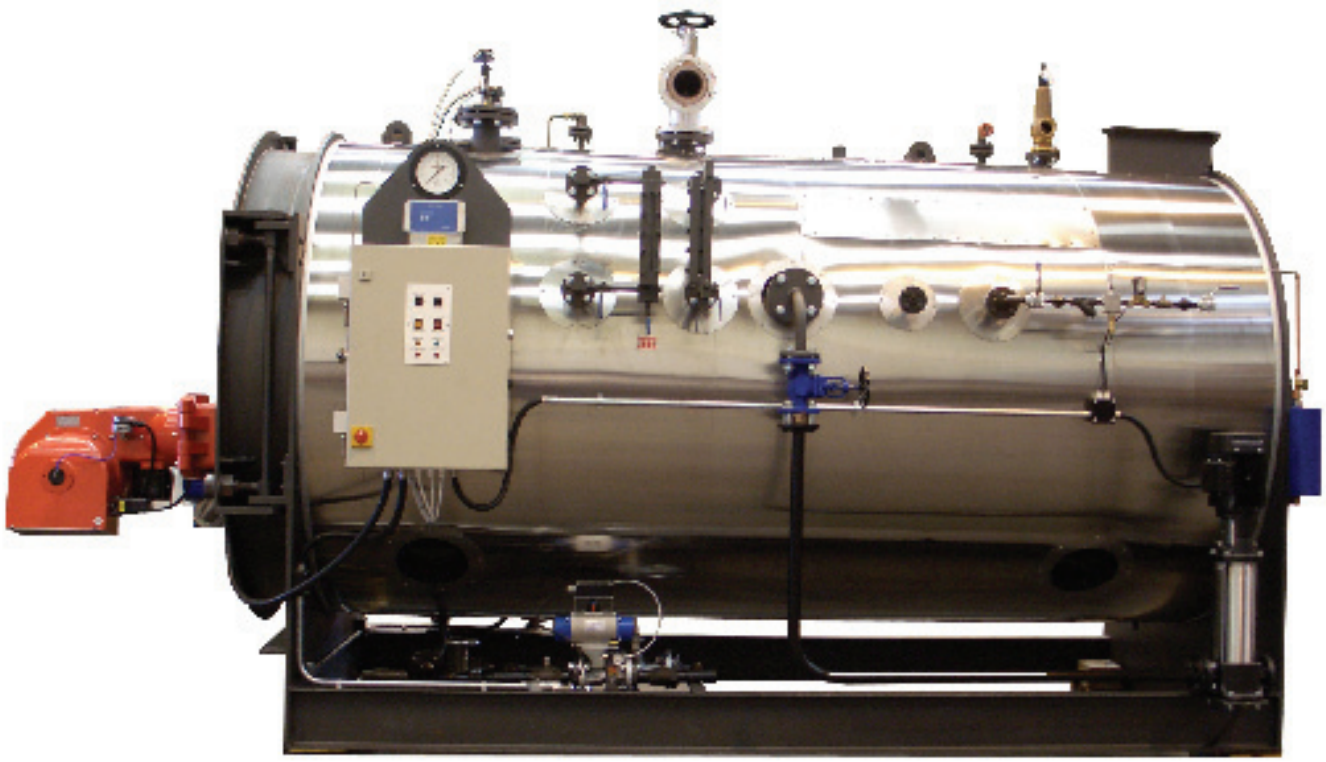
Fulton®

OPERATING, MAINTENANCE and SPARE PARTS MANUAL



RBC Series

HORIZONTAL STEAM BOILERS

RBC Standard. 04 2011

For Your Safety!

The following **WARNINGS, CAUTIONS** and **NOTES** appear in various sections of this manual.

WARNINGS must be observed to prevent serious injury or death to personnel.

CAUTIONS must be observed to prevent damage or destruction of equipment or loss of operating effectiveness.

NOTES must be observed for essential and effective operating procedures, conditions and as a statement to be highlighted.

It is the responsibility and duty of all personnel involved in the operation and maintenance of this equipment to fully understand the **WARNINGS, CAUTIONS** and **NOTES** by which hazards are to be eliminated or reduced.

Personnel must become familiar with all aspects of safety and equipment prior to operation or maintenance of the equipment.

⚠ WARNING

Steam Boilers are a potential hazard, possibly fatal if not properly maintained.

⚠ CAUTION

It is vitally important that the instructions given in this manual are strictly adhered to.
Failure to carry out the routine maintenance checks could result in a drastic reduction in the life expectancy of the boiler.

NOTE

The Pressure system and Transportable Gas Containers Regulations 1989
Fulton Boilers fall within the scope of the Pressure Systems Examination Scheme and Section 40 of the Health and Safety at Work in 1974.

Regular inspections are therefore required by a ‘Competent Person’ at intervals not exceeding 14 months.
The scope of the examination and the actual intervals between examinations is at the discretion of the competent person.

It is the responsibility of the user to provide a written scheme of examination for those parts of the system in which a defect may give rise to danger.
Instructions in this manual are provided for the safe operation and maintenance of the boiler and do not cover periodic statutory inspections.

For further information contact:-

(a) SAFed
SAFETY ASSESSMENT FEDERATION Limited.
Nutmeg House, 60 Gainsford Street, Butlers Wharf,
London, SE1 2NY.

(b) Health and Safety Executive local office.

(c) Your insurance company/broker.

LIST OF CONTENTS

⚠ SAFETY

The instructions provided for the operation and maintenance of the boiler **MUST** be observed.
Failure to do so could result in damage to the boiler and serious personal injury.

⚠ WARNING

It is the responsibility of the installer to ensure all parts supplied with the boiler are fitted in a correct and safe manner.

⚠ WARNING

Do not try to do repairs or any other maintenance work you do not understand.
Obtain a Service Manual or call a Fulton Service Engineer.

⚠ WARNING

Understand the electrical circuit before connecting or disconnecting an electrical component. A wrong connection can cause injury and or damage.

⚠ WARNING

A defective boiler can injure you or others. Do not operate a boiler which is defective or has missing parts. Make sure that all maintenance procedures are completed before using the boiler.

⚠ WARNING

The installation of Gas appliances including the flue system should only be carried out by Corgi Registered engineers.

⚠ WARNING

The importance of correct boiler water and feed water cannot be over emphasized, see the relevant section in this manual.

⚠ WARNING

DANGER FROM INCOMPLETE COMBUSTION

The importance of correct burner adjustment to achieve low emissions, safe, clean and efficient combustion is paramount. Poor combustion, where un-burnt gas forms carbon monoxide is both a health hazard, and the potential risk to the boiler from overheating, caused by re-burning of the un-burnt gas in the secondary flue passes.

⚠ CAUTION

Obey all laws and local regulations which affect you and your boiler.

⚠ CAUTION

LOW FEED WATER TEMPERATURE

Low feed water temperature can result in thermal shock to the boiler pressure vessel. Return the maximum amount of condensate and if necessary pre-heat the feed water. If in doubt consult FBW.

⚠ CAUTION

HYDRAULIC TEST - RISK OF BRITTLE FRACTURE

Hydraulic testing requires specialist equipment and is nor-mally only required by engineering surveyors / inspectors. The material the boiler is manufactured from, has not been impact tested, as it is not a requirement of BS2790 (boiler construction standard). In order to ensure the material / pres-sure vessel does not suffer from brittle fracture, hydraulic testing should not be carried out below 7^{O}C.

⚠ WARNING

Only qualified persons should be allowed to operate and maintain the boiler and its equipment. Boilers should always be drained through an approved Blowdown Vessel.

⚠ WARNING

Do not change the boiler fuel without consulting the boiler manufacturer.

⚠ WARNING

Non-approved modifications can cause injury and damage. Contact your Fulton dealer before modifying the boiler.

⚠ WARNING

Lifting Equipment

Make sure that lifting equipment complies with all local regulations and is suitable for the job.
You can be injured if you use faulty lifting equipment.
Make sure the lifting equipment is in good condition.

⚠ WARNING

Operating the boiler beyond its design limits can damage the boiler, it can also be dangerous. Do not operate the boiler outside its limits. Do not try to up grade the boiler performance by unapproved modifications.

⚠ WARNING

DANGER FROM HOT SURFACES

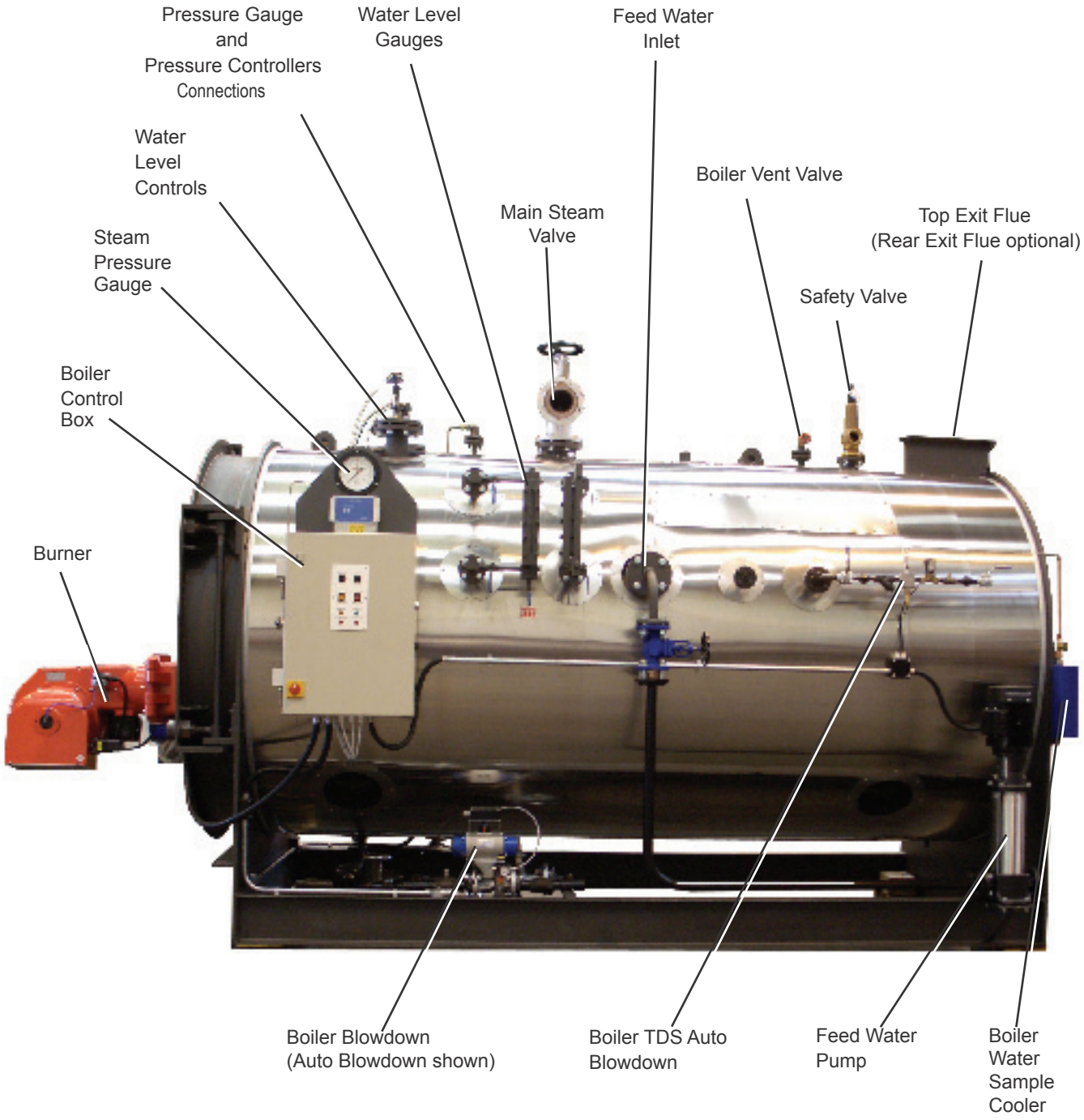
Steam Boilers have high temperature surfaces, that if touched may cause serious burns. Only competent and qualified personnel should work on or in the locality of a steam boiler and ancillary equipment. Always ensure the working area and floor are clear of potential hazards, work slowly and methodically.

⚠ CAUTION

WATER SOFTENER and CHEMICAL TREATMENT

The chemicals required to operate the water softeners and chemical treatment plants are NOT SUPPLIED by Fulton.
It is the responsibility of the operator to ensure adequate supplies of chemical are available at all times (including commissioning).
Costly repairs could be required should the plant operate without chemicals or the wrong dosage of chemicals.

LIST OF ILLUSTRATIONS



Note: Component locations may vary from that shown.

FIG. 1 RBC SERIES STEAM BOILER

INTRODUCTION

SECTION 1

1.1 GENERAL

The Fulton RBC Series Steam Boiler is a conventional, reverse-fired, three-pass, wet-back boiler with internal economizer constructed to BS 2790 1992. The boiler is mounted on a skid-frame and is equipped with control and combustion equipment according to individual specifications.

The control and combustion equipment can be fitted on either side of the boiler to suit the installation. Every care has been taken in the manufacture of the boiler to ensure that quality and reliability standards are maintained. However, satisfactory performance can only be ensured if the installation recommendations, operating routines and maintenance procedures detailed in this manual are adhered to.

The boiler is fitted with front and rear access doors to the combustion zones for cleaning and maintenance purposes. Waterside access is via a manhole in the crown of the boiler, while hand/head holes are provided in the lower boiler shell to facilitate inspection. The optional economizer is a finned tube heat exchanger mounted in the rear smoke box of the boiler.

A standard complement of valves and mountings are fitted as follows:

(a) Main Steam Valve
(b) Safety Valve
(c) Blowdown Valves
(d) Water Level Gauge Sets
(e) Steam Pressure Gauge
Syphon and Cock
(f) Feed Water and Non-return Valve
(g) Water Level and Steam Pressure Controls
(h) Water Sample Valve
(j) Auxiliary Steam Valve

Alternative/additional valves/mountings may be fitted according to specific requirements.

Boiler combustion is provided by gas, oil or dual fired burners designed for high/low flame operation. Combustion air is normally controlled by a motorized butterfly damper incorporating a proof of closure interlock.

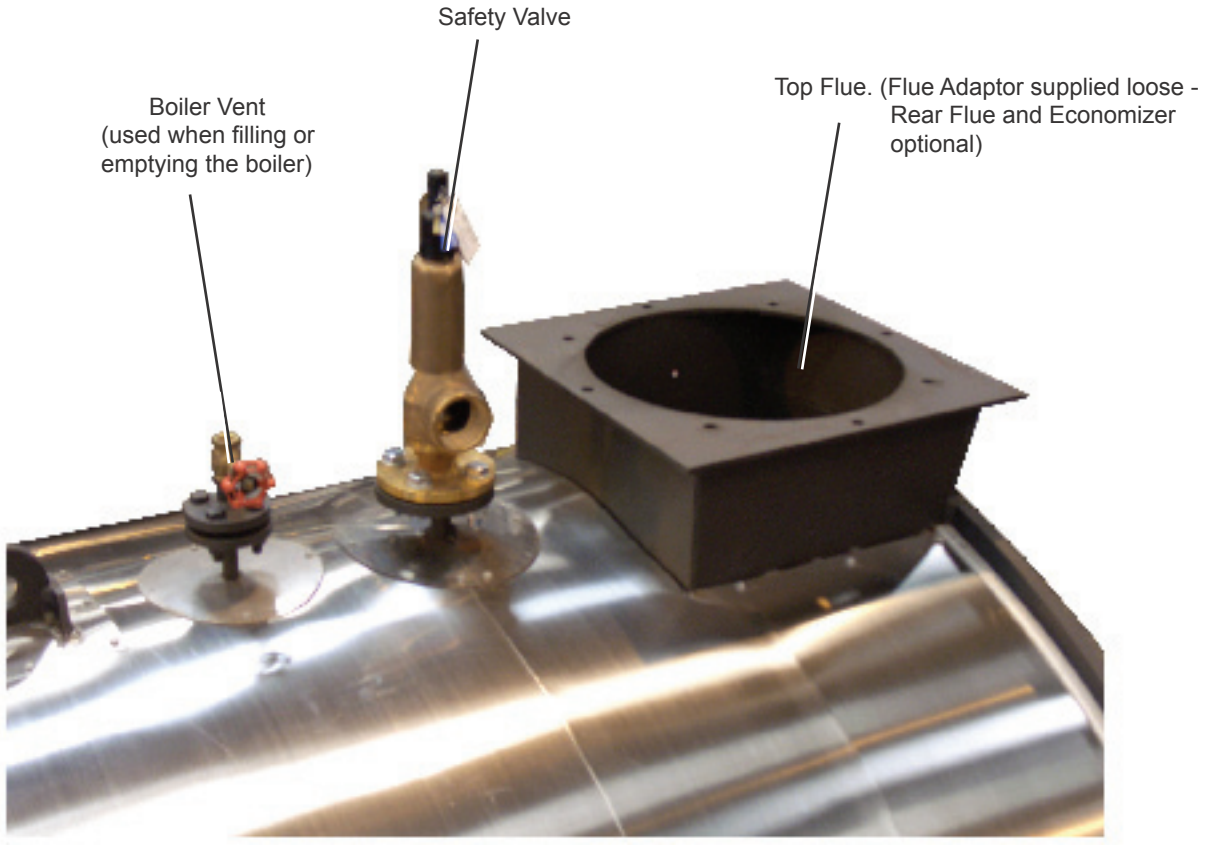
Burner controls and a fuel pump unit (oil-fired models only) are mounted on the burner.

Note: Consult burner manufacturer's Operation and Maintenance instructions for more details.

.

1.2 TECHNICAL DATA - for a full specification see General Data, Section 5.

⚠ CAUTION
WATER SOFTENER and CHEMICAL TREATMENT
The chemicals required to operate the water softeners and chemical treatment plants are NOT SUPPLIED by Fulton.
It is the responsibility of the operator to ensure adequate supplies of chemical are available at all times (including commissioning).
Costly repairs could be required should the plant operate without chemicals or the wrong dosage of chemicals.



Note: Component locations may vary from that shown.

FIG. 2 BOILER VENT, SAFETY VALVE and TOP FLUE

SECTION 2

2.1 GENERAL

CAUTION

The installation of an RBC Series Steam Boiler must be carried out by competent personnel in accordance with all relevant safety regulations.
It is the responsibility of the installer to ensure that these regulations are complied with.

2.2 SITING

⚠ WARNING
Lifting Equipment

Make sure that lifting equipment complies with all local regulations and is suitable for the job.
You can be injured if you use faulty lifting equipment.
Make sure the lifting equipment is in good condition.

The boiler house must be sufficiently large to allow easy and safe access to all parts of the boiler for operational and maintenance purposes.
Typical boiler dimensions are given in the General Data, Section 5.
The flooring must be level, laid in a non-combustible material and be of sufficient strength to support the boiler.

2.3 VENTILATION

An adequate supply of clean, fresh air is necessary for safe, efficient boiler operation.
Ventilation should be provided at both high and low level to BS6644:1991 and IGE/UP/10 Edition 2.

2.4 FLUE OUTLET

The height and type of flue will be subject to local planning regulations and approvals, and to the requirements of the Clean Air Act.

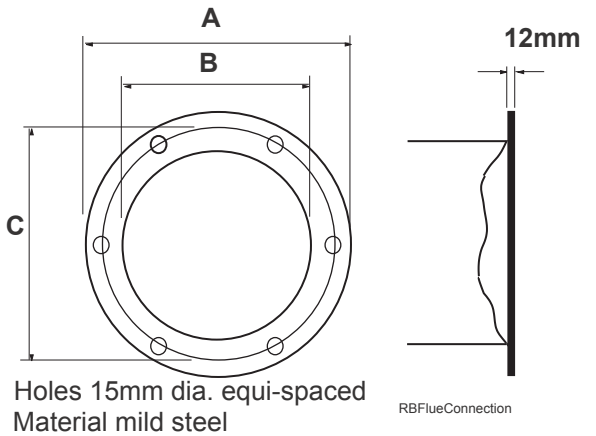
Note: Before erecting a flue, Public Health Authority and Planning permission must be obtained.

The following information is intended to provide assistance where the installation of a simple flue is required. Where multi-boiler flues are necessary, or difficulties could be experienced, specialist advice must be obtained.

Boilers are fitted with a flanged flue outlet. The flue manufacturer/installer must be consulted at an early stage to ensure a correct mating component for flue connection (see fig. 3).

The flue diameter must be the same or larger than the boiler flue outlet. A reduction in flue diameter will cause additional resistance which could have an adverse effect on combustion.

2.4 FLUE OUTLET, continued.



Holes 15mm dia. equi-spaced
Material mild steel

FIG. 3 FLUE FLANGE

Model	'A'	'B'	'C'	PCD	Holes
600	350	250	310		6
750	400	300	360		6
1000	400	300	360		6
1250	450	350	410		6
1500	500	400	460		6
1850	550	450	510		6
2100	550	450	510		6
2500	600	500	560		8
3000	650	550	610		8

Avoid fitting 90° short radius elbows, 90° tees and long horizontal runs wherever possible.
All horizontal flue runs should have a rising pitch of 15°minimum to prevent condensate build-up and subsequent corrosion.
Oil-fired boiler installations are generally more critical because of the sulphur content in the fuel and the higher dew-point temperature.
Specialist advice should be obtained on flue material and insulation.

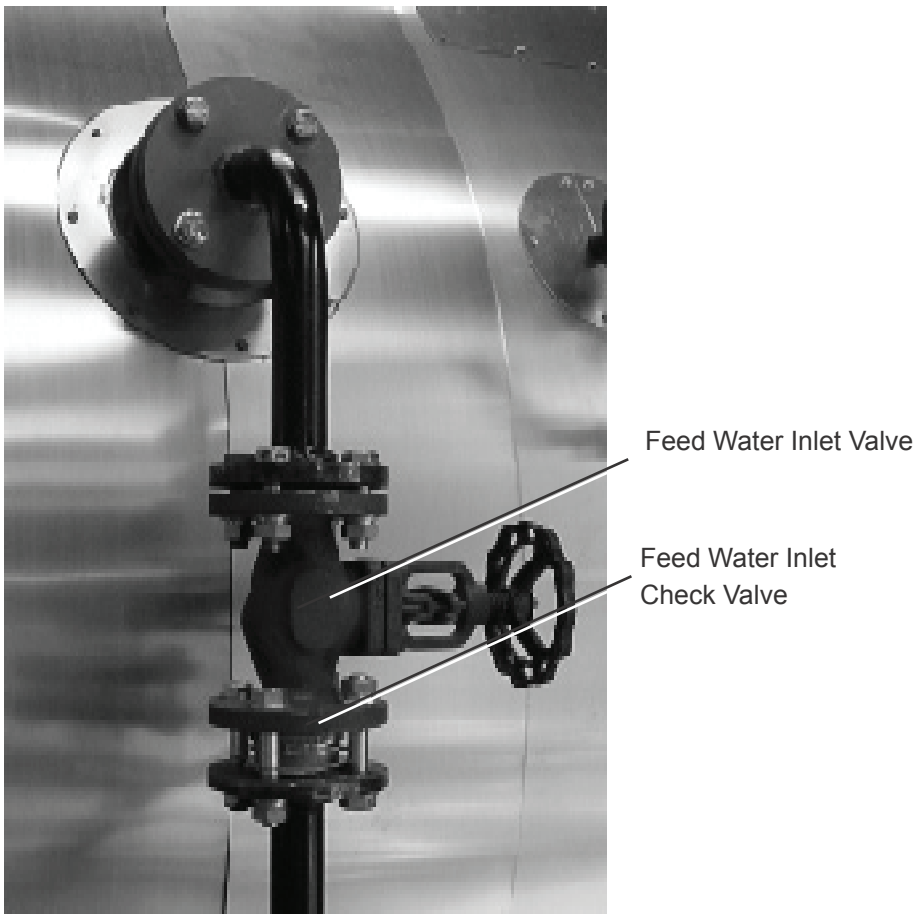


FIG. 4 FEED WATER INLET

2.5 WATER SUPPLY

(see Recommended Water Conditions, Section 5)

⚠ WARNING

DO NOT use unheated or untreated feed water which can result in premature tube failure by oxygen corrosion

The quality of the feed water will effect the life and performance of a steam boiler.

Steam is produced by heat transfer from the heat source into the water confined within the boiler cylindrical shell, by the passage of hot gases through the furnace and tubes.

It should be noted that solids entering the boiler with the feed water can rapidly concentrate at areas of high heat transfer. Such deposits can restrict heat transfer and consequently raise mean metal temperature, which can cause corrosion and reduce safety margins possibly to the point of failure.

It is therefore strongly recommended that a reputable water treatment specialist is consulted prior to putting the boiler into service.

Water characteristics are generally as specified in BS2486 1997 “Treatment of Water for Steam Boilers and Water Heaters”, Table 2.

Boilers operating in areas with high residual hardness, high levels of Bicarbonate (temporary) hardness and low condensate return rates, will have difficulty in maintaining Total and Caustic Alkalinity (TDS) figures, within the specified limits when base exchange softening is used.

This will result in a tendency of the boiler water to foam causing unstable water level conditions possibly leading to priming and carry over. In these instances particular care should be taken to establish a suitable water treatment programme and blowdown schedule in consultation with your water treatment specialist.

Cold feed water contains high levels of dissolved oxygen which is highly corrosive when released within a steam boiler. Always pre-heat the feed water to 80 - 85^{O}C to reduce dissolved oxygen to a minimum and prevent thermal shock. Water treatment chemicals should be used to remove the remainder of the dissolved oxygen.

Failure to do so will result in premature failure of the boiler tubes which will not be covered by warranty.

2.6 BLOWDOWN VALVES

The boiler is fitted with three blowdown valves; one at each water level gauge assembly and the main boiler blowdown valve at the front of the boiler. The pipe work from these blowdown valves must be connected to a receptacle of approved design. If in doubt, consult Fulton Boiler Works or Health and Safety Executive Guidance Note PM60 which covers blowdown tanks and associated pipe work installation.

⚠ WARNING

Never discharge blowdown from the boiler directly to a drain. Where a high level of blowdown or automatic blowdown systems are installed , serious consideration should be given to fitting a Blowdown After Cooling System.

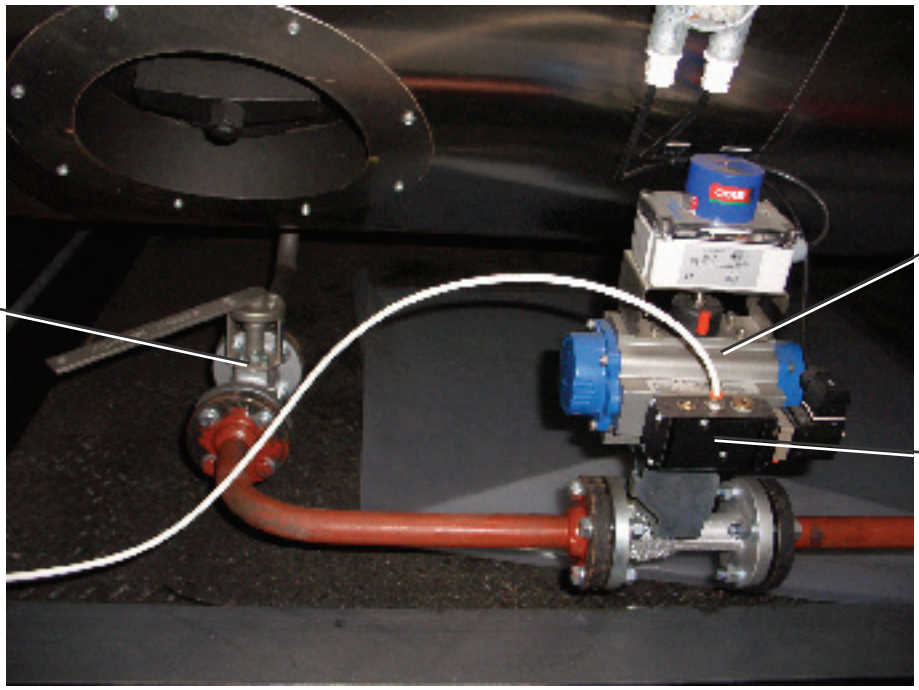


FIG. 5 AUTOMATIC BOILER BLOWDOWN

2.7 MAIN STEAM VALVE

Distribution pipe work should be run from the main steam valve on top of the boiler to the steam delivery point(s). Care should be taken to ensure that adequate condensate drainage and expansion facilities are provided within the pipe work run(s).

To prevent excessive loads being imposed on the main steam isolating valve, the pipe work should be secured near the boiler, ensuring adequate flexibility exists in the pipe work between the steam valve and the securing point, to minimise any loads imposed on the valve,

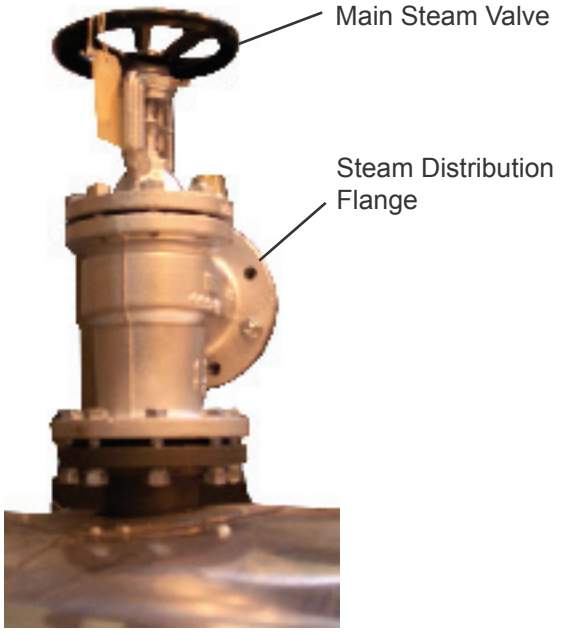


FIG. 6 MAIN STEAM VALVE

2.8 SAFETY VALVE

⚠ WARNING

The factory-fitted safety valve is designed to protect only the boiler.
This valve must not be used to protect other items.

The safety valve is factory fitted and pre-set; it **MUST NOT** be adjusted.
The discharge outlet should be piped to a safe discharge point and the pipe work so arranged that any trapped condensate will drain away from the valve.

(a) The lift pressure is indicated on the safety valve (DO NOT adjust).

(b) The safety valve is designed to prevent the boiler from exceeding its design pressure.

(c) Any system connected to the boiler which is not capable of accepting boiler pressure must be protected by a separate safety valve set to the required pressure.

FIG. 7 SAFETY VALVE

Note: Safety Valve Outlet connections should be piped two sizes larger than the inlet connection size this will ensure there are no accumulation issues.

2.9 WATER LEVEL GAUGE SET

All RBC series boilers are fitted with two, 'Clifton' type (unless otherwise specified) reflex water level gauges.

The water level gauge blowdown valves should be connected to the auxiliary blowdown line; final connection to the blowdown valves being via soft copper tubing.

The valve fittings are 6 mm.
For operating details refer to Section 3 - Operation.

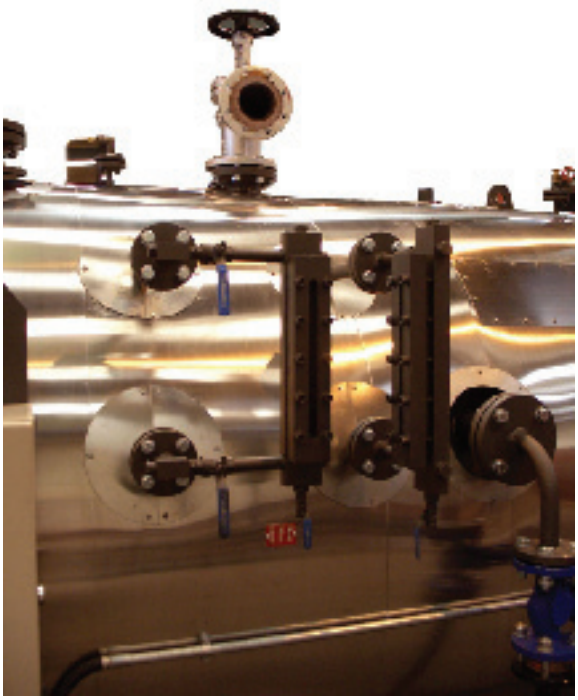


FIG. 8 FEED WATER LEVEL GAUGES

2.10 GAS SUPPLY

The gas/pressure requirement varies according to the burner size and the gas train selected.
Verify that the type and pressure of the gas available on the site is suitable for the burner fitted.
If the site gas pressure is too low, it will be necessary to fit a gas booster system.
Consult Fulton Boiler Works if in doubt.

To minimise pressure drops, eliminate all unnecessary bends and elbows in the pipe work between the gas meter and the inlet to the gas train.
Ensure that a gas cock of the correct size is installed as close as possible to the gas train.

All gas pipe work must be installed by 'Competent Persons' in accordance with the gas regulations.

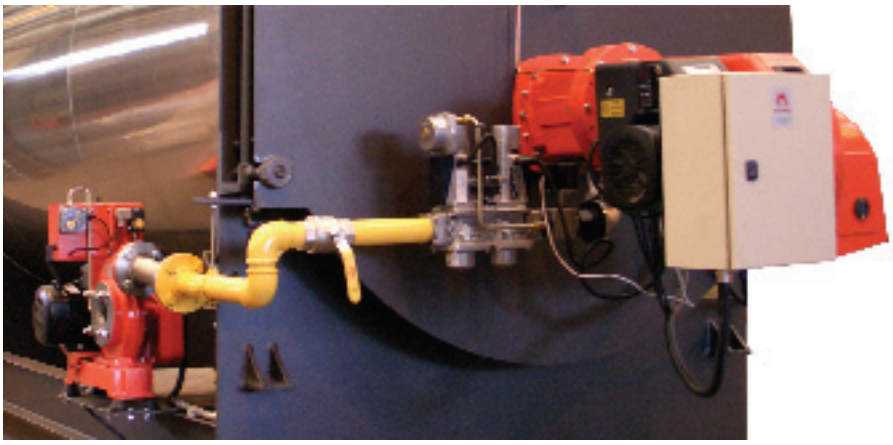


FIG. 9 GAS BURNER INSTALLATION
(installation will change with the type of burner fitted)

2.11 OIL SUPPLY

Oil-fired boilers are supplied with a matched, automatic high/low oil burner suitable for use with 35 SRNI fuel oil.

A single-pipe system can be used where the suction is fully flooded, however, for systems where 'lift' is required, it will be necessary to install a two-pipe system. For more details consult the burner manufacturer's instruction manual.

The following points should be observed:

(a) Always install an oil filter.

(b) Use flexible pipe work for the final oil connections to the oil pump.

(c) Fit isolating valves to the pump.

(d) Ensure that the supply pipe work is sized to cause a minimum pressure drop.

