appliance.

Glass :

Extra care should be taken to avoid breakages.

Fire cement :

Care should be taken to avoid fire cement contacting the skin. The material is caustic and in the event of contact being made, wash off immediately with clean water.

Electrical :

If electrical components are to be used in the installation system, all installation work must be carried out in accordance with the Regulations for the Electrical Equipment of Buildings. Care should be taken to conform to the installation instructions of individual manufacturers.

Flues, combustion air supply and connection of the appliance

Current Building Regulations and relevant Codes of Practice must be observed.

The responsibility of FRANCO-BELGE only affect the supply of the appliance.

2.3. Siting the stove

The hearth on which the stove is to be installed must comply with Current Building Regulations.

A fresh air inlet must be provided in order to allow efficient combustion and to avoid a vacuum effect being created in the room ; air extractors and fans must not be used in the same room or adjoining room to the installation.

This stove is not designed to be built in, and an air space of at least 150 mm must be left all around the stove. Ensure that appliance and flue pipe are clear of combustible materials.

The stove should be level. Sufficient access for chimney sweeping and appliance cleaning must be provided.

2.4. The chimney

The chimney must be in good condition free from cracks and blockages and should not have an excessive cross sectional area. If problems are encountered expert advice should be sought regarding the necessity of having the chimney lined. Should it be found necessary to line the chimney, a lining suitable for solid fuel must be used. If the appliance is to be fitted in a room where there is no existing chimney a prefabricated block chimney or a twin walled insulated stainless steel flue to B.S 4543 can be used either internally or externally. The internal diameter must not be less than 150 mm (6 inches). These flues must be fitted in accordance with the manufacturers instructions and Building regulations.

Before connecting the appliance to an existing flue, the flue must be swept and checked. In order for the appliance to perform satisfactorily the chimney height should not be less than 5 metres measured vertically from the outlet of the stove to the top of the flue terminal. Should there be excessive draught in the chimney it may be necessary to fit a draught stabiliser.

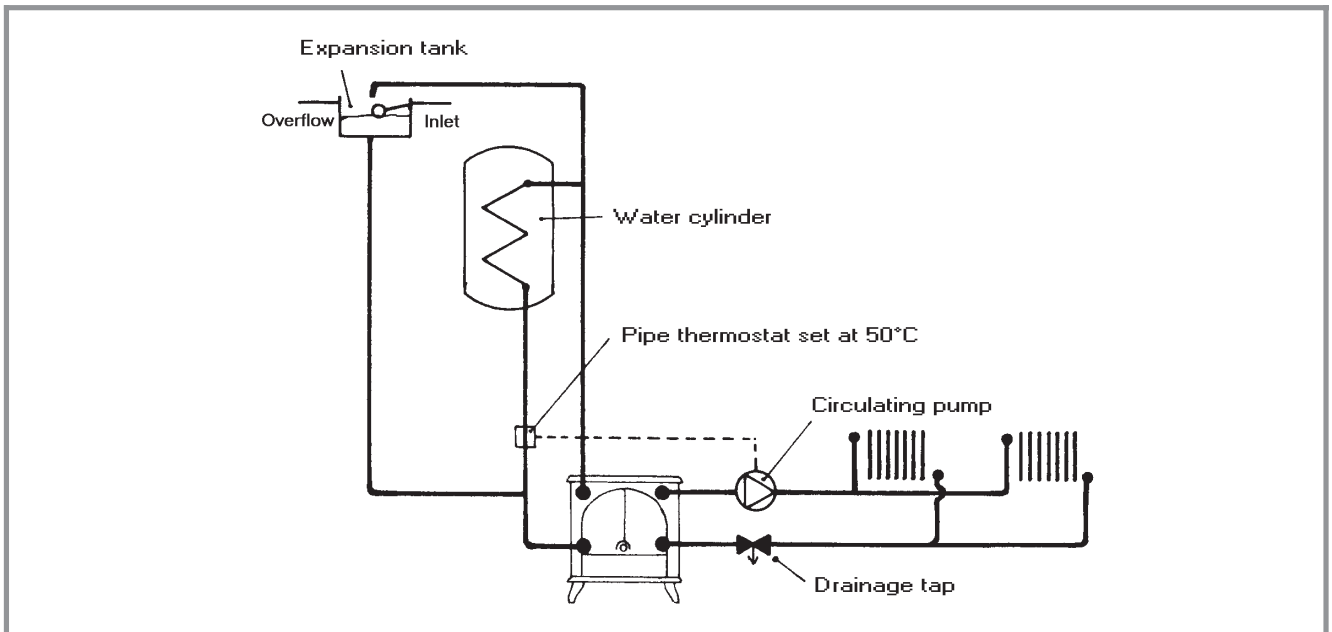


Figure 5 - Water connections

2.5. Chimney connection

No combustible materials may be set closer than at least 450 mm clearance.

