

# ELECTRIC BOILING PANS

**BP 135E**

**BP 225E**



**BP 135E**



**BP 225E**

## **Index:**

General Data	2
Owner's Responsibility	3
Authorised Vulcan Catering Equipment	
Branches and Dealers	4
Parts Ordering / Service Information	5
Prior to Installation of Equipment	5
Cleaning Process	6
Trouble Shooting	6
Installation	7
Line diagram	8
Wiring Diagrams	9
Spares	10
Operation	11
Routine Maintenance	11
Safety	12



**VULCAN CATERING  
EQUIPMENT (PTY) LTD**



## GENERAL DATA:

MANUFACTURER: Reg No. 1954/002040/07  
Vulcan Catering Equipment (Pty) Ltd  
P O Box 60188 15 Newclare Road  
Langlaagte 2102 Industria 2093  
Johannesburg Johannesburg  
South Africa South Africa  
Web Site: www.vulcan.co.za

MODEL / SERIAL NUMBER: BP 135 126/34/ onwards  
BP 225 126/54/ onwards

### **BP 135 Oil jacketed boiling pan**

Heated by 3 x 3 kW elements and controlled by 30°C to 160°C thermostat with overriding thermostat.

### **BP 225 Oil jacketed pan**

Heated by 6 x 3 kW elements and controlled by 30°C to 160°C thermostat with overriding thermostat.

#### **NOTE 1:**

Boiling pans with serial numbers

126/33/ BP135 and  
126/53/ BP225 are fitted with 30°C to 150°C thermostats and only one contactor. 160°C thermostats to be used as replacement spares.

#### **NOTE 2:**

Boiling pans with serial numbers

126/34/ BP135 and  
126/54/ BP225 are fitted with 2 x BF20 contactors.

PROTECTION: BP 135 - 3 x 25 Amp line circuit breakers.

BP 225 - 3 x 40 Amp line circuit breakers.

CONDUIT ENTRY: 25mm Conduit at rear of control box.

ELECTRICAL LOADING:	BP 135	L1 = 3kW	Total load = 9 kW
		L2 = 3kW	
		L3 = 3kW	

BP 225	L1 = 6kW	Total load 18 kW
	L2 = 6kW	
	L3 = 6 kW	

ELECTRICAL SUPPLY: 400 V (400 Volts; 3 Phase; 4 Wire, 50 Hertz)

NET MASS:	BP 135	107kg
	BP 225	126kg

## OWNER'S RESPONSIBILITY:

### It is the owners responsibility to:

- Ensure that the boiling pans electric model BP 135 litre and BP 225 litre units are regularly and properly maintained.
- Ensure that all safety devices and warning signs are in their original location.
- Allow only trained personnel to operate, clean and maintain the equipment.
- Replace warning signs or manuals when necessary. Contact an authorised Vulcan Catering Equipment Dealer for replacement.

## **AUTHORISED VULCAN CATERING EQUIPMENT BRANCHES AND DEALERS:**

<b>Vulcan Toll Free Number</b>	0860	Vulcan / 885226
<b>Johannesburg Branch Office</b>	(011)	249 - 8500
Johannesburg Service Department	(011)	249 - 8578 / 8582
Johannesburg Spares Department	(011)	249 - 8600
Johannesburg Standby      Tel. Number	(082)	446 - 7095 <b><u>After Hours</u></b>
<b>Cape Town Branch Office</b>		
Cape Town Office      Tel. Number	(021)	510 - 5010
<b>Durban Branch Office</b>		
Durban Branch Office      Tel. Number	(031)	569 - 7800
<b>Port Elizabeth Office</b>		
Port Elizabeth Office      Tel. Number	(041)	453 - 5177
<b>East London Branch Office</b>		
East London Office      Tel. Number	(043)	722 - 2883
<b>Botswana Dealer Office</b>		
Botswana Dealer Office      Tel. Number	(+267)	395 - 2228
<b>Namibia Dealer Office</b>		
Namibia Dealer Office      Tel. Number	(+264)	61 251 - 708

## PARTS ORDERING / SERVICE INFORMATION:

Parts / spares orders must be placed directly with your local branch / distributor.  
To help speed up your order, we require the following information:

1. Model / Serial Number \_\_\_\_\_
2. Voltage (230V / 400V) \_\_\_\_\_
3. Item Part Number \_\_\_\_\_
4. Quantity Required \_\_\_\_\_

The serial number data plate is situated at the front right hand side of the unit.

Service information may be obtained by calling your local branch / distributor.  
When calling. Please have the following information available:

1. Model / Serial Number. \_\_\_\_\_
2. Voltage (230V / 400V). \_\_\_\_\_
3. Nature of Service Problem. \_\_\_\_\_

## PRIOR TO THE INSTALLATION OF EQUIPMENT:

- Please read this operating manual to ensure that the installation meets all the requirements as specified within the Operating and Installation manual provided with your unit.

