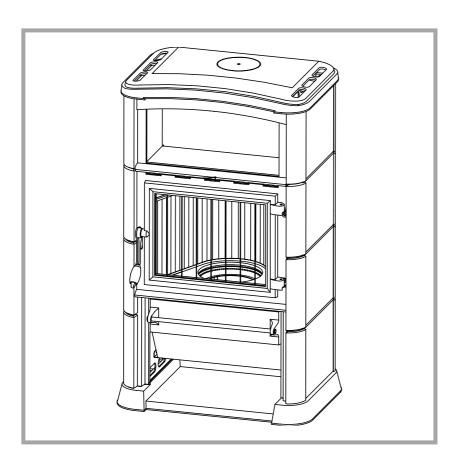
Le Beffroi

Oil fired stove

Model 174 10 54



Description of the appliance

Installation instructions

Operating instructions

Spare parts

Warranty certificate

Document n° 954-6 ~ 29/04/2004









Technical manual

to be saved
by the user
for future reference.



STAUB FONDERIE

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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 make full use of its functions, both for your comfort and safety.

CONTENTS Specifications p. 3 Package:....p. 3 Operating principle. p. 4 Optional equipment p. 3 Position of the unit p. 5 Oil flow adjustment p. 7 External tank p. 5 Chimney draught. p. 8 Chimney connector p. 6 Door closing pressure p. 8 Mounting the levelling feet p. 6 Pre-utilisation check p. 8 Smoke exit at the top p. 6 Mounting mirrors (Optional).....p. 8 Smoke exit at rear p. 6 Casing assembly. p. 6 Maintenance of the Chimney p. 8 Maintenance of the stove p. 9 Fuel p. 9 Lighting procedure p. 9 Recommendation p. 10 Trouble shooting p. 11 Operating procedure. p. 9 Shutting down p. 9

"Le Beffroi" ref. 174 10 54 Description of the unit

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 - NF D 35-385).

1.2. Package:

- 1 stove
- 1 casing
- Natural stone casing 72554
- Enamelled panels :

Beige 72553 - Red 72605 - Blue 72606

- Marble panels :

Black 72805 - Beige 72806 - Gray 72807

1.3. Optional equipment

Brass-rampe : KR 134 08.Mirrors : P 174 10 53

• Vent-pipe.

1.4. Specifications

Model	174 10 54
Nominal heat output kW	10
BTU/hr	34130
Oil consumption at :	
- maximum speed I/h	1,20
gal/hr	0.317
- minimum speed litre/h	0,25
gal/hr	0,066
Chimney draft required at :	
- maximum speed Pa	14
- minimum speed Pa	5
Weightkg	138

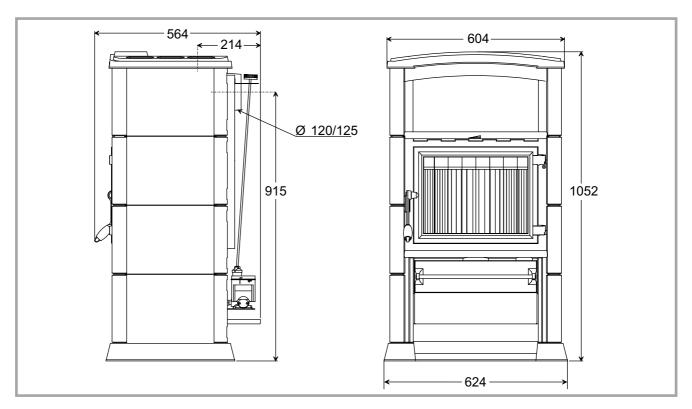


Fig. 1 - Dimensions in mm

"Le Beffroi" ref. 174 10 54 Description of the unit

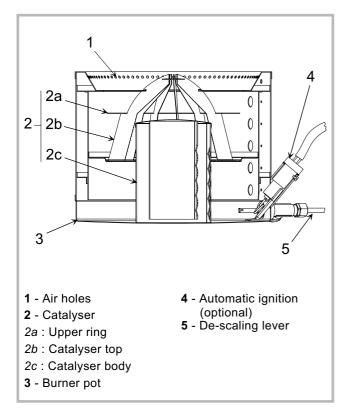


Figure 2 - Burner

1.5. Operating principle

Furnace oil is fed to the burner floor (fig. 2) where is it ignited by means of a firestarter. The heat produced by this flame brings the burner temperature to the required level to vaporize the fuel. Oil will only burn as a vapour not a liquid.

