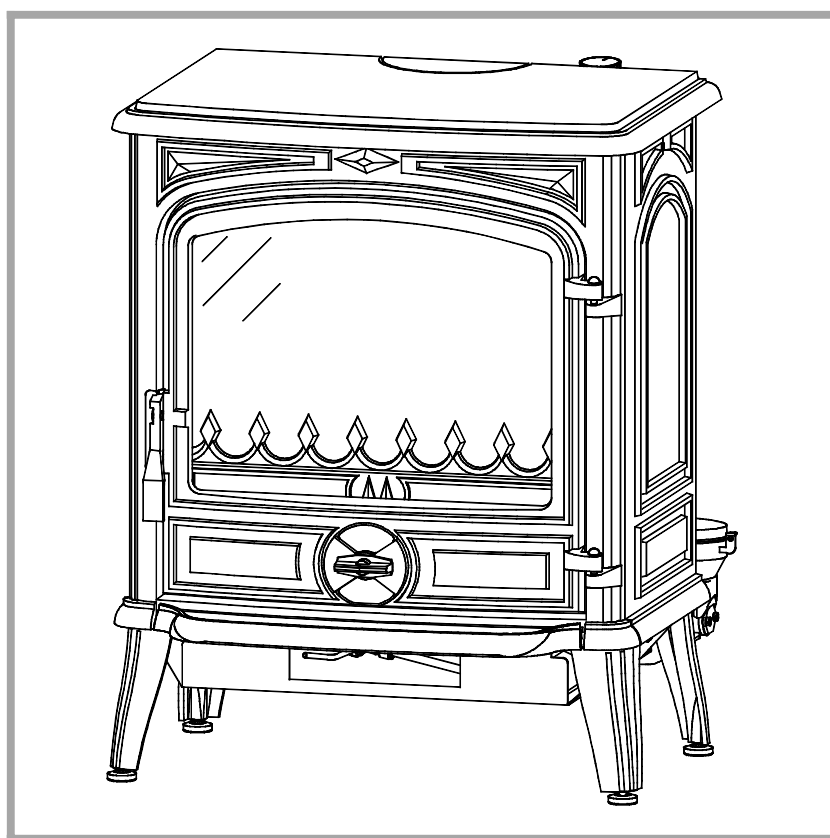

SAVOIE

Oil burning stove

Model : 174 08 02 Y

(EN1)



Description of the appliance

Installation instructions

Operating instructions

Spare parts

Warranty certificate

Document n° 1038-2 ~ 24/10/2001

English

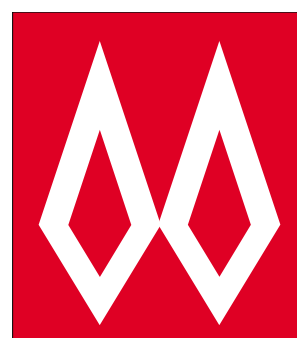
Norsk

Technical manual

to be saved

by the user

for future reference



FRANCO BELGE

Les Fonderies Franco-Belges
59660 MERVILLE
Phone : 03.28.43.43.43
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RC Hazebrouck 445750565B
Subject to modifications

FRANCO BELGE congratulates you on your choice.
 FRANCO BELGE, which has been granted the ISO 9001 certification, guarantees the
 quality of its appliances and is committed to meet its customers' needs.
 FRANCO BELGE, which can boast a 75-year experience in the industry of heating devices,
 uses state-of-the-art technologies
 to design and manufacture its whole range of products.
 This document contains instructions on how to install your appliance and and make full
 use of its functions, both for your comfort and safety.

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This appliance is an oil-fired stove.
WARNING
 An incorrectly installed oil-fired stove can cause serious accidents. This appliance should only be installed by competent personnel.

1. Description of the unit

1.1. Description

Flued oil stove with vaporizing burner. (Norm EN1)

1.2. Package

1 package : 1 stove

1.3. Optional equipment

- Visioflamme (mirrors)
- Glow-plug ignitor
- Ground vat
- Ceramic coals

1.4. Specifications

Model	174 08 02
Nominal Heat Output	8 kW
at maximum speed	0,95 liter/hr
at minimum speed	0,25 liter/hr
Chimney draft required	
at maximum speed	15 Pa
at minimum speed	8 Pa
Weight	100 kg