## **CLEANING:**

1. Use a soft sponge and warm soapy water when cleaning.
2. Care must be taken in cleaning draw-off valve not to damage machined surfaces.
3. Wipe surface with soapy damp cloth.
4. Never use soda, steel wool, scouring pad or any other harsh abrasive to clean the unit.
5. Do not spray the unit with a high pressure hose or spray gun.
6. Avoid excessive spillage.

## **TROUBLE SHOOTING:**

<b>COMPLAINT</b>	<b>POSSIBLE CAUSE</b>	<b>REMEDY</b>
<ul style="list-style-type: none"><li>• Unit not switching on</li></ul>	<ul style="list-style-type: none"><li>• Main isolator off</li><li>• Main circuit breaker off</li></ul>	<ul style="list-style-type: none"><li>• Switch isolator on</li><li>• Switch circuit breaker on</li></ul>
<ul style="list-style-type: none"><li>• Boiling pot not heating up</li></ul>	<ul style="list-style-type: none"><li>• Thermostat off</li></ul>	<ul style="list-style-type: none"><li>• Switch thermostat on</li></ul>

## INSTALLATION

1. Before leaving the factory, this unit has been fully assembled and undergone final testing.
2. Remove the plastic material protecting the stainless steel panels.
3. Position unit. Check with spirit level. Use floor adjusters on legs to bring to correct level secure feet firmly with M6 anchor bolts.
4. Fill jacket with shell Thermia 'D' oil to the bottom mark on the dipstick. Before filling ensure drain valve is closed.

Oil Capacity BP 135 = 34 Litres

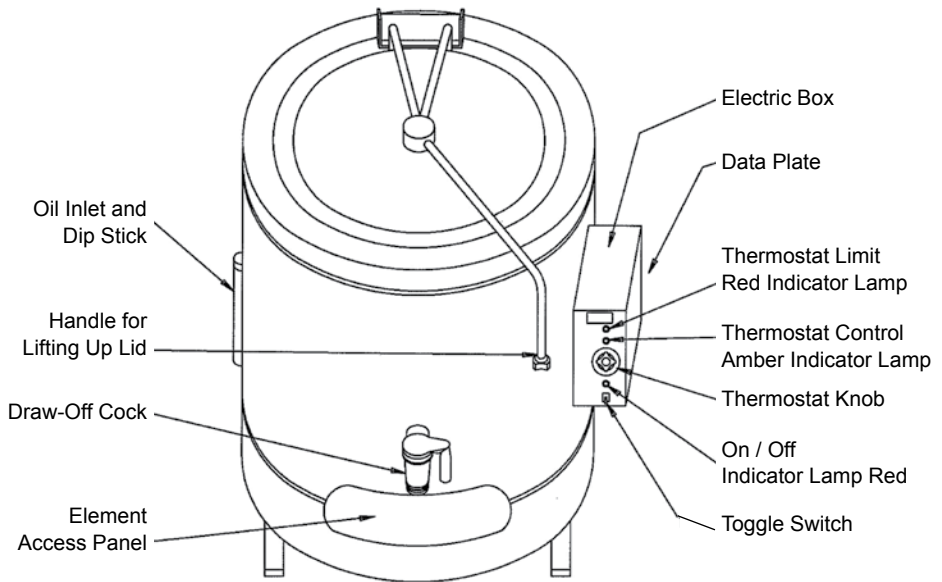
BP 225 = 60 Litres

5. An electrical isolator switch must be incorporated in the supply line and fitted adjacent to the unit.
6. Before connecting the electrical supply to the unit, check voltage details correspond with the data plate positioned on the control box.
7. For access to mains terminals, remove side control panel. Connect the three phase wire to the circuit breakers, the neutral wire to the neutral block and the earth wire to the earth connection.
8. Ensure that the unit is effectively earthed.
9. The unit is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
10. Children should be supervised to ensure that they do not play with the appliance.

