

Efficient. Intelligent. Sustainable

Machine Overview & Technology:

This is a state-of-the-art, servo-controlled Compression Testing Machine, designed for high-precision compression and flexural testing across a wide range of materials. Its intelligent 3-in-1 design integrates multiple load capacities and advanced features for versatile laboratory and quality control applications.



Key Features:

- **Servo Control System:** Provides precision closed-loop control for accurate and repeatable test execution.
- **Auto Load frame Change Valves:** Automated switching between different load frames/capacities, streamlining the testing process and preventing errors.
- **Load Rate / Pace Rate Control:** Fully programmable and highly precise control of loading rate, adjustable from 0.03kn to 20kn/sec.
- **Integrated HMI Screen 10"':** Intuitive Human-Machine Interface for real-time display of test parameters, results, and machine status.

Advanced Testing Capabilities:

- **Cyclic Test:** Standard test method for determining the static modulus of elasticity (MOE) and Poisson's ratio of concrete in compression. As Per **ASTM C469, EN-12390-13 IS:516**
- **Modulus of Elasticity (MOE) Calculation:** Direct determination from acquired load-deformation data.
- **Poisson's Ratio Calculation:** Direct determination from acquired load-deformation data.
- **CMOD Measurement:** Crack Mouth Opening Displacement measured in Millimeter.
- **Specialized Attachments:** Compressometer & Extensometer are included for accurate measure of axial and lateral deformation during cylinder compression test.



Data Acquisition & Output:

- **Direct MPa Result:** Instantaneous display of stress in MPa, eliminating manual calculations.
- **Load vs. Time Graph:** Real-time graphical representation of load application against time displayed on the HMI.
- **Reporting:** Immediate physical Print Out After Every Test for documentation and record-keeping.
- **Software:** Features Integrated Video Recording

Capacity & Application:

Load | Test Type | Designed For

3000 kN | Compression | High strength concrete
 1000 kN | Compression | Low strength concrete
 500 kN | Compression | Cement, mortar, aggregates
 100 kN | Flexural | Controlled beam testing

Technical Specifications:

Model	Max Capacity	Ram Diameter	Ram Travel	Least Count	Max Pressure	Vertical Day Light	Horizontal Clearance
3000 kN	3000 kN	300 mm	50 mm	0.001 kN	400 BAR	410 mm	380 mm
500 kN	500 kN	300 mm	50 mm	0.001 kN	100 BAR	410 mm	380 mm
100 kN (Flexure)	100 kN	165 mm	50 mm	0.001 kN	50 BAR	160 mm	320 mm

ECO SERVO SMART +

Compression Testing Machine (3-IN-1)

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ACCESORIES

AT ADDITIONAL COST



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SCREENSHOTS

