

Microcontroller Based Compression Testing Machine

ZI 2041



Micro Control Based Compression Testing Machine : ZI 2041

BS 1881-115, BS 1610

Operation of Micro Controller based Compression Testing Machine are controlled by an intelligent Pace Rate Controller. This facilities Automatic Pace Rate Control, Data Logging, Data Printing, Load Hold etc. It has a full 3 term PID feed back control which uses a high torque Stepper Motor. It consists of a Loading Unit, an Electrically Operated Hydraulic Pump and an Intelligent Pace Rate Controller. Micro Controller based Compression Testing Machine is available in all models from 50kn to 3000kN capacity. In addition to all the features of Compression Testing Machine with digital display, this machine has automatic pace rate control with the facility of data logging, storage & printing for analysis. The operation of the machine is detailed in the operating manual supplied with the machine. The operation is user friendly with a menu driven interface and prompts for an operator.

LOADING UNIT:

The loading unit is of fully welded construction having a crosshead, base and solid side plates. The hydraulic jack is fixed to the base. the platens of the machine are hardened, ground and polished. The upper platen is provided with self-aligning action. To facilitate testing of various size specimens, suitable size spacers are provided complete with ball seating arrangement.

PUMPING UNIT:

The pumping unit has two speeds. It can pump oil from an oil reservoir, fitted with an oil filler plug-cum-dipstick and a drain plug. The pump is driven by an electric motor which has to be connected to 220 Volts, Single Phase, 50 Cycles A.C. Supply through a junction box provided for the purpose, at the back of the pumping unit. The unit further contains two programmable motors for pace rate control and the opening and closing of the release valve. It is also provided with manual release to be used in case of a power cut or any other emergency.

SPECIAL FEATURES :

1. Automatic Pace Rate Control at a preset value.
2. Automatic Data Logging.
3. Logged Data Printing Facility.
4. Data Storage for upto 150 runs.
5. Multifunctional LCD interface.
6. Menu Driven interface.
7. Auto Shut down facility.
8. Load hold facility.
9. Manual emergency stop button.
10. Peak load record.
11. Bar Graph Display for on-line monitoring of the quality of control.
12. Automatic control of the pump motor.
13. Automatic display of breaking load at the end of the test.
14. Real Time Clock to keep automatic track of the date, time and runs.
15. Calibration checking facility.
16. Support for an additional compression or flexure units (optional).

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