Room combustion air enters the burner through the air inlet holes (# 1).

In the center of the burner is the catalyser (# 2) which aids in vaporizing the fuel. When the stove is operation, the catalyser glows red. The stove should not be used with out both the catalyser (# 2c), catalyser top (# 2b) and ring (# 2a).

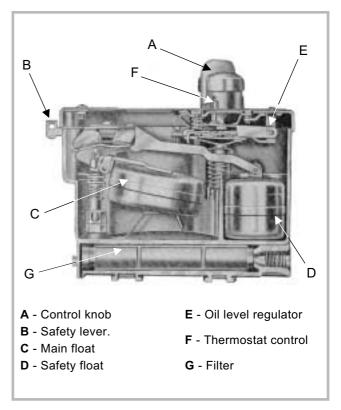


Figure 3 - Float regulator

A de-scaling lever (# 5) can be pushed and pulled in and out as well as turning slightly at the same time to keep the inlet pipe clear of carbon buildup.

The stove float regulator (fig. 3) contains a filter (# G) to trap impurities.

A safety lever (# B) controls fuel flow. Oil can only enter the float chamber when the safety lever is depressed.

Oil temperature variations will affect the oil flow into the float chamber. A float in the chamber raises the fuel level available to the burner.

The carburetor is also controlled by a control knob which turns from "0" (off) to "6" (high setting).

A draft regulator (# 1, fig. 11) ensures a constant air intake to the burner regardless of external factors.

2. Installation instructions

SAFETY NOTICE: Read carefully all instructions before starting the installation. If the stove is not properly installed, a house fire may result. For your safety, follow the installation directions. Contact local building or fire officials about restrictions and installation inspection in your area.

2.1. Position of the unit

- The position of the appliance must be chosen very carefully in order to obtain the best possible results for heat distribution.
- Position the unit to comply with the minimum clearances to combustible material. Minimum clearances are shown from the vertical portion of the chimney connector. Check that no overhead cross members in the ceiling will be cut. Reposition unit if necessary, being careful not to move closer than the minimum clearances.
- Outside air: For the oil stove to function properly, an adequate supply of combustion air is required.

2.2. Chimney

- Ensure that the flue has sufficient draught (refer to technical details).
- Minimum flue diameter, 10 cm (4" I.D).
- The chimney must be at least 4.5 m (15 ft high).
- The flue must not be shared with any other appliance.
- Downdraughts caused by obstacles close to the chimney top may sometimes be prevented by fitting an anti-downdraught cap to the top of the chimney.
- The chimney must have a constant cross section. Too large a flue could affect the chimney draught.
- The chimney must be soundly constructed, in order to prevent cold air infiltration.
- 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 swept at least once a year.

2.3. External tank

A barometric fuel tank should not be positionned 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.

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.

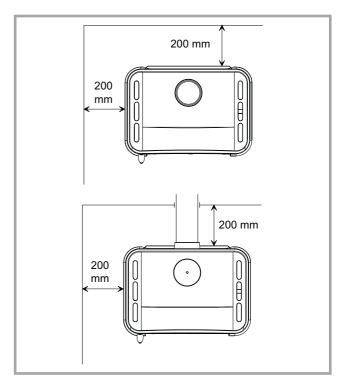


Figure 4 - Minimum clearances

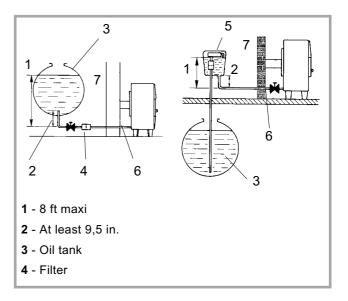


Figure 5 - Oil supply

2.4. Chimney connector

 The appliance must be as close as possible to the chimney. Avoid horizontal flue connection pipes which can dangerously restrain functioning of the appliance.