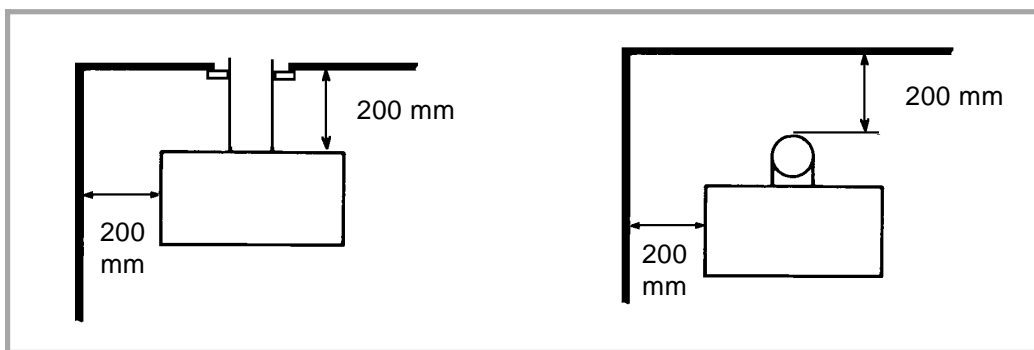


Figure 1 - Minimum clearances

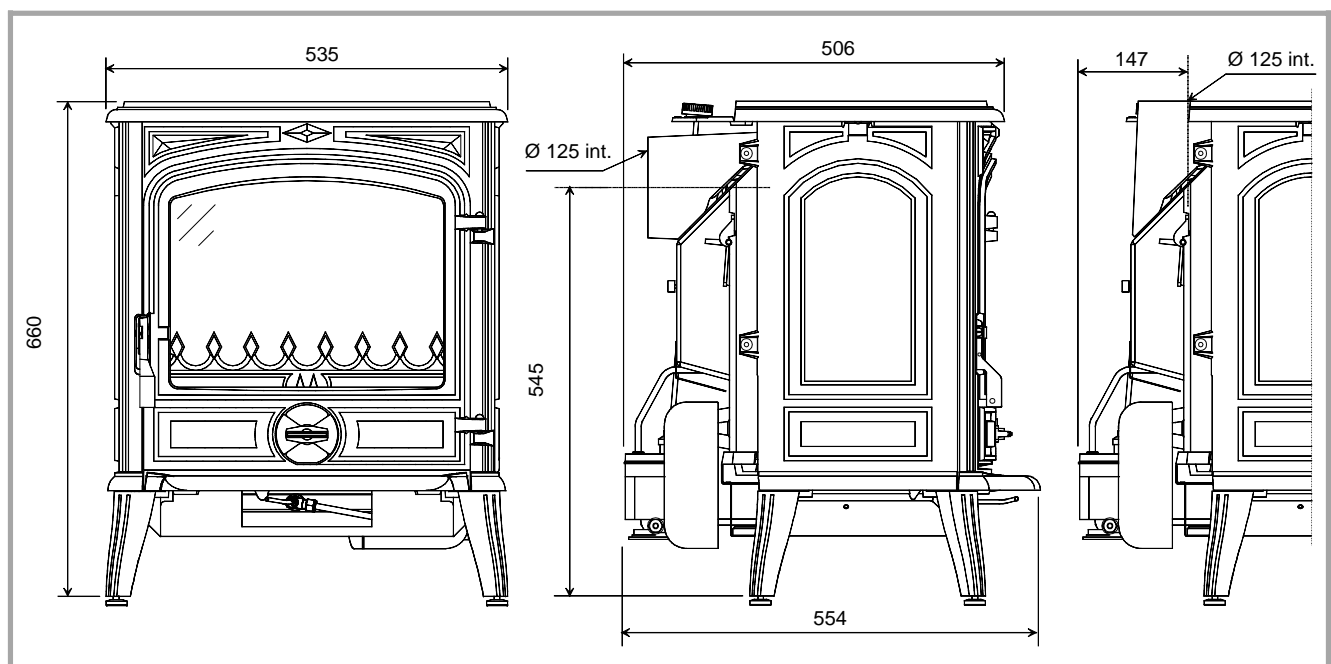


Figure 2 - Dimensions in mm

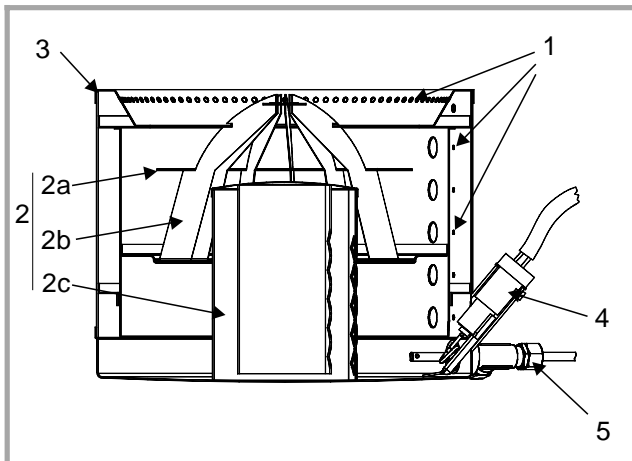


Figure 3 - Burner

- | | |
|---------------------|-----------------------------------|
| 1 - Air holes | 3 - Burner pot |
| 2 - Catalyser | 4 - Automatic ignition (optional) |
| 2a - Upper ring | 5 - De-scaling lever |
| 2b - Catalyser top | |
| 2c - Catalyser body | |

1.5. Operating principle

Heat is mainly diffused by radiation, through the window and body of the appliance. The speed control is obtained by control the oil flow into the burner.

The stove is fitted with a vaporizing burner (fig. 3). Furnace oil is fed to the burner floor where it is ignited by means of a firestarter (or with an optional electrical igniter). The heat produced by this flame brings the burner temperature to the required level to vaporize the oil. Oil will only burn as a vapour not a liquid.

Combustion air enters the burner through the air holes (# 1, fig. 3). In the center of the burner is the catalyser (# 2), which aids the the good combustion.

2. Installation instructions

2.1. Warning to the user

An incorrectly installed heating appliance can cause serious accidents (chimney fires, burning of plastic insulation materials, in partition walls, etc.).

The installation must be carried out according to local building regulations.

The manufacturers responsibility shall be limited to the supply of the equipment.

2.2. Position of the unit

Ventilation :

For satisfactory operation with a **natural draught**, check that sufficient air for combustion is available in the room.

In houses equipped with mechanical ventilation, an outside air intake must be installed for the chimney.

Chimney position :

For new chimney installations, select a central position

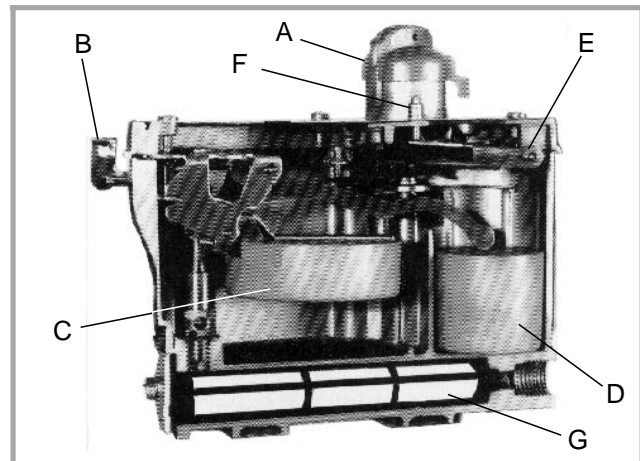


Figure 4 - Float regulator

- | | |
|-------------------|-------------------------|
| A - Control knob | E - Oil level regulator |
| B - Safety lever. | F - Thermostat control |
| C - Main float | G - Filter |
| D - Safety float | |

On the feed-line there is a de-scaling lever (# 5). The de-scaling lever can be operated to keep the inlet pipe clear of carbon buildup.