FIG. 10 OIL BURNER INSTALLATION
(installation will change with the type of burner fitted)

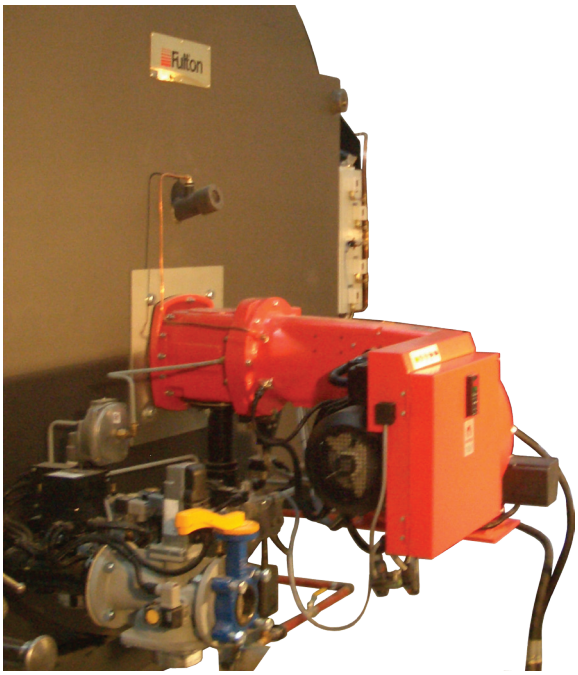


FIG. 10A DUAL FUEL BURNER INSTALLATION
(installation will change with the type of burner fitted)

2.12 ELECTRICAL REQUIREMENTS

CAUTION
Any electrical work should be undertaken by a qualified electrician to current local regulations.

The boiler wiring diagram is located on the inside of the boiler control panel.

A 3-phase, neutral and earth isolated supply is required; this should be connected to the supply terminals of the main isolator in the boiler control panel.

Details of power ratings to be provided at time of order.

2.13 FRONT ACCESS DOOR INSULATION

⚠ WARNING

When handling ceramic fibre always follow the local regulations regarding such materials, including the use of breathing apparatus, suitable body protection and protective gloves.

The front access door is lined with end-on ceramic fibre leaving an air gap between the fibre and the boiler tube face plate.
The face of the boiler front tube plate is also insulated with end-on ceramic fibre, the insulation is positioned around the perimeter of the shell and over the area of tube plate above the water level.
The insulation is glued into position using a high temperature adhesive.
Inspection of the tube plate to shell weld will require insulation to be removed, it is important after inspection to replace with new high temperature end-on fibre, available with adhesive from Fulton.
See section 4.4.

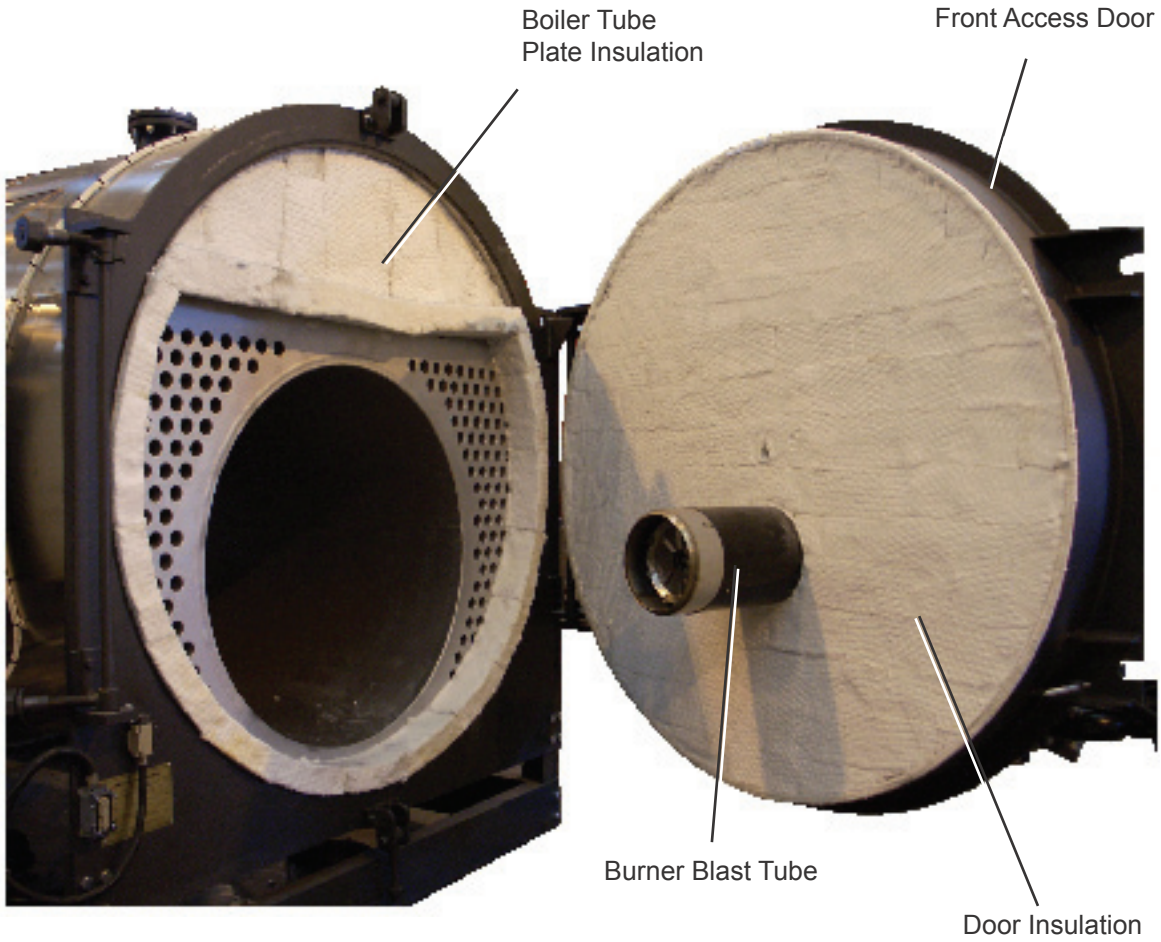
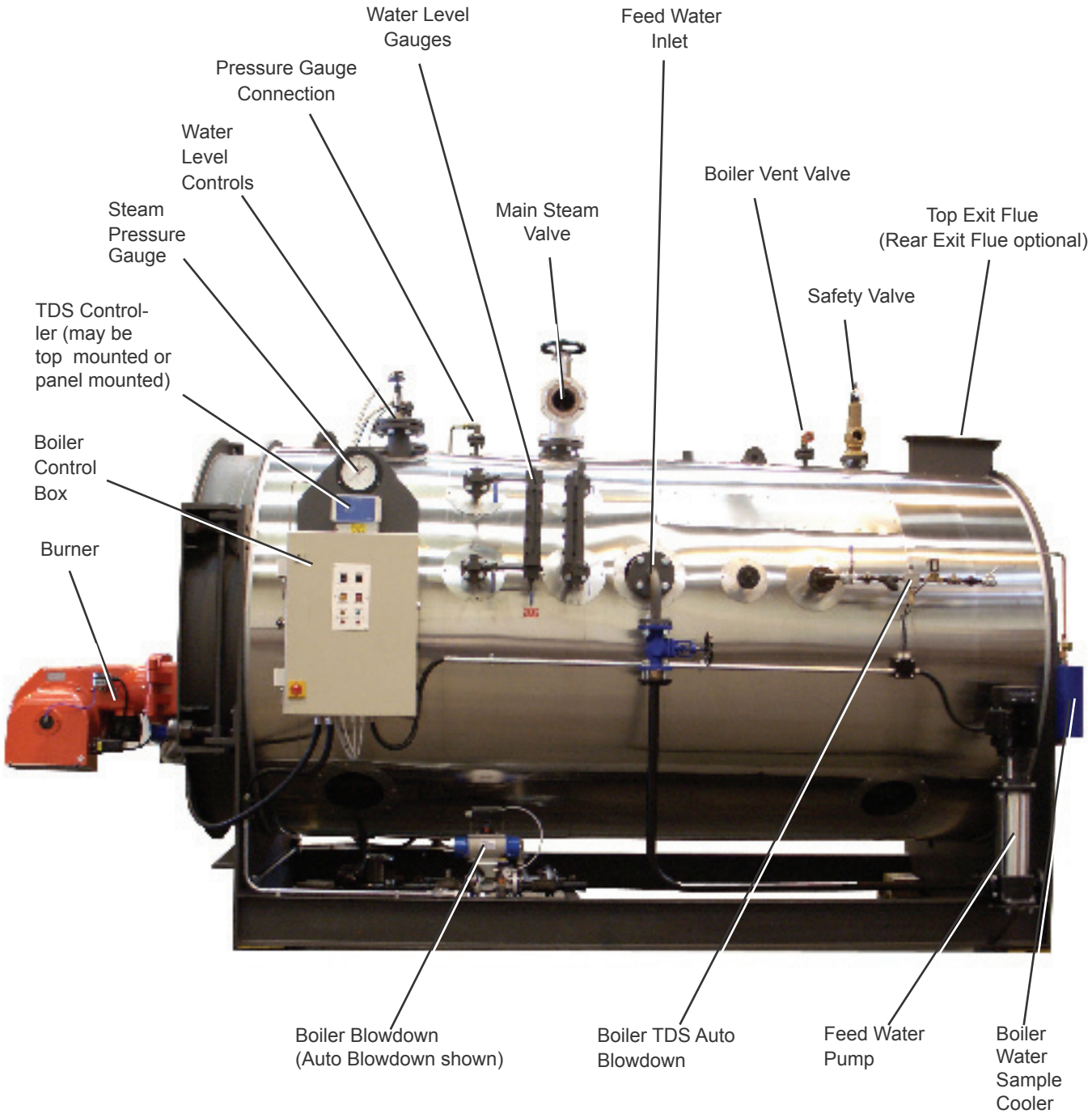


FIG. 11 FRONT ACCESS DOOR INSULATION

2.14 ECONOMIZER



Note: Component locations may vary from that shown.

FIG. 12 GENERAL ARRANGEMENT

OPERATION

SECTION 3

⚠ CAUTION

Before putting the boiler into operation it must be fully commissioned. In order to ensure safety, the commissioning must be carried out by a Fulton engineer. The commissioning of the boiler by any other person without the specific written authority from Fulton Boilers will invalidate the warranty.

3.1 GENERAL

The following instructions are given for the guidance of the operator in the use of the RBC Series Steam Boilers and to provide adequate information to ensure that, when the boiler is put into use, it will be done safely and without risk to health.

3.2 BOILER FITTINGS AND CONTROLS

The following brief description of the fittings and controls used on the RBC Series boiler is intended to provide the operator with a basic understanding of the operating principles, which is essential for the continued efficient use of the boiler.

Main Steam Valve. Steam outlet stop valve fitted centrally on the top centre line of the boiler.

Steam Vent Valve. Fitted to the rear, on the top centre line of the boiler.

Steam Pressure Gauge. Fitted to the control box mounting plate on the side of the boiler.

Blowdown Valves. A main boiler blowdown valve fitted on pipe work at the front of the boiler on the underside centre line and one blowdown valve for each water level gauge set.

Feed Water Valve. Water supply inlet stop valve mounted on the side of the boiler.

Feed Water Non-return (Check) Valve. Water supply NRV mounted on the side of the boiler directly under the main feed water inlet valve.

Water Level Gauge Set. Two 'Clifton' type reflex gauge sight glasses mounted on the side of the boiler.

Boiler Water Sample Valve. Fitted behind the feed water inlet on the side of the boiler.

Low Water Safety Relays and Feed water Pump Relays. These relays operate in conjunction with probes suspended in the boiler shell to automatically maintain the water level in the boiler between set limits.
If the water should fall to an unsafe level, the burner is cut out and an alarm is sounded.
The probes are located in two, 100 mm diameter standpipe flanges mounted on either side of the boiler centre line towards the front of the boiler.

A standard boiler is fitted with Feed water pump On/Off, 1st Low Water and 2nd Low Water probes.

A 15mm TDS (surface) Blowdown connection is supplied, fitted with a blank flange.

If a TDS monitored system is fitted it should be interlocked such that the valve will not open when the feed water pump is running.

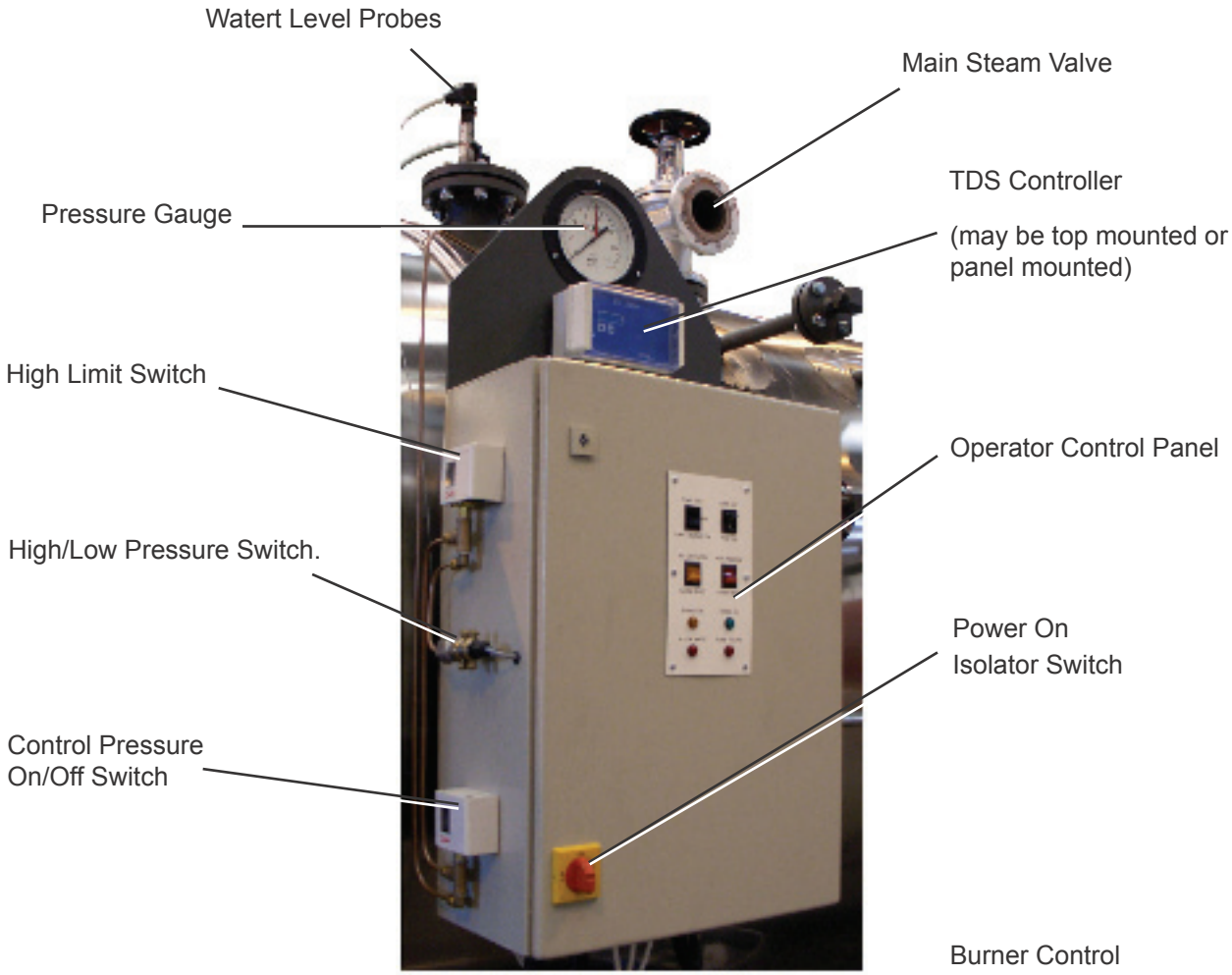
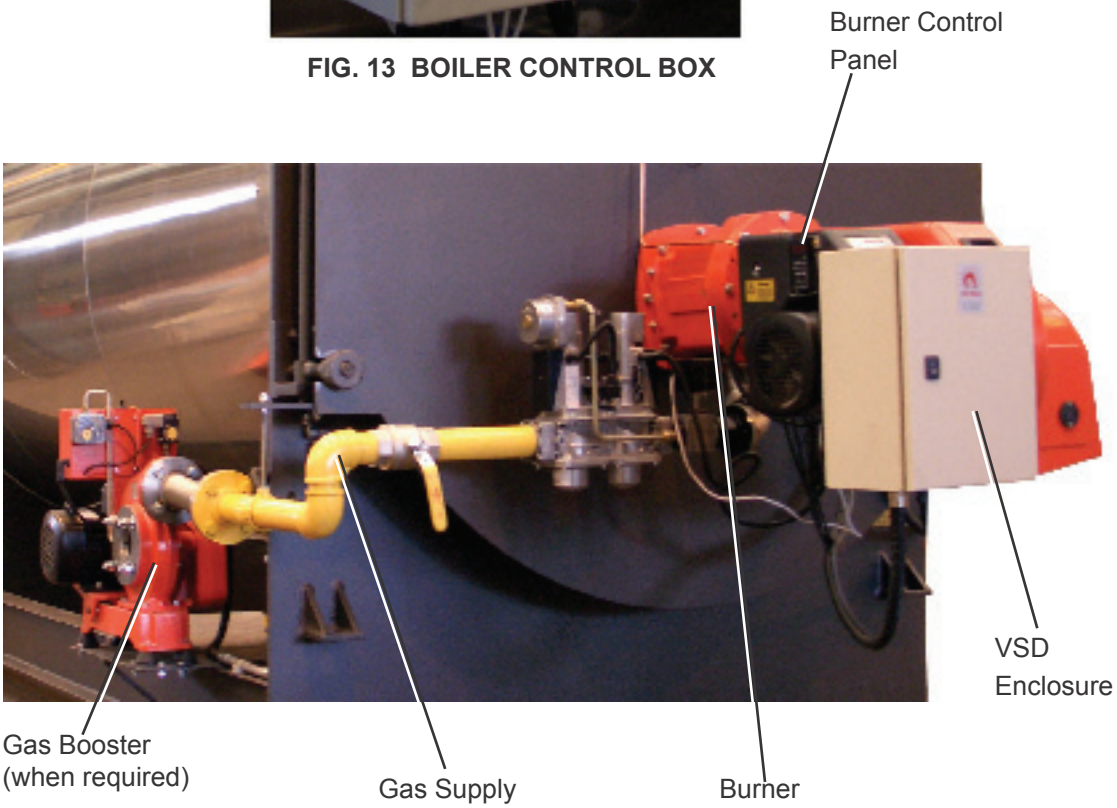


FIG. 13 BOILER CONTROL BOX



Note: Burners and their installation will vary with boiler model and burner size

FIG. 14 GAS BURNER INSTALLATION

3.2 BOILER FITTINGS AND CONTROLS continued.

Steam Pressure Controls
Pressure controls are mounted on the side of the control box.
These are as follows:

(a) Control Pressure On/Off Switch.
Controls the ON/Off cycle of the burner, switching the burner off when the desired steam pressure is reached and switching it on when steam pressure falls.

(b) High Limit Switch.
Should the Control Pressure Switch fail, the steam pressure will raise above the preset limit causing the High Limit Switch (set at least 0.5 barg higher than the Control Pressure Switch) to switch off and lock out the burner.

A High Limit Indicator will illuminate and an alarm will sound.

(c) High/Low Pressure Switch.

1. Air pressure transducer for fully modulated burners switches the burner from high to low flame and vice-versa.
2. Provides a proportional control signal to the burner combustion control.

Burner Programmer.

Is located in the burner mounted control panel. Acts in conjunction with a sensing device to 'supervise' the ignition sequence, prove the flame is satisfactory and finally 'monitor' the established flame. Should any fault occur, either during the ignition sequence or during normal running, the programmer will immediately go to 'lock-out' and both main and pilot gas/oil valves will shut to isolate the fuel lines to the burner.

Air Pressure Switch. (Gas and Dual Fuel Burners only)

Mounted on the burner, this switch is operated by the pressure of air entering the burner through the throat of the scroll. Lack of combustion air, or insufficient air pressure, will stop the switch completing the circuit, preventing the burner from operating.

Gas Train Assembly.

Consists of pilot and main supply lines, each line having a manual cock, a governor and solenoid operated valves. The governors maintain a consistent pressure of fuel entering the burner and are adjustable. The solenoid valves are electronically controlled by the burner programmer. For specific details, consult the burner manufacturers Instruction Manual.

FIG. 15 BOILER CONTROL PANEL

Note: An oil burner is illustrated for specific details consult the burner manual supplied with the boiler.

FIG. 16 BURNER CONTROL PANEL

3.3 BOILER CONTROL PANEL

Boiler controls and indicators are housed in a control panel mounted on the side of the boiler. These are as follows:

Power Isolator Switch. Control panel power supply ON/OFF switch, mounted on the panel door.
Power On Indicator. Indicates that the door mounted 'power on' isolator is in the ON position and that the panel is electrically live.

⚠ WARNING

The Power On indicator is derived from one phase. It is possible for the Power On indicator supply phase to be down, leaving the other two phases live. Always isolate the supply before working on the panel.

Pump Only / Off / Pump & Burner On.

This rocker switch has three separate functions. In the PUMP ONLY and PUMP & BURNER ON positions, the power supply is switched through to the control system. It is a mandatory requirement of the AOTC and Gas Supply Standards that when the control system is first energised, or reenergized (power restoration), it must go to a fail-safe shutdown position, sound an alarm and require manual resetting to cancel the alarm. The alarm condition, when activated, is cancelled by resetting the 2nd low water reset switch.

PUMP ONLY Position. This position should only be selected to fill the boiler. The normal functions of the level control alarm system are overridden to prevent a continuous alarm while the boiler is being filled. The pump off level control will function normally and switch the pump off once the correct water level is reached.

Note:

(1) The burner mounted Burner On/Off/Reset Switch should be in the OFF position during the filling process.

(2) The Pump On/Pump Off Switch should be in the PUMP ON position.
Both alarms will be cancelled when pressing the reset switches irrespective of the water level in the boiler.

OFF Position. In this position the burner, feed pump and control system are off.

PUMP & BURNER ON Position. In this position, both burner and pump will run under automatic control providing that the burner mounted Burner On/Off/Reset Switch is in the ON position, and the Pump On/ Pump Off Switch is in the PUMP ON position.

Note:

(1) When selecting this position from either PUMP ONLY or OFF, the power restoration alarms will be activated. The alarm can be cancelled by pressing the 2nd Low Water Alarm/Reset switch.

(2) The 2nd Low Water alarm can only be cancelled if the boiler water level is above the 2nd low water level. If the alarm cannot be cancelled, allow the feed pump to restore the water level to the normal working level (approximately midway up the sight glass) and then reset the alarm.

Pump off/on switch

This switch is only used for evaporation and low water tests.
Interrupts the power supply to the feed pump contactor coil.

3.3 BOILER CONTROL PANEL continued.

Sequence manual/auto switch (when fitted)

Used to select either manual or automatic sequence step control.

In the manual position the burner will operate under the direct control of the master pressure controller, mounted in the steam header/distribution pipe work. The boiler mounted high pressure and on/off pressure switches are still functional.

1st Low Water Indicator. This lamp will be illuminated and an alarm sounded when the water level in the burner falls to the 1st low water level. The burner will shut down and the alarm will continue to sound until the water level is restored to a safe working level. The alarm will then cancel, the indicator lamp will extinguish and the burner will automatically restart.

2nd Low Water Alarm/Reset Switch. Sounds an alarm on switch on, press to reset. If the level of water in the boiler falls below the second pre-set limit during boiler operation, the 2nd Low Water Alarm/Reset Switch will illuminate, the alarm will sound and the burner will shut down. The water level must be restored before the alarm can be cancelled by pressing the switch.

High Water Indicator (when fitted). This lamp will illuminate and an alarm sound when the water level reaches a pre-determined high level. The feed water pump will stop.

When the water level falls to the normal working level, the indicator lamp will extinguish, the alarm cancel.

Burner Run Indicator. Indicates that the burner is operating in the normal run position.

High Steam Pressure Alarm/Reset Switch. This switch will Illuminate and an alarm sound when the high limit pressure switch is tripped. The switch/alarm must be manually reset after the pressure has reduced to a safe level.

WARNING

Before resetting this control, ascertain the reason for the alarm, and rectify.

Flame Failure Indicator. Indicates the burner combustion control relay, detects a flame failure condition.

Night Set Back Switch (where fitted). The ‘Set Back Switch’ needs to be set to the ‘On’ position at the end of the working shift. This means the burner will only fire if the boiler pressure falls below a set stand-by pressure. This therefore reduces start-up lead time at the beginning of the next shift, when the ‘Set Back Switch’ should be set to the off position to enable the boiler to reach normal operating pressure.

3.4 BURNER MOUNTED CONTROL PANEL (consult the specific burner manual)

Burner controls and indicators are mounted on the burner. The following controls are typical for a dual fuel burner, but reference should be made to the burner manufacturer's Operating Manual for the particular type used.

Burner On/Off/Reset Switch. Three-position switch used to switch on/off and/or reset the burner.

Lockout Indicator. Indicates the burner combustion control relay detects a flame failure condition. The burner controller can be reset by setting the Burner On/Off/Reset Switch to the RESET position.

Hand Indicator. This lamp will illuminate when the hand/auto switch mounted inside the burner control panel is in the hand position, normally used for commissioning only.

Auto Indicator. This lamp will illuminate when the hand/auto switch mounted inside the panel is in the auto position.

High Pressure Indicator. This lamp is not wired when a high steam pressure alarm/lamp is provided in the boiler control panel.

Modulating Controller, Controls the firing of the burner within the pressure band selected.

3.4.1 INTERNAL ECONOMIZER

Operation

Feed water from a constant running pump is passed through a modulating feed water control valve and then through the economizer before entering the boiler.

Heat is extracted from the boiler exhaust gases by the economizer which inturn heats the feed water to temperatures that can exceed 100 ^{o}C.

Back flow is prevented by non-return valves in the feed water pipe work on the inlet and outlet of the economizer. A non-return valve is fitted after the boiler feed water pump to protect it from excessive temperatures.

The economizer is designed to reduce the boiler exhaust temperature to approximately 140^{O}C, if the temperature falls significantly below this figure condensation will occur which can lead to corrosion. The economizer is fitted with inlet and outlet temperature gauges for both feed water and exhaust gas. These gauges should be used to monitor the condition and performance of the economizer.

Note: Sudden changes in temperature should be reported immediately as they could indicate a blockage of the economizer water ways, or a malfunction of the modulating feed water control valve.

In general a 10 degree centigrade increase in feed water temperature will give an efficiency improvement of 2%. Because the boiler feed water modulating control valve and the burner are both proportioned to the steam load, the burner heat input and cooling water flow rate to the economizer are in balance throughout the burner firing range.

A 15mm spill back line with an adjustable lock shield valve is installed in the feed water pipe work in the discharge from the pump, the outlet from this valve must be piped back to the feed water tank.
The purpose of the spill back line is to prevent the constant running feed water pump from overheating should the modulating feed water control valve fully close. A 5mm orifice plate fitted in the spill back line before entering the tank as well as tank inlet dip pipe are also recommended.

3.4.2 BOILER PLATFORM

The platforms (where fitted) are mounted to the boiler base frame. They are designed to allow easy maintenance access to the components on the top of the boiler (i.e. the water level probes, main steam valve, vent and safety valves).

It is the responsibility of the user to ensure that a site risk assessment is carried out for the safe use of the ladders and working at height on the platform.

FIG. 16A TYPICAL BOILER PLATFORM

3.5 FILLING THE BOILER

1. Ensure the following valves are 'Open':

a) Steam pressure gauge isolating valve.
b) All valves in the water feed line.
c) Water gauge isolating valves.
d) Air release valve.

2. Ensure the following valves are 'Shut':

a) Main steam valve.
b) Main blowdown valve.
c) Water gauge blowdown valves.
d) All valves in the gas/oil train to the burner.

3. Ensure that the Burner On/Off/Reset Switch is set to 'Off'.

4. Ensure that the Pump On/Pump Off Switch is in the 'Pump Off' position, and that the Pump Only/ Off/Pump & Burner On Switch is in the 'Off' position.

5. Turn the door isolator to the 'On' position.

6. Place the Pump On/Pump Off Switch to the 'Pump On' position.

7. Vent the pump.

8. Place the Pump Only/Off/Pump & Burner On switch to the 'Pump Only' position.

9. The feed pump should start, (check the pump direction of rotation) and fill the boiler to the correct working level and then switch 'Off'.

Note: If the 2nd Low Water and High Pressure Alarm/Reset switches illuminate and the alarms sound, check that the burner mounted Burner On/Off/Reset Switch is in the 'Off' position, and then reset both alarms by pressing the switches.

Note: It may be necessary to vent the feed pump by bleeding air from the plug mounted in the top casting below the pump motor to pump body connection.

3.5.1 DRAINING THE BOILER

⚠ CAUTION

Local Regulations State Boiler Water above 43˚C must not be discharged into the drainage system.

1. Ensure the boiler is cold.

Operators should note:

The boiler must be allowed to cool before the engineer starts his maintenance procedure.

2. Isolate the boiler electrics at the isolator on the Control Box door.
3. Isolate the Feed Water Tank and the Feed Water Pumps.
4. Open the Drain Valve in the boiler and the boiler air vent (if fitted) allowing air into the boiler.
5. Open the Blowdown Vessel Drain Valve.
6. Open all valves in the drain lines.
   (Skid Units / Plant Rooms, have internal drainage systems which require the same procedures).

Boilers with automatic blowdown systems

1. The boiler should not be under pressure.
   The boiler should be cold.
2. Close the blowdown isolation valve.
3. Using a screwdriver located as shown **'A'**, push the Manual Blowdown Button up and make a quarter turn clockwise, this will lock the button in position and open the blowdown valve.
4. Using the blowdown isolation valve to throttle the flow, drain the boiler.

Note: Skid units and plant rooms have internal drainage systems which require the same procedures.

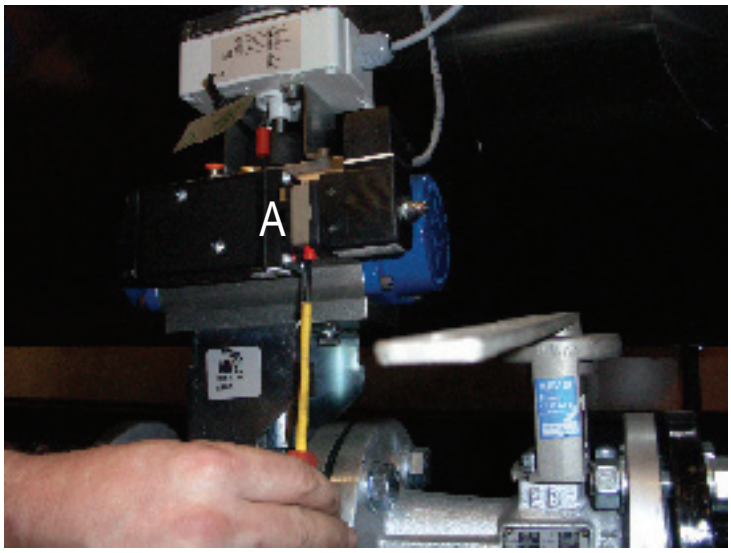


FIG. 16B MANUAL BLOWDOWN BUTTON

If the boiler is not going to be used for some weeks see 3.9.3 Long Term Storage.

3.6 STARTING THE BURNER FROM COLD

3.6.1 Practical Considerations ⚠ CAUTION

When starting up the boiler, it is prudent to minimise the thermal and mechanical stress caused by differential expansion of various parts of the boiler as they reach working temperature.
The shell temperatures is determined by the contained water/steam temperature. The furnace temperature which is higher is determined by the heat transfer / furnace wall loading and gas temperature. The tube temperature lies between the shell and furnace temperatures, but is nearer the shell temperature. Since all these components are virtually the same length, they expand longitudinally by different amounts causing mechanical and thermal stress. Whilst this is catered for in the mechanical design of the pressure vessel, the life expectancy of the boiler can be affected if the boiler is frequently heated too quickly from cold .

When starting from cold the furnace approaches its design temperature shortly after start-up, whereas the tube and shell temperatures are delayed by the time taken to bring the contained water up to temperature. As a result, the thermal expansion is at its greatest. Additionally, the temperature gradient which exists between the bottom and the top of the boiler is exaggerated. This can be reduced by blowing the boiler down during the heat-up period.

In practical terms, the ideal solution would be to gradually raise the temperature and pressure in the boiler progressively by firing the boiler on low fire for a few minutes and leaving it to ‘soak’ (e.g. allowing the temperatures in the boiler and water to even out by diffusion) for 20 to 30 minutes, blowing down the boiler, firing the boiler again for a little longer and soaking for less, and so on.
If the boiler has been fired the day before, the large thermal mass in the boiler will maintain the internal temperature to a point that the boiler can be simply switched on (preferably on low fire) and then left to reach working temperature/pressure.

The life expectancy of the boiler and door insulation, ignoring other factors, is proportional to the number of thermal/mechanical cycles that the boiler undergoes from cold/zero pressure to working temperature and pressure. A boiler that is continually maintained at working pressure will last longer than one that is constantly heated and cooled.

Service Inspection of welded joints.

The frequency of the SAFed requirement for in service inspection of the main welded joints of the boiler is calculated by the number of cycles since the last inspection.
Boilers running twenty four hours a day require the shell and furnace end plate welds to be inspected at five year intervals and the longitudinal seam every ten years.

Boilers that are continually heated and cooled require more frequent inspection.
During manufacture the major longitudinal and circumferential weld seams are subject to non destructive testing by X-ray and or Ultrasonic testing.
The boiler construction standard BS 2790 1992 class 1, specifies a minimum level of testing, in order to reduce down time during testing RBC boilers are fitted with removable cladding strips located above the main shell horizontal and circumferential weld seams.

3.6.1 Practical Considerations, continued.

The purpose of the in-service weld inspections is to check for:-

A. Buried defects during manufacture that are outside acceptable limits. Because the boiler was 100% tested during manufacture none should be found, and upon proof of 100% manufacture testing these tests may be waived at the discretion of the 'competent person'.

B. Cracks propagating from the region of the toe of the fillet weld on the shell to the tube plate weld, resulting from fatigue or corrosion fatigue cracking.
These cracks would not be there after manufacture but can develop in service, they are caused by stress due to a combination of pressure loads, differential expansion, local temperature gradients, oxygen impurities in the boiler water / steam and inadequate pH (water chemistry) control.

Differential thermal expansion and local temperature gradients all result from continuous pressure / temperature cycling and heating from cold too quickly. Water treatment and in particular oxygen corrosion are covered in section 2.5. The importance of correct water treatment cannot be over emphasized.

To achieve long trouble free boiler life :-

1. Maintain the boiler at working pressure as long as possible.

2. When heating from cold do so slowly.

3. Maintain water treatment within the prescribed limits at all times.

3.6.2 Starting Procedure

Note: When starting from cold section 3.6.1 must be read and understood, if in doubt consult Fulton.

(a) Fill the boiler as described in Section 3.5.

(b) Ensure the main steam valve is 'Shut'.

(c) Open all the valves in the gas train/oil supply. It is assumed that the fuel supply lines have been purged prior to attempting to start the boiler/burner.

(d) Turn the Pump Only/Off/Pump & Burner On Switch to the 'Pump & Burner On' position.

(e) Switch the burner mounted Burner On/Off/Reset Switch to the 'On' position. The 2nd Low Water and High Pressure Alarm/Reset switches will illuminate and alarms will sound due to the power restoration interlock, (refer to Section 3.3 - Pump Only / Off / Pump & Burner On switch description).

Note: If the 2nd Low Water and High Pressure Alarm/Reset switches illuminate and the alarms sound, check that the burner mounted Burner On/Off/Reset Switch is in the 'Off' position, and then reset both alarms by pressing the switches.

(f) The burner motor will start and, after going through the post purge/pre purge interlock checks, should fire after approximately 45 seconds.

Note: Before leaving the boiler unattended, the daily operating tests (see Section 3.7) should be carried out to check the functions of all the safety interlocks. For more detailed information on the burner firing sequence consult the burner manufacturer's Operation and Maintenance instructions.