A 150 mm diameter flue pipe will be required to connect the stove to the chimney. Make sure the flue pipe is suitable for solid fuel (cast iron, stainless steel, vitreous enamelled steel). Under no circumstances should flexible or asbestos pipe be used.

Too long horizontal smoke pipe may dangerously restrain the running of the appliance (do not exceed 0,3 m in length). The connecting flue should not exceed 1,8 m in length. Greater lengths should be completed by using twin-walled insulated chimney.

Ensure the flue pipe extends into the chimney but not so far that it blocks air flow.

Ceiling or wall penetration should always be made with insulated pipe and the proper accessories.

Allow fire cement to dry properly before lighting the stove. Stove running and chimney being hot, check if chimney draught is at least 10 Pa (1 mm w.g.) at normal rate and 15 Pa (1,5 mm w.g.) at maximum rate.

If chimney draught is too excessive, a flue stabiliser should be installed on the flue pipe or on masonry chimney so as to avoid the introduction of cold air into the chimney.

2.6. Water connections

FRANCO-BELGE recommends that the installation is carried out by a qualified heating engineer who is fully experienced in solid fuel heating installations.

Must be provided (fig. 5) :

- an expansion tank open to the atmosphere,
- an indirect cylinder,
- a gravity circulation to one radiator to dissipate heat when the pump is off,
- the fitting of a low limit thermostat to the primary return to ensure the pump does not operate when return water temperatures are less than 50 °C,
- a drainage tap in the return flow.

2.7. Check list before lighting stove

- check that all firebox parts (grates, flue baffle) are correctly fitted and that the oscillating grates move correctly when operated
- check the appliance for soundness of seals between casting (flue collar, blanking plates, loading doors, etc...)
- check the connection between the appliance and the chimney flue for air tightness
- check if there is enough water in the heating system and check the connections for water leaks
- after lighting up the stove, check if it operates correctly under fire, check for soundness of seals, leave the appliance operational with the heating system correctly balanced, hand over user instructions.

2.8. Adjustment of the thermostat

The thermostat has been set in the factory. If it becomes necessary to make adjustments or fit a new thermostat, the following procedure should be followed (see fig. 6) :

- ensure the appliance is cold,
- remove the rear metal heat shield,
- set the thermostat adjustment lever at position «8» (fully open),
- adjust the position of the screw on the lever arm to provide a gap of 50 mm,
- set the thermostat adjustment lever at position «1» (fully closed),
- refit the rear metal heat shield.

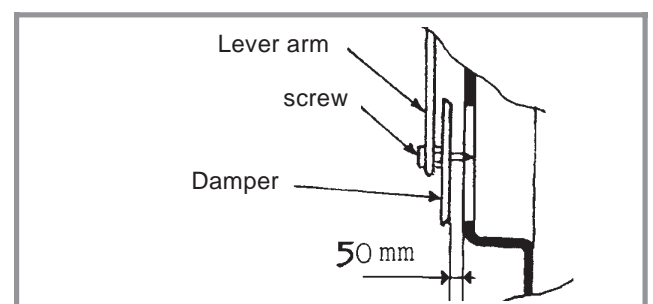


Figure 6 - Adjustment of the thermostat

3. Instructions for user

Warning : properly installed and operated this appliance will not emit fumes into the dwelling. Occasional fumes from de-ashing and re-fueling may occur. Persistent fume emission is dangerous and must not be tolerated. If fume emission does persist :

- open doors and windows to ventilate room
- let the fire out and dispose of fuel from the appliance
- check for flue or chimney blockage, and clean if required
- do not attempt to relight the fire until the cause of the fume emission has been identified and corrected. If necessary seek expert advice.