The connector pipe must be either 24 ga. black painted or blued steel or 316 grade 20 ga. stainless steel or 1 mm vitreous enamelled steel, with a maximum diameter of 127 mm (5" O.D.). Single wall pipe may be utilized being careful to maintain clearances to any combustible surface.

Once the stove has been properly installed the chimney draught must be checked with a draught meter.

If the chimney draught is excessive or irregular, a draught stabilizer (barometric damper) must be installed to the connector pipe.

2.5. Mounting the levelling feet

Fit the 4 screws and the 4 caps supplied (on the burner) into each leg of the stove (# 4, p. 13).

2.6. Smoke exit at the top

Figure 6

- Remove the internal baffle (fig. 14, p. 8).
- Fit the blanking plate and the support on the top, ensuring there is a good seal.
- Fix the sealing rope in the groove on the rear and fit the flue spigot using the two bolts and washers supplied, ensuring there is a good seal.
- Replace the internal baffle (fig. 15, p. 8)

2.7. Smoke exit at rear

Figure 7

- Remove the internal baffle (fig. 14, p. 8).
- Set the blanking plate with the flue pipe on the top, ensuring that it is leaktight.
- Set the ceramic rope in the groove and fixe the flue collar with 2 screws and ring supplied at rear.
- Reinstall the internal baffle (fig. 15, p. 8).

2.8. Casing assembly

Natural stone: As the stones are easily stained it is recommended to wear gloves during handling.

Figure 8

- ① Remove the pin of regulator,
- 2 Remove the rear panel,
- 3 Remove the lateral supports,
- Fit the sides panels by sliding and replace the lateral support (don't locking). Adjust the side panels with regard to upright above locking,

Replace the rear panel and the pin.

Figure 9

Natural stones: You must glue, under neath the stone, the ceramic rope which is supplied.

Enamelled panel: The top neck line must be towards the back.

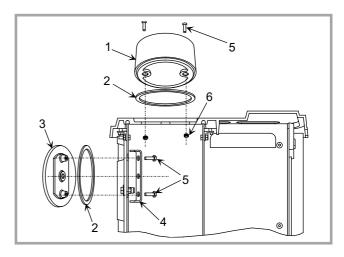


Figure 6 - Smoke exit from top

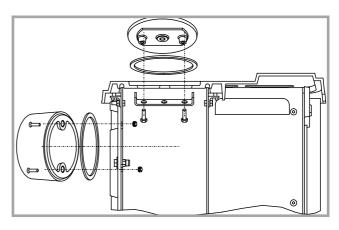


Figure 7 - Rear flue outlet

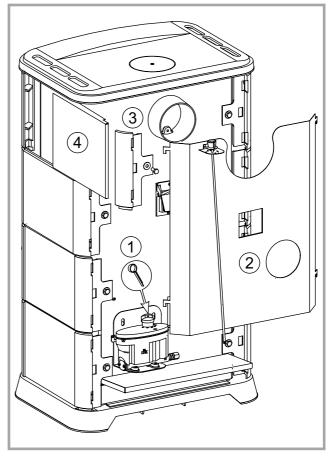


Figure 8 - Side panels assembly

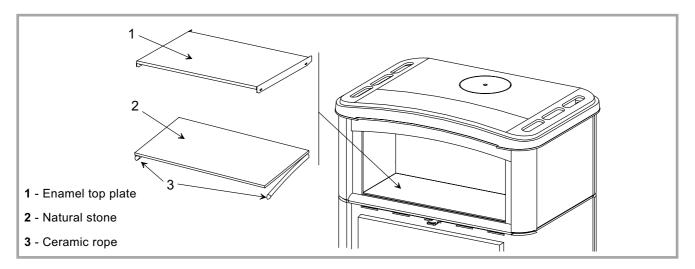
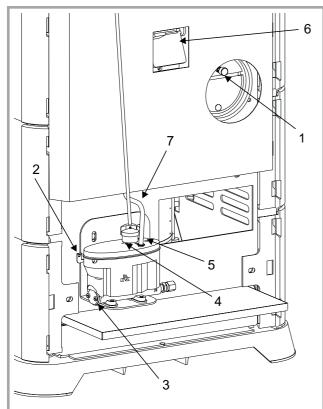