3.7 DAILY OPERATING TESTS

⚠ CAUTION

If any of the following tests fail to function as described, shut down the boiler immediately and consult Fulton Boiler Works Ltd, Service Department.

With the burner firing carry out the following tests:

Note: Ensure the correct water level is maintained during pressure build up. If any part of the equipment is not operating correctly, the fault should be investigated before the boiler is used. Ensure all blowdown pipework is safe and discharged to a blowdown receptacle.

3.7.1 Flame Sensor (UV Photo Cell) Check

Remove the burner UV photocell from its plug-in connection (on the side of the burner) and cover the detection window to exclude all light.
The burner control should immediately (2 - 3 sec gas, 5 sec oil) go to a lockout/flame failure condition and will require manual resetting.
Clean the UV photocell before replacing it.

FIG. 17 TYPICAL FLAME SENSOR REMOVAL

3.7.2 Pump Check

(a) Lower the water level in the boiler, either by evaporation or by opening the main blowdown valve with the key provided, operate the bypass system for boilers fitted with auto-blowdown.

(b) Observe the water level in the water level gauges and, as the water level falls, check that the feed water pump starts.

(c) Shut the main blowdown valve if opened, and ensure that the feed water pump continues to fill the boiler to the correct level then switches off.

3.7.3 1st Low Water Check

Note: Water levels and probe lengths should be noted on commissioning and recorded with the boiler.

(a) Turn the Pump On/Pump Off Switch on the boiler control panel to the ‘pump off’ position.

(b) Lower the water level in the boiler, either by evaporation or by opening the main blowdown valve.

3.7.4 2nd Low Water Check

(a) Repeat the procedure described in Section 3.7.3, (a) to (c) but allow the water level to continue to fall, either by evaporation or maintaining the main blowdown valve open.
Before the water level falls below the level of the water level gauge, check that the 2nd Low Water
Alarm/Reset switch illuminates, the alarm sounds and the burner shuts down.

(b) Shut the main blowdown valve (if opened).

(c) Set the Pump On/Pump Off Switch to the 'pump on' position.

(d) Check that:

The feed water pump starts, restores the water level to a safe working level, then stops.
The 1st Low Water alarm cancels.
The 1st Low Water Indicator lamp extinguishes but the burner does not start.
The 2nd Low Water alarm continues to sound.
The 2nd Low Water Alarm/Reset switch remains illuminated.

(e) Press the 2nd Low Water Level Alarm/Reset switch.

(f) Check that:

The 2nd Low Water alarm cancels.
The 2nd Low Water Alarm/Reset switch extinguishes.
The automatic burner firing sequence commences.

To reduce the possible down time and a loss of pressure to the steam load, the tests detailed in 3.7.2 / 3.7.3 / 3.7.4 can be accomplished by isolating the feed pump using the pump 'on/off' switch on the boiler control panel. (as 3.10) and allowing the water level to fall by evaporating steam to the system.

Once the 1st. Low Water Level Alarm is activated the water level can be lowered to the 2nd. Low Water Level by using the main blowdown valve.
When the 2nd. Low Water Alarm sounds, 'close' the blowdown valve, turn the feed pump on / off switch to 'pump on'.

Once the 1st. Low Water Level cancels the burner should remain off, but the 2nd. Low Water Alarm should continue to sound , reset the 2nd. Low Water Alarm. The burner should start and the pump restore the water level to normal and stop.

Note: This procedure requires a longer attendance time by the boiler house operator, but reduces the pressure loss to the system.

WARNING

The 2nd. Low water at 30mm in the sight glass must not be changed.

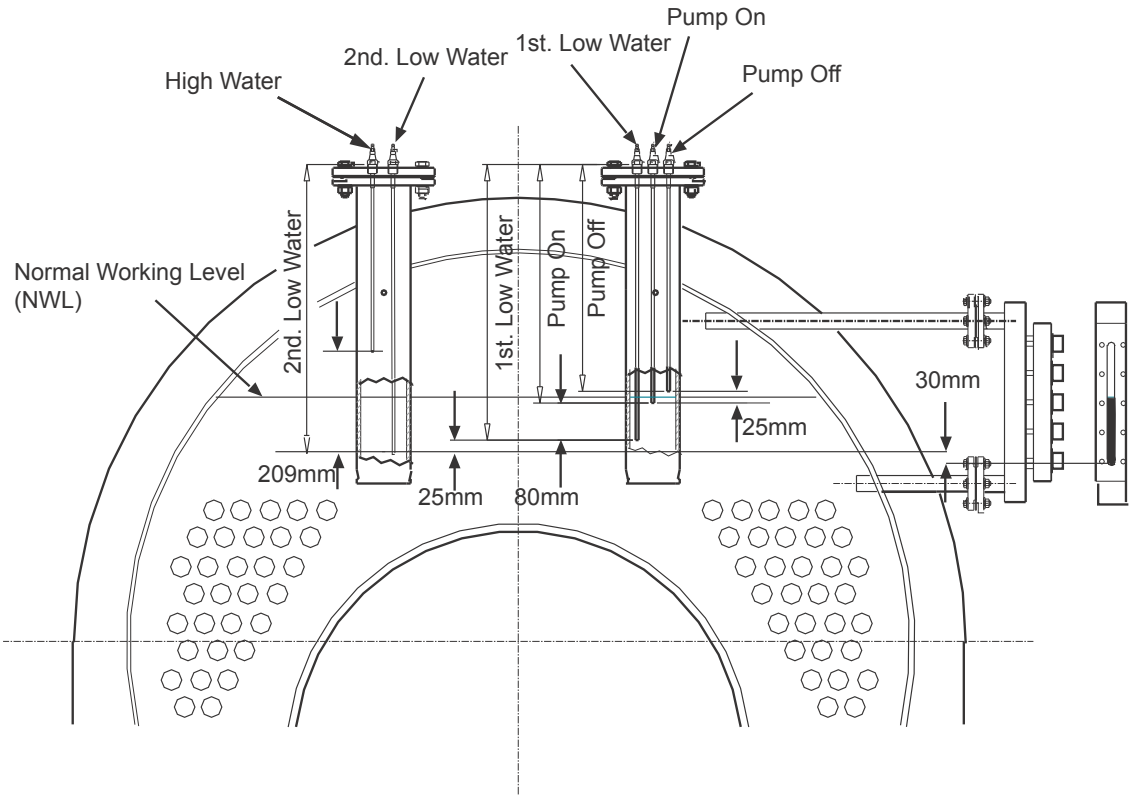


FIG. 18 WATER LEVEL CONTROL DIMENSIONS

Note: Water levels and probe lengths should be noted on commissioning and recorded with the boiler. Probe lengths are nominal and must be checked against the requirements of each individual boiler

Model	Pump OFF	Pump ON	1st Low Water	2nd Low Water	High Water
RB600	415	440	520	545	336
RB750	415	440	520	545	336
RB1000	415	440	520	545	336
RB1250	535	560	640	665	456
RB1500	535	560	640	665	456
RB1850	515	540	620	645	436
RB2100	515	540	620	645	436
RB2500	535	560	640	665	456
RB3000	535	560	640	665	456

Note: All probe lengths are measured from the underside of the hex. nut.
Replacement probes are supplied at a standard length and should be cut to the same length as the probe being replaced.

3.8 BLOWDOWN PROCEDURES

In order to keep the boiler and water level gauge pipework clear and free from sludge and scale build-up, regular blowdown should be carried out.

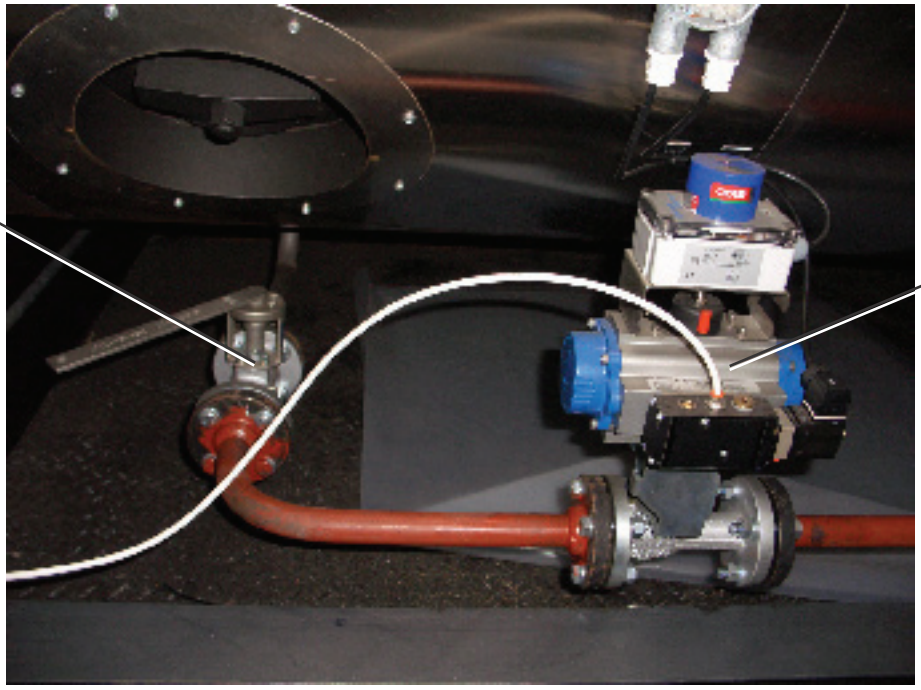
(a) For non-automatic blowdown systems, fully 'open' the main blowdown valve, using the key provided, for a minimum of 10 seconds, automatic systems will blowdown at set times determined by site requirements and only need checking to ensure the amount of blowdowns performed is sufficient.

(b) Shut the main blowdown valve.

Auto Blowdown/Draining

The boiler may be drained by opening the boiler blowdown isolation valve, having mechanically opened the auto blowdown valve.

Note: As well as removing sludge (suspended solids) from the boiler, a second and equally important function is to maintain the TDS (totally dissolved solids) level to within the required limits. The amount of blowdown, and hence time required, is dependent on the amount of TDS in the raw water supply, the percentage condensate return, water treatment chemicals added and the number of hours a day operation. In order to establish the required blowdown rate, consult your water treatment specialist who will recommend a water treatment programme in terms of appropriate chemicals and the required blowdown rate which takes these factors into account.



Note: The boiler blowdown shown is an automatic installation, manual blowdown is also available.

FIG. 19 MAIN BOILER BLOWDOWN
(Automatic Valve)

3.8.2 Water Gauge Blowdown

Blowdown the water gauge, set 1.

1. Open the gauge glass blowdown valve A
2. Close (for approx. 3 seconds) the top gauge valve B
3. Open valve B
4. Close (for approx. 3 seconds) the bottom gauge valve C
5. Open valve C
6. Close valve A

Repeat for gauge set 2

On completion of the blowdown procedure ensure that all isolation valves are 'open' and all blowdown valves are 'closed'.

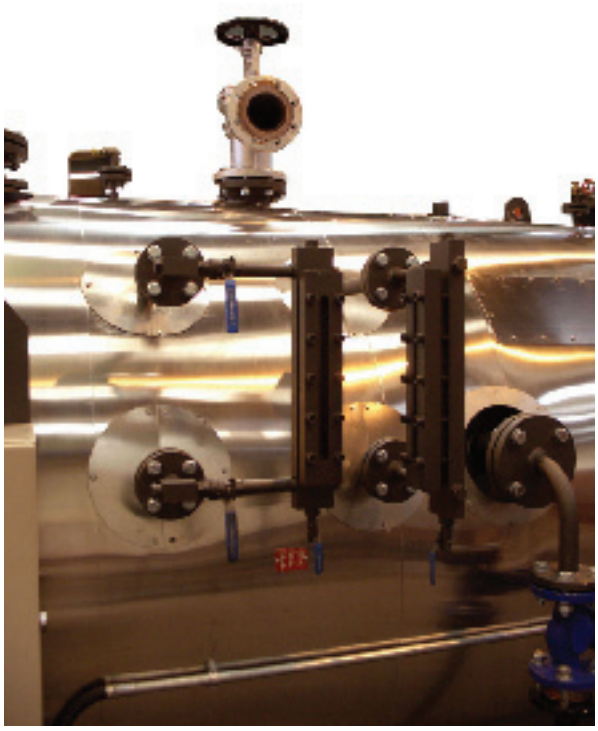
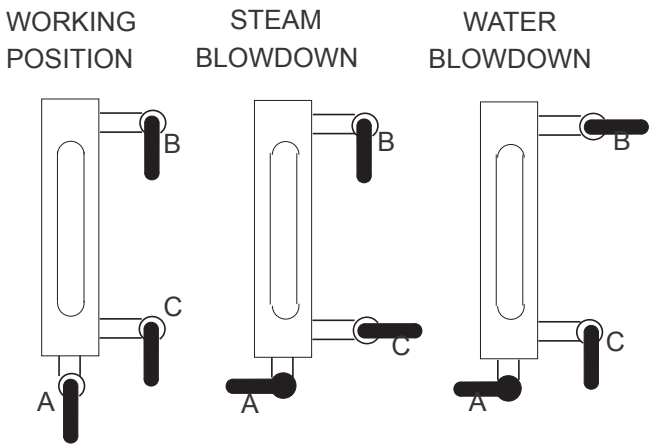


FIG. 20 WATER GAUGE INSTALLATION

Note: Where a Boiler is operating continuously at steam pressure, advice should be taken from a Fulton agent as to the appropriate blowdown procedure.



Water Level Gauge operating positions.

FIG. 21 WATER GAUGE OPERATION

3.9 BURNER SHUT DOWN

3.9.1 Short Term (Hours)

Select 'Off' on the burner control panel switch.
The burner will stop firing, post-purge and then stop.

3.9.2 Medium Term (Days)

(a) Select 'Off' on the burner control panel switch.
The burner will stop firing, post-purge and then stop.

(b) Shut the main steam valve.

(c) Select pump only on the boiler control panel.

Note: Ensure the boiler water treatment levels for dissolved oxygen are within the specified limits.

3.9.3 Long Term (Weeks)

To store the boiler in a corrosion-free situation there are three practical solutions as follows:

(a) Fully flood the boiler to exclude as much air as possible.

(b) Drain the boiler completely.
Remove all hand hole and man hole doors.
Open all gas/oil-side access doors (refer to the maintenance section).

(c) As (b) but also introduce a form of convection heating to the gas/oil and water side.
A very effective solution is to install a string of outdoor-type waterproof light bulbs distributed throughout the boiler.

3.10 EVAPORATION TEST

This test may be required by your insurance inspector as part of the annual inspection:

(a) With the burner running, switch off the boiler feedpump and allow the water level in the boiler to lower by evaporation.

(b) When the water level reaches the 1st low water position an alarm will sound, the 1st low water indicator lamp will illuminate and the burner will stop.

(c) Allow the evaporation process to continue until the 2nd low water alarm sounds and the 2nd low water alarm/switch illuminates.

(d) Switch the feed pump to the pump & burner on position.

(e) The water level will be restored to normal working level, the 1st low water indicator lamp will extinguish and the alarm will cancel.

(f) Press the 2nd low water alarm/reset switch.

(g) The 2nd low water alarm/reset switch will extinguish, the alarm will cancel and the burner will start.

Note: Because the burner shuts down during this test it is possible that the steam load will rapidly decrease the pressure in the boiler causing a premature 2nd low water alarm. This is normal and typical of 'priming' where a boiler tries to maintain an overload condition resulting in unstable water conditions.

3.11 FAULT FINDING

Before calling the Fulton Service Department, check the following:

(a) Gas isolating valve(s) are ‘Open’ (gas and dual fuel burners).

(b) Oil isolating valve(s) are ‘Open’ (oil and dual fuel burners).

(c) Oil storage tank contains an adequate level of fuel.

(d) Oil filter(s) are not blocked.

(e) Water feed line from feed tank/hotwell is ‘Open’.

(f) Water feed isolating valve on boiler is ‘open’.

(g) All blowdown valves are ‘shut’.

(h) Fuses or MCBs in the mains supply are not tripped

(j) Thermal overload on the pump motor is not tripped.

(k) Thermal overload on the burner motor is not tripped.

(l) Normal water level is visible in the water level gauges.

(m) Feed pump is primed and not air locked.

(n) Front door proof of closure microswitch is ‘closed’.

Before contacting the Fulton Service Department, have the following information available:

(a) The model and size of the boiler.

(b) The boiler serial No.

(c) The model and type of burner fitted.

Note: A very common problem is that when a boiler cools down, the steam in the steam space condenses and gradually forms a vacuum. If the feed water line is open, the boiler will syphon water in, attempting to equalise the pressure.
The appearance in the water level gauges is the same if they are empty or fully flooded.
If the sight glasses appear empty, but the water level control alarm(s) have not sounded, it is highly probable that the boiler is flooded.
Allow air into the system and lower the water to the normal operating level.

FAULT FINDING TABLE

Problem	Cause	Remedy
Starting	Power supply Gas supply Low water probe Loose wire connection Control circuit dead	Check fuses or circuit breaker. Check for gas pressure. Check main gas cock is open. Check low water probes. Check connections to all components. Door interlock microswitch.
Gas burner will not	Gas supply Gas pressure switch(s) Air pressure switch	Check for gas pressure. Reset gas pressure switch. Check air pressure switch. Check fan and thermal overload switch.
Oil burner will not	Oil supply Fuel pump	Check for oil in storage tank. Check oil feed line is open. Check oil solenoid valves. Check oil pump is de-aerated. Check oil strainer.
Burner will not start	Burner control locked Ignition	Reset. Check ignition electrode and readjust or clean. Check transformer.
Flame failure	Flame sensor Burner programmer	Clean or replace. Check functions or replace.
Poor combustion	Fuel flow Air adjustment Off centre flame Flue	Check fuel pressure. Check fuel valves. Check fuel nozzle. Readjust. Check air inlet. Check fan and thermal overload switch. Check diffuser alignment in the blast tube. Check flue for blockage.
Boiler will not maintain pressure	Gas supply Oil supply Steam pressure switch Scale build up in boiler Steam traps Dirty flue Steam overload	See above. See above. Check steam pressure switch, readjust or replace. Check Water Treatment advisor. Check steam traps and replace as necessary. Clean flue side of boiler. Reduce.

FAULT FINDING TABLE, continued.

Problem	Cause	Remedy
Wet steam, boiler primes	Too much boiler treatment chemical Steam traps	Dump return tank, flush system or stop treatment for a week. See previous page.
Pump will not cut off	Earth connection Probes connections Dirty probes Water level relay	Check for tightness and clean. Check for tightness and clean. Clean or replace. Replace.
Feed pump runs but does not put water into boiler	Air/steam lock in pump Blocked water feed line Impellers damaged	Check for bad steam traps. Check for check valve in water feed line. Reduce temperature of feed tank. Check and clean if necessary. Replace pump.
Feed pump will not start in time	Probe connections Dirty probes Water level relay Earth connection	Check for tightness and clean the connections. Clean or replace. Replace. Check for tightness and clean.
Low water alarm/burner shut-off will not act in time	Probe connections Dirty probes Water level relay Earth connection	Check for tightness and clean the connections. Clean or replace. Replace. Check for tightness and clean.
Starting the boiler, the high limit steam pressure limit is illuminated and the burner stops	Boiler is completely filled with water. On/off pressure switch has failed.	Blowdown the boiler to a normal water level. Check pressure switch replace as required.

Note: For more detailed fault finding on the burner consult the burner manufacturers Installation and Maintenance instructions

MAINTENANCE

SECTION 4

4.1 GENERAL

To ensure the continuing efficiency of the boiler, regularly carry out regular routine maintenance procedures as detailed below.

⚠ WARNING

Lifting Equipment

Make sure that lifting equipment complies with all local regulations and is suitable for the job.
You can be injured if you use faulty lifting equipment.
Make sure the lifting equipment is in good condition.

IMPORTANT

If any fault is found during these procedures, shut down the boiler immediately and consult Fulton Boiler Works Ltd.

Note: It is essential that regular checks are made to ensure scale build-up is not taking place within the boiler. Such checks will ensure that water treatment being applied to the boiler water feed is effective.

The lower hand hole doors should be removed after one month and the interior of the boiler thoroughly examined. If scale or sludge build-up is observed, a water treatment specialist should be consulted. During normal operation the front ends of the turbulators will be burnt off, this is normal and not a cause for concern.

Subsequent interior examinations should be carried out on a regular basis until satisfactory conditions are obtained. Thereafter, inspections should be carried out at six monthly intervals.

IMPORTANT

New gaskets must be fitted every time a hand hole door is removed, refer to Section 4.5 for fitting procedures

4.2 WEEKLY

⚠ WARNING

All steam pipework, valves and fittings will be very hot.
Do not operate the safety valve without protection.

Check for signs of leakage around the front door seal. Leakage from the seal can cause a flame to short circuit in the furnace, which can lead to over heating of the front tube plate.
If a leak is detected shut down the boiler and replace the seal.

Check the hand holes and man holes for signs of leakage. This is particularly important when the boiler is started from new or when gaskets have been replaced (refer to Section 4.5 for fitting procedures for new gaskets). Corrective action taken as soon as a leak occurs can prevent costly repairs later.

Check for signs of leaks on all valves and fittings and take the appropriate action.

Test all the boiler water level functions by evaporation, e.g. switch off the boiler feed pump - see Starting the Burner, section 3.6.

Carry out routine maintenance checks on the burner as recommended by the manufacturer's Installation and Maintenance instructions.

Check the flame failure controls by removing the burner flame sensor from its plug-in connection on the side of the burner and covering the detection window to exclude all light.

The burner control should immediately go to a lockout flame failure condition and will require manual resetting.
Clean the flame sensor before replacing it.

4.3 SIX MONTHLY

WARNING

The boiler must be completely cold before carrying out any of the following procedures.

(a) Ensure that the following valves are 'Shut'.
The main steam stop valve
The feed water isolating valve
The fuel (gas/oil) valves

(b) Ensure that the power supply to the boiler is switched 'Off'.

CAUTION

The boiler and attaching parts will retain heat long after the boiler has been shut down. Always use protective clothes and extreme caution when working on a hot boiler.

(c) Empty the boiler by allowing air into the boiler via the boiler vent valve, and draining through the boiler blowdown valve.

WARNING

Lifting Equipment

Make sure that lifting equipment complies with all local regulations and is suitable for the job.

You can be injured if you use faulty lifting equipment. Make sure the lifting equipment is in good condition.

(d) Remove the hand hole and manhole doors and thoroughly inspect the internal surfaces of the boiler, paying particular attention to the junction of the tubes with the front tube plate and the tubes for signs of pitting. Any deposits should be removed and your water treatment specialist consulted. Ensure there are no accumulated deposits of sludge in the bottom of the boiler.

(e) Remove the feed water disperser inspect and clean.

(f) Replace the man hole and hand hole door gaskets, refer to Section 4.5 for fitting procedures.

(g) Open the boiler front access door with the burner mounted on it as described below. It will be necessary to disconnect the gas supply (authorised personnel only) from the gas train and oil supply from the oil lines to allow the door to swing open.

Undo the four retaining nuts, (The two on the hinge side by two complete turns). See 4.7.
Open the door sufficiently to allow full access to the furnace and tube ends.

(h) Where retarders are fitted they should be removed - some burning of the retarders at the inlet end is normal.

(i) Remove the access panel from the economizer, check for clogging or blocking of the finned tubes, should the tubes need to be cleaned extreme care should be taken not to damage or distort the fins. Maintenance instructions for control and safety devices fitted to the economizer system should be fully observed.
Refit the economizer access panel.

4.3 SIX MONTHLY, continued.

(j) Remove the rear smoke box access doors.

(k) Brush through the tubes to remove any deposits from the products of combustion.

(l) Using a wire brush, clean the internal surfaces of the furnace and the face of the front tube plate.
Pay particular attention to the tube ligaments (the spaces between adjacent tubes).

(m) Inspect the tube ends for any signs of splitting or burning.
These are symptoms of gas reburning in the tube ends as a result of poor combustion, e.g. carbon monoxide carry-over. If the tube ends exhibit these signs, consult Fulton Boiler Works.

(n) Clean out the rear smoke boxes to remove the deposits brushed through from the tubes.

(p) When fitted, inspect the finned tubes of the economiser for clogging or blocking, clean as required.

IMPORTANT

Ensure that the rear smoke box drain connections are clean and free from deposits.
This is particularly important on oil fired boilers because of the acidic nature of the condensate formed.

4.3 SIX MONTHLY, continued.

4.3 SIX MONTHLY, continued.

⚠ WARNING

When handling ceramic fibre always follow the local regulations regarding such materials, including the use of breathing apparatus, suitable body protection and protective gloves.

(q) Examine the internal surface of the door lining for defects. Small repairs may be carried out by cutting out the defective area and replacing with new fibre, ensure the correct adhesive is used.

(r) Examine the end of the burner blast tube where it extends through the door into the furnace. Clean off any deposits, paying particular attention to the internal lip where deposits can cause irregular flame patterns.

(s) Inspect the rear smoke box door seals for deterioration and replace if necessary.

(t) Close the hinged front access door by reversing the opening procedure, (see 4.7).

(u) Reconnect the gas/oil connections.

(v) Drain and flush the feed water/hotwell tank, clean any filters and the strainer in the feed line before the pump.

(w) Drain and flush out the blowdown separator.

(x) Carry out routine maintenance to the burner as detailed in the manufacturers Installation and Maintenance instructions.

Note: Depending upon the mode of operation, it may be found that the six monthly interval can be extended, possibly to an annual service. It is strongly recommended, however, that the interval should be 6 months from initial start up until such times as a 'pattern of use' and the condition of the boiler after a typical 6 months can be established.

4.4 ANNUALLY

It is a requirement of the Factories Act and Pressure Systems Regulations that the boiler is internally inspected and re-certified at not more than 14 month intervals.

It is normal practice to carry out an annual service during which your insurance surveyor would attend to carry out the statutory inspection. The scope of a full insurance strip-down is such that it should only be attempted by persons competent to do so who have had the necessary training, and have the required test equipment. Fulton Boiler Works can offer this service if required.

The engineering surveyor may require the removal of the ceramic fibre insulation around the periphery of the front tube plate to facilitate inspection of the shell to tube plate weld.
The standard Fulton service kit includes replacement ceramic fibre material which must be glued in place with the adhesive supplied. It is vital the material is fitted ensuring the ends of the fibre face into the centre of the boiler.
For burner maintenance, refer to the manufacturer's Installation and Maintenance instructions.

4.5 FITTING NEW GASKETS (Fig. 6 and 7)

4.5.1 General

⚠ CAUTION

TOPOG-E gasket have a finite life after installation and must be renewed annually.
It is important that the instructions given in this section are adhered to.

The RBC Series boilers are fitted with TOPOG-E gaskets in all the inspection holes of the boiler. These gaskets work very well and millions have been safely used over the last 30 years, however, it is absolutely essential to observe a few simple rules in order to get the best performance from your installation.

Elastomeric Vulcanizates, which form the basis of TOPOG-E gaskets, undergo degradation from many sources including heat, oxygen, stress, and overdosing from certain types of water treatment. This takes the form of material oxidation, hardening/embrittlement and cracking which may result in gasket failure. Steps must be taken to minimise the effects of such attacks.

Water treatment and oxygen attack can be combated by ensuring that the gasket is aligned correctly so that only the extreme edges of the gasket are exposed. If a new gaskets leaks after fitting this is almost certainly due to incorrect seating or alignment. As such gaskets are very flexible it is possible to cure the leak by excessive tightening, but such an action will seriously reduce the life of the gasket and cause problems later.

Undue stress can be avoided by tightening just sufficiently to stop any leakage when fitting cold and before firing the boiler. Fire the boiler and then gradually warm the boiler up, allowing the increasing steam pressure to take over and complete the seal. The will allow the gasket material to contract naturally and follow the topography of the mating surfaces. The securing nut can then be tightened gently by, say, a quarter of a turn to ensure a ‘snug’ fit and prevent the seal from being broken when the boiler is cold and under negative pressure.

Gentle warming of the boiler on initial firing after maintenance will also help to ensure that the rubber ‘cures to shape’. If the rubber post-cures, the elastic memory will be destroyed and any initial over tightening will cause the gasket to become hardened and embrittled, leading to cracks and eventual failure.

4.5.2 Fitting Instructions

Blowdown the boiler completely (see Operation, Section 3.8). and examine all inspection holes in the boiler. If any leakage is evident, proceed as follows:

(a) Disassemble the crab(s) and cover plate and remove the inspection hole assembly. Remove the old gasket and thoroughly clean the mating faces of the cover plate and boiler ring.

(b) Place the new Topog-E gasket on the cover plate, ensure the gasket is the correct size and is seating flat against the plate. Do not use any grease, lubricant or adhesive. If the new gasket is not seated properly before the plate is tightened, the gasket may be pinched causing a failure when the pressure builds up.

(c) Position the cover plate in the boiler ring, ensuring that the plate is correctly centred. An off-centre cover plate can concentrate forces on the gasket and cut it in two. The cover plate may also drag on the boiler hole ring and fail to seal as the pressure rises. Set the crab(s) and hand-tighten the securing nut(s) sufficiently to provide a snug fit. Tighten the nuts a further quarter of a turn using a spanner. DO NOT OVERTIGHTEN.

Note: Ensure the gasket is aligned correctly so that only the extreme edges are exposed to water treatment or oxygen attack. If the gasket is misaligned, overtightening to seal a leak will not prevent subsequent leakage at a later date.

4.5.2 Fitting Instructions, continued.

(d) Gradually warm up the boiler, allowing steam pressure to make the seal. If the gasket leaks during pressure build up, tighten the securing nut(s) sufficiently only to stop the leakage. It is important to keep the nuts correctly tightened thereafter, this prevents the vacuum developed by cooling on shutdown from feeding and draining the boiler.

Note: New gaskets fitted to inspection holes located along the bottom of the boiler are more difficult to insta without leaking. Small particles of scale or sand tend to run down on the mating surfaces after cleaning but prior to assembling. This condition is likely to have occurred if excess tightening is required to stop a leak before warming the boiler. In this event, the best course of action is to drain the boiler and repeat the gasket fitting procedure. Failure to do so will severely reduce the life of the gasket.

(e) Clean and inspect each water gauge sight glass. If any water leakage is evident, renew the sight glass gasket.

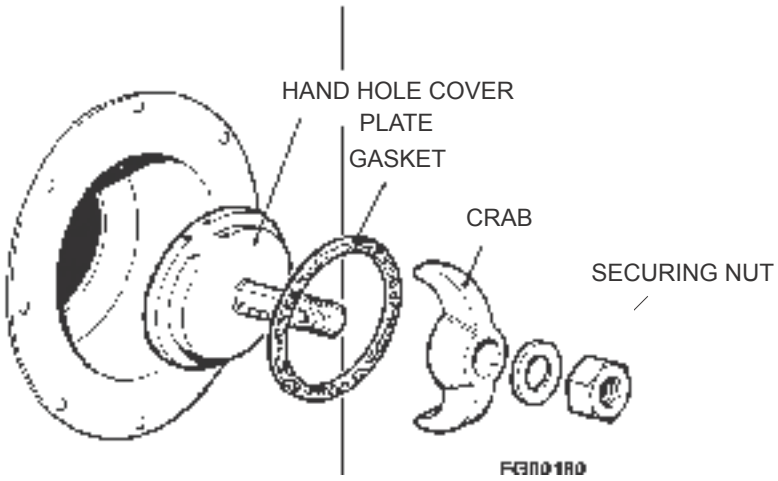


FIG. 22 INSPECTION HOLE ASSEMBLY

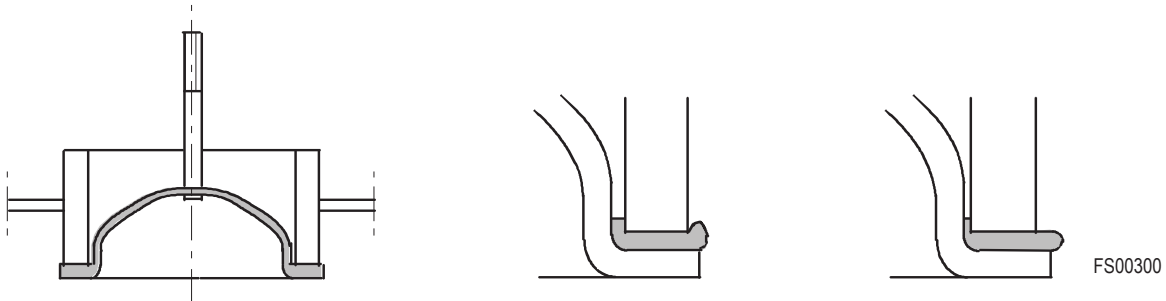


FIG. 23 FITTING A NEW TOPOG-E GASKET

4.6 STEAM PRESSURE SWITCH ADJUSTMENT

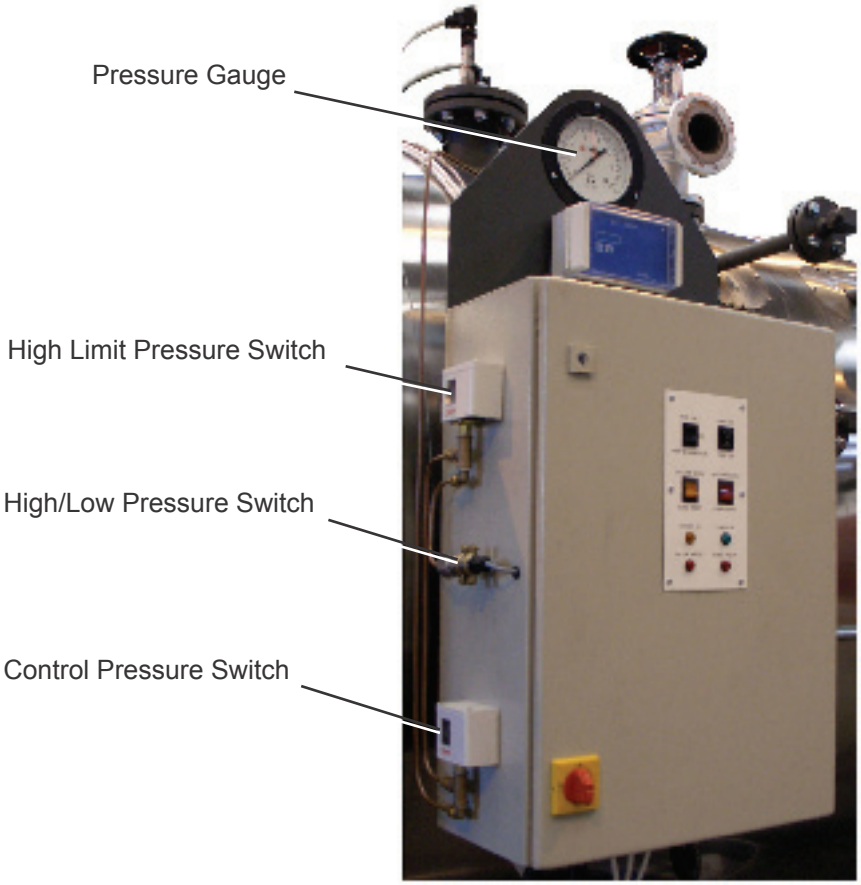


FIG. 24 PRESSURE SWITCH LOCATIONS

4.6.1 Controls

The standard boiler is fitted with steam pressure switches as follows:

High Limit Pressure Switch (proportional, non-adjustable) when fitted.
High/Low Pressure Switch
Control Pressure Switch
Burner Control Pressure Switch (Oil only)

They are located on the control box together with a syphon pipe, pressure test point and steam pressure gauge.