The stove float regulator (fig. 4) contains a filter (# G) to trap impurities. A safety lever controls oil flow (# B). A float in the chamber raises the oil level available to the burner.

Oil can only enter the float chamber when the safety lever is depressed.

The carburetor is also controlled by a control knob (# 2, fig. 14, p. 8) which turns from "off" to "high setting".

A draft regulator (# 1, fig. 9, p. 6) ensures a constant air intake to the burner regardless of external factors.

within the building, to provide a good heat distribution around the building.

Position the unit to comply with the minimum clearances to combustible material (fig. 1, p. 3).

2.3. Chimney

- The flue must be in good condition and must provide sufficient draught. (refer to technical details p. 3).
- The flue must be **suitable** for the installation of fuel burning appliances and comply with Current Building Regulations.
- The flue must be **clean**. It should be swept to remove soot and dislodge tar deposits.
- The flue must be **well insulated**, water and air tight. A chimney with a cold internal surface can prevent a good chimney draught and condensation will occur.
- The flue must be watertight.
- The chimney must have a constant cross section.

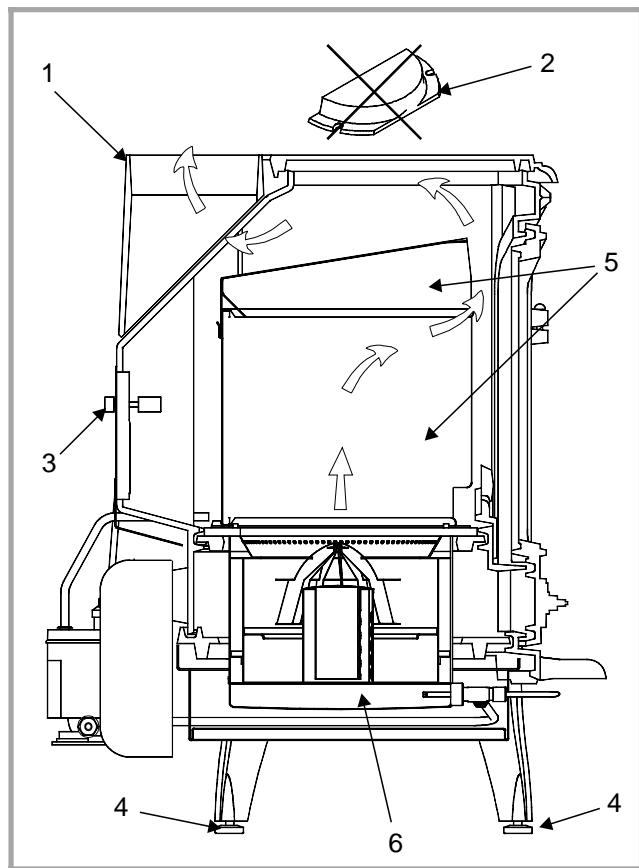


Figure 5 - Description

- | | |
|-----------------------|--|
| 1 - Flue collar | 4 - Control screws for appliance levelling |
| 2 - Blanking plate | 5 - Flue baffle |
| 3 - Draught regulator | 6 - Burner |

- The flue must not be shared with any other appliance.
- The chimney must be at least 4.5 m (15 ft high).
- If the chimney has any downdraught tendency, due to its position in relation to nearby obstacles, an anti-downdraught cowl must be installed on the chimney or the chimney height must be increased.
- If the chimney draught is excessive or irregular, a draught stabilizer (barometric damper) must be installed to the connector pipe.

2.4. Mounting the levelling feet

Figure 5, # 4

Fit the 4 screws and caps supplied on the burner into each leg of the stove.

2.5. Smoke exit

Figure 5 and 6

The rear exchanger is reversible (2 screws) so that the smoke exit can be done at rear or on the top

2.6. Chimney connector

- The appliance must be as close as possible to the chimney.

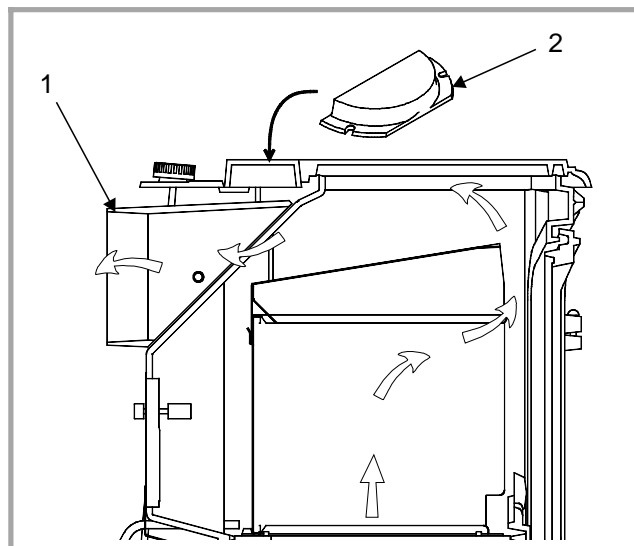


Figure 6 - Rear flue outlet

- | | |
|-----------------|--------------------|
| 1 - Flue collar | 2 - Blanking plate |
|-----------------|--------------------|

