



Applications :

The Autoclave is suitable for conducting accelerated soundness test on cements by the autoclave expansion test requiring constant steam pressure with the correspondent constant temperature.

Construction Details :

It consists of a stainless steel cylinder with a welded heat insulated cover, mounted on a sturdy supporting frame, enclosed in a heat insulated metal housing, attractively finished. The attached control unit encloses sensitive pressure regulator and pressure gauge, power switches and pilot lights for controlling the electric heating units.

Salient Features :

- Suitable to test soundness and expansion of cement Autoclave apparatus, meet requirement as per CI 6.1 and CI 6.4 of IS 4031 (P-3): 1988.
- The capacity of heating unit of autoclave will be such that with maximum load (Water plus cement specimens) the pressure of saturated steam in autoclave will be raised to a gauge pressure of 2.1MPa or absolute pressure of about 2.2 MPa in 1 to 1¼ hour from the time the heat is turned on.
- The automatic pressure control will be capable of maintaining the pressure at 2.1 ± 0.1 MPA corresponding to a temperature of $215.7 \pm 1.7^\circ$ C.
- The autoclave will be so designed that to permit the pressure to drop from 2.1 MPa to less than 0.07 MPA in one hour after the heat supply is cut off.
- The autoclave will consist of S.S. pressure vessel enclosed in heat insulated stainless steel chamber mounted on sturdy frame.
- Fiber glass/Glass Wool as insulating material.
- Silicon rubber lid sealing gasket provided.
- Digital thermometer with least count of 0.1° C with range up to 250° C provided.
- Internal Diameter 150mm x 500mm depth
- A microprocessor based PID controller provided to control the required pressure inside the pressure vessel of autoclave.
- The pressure gauge diameter 115mm with scale range from 0 to 42 kg/cm² with Scale division of 0.4 kg/cm², Accuracy ± 0.2 kg/cm² at the operating pressure of 21 kg/cm²
- Provided with spring loaded safety valve. The Safety valve is set at above 6 to 10% above the maximum pressure of 21 kg/cm² at which the safety valve opens or begins to open.
- Calibration certificate of Pressure gauge and Thermometer will be furnished along with equipment.

Note: Specifications are subject to change.

Technical Specifications	
Overall Dimensions	500 X 700 X 1150 (L X W X D) mm
Inner chamber	15 cm diameter x 45 cm height
Pressure gauge Dia	115mm
Pressure gauge range	0-42 Kg/Cm2 (0 - 4.1 MPA)
Scale Division	0.4 Kg/Cm2 (0.04 MPA)
Gauge accuracy	± 0.2 Kg/cm2 (0.02 MPA)
Operating Pressure	21 Kg/cm2 (2.1 MPA)
Pressure Controller	0 - 21 Kg/cm2 (0.0 - 2.1 MPA)
Pressure Raise Rate	0 - 21 Kg/cm2 (0.0 - 2.1 MPA) in 60 min to 75 min
Pressure Regulator	Provided to regulate the pressure
Air Vent Valve	Provided
Safety Pop Valve	Set at 24 Kg/Cm2 (2.4 MPA)
Thermometer	Supplied (Range : 0 - 250 °C)
Thermometer L.C.	0.1 °C
Gasket	Supplied (1 No)
Power Requirements	1,500 Watts (1.5 Kw)
Operation on	230 V, 50Hz, single phase, A.C. Supply
Accessories	Test bar holder, special rack to hold specimens in vertical position above water level
Certificate	Calibration certificate of Pressure gauge with national traceability
Length comparator	At extra cost (Refer to optional accessories)
Shrinkage bar moulds	At extra cost (Single/Two/Triple Gang) (Refer to optional accessories)

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