The Control Pressure Switch controls the on/off cycle of the burner, switching the burner off when the desired steam pressure is reached, and switching it on when the steam pressure falls.

The High Limit Pressure Switch is a maximum steam pressure switch which has to be set to operate at least 0.5 bar higher than the Control Pressure Switch. Normally the High Limit Switch does not operate, but if the Control Pressure Switch fails and steam pressure rises above the adjusted steam pressure, the High Limit Switch should switch off, lock out the burner, illuminate the High Limit Pressure lamp and sound the alarm. Should this happen, switch the boiler to pump only and wait until the steam pressure is discharged. Check the connection to the pressure switch, replace as required.

The High/Low Pressure Switch switches the burner between high and low fire.

4.6.2 Adjusting the Pressure Switches

(a) Start the boiler.

(b) Shut the main steam valve.

(c) Set the control pressure switch to its maximum.

(d) Set the high limit pressure switch to 0.5 bar below the safety valve setting.

(e) Allow the steam pressure to rise until the high limit pressure switch trips.
On the steam pressure gauge, check that the pressure is not less than 0.5 bar below the safety valve lift pressure.

If the pressure is incorrect, repeat steps (b), (d) and (e).

(f) Open the main steam valve to lower the steam pressure.

(g) Reset the control pressure switch to the required working pressure and the high/low pressure switch to 0.3 - 0.5 bar below the control pressure switch setting.

(h) Shut the main steam valve.

(j) Reset the high limit pressure switch and allow the steam pressure to rise until the high/low pressure switch reduces the burner to low fire, and then the burner shuts down under the control pressure switch.

(k) Readjust if necessary to achieve the required settings.

Note: The requirement for a difference between the control and high limit pressure switches is to prevent unnecessary high limit steam pressure faults tripping the burner at no load conditions.
The residual heat in the furnace, the flue pipes and the door refractory is capable of raising steam pressure slightly, causing the high limit pressure switch to trip out.

4.7 FRONT ACCESS DOOR ADJUSTMENT AND SEAL

⚠ WARNING

When handling ceramic fibre always follow the local regulations regarding such materials, including the use of breathing apparatus, suitable body protection and protective gloves.
The front access door is held in position by four swivel bolts A fitted with M48 hexagon nuts B.
The hinge side is secured by a parallel hinge system allowing the door to move away from the front face of the boiler when turning the hinge nuts B anticlockwise, but still secures the door to the hinge pin.

The swivel bolts A on the latching side can be moved out of their securing slots once the nuts are undone. In order to seal the door fully around the circumference, it is important to ensure the door is parallel to the front sealing face of the boiler before finally tightening the securing nuts to effect a seal. When opening and closing the door always slacken and then tighten all four nuts B, not just the two on the latching side.

The door seal utilises a 25 x 35mm square section glass rope which is glued into an angle section welded into the perimeter of the door. Over a period of time the glass rope will loose its ability to deform sufficiently to take up the irregularities between the door and sealing faces, which may result in a gas leak, if leakage occurs the boiler should be shut down and the seal be replaced.
To remove the seal, locate the joint (usually at the six o'clock position. Prise out one end and using a chisel or similar to break the glued joint, pull out the remainder of the seal.

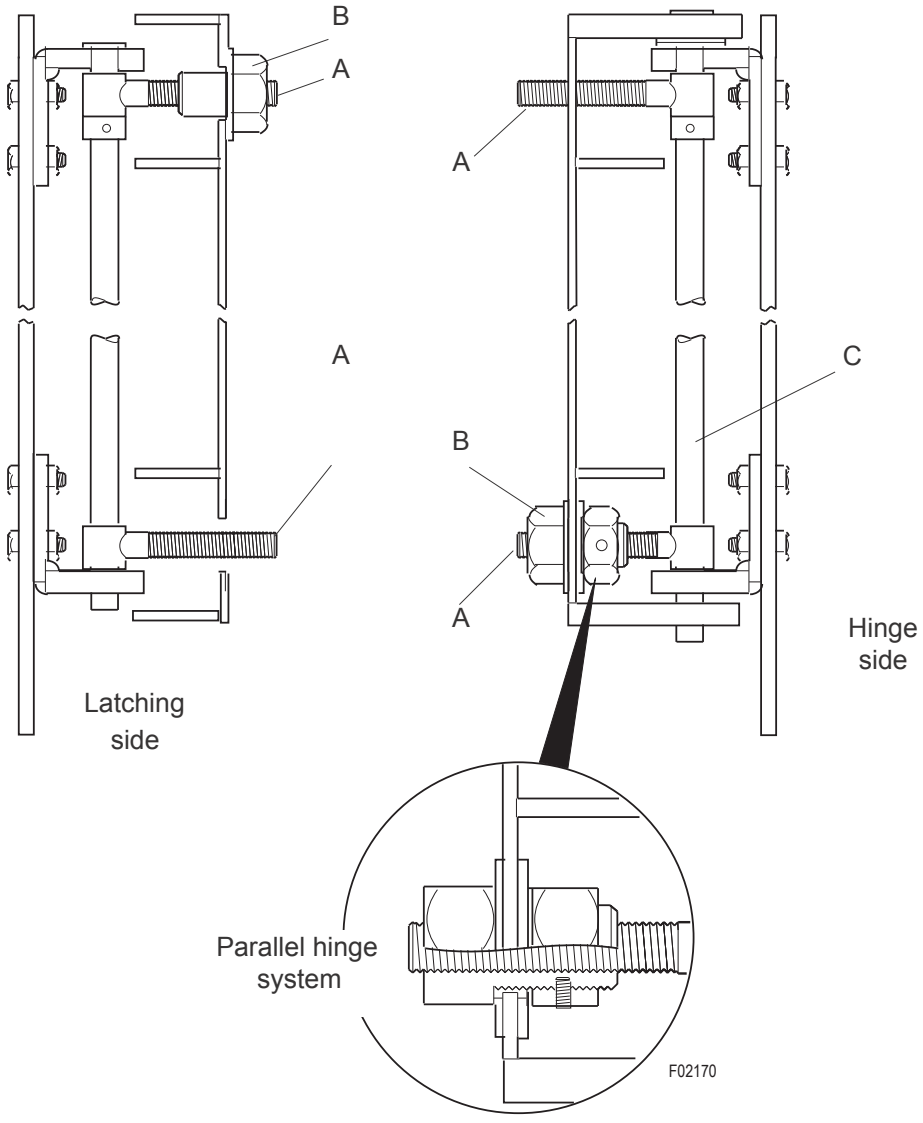


FIG. 25 DOOR HINGE AND LATCH ASSEMBLY

4.8 FEED WATER DISPERSER

⚠ CAUTION

DO NOT use unheated or untreated feed water which can result in premature tube failure by oxygen corrosion.

RBC Boilers are fitted with a feed water disperser, removable for cleaning. The holes in the disperser are sized to give an exit velocity sufficient to ensure rapid mixing of the boiler water and the cooler feed water, reducing temperature gradients within the water to a minimum.

In order to reduce oxygen corrosion to the tubes and prevent thermal shock, it is imperative that feed water entering the boiler is heated to 80 - 85^{O} C. (The solubility of oxygen in water reduces to a minimum at 85^{O} C.), on initial start-up this may not be possible.

As part of the water treatment programme chemicals will be dosed into the boiler feed water line and / or the boiler feed water tank. The nature of many of these chemicals is that they react when there is a rapid rise in temperature such that dissolved solids are precipitated and fall out of solution as a sludge.

The first major change in temperature to the feed water is as it enters the feed water disperser, as a result some solids will be precipitated within the disperser, the majority will be washed through, however some may remain as deposits.

The disperser should therefore be removed inspected and cleaned at each inspection interval i.e. 6 monthly or before if the feed pump has difficulty in maintaining the boiler water level.
To reduce the problems of possible disperser blockage, chemical dosage should always be applied as a slug into the feed water pipe rather than into the feed tank.
By chemical slug method, precipitation of solids only takes place from the water either side and mixed with the dose.
By dosing the feed tank all of the feed water becomes saturated with chemical causing all of the feed water entering the boiler to release precipitates / sludge. The exceptions are Sulphite compounds used for oxygen scavenging which can be dosed directly into the feed water tank.

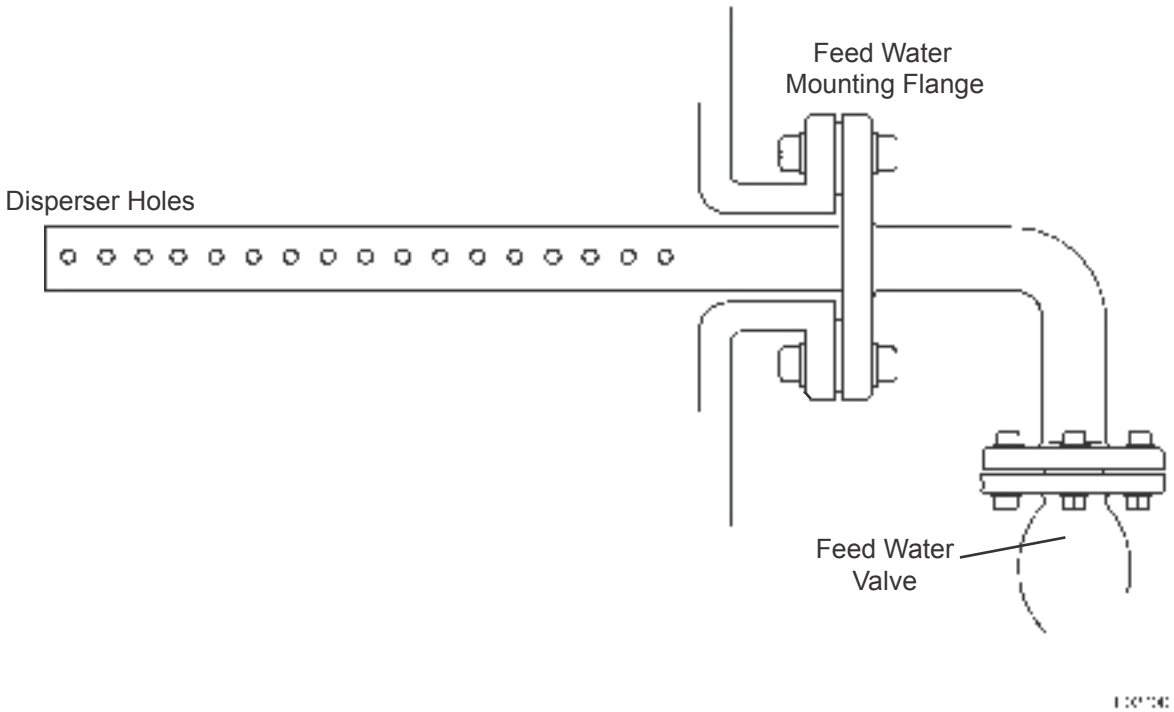


FIG. 26 FEED WATER DISPERSER

4.9 WATER LEVEL PROBE - REPLACEMENT

⚠ CAUTION

Ensure the new probe is cut to the same length as the probe being replaced.

4.9.1 Standard Probes (Brass)

The probe is supplied in a standard length and should be cut to the length required, (the length of the probe being replaced) ensuring measurements are taken from the underside of the probe hexagonal nut, remove any burrs caused by cutting.

4.9.2 High Integrity Probes (Stainless Steel)

The probe is supplied in two parts, the head and the tip. The tip should be screwed onto the head aligning the slot in the top of the tip with the hole in the screwed shaft of the head.
Located the pin provided into the slot/hole and secure with the lock nut.
Using the measurement from the old probe, cut the new probe to length and de-burr. Ensure both measurements are taken from the underside of the hex. nut on the probe head.

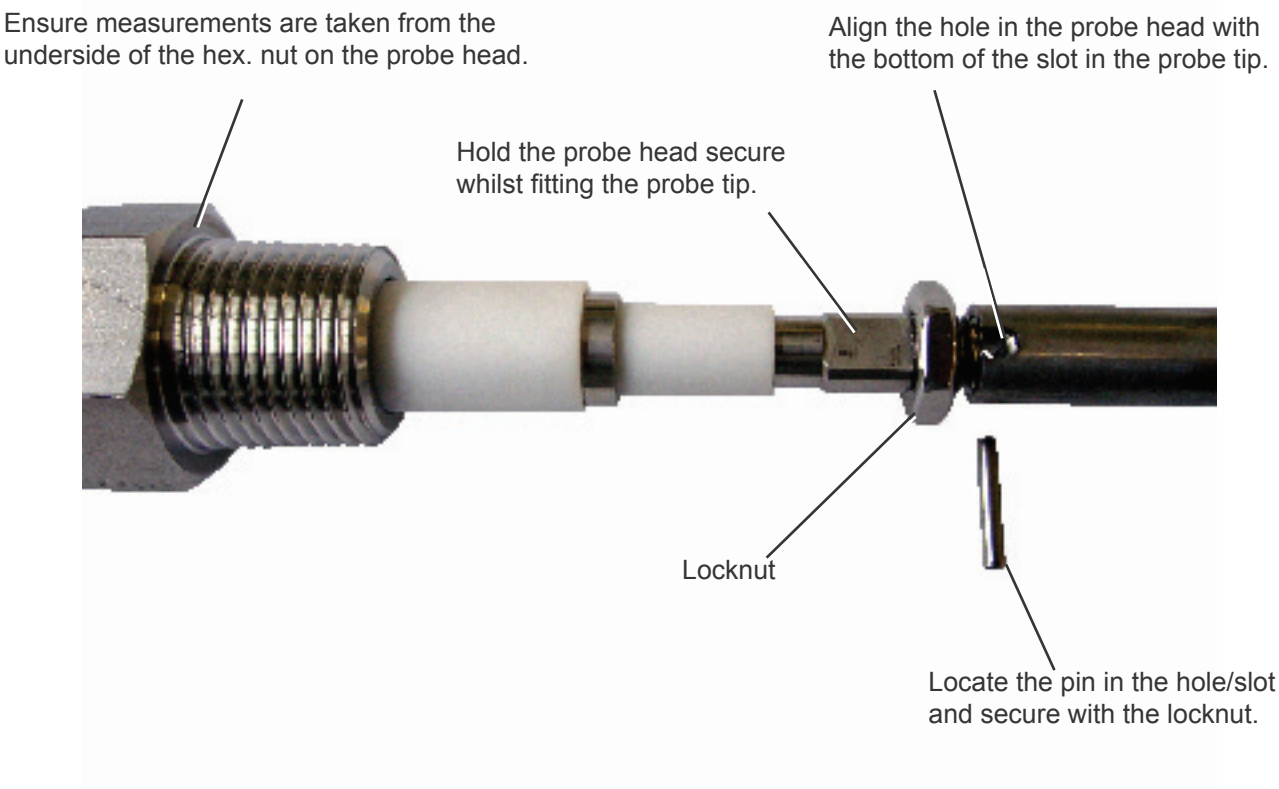


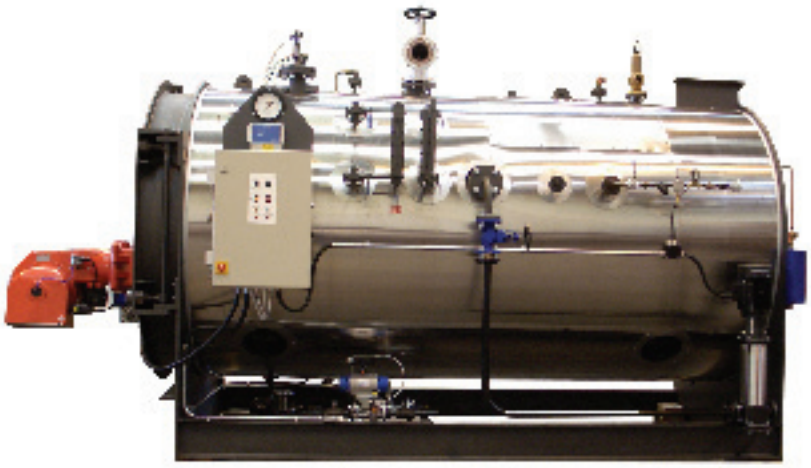
FIG. 27 HIGH INTEGRITY WATER LEVEL PROBE

CAUTION

Dimensions given are approximate and must not be used for installation pipework.

GENERAL DATA

SECTION 5



5.1 BOILER SPECIFICATIONS

Model: RBC	**600**	**750**	**1000**	**1250**	**1500**	**1850**	**2100**	**2500**	**3000**
Steam output, (kg/h) F & A 100°C	957	1197	1596	1995	2393	2952	3350	3990	4787
Heat output, (kW)	600	750	1000	1250	1500	1850	2100	2500	3000
Max. Operating pressure, (barg)	10.34	10.34	10.34	10.34	10.34	10.34	10.34	10.34	10.34
Water content, (litre)	1350	1450	1560	2286	2240	2888	2850	3420	4337
Weight empty, (tonne) (ex. burner)	4.31	4.71	5.35	7.28	7.38	8.87	8.97	10.6	12.17
Approximate fuel usage									
Light diesel oil, (l/h)	69	86	114	143	171	214	243	287	345
Natural gas, (m3/h)	69	86.5	115	144	173	231	242	288	346
Connections DN - All flanges to BS4504, PN16-A2 unless otherwise stated.									
Steam outlet (PN16)	65	65	80	100	100	100	100	125	125
Safety valve outlet (PN16)	40	40	50	50	50	65	65	80	80
Boiler blowdown outlet (PN16)	25	25	25	32	32	32	32	40	40
Feed water pump inlet (BSP)	25	25	25	-	-	-	-	-	-
Feed water pump inlet (PN16)	-	-	-	32	32	32	32	32	32
Sight glass blowdown (BSP)	15	15	15	15	15	15	15	15	15
TDS blowdown outlet (PN16)	25	25	25	25	25	25	25	25	25
Boiler water sampling (PN16)	15	15	15	15	15	15	15	15	15
Gas inlet, natural gas (KEVII)	40****	40****	40	40	40	-	-	-	-
Gas inlet, natural gas (PN16)	-	-	65****	-	-	80	65	65	80
Power kW									
Burner fan, diesel oil fired	1.1	2.2	2.2	3	3	5.5	5.5	7.5	11
Burner fan, gas fired	1.1	1.1	3	3	4	5.5	7.5	7.5	11
Burner fan, dual fuel	1.1	2.2	3	3	4	5.5	7.5	7.5	11
Feed water pump	1.1	1.5	1.5	2.2	2.2	2.2	3	4	4

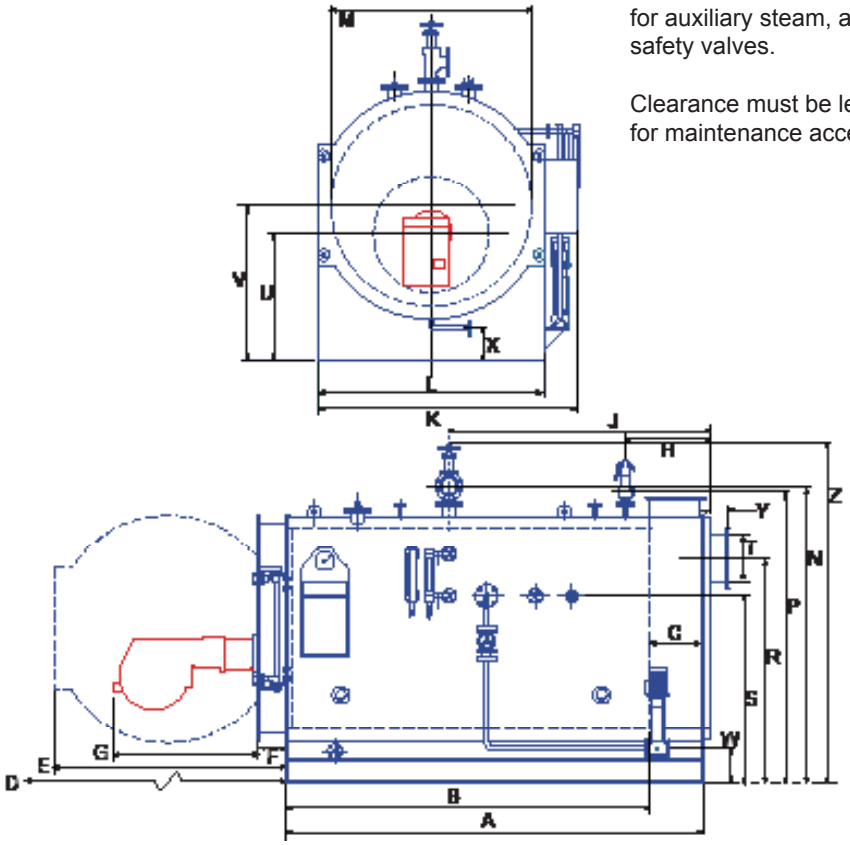
**** Gas booster not fitted.

5.2 BOILER DIMENSIONS

Note: All dimensions are approximate and should not be used for installation.

Additional connections will be required for auxiliary steam, air release and extra safety valves.

Clearance must be left all round the boiler for maintenance access.



	Model: RBC	600	750	1000	1250	1500	1850	2100	2500	3000
A	Boiler length	2445	2530	3045	3435	3435	3745	3745	3850	3950
B	Shell length	2145	2180	2600	2940	2940	3200	3200	3200	3300
C	Rear gas chamber depth	250	300	395	445	445	495	495	550	550
D	Tube withdrawal	2150	2185	2605	2945	2945	3205	3205	3205	3305
E	Door opening radius	1735	1735	1735	1905	1905	2055	2055	2285	2285
F	Front door depth	240	240	240	240	240	240	240	240	240
G*	Oil burner	865	865	1058	1058	1058	737	737	737	910
	Gas burner	795	795	980	980	980	980	980	980	906
	Dual fuel burner	835	835	975	975	975	975	1081	1081	1245
H	Safety valve to front	2090	2090	2520	2790	2790	3045	3045	3100	3200
J	Steam outlet to front	890	890	1040	1340	1340	1645	1645	1700	1750
K	Overall width	1960	1960	1960	2175	2175	2305	2305	2510	2510
L	Base frame width	1700	1700	1700	1870	1870	2020	2020	2248	2248
M	Shell diameter	1500	1500	1500	1650	1650	1800	1800	2028	2036
N	Steam outlet to floor	2245	2245	2245	2425	2425	2575	2575	2805	2805
P	Safety valve to floor	2205	2205	2215	2365	2365	2250	2540	2755	2755
R	Rear flue outlet to floor	1700	1700	1700	1850	1850	1975	1975	2140	2140
	Top flue outlet to floor	-	2405	2405	2555	2555	2715	2715	2875	2875
S	Sampling outlet to floor	1460	1460	1460	1540	1540	1710	1710	1863	1863
T**	Flue diameter (nominal)	250	300	300	350	400	450	450	500	550
U	Furnace centreline to floor	980	980	980	1035	1035	1105	1105	1140	1175
V	Boiler centreline to floor	1200	1200	1200	1275	1275	1350	1350	1450	1450
W	Feedwater pump inlet to floor	290	290	290	290	290	290	290	290	290
X	Boiler blowdown height	300	300	300	300	300	215	215	250	250
Y***	Flue outlet depth	152	152	152	152	152	152	152	152	152
Z	Overall height	2495	2495	2545	2750	2750	2940	2940	3200	3200

* Dimensions given for Nu-Way burners. Other burners will vary.
** Details of flanges will vary with specification.
*** Flue may be rear or top mounted.

5.3 RECOMMENDED WATER CONDITIONS

IMPORTANT

Recommended Water Conditions for Fulton Horizontal Boilers

It is very important that a strict water management program is followed to ensure trouble free boiler operation.
The following are recommended for feedwater and boiler water.

FEEDWATER (water entering boiler)

pH Value	8.5 to 9.5 tested at room temperature,
Hardness	less than 2.0mg/kg in the form of $CaCO_3$,
Suspended Solids	None
Chloride	less than 50mg/kg
Organic Matter	less than 5mg/kg
Oil	None

BOILER WATER (water inside boiler)

pH Value	10.5 - 12.0, tested at room temperature
Hardness	Not detectable
Suspended Solids	Less than 200mg/kg
Chloride	Less than 500mg/kg
Oxygen Scavenger, Sodium Sulphite or Tannin	30 to 70mg/kg
Phosphate	Less than 50mg/kg, in the form of PO4
Total Alkalinity	Less than 1000mg/kg
Caustic Alkalinity	350mg/kg minimum as $CaCO_3$
Total Dissolved Solids (TDS)	Less than 3500ppm
Iron	Less than 1mg/kg
Silica	Less than 150mg/kg, in the form of SiO_2 Dis-
solved Oxygen	None

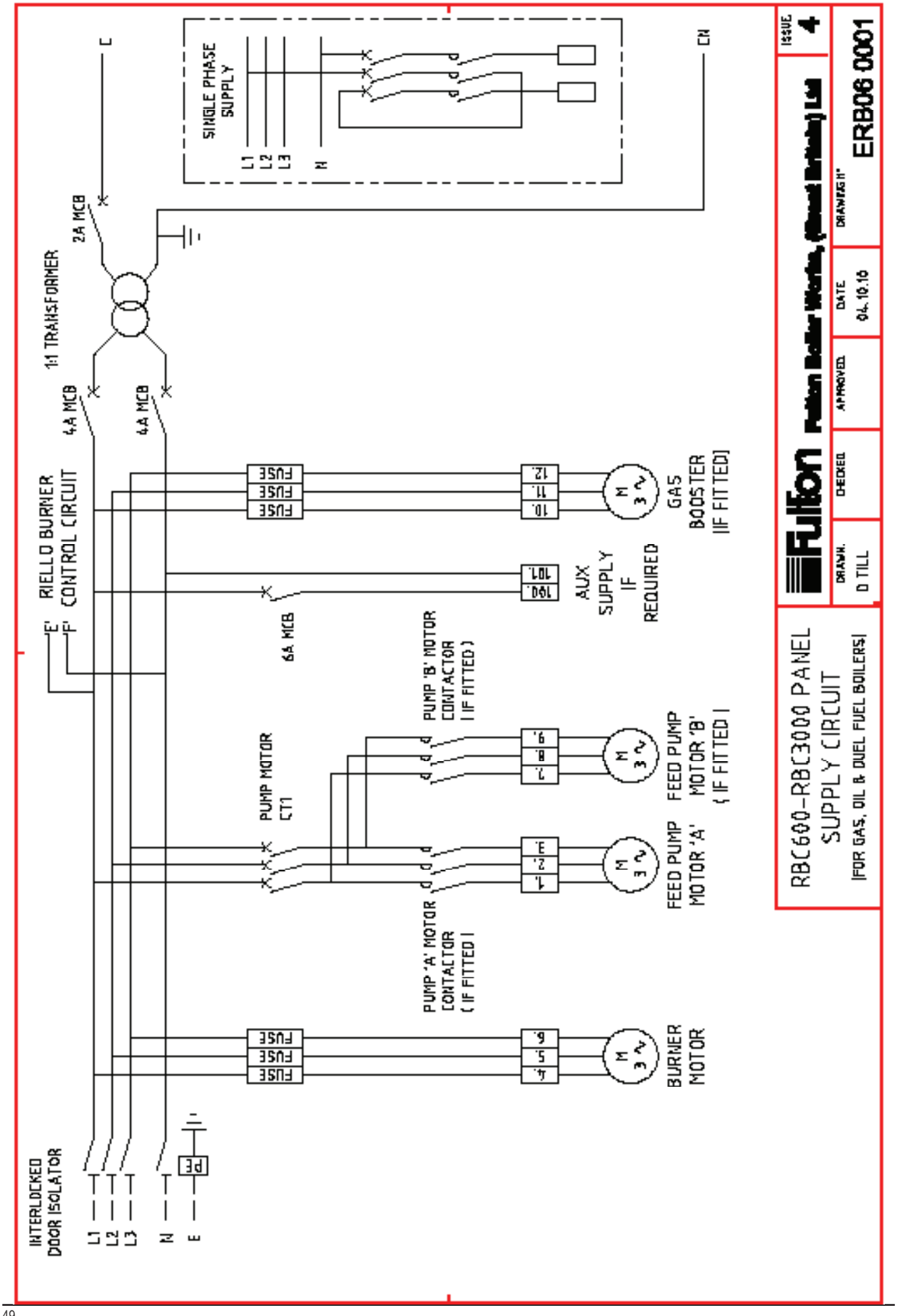
mg/kg	=	Milligrams per Kilogram
$CaCO_3$	=	Calcium Carbonate
PO4	=	Phosphate
SiO_2	=	Silica
1 Grain hardness	=	17.118ppm
therefore 70ppm	=	4.10 grains hardness.
For practical purposes mg/kg	=	ppm

It is critical that the boiler water is alkaline and within the range 10.5pH - 12.0pH.

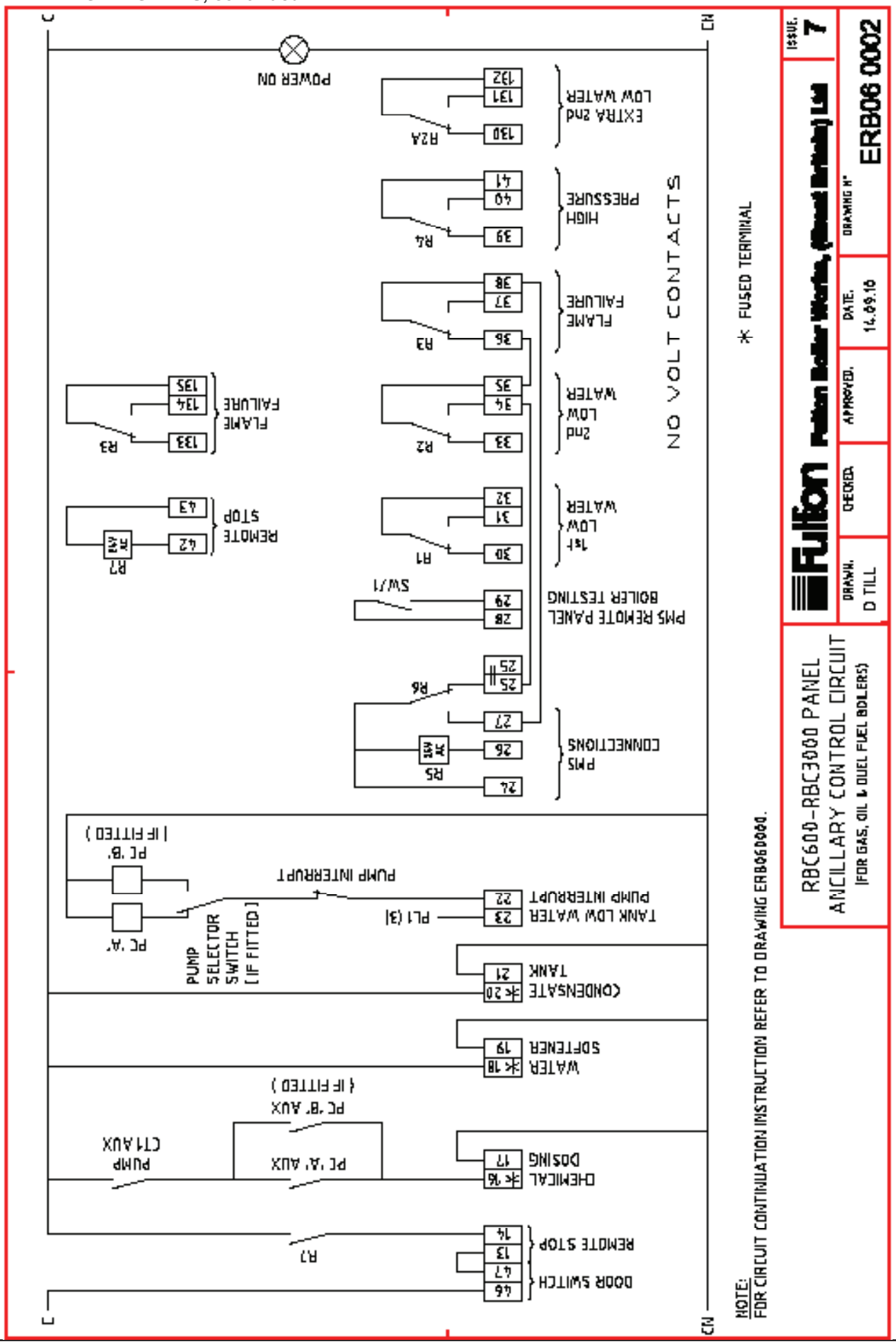
Daily boiler blowdown is essential to help prevent formation of deposits and reduce Total Dissolved Solids (TDS).

Consult your Water Treatment specialist to establish the frequency and duration of blowdown required to achieve the required water conditions.

