**Note:** Jets should only be cleaned with a solvent or compressed air. If they cannot be cleaned easily they should be renewed. Never poke out a jet orifice; it will damage the jet and affect the safety and performance of the furnace.

- 3 Apply a small amount of sealing compound to the external threads of the jet and replace into the jet carrier.
- **7.3 Valve Assembly.** To replace the valve assembly:
- 1 Disconnect the hose assembly from the furnace inlet connection.
- 2 Unscrew the locknut securing the valve to the mounting bracket and remove valve.
- 3 Reassembly in reverse order.
- **7.4 Top Plate Assembly.** To replace the top plate assembly:
- 1 Remove four hexagon set screws securing the top plate assembly and remove assembly.
- 2 Fit new top plate assembly and reassemble in reverse order.
- 7.5 Standard Control Valve Component. To service the furnace valve:
- 1 Remove the knob screw, washer and valve knob.
- 2 Remove cap nut with 5/8 AF spanner (right hand thread).
- 3 Unscrew and inspect the valve needle. Renew if the cone is damaged or the 'O' ring seal is worn. Lightly lubricate the 'O' ring seal with a molybdenum disulphide grease before reassembly.

D

- 4 Clear the valve body of any dirt or swarf.
- 5 Reassemble the valve needle fully, followed by the valve spring and the cap nut; tighten cap nut firmly but without force. Refit valve knob, screw and lockwasher.
- 7.6 Mounting Bracket. To replace the mounting bracket:
- 1 Unscrew the burner tube assembly from the mixing tube elbow.
- 2 Remove two hexagon set screws and one round head screw and washer securing the shield to the frame and remove shield.
- 3 Unscrew locknut securing the valve assembly and remove valve assembly.
- 4 Unscrew and remove flame adjuster from mixing tube.
- 5 Unscrew locknut securing the mixing tube to the bracket and remove tube from the bracket.
- 6 Remove four hexagon set screws securing mounting bracket to frame and remove bracket. 7 Reassemble in reverse order.

#### 8 Accessories

The following accessories are available for the Standard Single Furnace.

Part	Description				
1404 M	Flame Deflector				
1404 N	Windshield				

#### 9 Spare Parts (See Diagram)

No.	Part	Description	No.	Part	Description
1	SP 1365 BS	Top Plate Assembly	5	SP 1365 V	Burner Tube Assy.
2	SP 1365 Q	Valve Assembly	6	SP 1365 H	Mounting Bracket
3	SP 100 A	Std Control Valve Comp's	7	1021	Hose Connector
4	SP 90	Gas Jet			

Bullfinch (Gas Equipment) Limited

Diadem Works, Kings Road, Tyseley, Birmingham B11 2AJ Tel. 0121 765 2000 Fax. 0121 707 0995



-(3)

a Constal



# BULLFINCH UNILOW FURNACE No. 1365

A non-domestic, portable, industrial high output bulk heating furnace for propane gas. For propane at 0.35 – 1 bar. Max. Heat input 12.6 kW. **This appliance requires a hose and regulator. Read instructions before use.** 

# OPERATING, MAINTENANCE AND SERVICING INSTRUCTIONS.

## CONTENTS.

### Section No.

- 1 Operating Instructions
  - 1 Introduction
  - 2 Ventilation & Free Space
  - 3 Positioning
  - 4 Gas Supply
  - 5 Technical data
- 2 Maintenance & Servicing
  - 6 Routine Maintenance
  - 7 Accessories
  - 9 Spare Parts

1365 BU Iss 2

### Section 1 Operating Instructions

#### 1. Introduction

The UNILOW FURNACE No. 1365 is a non domestic portable high output furnace for use with propane at 0.35 - 1 bar pressure. The wide low frame gives good

stability. It is fitted with an adjustable air intake to allow for a wide range of flame patterns ranging from soft to vigorous and the burner design prevents the jet from being easily blocked by spillage. It is ideal for melting lead and other metals, compounds bitumen, etc. The furnace is fitted with a needle valve, it is also supplied with a hose tail end suitable for fitting to 4.8 bore LPG hose to BS 3212/2 (high pressure). To get the best results from the furnace it should be used in accordance with these instructions and the enclosed safety precautions leaflet giving general advice on the safe use of LP gas.

#### 2. Ventilation and free space

Use only in a well ventilated area. The minimum room size for the Standard Furnace

should not be less that 126m<sup>3</sup> (4453 ft<sup>3</sup>) with a free

ventilation area of more than  $315 \text{ cm}^2$  (49 in<sup>2</sup>) divided equally between high and low levels. This free space and ventilation area are in addition to those required for any other gas appliance and occupants of the room.