Figure 9 - Top panel assembly



- 1 Adjustment of the draught regulator.
- 2 Safety lever.
- 3 Access to regulator filter.
- 4 Adjustment screw for minimum setting.
- 5 Adjustment screw for maximum setting.
- 6 Safety pressure door
- 7 Vent-pipe (optional).

Figure 11 - Operating devices

2.9. Levelling

- It is essential to ensure that the appliance sits level on the floor. Adjust the levelling feet (# 7, fig. 16, p. 9).
- Use a spirit level across the burner pot to check the level (fig. 10).

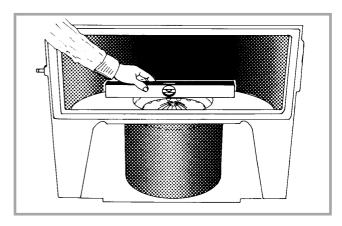


Fig. 10- Levelling

2.10. Oil flow adjustment

The float regulator has been adjusted at the factory and should not need further adjustment. If the burner does not work correctly, check possible causes before readjusting the settings:

- Chimney draught
- Fresh air inlet
- Oil supply.

Low setting (Refer to fig. 11, #4):

- set the regulating knob on "1" 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 (# 4) clockwise.
- if the flame is too high, reduce the flame by turning the setting screw (# 4) counter clockwise.

High setting (Refer to Fig. 11, #5):

- set the regulating knob on "6" and let the burner run for a few moments. The flame must be shaped like a cone and reach the upper part of the door.
- if the flame is too low, increase by turning the set screw anti-clock-wise.
- if the flame is too high, reduce by turning the set screw clockwise.

Please note - Very important: The adjustments of the float regulator are very sensitive. The hight 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 draught

Once the stove has been properly installed, the chimney draught must be checked.

The adjustment of the draught will be made with the barometric damper located at the back of the stove (# 1, fig. 11).

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

Refer to the specifications p. 3 for minimum draught requirement on mini setting and on maxi setting.

2.12. Door closing pressure

Figure 13

The closing latch rotates around a pressure screw positioned cam.

- Loosen pressure screw 1.
- Turn cam 2 to desired position.
- Tighten pressure screw 1.

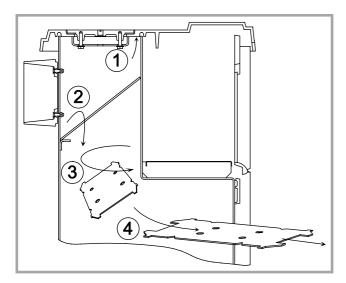


Figure 14 - Removing the flue baffle

2.13. Pre-utilisation check

Check the condition of the filler seals, that the door closes correctly, that the window is not damaged, that the smoke passages are not obstructed by packaging or removable parts. All removable parts, fuel retainer, baffle (fig.15), must be correctly installed.

2.14. Mounting mirrors (Optional)

Open the window and position the glasses in the reflector runner (# 4, fig. 16, p. 9).

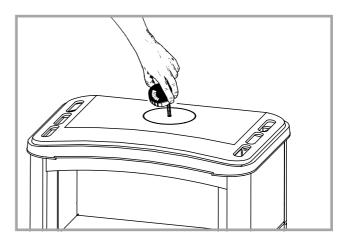


Figure 12 - Draught control

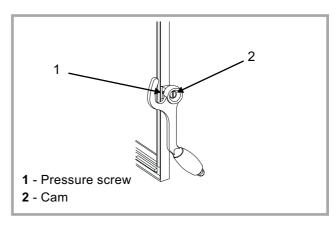


Figure 13 - Door closing pressure

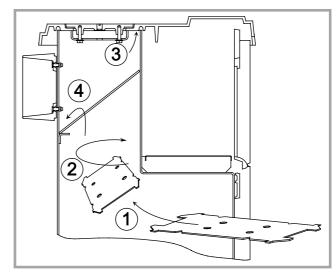


Figure 15 - Fitting the flue baffle

2.15. Maintenance of the Chimney

Chimney and chimney connector should be inspected at least once every three months during the heating season to determine if a soot build up has occurred. If soot has accumulated, it should be removed to reduce the risk of a chimney fire.