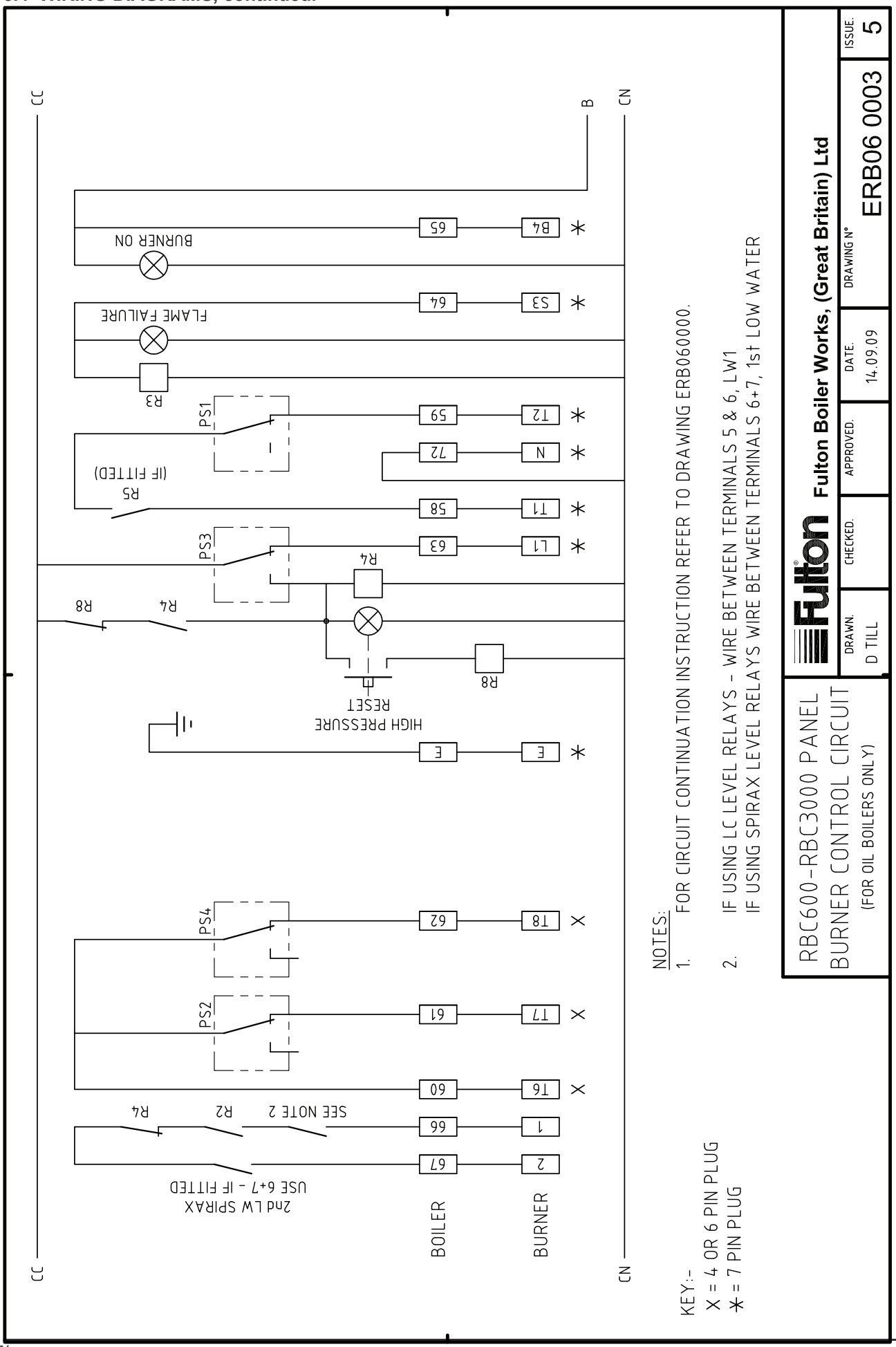
5.4 WIRING DIAGRAMS



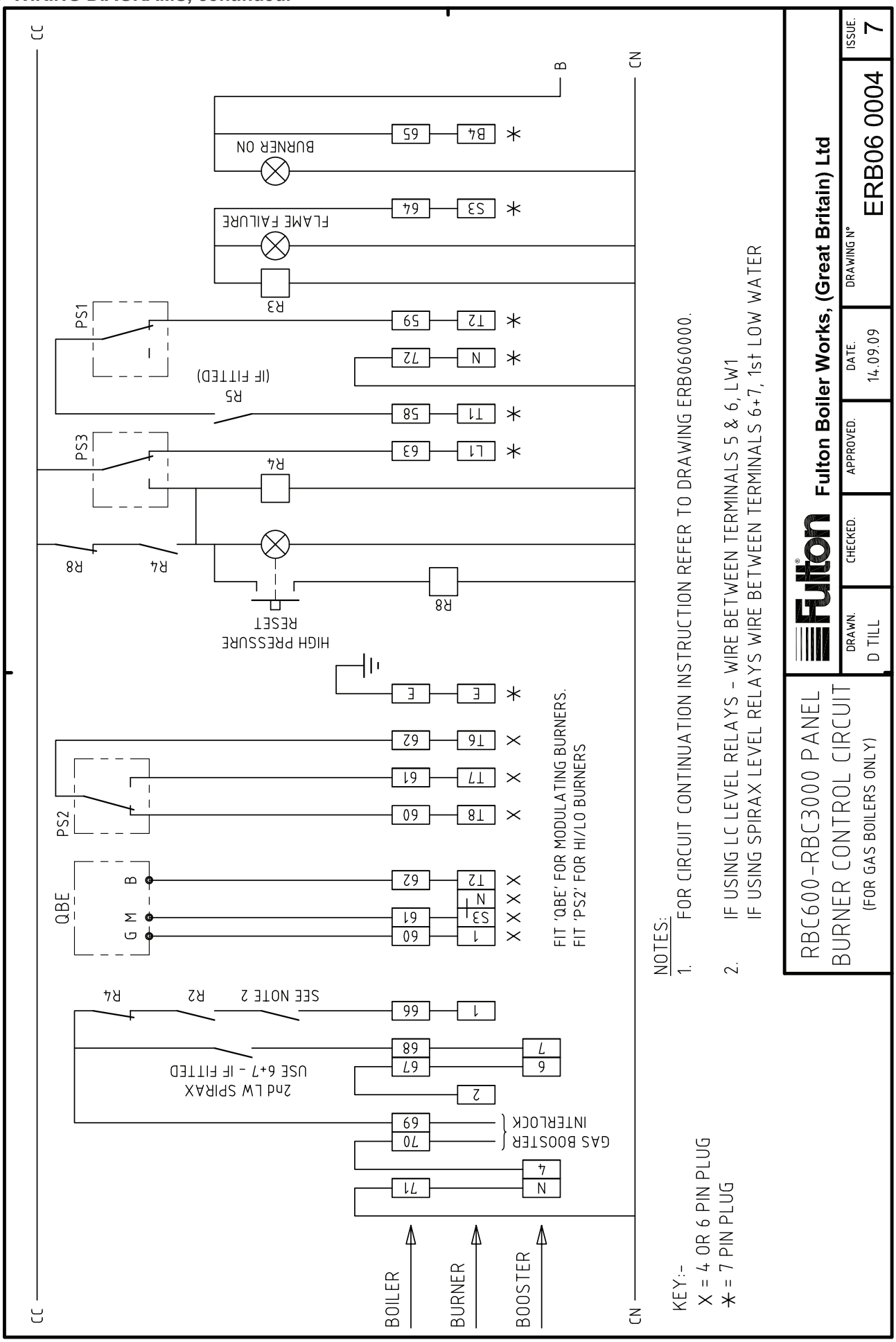
5.4 WIRING DIAGRAMS, continued.



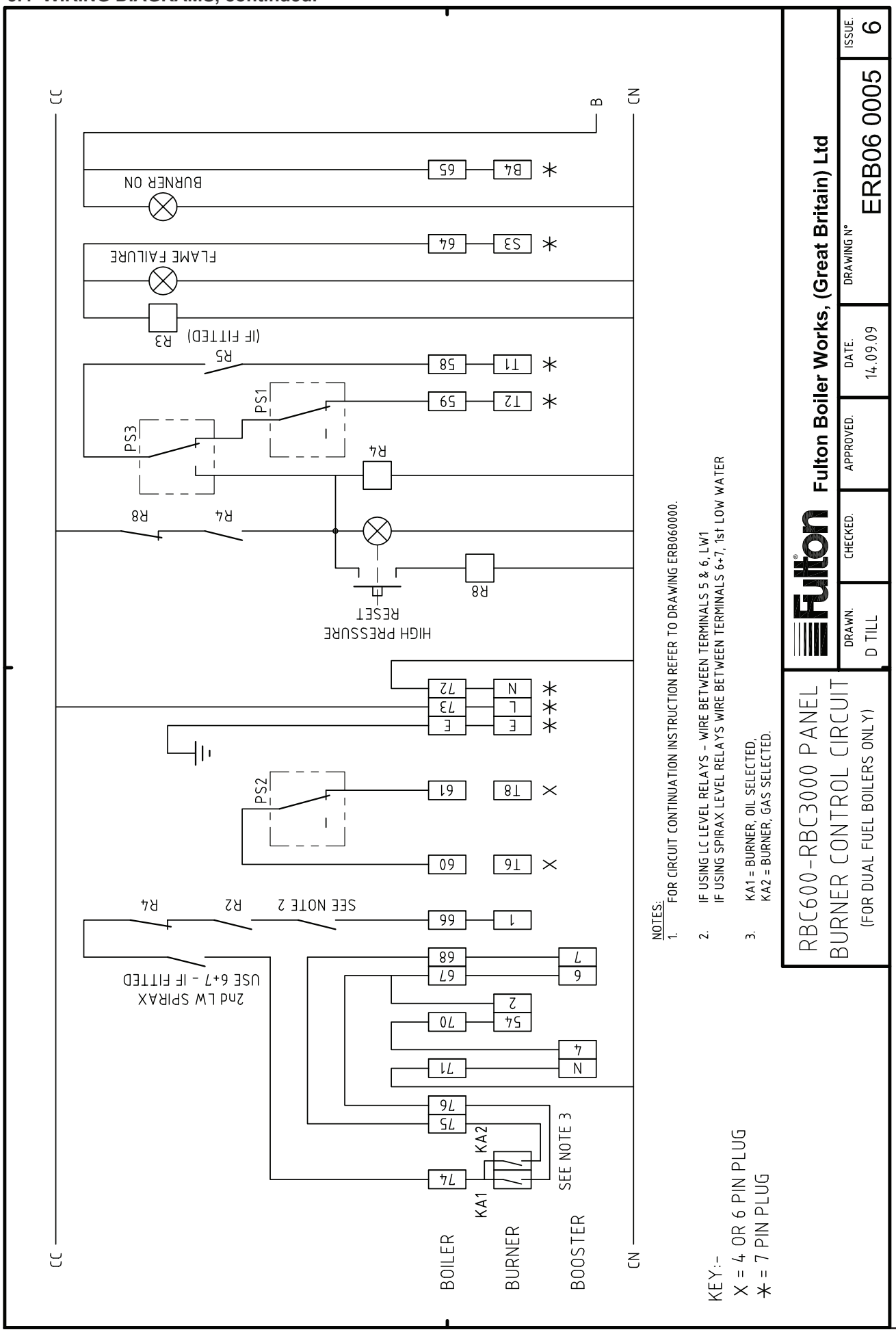
5.4 WIRING DIAGRAMS, continued.



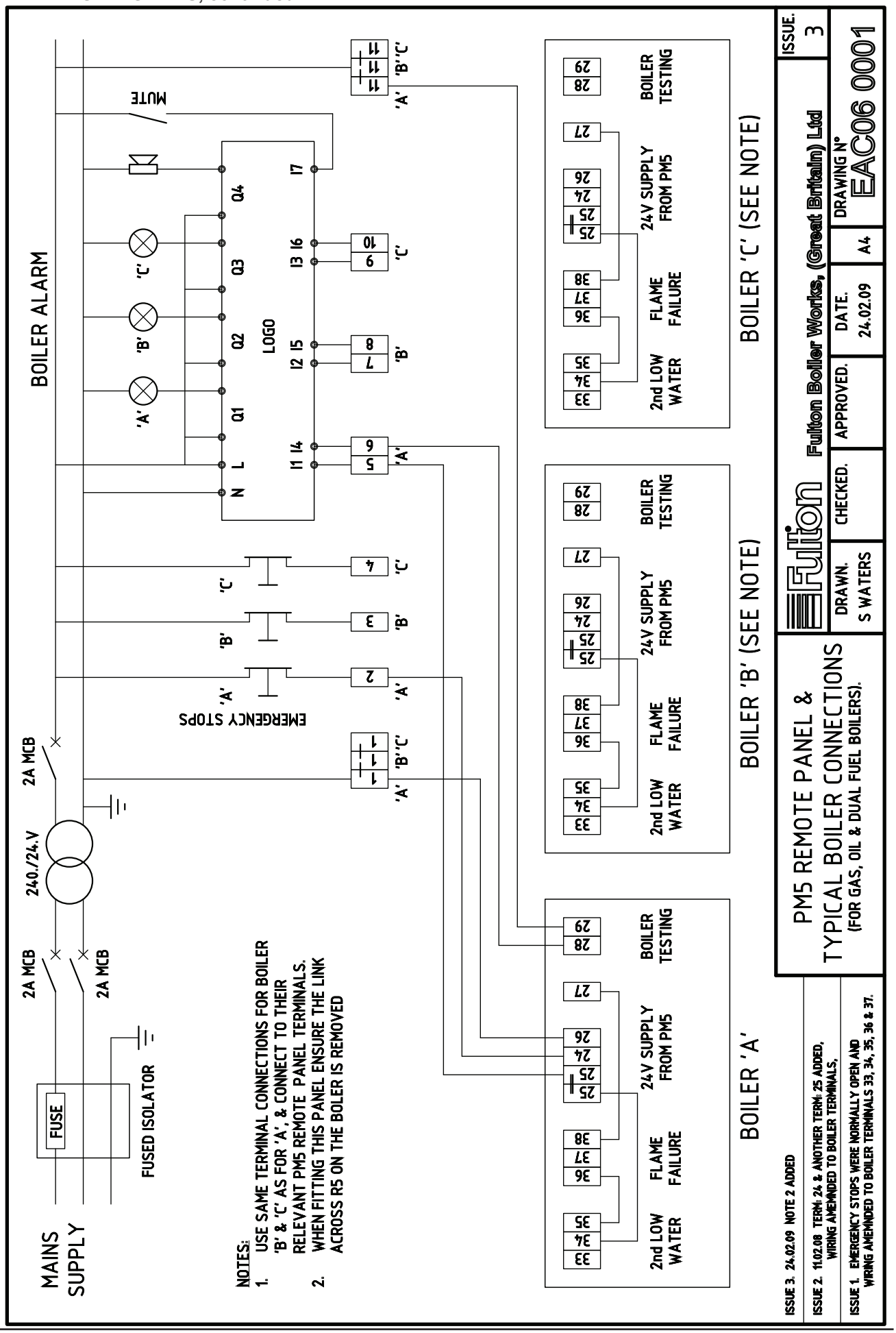
5.4 WIRING DIAGRAMS, continued.



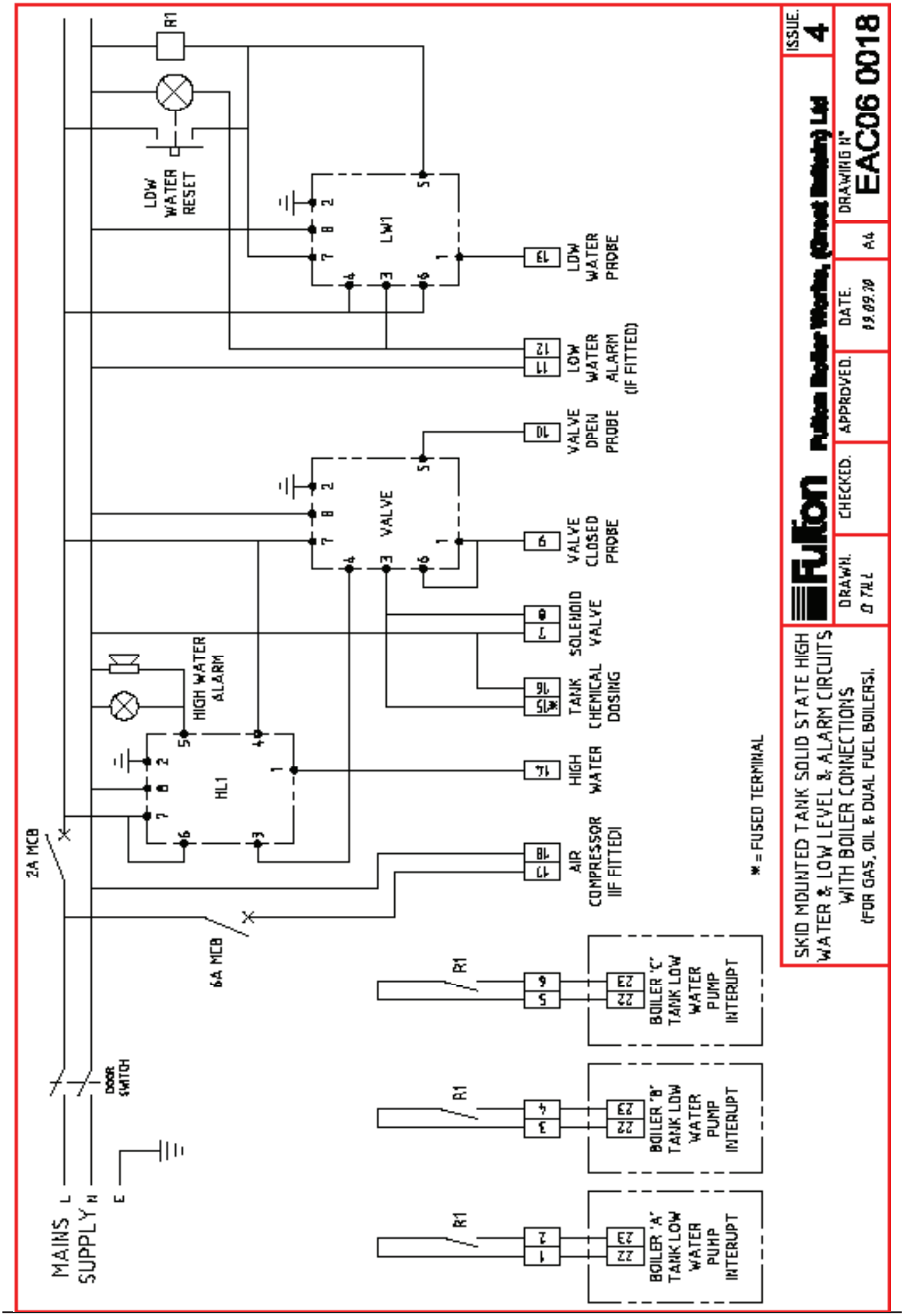
5.4 WIRING DIAGRAMS, continued.



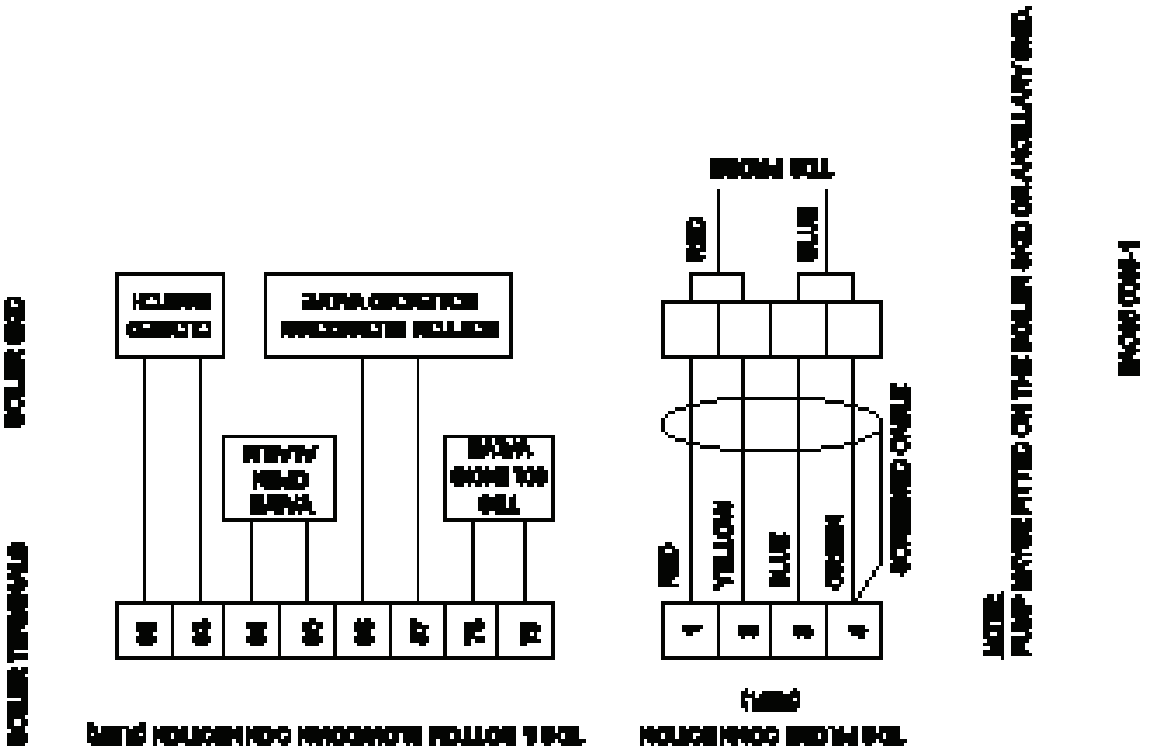
5.4 WIRING DIAGRAMS, continued.

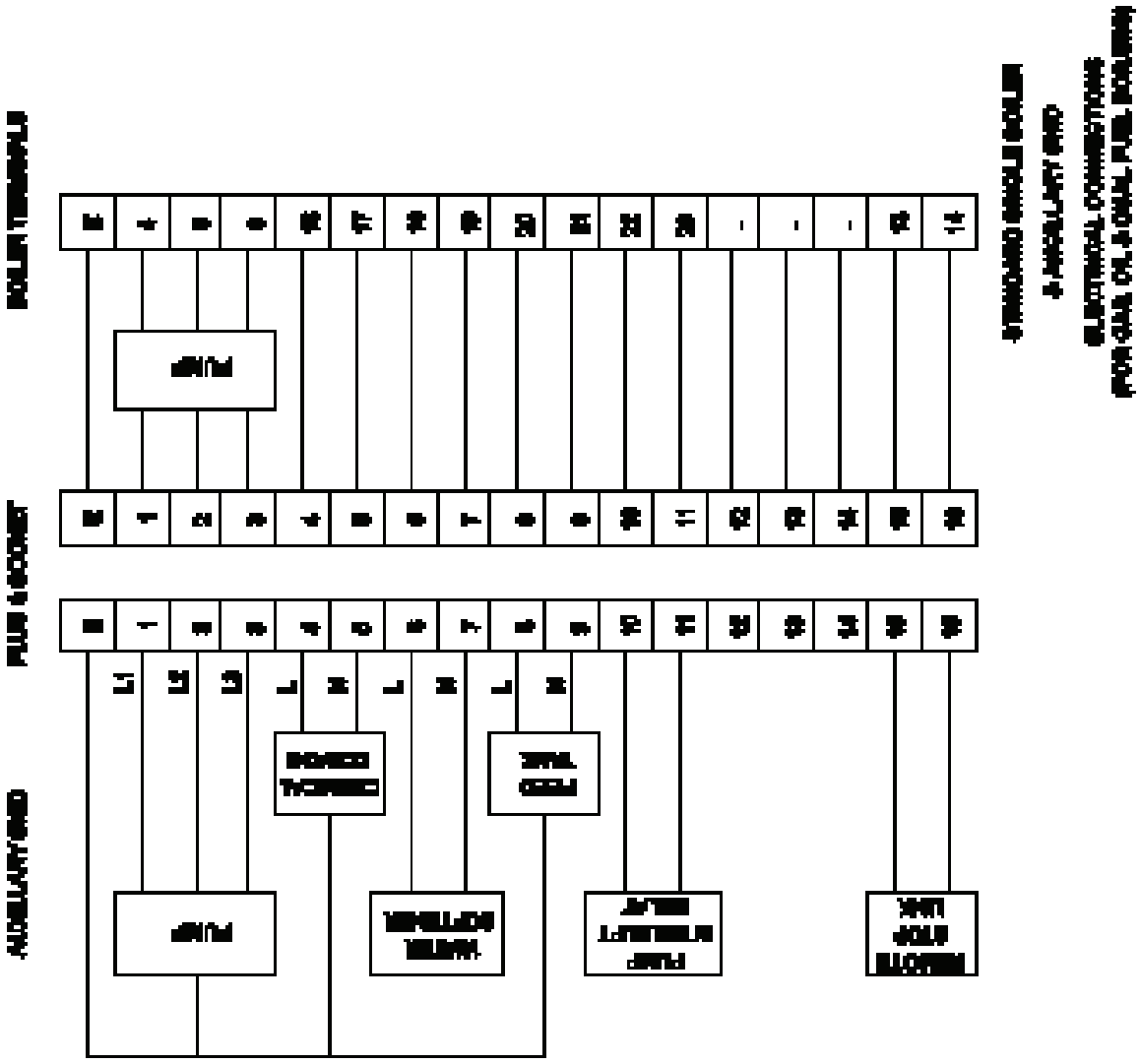


5.4 WIRING DIAGRAMS, continued.

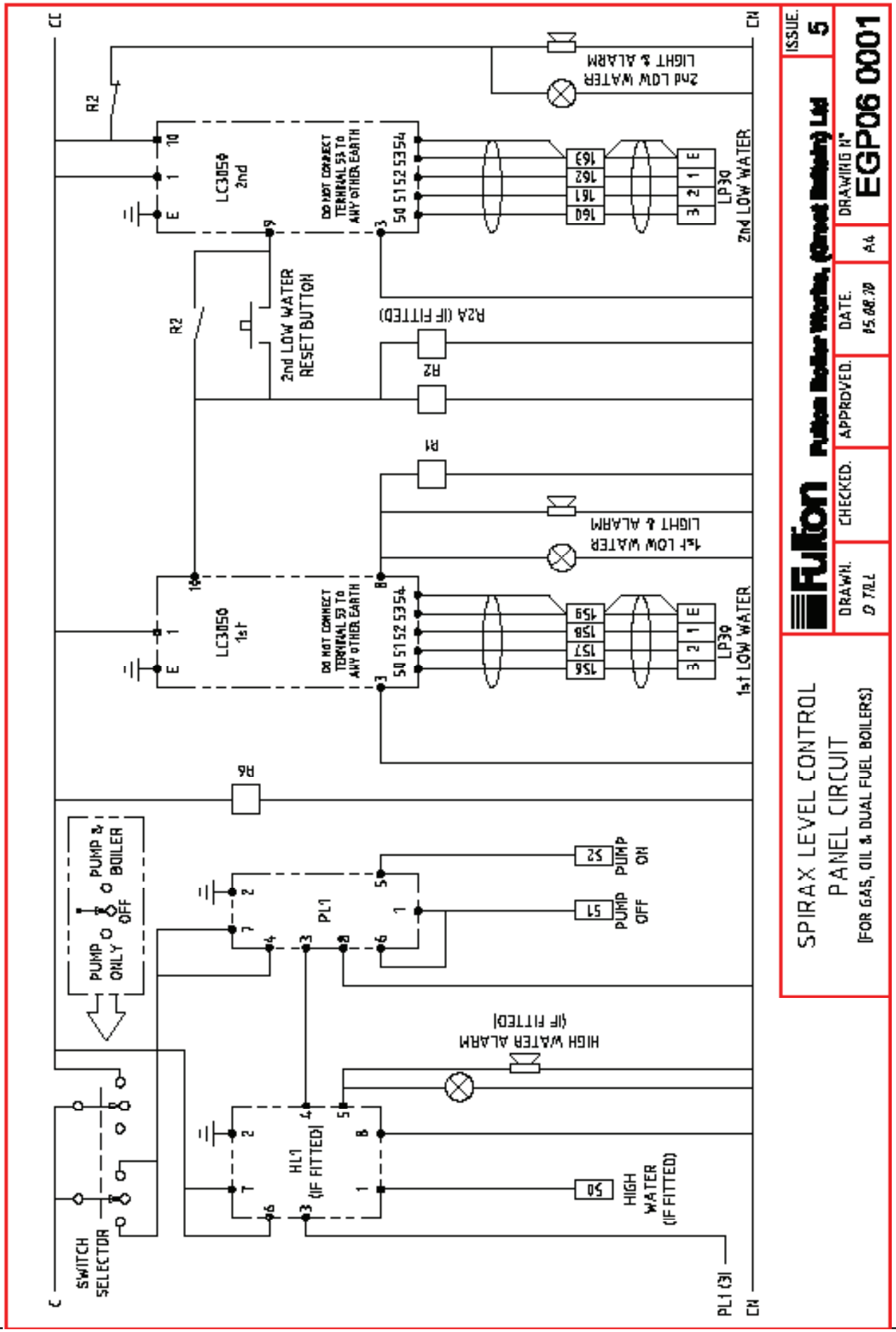


5.4 WIRING DIAGRAMS, continued.

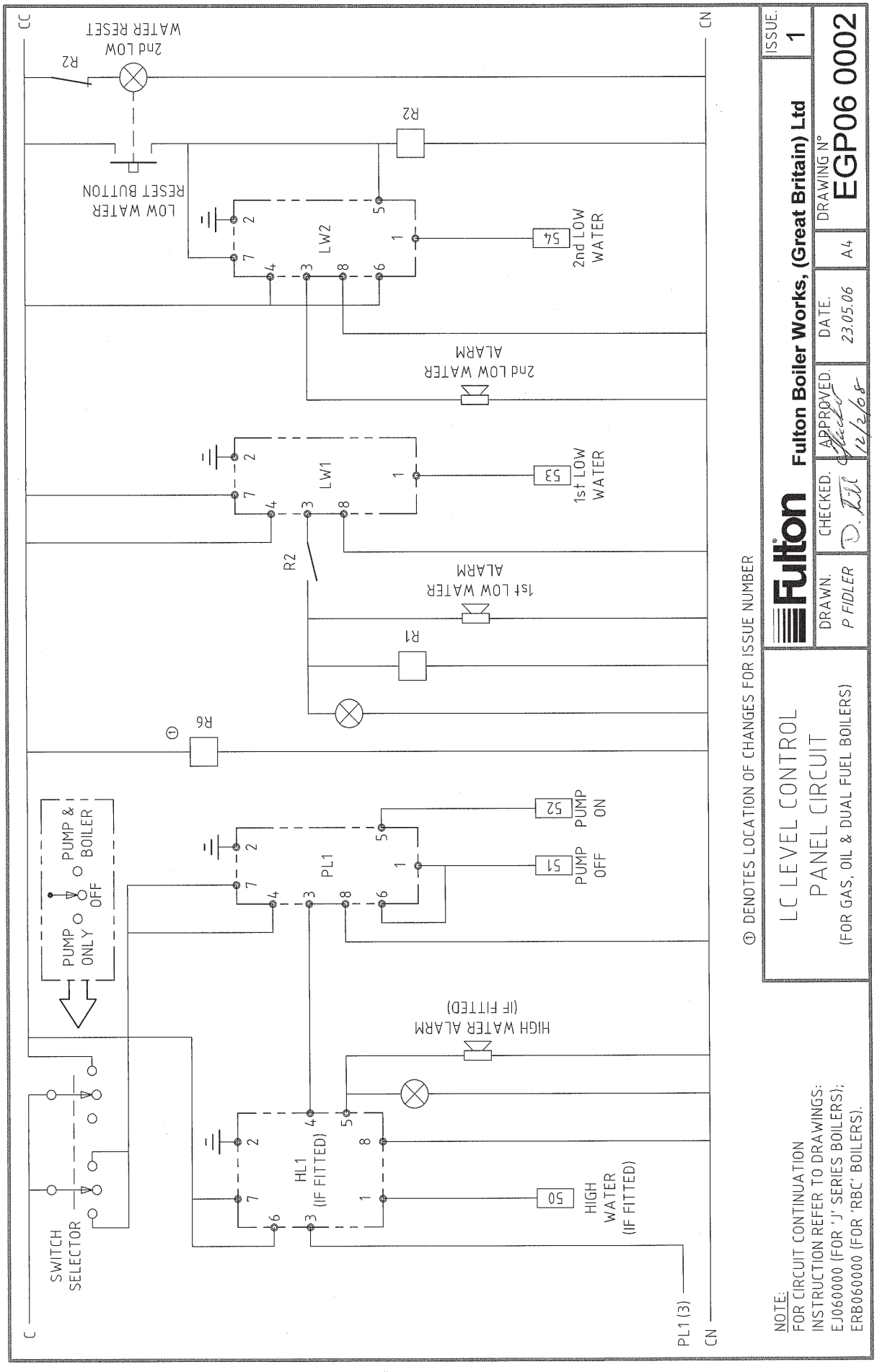




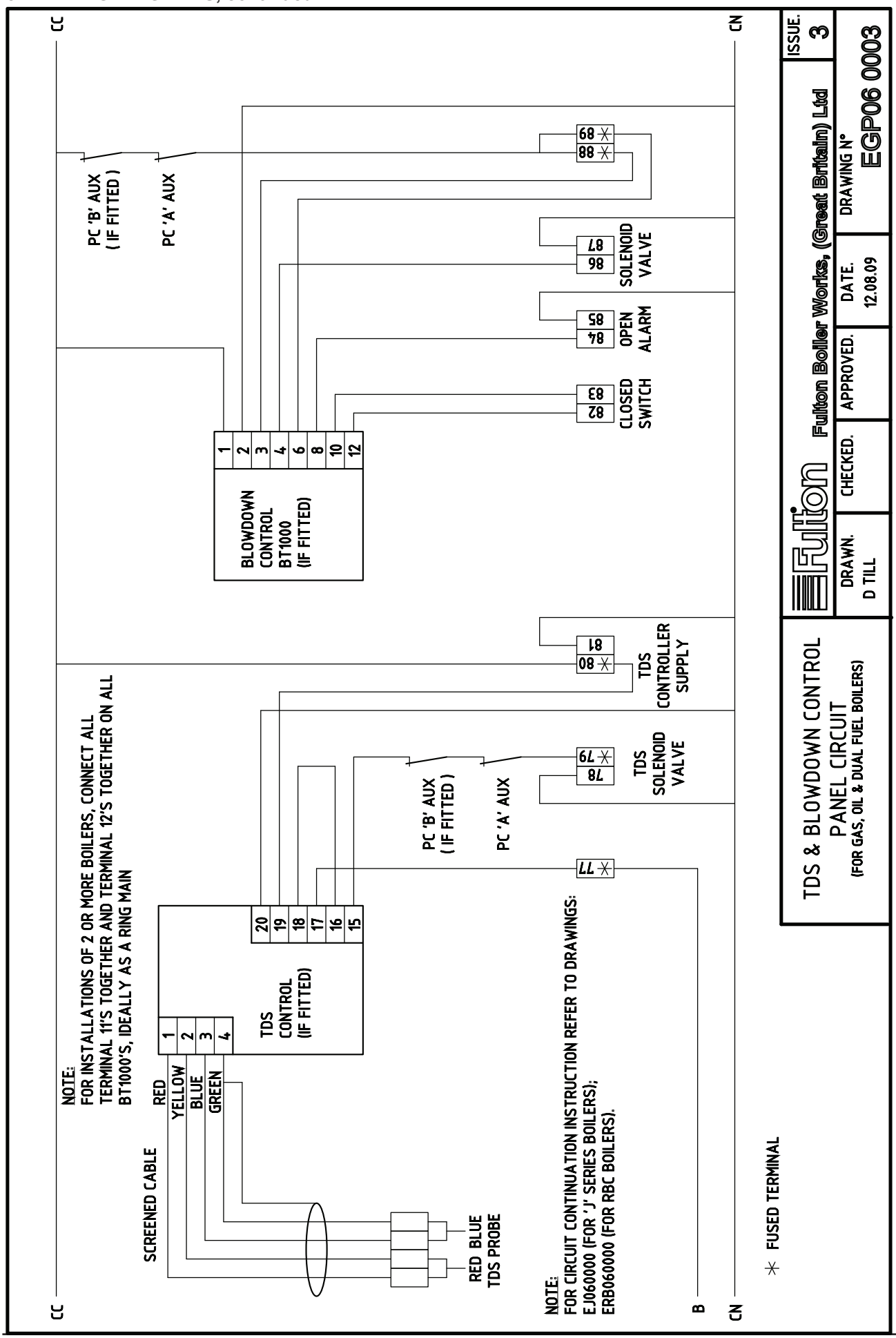
5.4 WIRING DIAGRAMS, continued.