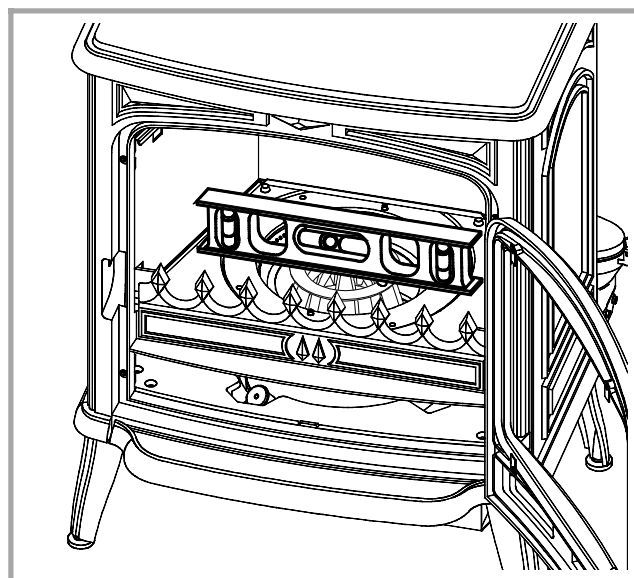


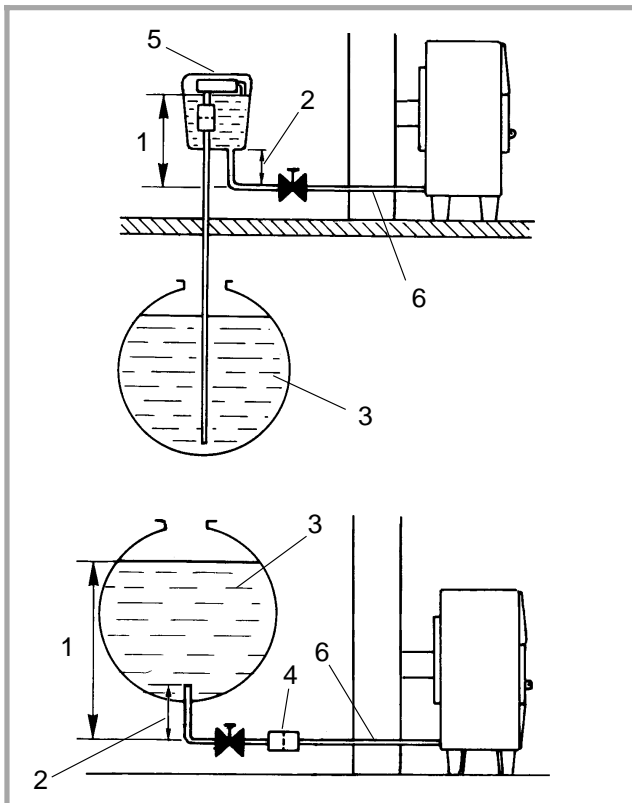
Figure 7 - Burner level check

- The connector pipe must be approved for installation with combustion products (either 24 ga. Black painted or blued steel or 316 grade 20 ga. Stainless steel or 1 mm vitreous enamelled steel).
- Pipe diameter must not be less than the appliance spigot diameter.
- The joint between the connection pipe and the stovepipe, and the flue, must be leak tight.
- The connection pipe and any draught stabiliser must have access for cleaning.

2.7. Levelling

It is essential to ensure that the appliance sits level on the floor.

- Use a spirit level across the burner pot to check the level (fig. 7).



*Figure 8 - Gravity oil supply
Pumped oil supply*

- | | |
|-----------------|--|
| 1 - Max. 2,5 m | 5 - Suction pump with reserve and filter |
| 2 - Min. 0,25 m | 6 - Pipe 3/8 in. O.D. |
| 3 - Tank | |
| 4 - Filter | |

2.8. External / remote tank

Figure 8

- A barometric fuel tank should not be positioned where it will be in the direct rays of the sun or adjacent to a source of intense heat.
- If the tank is more than 8 ft (2,5 m) higher than the stove a pressure reducer must be installed on the oil line (max. working pressure : 300 mbar).
- If the tank is lower than the stove a lift pump will have to be utilized.
- A clearance of 6" (15 cm) must be maintained between the external/remote tank and the stove.

2.9. Pre-utilization check

- Check that the glasses are not damaged.
- Check that the door closes correctly.
- Check that all removable parts (baffle, catalyser, ring, etc.) are correctly installed.
- Check that the seals of the smoke-line are in good condition.
- Check that the seals of the feed-line are in good condition.
- Light the appliance by referring to the operating instructions.

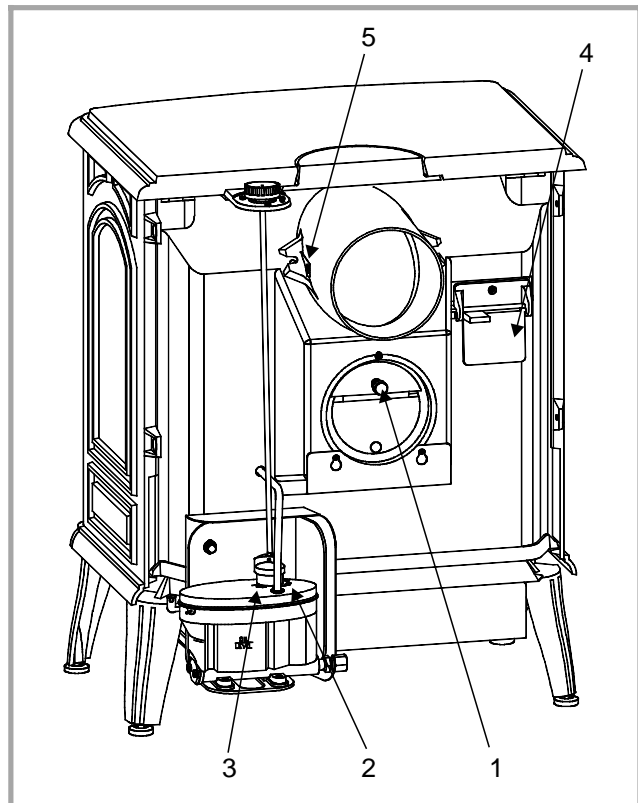


Figure 9 - Adjustment devices

- | | |
|---|--------------------------------------|
| 1 - Adjustment of the draught regulator | 3 - Adjustment screw for low setting |
| 2 - Adjustment screw for high setting | 4 - Safety pressure door |
| | 5 - Draught control |

2.10. Oil flow adjustment

The float regulator has been adjusted at the factory and should not need further adjustment.

The eventual re-fit must be realized by a qualified engineer.