0

#### 3. Positioning

Care should be taken to position the furnace so that it cannot overheat the gas cylinder (3m minimum distance) or any other combustible surface or wall (300 mm minimum distance). Avoid twisting or kinking the flexible hose. Do not use aerosols, paints, glues or other flammable liquids in the same room as the furnace. Do not use in basements or below ground level.

#### 4. Gas supply

The furnace requires a propane gas supply at 1 bar (15 psi) regulated pressure. Minimum cylinder size 13 kg. Use a high pressure propane regulator, either pre set to 1 bar or variable up to 1 bar (Bullfinch Variable Tinyreg No. 1051/01 is suitable) and at least 3 m of high pressure 4,8 bore LPG hose to BS 3212/2 (Bullfinch No. 1299).

#### 4.1 Connection to the gas supply

- 1 Fit hose to regulator and hose connector and secure with suitable hose clips.
- 2 Check that the regulator connection and the inside sealing face of the cylinder valve are clean and undamaged, connect the regulator to the cylinder and spanner tighten the nut. It has a left hand thread.
- 3 Check that the hose is not twisted or kinked and is secured to the fittings at both ends with the appropriate clips and that the gas connections are tight. Ensure that the furnace valve is in the off position and turn on the gas at the cylinder valve and if required adjust the pressure regulator to 1 bar.
- 4 Check for gas leaks using a soap solution or leak detecting fluid as described in the Safety Precautions. Do not light the furnace if it is leaking but turn off the cylinder valve and have the furnace serviced. **Never search for gas leaks with a naked flame.**
- 5 When changing gas cylinders always ensure that there are no naked flames in the area. Check that the cylinder valve is closed before disconnecting or reconnecting the furnace.

#### 4.2 Lighting the furnace.

- 1 Adjust the pressure regulator to 1 bar and turn on the cylinder valve.
- 2 Open the flame adjuster by turning the knurled collar to allow maximum amount of primary air into the mixing tube.

- 3 Open the furnace valve slightly to allow a small flow of gas to the burner and apply a flame to the top edge of the burner, once the burner is lit open the valve fully. The flame should burn fiercely without a yellow tip, with a dark blue outer mantle of approximately 270 mm long with a lighter blue inner cone of approximately 120 mm long.
- 4 The flame pattern can be softened by using the knurled flame adjuster to close off the amount of primary air to the burner. Progressive loss of primary air to the burner causes the flame to become less fierce with less definition to the outer and inner cones, the flame will also burn with a yellow tip.
- 5 If a variable regulator is being used, the heat input can be varied by reducing the pressure at the regulator.
- 6 After use turn the furnace off using the gas cylinder valve and allow the flame to die away before closing the furnace valve. Do not turn on the cylinder valve again until the furnace is about to be used.

## If you are in any doubt about the use of the Standard Single Furnace, turn off the gas at the cylinder valve and consult your dealer.

#### 5. Technical data

Technical data												
Heater	Jet	Operating	Heat input		Gas consumption		Dimensions		Min. size	Vent.	Min.	
No.	size	pressure	kw	Błu/h	kg/h	dm³/h	m		of room	area	cly. Size	
		bar			-		ht	w	d	m <sup>3</sup>	cm <sup>2</sup>	kg
1365	90	1	12.6	43000	0.9	472.5	0.23	0.3	0.3	126	315	13

All data are approximate and, in line with our product improvement policy, may be subject to revision without notice.

### Section 2 Maintenance and Servicing Instructions

#### 6. Routine maintenance

The following routine maintenance checks should be carried out at regular intervals or if the furnace has not been used for a year or more.

#### 6.1 Cleaning.

When the furnace is cold wipe exposed metal surfaces with a damp cloth. Occasionally, especially if the furnace has not been used for some time dust or insect debris may become lodged in the burner or the tube, this may be removed by blowing through the tube with a high pressure air line.

#### 6.2 Gas soundness

Check the soundness of all gas joints with a leak detecting fluid (Bullfinch No. 550) and rectify all leaks before lighting the furnace.

#### Never search for gas leaks with a naked flame.

#### 6.3 Operation.

Light the furnace in accordance with the operating instructions and ensure that it ignites and burns correctly.

#### 6.4 Controls.

Check that the furnace valve operates without force and that it always closes off the gas flow to the burner when it is turned to the closed position.

#### 7. Servicing

**Important:** Servicing should only be carried out by trained and competent service agents. After servicing or replacement of any part, check for gas leaks and correct operation before returning the furnace to the user.

- 7.1 Burner. To replace the burner tube assembly:
- 1 Unscrew the burner assembly from the mixing tube elbow.
- 2 Refit new burner assembly.
- 7.2 Gas Jet. To clean or replace the gas jet (size 90):
- 1 Retract the flame adjuster to give maximum aeration.
- 2 Unscrew the jet from the jet carrier and clean or renew.