"Le Beffroi" ref. 174 10 54 Operating instructions

3. Operating instructions

3.1. Fuel

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

• Fuel oil # 2 or fuel oil # 1

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

3.2. Lighting procedure

- Be sure the control knob is to "0" (# 10, fig. 16).
- Turn on oil supply,
- Push down gently on the safety lever (# 2, fig. 11, p. 7). This will allow the oil to flow into the regulator.
- Open the front door, and remove the catalyser from burner. Make sure the inside of the pot is clean thoroughly, and there is no oil accumulation. (fig. 17, rep. 4, 3 et 2).
- 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 catalyser to heat approximately 30 to 45 sec. Turn dail to "1" position.
- Allow 10 to 15 minutes for oil fire and draught to stabilize. The catalyser should glow red before adjusting the control knob to a higher setting.

3.3. Operating procedure

 Allow 10 to 15 minutes after lighting to adjust the control knob to a higher setting, usually between a "2" and "4" setting.

When increasing the heat output, move the control knob only 1 number, allowing 5 minutes between moves for the flame to re-adjust to new setting.

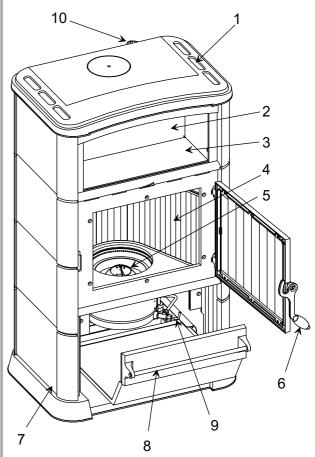
• If the burner stops during operating, immediatly turn off the control knob (position "0") and wait until the burner is completely cool before repeating the lighting procedure.

3.4. Shutting down

- Set dial to the "0" position (# 10, fig. 16).
- -Raise the safety lever of the regulator (# 2, fig. 11, p. 7).
- Allow the flame to burn out completely before opening the door.

3.5. Maintenance of the stove

- Every week: operate the de scaling lever (#9, fig. 16).
- 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 all the parts of the catalyser (#2,3et4, fig. 17)



- 1 Hot air convector outlet.
- 2 Plate warmer compartment.
- 3 Céramics (optional coulor available).
- 4 Mirrors (optional).
- Burner.
- **6** Opening and closing of the windows.
- 7 Access to the leveling legs.
- 8 Opening / closing de-scaling.
- 9 De scaling lever.
- 10 Oil contro knob.

Figure 16 - Operating devices

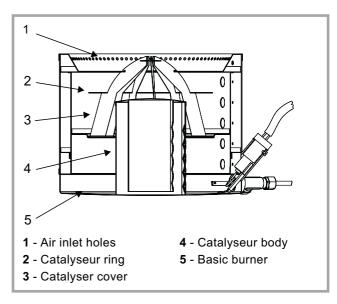


Figure 17 - Burner

"Le Beffroi" ref. 174 10 54 Operating instructions

- Using a soft bristle brush (a small clean paint brush), carefully brush off the catalyser. Loosen any carbon soot from the bottom of the burner with a putty knife, and vacuum clean. Ensure that the small air holes in burner are free of carbon.
- At least once a year / End of heating season: Clean or replace all the oil filters in the oil supply line and to change the joint of the de-scaling lever (rep. A, fig. 18, code 142825) by a professional installer.