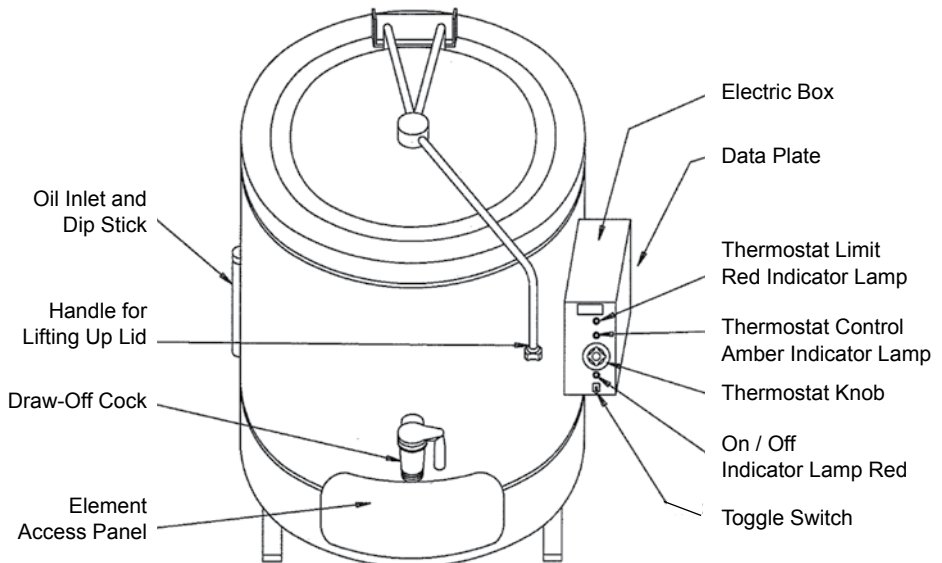
### 11. **PLEASE NOTE**

**The installation of the equipment must be done by a qualified registered technician all in compliance with statutory Health and Safety Regulations.**