Note : It is recommended to use a fireguard in the presence of children, and also in the presence of old and/or infirm people

3.1. Lighting the stove

- Ensure that there is enough water in the heating system
Do not light the fire if it is suspected that any part of the water system is frozen.
- Use crumpled paper or firelighters and enough kindling wood to obtain a good fire bed.
- Set thermostat control in maximum open position.
- Light the paper through the fuel retainer and close the loading doors.
- Once the embers are glowing, load the firebox with solid fuel and close the doors carefully.
- Once the fire is burning well, set the thermostat to desired position.
- At first lighting, build up heat slowly to allow the appliance to be correctly "run in".

Note :

The body of the stove may emit some fumes and give off a new paint smell for the first couple of hours. This is quite normal and you shouldn't worry about it. Make sure the room is well ventilated during initial use.

Fuel

Recommended fuel :

Coal

Sunbrite (small) - Anthracite (Medium) - Dry Wood

Wood

- Use hard wood logs which have been cut for at least two years and stored under shelter.

- Hardwood has a higher calorific value per cu metre (oak, ash, maple, birch, elm, beech, etc.).

- Large logs must be split and cut to the usable length, before being stored in a sheltered and ventilated place.

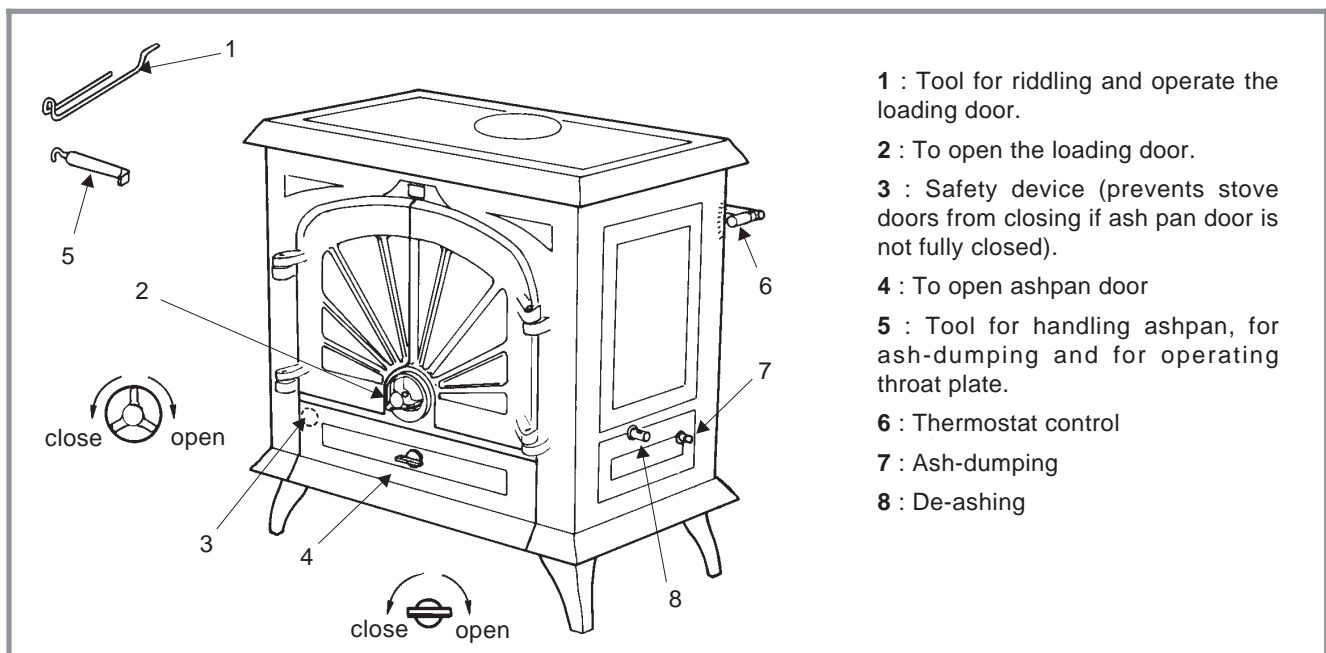
Not recommended as fuel :

- "green wood". Green or damp wood reduces stove efficiency and makes the window, the internal walls and the flue dirty (soot, tar, etc.).

- "used timbers". Burning treated wood (railway sleepers, telegraph poles, offcuts of plywood or chip board, pallets, etc.) quickly clogs the flue ways (soot, tar, etc.), pollutes the environment (pollution and smell, etc.) and cause the fire to burn too quickly and overheat.