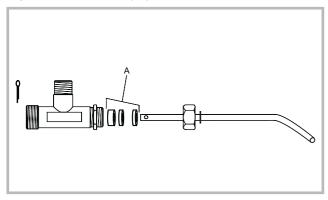


Figure 18

To clean the filter of the float regulator:

- -set the regulation knob in closed position "0" (# 10, fig. 16),
- turn off the tankvalve or the valve of the oil supply ligne,
- -raise the safety lever of the float regulator (# 2, fig. 11, p. 7),
- 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 (# 3, fig. 11, p. 7) with a screwdriver,
- remove the tubular filter from the regulator. Clean, if ne 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.
- Clean all the enamelled panels of the stove with a dry or slighly damp soft cloth.
- 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.

N.B.: The appearance of cracks when burning the enamelled units is quite usual and tends to disappear when the appliance is cooling down. It should not be considered as a defect but rather as a patina of the enamel which does not affect its quality nor its service ability.

3.6. Recommendation

- The adjustment of the stove has been made at the factory and checked by your installer. Any anomaly of operation should be reported to him at once.
- This room heater is a hight 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

Do not use for drying wet clothing.

CAUTION: Never light the burner if there is oil in the burner pot. Clean out oil before lighting.

Racing: An audible fluttering sound is an indication that there is too much oil in the pot burner and/or a lack adequate draught.

- turn off oil supply and set the control knob in closed position "0" (# 10, fig. 16).
- until fire has decreased to proper burn rate.
- **Do not overfire**: If the stove or chimney connector starts to glow, you are overfiring.

"Le Beffroi" ref. 174 10 54 Operating instructions

3.7. Trouble shooting



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

		T	
SYMPTOM	PROBLEM	$\overline{}$	- TEST SOLUTION
Flames extinguish during lighting.	Very cold chimney. No draft established.	·	- Leave door ajar until fire has caught.
			- Check air supply in the room.
Fire extinguishes once firestarter has burnt off.	Fuel tank is empty.		- Fill tank.
	Fuel valve is closed.		- Open valve.
	Main regulator float not engaging.		- De-press the safety lever.
	Control knob is set on "0"		- Adjust control knob to "1".
Fire extinguishes during use.	Fuel tank is empty.		- Fill tank.
	Insufficiant draft.		- Call your installer.
Flame is excessely large, smokey and sooty.	Fuel adjustment made too quickly.		 Return control knob to "1"; wait for normal combustion. (catalyser should glow red) Wait 5 to 15 minutes between each adjustment.
Stove burns noisily, extinguishes and relights itself.	Burner contains excess fuel.	V	- Adjust to lower setting. If problem persists call you installer.
	Insufficient fuel.		- Check that the de-scaler, the regulator filter and burne pot are cleaned.
ire smokes.Soot build up oticed. Flame imbalance	Insufficient air supply.		 Increase fresh air supply (open door, window; add make up air supply).
	Downdraft or blockage in chimney.		- Check Chimney for Soot build up. clean if necessary.
			 Ensure chimney height is sufficient and cap is no affected by any nearby obstructions.
			 Room is in negative pressure. Increase fresh air supply. Check draft with draft meter and adjust if not to requirements. See page 5.
	Oil flow is too low on 1 setting.	V	Adjust low flow rate while control is set on "1", call you installer.
	Stove is not level. Flame imbalance.		- Check level. Adjust if necessary.
	Catalyser not centered. Uneven fuel distribution resulting in secondary air shortage.		- Center catalyser assembly
	Insufficient fuel.		Check that the de-scaler, the regulator filter and burned pot are cleaned.
	The draft regulator is blocked in open position		- Unlock the draft regulator.
			- Check the regulator adjustment and refit, if necessary.
Coke build up noticed.	Excessive air supply.		- Adjust draft.