## 135 LITRE BOILING PAN / PBP-135



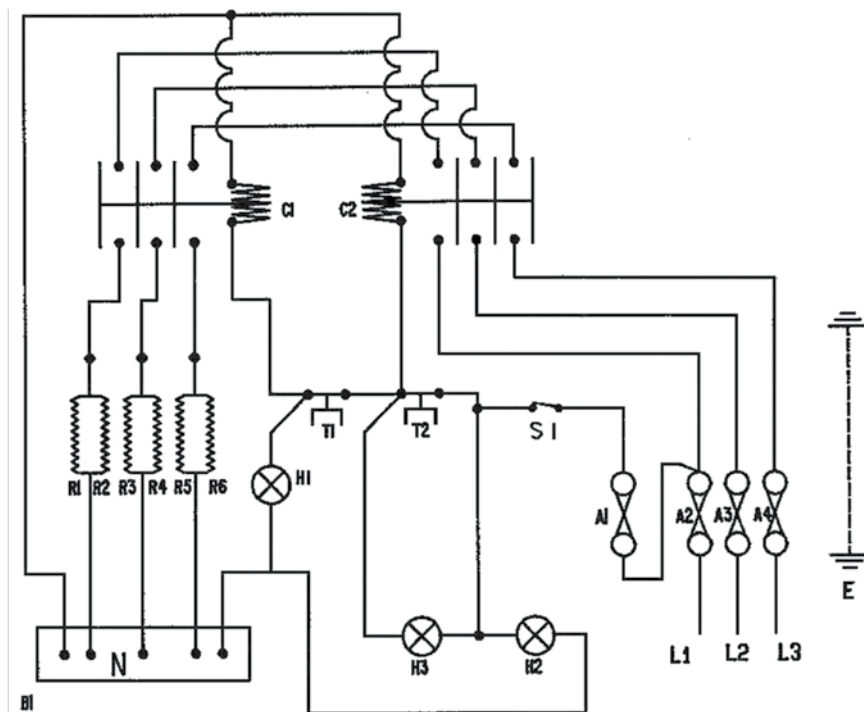
## 225 LITRE BOILING PAN / PBP-225





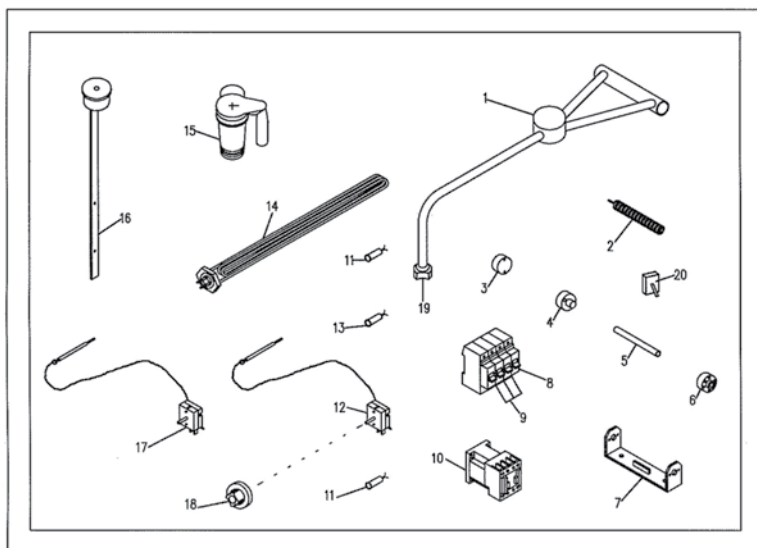
## WIRING DIAGRAM FOR 135 LITRE AND 225 LITRE ELECTRIC BOILING PANS

Please Note : The 135 litre boiling pan only has 3 elements



Item No	Stores Ref.No	Description
A1	3010 - 29	Circuit Breaker 5 amp
A2 – A4	3010 - 36	Circuit Breaker 25amp <b>3 off req. for 135L BP</b>
A2 – A4	3010 - 28	Circuit Breaker 40amp <b>3 off req. 225L BP</b>
B1	3076 - 01	Neutral block
C1 – C2	3009 - 19	Contactur BF 25 <b>2 off required 135 Litre BP</b>
C1 – C2	3009 - 22	Contactur BF 38 <b>2 off required 225 Litre BP</b>
H1	3051 - 01	Pilot Light Amber
H2,H3	3051 - 02	Pilot Light Red
R1,R2,R3	3019 - 02	Element 3kW <b>3 off required 135 Litre BP</b>
R1 – R6	3019 - 02	Element 3kW <b>6 off required 225 Litre BP</b>
S1	3067 - 06	Toggle switch
T1	3077 - 37	Control Thermostat 30° - 160°C
T2	3077 - 38	Over riding Thermostat 50° - 180°C

## CONTROLS AND SPARE PARTS FOR 135 LITRE AND 225 LITRE ELECTRIC BOILING PANS



Item No	Stores Ref.No	Description
1	DN 5603	Lid handle
2	34433 - 81	Hinge spring
3	3700 - 04	Swivel boss pivot LH
4	3700 - 05	Boss spring anchor
5	DN 5609	Tube stainless steel 19,05Ø x 140mm long
6	3700 - 03	Swivel boss pivot RH
7	DN 5603	Hinge main bracket
8	3010 - 36	Circuit breaker 25amp <b>3 off required.135 BP</b>
8	3010 - 28	Circuit breaker 40 amp <b>3 off required 225 BP</b>
9	3010 - 29	Circuit breaker 5 amp
10	3009 - 19	Contactors BF 25
10	3009 - 22	Contactors BF 38
11	3051 - 02	Pilot light red
12	3077 - 37	Control thermostat 30° - 160°C
13	3051 - 01	Pilot light amber
14	3019 - 02	Element 3kW <b>3 off 135L BP / 6 off 225L BP</b>
15	3246 - 07	Draw-off cock
16	DN 5135	Dip stick
17	3077 - 38	Over riding Thermostat ( <b>Pre set</b> ) 50° - 180°C
18	3311 - 15	Thermostat knob
19	3141 - 15	Lid handle knob
20	3067 - 06	Toggle switch
21	3076 - 01	Neutral block

## OPERATION:

The boiling pan is controlled by a thermostat 30°C to 160°C with indicating pilot lights.

## PREVENTATIVE MAINTENANCE:

1. Reduce heat when not in use.
2. When cleaning switch-off at isolator.
3. Clean when unit is still warm.
4. Care must be taken when cleaning draw-off valve not to damage machined surfaces.
5. Wipe surfaces with soapy damp cloth.
6. **DO NOT HOSE DOWN OR USE EXCESSIVE WATER.**

**Note:** In the event the red pilot light comes on, the oil has overheated and the preset overriding thermostat has cut off – call an electrician to investigate cause.

## MAINTENANCE:

1. Conduct a routine check on the general appearance, all moving parts, and to ensure that screws and nuts have not worked loose.
2. Check elements, thermostats and contactors are operating correctly.
3. For access to electrical controls remove control box cover.
4. For access to elements remove panel at front below draw-off valve.
5. Check oil level. Use the bottom mark when the oil is cold and the top mark when the oil is hot.
6. Replace the oil every two years.

## SAFETY:

1. Be sure to read and understand the enclosed instructions thoroughly before operating this unit.
2. Remember to always use extreme caution when dealing with any heavy duty electric appliance.
3. Do not place your hand directly into the boiling pan.
4. Do not spray water onto the electrical connections, this could result in an Electric Shock.
5. Turn the temperature off when unit is not in use.

Subject to standard Vulcan warranty within South Africa borders. Subject to standard Vulcan Export warranty outside South Africa borders. Vulcan reserves the right to modify or alter appliances without prior notice. Local prices subject to confirmation at time of purchase / placing of order.

© Copyright subsists on all work published in this operating manual and may not be reproduced or adapted, in whole or in part, without written permission of Vulcan Catering Equipment (Pty) Limited. Whilst every effort has been taken in the preparation of this operating manual to ensure the accuracy and relevance of the contents, Vulcan Catering Equipment (Pty) Limited cannot be held responsible for any omissions or errors, or from damages resulting from the use of information contained herein.