"Green wood" and "recovered wood" can eventually cause a chimney fire.

Prohibited fuel : Any form of bituminous coal or petroleum based coke. ☐



1 : Tool for riddling and operate the loading door.

2 : To open the loading door.

3 : Safety device (prevents stove doors from closing if ash pan door is not fully closed).

4 : To open ashpan door

5 : Tool for handling ashpan, for ash-dumping and for operating throat plate.

6 : Thermostat control

7 : Ash-dumping

8 : De-ashing

Figure 7 - Operating devices

3.2. Running the stove

Rate of burning is obtained by setting the thermostat control.

Experience will show you which settings are best for your situation. In general, the higher position is only required for lighting and restoring the fire.

Overnight burning :

Riddle and de-ash ; run on high setting the stove for about 15 - 20 minutes ; once the embers are glowing well, stoke up the fire ; half close the thermostat control for about 15 - 20 minutes before finally setting the thermostat control for the night at low position.

De-ashing (fig. 8) :

Riddle and de-ash before refuelling and every time grates become congested. Keep fire bed and air inlet free from ash.

Riddle with vigorous forward and backwards movement of the riddling tool.

Ash dumping (fig. 9) :

With the casting handle, pull out control, then insert the wired handle in riddling control and turn downwards.

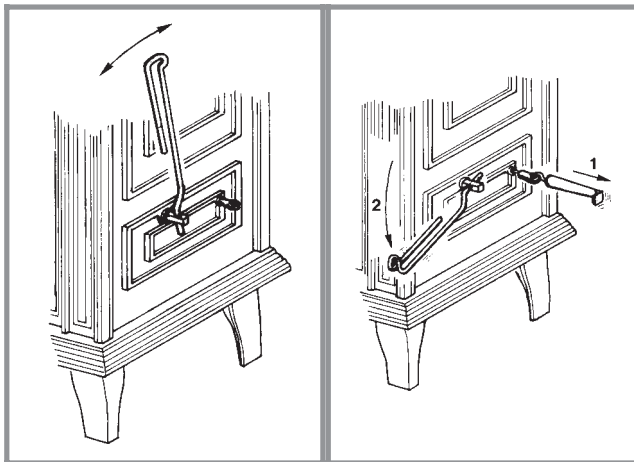


Figure 8 - De-ashing

Figure 9 - Ash-dumping

3.3. Maintenance

3.4. Care of the stove

Do not use abrasive cleaners, use a dry lint-free cloth or a soft bristle brush.

3.5. Cleaning the glass

Any deposits on the glass should clear when the stove is fired high. If there is any soot or tar left, first **do wait until the glass is cool**, clean with a proprietary stove glass cleaner.

Do not use abrasives cleaners.

The glass will resist temperature up to 750°C. Do not replace broken-glass with substitute materials. Consult your usual FRANCO-BELGE supplier.

3.6. Flue cleaning and summer time

The chimney and the connecting flue pipe must be swept a least once a year. Also remove any deposits from the oscillating grates, the firebox surfaces and the flue collar.

Keep the air inlet door free from ashes.

The top surface of throat plate (located inside the appliance between the two top tube sections) must be monthly cleaned of soot and fly-ash deposite. This can be achieved without removing it from the appliance :

If left unused for long periods (E.g. summer months) clean the appliance thoroughly, disconnect flue pipe and block the chimney, leave all air inlets fully open.

