

220/240 Volts ac, 50-60Hz

Heating element 1.5Kw, 6-7 amps depending on voltage.

Continuous operation, with intermittent use.

Electronic system is set to hold 126°C minimum loaded with instruments for 11 minutes (except 210024).

On model 210024 the electronic system is set to hold 121°C minimum, loaded with instruments for 21 minutes.

All cycle times incorporate a 1 minute safety margin.

Nominal operating pressures are 1.05 Bar (15 psi) at 121°C, and 1.6 Bar (23 psi) at 126°C.

Minimum vessel burst pressure is 7.8 Bar (115 psi).

Safety Features

- Pressure release valve
- 2 x lid pressure interlocks
- Gasket offset device (prevents pressure build up if lid not closed correctly)
- Body thermal fuse
- Boil dry detector
- Gasket extrusion slot for pressure relief

End of cycle buzzer.

Bi-metallic air bleed device fitted.

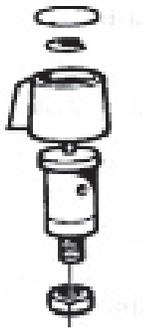
Pressure indicator fitted.

Thermal Jacket fitted to body only {Super Extended model (210030) and Media model (210024)}

Pressure and temperature gauges available on some models (refer to price list).

Note: Before attempting any repairs, read the operating instructions.

STEAM RELEASE VALVE:



Circlip in valve handle

To replace the circlip, remove the decal and push up the valve stem. The circlip may now be removed / replaced

Fig .1

To replace this valve, remove lock nut from inside the lid with a 13mm spanner and lift out valve complete (Fig. 1) Replace the valve with a new one and fit new decal. Ensure cut outs in the aluminium valve body fit into notches on lid moulding.

These locate the valve in position.

Tighten nut to 10Nm.

PRESSURE INDICATOR:

To remove this indicator, locate M16 hexagonal nut in a socket and use the specified tool to undo the red cap.

(For tool kit see 6: Tools and Test Equipment).

GASKET OFFSET DEVICE:

The gasket offset device (GOD spring) is a very important safety device. It ensures that if the lid is incorrectly fitted pressure cannot build up.

The spring is forced away from the gasket by the body lug as the lid is rotated. The spring allows the gasket to seal when the lid and body lugs are in a half lug engagement or better interlock position.

This device must be inspected monthly

To work correctly the spring must be firmly riveted to the lid. It must protrude on the inside of the lid, past the flange by a minimum of 1mm (with gasket removed). See figures 3 and 4.

A new spring cannot be fitted without the correct factory equipment, spring and riveter.

If the spring or rivet is damaged a new lid must be fitted.

Procedure to correct GOD Spring setting

If the limits are outside the specification, then the GOD spring has to be adjusted using long nose pliers.

Twist pliers

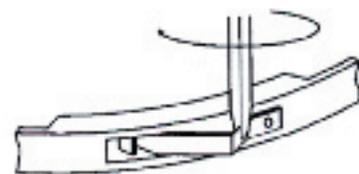


Fig. 2

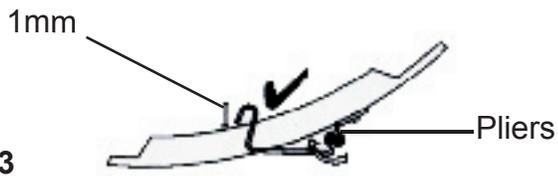


Fig. 3

Ensure the lid is flat and stable and apply the pliers vertically. Locate the pliers onto the back edge of the spring and twist inwards carefully. Do not buckle the spring. Check visually and measure the distance again.

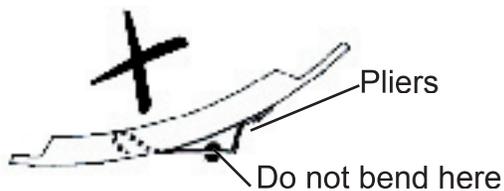


Fig. 4

Remove the lid and gasket to ensure that the spring is protruding from the edge of the flange by 1mm. (Fig. 5.).

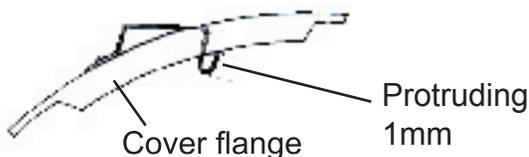


Fig. 5

HANDLES and COVER:

Body handles are held in place by an M5 securing screw.

To remove the lid moulding, first remove the steam release valve as previously described, (Fig 1.)

Unscrew the Hexagonal headed bolt located on the inside of the lid at the centre.

Replace new handles and cover following the reverse of the sequence previously described.

A new seal must always be used when refitting the lid moulding.

AIR BLEED DEVICE:

Located under cover moulding.
(See Exploded View page).

To remove, first take off steam release valve and lid moulding as previously described.

Break off retaining clip and throw away old assembly. (Never re-use assemblies).