If the burner does not work correctly, check possible causes before readjusting the settings :

- Chimney draught
- Fresh air inlet
- Oil supply.

Minimum speed (# 3, fig. 9) :

- Set the regulating knob on minimum speed (# 3) and let the burner run for a few minutes. The flame must completely cover the bottom of the burner and the catalyser body must be glowing red hot.
- If the flame is too small, the stove will soot up quickly ; increase the flame by turning the setting screw (# 3) clockwise.
- If the flame is too high, reduce the flame by turning the setting screw (# 3) counter clockwise.

Maximum speed (# 2, fig. 9) :

- Set the regulating knob on maximum speed (# 2) and let the burner run for a few minutes. The flame must be shaped like a cone and reach the upper part of the door.
- If the flame is too low, increase the flame by turning the setting screw (# 2) counter clockwise.
- If the flame is too high, reduce the flame[by turning the setting screw (# 2) clockwise.

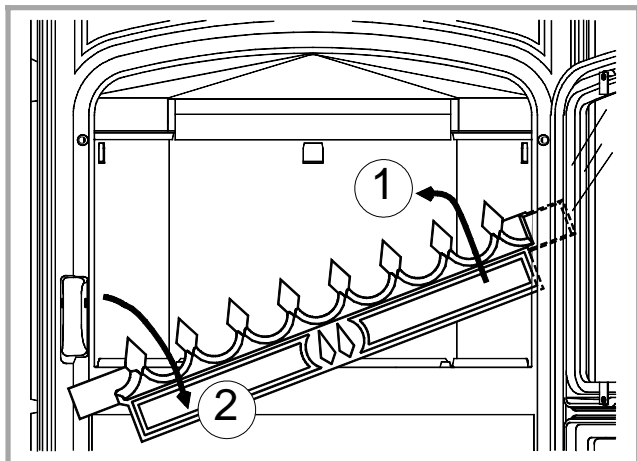


Figure 10 - Removing the front grate

Please note - **Very important** : The adjustments of the float regulator are very sensitive. The high and the low setting screws must never be turned more than a 1/4 of a turn at a time in any direction from their initial setting. When making any adjustments, allow 3 to 5 minutes between adjustments to allow burner to stabilize to previous adjustment before proceeding, if necessary.

2.11. Chimney draft required

The reading of the draught must be done once the unit is hot (minimum 30 minutes of use).

Refer to the specifications (page 3) for minimum draught requirement. The eventual re-fit must be realized by a qualified engineer.

The adjustment of the draught will be made with the barometric damper located at the back of the stove (# 1, fig. 9)

2.12. Maintenance of the Chimney

Chimney condition should be checked at least once per year.

If the appliance is regularly used, the chimney should be swept several times per year, together with the stovepipe connection section (and also the flue baffles).

- First remove the flue baffle (fig. 11)
- The barometric damper (draught regulator # 1, fig. 9) should be checked at least once per year.

2.13. Door closing pressure

Figure 12

The closing latch rotates around a pressure screw positioned cam.

- Remove gently the ceramics rope,
- Loosen pressure screw (# 1),
- Turn cam (# 2) to desired position,
- Tighten pressure screw (# 1).