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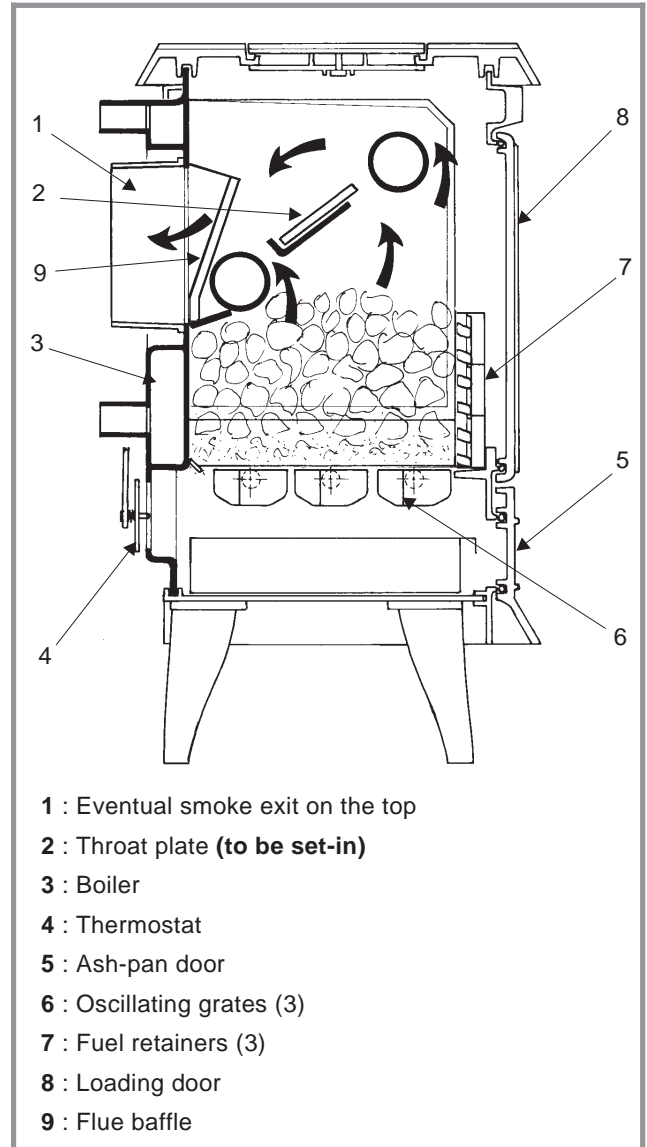


Figure 10 - Description

3.7. Removing the oscillating grates

Figure 11 :

De-ash and scale (see fig. 9) the grates.
Open the loading door and remove the fuel retainers.
Remove the 2 firebricks placed under each side of the

boiler. Lift up the left part of the oscillating grate, push it to the left and when the right part of the grate is free, tip it up completely. In case of exchanging old grates by new ones, operate one grate by one grate to make sure you keep the riddling device to the right place. After the exchange, check if riddling can be done easily without jamming.