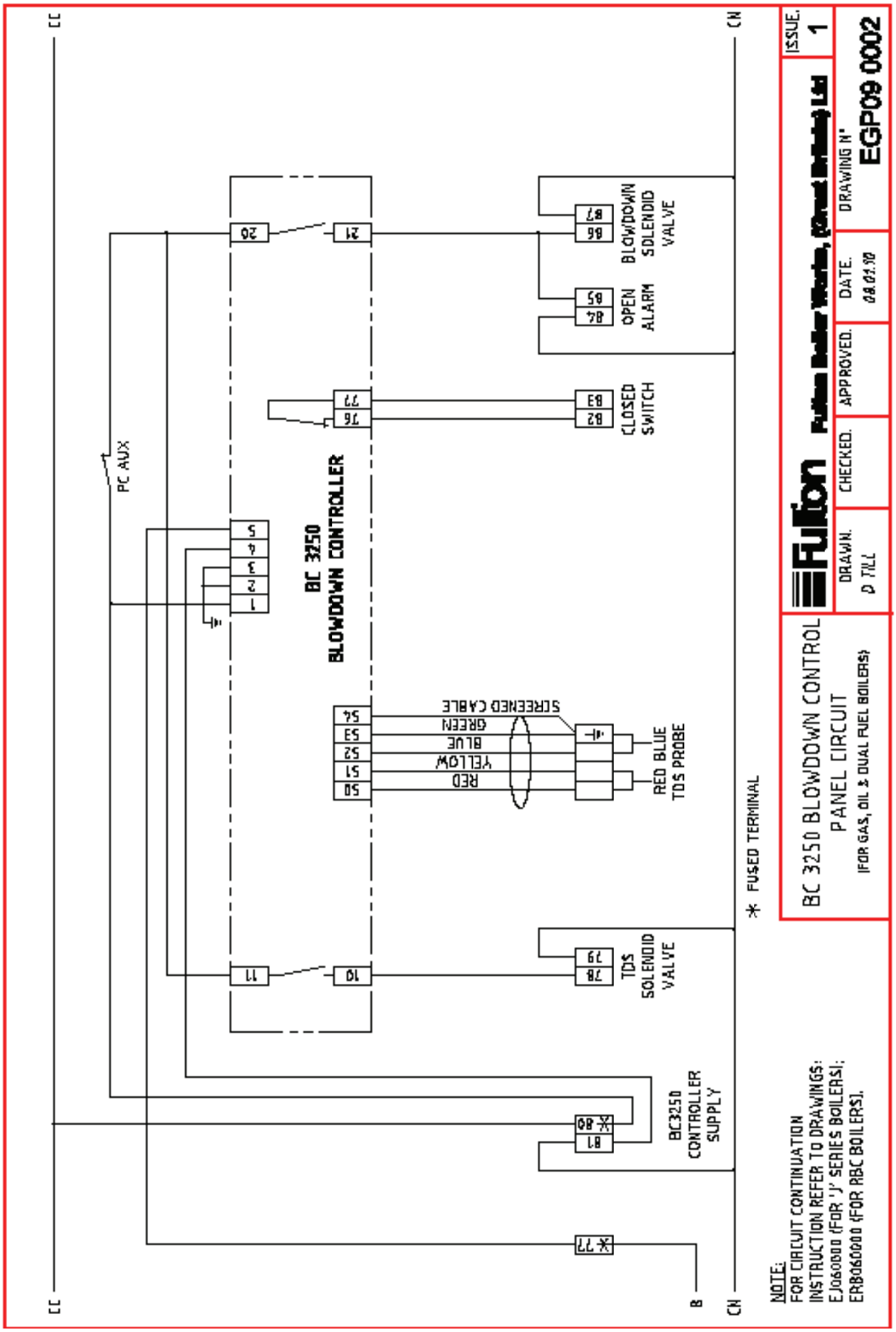


5.4 WIRING DIAGRAMS, continued.



5.4 WIRING DIAGRAMS, continued.




BC 3250 BLOWDOWN CONTROL
PANEL CIRCUIT
(FOR GAS, OIL & DUAL FUEL BOILERS)
DRAWN. D TILL
CHECKED.
APPROVED.
DATE. 08.01.10
DRAWING N° EGP09 0002
ISSUE. 1
BC 3250
BLOWDOWN CONTROLLER
PC AUX
BLOWDOWN SOLENOID VALVE
OPEN ALARM
CLOSED SWITCH
TDS SOLENOID VALVE
RED BLUE TDS PROBE
SCREENED CABLE
RED
YELLOW
BLUE
GREEN
BC3250 CONTROLLER SUPPLY
* FUSED TERMINAL
NOTE:
FOR CIRCUIT CONTINUATION INSTRUCTION REFER TO DRAWINGS:
EJ060000 (FOR 'J' SERIES BOILERS);
ERB060000 (FOR RBC BOILERS).

SPARE PARTS

SECTION 6

WARNING

The use of incorrect parts could be a risk to safety
and seriously damage your boiler. Replacement Safety Valves

To comply fully with safety regulations it is essential that the correct safety valves are used.
If in any doubt contact Fulton Boiler Works (Great Britain) Ltd. Sales and Service Department for assistance.
When ordering replacement or spare parts ensure you provide all the details given in the parts lists together with the following:

Boiler number : _____

Boiler type : _____

Wiring Diagram No and Boiler Voltage _____

Commissioning Date and Engineer : _____

To locate the correct spare part:
Always check your boiler model against the models named in the parts lists.

WARNING

The type, size and lift pressure safety valve fitted to a boiler is specific to that boiler.
When ordering spare safety valves it is important that, as well as the information requested above, the following additional information is given:
Boiler design pressure (given on the boiler data plate)
Make and type (e.g. fig. no.) of safety valve fitted

Assy No.	Description	Part No.	Description	Quantity
060RD140SX	**RBC600 DUAL FUEL**	13295	RB BRUSH HANDLE 2300mm	1
		13037	GASKET 100mm PN16	2
		11824	GASKET 15mm PN16 IBC	3
		11825	FLANGE 1/2" PN16/4	3
		12456	GAUGE PRESSURE 6"200PSI	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13276	VALVE STOP FLANGED DN25	1
		060RD324SX	PANEL D/F 75-180 AOTC	1
		12449	SWITCH DOOR LIMIT DB4	1
		11608	VALVE CHECK 1" RK41/E/S	1
		11786	GASKET 25mm PN16 IBC	11
		14670	BURNER D/F MDFL760 T3D	1
		10423	PROBE BRASS 36" LONG	2
		14465	VALVE GLOBE BRONZE 1/2"	2
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13123	GASKET 65mm PN16 IBC	2
		14819	VALVE SAFETY DN25 11.2	1
		12597	PROBE BODY LP30 HIGH	2
		SA3010	RB PRESSURE GAUGE ASSY	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13033	PROBE TIP 1000mm LP30	2
		14288	PUMP WATER CR1-23	1

Assy No.	Description	Part No.	Description	Quantity
060RD140UK	**RBC600 DUAL FUEL**	13276	VALVE STOP FLANGED DN25	1
		12456	GAUGE PRESSURE 6"200PSI	1
		13123	GASKET 65mm PN16 IBC	2
		15001	VALVE SAFETY DN25/40 ARI	1
		11824	GASKET 15mm PN16 IBC	3
		13291	RB BRUSH TUBE 32mmSINGLE	1
		13295	RB BRUSH HANDLE 2300mm	1
		060RD324UK	PANEL D/F 60-180HP AOTC	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		11786	GASKET 25mm PN16 IBC	11
		10423	PROBE BRASS 36" LONG	4
		12449	SWITCH DOOR LIMIT DB4	1
		13037	GASKET 100mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		13075	VALVE DN65 ANGLE PATTERN	1
		11608	VALVE CHECK 1" RK41/E/S	1
		SA3010	RB PRESSURE GAUGE ASSY	1
		14465	VALVE GLOBE BRONZE 1/2"	2
		SA2000	CLIFTON SAMPLE COOLER	1
		14288	PUMP WATER CR1-23	1
		14670	BURNER D/F MDFL760 T3D	1

Assy No.	Description	Part No.	Description	Quantity
060RD324SX	PANEL D/F	14808	LABEL 'RECOMMENDED WATER	1
		15087	MCB 2P 4A TYPE D 6KA	1
		11596	RELAY MINIATURE 240V	6
		11597	RELAY BASE MINIATURE 4P	8
		11737	CONTACT AUX CBA-10 FRONT	1
		10496	CONTACTOR CI 9 220-240V	1
		11869	RELAY LC3 LED 240V	2
		11935	SWITCH ROCKER GREEN	1
		14806	MCB 1P 2A TYPE D 6KA	1
		13380	ALARM AUDIBLE CONTINUOUS	1
		14332	LAMP IND RED 140-006	2
		11904	BASE LC RELAY 11-PIN DIN	2
		14381	TRANSFORMER 500VA SIEMEN	1
		14345	PUSH BUTTON BLACK	3
		14215	PRESSURETROL 4-12BAR	3
		14333	LAMP IND AMBER 140-007	1
		14334	LAMP IND GREEN 140-009	1
		14335	TOP COVER DANFOSS KPI36	3
		14460	SWITCH SELECTOR BODY	3
		10448	SWITCH ISOLATOR 25AMP	1
		11526	SWITCH ROCKER AMBER	1
		11587	SWITCH ROCKER BLACK	1
		13356	RELAY MINIATURE 24V	2
		14712	SHAFT EXT 330mm OT HAND	1
		13562	FUSEHOLDER 3 POLE 10x38	2
		12468	FACIA PANEL FR SERIES	1
		13381	ALARM AUDIBLE PULSATING	2
		11962	CIRCUIT BREAKER 6.3-10A	1
		15111	CONTROLLER SPIRAX LEVEL	2
		12254	SWITCH ON/OFF BLACK/	1
		12016	SWITCH HANDLE IP65 RED/	1

Assy No.	Description	Part No.	Description	Quantity
060RD324UK	PANEL D/F	14335	TOP COVER DANFOSS KPI36	3
		14334	LAMP IND GREEN 140-009	1
		11526	SWITCH ROCKER AMBER	1
		11904	BASE LC RELAY 11-PIN DIN	4
		14333	LAMP IND AMBER 140-007	1
		11737	CONTACT AUX CBA-10 FRONT	1
		14332	LAMP IND RED 140-006	2
		14806	MCB 1P 2A TYPE D 6KA	1
		14381	TRANSFORMER 500VA SIEMEN	1
		12468	FACIA PANEL FR SERIES	1
		14808	LABEL 'RECOMMENDED WATER	1
		14460	SWITCH SELECTOR BODY	1
		10496	CONTACTOR CI 9 220-240V	1
		11869	RELAY LC3 LED 240V	4
		14345	PUSH BUTTON BLACK	1
		15087	MCB 2P 4A TYPE D 6KA	1
		10448	SWITCH ISOLATOR 25AMP	1
		11587	SWITCH ROCKER BLACK	1
		11596	RELAY MINIATURE 240V	6
		13356	RELAY MINIATURE 24V	2
		14712	SHAFT EXT 330mm OT HAND	1
		14215	PRESSURETROL 4-12BAR	3
		12854	FUSE 2A KLIPPON 20x5mm	3
		12855	FUSE CARRIER ASK1/35	4
		11597	RELAY BASE MINIATURE 4P	8
		13381	ALARM AUDIBLE PULSATING	2
		13380	ALARM AUDIBLE CONTINUOUS	1
		10525	TERMINAL FUSE 5 AMP	1
		12016	SWITCH HANDLE IP65 RED/	1
		11962	CIRCUIT BREAKER 6.3-10A	1
		11935	SWITCH ROCKER GREEN	1
		10507	CONTACTOR BLOCK N/OPEN	1

6 RBC600 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
060RG140SX	**RBC600 GAS BOILER**	11608	VALVE CHECK 1” RK41/E/S	1
		060RX324SX	PANEL GAS	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14288	PUMP WATER CR1-23	1
		11824	GASKET 15mm PN16 IBC	3
		SA3010	RB PRESSURE GAUGE ASSY	1
		13033	PROBE TIP 1000mm LP30	2
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12597	PROBE BODY LP30 HIGH	2
		12671	BURNER GAS MGN 860LN T3D	1
		11786	GASKET 25mm PN16 IBC	11
		13276	VALVE STOP FLANGED DN25	1
		13291	RB BRUSH TUBE 32mmSINGLE	1
		13295	RB BRUSH HANDLE 2300mm	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13123	GASKET 65mm PN16 IBC	2
		13037	GASKET 100mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		10423	PROBE BRASS 36” LONG	2
		15001	VALVE SAFETY DN25/40 ARI	1
		13141	VALVE BLOWDOWN 25mmKBV20	1

Assy No.	Description	Part No.	Description	Quantity
060RG140UK	**RBC600 GAS BOILER**	SA3010	PRESSURE GAUGE ASSY	1
		14288	PUMP WATER CR1-23	1
		11786	GASKET 25mm PN16 IBC	11
		SA2000	CLIFTON SAMPLE COOLER	1
		060RX324UK	PANEL GAS 60-180HP	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13291	BRUSH TUBE 32mm SINGLE	1
		13295	BRUSH HANDLE 2300mm	1
		12456	GAUGE PRESSURE 6” 200PSI	1
		11608	VALVE CHECK 1” RK41/E/S	1
		13276	VALVE STOP FLANGED DN25	1
		12449	SWITCH DOOR LIMIT DB4	1
		13037	GASKET 100mm PN16 IBC	2
		13141	VALVE BLOWDOWN 25mmKBV20	1
		11824	GASKET 15mm PN16 IBC	3
		13123	GASKET 65mm PN16 IBC	2
		12671	BURNER GAS MGN 860LN T3D	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		15001	VALVE SAFETY DN25/40 ARI	1
		10423	PROBE BRASS 36” LONG	4

Assy No.	Description	Part No.	Description	Quantity
060RH400UK	**RB0600/750 DOOR ASSEMBLY**	SA3000	SPY GLASS ASSEMBLY	1

RBC600 GAS BOILER ANCILLARY SKID (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
060RGA40UK	**RB 600 GAS BOILER**	13080	GASKET MAN/H 305x400x25	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13123	GASKET 65mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		SA3010	PRESSURE GAUGE ASSY	1
		14819	VALVE SAFETY DN25 11.2	1
		SA2000	CLIFTON SAMPLE COOLER	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		13037	GASKET 100mm PN16 IBC	2
		13217	GASKET H/H 7”x 5”x 3/4”	2
		11161	WATER SOFTNER EL15D	1
		13424	LABEL RB REGISTRATION	1
		12456	GAUGE PRESSURE 6”200PSI	1
		14288	PUMP WATER CR1-23	1
		13276	VALVE STOP FLANGED DN25	1
		13291	RB BRUSH TUBE 32mmSINGLE	1
		13295	RB BRUSH HANDLE 2300mm	1
		11608	VALVE CHECK 1” RK41/E/S	1
		11824	GASKET 15mm PN16 IBC	3
		12449	SWITCH DOOR LIMIT DB4	1
		12671	BURNER GAS MGN 860LN T3D	1
		12444	GAUGE REFLEX CLIFTON 350	2
		11786	GASKET 25mm PN16 IBC	11
		10483	DOSAGE CHEM SET SINGLE	1
		10423	PROBE BRASS 36” LONG	4
		14465	VALVE GLOBE BRONZE 1/2”	2

RBC600 MODULATING GAS CONTROL PANEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
060RM324SX	**PANEL D/F-GAS MODULATING**	11962	CIRCUIT BREAKER 6.3-10A	1
		15111	CONTROLLER SPIRAX LEVEL	2
		13380	ALARM AUDIBLE CONTINUOUS	1
		14345	PUSH BUTTON BLACK	1
		13381	ALARM AUDIBLE PULSATING	2
		14712	SHAFT EXT 330mm OT HAND	1
		13562	FUSEHOLDER 3 POLE 10x38	2
		14460	SWITCH SELECTOR BODY	1
		14660	CONTROLLER LC2250 SPIRAX	1
		14332	LAMP IND RED 140-006	2
		11587	SWITCH ROCKER BLACK	1
		14334	LAMP IND GREEN 140-009	1
		14335	TOP COVER DANFOSS KPI36	2
		10448	SWITCH ISOLATOR 25AMP	1
		12016	SWITCH HANDLE IP65 RED/	1
		14333	LAMP IND AMBER 140-007	1
		14381	TRANSFORMER 500VA SIEMEN	1
		12350	DEKAFIX NUMBER 18	1
		11904	BASE LC RELAY 11-PIN DIN	1
		15087	MCB 2P 4A TYPE D 6KA	1
		11526	SWITCH ROCKER AMBER	1
		12468	FACIA PANEL FR SERIES	1
		11596	RELAY MINIATURE 240V	6
		11737	CONTACT AUX CBA-10 FRONT	1
		14215	PRESSURETROL 4-12BAR	2
		11597	RELAY BASE MINIATURE 4P	8
		14806	MCB 1P 2A TYPE D 6KA	1
		11850	CONTACTOR LC1-D09U7 240V	1
		13356	RELAY MINIATURE 24V	2

Assy No.	Description	Part No.	Description	Quantity
060RM324UK	**PANEL GAS MOD**	13380	ALARM AUDIBLE CONTINUOUS	1
		11526	SWITCH ROCKER AMBER	1
		13560	SHAFT EXT 180mm OT HAND	1
		13381	ALARM AUDIBLE PULSATING	1
		13562	FUSEHOLDER 3 POLE 10x38	1
		14215	PRESSURETROL 4-12BAR	3
		11596	RELAY MINIATURE 240V	6
		14806	MCB 1P 2A TYPE D 6KA	1
		11904	BASE LC RELAY 11-PIN DIN	1
		11869	RELAY LC3 LED 240V	1
		11587	SWITCH ROCKER BLACK	1
		14324	SWITCH ISOLATOR 80AMP	1
		12016	SWITCH HANDLE IP65 RED/	1
		12142	FUSE 16AMP CARTRIDGE	3
		11850	CONTACTOR LC1-D09U7 240V	1
		12468	FACIA PANEL FR SERIES	1
		13356	RELAY MINIATURE 24V	1
		11597	RELAY BASE MINIATURE 4P	7
		14335	TOP COVER DANFOSS KPI36	3
		14381	TRANSFORMER 500VA SIEMEN	1
		11962	CIRCUIT BREAKER 6.3-10A	1
		14438	FUSE 2 AMP CARTRIDGE	3
		15087	MCB 2P 4A TYPE D 6KA	1
		14334	LAMP IND GREEN 140-009	1
		14333	LAMP IND AMBER 140-007	1
		14782	LABEL SELF MONITORING	1
		14660	CONTROLLER LC2250 SPIRAX	1
		14332	LAMP IND RED 140-006	2
		14638	FUSE HOLDER 3P 14x51	1
		14345	PUSH BUTTON BLACK	3
		14637	FUSE 40AMP CARTRIDGE HBC	-
		14460	SWITCH SELECTOR BODY	3

RBC600 OIL CONTROL PANEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
060RO324SX	**PANEL OIL**	11597	RELAY BASE MINIATURE 4P	7
		12254	SWITCH ON/OFF BLACK	1
		11935	SWITCH ROCKER GREEN	1
		12016	SWITCH HANDLE IP65 RED	1
		11526	SWITCH ROCKER AMBER	1
		11587	SWITCH ROCKER BLACK	1
		11596	RELAY MINIATURE 240V	6
		13381	ALARM AUDIBLE PULSATING	2
		11962	CIRCUIT BREAKER 6.3-10A	1
		10448	SWITCH ISOLATOR 25AMP	1
		15087	MCB 2P 4A TYPE D 6KA	1
		11737	CONTACT AUX CBA-10 FRONT	1
		13380	ALARM AUDIBLE CONTINUOUS	1
		15111	CONTROLLER SPIRAX LEVEL	2
		14808	LABEL ‘RECOMMENDED WATER	1
		14638	FUSE HOLDER 3P 14x51	1
		14806	MCB 1P 2A TYPE D 6KA	1
		12468	FACIA PANEL FR SERIES	1
		10496	CONTACTOR CI 9 220-240V	1
		11869	RELAY LC3 LED 240V	2
		14381	TRANSFORMER 500VA SIEMEN	1
		14712	SHAFT EXT 330mm OT HAND	1
		14333	LAMP IND AMBER 140-007	1
		14345	PUSH BUTTON BLACK	3
		14460	SWITCH SELECTOR BODY	3
		14215	PRESSURETROL 4-12BAR	4
		14334	LAMP IND GREEN 140-009	1
		11904	BASE LC RELAY 11-PIN DIN	2
		14335	TOP COVER DANFOSS KPI36	4
		14332	LAMP IND RED 140-006	2

Assy No.	Description	Part No.	Description	Quantity
060RO324UK	**PANEL OIL**	12854	FUSE 2A KLIPPON 20x5mm	3
		12016	SWITCH HANDLE IP65 RED	1
		14808	LABEL ‘RECOMMENDED WATER	1
		11935	SWITCH ROCKER GREEN	1
		12468	FACIA PANEL FR SERIES	1
		13380	ALARM AUDIBLE CONTINUOUS	1
		13381	ALARM AUDIBLE PULSATING	2
		10496	CONTACTOR CI 9 220-240V	1
		10507	CONTACTOR BLOCK N/OPEN	1
		14460	SWITCH SELECTOR BODY	2
		11526	SWITCH ROCKER AMBER	1
		11962	CIRCUIT BREAKER 6.3-10A	1
		11596	RELAY MINIATURE 240V	6
		10448	SWITCH ISOLATOR 25AMP	1
		13562	FUSEHOLDER 3 POLE 10x38	1
		14712	SHAFT EXT 330mm OT HAND	1
		11587	SWITCH ROCKER BLACK	1
		11597	RELAY BASE MINIATURE 4P	8
		14345	PUSH BUTTON BLACK	2
		14335	TOP COVER DANFOSS KPI36	3
		14332	LAMP IND RED 140-006	2
		14333	LAMP IND AMBER 140-007	1
		14381	TRANSFORMER 500VA SIEMEN	1
		14215	PRESSURETROL 4-12BAR	3
		14334	LAMP IND GREEN 140-009	1
		15087	MCB 2P 4A TYPE D 6KA	1
		11869	RELAY LC3 LED 240V	4
		11737	CONTACT AUX CBA-10 FRONT	1
		14806	MCB 1P 2A TYPE D 6KA	1

RBC600 GAS CONTROL PANEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
060RX324SX	**PANEL GAS**	13380	ALARM AUDIBLE CONTINUOUS	1
		15111	CONTROLLER SPIRAX LEVEL	2
		13356	RELAY MINIATURE 24V	2
		14215	PRESSURETROL 4-12BAR	3
		11962	CIRCUIT BREAKER 6.3-10A	1
		13381	ALARM AUDIBLE PULSATING	2
		13562	FUSE HOLDER 3 POLE 10x38	1
		14712	SHAFT EXT 330mm OT HAND	1
		12254	SWITCH ON/OFF BLACK	1
		11737	CONTACT AUX CBA-10 FRONT	1
		14808	LABEL 'RECOMMENDED WATER	1
		11526	SWITCH ROCKER AMBER	1
		12016	SWITCH HANDLE IP65 RED	1
		12468	FACIA PANEL FR SERIES	1
		11935	SWITCH ROCKER GREEN	1
		11597	RELAY BASE MINIATURE 4P	8
		14460	SWITCH SELECTOR BODY	3
		14367	TRANSFORMER 250VA SIEMEN	1
		14345	PUSH BUTTON BLACK	3
		10448	SWITCH ISOLATOR 25AMP	1
		14332	LAMP IND RED 140-006	2
		11587	SWITCH ROCKER BLACK	1
		11596	RELAY MINIATURE 240V	6
		11904	BASE LC RELAY 11-PIN DIN	2
		14806	MCB 1P 2A TYPE D 6KA	1
		15087	MCB 2P 4A TYPE D 6KA	1
		14333	LAMP IND AMBER 140-007	1
		10496	CONTACTOR CI 9 220-240V	1
		14638	FUSE HOLDER 3P 14x51	1
		14335	TOP COVER DANFOSS KPI36	3
		14334	LAMP IND GREEN 140-009	1
		11869	RELAY LC3 LED 240V	2

Assy No.	Description	Part No.	Description	Quantity
060RX324UK	**PANEL GAS**	14712	SHAFT EXT 330mm OT HAND	1
		13381	ALARM AUDIBLE PULSATING	2
		13380	ALARM AUDIBLE CONTINUOUS	1
		12854	FUSE 2A KLIPPON 20x5mm	3
		14334	LAMP IND GREEN 140-009	1
		11526	SWITCH ROCKER AMBER	1
		14215	PRESSURETROL 4-12BAR	3
		14333	LAMP IND AMBER 140-007	1
		15087	MCB 2P 4A TYPE D 6KA	1
		14806	MCB 1P 2A TYPE D 6KA	1
		14332	LAMP IND RED 140-006	2
		14345	PUSH BUTTON BLACK	1
		11962	CIRCUIT BREAKER 6.3-10A	1
		1935	SWITCH ROCKER GREEN	1
		10507	CONTACTOR BLOCK N/OPEN	1
		11587	SWITCH ROCKER BLACK	1
		14460	SWITCH SELECTOR BODY	1
		10496	CONTACTOR CI 9 220-240V	1
		11597	RELAY BASE MINIATURE 4P	8
		13562	FUSE HOLDER 3 POLE 10x38	1
		10448	SWITCH ISOLATOR 25AMP	1
		12016	SWITCH HANDLE IP65 RED/	1
		11904	BASE LC RELAY 11-PIN DIN	4
		14808	LABEL 'RECOMMENDED WATER	1
		12468	FACIA PANEL FR SERIES	1
		11596	RELAY MINIATURE 240V	6
		13356	RELAY MINIATURE 24V	2
		14335	TOP COVER DANFOSS KPI36	3
		14367	TRANSFORMER 250VA SIEMEN	1
		11869	RELAY LC3 LED 240V	4
		11737	CONTACT AUX CBA-10 FRONT	1

RBC 600 / 750 SERVICE KIT

Assy No.	Description	Part No.	Description	Quantity
060SR100UK	**SERVICE KIT**	13037	GASKET 100mm PN16 IBC	2
		13217	GASKET H/H 7”x 5”x 3/4”	2
		12199	VALVE BALL 1/2” SPECIAL	2
		13314	RB EYE GLASS 53mmx 3mm	1
		11895	GLASS REFLEX B7 CLIFTON	2
		11824	GASKET 15mm PN16 IBC	4
		11786	GASKET 25mm PN16 IBC	11
		11893	GASKET REFLEX B7	4
		13291	RB BRUSH TUBE 32mmSINGLE	1
		13080	GASKET MAN/H 305x400x25	1
		13123	GASKET 65mm PN16 IBC	2
		12210	VALVE BALL 1/4” SPECIAL	2
		14363	BELT G28017X FOR NUWAY	1

RBC750 DUAL FUEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
075RD140SX	**RBC750 DUAL FUEL**	SA2000	CLIFTON SAMPLE COOLER	1
		14290	PUMP WATER CR3-21	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		060RD324SX	PANEL D/F 75-180 AOTC	1
		11786	GASKET 25mm PN16 IBC	11
		14848	BURNER D/F MDFL 1070 T3D	1
		12597	PROBE BODY LP30 HIGH	2
		SA3010	PRESSURE GAUGE ASSY	1
		11824	GASKET 15mm PN16 IBC	3
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13037	GASKET 100mm PN16 IBC	2
		13033	PROBE TIP 1000mm LP30	2
		11608	VALVE CHECK 1” RK41/E/S	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13295	BRUSH HANDLE 2300mm	1
		10423	PROBE BRASS 36” LONG	2
		10549	VALVE BALL 1/4” ART 45T	1
		13291	BRUSH TUBE 32mmSINGLE	1
		15001	VALVE SAFETY DN25/40 ARI	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13276	VALVE STOP FLANGED DN25	1
		13123	GASKET 65mm PN16 IBC	2

Assy No.	Description	Part No.	Description	Quantity
075RD140UK	**RBC750 DUAL FUEL**	060RD324UK	PANEL D/F 60-180HP AOTC	1
		14290	PUMP WATER CR3-21	1
		13276	VALVE STOP FLANGED DN25	1
		10549	VALVE BALL 1/4” ART 45T	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		11824	GASKET 15mm PN16 IBC	3
		14848	BURNER D/F MDFL 1070 T3D	1
		SA3010	PRESSURE GAUGE ASSY	1
		11608	VALVE CHECK 1” RK41/E/S	1
		11786	GASKET 25mm PN16 IBC	11
		10423	PROBE BRASS 36” LONG	4
		15001	VALVE SAFETY DN25/40 ARI	1
		13291	BRUSH TUBE 32mmSINGLE	1
		13295	BRUSH HANDLE 2300mm	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13037	GASKET 100mm PN16 IBC	2
		12405	ELBOW WI 1/2”	1
		13123	GASKET 65mm PN16 IBC	2
		12449	SWITCH DOOR LIMIT DB4	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13075	VALVE DN65 ANGLE PATTERN	1

Assy No.	Description	Part No.	Description	Quantity
075RG140CH	**RBC750 GAS BOILER**	14819	VALVE SAFETY DN25 11.2	1
		10549	VALVE BALL 1/4" ART 45T	1
		14423	PIPELINE SET BCS1 1/2"	1
		10322	TUBE 1/4"OD COPPER SOFT	30
		11608	VALVE CHECK 1" RK41/E/S	1
		12456	GAUGE PRESSURE 6"200PSI	1
075RG140CX	**RBC750 GAS BOILER**	12456	GAUGE PRESSURE 6"200PSI	1
		14215	PRESSURETROL 4-12BAR	4
		10717	ELBOW 1/4BSP MALEx1/4"	4
		11608	VALVE CHECK 1" RK41/E/S	1
		14432	MV11 SOLENOID VALVE 240V	1
		14335	TOP COVER DANFOSS KPI36	4
		14819	VALVE SAFETY DN25 11.2	1
		14431	AIR SET 1/4" MPC2 0 BAR	1
		13033	PROBE TIP 1000mm LP30	2
		12597	PROBE BODY LP30 HIGH	2
		14429	VALVE BLOWDOWN DN25 PN40	1
		10549	VALVE BALL 1/4" ART 45T	3
		14423	PIPELINE SET BCS1 1/2"	1

Assy No.	Description	Part No.	Description	Quantity
075RG140SX	**RBC750 GAS BOILER**	060RX324SX	PANEL GAS	1
		12449	SWITCH DOOR LIMIT DB4	1
		SA3010	PRESSURE GAUGE ASSY	1
		11824	GASKET 15mm PN16 IBC	3
		SA2000	CLIFTON SAMPLE COOLER	1
		11786	GASKET 25mm PN16 IBC	11
		13080	GASKET MAN/H 305x400x25	1
		14290	PUMP WATER CR3-21	1
		13075	VALVE DN65 ANGLE PATTERN	1
		14465	VALVE GLOBE BRONZE 1/2"	2
		15001	VALVE SAFETY DN25/40 ARI	1
		13123	GASKET 65mm PN16 IBC	2
		11608	VALVE CHECK 1" RK41/E/S	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13291	BRUSH TUBE 32mmSINGLE	1
		10423	PROBE BRASS 36" LONG	2
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13037	GASKET 100mm PN16 IBC	2
		13033	PROBE TIP 1000mm LP30	2
		13217	GASKET H/H 7"x 5"x 3/4"	2
		13276	VALVE STOP FLANGED DN25	1
		13295	BRUSH HANDLE 2300mm	1
		12597	PROBE BODY LP30 HIGH	2
		13424	LABEL RB REGISTRATION	1
		12456	GAUGE PRESSURE 6"200PSI	1
		12671	BURNER GAS MGN 860LN T3D	1

RBC750 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
075RG140UK	**RBC750 GAS BOILER**	13037	GASKET 100mm PN16 IBC	2
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13295	BRUSH HANDLE 2300mm	1
		13276	VALVE STOP FLANGED DN25	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13424	LABEL RB REGISTRATION	1
		12671	BURNER GAS MGN 860LN T3D	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		13291	BRUSH TUBE 32mmSINGLE	1
		11608	VALVE CHECK 1” RK41/E/S	1
		13080	GASKET MAN/H 305x400x25	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	2
		10423	PROBE BRASS 36” LONG	4
		11824	GASKET 15mm PN16 IBC	3
		SA3010	PRESSURE GAUGE ASSY	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		15001	VALVE SAFETY DN25/40 ARI	1
		11786	GASKET 25mm PN16 IBC	11
		14290	PUMP WATER CR3-21	1
		SA2000	CLIFTON SAMPLE COOLER	1
		060RX324UK	PANEL GAS	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1

Assy No.	Description	Part No.	Description	Quantity
075RG321UK	**PANEL GAS 75-180HP AOTC**	11904	BASE LC RELAY 11-PIN DIN	3
		11596	RELAY MINIATURE 240V	5
		12468	FACIA PANEL FR SERIES	1
		11587	SWITCH ROCKER BLACK	1
		11597	RELAY BASE MINIATURE 4P	5
		11526	SWITCH ROCKER AMBER	1
		14345	PUSH BUTTON BLACK	2
		14782	LABEL SELF MONITORING	1
		14460	SWITCH SELECTOR BODY	2
		14333	LAMP IND AMBER 140-007	1
		14334	LAMP IND GREEN 140-009	1
		10491	CONTACTOR CI 9 110/1/50	1
		14332	LAMP IND RED 140-006	2
		15111	CONTROLLER SPIRAX LEVEL	2
		13560	SHAFT EXT 180mm OT HAND	1
		10576	BELL STARKSTROM 4” 110V	2
		13636	MCB 10A 1-POLE	1
		11962	CIRCUIT BREAKER 6.3-10A	1
		10448	SWITCH ISOLATOR 25AMP	1
		12016	SWITCH HANDLE IP65 RED/	1
		11935	SWITCH ROCKER GREEN	1

RBC750 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
075RO140SX	**RBC750 OIL BOILER**	13080	GASKET MAN/H 305x400x25	1
		12449	SWITCH DOOR LIMIT DB4	1
		SA3010	PRESSURE GAUGE ASSY	1
		13033	PROBE TIP 1000mm LP30	2
		13123	GASKET 65mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		13075	VALVE DN65 ANGLE PATTERN	1
		060RO324SX	PANEL OIL 75-180 AOTC	1
		14290	PUMP WATER CR3-21	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13037	GASKET 100mm PN16 IBC	2
		12597	PROBE BODY LP30 HIGH	2
		SA2000	CLIFTON SAMPLE COOLER	1
		11824	GASKET 15mm PN16 IBC	3
		13786	BURNER OIL NOL 35-25 T3L	1
		13175	FLANGE 25mm PN16 SLIP-ON	3
		11786	GASKET 25mm PN16 IBC	11
		11608	VALVE CHECK 1” RK41/E/S	1
		10423	PROBE BRASS 36” LONG	2
		12456	GAUGE PRESSURE 6”200PSI	1
		15001	VALVE SAFETY DN25/40 ARI	1
		13719	PYROLOG BLOCK 300x50x65	16
		13276	VALVE STOP FLANGED DN25	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		13291	BRUSH TUBE 32mmSINGLE	1
		13424	LABEL RB REGISTRATION	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13295	BRUSH HANDLE 2300mm	1

Assy No.	Description	Part No.	Description	Quantity
075RO140UK	**RBC750 OIL BOILER**	12449	SWITCH DOOR LIMIT DB4	1
		11824	GASKET 15mm PN16 IBC	3
		14290	PUMP WATER CR3-21	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		10423	PROBE BRASS 36” LONG	4
		12456	GAUGE PRESSURE 6”200PSI	1
		13123	GASKET 65mm PN16 IBC	2
		13295	BRUSH HANDLE 2300mm	1
		13291	BRUSH TUBE 32mmSINGLE	1
		11608	VALVE CHECK 1” RK41/E/S	1
		11786	GASKET 25mm PN16 IBC	11
		13786	BURNER OIL NOL 35-25 T3L	1
		13069	FACIA FULTON FR-HOR 3mm	1
		060RO324UK	PANEL OIL 60-180HP AOTC	1
		10549	VALVE BALL 1/4” ART 45T	1
		13276	VALVE STOP FLANGED DN25	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		15001	VALVE SAFETY DN25/40 ARI	1
		13037	GASKET 100mm PN16 IBC	2
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	PRESSURE GAUGE ASSY	1

RBC750 OIL / GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
075RO324UK	PANEL OIL	14333	LAMP IND AMBER 140-007	5
		13560	SHAFT EXT 180mm OT HAND	1
		12468	FACIA PANEL FR SERIES	1
		10445	LAMP BULB NEON AC16	2
		13636	MCB 10A 1-POLE	3
		12450	SWITCH CA10A21260E (UK	1
		10444	PUSH BUTTON AC16	2
		12462	SWITCH CG8 A210620E C/W	1
		12016	SWITCH HANDLE IP65 RED/	1
		11869	RELAY LC3 LED 240V	2
		11597	RELAY BASE MINIATURE 4P	5
		12254	SWITCH ON/OFF BLACK/	2
		11596	RELAY MINIATURE 240V	5
		10575	BELL 4” 230vac MOFLASH	3
		11962	CIRCUIT BREAKER 6.3-10A	1
		11904	BASE LC RELAY 11-PIN DIN	2
		11850	CONTACTOR LC1-D09U7 240V	1
		10448	SWITCH ISOLATOR 25AMP	1

