

**IMPACT**  
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**2000kN Concrete Machine  
CT305**

Impact Test Equipment Ltd  
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User Guide  
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## **Equipment**

The Equipment comprises the following:-

1. One 2000kN Compression Testing Machine
2. One Motorised Pumping Unit

## **Introduction:**

The 2000kN Compression Testing Machine is simple in construction, easy to operate and versatile for carrying out testing of concrete specimens.

The machine is so designed that it can be loaded up to maximum capacity. The machine is calibrated against NPL tested Proving Ring as B.S. 1610. Safety devices are incorporated in the machine to avoid any sort of damage that can incur due to mishandling the machine or other reasons for operation on 220 volts, single phase, 50 cycles A/C supply.

## **Description:**

The 2000kN Compression Testing Machine consists of a base plate, Steel Cross Head, tightened with tension rods. The Hydraulic jack inside the cover of 2000kN capacity is fixed on the base plate. The lower platen resting centrally on the hydraulic jack, can be removed and spacer can be placed on the Hydraulic Jack to reduce the gap between the upper and lower platens for smaller specimens. The spacers are centrally located by means of centre locating pins. The lower platen can then be kept on the spacer guided centrally by means of centre locating pins.

The upper platen has got spherical seat for the self-aligning action. A cover provided Hydraulic Jack to prevent any dust going inside the cylinder.

The motorised pumping unit is multiple plunger type. The pump is coupled to an electric motor by means of Nylon coupling and is housed in the Pumping Unit.

Automatic cut-off switch has been provided which will switch off the machine to prevent over travel of Jack or in case the load exceeds the maximum load (for which the machine is designed).

The 'OFF-ON' push button and pressure release valves are mounted on the top panel for easy operation. The rate of loading can be controlled by adjusting the knob of Course Flow Control Valve.

The unit is intended for use of 220 volts, 50 Hz and 1 phase supply. The mains can be connected through the mains cord.

**Setting Up & Operation:**

Before despatch oil is drained out of the pump reservoir. After unpacking proceed as follows:-

Choose a firm level base for Compression Testing Machine and adjacent place for the pumping unit. It is not required to be put on the foundation. Position the pumping unit with respect to loading unit and connect the two with connecting pipes supplied.

The oil used for unit is Shell Tellus 37 or equivalent grade Hydraulic Oil can also be used.

Connect the pumping unit to 220 volts, 50Hz, 1 phase supply with the mains cord through mains.

' DO NOT FORGET TO EARTH THE MACHINE'

Now, keep this spacer on the Hydraulic Jack so that the lower platen is near to the upper platen. Switch on the pump after closing the release valves and rotating the coarse Flow Control valves in open position. Open the pressure release valve as soon as the load reaches up to 30% of full capacity of machine. Repeat this process at least 6 times to bleed out the air from the system. When the air is removed from the system adjust the control knob to get a particular specimen.

Remove the spacer so that the gap between two platens is enough to accommodate the desired size of the specimen. Keep the specimen to be tested on the lower platen centrally guided by guidelines. Close the pressure release valves.

**Maintenance:**

Keep the platens greased when not in use to prevent corrosion.

Keep the oil level in the pump reservoir up to mark indicated on the Oil Level indication.

Never operate the pump when there is no oil in the pump.

Never load the machine beyond capacity.