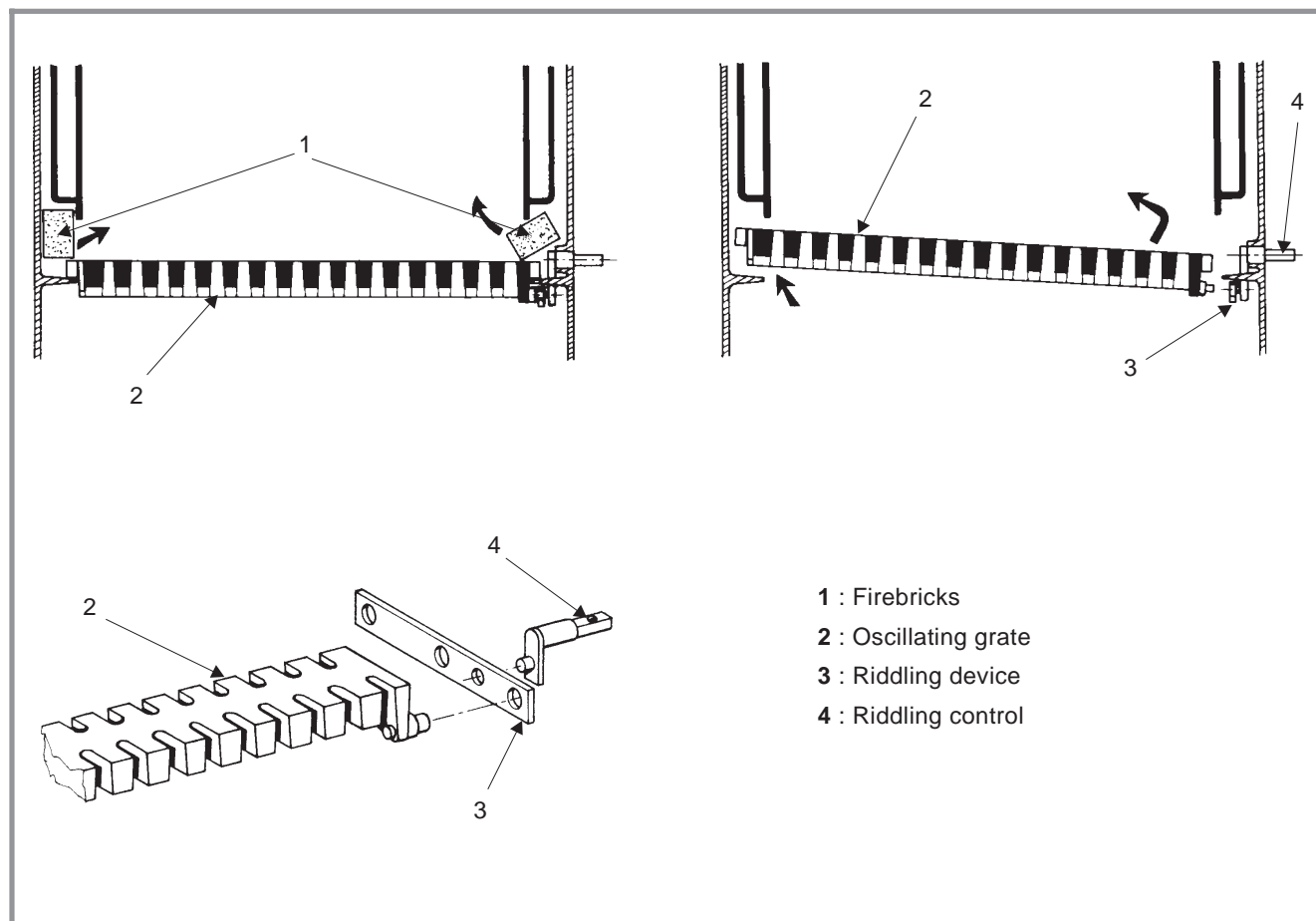


Figure 11 - Removing the oscillating grates

Trouble Shooting

Problem	Probable causes	Corrective action
Fire difficult to start Fire goes out	Wood green, too damp or poor quality	- Use the recommended fuel
	Logs are too big	- To light the fire, use small, very dry twigs. To maintain the fire, use split logs
	Air starvation	- Open lower spin wheel and top air control lever
	Insufficient draught	- Check that the flue is not obstructed, sweep it if necessary - Seek advice from a chimney specialist
Fire burns too quickly	Too much draught	- Ensure that the lower spin wheel is closed - Partially close the top air control lever
	Excessive draw	- Install a draught stabiliser. Consult your Dealer
	Poor quality wood	- Do not continuously burn small wood, sticks, bundles, carpentry offcuts (plywood, pallets), etc.
Smokes when lighting up	Flue duct is cold	Burn paper and kindling wood to increase heat
	Room is in decompression	- In houses equipped with mechanical ventilation, partly open a window until the fire is well established
Smokes while burning	Draught is insufficient	- Consult a chimney specialist. - Check that the flue is not obstructed, sweep if necessary
	Down draught	- Install an anti-down draught cowl. Consult your Dealer.
	Room is in decompression	- In houses equipped with CMV, an outside air intake must be installed for the chimney
Low heat output	Incorrect Fuels	- Use the recommended fuel

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4. List of components

When ordering spare parts, specify the stove type and serial number, including the colour index (on the guarantee