"Le Beffroi" ref. 174 10 54 Spare parts

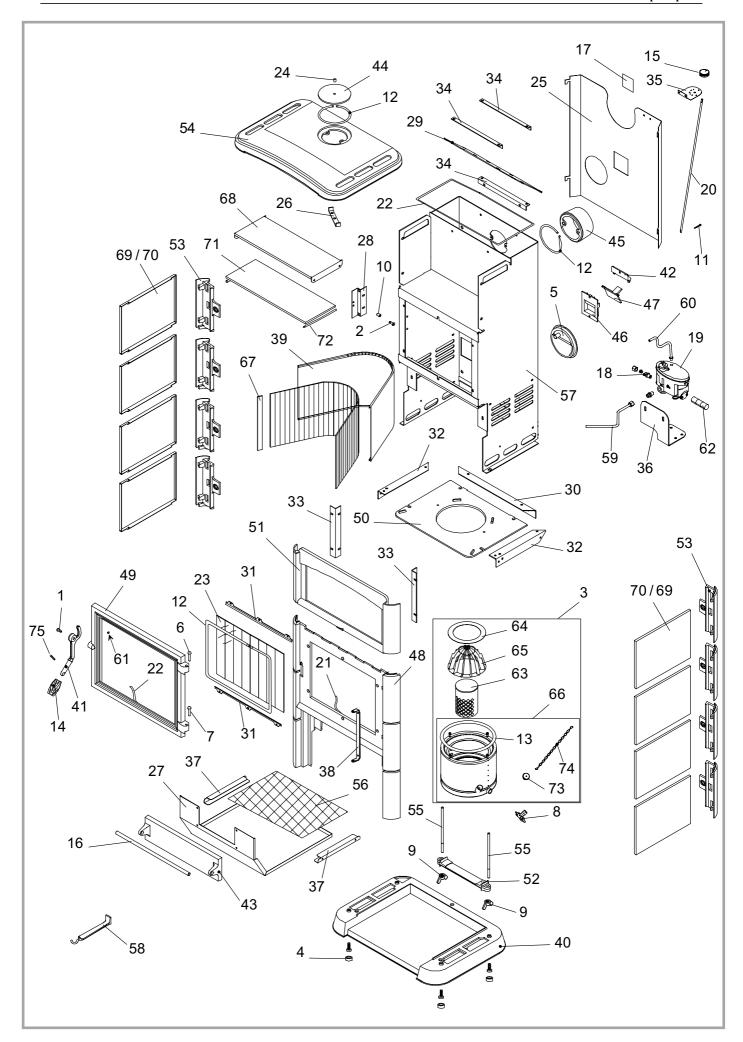
4. Spare parts

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 "Le Beffroi", Ref. 174 10 54, Base 300478 EF

N°	Code	Description Type Qty	N°	Code		Description Type Qty
1	100917	Axle 12x20 M7 01	35	236708	94	Support
2	100951	Axle	36	239718	60	Support
3	905326	Burner	37	258406 I	EF	Guide
4	109552	Cap	38	273214		Hinge
5	110105	Barometric damper 01	39	276227		Reflector
6	110404	Hinge pin 6x30 01	40	300478 I	EF	Base
7	110405	Hinge pin 6x35 01	41	301539 I	EF	Door lock
8	119215	Descaler	42	303301		Bearing
9	122204	Winged nut diam. 8 02	43		EF	Door ash pan 01
10 11	134253 134601	Bushing	44		EF	Blanking plate 01
12	142316	Gasket	45		EF	Flue collar
13	142341	Gasket	46	304201		Frame
14	149087	Handle	47	909401		Sliding door
15	149868	Knob	48		EF	Front plate
16	158624	Handle	49 50		EF EF	Main door
17	162576	Descriptive plate 01	51		EF	support
18	164205	Oil-tight nut	52		60	Suppl. front plate
19	165139	Float regulator 01	53		EF	Upright
20	179615	Regulator shaft 01	54		EF	Top plate
21	181606	Ceramic rope 10 x 4 1,99 m	55	419003		Stud bolt
22	181607	Ceramic rope Ø 9,5 2,68 m	56	446265		Protection plate
23	188807	Glass	57		EF	Firebox shell
23 24	199308 189118	Refractory glass 1x(285x47) 01 Screw Ø 10 01	58		ED	Handle
25	205373	Back wall	59	982626		Feed line tank-regulator 01
26	210501	Clamp	61	189825		Screw M 6x5 01
27	218702 EF	Drawer panel	62	199204		Regulator filter 01
28	221210	Striking plate	63	194402		Catalyser body 01
29	222550	Flue baffle	64	198205		Catalyser ring 01
30	226211	Square	65	194401		Catalyser cover 01
31	228620	Square	66	905322		Burner
32	230608	Square	73	104708		Plug
33	230901	Square	74	109718		Chain
34	231711	Square	75	134749		Pin 4x20 01
	mel plate		Ма	rble		
Bei		Cumply to minto				
68 69	202111 QJ	Suppl. top plate				
09	201012 QJ	Side parier	Bla	ck		
			70	149977		Side
Rοι		Owner to a plate		149978		Top plate
68 69		Suppl. top plate		181607		Ceramic rope 0,3 m
03	201012 WA	Side parier				
<i>Ble</i> 68		Suppl. top plate 01	Be	ige		
69		Side panel	70	149979		Side
			71	149980		Top plate
Nat	ural stone		72	181607		Ceramic rope 0,3 m
70	157362	Natural stone	Gra	av		
71	157363	Natural stone	70	149981		Side
72	181607	Ceramic rope Ø 9,5 0,3 m	70	149981		Top plate
			72	181607		Ceramic rope
Onf	ional parts					
60	982627	Vent-line				
67	199309	Mirror glass				
01	100000					

