



## CEMENT AUTOCLAVE (SIZE- 150 X 450 MM)

### Compliance Standards :

IS 4031:1988 (P-3), ASTM C151, ASTM C490

### 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 :

1. Suitable to test soundness and expansion of cement Autoclave apparatus, meet requirement as per Cl 6.1 and Cl 6.4 of IS 4031 (P-3): 1988.
2. 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.
3. The automatic pressure control will be capable of maintaining the pressure at  $2.1 \pm 0.1$  MPA corresponding to a temperature of  $215.7 \pm 1.7^\circ$  C.
4. 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.
5. The autoclave will consist of S.S. pressure vessel enclosed in heat insulated stainless steel chamber mounted on sturdy frame.
6. Fiber glass/Glass Wool as insulating material.
7. Silicon rubber lid sealing gasket provided.
8. Digital thermometer with least count of  $0.1^\circ$ C with range up to  $250^\circ$ C provided.
9. Internal Diameter 150mm x 500mm depth
10. A microprocessor based PID controller provided to control the required pressure inside the pressure vessel of autoclave.
11. The pressure gauge diameter 115mm with scale range from 0 to 42 kg/cm<sup>2</sup> with Scale division of 0.4 kg/cm<sup>2</sup>, Accuracy  $\pm 0.2$  kg/cm<sup>2</sup> at the operating pressure of 21 kg/cm<sup>2</sup>
12. Provided with spring loaded safety valve. The Safety valve is set at above 6 to 10% above the maximum pressure of 21 kg/cm<sup>2</sup> at which the safety valve opens or begins to open.
13. Calibration certificate of Pressure gauge and Thermometer will be furnished along with equipment.

#### Corporate Office:

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#### Calibration Laboratory:

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GST TIN No. : 24AABCE4018L1ZU  
I.T. PAN No. : AABCE 4018L  
IEC No. : 0813026598 Dt. 04/03/2014  
CIN No. : U29199GJ2004PTC045078  
TAN No. : AHME00572F



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#### Optional accessories at extra cost:

1. Length comparator with dial gauge
2. Length comparator with Digital dial gauge
3. Shrinkage mould - 1 compartment
4. Shrinkage mould - 2 compartment
5. Shrinkage mould - 3 compartment
6. Shrinkage mould - 4 compartment

#### Technical Specification

•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/Cm <sup>2</sup> (0 - 4.1 MPA)
•Scale Division	: 0.4 Kg/Cm <sup>2</sup> (0.04 MPA)
•Gauge accuracy	: $\pm 0.2$ Kg/cm <sup>2</sup> (0.02 MPA)
•Operating Pressure	: 21 Kg/cm <sup>2</sup> (2.1 MPA)
•Pressure Controller	: 0 - 21 Kg/cm <sup>2</sup> (0.0 - 2.1 MPA)
•Pressure Raise Rate	: 0 - 21 Kg/cm <sup>2</sup> (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/Cm <sup>2</sup> (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)
•Weight approx	: 98 kg (unpacked)

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