



NORFOLK INCINERATOR

OPERATING MANUAL

These operating instructions should be read carefully and understood by the persons owning, operating or responsible for the operation of this incinerator.

No responsibility whatsoever will be accepted by the manufacturer or agents for any injury sustained in connection with the operation of the NORFOLK INCINERATOR. It is suggested that only trained persons be assigned to operate this incinerator.

Only fully qualified gas fitters should be allowed to install this incinerator.

Make:	Norfolk Incinerator
Model:	002 LGE-SC
Serial No.:
Date of Manufacture:

**BODO Ltd.
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1.0 Machine Specification

Make: Norfolk Incinerator
Model: 002 LGE-SC
Serial No.:
Date of Manufacture:

2.0 Limitations to Use

- 2.1 The Norfolk Incinerator 002 LGE-SC is designed to dispose of POULTRY carcasses only. Other animal remains may contain Special Risk Material (SRM) and should not be disposed of in the Norfolk Incinerator.
- 2.2 No plastics of any kind should be burned in the Norfolk Incinerator.
- 2.3 No pressurised containers or explosive material should ever be put into the Norfolk Incinerator.

3.0 Installation

3.1 Siting of Incinerator

It is recommended that any by-laws and regulations regarding the location of the incinerator are checked with the local authority.

The incinerator should be set on a hard, level surface ideally concrete or hardcore, away from residential areas, wooden buildings or other combustible materials.

It is highly recommended that the incinerator be placed in a housing to protect it from the elements, especially wind, rain and frost. Wind will adversely effect the burning efficiency and the secondary chamber temperature. Rain will prematurely corrode the outside of the incinerator and cold air entering the incinerator while in use can cause thermal shock ie. cracks in the refractory lining.

3.2 Inspection on Delivery

Please inspect your incinerator on delivery to make sure all components are present (see parts list) and that no damage has occurred in transit. All Norfolk Incinerators have been checked and tested before dispatch. Any faults or breakages should be reported immediately to Bodo Ltd.

Before initial use, all gas joints and connections must be checked to ensure there are no leaks by applying a soap solution. A leak will be seen as bubbles. Never look for a gas leak with a naked flame – always use a soap or detergent solution. If additional gas pipe work is going to be used, a qualified gas fitter should be employed.

The Norfolk Incinerator is designed to run on LPG at one Bar (15 PSI) pressure.

Each of the 4 burners are rated at 32 thousand BTU, totalling 128 thousand BTU (37.5 Kw). a 47 kilo bottle of LPG is designed to release 110 thousand BTU, so a bank of at least 2 bottles should be used if running on LPG bottles.

It is desirable that a pressure above 1 bar is supplied to the one bar fixed regulator supplied, if bulk gas tanks are used.

4.0 Safety and Personal Protection Equipment

- 4.1 Children, domestic animals and livestock should not be able to gain access to the area surrounding the incinerator.
- 4.2 Risk of Fire: The area surrounding the incinerator should be kept clear and clean - dry dust can become a very explosive material. Combustible material should not be stored in the vicinity of the incinerator.
- 4.3 The Norfolk Incinerator is designed to dispose of Poultry carcasses only. It is recommended that paper sacks be used for collection and storage of fallen stock. These can then be incinerated. Plastic sacks etc. must not be burned – this is contrary to regulations and can damage the refractory lining.
- 4.4 Explosive material and pressurized containers should not be put into the incinerator.
- 4.5 The lighting procedure must be followed precisely and at all times. The incinerator is fitted with 'Flame Failure Valves', if these are not operated correctly the incinerator or the secondary chamber could fill with gas and an explosion occur.
- 4.6 Many parts of the incinerator will become very hot during use. Gloves must always be worn by operatives when attending the incinerator. We recommend Welding Gauntlets and supply one pair with the incinerator.
- 4.7 A suitable dust mask should also be worn when attending the incinerator to protect against dust and fly ash, particularly when clearing the ash from the incinerator.
- 4.8 Appropriate gloves and mask should be used when handling fallen stock to protect against possible infection.
- 4.9 Fallen stock should be suitably handled and stored to ensure that contamination of water course or water table cannot occur.
- 4.10 Fallen stock should be stored in a manner to avoid the attraction of vermin or other animals.

5.0 Operation

5.1 Lighting and Loading Procedure

1. Make sure incinerator is empty and grate is clear.
2. Make sure that ash tray is empty.
3. Make sure that 'grand brick' is intact and not obstructing burners.
4. Fully open incinerator Main chamber door.
5. Attach regulator to gas supply and turn on.
6. Turn the control valve lever on the secondary chamber burner valve to the 'On' position. See fig.1



Fig. 1

7. Depress the Push Button on the flame failure valve. See fig.2



Fig.2

8. Ignite the burners using the lighter provided keeping the Push Button depressed for approx. 15 seconds after ignition. See fig.3



Fig.3

9. If the burners fail to light, do not continue to depress the Push Button as this will fill the incinerator with gas.
10. Turn the control valve lever on the Main burner valve to the 'On' position.
11. Follow stages 7 and 8 for the Main chamber burners.
12. Close the incinerator Main chamber door.
13. Place temperature probe into sleeve in the secondary chamber. See fig.4. Once a temperature of 850 degrees C has been reached, the incinerator can be loaded.