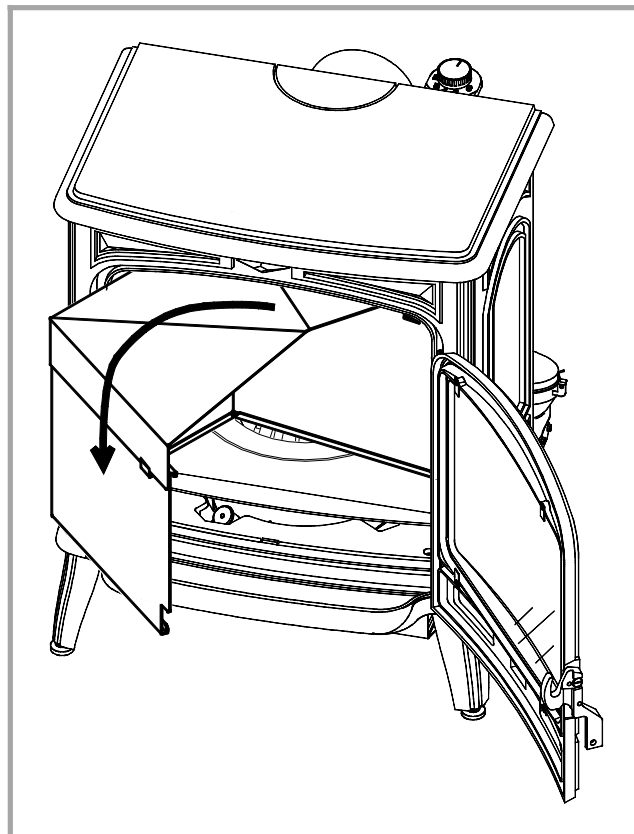


Figure 11 - Removing the flue baffle

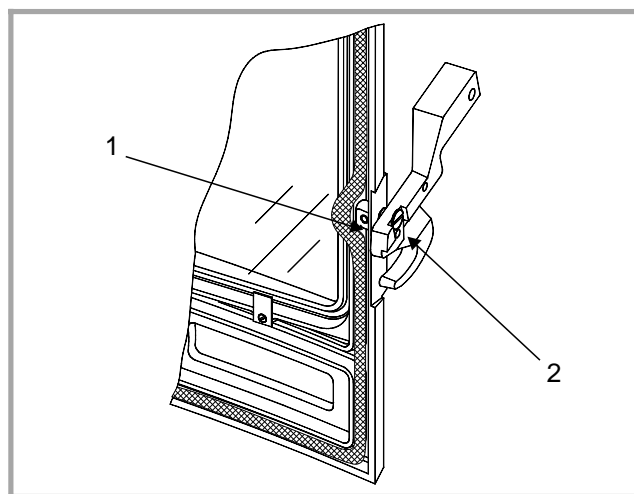


Figure 12 - Door closing pressure

1 - Pressure screw 2 - Cam

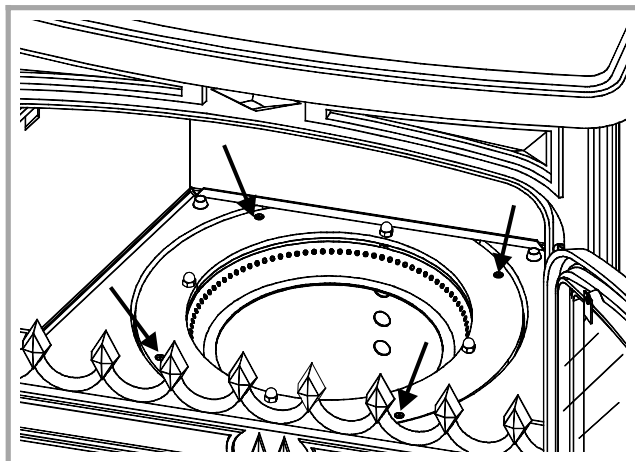


Figure 13 - Removing the burner

2.14. Removing the burner

To remove the burner : Remove the lower panel and the magnet support, disconnect the feed line from the de-scaler nut, unscrew the 4 burner fixing nuts.

3. Instructions for user

Franco Belge will not be responsible for damages on parts of the appliance due to the use of prohibited fuel or due to an alteration of the appliance or its installation.

3.1. Fuel

Your stove is fitted with a specific float regulator for a specific oil.

The fuel oil must be free from any dirt and water, which could disturb the stove in operation.

3.2. Lighting procedure

Figure 14

Don't light the appliance when it is hot. Wait until the burner is completely cool before repeating the lighting procedure.

- Be sure the control knob (# 2A) is to "0".
- Turn on oil supply,
- Push down gently on the safety lever (# 4). This will allow the oil to flow into the float regulator.
- Open the front door, and remove the catalyser from burner (# 2, 3, 4, fig. 3, p. 4). Make sure the inside of the pot is clean thoroughly, and there is no oil accumulation.
- Place 2 tablespoons of methylated spirit or gelled alcohol in the bottom of the pot.
- Light the starter gel or methylated spirit with a fireplace match or long butane lighter.
- Place the catalyser back into the burner, being sure it is centered in the burner. Shut the main door.
- Allow the burner to heat approximately 30 to 45 sec. Turn dial to "1" position (# 2B).
- Allow 10 to 15 minutes for oil fire and draught to stabilize. The catalyser (or the ring) should glow red before adjusting the control knob to a higher setting (# 2C).

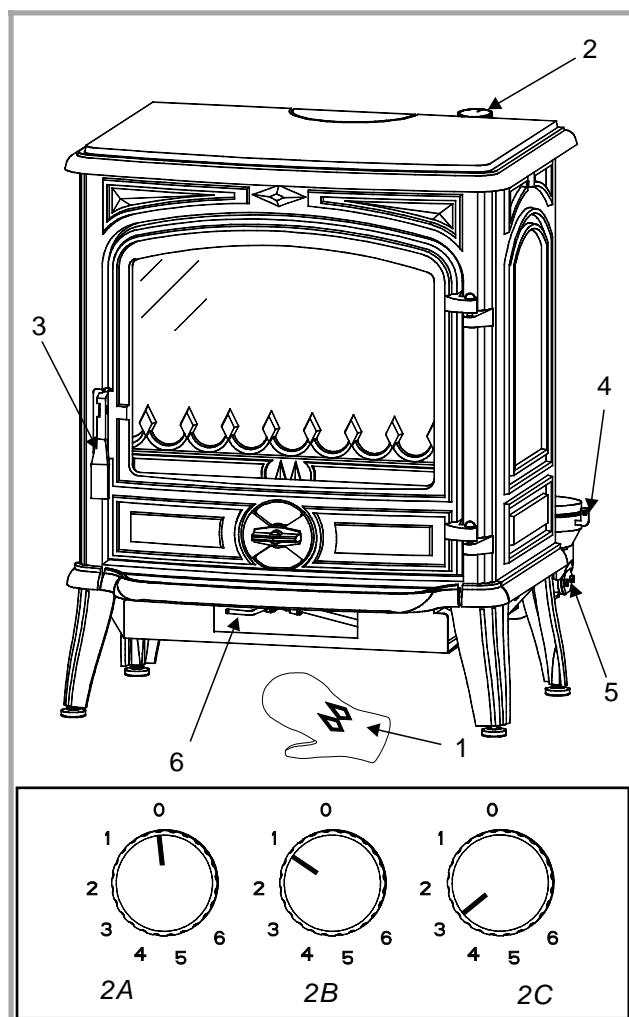


Figure 14 - Operating devices

- | | |
|-------------------------|---------------------------------------|
| 1 - Gant de protection | 3 - Opening and closing of the window |
| 2 - Regulation knob. | 4 - Safety lever. |
| 2A - Shutting down | 5 - Access to regulator's filter |
| 2B - Lighting procedure | 6 - De-scaling lever. |
| 2C - Normal speed | |

3.3. Operating procedure

- Allow 10 to 15 minutes after lighting to adjust the control knob to a higher setting, usually (# 2C) setting.
- When increasing the heat output, move the control knob only 1 number at a time, allowing 5 minutes between moves for the flame to re-adjust to new setting.
- If the burner stops during operating, immediately turn off the control knob position "0" (# 2A) and wait until the burner is completely cool before repeating the lighting procedure.

3.4. Shutting down

Figure 14

- Set dial to the (# 2A) position.
- Raise the safety lever of the regulator (# 4).
- Allow the flame to burn out completely before opening the door (# 3).

3.5. Recommendations

- The adjustment of the stove has been made at the factory and checked by your installer. In case of trouble shooting, do the usual maintenance operations. If problem persists call your installer.
- This room heater is a high heat producing appliance and may cause severe burns if touched on the glass front door, or on top directly over the burner - keep children away.
- **CAUTION** : Never light the burner if there is any amount of oil in pot. Clean out oil before lighting.
- Too much oil in pot may cause a racing : a very high flame generating vibrations.
In case of racing :
 - Turn off oil supply.
 - Set dial to the "0" position (# 2A, fig. 14, p. 8).
 - Wait until the burner is completely cool before repeating the lighting procedure.
- **Do not overfire.** If the unit or chimney connector starts to glow you are overfiring.