# VULCAN BOILING PAN - GAS MODEL BP225G



## Index:

General Data	2
Owner's Responsibility	3
Authorised Vulcan Catering Equipment	
Branches and Dealers	3
Parts Ordering / Service Information	4
Prior to Installation of Equipment	4
Cleaning Process	5
Trouble Shooting	5
Installation	6
Spares	7
Wiring Diagrams	8
Operation	9
Maintenance	10
Preventative Maintenance	11
Safety	12



**VULCAN CATERING  
EQUIPMENT (PTY) LTD**



## GENERAL DATA:

MANUFACTURER: Reg No. 1954/002040/07  
Vulcan Catering Equipment (Pty) Ltd  
P O Box 60188 15 Newclare Road  
Langlaagte 2102 Industria 2093  
Johannesburg Johannesburg  
South Africa South Africa  
Web Site: [www.vulcan.co.za](http://www.vulcan.co.za)

### MODEL / SERIAL NUMBER:

128/57/0977 – ONWARDS MKIII  
LP Gas Safety Association Permit No 1123/01/RSA-03/A

HEATING: Heated by 3 x 30 000 kJ S/S tubular burners & controlled by a 50° - 150°C thermostat.

GAS CONNECTION: 10MM (3/8") Gas pipe at bottom front of control box – Male.

GAS RATING: 90 000 kJ/hr  
1800 g/h

GAS PRESSURE: L.P. Gas 280mm H<sub>2</sub>O (2.75 kPa)  
Natural Gas 2.0 kPa  
Complying with SANS 1539:2008 requirements

NET MASS: 175Kg

OIL JACKET CAPACITY: 46L Shell Thermia "D" oil

## OWNER'S RESPONSIBILITY

### It is the owner's responsibility to:

- To ensure that the boiling pan gas model BPG 225 litre unit is regularly and properly maintained.
- Ensure that all safety devices and warning signs are in their original location.
- Allow only trained personnel to operate, clean and maintain the equipment.
- Replace warning signs or manuals when necessary. Contact an authorised Vulcan Catering Equipment dealer for replacement.
- Important Information For The User: This appliance may only be installed by a registered LP Gas installer. All registered installers are issued with a card carrying their registration number. Ask to be shown the card before allowing the installation work to commence and make a note of the installer QCC number. Upon completion of the installation the installer is required to explain the operational details of the appliance, together with the safety instructions. You will be asked to sign acceptance of the installation and be provided with a completion certificate.
- Important Information For The Installer: The installer must be registered with the Liquefied Petroleum Gas Association of Southern Africa. The appliance must be installed in accordance with SANS 10087-1 requirements and local fire department regulations and /or by-laws.

### AUTHORISED VULCAN CATERING EQUIPMENT BRANCHES AND DEALERS:

<b>Vulcan Toll Free Number</b>	0860	Vulcan / 885226
<b>Johannesburg Branch Office</b>	(011)	249 - 8500
Johannesburg Service Department	(011)	249 - 8578 / 8582
Johannesburg Spares Department	(011)	249 - 8600
Johannesburg Standby      Tel. Number	(082)	446 - 7095 <b><u>After Hours</u></b>
<b>Cape Town Branch Office</b>		
Cape Town Office      Tel. Number	(021)	510 - 5010
<b>Durban Branch Office</b>		
Durban Branch Office      Tel. Number	(031)	569 - 7800
<b>Port Elizabeth Office</b>		
Port Elizabeth Office      Tel. Number	(041)	453 - 5177
<b>East London Branch Office</b>		
East London Office      Tel. Number	(043)	722 - 2883
<b>Botswana Dealer Office</b>		
Botswana Dealer Office      Tel. Number	(+267)	395 - 2228
<b>Namibia Dealer Office</b>		
Namibia Dealer Office      Tel. Number	(+264)	61 251 - 708

## **PARTS ORDERING / SERVICE INFORMATION:**

Parts / spares orders must be placed directly with your local branch / distributor. To help speed up your order, we require the following information:

1. Model / Serial Number \_\_\_\_\_
2. Type of Gas (L.P. or Natural Gas) \_\_\_\_\_
3. Item Part Number \_\_\_\_\_
4. Quantity Required \_\_\_\_\_

The serial number data plate is situated at the front right hand side of the unit.

Service information may be obtained by calling your local branch / distributor. When calling, please have the following information available:

1. Model / Serial Number \_\_\_\_\_
2. Type of Gas (L.P. or Natural Gas) \_\_\_\_\_
3. Nature of Service Problem \_\_\_\_\_
4. Location / altitude where equipment operating (e.g. Johannesburg, Cape Town):  
\_\_\_\_\_

## **PRIOR TO THE INSTALLATION OF EQUIPMENT:**

- Read this operating manual to ensure that the installation meets all the requirements as specified within the Operating and Installation manual provided with your unit.