"Le Beffroi" ref. 174 10 54 Spare parts





FRANCO BELGE



Guarantee certificate

≥ Legal guarantee

The specifications, dimensions and information shown on our documents are provided for information purposes only and under no circumstances are binding upon the vendor. With the aim of constantly improving our equipment, all modifications considered as necessary by our departments may be made without notice.

The provisions of the present guarantee certificate are not excluding or limiting the owner of the equipment's rights, concerning the legal guarantee regarding faults or hidden vices which applies in all circumstances, in the conditions detailed in articles 1641and following of the civil code, and in the country in which the equipment was purchased.

№ Contractual guarantee

Our equipment is guaranteed against faults and hidden vices subject to the following conditions:

- 1) Installation and adjustment of the device by a professional installer.
- 2) Observance of the instructions provided in our technical documents and our installation/adjustment instructions.
- 3) The installation, use and maintenance of the device carried out in conformity with the applicable standards and legislation, and with the indications provided in the technical instructions accompanying the device.

This guarantee covers the replacement, in our factory, of parts recognised as being defective from the outset by our "Guarantee Inspection" Department. Carriage and labour is at the user's cost. Moreover, if the repair or replacement

of parts covered by the guarantee is found to be too costly vis-à-vis the price of the appliance, the decision to replace or repair the appliance will be taken by the vendor.

Our guarantee is for 2 (two) years for all appliances, with the exception of closed combustion fireplace and inserts for which our guarantee is 5 (five) years excluding the following:

- 1) Indicator lights, fuses, electrical elements and fans.
- 2) Parts subject to wear or in contact with high temperatures namely: soles and burner grills, bottom plates baffles, ash pans, paintwork and surface treatments for decorative parts. Also excluded from this guarantee are seals and windows.
- Any damage which may result from the use of the appliance with a fuel other than that stipulated in our instructions.
- 4) Damage occurring to parts caused by elements outside the appliance (down draught, storm damage, damp, abnormal pressure or vacuum, heat shocks, etc.).
- 5) Damage to electrical parts caused by plugging in and using the appliance on a mains system, the voltage of which (measured at the entrance to the appliance) is 10% above or below the nominal voltage of 220 V.

> Exclusion of liability

In the case of a product manufactured at the client's request, under no circumstances may we, as a subcontractor, be considered liable vis-a-vis the client or third parties for defects arising from the installation or a design fault with the item in question.

⊠ Installer/Name and address :
☎ Telephone:
⊠ Customer/Name and address :
Date of installation :
Model of the appliance : ☐ 174 10 54
color: \Box
Serial number :
This certificate has to be completed and kept carefully.
In case of claims, send a copy of this to :
STAUB FONDERIE
BP 73, 59660 MERVILLE, FRANCE.