Assy No.	Description	Part No.	Description	Quantity
075RX323UK	PANEL GAS	12468	FACIA PANEL FR SERIES	1
		11904	BASE LC RELAY 11-PIN DIN	3
		13560	SHAFT EXT 180mm OT HAND	1
		13636	MCB 10A 1-POLE	1
		12989	CONTACTOR LC1-D09M7 220V	1
		11596	RELAY MINIATURE 240V	5
		11587	SWITCH ROCKER BLACK	1
		14332	LAMP IND RED 140-006	2
		10575	BELL 4” 230vac MOFLASH	2
		12016	SWITCH HANDLE IP65 RED/	1
		11962	CIRCUIT BREAKER 6.3-10A	1
		10448	SWITCH ISOLATOR 25AMP	1
		14333	LAMP IND AMBER 140-007	1
		14334	LAMP IND GREEN 140-009	1
		11935	SWITCH ROCKER GREEN	1

Assy No.	Description	Part No.	Description	Quantity
075RP140UK	RBC750 FULTON HORIZONTAL	13291	RB BRUSH TUBE 32mmSINGLE	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		13334	SCREW GRUB M10x10mm	2
		13295	RB BRUSH HANDLE 2300mm	1
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12449	SWITCH DOOR LIMIT DB4	1
		11608	VALVE CHECK 1” RK41/E/S	1
		13276	VALVE STOP FLANGED DN25	1
		11786	GASKET 25mm PN16 IBC	11
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		13424	LABEL RB REGISTRATION	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		12444	GAUGE REFLEX CLIFTON 350	2
		14819	VALVE SAFETY DN25 11.2	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		11824	GASKET 15mm PN16 IBC	3
		13123	GASKET 65mm PN16 IBC	2
		10423	PROBE BRASS 36” LONG	4
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	RB PRESSURE GAUGE ASSY	1
		13080	GASKET MAN/H 305x400x25	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13849	BURNER GAS NGL 55T3S-430	1
		14290	PUMP WATER CR3-21	1

Assy No.	Description	Part No.	Description	Quantity
100RD140SX	**RBC1000 DUAL FUEL**	12449	SWITCH DOOR LIMIT DB4	1
		13123	GASKET 65mm PN16 IBC	2
		12412	GASKET 32mm PN16 IBC	1
		13424	LABEL RB REGISTRATION	1
		12597	PROBE BODY LP30 HIGH	2
		13075	VALVE DN65 ANGLE PATTERN	1
		13069	FACIA FULTON FR-HOR 3mm	1
		SA2000	CLIFTON SAMPLE COOLER	1
		12405	ELBOW WI 1/2”	1
		SA3010	PRESSURE GAUGE ASSY	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13037	GASKET 100mm PN16 IBC	2
		11786	GASKET 25mm PN16 IBC	10
		14645	BURNER D/F MDFL1880 T3D	1
		13033	PROBE TIP 1000mm LP30	2
		060RD324SX	PANEL D/F 75-180 AOTC	1
		11824	GASKET 15mm PN16 IBC	3
		13294	RB BRUSH HANDLE 2950mm	1
		13276	VALVE STOP FLANGED DN25	1
		14290	PUMP WATER CR3-21	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13141	VALVE BLOWDOWN 25mmKBV20	1
		11608	VALVE CHECK 1” RK41/E/S	1

Assy No.	Description	Part No.	Description	Quantity
090SR100UK	**SERVICE KIT RB 900**	13080	GASKET MAN/H 305x400x25	1
		13037	GASKET 100mm PN16 IBC	2
		13314	RB EYE GLASS 53mmx 3mm	1
		11895	GLASS REFLEX B7 CLIFTON	2
		12412	GASKET 32mm PN16 IBC	1
		13321	GASKET *USE PART 13408*	2
		11786	GASKET 25mm PN16 IBC	10
		11893	GASKET REFLEX B7	4
		12199	VALVE BALL 1/2” SPECIAL	2
		13217	GASKET H/H 7”x 5”x 3/4”	2
		13292	RB BRUSH TUBE 38mmSINGLE	1
		12210	VALVE BALL 1/4” SPECIAL	2
		11824	GASKET 15mm PN16 IBC	4
		13123	GASKET 65mm PN16 IBC	2
099J9310IR	**WATER COLUMN ASSY ‘J’CON**	11524	VALVE BALL 3/4” 2 PIECE	1

RBC1000 DUAL FUEL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
100RD140UK	**RBC1000 DUAL FUEL**	13037	GASKET 100mm PN16 IBC	2
		14465	VALVE GLOBE BRONZE 1/2”	2
		13294	BRUSH HANDLE 2950mm	1
		10423	PROBE BRASS 36” LONG	4
		13069	FACIA FULTON FR-HOR 3mm	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		14290	PUMP WATER CR3-21	1
		12449	SWITCH DOOR LIMIT DB4	1
		14645	BURNER D/F MDFL1880 T3D	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13292	BRUSH TUBE 38mmSINGLE	1
		12412	GASKET 32mm PN16 IBC	1
		13123	GASKET 65mm PN16 IBC	2
		13276	VALVE STOP FLANGED DN25	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13075	VALVE DN65 ANGLE PATTERN	1
		11824	GASKET 15mm PN16 IBC	3
		060RD324UK	PANEL D/F 60-180HP AOTC	1
		11608	VALVE CHECK 1” RK41/E/S	1
		SA3010	PRESSURE GAUGE ASSY	1
		11786	GASKET 25mm PN16 IBC	10
		13424	LABEL RB REGISTRATION	1

RBC1000 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
100RG140SX	**RBC1000 GAS BOILER**	12449	SWITCH DOOR LIMIT DB4	1
		060RX324SX	PANEL GAS 75-180 AOTC	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12412	GASKET 32mm PN16 IBC	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13276	VALVE STOP FLANGED DN25	1
		11608	VALVE CHECK 1” RK41/E/S	1
		12597	PROBE BODY LP30 HIGH	2
		14797	BURNER GAS MGN1550LN T3D	1
		SA3010	PRESSURE GAUGE ASSY	1
		11824	GASKET 15mm PN16 IBC	3
		13033	PROBE TIP 1000mm LP30	2
		13292	RB BRUSH TUBE 38mmSINGLE	1
		13294	RB BRUSH HANDLE 2950mm	1
		11786	GASKET 25mm PN16 IBC	10
		13123	GASKET 65mm PN16 IBC	2
		14290	PUMP WATER CR3-21	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13424	LABEL RB REGISTRATION	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13037	GASKET 100mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		14465	VALVE GLOBE BRONZE 1/2”	2

Assy No.	Description	Part No.	Description	Quantity
100RG140UK	**RBC1000 GAS BOILER**	060RX324UK	PANEL GAS	1
		13037	GASKET 100mm PN16 IBC	2
		11824	GASKET 15mm PN16 IBC	3
		15002	VALVE SAFETY DN32/50 ARI	1
		11786	GASKET 25mm PN16 IBC	10
		12412	GASKET 32mm PN16 IBC	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11608	VALVE CHECK 1” RK41/E/S	1
		13294	BRUSH HANDLE 2950mm	1
		14465	VALVE GLOBE BRONZE 1/2”	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		14797	BURNER GAS MGN1550LN T3D	1
		13276	VALVE STOP FLANGED DN25	1
		13292	BRUSH TUBE 38mmSINGLE	1
		10422	PROBE BRASS 22” LONG	3
		11774	PROBE BRASS 394mm LONG	1
		13123	GASKET 65mm PN16 IBC	2
		12449	SWITCH DOOR LIMIT DB4	1
		14290	PUMP WATER CR3-21	1
		13980	PROBE BRASS 430mm LONG	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13424	LABEL RB REGISTRATION	1
		12456	GAUGE PRESSURE 6”200PSI	1

RBC1000 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
100RO140SX	**RBC1000 OIL BOILER**	SA2000	CLIFTON SAMPLE COOLER	1
		11786	GASKET 25mm PN16 IBC	10
		10423	PROBE BRASS 36” LONG	2
		060RO324SX	PANEL OIL 75-180 AOTC	1
		13033	PROBE TIP 1000mm LP30	2
		13424	LABEL RB REGISTRATION	1
		13037	GASKET 100mm PN16 IBC	2
		13276	VALVE STOP FLANGED DN25	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		12412	GASKET 32mm PN16 IBC	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13123	GASKET 65mm PN16 IBC	2
		12449	SWITCH DOOR LIMIT DB4	1
		SA3010	PRESSURE GAUGE ASSY	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13292	BRUSH TUBE 38mmSINGLE	1
		11608	VALVE CHECK 1” RK41/E/S	1
		12456	GAUGE PRESSURE 6”200PSI	1
		15002	VALVE SAFETY DN32/50 ARI	1
		14290	PUMP WATER CR3-21	1
		13294	BRUSH HANDLE 2950mm	1
		12597	PROBE BODY LP30 HIGH	2
		14584	BURNER OIL NOL 50-34 T3L	1
		13141	VALVE BLOWDOWN 25mmKBV20	1

Assy No.	Description	Part No.	Description	Quantity
100RO-40UK	**RB1000 OIL HORIZ + SKID**	13276	VALVE STOP FLANGED DN25	1
		13075	VALVE DN65 ANGLE PATTERN	1
		13123	GASKET 65mm PN16 IBC	2
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13069	FACIA FULTON FR-HOR 3mm	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		13424	LABEL RB REGISTRATION	1
		12412	GASKET 32mm PN16 IBC	1
		10423	PROBE BRASS 36” LONG	2
		14465	VALVE GLOBE BRONZE 1/2”	2
		13292	RB BRUSH TUBE 38mmSINGLE	1
		12449	SWITCH DOOR LIMIT DB4	1
		14584	BURNER OIL NOL 50-34 T3L	1
		13294	RB BRUSH HANDLE 2950mm	1
		12444	GAUGE REFLEX CLIFTON 350	2
		SA3010	RB PRESSURE GAUGE ASSY	1
		13037	GASKET 100mm PN16 IBC	2
		SA2000	CLIFTON SAMPLE COOLER	1
		14290	PUMP WATER CR3-21	1
		14820	VALVE SAFETY DN32 11.2	1
		12456	GAUGE PRESSURE 6”200PSI	1
		11786	GASKET 25mm PN16 IBC	10
		11608	VALVE CHECK 1” RK41/E/S	1
		11824	GASKET 15mm PN16 IBC	3

RBC1000 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
100RO140UK	**RBC1000 OIL BOILER**	13424	LABEL RB REGISTRATION	1
		10423	PROBE BRASS 36” LONG	4
		060RO324UK	PANEL OIL 60-180HP AOTC	1
		11824	GASKET 15mm PN16 IBC	3
		14465	VALVE GLOBE BRONZE 1/2”	2
		11608	VALVE CHECK 1” RK41/E/S	1
		14290	PUMP WATER CR3-21	1
		13294	BRUSH HANDLE 2950mm	1
		12412	GASKET 32mm PN16 IBC	1
		13037	GASKET 100mm PN16 IBC	2
		SA3010	PRESSURE GAUGE ASSY	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13075	VALVE DN65 ANGLE PATTERN	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11786	GASKET 25mm PN16 IBC	10
		14584	BURNER OIL NOL 50-34 T3L	1
		13276	VALVE STOP FLANGED DN25	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	2
		15002	VALVE SAFETY DN32/50 ARI	1
		13141	VALVE BLOWDOWN 25mmKBV20	1

RBC1200 SERVICE KIT (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
120SR100UK	**SERVICE KIT RB 1200**	13036	GASKET 80mm PN16 IBC	1
		12412	GASKET 32mm PN16 IBC	1
		11893	GASKET REFLEX B7	4
		12199	VALVE BALL 1/2” SPECIAL	2
		12210	VALVE BALL 1/4” SPECIAL	2
		11895	GLASS REFLEX B7 CLIFTON	2
		13037	GASKET 100mm PN16 IBC	2
		13123	GASKET 65mm PN16 IBC	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		11824	GASKET 15mm PN16 IBC	4
		11786	GASKET 25mm PN16 IBC	11
		13080	GASKET MAN/H 305x400x25	1
		13321	GASKET *USE PART 13408*	2
		13292	BRUSH TUBE 38mmSINGLE	1
		13314	EYE GLASS 53mmx 3mm	1
		14363	BELT G28017X FOR NUWAY	1

Assy No.	Description	Part No.	Description	Quantity
120RP140UK	**RB1250 FULTON HORIZONTAL**	10423	PROBE BRASS 36” LONG	4
		13277	VALVE STOP FLANGED DN32	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		14465	VALVE GLOBE BRONZE 1/2”	2
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13037	GASKET 100mm PN16 IBC	2
		SA3010	RB PRESSURE GAUGE ASSY	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	1
		14290	PUMP WATER CR3-21	1
		13080	GASKET MAN/H 305x400x25	1
		13292	RB BRUSH TUBE 38mmSINGLE	1
		15043	BURNER PROPANE RS160/M	1
		11824	GASKET 15mm PN16 IBC	3
		13036	GASKET 80mm PN16 IBC	1
		14820	VALVE SAFETY DN32 11.2	1
		13294	RB BRUSH HANDLE 2950mm	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11786	GASKET 25mm PN16 IBC	10
		13826	VALVE CHECK 1 1/4”RK41/E	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		12449	SWITCH DOOR LIMIT DB4	1
		12412	GASKET 32mm PN16 IBC	1

RBC1250 DUAL FUEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
125RD140SX	**RBC1250 DUAL FUEL**	13277	VALVE STOP FLANGED DN32	1
		13036	GASKET 80mm PN16 IBC	1
		10423	PROBE BRASS 36” LONG	2
		13033	PROBE TIP 1000mm LP30	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14290	PUMP WATER CR3-21	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13037	GASKET 100mm PN16 IBC	2
		11786	GASKET 25mm PN16 IBC	10
		12597	PROBE BODY LP30 HIGH	2
		11824	GASKET 15mm PN16 IBC	3
		12456	GAUGE PRESSURE 6”200PSI	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13123	GASKET 65mm PN16 IBC	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		SA3010	PRESSURE GAUGE ASSY	1
		12449	SWITCH DOOR LIMIT DB4	1
		13294	BRUSH HANDLE 2950mm	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13069	FACIA FULTON FR-HOR 3mm	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		060RD324SX	PANEL D/F 75-180 AOTC	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12412	GASKET 32mm PN16 IBC	2
		14645	BURNER D/F MDFL1880 T3D	1

Assy No.	Description	Part No.	Description	Quantity
125RD140UK	**RBC1250 DUAL FUEL**	12456	GAUGE PRESSURE 6” 200PSI	1
		12449	SWITCH DOOR LIMIT DB4	1
		15002	VALVE SAFETY DN32/50 ARI	1
		14290	PUMP WATER CR3-21	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		12412	GASKET 32mm PN16 IBC	2
		11786	GASKET 25mm PN16 IBC	10
		13037	GASKET 100mm PN16 IBC	3
		13292	BRUSH TUBE 38mmSINGLE	1
		13277	VALVE STOP FLANGED DN32	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13016	VALVE BLOWDOWN 32mmKBV20	1
		060RD324UK	PANEL D/F 60-180HP AOTC	1
		13294	BRUSH HANDLE 2950mm	1
		10423	PROBE BRASS 36” LONG	2
		SA3010	PRESSURE GAUGE ASSY	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14645	BURNER D/F MDFL1880 T3D	1

RBC1250 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
125RG140SX	**RBC1250 GAS BOILER**	10423	PROBE BRASS 36” LONG	2
		13209	VALVE DN100 ANGLE/PAT’N	1
		060RX324SX	PANEL GAS 75-180 AOTC	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14749	BURNER GAS MGN1550LN T3D	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13037	GASKET 100mm PN16 IBC	3
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13123	GASKET 65mm PN16 IBC	1
		13036	GASKET 80mm PN16 IBC	1
		SA3010	PRESSURE GAUGE ASSY	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		12597	PROBE BODY LP30 HIGH	2
		13033	PROBE TIP 1000mm LP30	2
		13294	BRUSH HANDLE 2950mm	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13277	VALVE STOP FLANGED DN32	1
		11824	GASKET 15mm PN16 IBC	3
		14290	PUMP WATER CR3-21	1
		12412	GASKET 32mm PN16 IBC	8
		11786	GASKET 25mm PN16 IBC	5

Assy No.	Description	Part No.	Description	Quantity
125RG140SM	**RBC1250 GAS MOD/WATER**	13037	GASKET 100mm PN16 IBC	3
		14465	VALVE GLOBE BRONZE 1/2”	2
		13294	RB BRUSH HANDLE 2950mm	1
		15002	VALVE SAFETY DN32/50 ARI	1
		14181	VALVE CHECK DN32 DCV2	1
		14915	VALVE BALL 1 1/4” PN16	5
		14998	GAUGE TEMP 4” 0-120DEGc	2
		12597	PROBE BODY LP30 HIGH	2
		13277	VALVE STOP FLANGED DN32	1
		13292	RB BRUSH TUBE 38mmSINGLE	1
		15005	VALVE SAFETY DN25/40 ARI	1
		10418	PROBE BRASS 7” LONG	1
		SA3010	RB PRESSURE GAUGE ASSY	1
		14999	GAUGE TEMP 4” 0-300 DEGc	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		11824	GASKET 15mm PN16 IBC	3
		13033	PROBE TIP 1000mm LP30	2
		14589	PUMP WATER CR5-24	1
		14659	PROBE BODY LP20	1
		13069	FACIA FULTON FR-HOR 3mm	1
		060RM324SX	PANEL D/F-GAS MODULATING	1
		14661	PROBE PA20 PRE AMPLIFIER	1
		11786	GASKET 25mm PN16 IBC	5
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14986	BURNER GAS MGN2000LN M3D	1
		12412	GASKET 32mm PN16 IBC	6
		13209	VALVE DN100 ANGLE/PAT’N	1
		13123	GASKET 65mm PN16 IBC	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		SA2000	CLIFTON SAMPLE COOLER	1
		12456	GAUGE PRESSURE 6”200PSI	1
		10566	GAUGE PRESSURE 4” 250PSI	1
		14997	VALVE FEEDWATER DN32 MOD	1
		12449	SWITCH DOOR LIMIT DB4	1
		11824	GASKET 15mm PN16 IBC	1
		12444	GAUGE REFLEX CLIFTON 350	2

RBC1250 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
125RG140UK	**RBC1250 GAS BOILER**	13217	GASKET H/H 7”x 5”x 3/4”	2
		13037	GASKET 100mm PN16 IBC	2
		13036	GASKET 80mm PN16 IBC	1
		13277	VALVE STOP FLANGED DN32	1
		12412	GASKET 32mm PN16 IBC	1
		12449	SWITCH DOOR LIMIT DB4	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13209	VALVE DN100 ANGLE/PAT’N	1
		13069	FACIA FULTON FR-HOR 3mm	1
		15002	VALVE SAFETY DN32/50 ARI	1
		13294	BRUSH HANDLE 2950mm	1
		SA3010	PRESSURE GAUGE ASSY	1
		10423	PROBE BRASS 36” LONG	4
		14749	BURNER GAS MGN1550LN T3D	1
		13292	BRUSH TUBE 38mmSINGLE	1
		14290	PUMP WATER CR3-21	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		11824	GASKET 15mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	10
		12456	GAUGE PRESSURE 6”200PSI	1
		13080	GASKET MAN/H 305x400x25	1
		13123	GASKET 65mm PN16 IBC	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13826	VALVE CHECK 1 1/4”RK41/E	1

Assy No.	Description	Part No.	Description	Quantity
125RO-40SX	**RB1250 HORIZONTAL + SKID**	10423	PROBE BRASS 36” LONG	4
		14465	VALVE GLOBE BRONZE 1/2”	2
		SA2000	CLIFTON SAMPLE COOLER	1
		11824	GASKET 15mm PN16 IBC	3
		12444	GAUGE REFLEX CLIFTON 350	2
		11608	VALVE CHECK 1” RK41/E/S	1
		13276	VALVE STOP FLANGED DN25	1
		060RX324SX	PANEL GAS 75-180 AOTC	1
		SA3010	RB PRESSURE GAUGE ASSY	1
		13294	RB BRUSH HANDLE 2950mm	1
		12412	GASKET 32mm PN16 IBC	1
		12449	SWITCH DOOR LIMIT DB4	1
		12454	VALVE DN80 ANGLE PATTERN	1
		14290	PUMP WATER CR3-21	1
		14584	BURNER OIL NOL 50-34 T3L	1
		13292	RB BRUSH TUBE 38mmSINGLE	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13036	GASKET 80mm PN16 IBC	1
		14820	VALVE SAFETY DN32 11.2	1
		13123	GASKET 65mm PN16 IBC	1
		13037	GASKET 100mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6”200PSI	1

RBC1250 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
125RO140SX	**RBC1250 OIL BOILER**	14290	PUMP WATER CR3-21	1
		13037	GASKET 100mm PN16 IBC	2
		13123	GASKET 65mm PN16 IBC	1
		13276	VALVE STOP FLANGED DN25	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12449	SWITCH DOOR LIMIT DB4	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13036	GASKET 80mm PN16 IBC	1
		13141	VALVE BLOWDOWN 25mmKBV20	1
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6”200PSI	1
		11824	GASKET 15mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	10
		10423	PROBE BRASS 36” LONG	2
		13033	PROBE TIP 1000mm LP30	2
		13292	BRUSH TUBE 38mmSINGLE	1
		12597	PROBE BODY LP30 HIGH	2
		13294	BRUSH HANDLE 2950mm	1
		14584	BURNER OIL NOL 50-34 T3L	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	PRESSURE GAUGE ASSY	1
		12412	GASKET 32mm PN16 IBC	1
		060RO324SX	PANEL OIL 75-180 AOTC	1
		11608	VALVE CHECK 1” RK41/E/S	1

Assy No.	Description	Part No.	Description	Quantity
125RO140UK	**RBC1250 OIL BOILER**	060RO324UK	PANEL OIL 60-180HP AOTC	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13069	FACIA FULTON FR-HOR 3mm	1
		SA3010	PRESSURE GAUGE ASSY	1
		10423	PROBE BRASS 36” LONG	4
		13141	VALVE BLOWDOWN 25mmKBV20	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13123	GASKET 65mm PN16 IBC	1
		14584	BURNER OIL NOL 50-34 T3L	1
		13294	BRUSH HANDLE 2950mm	1
		13276	VALVE STOP FLANGED DN25	1
		12449	SWITCH DOOR LIMIT DB4	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13037	GASKET 100mm PN16 IBC	2
		13292	BRUSH TUBE 38mmSINGLE	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12412	GASKET 32mm PN16 IBC	1
		11786	GASKET 25mm PN16 IBC	10
		13036	GASKET 80mm PN16 IBC	1
		11824	GASKET 15mm PN16 IBC	3
		15002	VALVE SAFETY DN32/50 ARI	1
		11608	VALVE CHECK 1” RK41/E/S	1
		14290	PUMP WATER CR3-21	1

RBC1500 DUAL FUEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RD140SX	**RBC1500 DUAL FUEL**	12597	PROBE BODY LP30 HIGH	2
		13016	VALVE BLOWDOWN 32mmKBV20	1
		14291	PUMP WATER CR3-25	1
		11786	GASKET 25mm PN16 IBC	5
		SA3010	PRESSURE GAUGE ASSY	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13037	GASKET 100mm PN16 IBC	3
		11824	GASKET 15mm PN16 IBC	3
		SA2000	CLIFTON SAMPLE COOLER	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12763	BURNER D/F MDFL 2505 T3D	1
		060RD324SX	PANEL D/F 75-180 AOTC	1
		13033	PROBE TIP 1000mm LP30	2
		15002	VALVE SAFETY DN32/50 ARI	1
		13277	VALVE STOP FLANGED DN32	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		12412	GASKET 32mm PN16 IBC	6
		10423	PROBE BRASS 36” LONG	4
		13209	VALVE DN100 ANGLE/PAT’N	1
		13294	BRUSH HANDLE 2950mm	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13069	FACIA FULTON FR-HOR 3mm	1
		12449	SWITCH DOOR LIMIT DB4	1
150RD140UK	**RBC1500 DUAL FUEL**	3294	BRUSH HANDLE 2950mm	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13016	VALVE BLOWDOWN 32mmKBV20	1
		15002	VALVE SAFETY DN32/50 ARI	1
		12763	BURNER D/F MDFL 2505 T3D	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6”200PSI	1
		060RD324UK	PANEL D/F 60-180HP AOTC	1
		14291	PUMP WATER CR3-25	1
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	PRESSURE GAUGE ASSY	1
		12449	SWITCH DOOR LIMIT DB4	1
		13277	VALVE STOP FLANGED DN32	1
		10423	PROBE BRASS 36” LONG	4
		11786	GASKET 25mm PN16 IBC	5
		13292	BRUSH TUBE 38mmSINGLE	1
		13485	FLANGE 32mm SCREWED PN16	2
		11824	GASKET 15mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	6

RBC1500 DUAL FUEL CONTROL PANEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RD324UK	**PANEL DUAL FUEL**	12450	SWITCH CA10A21260E	1
		12462	SWITCH CG8 A210620E C/W	1
		10575	BELL 4” 230vac MOFLASH	3
		12430	TRANSFORMER 240V 24-50VA	1
		12468	FACIA PANEL FR SERIES	1
		15111	CONTROLLER SPIRAX LEVEL	2
		10448	SWITCH ISOLATOR 25AMP	1
		14333	LAMP IND AMBER 140-007	5
		11904	BASE LC RELAY 11-PIN DIN	2
		12254	SWITCH ON/OFF BLACK/	2
		11596	RELAY MINIATURE 240V	5
		13560	SHAFT EXT 180mm OT HAND	1
		12016	SWITCH HANDLE IP65 RED/	1
		14782	LABEL SELF MONITORING	1
		14345	PUSH BUTTON BLACK	2
		14460	SWITCH SELECTOR BODY	2
		13636	MCB 10A 1-POLE	3
		11869	RELAY LC3 LED 240V	2
		11597	RELAY BASE MINIATURE 4P	5
		10444	PUSH BUTTON AC16	2
		10445	LAMP BULB NEON AC16	2
		11850	CONTACTOR LC1-D09U7 240V	1
		11962	CIRCUIT BREAKER 6.3-10A	1

RBC1500 GAS with ECONOMIZER and MOD WATER

Assy No.	Description	Part No.	Description	Quantity
150RG140EM	**RBC 1500 E/M**	11824	GASKET 15mm PN16 IBC	3
		13294	BRUSH HANDLE 2950mm	1
		14999	GAUGE TEMP 4” 0-300 DEGc	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14659	PROBE BODY LP20	1
		12444	GAUGE REFLEX CLIFTON 350	2
		14589	PUMP WATER CR5-24	1
		SA2000	CLIFTON SAMPLE COOLER	1
		15036	INSULATION REEL 1725x152	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		SA3010	PRESSURE GAUGE ASSY	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13239	FLANGE 32mm WELDING S/O	3
		15005	VALVE SAFETY DN25/40 ARI	1
		10418	PROBE BRASS 7” LONG	1
		14661	PROBE PA20 PRE AMPLIFIER	1
		14915	VALVE BALL 1 1/4” PN16	5
		13277	VALVE STOP FLANGED DN32	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14998	GAUGE TEMP 4” 0-120DEGc	2
		12412	GASKET 32mm PN16 IBC	6
		12456	GAUGE PRESSURE 6”200PSI	1
		11786	GASKET 25mm PN16 IBC	5
		13123	GASKET 65mm PN16 IBC	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		10566	GAUGE PRESSURE 4” 250PSI	1
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		11824	GASKET 15mm PN16 IBC	1
		14997	VALVE FEEDWATER DN32 MOD	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		10423	PROBE BRASS 36” LONG	3
		12449	SWITCH DOOR LIMIT DB4	1
		14986	BURNER GAS MGN2000LN M3D	1
		15002	VALVE SAFETY DN32/50 ARI	1
		060RM324UK	PANEL GAS MOD WATER FEED	1
		14181	VALVE CHECK DN32 DCV2	1

RBC1500 GAS with MOD WATER (SM-Clifton) (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RG140SM	**RB1250 DUAL FUEL,MW**	10418	PROBE BRASS 7” LONG	1
		11824	GASKET 15mm PN16 IBC	3
		SA3010	PRESSURE GAUGE ASSY	1
		11786	GASKET 25mm PN16 IBC	5
		12449	SWITCH DOOR LIMIT DB4	1
		13037	GASKET 100mm PN16 IBC	3
		060RM324SX	PANEL D/F-GAS MODULATING	1
		14659	PROBE BODY LP20	1
		14783	PUMP WATER CR3-29	1
		12444	GAUGE REFLEX CLIFTON 350	2
		14784	VALVE FEEDWATER DN40	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14661	PROBE PA20 PRE AMPLIFIER	1
		SA2000	CLIFTON SAMPLE COOLER	1
		12456	GAUGE PRESSURE 6”200PSI	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		12597	PROBE BODY LP30 HIGH	2
		12412	GASKET 32mm PN16 IBC	6
		14820	VALVE SAFETY DN32 11.2	1
		13069	FACIA FULTON FR-HOR 3mm	1
		14679	BURNER GAS MGN2000LN T3D	1
		13033	PROBE TIP 1000mm LP30	2
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13277	VALVE STOP FLANGED DN32	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13123	GASKET 65mm PN16 IBC	1
		13294	BRUSH HANDLE 2950mm	1
		13209	VALVE DN100 ANGLE/PAT’N	1

RBC1500 GAS (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RG140SX	**RBC1500 GAS BOILER**	14679	BURNER GAS MGN2000LN T3D	1
		10423	PROBE BRASS 36” LONG	2
		SA3010	PRESSURE GAUGE ASSY	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		SA2000	CLIFTON SAMPLE COOLER	1
		12449	SWITCH DOOR LIMIT DB4	1
		11786	GASKET 25mm PN16 IBC	5
		11824	GASKET 15mm PN16 IBC	3
		14291	PUMP WATER CR3-25	1
		13277	VALVE STOP FLANGED DN32	1
		12597	PROBE BODY LP30 HIGH	2
		13292	BRUSH TUBE 38mmSINGLE	1
		12456	GAUGE PRESSURE 6”200PSI	1
		1500RS340CH	INSULATED SHELL RB1500	1
		13294	BRUSH HANDLE 2950mm	1
		12412	GASKET 32mm PN16 IBC	6
		060RX324SX	PANEL GAS 75-180 AOTC	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		15002	VALVE SAFETY DN32/50 ARI	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13037	GASKET 100mm PN16 IBC	3
		13123	GASKET 65mm PN16 IBC	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13033	PROBE TIP 1000mm LP30	2
		13016	VALVE BLOWDOWN 32mmKBV20	1

RBC1500 GAS (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RG140UK	**RBC1500 GAS BOILER**	060RX324UK	PANEL GAS 60-180HP	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13292	BRUSH TUBE 38mmSINGLE	1
		14291	PUMP WATER CR3-25	1
		10423	PROBE BRASS 36” LONG	4
		11824	GASKET 15mm PN16 IBC	3
		13294	RB BRUSH HANDLE 2950mm	1
		13277	VALVE STOP FLANGED DN32	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		12412	GASKET 32mm PN16 IBC	6
		SA3010	PRESSURE GAUGE ASSY	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14679	BURNER GAS MGN2000LN T3D	1
		15002	VALVE SAFETY DN32/50 ARI	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	1
		12449	SWITCH DOOR LIMIT DB4	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13037	GASKET 100mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	5

RBC1500 OIL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RO130CH	**RB1500 OIL BOILER**	13308	RBC 1500 NAME PLATE	1
		13299	RB1500 DOOR WRAPPER PLAT	1
		10564	GAUGE SYPHON PIGTAIL 1/4	1
		10565	TEE BRONZE 1/4” EQUAL	1
		10423	PROBE BRASS 36” LONG	4
		14291	PUMP WATER CR3-25	1
		SA3040	HAND/MANHOLE ASSEMBLY	1
		10322	TUBE 1/4”OD COPPER SOFT	2
		12449	SWITCH DOOR LIMIT DB4	1
		13296	RB BRUSH HANDLE 3250mm	1
		13298	ANGLE M/S 60x60x 6mm	5
		13370	RB1500 DOOR INSULATION	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		12444	GAUGE REFLEX CLIFTON 350	2
		12456	GAUGE PRESSURE 6”200PSI	1
		14820	VALVE SAFETY DN32 11.2	2
		13295	RB BRUSH HANDLE 2300mm	1
		13292	RB BRUSH TUBE 38mmSINGLE	1
		13219	TURBULATOR RB 150090	1
		13237	BURNER OIL NOL 85-38 T3L	1
		13277	VALVE STOP FLANGED DN32	1

RBC1500 OIL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RO140SX	**RBC1500 OIL BOILER**	SA2000	CLIFTON SAMPLE COOLER	1
		14678	BURNER OIL NOL 60-34 T3L	1
		13294	BRUSH HANDLE 2950mm	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13277	VALVE STOP FLANGED DN32	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13069	FACIA FULTON FR-HOR 3mm	1
		060RO324SX	PANEL OIL 75-180 AOTC	1
		10423	PROBE BRASS 36” LONG	2
		13209	VALVE DN100 ANGLE/PAT’N	1
		12412	GASKET 32mm PN16 IBC	6
		12456	GAUGE PRESSURE 6”200PSI	1
		13080	GASKET MAN/H 305x400x25	1
		13033	PROBE TIP 1000mm LP30	2
		12449	SWITCH DOOR LIMIT DB4	1
		11786	GASKET 25mm PN16 IBC	5
		11824	GASKET 15mm PN16 IBC	3
		13016	VALVE BLOWDOWN 32mmKBV20	1
		14291	PUMP WATER CR3-25	1
		13037	GASKET 100mm PN16 IBC	3
		13123	GASKET 65mm PN16 IBC	1
		12597	PROBE BODY LP30 HIGH	2
		15002	VALVE SAFETY DN32/50 ARI	1

Assy No.	Description	Part No.	Description	Quantity
150RO140UK	**RBC1500 OIL BOILER**	12412	GASKET 32mm PN16 IBC	6
		14465	VALVE GLOBE BRONZE 1/2”	2
		12449	SWITCH DOOR LIMIT DB4	1
		11824	GASKET 15mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	5
		10423	PROBE BRASS 36” LONG	4
		15002	VALVE SAFETY DN32/50 ARI	1
		060RO324UK	PANEL OIL 60-180HP AOTC	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13292	BRUSH TUBE 38mmSINGLE	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13080	GASKET MAN/H 305x400x25	1
		13123	GASKET 65mm PN16 IBC	1
		13294	BRUSH HANDLE 2950mm	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13277	VALVE STOP FLANGED DN32	1
		14678	BURNER OIL NOL 60-34 T3L	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14291	PUMP WATER CR3-25	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13037	GASKET 100mm PN16 IBC	3