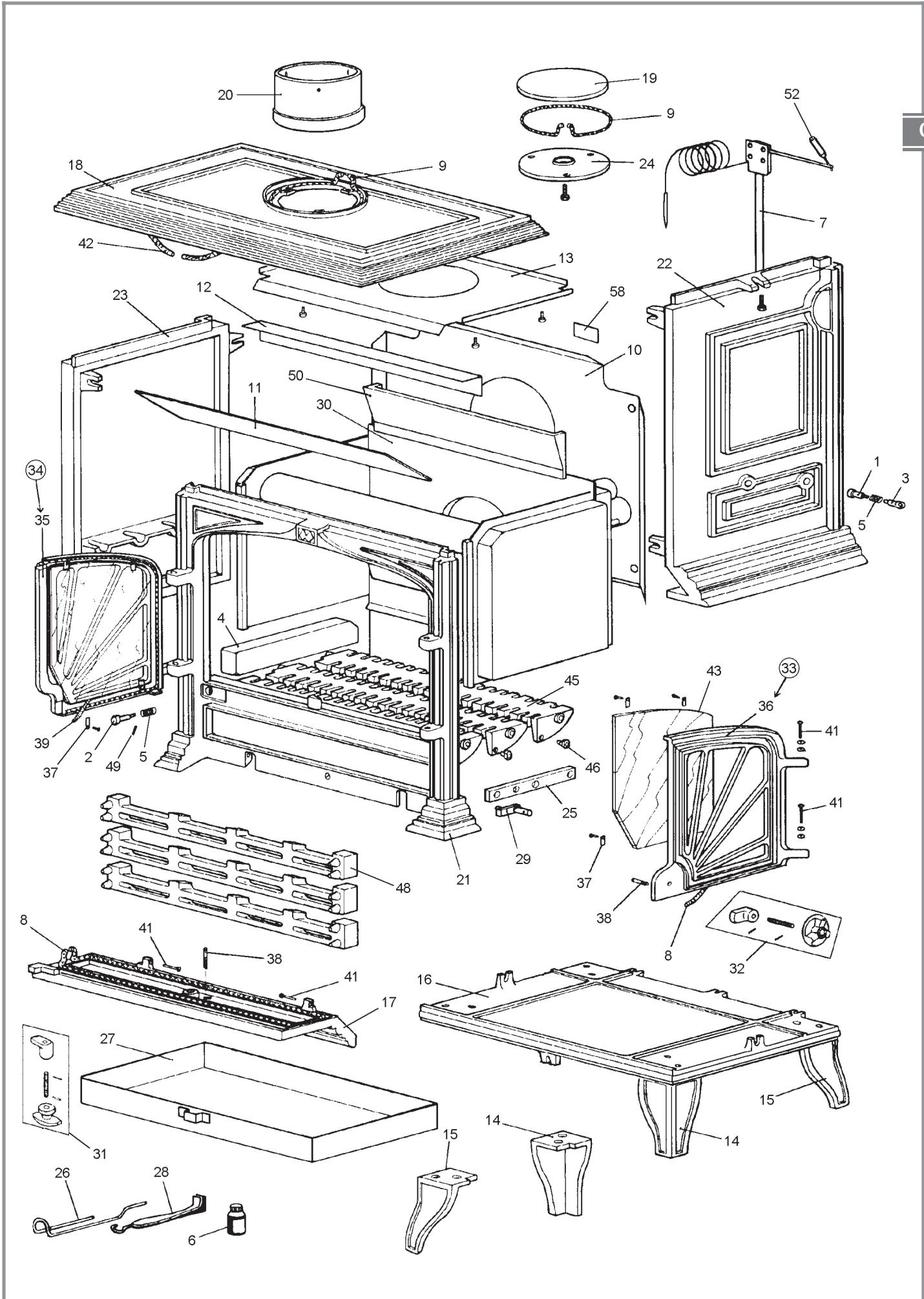
or identification plate), the name of the part and the part number.

Example : "Lorraine MF" stove, model **121 13 01 L**, cast top plate **302108-77**

Y = 121 13 01 Y ; L = 121 13 01 L ; K = 121 13 01 K

N°	Code	Description	Type	Qty	Y	L	K
1	100960	Axis		01	Y	L	K
2	100961	Axis		01	Y	L	K
3	105123	Ash dump knob		01	Y	L	K
4	105232	Firebrick		02	Y	L	K
5	166042	Spring		02	Y	L	K
6	161025	Brown touch up kits		01		L	
6	161026	Blue touch up kits		01			K
7	179015	Thermostat		01	Y	L	K
8	181614	Ceramics rope	Ø 9,5	2,78m	Y	L	K
9	181604	Ceramics rope	10 x 4	1 m	Y	L	K
10	205336	Heat shield		01	Y	L	K
11	222511	Flue baffle		01	Y	L	K

