

# OPERATING INSTRUCTIONS

## BS Rectangular Platens

### 37-4860

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## 1 Introduction

These platens are for use with 2000 kN and 3000 kN BS Compression Machines.

The vertical clearance when these platens are fitted is 228 mm. This can be increased to 248 mm by removing the bolt-on spacer from the ram.

The platens are supplied complete with two bolt-on spacers for use when testing blocks 140 mm or 190 mm high.

Dimensions are 445 x 250 x 75 mm.

The platens are supplied **without** gates. Due to the size of these platens, the safety gates will need removing from 2000 kN BS Compression Machines. Extended Safety Gates are available and must be ordered separately. Refer to Section 3.

**Note:** the platens are designed for use with ELE Compression Machines fitted with a 300 mm diameter upper platen, which **is not** removed when attaching the platens.

## 2 Fitting the Platens

2.1 Remove the rear screen by unscrewing the two retaining screws and lifting it out of the locating lugs. Retain all removed parts. If extended safety gates have been ordered, the retaining screws will be required.

2.2 3000 kN Machines: Open the front safety gate.

2000 kN Machines: Remove the front safety gate by unscrewing the retaining screw and removing the small spacer at the lower end of the gate hinge rod. Raise the gate to withdraw it from the lower locating lug and then swing the free end of the gate outward slightly to clear the lug before lowering it until the upper end of the gate hinge rod is free from the interlock switch. Retain all removed parts. If extended safety gates have been ordered, fit the extended front gate in the reverse order employed when removing the standard gate, taking care that the slot in the safety gate hinge rod is engaged correctly in the interlock switch drive pin.

2.3 With the machine ram in its lowest position, remove the existing lower platen.

**Note:** to achieve the maximum vertical clearance of 248 mm (required when testing 215 mm high blocks using fibre-board facing), unscrew and remove the four hexagon socket head cap screws and lift off the 20 mm thick spacer from the top of the ram.

When testing 190 mm high blocks, bolt on the 25 mm thick spacer provided.

When testing 140 mm high blocks, bolt on both the 25 mm and 50 mm thick spacers provided.

2.4 Screw the four lifting rods into the lower rectangular platen (this is identified by the specimen locating lines engraved on the upper surface) and place on the machine ram (or spacers).

2.5 Place spacing material, with a minimum diameter of 150 mm, centrally on the lower platen to leave a vertical clearance to the upper platen of approximately 100 mm.

2.6 Unscrew the lifting rods from the lower platen and fit into the upper platen. With the threaded holes uppermost, position the upper platen onto the spacing material and align with the lower platen. Remove the lifting rods.

2.7 Raise the ram using the hydraulic system until the spacing material is either touching or less than 1 mm from the upper circular platen.

- 2.8 Assemble the 8 spacers, clamp plates, bolts and washers so that the clamp plates are engaged in the groove of the circular platen. Clamp over the top surface of the circular platen if there is no groove (earlier types of platen). Tighten bolts. This does not clamp the two platens together but allows a limited “float” in order that the rectangular platen can align onto the specimen before the spherical seating comes into action.

**Note:** 8 spacers are provided, 4 short and 4 long. See figure 1 for assembly.

- 2.9 Release the hydraulic controls to lower the ram and remove the spacing material.

- 2.9.1 3000 kN Machines: Refit rear screen.

- 2.9.2 2000 kN Machines: If extended safety gates have been ordered, fit the extended rear screen and secure in position using the retaining screws removed in 2.1.

- 2.10 The frame is now ready for operation.

**Note:** for correct functioning of the upper platen, it is important to ensure that a 1 to 2 mm gap exists between the two upper platens in the unloaded condition. This gap must be checked before each test to ensure freedom from debris.

### 3 Optional Extras

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**Extended Safety Gates for 2000 kN BS Frames**, to fit machines with a serial number beginning with 1881, i.e. of the format 1881-X-XXXX.