Fit new air bleed device with 'O' ring, push into lid hole, place washer over valve steam and force 'push fix' down to lock the device in position. Use special tool to push clip over air bleed device spigot.

(For tool kit see 6: Tools and Test Equipment).

LID GASKET:

Simply extract the old gasket from the lid flanges and replace with a new one.

Only genuine Prestige Medical parts to be fitted.

Note: No lubrication is required for the gasket.

However, if the lid is difficult to put on, vaseline (petroleum jelly) can be lightly smeared around the edge and underside of the body flanges.

BASE MOULDING:

Place body on a flat surface upside down. Then remove the three posi screws, which hold the electronic module in place.

Lift out heatsink to remove module from base moulding. Disconnect the display ribbon cable connector.

Next, remove the earth wires from the body stud, then loosen the nut for the thermistor wire clamp (All M5 size).

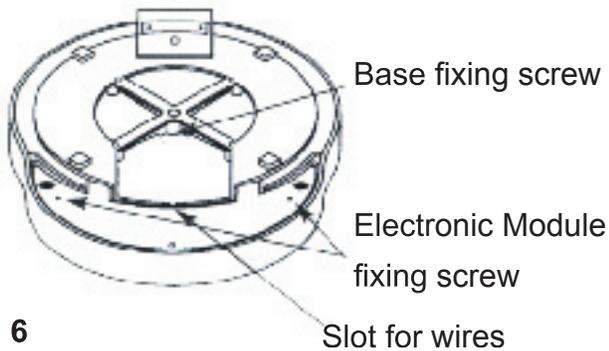


Fig. 6

Disconnect the push on terminals from the wiring of the base and the heater element.

The electronic module is now free (Do not remove the thermistor fixing nuts).

Next, remove the fixing screw M5, in the centre of the base moulding and pull off the base moulding complete whilst feeding the moulding between the moulded support legs.

Replace the base moulding with a new one in reverse order. **DO NOT OVER TIGHTEN SCREW (2.5m torque)**. Check to ensure the silicone caps are in position.

Make sure no wires are trapped between the base and the body.

Ensure the thermal fuse is in contact with the base, making sure the white putty supporting the thermal is replaced.

Refitting is in reverse order of the above.

The M5 nuts should be tightened to 1.4Nm.

Note:

1. Each earth wire must be fixed to the body stud with a nut (2 wires and 2 nuts).
2. An earth insulation test must also be carried out.
3. Apply new feet if necessary.
4. Do not forget to transfer the rating plate.
5. Ensure that the wires between rear mains inlet and module are retained in the location slots provided.

THERMAL FUSES:

The thermal fuse is in the base moulding, to gain access to this part, remove the base as previously described.

The thermal fuse is in the brown wire and must be replaced as a complete assembly with wires and terminals (Fig 7).

Do not replace the fuse only, as this cannot be reconnected to the brown wires without a proper crimping tool. The 220/240 volt autoclave is fitted with a 152 fuse.

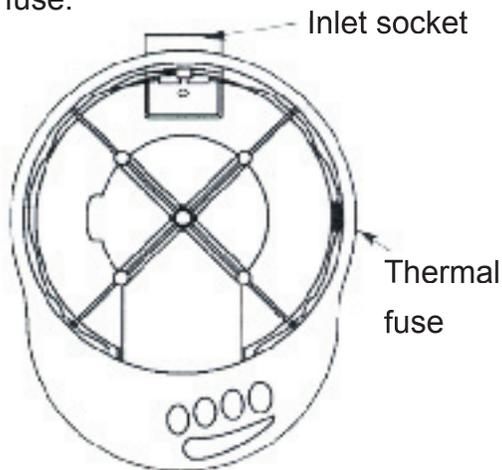


Fig. 7

MAIN INPUT SOCKET:

Remove base as previously described and remove push on terminals from input socket (Fig. 7).

Remove fixing screws from the socket.

Fit new socket and refit base in reverse order.

ELECTRONIC CONTROL (COMPLETE):

Place body on a flat surface upside down. Then remove the three posi screws, which hold the electronic module in place.

Lift up the control module (complete) and disconnect the push on terminals from the wiring of the base and element. (As previously described).

Disconnect display ribbon cable.

Remove thermistor wire cleat.

Remove 2 x M5 nuts on earth stud.

Remove both M5 thermistor pocket retaining nuts.

Control module may now be removed.

Note:

1. Clean away all silicone heat sink compound.
2. When refitting thermistor pocket, apply compound to base of the body centrally between studs. (Small quantity of compound - 3mm bead size). Mazak pocket must be pushed towards element. Excess compound **must not** touch the element - See Fig. 8.