3.6. Maintenance of the stove

- **Every week** : operate the de-scaling lever (# 6, fig. 14, p. 8). Pull the rod, then push the rod in rotating 360 degrees two or three times.

(CAUTION : The rod is HOT).

- **Every 3 or 4 months** : Clean the burner completely.
 - Remove and brush off the parts of the catalyser, using a soft bristle brush.
 - Loosen any carbon soot from the burner with a putty knife, and vacuum clean. Ensure that the small air holes are free of carbon.
 - When replacing the burner, tighten the nuts evenly and connect the pipe so as to be airtight.

- **At least once a year / End of heating season** : Clean or replace the oil filters of the oil supply line (# 5, fig. 14, p. 8).

To clean the filter of the float regulator :

- Set the regulation knob in closed position "0" (# 2A, fig. 14, p. 8).
- Turn off the tankvalve or the valve of the oil supply line.
- Raise the safety lever of the float regulator (# 4, fig. 14, p. 8).
- Place a small container (or a small rag) under the regulator filter opening in order to collect the oil contained in the regulator.
- Remove the filter cover plate located under the regulator (# 5, fig. 14, p. 8) with a screwdriver,
- Remove the tubular filter from the regulator. Clean it with oil using a soft brush, never a wire-brush.
- Replace the filter in the regulator, install the cover plate and secure with the screw.
 - ⌘ Use a soft clean cloth to wipe the front glass when the unit is running at a low burning rate.
 - ⌘ When the main door is opened for cleaning, the flame will be disturb, and turn to a yellow flame. Clean quickly, but gently. Close the door, the flame will return to a normal burning position.
 - ⌘ Clean all the enamelled panels of the stove with a dry or slightly damp soft cloth.

DO NOT CLEAN GLASS WHEN HOT.

3.7. Trouble shooting



: This sign means that you should asked for a qualified engineer to do the work.

Situation	Probable causes		Corrective action
Flames extinguish during lighting.	<input type="checkbox"/> Very cold chimney. No draught established.		- Leave door ajar until fire has caught. Check air supply in the room (page 4).
Fire extinguishes once firestarter has burnt off.	<input type="checkbox"/> Fuel tank is empty.		- Fill tank.
	<input type="checkbox"/> Fuel valve is closed.		- Open valve.
	<input type="checkbox"/> Main regulator float not engaging.		- De-press the safety lever.
	<input type="checkbox"/> Control knob is set on "0"		- Adjust control knob to "1" (minimum speed).
Fire extinguishes during use.	<input type="checkbox"/> Fuel tank is empty.		- Fill tank.
	<input type="checkbox"/> Insufficient fuel.		- Check that the de-scaler, the float regulator filter and burner pot are cleaned.
Flame is excessively large, smoky and sooty.	<input type="checkbox"/> Insufficient draught.	<input checked="" type="checkbox"/>	- Call your installer.
	<input type="checkbox"/> Fuel adjustment made too quickly.		- Return control knob to minimum speed "1" ; wait for normal combustion. (catalyser should glow red) ; wait 5 to 15 minutes between each adjustment.
Stove extinguishes and re-lights itself.	<input type="checkbox"/> Insufficient fuel.		- Check that the de-scaler, the float regulator filter and burner pot are cleaned.
Stove burns noisily.	<input type="checkbox"/> Burner contains excess fuel.		- Adjust control knob to minimum speed "1". If problem persists call your installer.
Fire smokes. Soot build up noticed. Flame imbalance	<input type="checkbox"/> Insufficient air supply.		- Increase fresh air supply (open door, window ; add make up air supply).
	<input type="checkbox"/> Downdraught or blockage in chimney.	<input checked="" type="checkbox"/>	- Check chimney for soot build up. Clean if necessary. Ensure chimney height is sufficient and cap is not affected by any nearby obstructions. If problem persists call your installer. Room is in negative pressure. Increase fresh air supply (page 4).
	<input type="checkbox"/> Oil flow is too low on minimum speed setting.	<input checked="" type="checkbox"/>	- Adjust low flow rate while control is set on "1", call your installer.
	<input type="checkbox"/> Stove is not level. Flame imbalance.	<input checked="" type="checkbox"/>	- Check level. Adjust if necessary.
	<input type="checkbox"/> Catalyser not centered.		- Center catalyser assembly
	<input type="checkbox"/> The draught regulator is blocked in open position.	<input checked="" type="checkbox"/>	- Unlock the draught regulator. Check the draught regulator [adjustment and refit, if necessary].
	Coke build up noticed.	<input type="checkbox"/> Insufficient fuel.	<input checked="" type="checkbox"/>
<input type="checkbox"/> Excessive draught		<input checked="" type="checkbox"/>	- Check draught. If always excessive, a draught stabilizer (barometric damper) must be installed to the connector pipe.