12	226816	Guide	01	Y	L	K
13	262307	Heat shield	01	Y	L	K
14	300105-59	Leg	02	Y		
14	300105-77	Leg	02		L	
14	300105-76	Leg	02			K
15	300217-59	Leg	02	Y		
15	300217-77	Leg	02		L	
15	300217-76	Leg	02			K
16	300462	Base plate	01	Y	L	K
17	301146	Ash paan door	01	Y		
17	301146-77	Ash paan door	01		L	
17	301146-76	Ash paan door	01			K
18	302108	Cast top plate	01	Y		
18	302108-77	Cast top plate	01		L	
18	302108-76	Cast top plate	01			K
19	303718	Blanking plate	01	Y		
19	303718-77	Blanking plate	01		L	
19	303718-76	Blanking plate	01			K
20	303826-59	Flue collar	01	Y		
20	303826-77	Flue collar	01		L	
20	303826-76	Flue collar	01			K
21	309834	Front plate	01	Y		
21	309834-77	Front plate	01		L	
21	309834-76	Front plate	01			K
22	310714	Right plate	01	Y		
22	310714-77	Right plate	01		L	
22	310714-76	Right plate	01			K
23	310814	Left plate	01	Y		
23	310814-77	Left plate	01		L	
23	310814-76	Left plate	01			K
24	327801	Inner plate	01	Y	L	K
25	404301	Riddling rod	01	Y	L	K
26	442100	Riddling bar	01	Y	L	K
27	624033	Ash pan	01	Y	L	K
28	808001-60	tool	01	Y	L	K
29	900914	De-ash catch	01	Y	L	K
30	911115	Water jacket	01	Y	L	K
31	900915	Lock complete	01	Y		
31	900916	Lock complete	01		L	
31	900917	Lock complete	01			K
32	900918	Knob complete	01	Y		
32	900919	Knob complete	01		L	
32	900920	Knob complete	01			K
33	988733	Right door complete	01	Y		
33	988734	Right door complete	01		L	
33	988735	Right door complete	01			K
34	988736	Left door complete	01	Y		
34	988737	Left door complete	01		L	
34	988738	Left door complete	01			K
35	309944	Left door	01	Y		
35	309944-77	Left door	01		L	
35	309944-76	Left door	01			K
36	303508	Right door	01	Y		
36	303508-77	Right door	01		L	
36	303508-76	Right door	01			K
37	259015	Square	08	Y	L	K
38	189105	Axis	02	Y	L	K
39	142301	Ceramics rope	1,72 m	Y	L	K
41	110405	Hinge pin	06	Y	L	K
42	181615	Ceramics rope	Ø 12 1,70 m	Y	L	K
43	188737	Refractory glass	02	Y	L	K
45	934800	3 fire box grates	03	Y	L	K
45	934801	Oscillating grate with axis	03	Y	L	K
46	100962	Axis	03	Y	L	K
48	307422	Face grate	03	Y	L	K
49	134751	Pin	02	Y	L	K
50	222602	Flue baffle	01	Y	L	K
52	158620	Handle	01	Y	L	K
58	158170	Descriptive plate	01	Y	L	K





FRANCO BELGE



Warranty certificate

Legal warranty

Our products are guaranteed for twelve months against any defect, flaw or imperfection. During this time, all parts judged defective by our Warranty control department may be replaced in our workshops. Incidental costs of transportation and packing payable by the buyer.

Some parts or components have a longer warranty period :

- Cast-iron shell of boiler : 3 years
- Steel shell of boiler : 3 years
- Removable or independent stainless steel hot water cylinder : 5 years
- Independent enamelled steel hot water cylinder : 3 years
- Incorporated circulating pump : 2 years.

Terms of the warranty

This warranty is only valid if :

- The unit has been installed and checked by a professional installer before operating,
- All installation and adjustment instructions listed in the

technical manual supplied with the unit have been followed,
- All operation and maintenance instructions have been followed.

This warranty does not cover :

- Lamps, fuses, spark plugs, cast iron parts directly in contact with burning coal and wood, firebricks, glasses .
- Any damage resulting from the use of fuel not recommended in our instructions ;
- Parts which are damaged by external causes such as unadapted chimneys, thunderstorms, damp, faulty pressure or fail in pressure, thermic anomalies, explosions, etc...
- Electrical parts which are deteriorated by any connection or use on a supply circuit with voltage within 10% of the indicted voltage (230 V).

Material subject to modifications without prior notice. This manual does not engage the responsibility of FRANCO BELGE.

<input type="checkbox"/> Name and address of installer : <hr/> <hr/>
<input type="checkbox"/> Telephone :
<input type="checkbox"/> Name and address of customer : <hr/> <hr/>
Date of installation : _____ / _____ / _____
Model of the appliance : <input type="checkbox"/> 121 13 01
Color : <input type="checkbox"/> Y <input type="checkbox"/> L <input type="checkbox"/> K
Serial number : _____
<p style="text-align: center;">This certificate has to be completed and kept carefully. In case of claims, send a copy of this to :</p> <p style="text-align: center;">Fonderies FRANCO BELGE, rue Orphée Variscotte, 59660 MERVILLE, FRANCE.</p>