## CLEANING:

1. Use a soft sponge and warm soapy water when cleaning.
2. Care must be taken in cleaning draw off valve not to damage machined surfaces.
3. Wipe surface with soapy damp cloth.
4. Never use soda, steel wool, green 3M scouring pad or any other harsh abrasive to clean the unit.
5. Do not spray the unit with a high pressure hose or spray gun.
6. Avoid excessive spillage.

## TROUBLE SHOOTING:

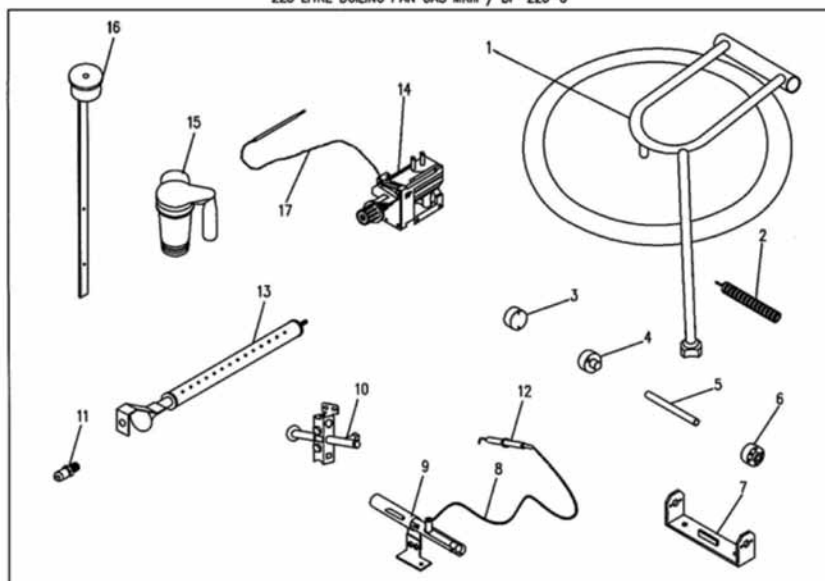
COMPLAINT	POSSIBLE CAUSE	REMEDY
<ul style="list-style-type: none"><li>• Unit not switching on.</li></ul>	<ul style="list-style-type: none"><li>• Main gas valve closed.</li></ul>	<ul style="list-style-type: none"><li>• Open gas valve.</li></ul>
<ul style="list-style-type: none"><li>• Boiling pot not heating up.</li></ul>	<ul style="list-style-type: none"><li>• Pilot igniter off.</li><li>• Thermostat switched off.</li></ul>	<ul style="list-style-type: none"><li>• Switch pilot on.</li><li>• Switch thermostat on.</li></ul>

## INSTALLATION:

1. Before leaving the factory, this unit has been fully assembled and undergone final tests.
2. The installation of appliances may only be carried out by an installation technician or trained personnel and such installations shall comply with the requirements of SANS 10087-1.
3. Position unit: Unit must be installed in a well ventilated area on a fire proof floor; if floor is of wood, arrangement must be made to comply with local fire department regulations. Rear of unit must be at least 100mm from the wall. If the unit is closer to the wall then the wall must be fire proof.
4. Check level of unit with a spirit level, use floor adjusters on legs to bring to correct level. Min. height to under unit 140mm from floor level.
5. Remove plastic material protecting the stainless steel panels. Fill jacket with Shell Thermia "D" oil to the bottom mark on the dip stick. Before filling ensure drain valve is closed. Oil capacity – approximately 46 litres.
6. A gas cock must be incorporated in the supply pipe and fitted close to the unit. A gas regulator / governor set at the correct pressure must also be fitted close to the unit.
7. This appliance is to be operated with a 2.8kPa (for LP Gas) and 2.0kPa (for Natural Gas) regulator complying with the regulations of the SANS 1539:2008 with a minimum capacity of 1800 g/h – regulator not supplied.
8. Before connecting gas supply, check the serial plate and ensure that unit is suitable for the type of gas being used. After connecting to the gas supply, check carefully for leaks (see Maintenance section for instructions), and as there may be air in the system, it will take several minutes to evacuate after depressing the main control knob to light the pilots.
9. Check that correct gas jets are fitted to suit type of gas and altitude.
10. Air intake adjustment slide on burner must be set to give clear blue flame. Red and yellow colour is incorrect.
11. The unit is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
12. Children should be supervised to ensure that they do not play with the appliance.