4. Spare parts

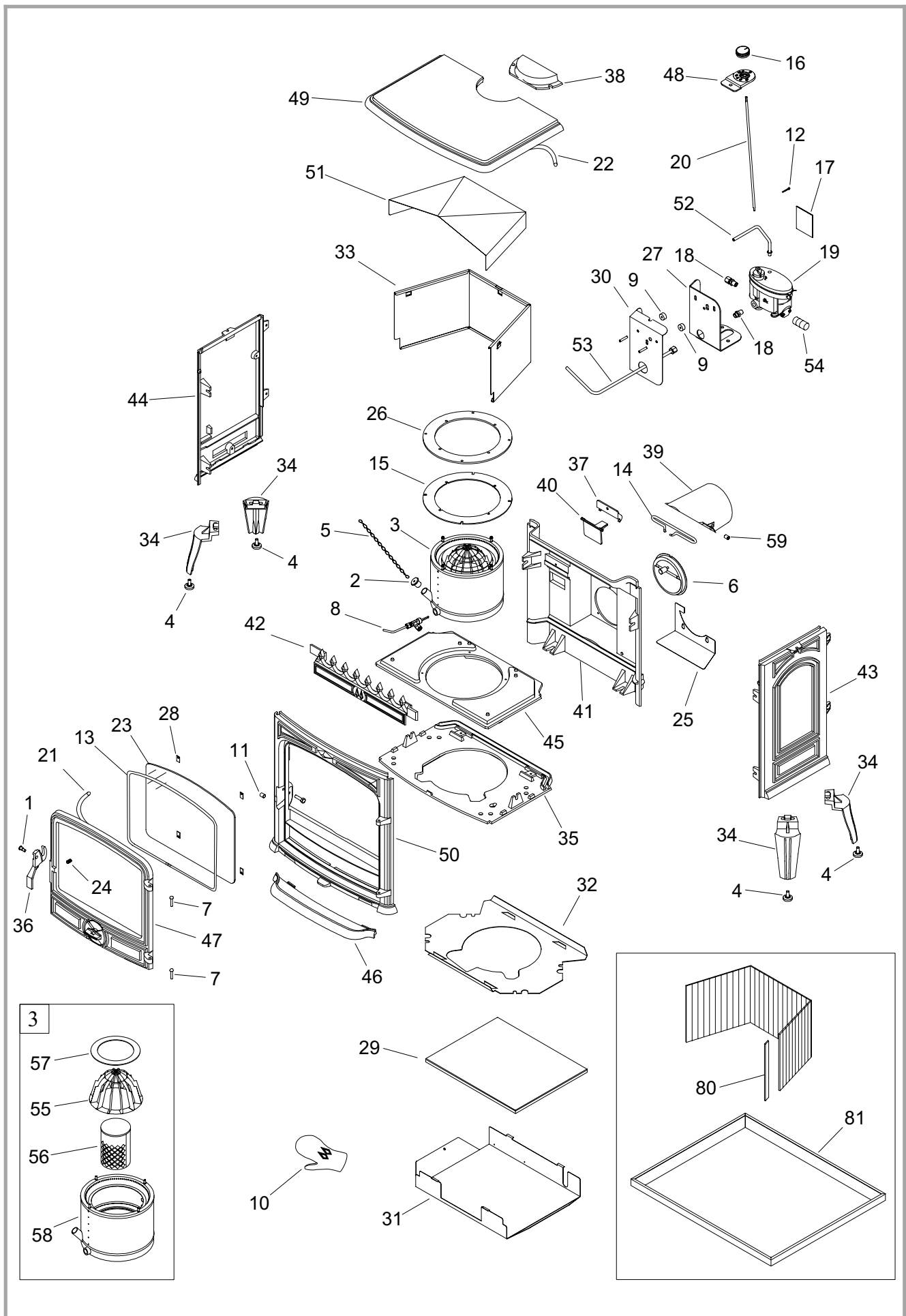
When ordering spare parts, specify the stove type and serial number, including the colour index (on the guarantee or identification plate), the name of the part and the part number.

Example : Stove 174 08 02 , Leg 300128 EF

N°	Code	Description	Type	Qty	N°	Code	Description	Type	Qty
1	100917	Cam pin	12x20 M7	01					
2	104708	Plug		01					
3	905330	Complete burner		01					
4	109552	Cap		04					
5	109718	Chain		01					
6	110105	Barometric damper		01					
7	110404	Hinge pin	6x30	02					
8	119216	Descaler		01					
9	119801	Bushing		02					
10	134107	Glove		01					
11	134258	Bushing		01					
12	134601	Pin	2x20	01					
13	142301	Adhesive rope		1,30 m					
14	142316	Gasket	7x3	0,53 m					
15	142874	Gasket		01					
16	149868	Knob		01					
17	162664	Descriptive plate		01					
18	164205	Tightness nut		02					
19	165028	Float regulator		01					
20	179622	Regulator shaft		01					
21	181607	Ceramic rope	Ø 9,5	1,60 m					
22	181619	Ceramic rope	Ø 12	1,60 m					
23	188820	Glass		01					
24	189825	Screw	M5x6	01					
25	209918	Protector		01					
26	236511	60 Burner support		01					
27	239723	60 Regulator support		01					
28	259015	Fixing plate		04					
29	260585	Heat shield		01					
30	261817	Heat shield		01					
31	262220	60 Shield		01					
32	262609	Heat shield		01					
33	276230	Reflector		01					
34	300128	EF Leg		04					
35	300488	Base		01					
36	301526	EF Door lock		01					
37	303301	EF Bearing		01					
38	303625	EF Top plate		01					
39	303872	EF Flue collar		01					
40	909401	Sliding door		01					
41	306282	Back wall		01					
42	307438	Fuel retainer		01					
43	310732	EF R. side panel		01					
44	310829	EF L. side panel		01					
45	312633	Burner support		01					
46	327903	EF Tray		01					
47	331111	EF Main door		01					
48	331500	Bracket		01					
49	352159	EF Top plate		01					
50	359800	EF Front plate		01					
51	622507	Flue baffle		01					
52	982639	Vent-pipe		01					
53	982640	Feed line regulator-burner		01					
54	199204	Regulator filter		01					
55	194401	Catalyser cover		01					
56	194402	Catalyser body		01					
57	198205	Catalyser ring		01					
58	905329	Burner		01					
59	189118	Screw	d. 10	01					

Optinal parts

80	199320	Refractory glass		38
81	242913	10 Ground vat		01





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, flue baffles, 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 in EU).

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

Name and address of the installer : _____

Telephone : _____

Name and address of the customer : _____

Date of installation : ___ / ___ / _____

Model of the appliance : 174 08 02

Color : Y

Serial number : _____

- This certificate has to be completed and kept carefully.

In case of claims, send a copy of this to :

Les Fonderies Franco-Belges, rue Orphée Variscotte, 59660 MERVILLE, FRANCE.