Assy No.	Description	Part No.	Description	Quantity
150ROA40UK	**RB1500 FULTON HORIZONTAL**	SA3010	RB PRESSURE GAUGE ASSY	1
		SA2040	EXHAUST HEAD 5” S/S	1
		120BD155XX	MODEL BDV 6 155L B/DOWN	1
		12449	SWITCH DOOR LIMIT DB4	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		SKIDX006	STANDARD SKID 6-60HP1.29999995	2
		13016	VALVE BLOWDOWN 32mmKBV20	1
		11824	GASKET 15mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	5
		HTT3000	TANK 3000LITRE S/S TOP	1
		12444	GAUGE REFLEX CLIFTON 350	2
		12456	GAUGE PRESSURE 6”200PSI	1
		14820	VALVE SAFETY DN32 11.2	1
		14291	PUMP WATER CR3-25	2
		SA2000	CLIFTON SAMPLE COOLER	1
		099CT301	SOLID STATE WLC L/W	1
		13123	GASKET 65mm PN16 IBC	1
		13239	FLANGE 32mm WELDING S/O	3
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		12412	GASKET 32mm PN16 IBC	6
		13080	GASKET MAN/H 305x400x25	1
		13277	VALVE STOP FLANGED DN32	1
		13292	RB BRUSH TUBE 38mmSINGLE	1
		13294	RB BRUSH HANDLE 2950mm	1
		10423	PROBE BRASS 36” LONG	4
		13209	VALVE DN100 ANGLE/PAT’N	1
		14678	BURNER OIL NOL 60-34 T3L	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13217	GASKET H/H 7”x 5”x 3/4”	2
		10483	DOSAGE CHEM SET SINGLE	1

Assy No.	Description	Part No.	Description	Quantity
150RPA40UK	**FR1500 FULTON HORIZONTAL**	12695	TANK 2700L INTERNALLY	1
		13111	LABEL FULTON PLASTIC	1
		SA0020	STEAM INJECTOR IN 15	1
		10483	DOSAGE CHEM SET SINGLE	1
		11524	VALVE BALL 3/4” 2 PIECE	1
		099CT301	SOLID STATE WLC L/W	1
		14509	VALVE BALL 1 1/2”ART 45T	6
		SKIDA150	FR1500 ANCILLARY SKID	1
		120BD155XX	MODEL BDV 6 155L B/DOWN	1

RBC1500/1800/2100 OIL, S ERVICE KIT (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150SR100UK	**SERVICE KIT RB 1500**	13314	EYE GLASS 53mmx 3mm	1
		13321	GASKET *USE PART 13408*	2
		13217	GASKET H/H 7”x 5”x 3/4”	2
		13292	RB BRUSH TUBE 38mmSINGLE	1
		13037	GASKET 100mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	6
		14363	BELT G28017X FOR NUWAY	1
		13123	GASKET 65mm PN16 IBC	1
		13080	GASKET MAN/H 305x400x25	1
		12210	VALVE BALL 1/4” SPECIAL	2
		11895	GLASS REFLEX B7 CLIFTON	2
		11786	GASKET 25mm PN16 IBC	5
		12199	VALVE BALL 1/2” SPECIAL	2
		11893	GASKET REFLEX B7	4
		11824	GASKET 15mm PN16 IBC	4

Assy No.	Description	Part No.	Description	Quantity
180SR100UK	**SERVICE KIT 1800/2100**	13080	GASKET MAN/H 305x400x25	1
		12199	VALVE BALL 1/2” SPECIAL	2
		13037	GASKET 100mm PN16 IBC	3
		12210	VALVE BALL 1/4” SPECIAL	2
		11895	GLASS REFLEX B7 CLIFTON	2
		13123	GASKET 65mm PN16 IBC	1
		12769	INSULATION GLASS FIBRE	6
		13217	GASKET H/H 7”x 5”x 3/4”	2
		11893	GASKET REFLEX B7	4
		11824	GASKET 15mm PN16 IBC	4
		11786	GASKET 25mm PN16 IBC	5
		13293	RB BRUSH TUBE 44mmSINGLE	1
		12412	GASKET 32mm PN16 IBC	5
		14363	BELT G28017X FOR NUWAY	1
		12413	GASKET 40mm PN16 IBC	1
		13321	GASKET *USE PART 13408*	2
		13314	RB EYE GLASS 53mmx 3mm	1

RBC1850 DUAL FUEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
185RD140SX	**RBC1850 DUAL FUEL BOILER**	13826	VALVE CHECK 1 1/4”RK41/E	1
		SA3010	PRESSURE GAUGE ASSY	1
		12763	BURNER D/F MDFL 2505 T3D	1
		13123	GASKET 65mm PN16 IBC	1
		12413	GASKET 40mm PN16 IBC	1
		12412	GASKET 32mm PN16 IBC	5
		14293	PUMP WATER CR5-20	1
		13069	FACIA FULTON FR-HOR 3mm	1
		060RD324SX	PANEL D/F 75-180 AOTC	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		12449	SWITCH DOOR LIMIT DB4	1
		13277	VALVE STOP FLANGED DN32	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11824	GASKET 15mm PN16 IBC	3
		13293	BRUSH TUBE 44mmSINGLE	1
		13037	GASKET 100mm PN16 IBC	3
		13016	VALVE BLOWDOWN 32mmKBV20	1
		11786	GASKET 25mm PN16 IBC	5
		12597	PROBE BODY LP30 HIGH	2
		15003	VALVE SAFETY DN40/65 ARI	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13033	PROBE TIP 1000mm LP30	2
		12456	GAUGE PRESSURE 6”200PSI	1
		10423	PROBE BRASS 36” LONG	2
		13296	BRUSH HANDLE 3250mm	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		SA3010	PRESSURE GAUGE ASSY	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		11824	GASKET 15mm PN16 IBC	3
		10423	PROBE BRASS 36” LONG	4
		12763	BURNER D/F MDFL 2505 T3D	1
		14293	PUMP WATER CR5-20	1
		15003	VALVE SAFETY DN40/65 ARI	1
		11786	GASKET 25mm PN16 IBC	5
		060RD324UK	PANEL D/F 60-180HP AOTC	1
		13037	GASKET 100mm PN16 IBC	3
		12456	GAUGE PRESSURE 6”200PSI	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		12449	SWITCH DOOR LIMIT DB4	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13296	BRUSH HANDLE 3250mm	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13123	GASKET 65mm PN16 IBC	1
		13277	VALVE STOP FLANGED DN32	1
		12413	GASKET 40mm PN16 IBC	1
		12412	GASKET 32mm PN16 IBC	5

Assy No.	Description	Part No.	Description	Quantity
185RG100SX	**RB1850 SPRX 110V CTR 415**	13293	RB BRUSH TUBE 44mmSINGLE	1
		12444	GAUGE REFLEX CLIFTON 350	2
		13277	VALVE STOP FLANGED DN32	1
		12449	SWITCH DOOR LIMIT DB4	1
		13209	VALVE DN100 ANGLE/PAT'N	1
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6"200PSI	1
		10844	WASHER FLAT M10 PLATED	12
		10845	WASHER FLAT M12 PLATED	64
		13033	PROBE TIP 1000mm LP30	2
		12413	GASKET 40mm PN16 IBC	1
		060RX314SX	PANL GAS 110V CTRL 415V	1
		11786	GASKET 25mm PN16 IBC	5
		14465	VALVE GLOBE BRONZE 1/2"	2
		SA3010	RB PRESSURE GAUGE ASSY	1
		12412	GASKET 32mm PN16 IBC	5
		13123	GASKET 65mm PN16 IBC	1
		13037	GASKET 100mm PN16 IBC	3
		12597	PROBE BODY LP30 HIGH	2
		13296	RB BRUSH HANDLE 3250mm	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13826	VALVE CHECK 1 1/4"RK41/E	1
		10423	PROBE BRASS 36" LONG	4
		SA2000	CLIFTON SAMPLE COOLER	1
		14821	VALVE SAFETY DN40 11.2	1
		14293	PUMP WATER CR5-20	1
		11824	GASKET 15mm PN16 IBC	3
		14646	BURNER GAS XGN2350-38	1

RBC1850 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
185RG140SX	**RBC1850 GAS BOILER**	12413	GASKET 40mm PN16 IBC	1
		13123	GASKET 65mm PN16 IBC	1
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		12412	GASKET 32mm PN16 IBC	5
		12449	SWITCH DOOR LIMIT DB4	1
		060RX324SX	PANEL GAS 75-180 AOTC	1
		11824	GASKET 15mm PN16 IBC	3
		14293	PUMP WATER CR5-20	1
		13033	PROBE TIP 1000mm LP30	2
		14585	BURNER GAS MGN 2500 T3D	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		11786	GASKET 25mm PN16 IBC	5
		13016	VALVE BLOWDOWN 32mmKBV20	1
		SA3010	PRESSURE GAUGE ASSY	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		15003	VALVE SAFETY DN40/65 ARI	1
		10423	PROBE BRASS 36” LONG	4
		13277	VALVE STOP FLANGED DN32	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13296	BRUSH HANDLE 3250mm	1
		12597	PROBE BODY LP30 HIGH	2

Assy No.	Description	Part No.	Description	Quantity
185RG140UK	**RBC1850 GAS BOILER**	10423	PROBE BRASS 36” LONG	4
		15003	VALVE SAFETY DN40/65 ARI	1
		12456	GAUGE PRESSURE 6”200PSI	1
		14585	BURNER GAS MGN 2500 T3D	1
		13296	BRUSH HANDLE 3250mm	1
		SA3010	PRESSURE GAUGE ASSY	1
		11786	GASKET 25mm PN16 IBC	5
		12413	GASKET 40mm PN16 IBC	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14293	PUMP WATER CR5-20	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13277	VALVE STOP FLANGED DN32	1
		12449	SWITCH DOOR LIMIT DB4	1
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		12412	GASKET 32mm PN16 IBC	5
		13209	VALVE DN100 ANGLE/PAT’N	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13123	GASKET 65mm PN16 IBC	1
		11824	GASKET 15mm PN16 IBC	3
		SA2000	CLIFTON SAMPLE COOLER	1

RBC1850 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
185RO140SX	**RBC1850 OIL BOILER**	12449	SWITCH DOOR LIMIT DB4	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14293	PUMP WATER CR5-20	1
		12413	GASKET 40mm PN16 IBC	1
		13296	BRUSH HANDLE 3250mm	1
		13277	VALVE STOP FLANGED DN32	1
		10423	PROBE BRASS 36” LONG	4
		14465	VALVE GLOBE BRONZE 1/2”	2
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13037	GASKET 100mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	5
		13209	VALVE DN100 ANGLE/PAT’N	1
		12597	PROBE BODY LP30 HIGH	2
		13123	GASKET 65mm PN16 IBC	1
		13033	PROBE TIP 1000mm LP30	2
		13237	BURNER OIL NOL 85-38 T3L	1
		15003	VALVE SAFETY DN40/65 ARI	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		11824	GASKET 15mm PN16 IBC	3
		SA3010	PRESSURE GAUGE ASSY	1
		11786	GASKET 25mm PN16 IBC	5
		060RO324SX	PANEL OIL 75-180 AOTC	1
		SA2000	CLIFTON SAMPLE COOLER	1

Assy No.	Description	Part No.	Description	Quantity
185RO140UK	**RBC1850 OIL BOILER**	13826	VALVE CHECK 1 1/4”RK41/E	1
		13277	VALVE STOP FLANGED DN32	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		060RO324UK	PANEL OIL 60-180HP AOTC	1
		11786	GASKET 25mm PN16 IBC	5
		13296	BRUSH HANDLE 3250mm	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		12413	GASKET 40mm PN16 IBC	1
		14293	PUMP WATER CR5-20	1
		11824	GASKET 15mm PN16 IBC	3
		13293	BRUSH TUBE 44mmSINGLE	1
		12412	GASKET 32mm PN16 IBC	5
		14465	VALVE GLOBE BRONZE 1/2”	2
		SA2000	CLIFTON SAMPLE COOLER	1
		13237	BURNER OIL NOL 85-38 T3L	1
		13069	FACIA FULTON FR-HOR 3mm	1
		10423	PROBE BRASS 36” LONG	4
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13123	GASKET 65mm PN16 IBC	1
		SA3010	PRESSURE GAUGE ASSY	1
		13037	GASKET 100mm PN16 IBC	3
		15003	VALVE SAFETY DN40/65 ARI	1

Assy No.	Description	Part No.	Description	Quantity
210RG140CH	**RB2100 GAS BOILER**	210RG240CH	RB2100 FULTON HORIZONTAL	1
		10549	VALVE BALL 1/4” ART 45T	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		10565	TEE BRONZE 1/4” EQUAL	2
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		14821	VALVE SAFETY DN40 11.2	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14491	BURNER GAS XGN3000-38M	1

RBC2100 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
210RG140SX	**RBC2100 GAS BOILER**	12413	GASKET 40mm PN16 IBC	1
		13293	BRUSH TUBE 44mmSINGLE	1
		10423	PROBE BRASS 36” LONG	2
		13277	VALVE STOP FLANGED DN32	1
		12597	PROBE BODY LP30 HIGH	2
		12412	GASKET 32mm PN16 IBC	5
		11786	GASKET 25mm PN16 IBC	5
		13424	LABEL RB REGISTRATION	1
		13296	BRUSH HANDLE 3250mm	1
		12449	SWITCH DOOR LIMIT DB4	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14658	BURNER GAS MGN2800X T3D	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		10549	VALVE BALL 1/4” ART 45T	1
		11824	GASKET 15mm PN16 IBC	3
		13016	VALVE BLOWDOWN 32mmKBV20	1
		SA3010	PRESSURE GAUGE ASSY	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14293	PUMP WATER CR5-20	1
		13037	GASKET 100mm PN16 IBC	3
		13123	GASKET 65mm PN16 IBC	1
		13033	PROBE TIP 1000mm LP30	2
		15003	VALVE SAFETY DN40/65 ARI	1
		060RX324SX	PANEL GAS 75-180 AOTC	1

Assy No.	Description	Part No.	Description	Quantity
210RG140UK	**RBC2100 GAS BOILER**	13277	VALVE STOP FLANGED DN32	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		13296	BRUSH HANDLE 3250mm	1
		13080	GASKET MAN/H 305x400x25	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13123	GASKET 65mm PN16 IBC	1
		12413	GASKET 40mm PN16 IBC	1
		12412	GASKET 32mm PN16 IBC	5
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		13069	FACIA FULTON FR-HOR 3mm	1
		11824	GASKET 15mm PN16 IBC	3
		14658	BURNER GAS MGN2800X T3D	1
		3037	GASKET 100mm PN16 IBC	3
		12449	SWITCH DOOR LIMIT DB4	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13016	VALVE BLOWDOWN 32mmKBV20	1
		12456	GAUGE PRESSURE 6”200PSI	1
		15003	VALVE SAFETY DN40/65 ARI	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11786	GASKET 25mm PN16 IBC	5
		SA3010	PRESSURE GAUGE ASSY	1
		10423	PROBE BRASS 36” LONG	4
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14293	PUMP WATER CR5-20	1

RBC2100 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
210RO140SX	**RBC2100 OIL BOILER**	11786	GASKET 25mm PN16 IBC	5
		14465	VALVE GLOBE BRONZE 1/2”	2
		15003	VALVE SAFETY DN40/65 ARI	1
		13033	PROBE TIP 1000mm LP30	2
		10549	VALVE BALL 1/4” ART 45T	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		10423	PROBE BRASS 36” LONG	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13037	GASKET 100mm PN16 IBC	3
		14293	PUMP WATER CR5-20	1
		13237	BURNER OIL NOL 85-38 T3L	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13296	BRUSH HANDLE 3250mm	1
		12449	SWITCH DOOR LIMIT DB4	1
		12597	PROBE BODY LP30 HIGH	2
		SA2000	CLIFTON SAMPLE COOLER	1
		11824	GASKET 15mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	5
		12413	GASKET 40mm PN16 IBC	1
		12456	GAUGE PRESSURE 6”200PSI	1
		060RO324SX	PANEL OIL 75-180 AOTC	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13277	VALVE STOP FLANGED DN32	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13424	LABEL RB REGISTRATION	1
		13123	GASKET 65mm PN16 IBC	1

Assy No.	Description	Part No.	Description	Quantity
210RO140UK	**RBC2100 OIL BOILER**	13016	VALVE BLOWDOWN 32mmKBV20	1
		13080	GASKET MAN/H 305x400x25	1
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		14293	PUMP WATER CR5-20	1
		12456	GAUGE PRESSURE 6”200PSI	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		15003	VALVE SAFETY DN40/65 ARI	1
		11786	GASKET 25mm PN16 IBC	5
		SA3010	PRESSURE GAUGE ASSY	1
		13424	LABEL RB REGISTRATION	1
		10423	PROBE BRASS 36” LONG	4
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13277	VALVE STOP FLANGED DN32	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13296	BRUSH HANDLE 3250mm	1
		1824	GASKET 15mm PN16 IBC	3
		SA2000	CLIFTON SAMPLE COOLER	1
		13217	GASKET H/H 7”x 5”x 3/4”	2
		12449	SWITCH DOOR LIMIT DB4	1
		13242	BURNER OIL NOL 100-38T3L	1
		060RO324UK	PANEL OIL 60-180HP AOTC	1
		12412	GASKET 32mm PN16 IBC	5
		13209	VALVE DN100 ANGLE/PAT’N	1
		12117	FLANGE BLANK 25mm PN16/8	1
		13123	GASKET 65mm PN16 IBC	1
		12413	GASKET 40mm PN16 IBC	1

Assy No.	Description	Part No.	Description	Quantity
210RO140CX	**RB2100 OIL SPIRAX CTLS**	13033	PROBE TIP 1000mm LP30	2
		14423	PIPELINE SET BCS1 1/2”	1
		210RG240CH	RB2100 FULTON HORIZONTAL	1
		14821	VALVE SAFETY DN40 11.2	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		SA2000	CLIFTON SAMPLE COOLER	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12597	PROBE BODY LP30 HIGH	

2

RBC2500 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
250RG140SX	**RBC2500 GAS BOILER**	12412	GASKET 32mm PN16 IBC	5
		12456	GAUGE PRESSURE 6”200PSI	1
		12413	GASKET 40mm PN16 IBC	1
		12449	SWITCH DOOR LIMIT DB4	1
		12597	PROBE BODY LP30 HIGH	2
		13293	BRUSH TUBE 44mmSINGLE	1
		13123	GASKET 65mm PN16 IBC	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		13277	VALVE STOP FLANGED DN32	1
		10423	PROBE BRASS 36” LONG	2
		14465	VALVE GLOBE BRONZE 1/2”	2
		13069	FACIA FULTON FR-HOR 3mm	1
		11824	GASKET 15mm PN16 IBC	3
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13296	RB BRUSH HANDLE 3250mm	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		14591	BURNER GAS MGN2800X T3D	1
		15004	VALVE SAFETY DN50/80 ARI	1
		11786	GASKET 25mm PN16 IBC	5
		13037	GASKET 100mm PN16 IBC	3
		14590	PUMP WATER CR5-22	1
		13033	PROBE TIP 1000mm LP30	2
		SA3010	PRESSURE GAUGE ASSY	1
		060RX324SX	PANEL GAS 75-180 AOTC	1
		SA2000	CLIFTON SAMPLE COOLER	1

Assy No.	Description	Part No.	Description	Quantity
250RG140UK	**RBC2500 GAS BOILER**	12413	GASKET 40mm PN16 IBC	1
		11786	GASKET 25mm PN16 IBC	5
		13037	GASKET 100mm PN16 IBC	3
		13296	BRUSH HANDLE 3250mm	1
		12412	GASKET 32mm PN16 IBC	5
		11824	GASKET 15mm PN16 IBC	3
		13293	BRUSH TUBE 44mmSINGLE	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		12992	GASKET 125mm PN16 IBC	1
		13069	FACIA FULTON FR-HOR 3mm	1
		14590	PUMP WATER CR5-22	1
		14591	BURNER GAS MGN2800X T3D	1
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	PRESSURE GAUGE ASSY	1
		13277	VALVE STOP FLANGED DN32	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		15004	VALVE SAFETY DN50/80 ARI	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		10423	PROBE BRASS 36” LONG	4
		13123	GASKET 65mm PN16 IBC	1

RBC2500 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
250RO140SX	**RBC2500 OIL BOILER**	13274	VALVE DN125 ANGLE/PAT'N	1
		13277	VALVE STOP FLANGED DN32	1
		13242	BURNER OIL NOL 100-38T3L	1
		14465	VALVE GLOBE BRONZE 1/2"	2
		13826	VALVE CHECK 1 1/4"RK41/E	1
		13293	BRUSH TUBE 44mmSINGLE	1
		14590	PUMP WATER CR5-22	1
		15004	VALVE SAFETY DN50/80 ARI	1
		10423	PROBE BRASS 36" LONG	2
		SA3010	PRESSURE GAUGE ASSY	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11824	GASKET 15mm PN16 IBC	3
		13296	BRUSH HANDLE 3250mm	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		13037	GASKET 100mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	5
		13123	GASKET 65mm PN16 IBC	1
		12992	GASKET 125mm PN16 IBC	1
		12413	GASKET 40mm PN16 IBC	1
		12597	PROBE BODY LP30 HIGH	2
		12412	GASKET 32mm PN16 IBC	5
		13069	FACIA FULTON FR-HOR 3mm	1
		13033	PROBE TIP 1000mm LP30	2
		12449	SWITCH DOOR LIMIT DB4	1
		060RO324SX	PANEL OIL 75-180 AOTC	1
		12456	GAUGE PRESSURE 6"200PSI	1

Assy No.	Description	Part No.	Description	Quantity
250RO140UK	**RBC2500 OIL BOILER**	060RO324UK	PANEL OIL 60-180HP AOTC	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13069	FACIA FULTON FR-HOR 3mm	1
		SA3010	PRESSURE GAUGE ASSY	1
		11824	GASKET 15mm PN16 IBC	3
		12413	GASKET 40mm PN16 IBC	1
		12456	GAUGE PRESSURE 6"200PSI	1
		13826	VALVE CHECK 1 1/4"RK41/E	1
		12992	GASKET 125mm PN16 IBC	1
		13037	GASKET 100mm PN16 IBC	3
		SA2000	CLIFTON SAMPLE COOLER	1
		11786	GASKET 25mm PN16 IBC	5
		13277	VALVE STOP FLANGED DN32	1
		13274	VALVE DN125 ANGLE/PAT'N	1
		12412	GASKET 32mm PN16 IBC	5
		12449	SWITCH DOOR LIMIT DB4	1
		15004	VALVE SAFETY DN50/80 ARI	1
		14590	PUMP WATER CR5-22	1
		13123	GASKET 65mm PN16 IBC	1
		13242	BURNER OIL NOL 100-38T3L	1
		13296	BRUSH HANDLE 3250mm	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		14465	VALVE GLOBE BRONZE 1/2"	2
		10423	PROBE BRASS 36" LONG	4

RBC3000 DUAL FUEL (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
300RD140SX	**RBC3000 DUAL FUEL**	11786	GASKET 25mm PN16 IBC	5
		11824	GASKET 15mm PN16 IBC	3
		12413	GASKET 40mm PN16 IBC	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		10423	PROBE BRASS 36” LONG	2
		12444	GAUGE REFLEX CLIFTON 350	2
		12412	GASKET 32mm PN16 IBC	5
		13303	VALVE BLOWDOWN 40mmKBV20	1
		13296	BRUSH HANDLE 3250mm	1
		14588	BURNER D/F MDFL 3300-41	1
		12992	GASKET 125mm PN16 IBC	1
		060RD324SX	PANEL D/F 75-180 AOTC	1
		13069	FACIA FULTON FR-HOR 3mm	1
		14822	VALVE SAFETY DN50 11.2	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13293	BRUSH TUBE 44mmSINGLE	1
		14668	PUMP WATER CR5-26	1
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	PRESSURE GAUGE ASSY	1
		12597	PROBE BODY LP30 HIGH	2
		13123	GASKET 65mm PN16 IBC	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		13037	GASKET 100mm PN16 IBC	3
		13033	PROBE TIP 1000mm LP30	2
		12449	SWITCH DOOR LIMIT DB4	1
		14703	VALVE STOP FLANGED DN40	1

Assy No.	Description	Part No.	Description	Quantity
300RD140UK	**RBC3000 DUAL FUEL**	11824	GASKET 15mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	5
		12413	GASKET 40mm PN16 IBC	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		15004	VALVE SAFETY DN50/80 ARI	1
		10423	PROBE BRASS 36” LONG	4
		13037	GASKET 100mm PN16 IBC	3
		SA3010	PRESSURE GAUGE ASSY	1
		060RD324UK	PANEL D/F 60-180HP AOTC	1
		11786	GASKET 25mm PN16 IBC	5
		13277	VALVE STOP FLANGED DN32	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13296	BRUSH HANDLE 3250mm	1
		12992	GASKET 125mm PN16 IBC	1
		14589	PUMP WATER CR5-24	1
		SA2000	CLIFTON SAMPLE COOLER	1
		14588	BURNER D/F MDFL 3300-41	1
		13303	VALVE BLOWDOWN 40mmKBV20	1

RBC3000 GAS BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
300RG140SX	**RBC3000 GAS BOILER**	SA3010	PRESSURE GAUGE ASSY	1
		060RX324SX	PANEL GAS 75-180 AOTC	1
		12413	GASKET 40mm PN16 IBC	4
		14766	BURNER GAS MGN3300-36T3L	1
		SA2000	CLIFTON SAMPLE COOLER	1
		11824	GASKET 15mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	5
		13277	VALVE STOP FLANGED DN32	1
		14465	VALVE GLOBE BRONZE 1/2”	1
		13293	BRUSH TUBE 44mmSINGLE	1
		12449	SWITCH DOOR LIMIT DB4	1
		14589	PUMP WATER CR5-24	1
		15004	VALVE SAFETY DN50/80 ARI	1
		11786	GASKET 25mm PN16 IBC	5
		10714	COUPLING MALE STUD 1/4”	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		13296	BRUSH HANDLE 3250mm	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		12992	GASKET 125mm PN16 IBC	1
		13033	PROBE TIP 1000mm LP30	2
		10423	PROBE BRASS 36” LONG	2
		13037	GASKET 100mm PN16 IBC	2
		13036	GASKET 80mm PN16 IBC	1
		13069	FACIA FULTON FR-HOR 3mm	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12597	PROBE BODY LP30 HIGH	2
		13239	FLANGE 32mm WELDING S/O	2
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14966	PYROLOG BLOCK 300x600x	4

Assy No.	Description	Part No.	Description	Quantity
300RG140UK	**RBC3000 GAS BOILER**	11786	GASKET 25mm PN16 IBC	5
		14766	BURNER GAS MGN3300-36T3L	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		13277	VALVE STOP FLANGED DN32	1
		13123	GASKET 65mm PN16 IBC	1
		14465	VALVE GLOBE BRONZE 1/2”	2
		SA3010	PRESSURE GAUGE ASSY	1
		13069	FACIA FULTON FR-HOR 3mm	1
		13037	GASKET 100mm PN16 IBC	3
		13293	BRUSH TUBE 44mmSINGLE	1
		13296	BRUSH HANDLE 3250mm	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		10423	PROBE BRASS 36” LONG	4
		15004	VALVE SAFETY DN50/80 ARI	1
		14589	PUMP WATER CR5-24	1
		060RX324UK	PANEL GAS 60-180HP AOTC	1
		12412	GASKET 32mm PN16 IBC	5
		12413	GASKET 40mm PN16 IBC	1
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12992	GASKET 125mm PN16 IBC	1
		13826	VALVE CHECK 1 1/4”RK41/E	1

RBC3000 OIL BOILER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
300RO140SX	**RBC3000 OIL BOILER**	14465	VALVE GLOBE BRONZE 1/2”	1
		10422	PROBE BRASS 22” LONG	3
		12597	PROBE BODY LP30 HIGH	2
		12412	GASKET 32mm PN16 IBC	5
		12413	GASKET 40mm PN16 IBC	4
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12992	GASKET 125mm PN16 IBC	1
		060RO324SX	PANEL OIL 75-180 AOTC	1
		11824	GASKET 15mm PN16 IBC	3
		11786	GASKET 25mm PN16 IBC	5
		13274	VALVE DN125 ANGLE/PAT’N	1
		14589	PUMP WATER CR5-24	1
		13033	PROBE TIP 1000mm LP30	2
		13037	GASKET 100mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		13036	GASKET 80mm PN16 IBC	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		13277	VALVE STOP FLANGED DN32	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13296	BRUSH HANDLE 3250mm	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		15004	VALVE SAFETY DN50/80 ARI	1
		SA3010	PRESSURE GAUGE ASSY	1
		15151	BURNER OIL NOL125-41 T3L	1
		SA2000	CLIFTON SAMPLE COOLER	1

Assy No.	Description	Part No.	Description	Quantity
300RO140UK	**RBC3000 OIL BOILER**	13036	GASKET 80mm PN16 IBC	1
		12992	GASKET 125mm PN16 IBC	1
		13293	BRUSH TUBE 44mmSINGLE	1
		13274	VALVE DN125 ANGLE/PAT’N	1
		13277	VALVE STOP FLANGED DN32	1
		15151	BURNER OIL NOL125-41 T3L	1
		SA2000	CLIFTON SAMPLE COOLER	1
		13037	GASKET 100mm PN16 IBC	2
		13069	FACIA FULTON FR-HOR 3mm	1
		10422	PROBE BRASS 22” LONG	4
		14465	VALVE GLOBE BRONZE 1/2”	1
		14589	PUMP WATER CR5-24	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		15004	VALVE SAFETY DN50/80 ARI	1
		12449	SWITCH DOOR LIMIT DB4	1
		11786	GASKET 25mm PN16 IBC	5
		11824	GASKET 15mm PN16 IBC	3
		13296	BRUSH HANDLE 3250mm	1
		13303	VALVE BLOWDOWN 40mmKBV20	1
		060RO324UK	PANEL OIL 60-180HP AOTC	1
		SA3010	PRESSURE GAUGE ASSY	1
		12413	GASKET 40mm PN16 IBC	4
		12412	GASKET 32mm PN16 IBC	5

RBC1500 OIL BOILER with ECONOMIZER and MOD WATER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
150RG140ESM	**RBC 1500 ECON MOD/WATER**	SA3010	PRESSURE GAUGE ASSY	1
		15005	VALVE SAFETY DN25/40 ARI	1
		SA2000	CLIFTON SAMPLE COOLER	1
		15002	VALVE SAFETY DN32/50 ARI	1
		060RM324SX	PANEL D/F-GAS MODULATING	1
		14181	VALVE CHECK DN32 DCV2	1
		14997	VALVE FEEDWATER DN32 MOD	1
		12444	GAUGE REFLEX CLIFTON 350	2
		12449	SWITCH DOOR LIMIT DB4	1
		12456	GAUGE PRESSURE 6”200PSI	1
		12597	PROBE BODY LP30 HIGH	2
		10418	PROBE BRASS 7” LONG	1
		11824	GASKET 15mm PN16 IBC	1
		13277	VALVE STOP FLANGED DN32	1
		13292	BRUSH TUBE 38mmSINGLE	1
		13294	BRUSH HANDLE 2950mm	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13033	PROBE TIP 1000mm LP30	2
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14589	PUMP WATER CR5-24	1
		12412	GASKET 32mm PN16 IBC	6
		14465	VALVE GLOBE BRONZE 1/2”	2
		14659	PROBE BODY LP20	1
		14999	GAUGE TEMP 4” 0-300 DEGc	2
		14998	GAUGE TEMP 4” 0-120DEGc	2
		10566	GAUGE PRESSURE 4” 250PSI	1
		14661	PROBE PA20 PRE AMPLIFIER	1
		14915	VALVE BALL 1 1/4” PN16	5
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14986	BURNER GAS MGN2000LN M3D	1
		11786	GASKET 25mm PN16 IBC	5
		11824	GASKET 15mm PN16 IBC	3

RBC1850 DUAL FUEL with ECONOMIZER and MOD WATER (SX-Spirax) (UK-Standard)

Assy No.	Description	Part No.	Description	Quantity
185RD140ESM	**RBC 1850 D/F ECON MODU**	14998	GAUGE TEMP 4” 0-120DEGc	2
		12429	BURNER D/F MDFL2505 M3D	1
		14659	PROBE BODY LP20	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		13826	VALVE CHECK 1 1/4”RK41/E	1
		14589	PUMP WATER CR5-24	1
		11825	FLANGE 1/2” PN16/4	2
		11824	GASKET 15mm PN16 IBC	1
		14999	GAUGE TEMP 4” 0-300 DEGc	2
		10566	GAUGE PRESSURE 4” 250PSI	1
		14661	PROBE PA20 PRE AMPLIFIER	1
		14915	VALVE BALL 1 1/4” PN16	5
		14465	VALVE GLOBE BRONZE 1/2”	2
		10418	PROBE BRASS 7” LONG	1
		14997	VALVE FEEDWATER DN32 MOD	1
		SA2000	CLIFTON SAMPLE COOLER	1
		SA3010	PRESSURE GAUGE ASSY	1
		15005	VALVE SAFETY DN25/40 ARI	1
		14181	VALVE CHECK DN32 DCV2	1
		15003	VALVE SAFETY DN40/65 ARI	1
		060RM324SX	PANEL D/F-GAS MODULATING	1
		11824	GASKET 15mm PN16 IBC	3
		12412	GASKET 32mm PN16 IBC	6
		12449	SWITCH DOOR LIMIT DB4	1
		11786	GASKET 25mm PN16 IBC	5
		13037	GASKET 100mm PN16 IBC	3
		13069	FACIA FULTON FR-HOR 3mm	1
		13123	GASKET 65mm PN16 IBC	1
		13209	VALVE DN100 ANGLE/PAT’N	1
		12444	GAUGE REFLEX CLIFTON 350	2
		13292	BRUSH TUBE 38mmSINGLE	1
		12456	GAUGE PRESSURE 6”200PSI	1
		13016	VALVE BLOWDOWN 32mmKBV20	1
		13033	PROBE TIP 1000mm LP30	2
		12597	PROBE BODY LP30 HIGH	2
		13277	VALVE STOP FLANGED DN32	1
		13294	BRUSH HANDLE 2950mm	1

Material & Workmanship Warranty

3 Year Warranty

On the Fulton Boiler Pressure Vessel

Fulton Limited. will repair or replace FoB factory any Fulton pressure vessel which within three (3) years of the date of delivery is found to be defective in workmanship, or material, provided this equipment is operated and maintained by the buyer for the purpose for which it was designed and in accordance with the Manufacturer's Handbook. This Warranty does not cover damage or failures that can be attributed to corrosion, scale or dirt accumulation, or to low water conditions.
This Warranty is good only in the United Kingdom of Great Britain and Northern Ireland.
This Warranty does not include labour or delivery charges of any kind.

Fulton®

Fulton Limited

General Warranty

The Fulton general Guarantee is given in lieu of and in exclusion of any warranty expressed or implied, statutory or otherwise, as to the state, condition, performance, quality or fitness of the goods. Save thereunder we shall be under no obligation or liability of any kind to you in regard to the goods. In the case of new goods manu-factured and supplied by us, we will make good any defect developing therein under proper use within 12 months of delivery, provided that after investigation in our sole discretion we are satisfied that the defect arose from faulty design, materials or workmanship and from no other cause whatsoever.

Defective goods or parts must be returned to us as soon as possible after discovery of the defect, Costs of carriage and of detaching and incorporating parts will be borne by you. ln all cases at the termination of such 12 months all liability on our part will cease.
No liability whatsoever is to be incurred by us in respect of gauge or sight-glasses, packing glands or electric motors or any goods or accessories not of our manufacture. But so far as we are able, we shall let you have the benefit of any guarantee or warranty given to us in respect thereof.

Fulton Limited.
Broomhill Road
Bristol
BS4 4TU

Factory and Export Sales
Telephone 0117 972 3322
Sales and Service: 0117 977 2563
Fax: 0117 972 3358
www.fulton.com