## 11. PLEASE NOTE

**The installation must be done by a qualified registered technician all in compliance with statutory Health and Safety Regulations.**



EDITION: 3

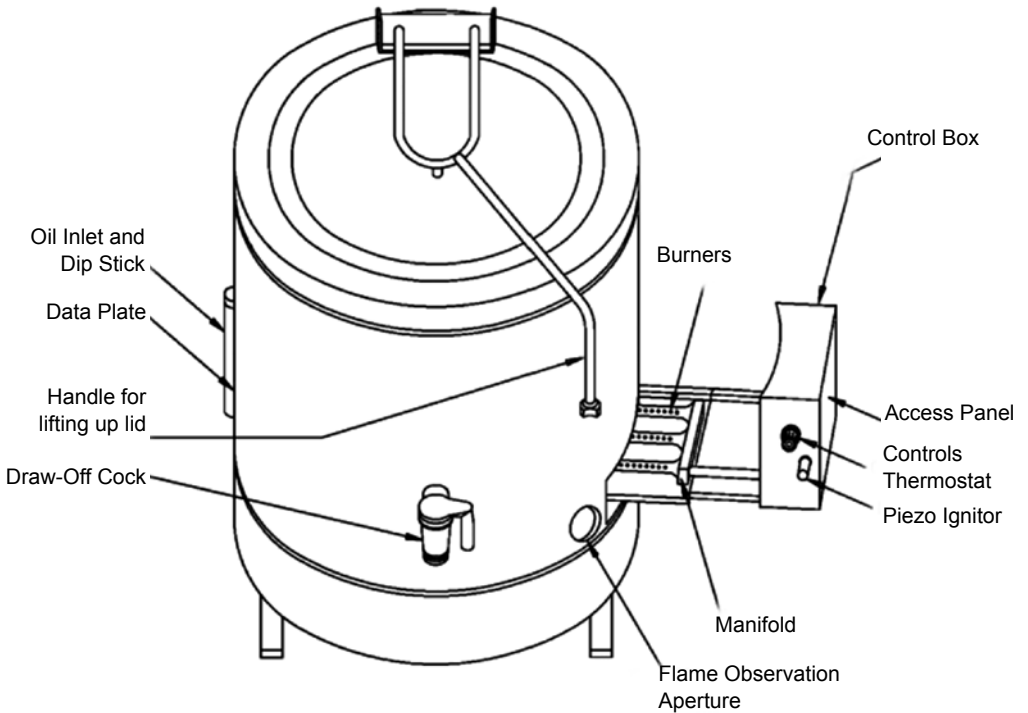
APPLICABLE FROM SERIAL No 128/57/0977 ONWARDS

Item No	Stores Ref.No	Description
1	DN.5603	Lid Handle
2	3433-81	Hinge Spring
3	3700-04	Swivel boss pivot LH
4	3700-05	Boss spring anchor
5	DN.5609	Ø 19,05 s/steel tube x 140 long
6	3700-03	Swivel boss pivot RH
7	DN.5603	Hinge main bracket
8	3114-17	Silicone ignition wire 900 long
9	3114-15	Piezo ignitor
10	3109-18	Three-way gas pilot
11	3129-02	Burner jet
12	3114-21	Electrode
13	3106-11	Burner
14	3114-20	Gas regulator valve
15	3246-07	Draw-off cock
16	DN.5135	Dip stick
17	3114-18	Thermo couple 600 long

**BP-225-G**

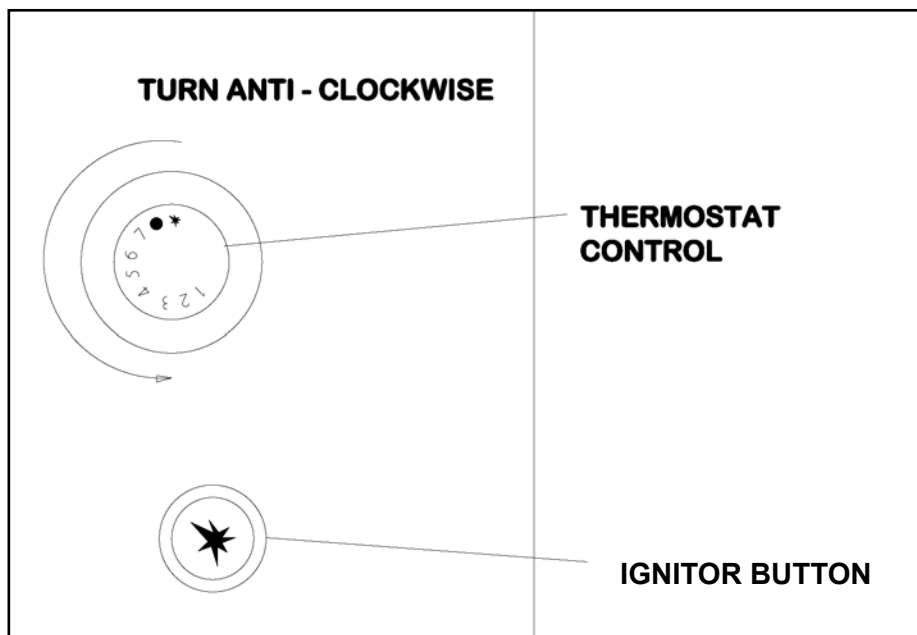
**225 LITRE BOILING PAN MKIII / BP-225-G**