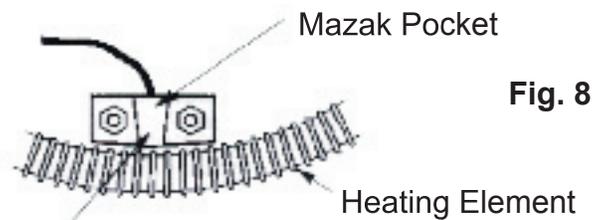


Fig. 8

Position Thermistor pocket to create gap - min 0.5mm; max 1mm - between pocket & element.

3. Refit module in reverse sequence for removal including replacement of white putty under the thermal fuse.
4. The tightening torque for M5 studs is 1.4Nm.
5. After calibration fit new decal.

DISPLAY BOARD:

Follow directions for removing electronic control as per 'base moulding remove'.

Remove the three posi screws, disconnect the ribbon cable and take the display board out.

PRESSURE GAUGE & TEMPERATURE GAUGE

To replace a damaged or faulty pressure gauge, the $\frac{1}{4}$ BSP nut must be removed.

To replace a damaged or faulty temperature gauge the $\frac{3}{8}$ BSP nut must be removed.

The gauge to lid seal is provided by a knife edge machined onto the gauge boss.

The lid must be inspected to ensure there is no damage in this area.

There should be an unbroken indented ring around the hole.

Care must be taken to ensure the knife edge seat on the replacement gauge is not damaged. The gauges must be correctly orientated (nuts to be re-tightened to 35Nm.)

Note: Entry port may be removed by undoing the locknut. Ensure knife edge seal is not damaged and that there is a continuous seal indent in the lid.

THERMOCOUPLE ENTRY PORT ($\frac{1}{4}$ BSP):

This device consists of connector body, locknut (25mm across flats) and a $\frac{3}{8}$ BSP plug (fitted with an 'O' ring).

This assembly utilizes a knife edge seal to lid.

The purpose of the entry port is to enable a qualified engineer to fit a thermocouple pressure probe to check the calibration of the autoclave.

To calibrate, lift the start switch decal at the narrow end, place a potentiometer trimmer into the temperature adjuster (Fig. 9).

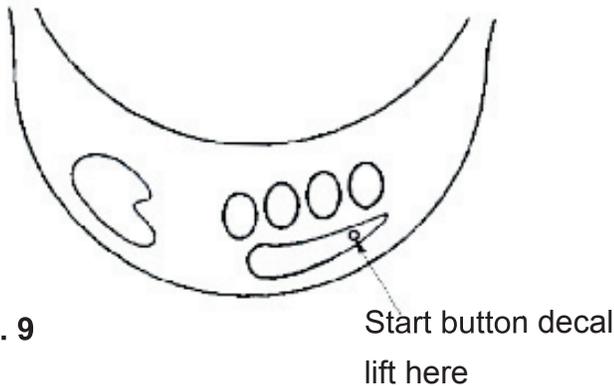


Fig. 9

Start button decal
lift here

Fill to water level with **de-ionized/distilled** water (0.75L). Put on the test lid with pressure gauge and digital thermometer connected. Then open the vent valve.

Fit thermal jacket - if specified for model to be calibrated - plug in and switch on at mains.

Place the furniture appropriate for the model in the chamber.

Press start button.

Note: Pressing the Start Button when the Yellow sterilizing light is illuminated will automatically set the electronic timer to zero and re-start the sterilizing cycle timer.

Orange heating light should be on.

When temperature of 105°C is reached, close valve.

After about 10 minutes from the start time, the sterilizing light should be lit with the heating light pulsing.

When the sterilizing light has been on for 5 minutes the temperature should be stabilized at between:

121°C Autoclave

125.5°C to 126.5°C

126°C Autoclave

128°C to 129°C

If this temperature is too low, turn the pot trimmer clockwise one click at a time to increase the temperature by 0.5 to 1.0°C, allow 1 to 2 minutes for the temperature to stabilize on thermometer.

Press start button after each adjustment to reset timer.

If the temperature is too high, turn the pot trimmer counter clockwise one click at a time, open the steam release valve for 1 to 2 seconds to drop the temperature quickly.

Note: It is important that the temperature is dropped below target value before vent valve is closed.

When the temperature is stable, switch off and vent with the steam release valve for 1.5 minutes until the temperature is 105°C to 110°C, close the valve and switch on and start another cycle.

Check the temperature and pressure are within the tolerance.

FINAL TEST FROM COLD:

Check water level, put furniture in the chamber together with a sterile indication (T. S.T) strip.

Fit product lid, close vent valve and start a cycle. Check the heating light, note the cycle time.

(11 minutes or 16 minutes minimum).

Check that the sterilizing light goes out after cycle complete light comes on.

Buzzer should sound when the cycle ends.

When cooled down, check the TST indicator strip has changed from yellow to purple/blue.

Note:

1. If the autoclave is in an ambient temperature of 0°C or less, it will not start a heating cycle. In the event of this occurring warm up autoclave by moving to another room or add hot water.

(Don't forget to empty and refill with **de-ionized/ distilled** water).