Fig.4

14. Open Main chamber door slowly standing behind the door as shown in fig. 5.



Fig.5

15. Fill incinerator to 1/3rd full. Close door and leave for 20 minutes.
16. Fill incinerator up to door level as required.
17. Ensure that the secondary burners are working correctly and that the temperature remains above 850 degrees C.
18. If the temperature in the secondary chamber rises above 1000 degrees C, the secondary burners should be turned down using the control valve lever. Running the secondary chamber at above 1000 degrees C will shorten the life of the insulating materials and will need replacing more often.
19. An entry on the log sheet should be made every 2 hours of operation recording the time and temperature.
20. The material in the Main chamber should burn down to virtually nothing.
21. All the burners should now be turned off using the valves on the burner assemblies.
22. Turn off the gas supply at the regulator.
23. If the timer option is fitted, all gas valves must still be turned off, especially overnight.

24. There must be no material left in the incinerator when not in use.

NB. Carcasses should be incinerated as soon as possible after death. If old carcasses are to be incinerated, they should be placed on top of fresh carcasses and away from the refractory lining of the incinerator. The higher water content can cause thermal shock and cracking of the refractory lining.

5.2 Clearing Ash

1. Ash must not be cleared while the incinerator is in use.
2. The incinerator must be allowed to cool down completely before ash is removed.
3. Gloves, safety glasses and suitable dust mask should be worn.
4. Remove ash tray and place COLD ashes into a paper or plastic sack for disposal according to DEFRA guidelines ie. taken away for landfill.

6.0 Maintenance

- 6.1 Never wash inside of incinerator
- 6.2 Ensure that ash and debris do not impede the flames from the bottom burners.
- 6.3 Ensure that the 'Grand brick' is in good order and positioned correctly on top of the grate. See fig.6



Fig.6

- 6.4 Every 250 operating hours, all burners must be removed and cleaned. The 2 internal jet holes must be cleaned with the nozzle cleaner provided. This pro-longs jet life, improves flame quality and speeds up the burn time. After re-assembly, all gas connections must be checked for leaks using a detergent or soap solution.
- 6.5 Every 1500 operating hours we recommend that your incinerator is serviced by one of our engineers. This will ensure the operation of the unit will continue to be safe and efficient.
- 6.6 We recommend that the incinerator is periodically painted using heat resistant aluminium paint to pro-long the life of the unit. Paint available from Bodo Ltd. Part no. BF945. NB. Not required on stainless steel models.
- 6.7 If the brick lining becomes damaged, it must be repaired immediately as distortion to the outer case will occur which will be expensive to rectify.

- 6.8 Regular inspection and maintenance will help pro-long the useful life of your incinerator. We will be pleased to offer any information or on-site training if required.
- 6.9 The refractory bricks are held in place with metal brackets bolted through the incinerator casing. Both refractory bricks and brackets can be replaced if required. See fig. 7.



Fig.7

7.0 Trouble Shooting

Fault	Remedy
Slow burn time	Product too wet Ash tray full Low gas pressure Gas jets blocked Faulty gas regulator
Will not light	Low on gas Flame probe mis-aligned Too much wind
Refractory bricks cracking	Wet product causing thermal shock Clearing debris with iron bar
Flame goes out	Low on gas Flame probe faulty Wind blows out flame Clock needs re-setting Grand brick fallen
Excessive fumes	Secondary chamber burner out Very wet product Plastic present in product

8.0 Parts List

Part No.	Description	No. Off
BF001	Grate 001 (Standard)	1
BF002	Grate 002 (Large, Super)	1
BF038	Refractory brick	-
BF039	Grand brick	1
BF040	Flame probe (Thermocouple)	2
BF050	Flame failure valve	2
BF055	Ball valve 1/4" BSP	2
BF090	Top manifold	1
BF045	Bottom manifold	1
BF010	Gas burner unit	4
BF004	Flue section	2
BF005	Flexible propane hose	1
BF075	Propane regulator	1
BF080	Galvanised pipe 1/4" BSP	1
BF095	Reducing socket	4
BF085	Thumb screws	4
BF082	Galvanised Tee 1/4" BSP	1
BF084	Male nipple 1/4" BSP	2
BF092	Cerreform lining	-
BF094	Mortar	-
BF096	Castable lining matl.	-

Optional Items

Part No.	Description	No. Off
BF920	Auto timer 0 to 120 minutes	1
BF925	Timer switch box c/w lid	1
BF930	Breaker thermocouple	2
BF935	Heat resistant cable	4
BF940	Electronic gas lighter	
BF945	Aluminium paint	
BF950	Welding gauntlets	
BF955	Ash rake	
BF960	Nozzle cleaner	

9.0 Guarantee

The NORFOLK INCINERATOR is guaranteed against defects due to faulty materials or workmanship for a period of one year from date of sale.

An incinerator developing a defect will be repaired or replaced with equivalent unit without charge. A replacement will carry the unexpired portion of this guarantee.

Damage caused through accident, misuse or neglect is excluded from this guarantee.

Our decision on all matters relating to functional and defective parts shall be conclusive. Any parts replaced shall become our property.

EC DECLARATION OF CONFORMITY

MANUFACTURER

Bodo Limited
Carvers Lane
Attleborough
Norfolk
NR17 1AB

In accordance with **The Supply of Machinery (Safety) Regulations 1992** we hereby declare that the product described conforms with the Essential Health And Safety Requirements, the following EEC Directives: **98/37/EEC**, **73/23/EEC** and **89/336/EEC** and the following transposed harmonised standards: **EN 292-1**, **EN 292-2**, **EN 1050**, Animal By-Products Regulation **1774/2002** and DEFRA Guidance '**Controls on Low Capacity Animal Carcass Incineration Plants**' **Appendix 3**.

SIGNED



POSITIONManaging Director.....

PRODUCT DESCRIPTIONNorfolk Incinerator.....

MODEL002 LGE-SC.....

SERIAL NUMBER

DATE OF MANUFACTURE