**Figure:1**



## OPERATING:

1. The tubular s/s burners are controlled by a thermostat 110° - 160°C with continuous burning pilot located in the control box to the lower side of the unit. See figure 1.
2. Press in and turn control thermostat knob in an anti-clockwise direction until it slides into the slot. Keep knob depressed and depress ignitor (repeat if necessary) until pilot is lit, keep control knob depressed for A30 seconds (to heat thermocouple) before releasing. If pilot flame dies repeat operation allowing for a longer period before releasing knob.
3. To light burners, after being released continue to turn control thermostat knob in an anti-clockwise direction to the required setting (temperature), burners will ignite.



## **MAINTENANCE:**

1. Routine check on general appearance.
2. Check that moving parts, screws and nuts have not worked loose.
3. Check operating functions of control valve, thermostat, burner, pilot and thermocouple are satisfactory.
4. The control box and burners are complete independent sub-assembly of the boiling pan. To remove control box and burners remove access panel on control box by unscrewing two screws underneath the control box. Inside the control box unscrew top two and bottom center screws situated at rear of box.
5. Remove complete sub-assembly by pulling the control box towards oneself, being careful to remove thermostat probe from its housing in the boiler plate at the bottom of the pan.
6. Gas Leak testing should be done annually and/or whenever the unit is reconnected to the main gas supply.
7. Always inspect the hose / pipe for cuts, cracks, or excessive wear before use.
8. Damaged hoses / pipes must be replaced with suitable type which meets the national standards for the country of use. (South Africa: SANS 1156-2 or BS3212).
9. Check oil level, bottom mark on dip stick is when oil is cold, top mark when oil is hot.
10. Replace the oil every two years.

## Method to check for gas leakage is as follows :

- Ensure the area is well ventilated.
- Confirm that control knob is in OFF position.
- Mix up a solution of soap and water to a 50/50 ratio.
- Open the main gas control valve.
- Methodically brush the solution onto all the gas system joints, including all the valve connections, hose connections, and regulator connections.
- The formation of bubbles indicates a gas leak.
- Turn off the gas supply and re-tighten all joints where there are bubbles.
- Repeat the test.
- If bubbles appear again do not use the unit. Contact you supplier or service agent for assistance.
- NEVER use an open flame to test for gas leaks at any time.

## GAS JET NOZZLE CONVERSION:

<b>GAS</b>	<b>JET NOZZLE SIZE</b>
LPG	Æ 1,4mm
NATURAL GAS	Æ 3mm
ARTIFICIAL	
COAL GAS	Æ 4mm
OIL MADE GAS	Æ 2,,7mm

## SAFETY :

1. Be sure to read and understand the enclosed instructions thoroughly before operating this unit.
2. Remember to always use extreme caution when dealing with any heavy duty gas appliance.
3. Always ensure that the pilot flames are properly ignited before opening the gas valves. This can be observed through the aperture near the control box. (See drawing on page 8.)
4. Do not leave the unit unattended whilst lit.
5. Do not move the appliance whilst lit.
6. Do not place or use flammable materials near unit.
7. Do not tamper with any parts sealed by manufacturer. Any modification of this appliance is dangerous and will nullify any warranty. All repairs or adjustments should be made by a qualified technician.
8. Turn off the main gas supply and gas cocks after use.
9. This appliance consumes oxygen and is dangerous to the health and safety of humans. Use only in properly ventilated area.

## WARNING

**This is an un-vented gas appliance. It uses air (oxygen) from the room in which it is installed. Provisions for adequate ventilation must be provided.**

Subject to standard Vulcan warranty within South Africa borders. Subject to standard Vulcan Export warranty outside South Africa borders. Vulcan reserves the right to modify or alter appliances without prior notice. Local prices subject to confirmation at time of purchase / placing of order.

© Copyright subsists on all work published in this operating manual and may not be reproduced or adapted, in whole or in part, without written permission of Vulcan Catering Equipment (Pty) Limited. Whilst every effort has been taken in the preparation of this operating manual to ensure the accuracy and relevance of the contents, Vulcan Catering Equipment (Pty) Limited cannot be held responsible for any omissions or errors, or from damages resulting from the use of information contained herein.

