



EIE INSTRUMENTS PVT. LTD.
(An ISO 9001:2015 Certified Company)

WATER SENSITIVITY TEST APARATUS OF ASPHALT



1) Marshal stability 100 kN capacity

SALIENT FEATURES :

1. Alphanumeric 4 line display indicating: Load, displacement, status, peak value of flow and Load.
2. Digital display to measure the load up to 10000 Kg /100 KN, Least Count 0.1 kg/0.001KN
3. Displacement resolution: 0.01mm
4. Load and displacement both at the single screen. No need for the flow meter and Proving ring.
5. Only one person needed for test
6. Hassle free operation, no need of TARE.
7. Load cell can also be calibrated using standard reference
8. Panel cut out size 92 x 188 mms.
9. Facility to read in Kg as well as KN
10. Peak hold facility to read load and flow value until reset
11. Auto cutoff at the pre decided load.
12. With safety cut off on lower and upper limit
13. Auto internal calibration facility.(external calibration has to be done after a year)
14. Backlight in the indicator to observe the reading clearly even in the dark.
15. Auto reverse on completion of test
16. Fully powder coated in 2 tone color for aesthetic finish
17. With PC/printer interface with software for direct printout of calculated results (at extra cost)

With following accessories :

1. Marshal Mould, cylindrical 6" dia.: 3 Nos.
2. Base plate: 3 Nos.
3. Collars 6.1/8" dia.: 3 Nos.
4. Marshal Compaction hammer, 10.2kg weight and 45.7cm drop: 2 Nos.
5. Specimen extractor: 1 No.
6. Compaction pedestal complete with specimen holder: 1 No.

7. Breaking head assembly, complete with gauge disc and flow meter pedestal: 1 No.
8. Load transfer bar: 1 No.
9. 100 KN Capacity Loading Unit motorized with uniform vertical movement of 5.08cm/min. Suitable for operation on 230 volts AC supply: 1 No.

AT EXTRA COST:

1. RS 232 interface with software with following features@ Rs.20000.00
2. Direct analytical reports on computer
3. Auto generation of load/time graph.
4. Auto calculation of average of 3 readings for flow and load
5. Two way communication facility - Can operate the machine through PC
6. Name of Issuing Lab and customer name can be inserted
7. Auto date and time of testing
8. Transfer of result to PC automatically

Essential Instruments Available at extra cost

1. Filter Paper - Pack of 100 circles
2. Electronic Weighing Balance
3. Automatic Marshal Mould compactor with Digital Counter
4. Constant Temperature Waterbath with Digital Temp. display
5. Sample extractor - Hydraulic or Mechanical

Note: Use of 1 KVA single phase servo controlled stabilizer is essential to protect the machine against voltage fluctuations. Warranty voids in case of any damage due to power fluctuation.

Data and design subject to change due to continuous R&D

Click here for working video : <https://www.youtube.com/watch?v=Qe8GuAkU-5c&t=165s>

2) Indirect tensile strength attachment for 4" & 6"

Compliance Standards:

ASTM D6931, AASHTO T283

Principle:

The Indirect Tensile Strength is determined by measuring the ultimate load to failure of a specimen, which is subjected to a constant deformation rate of 50.8 mm/minute on its diametrical axis according to ASTM D6931.

Apparatus details:

The LOTMAN Breaking head assembly with Guide rods and loading strips will be supplied. The Marshal Machine, water bath, Oven etc. required for test will not be part of this supply.

3) Vacuum desiccator with vacuum pump

DESICCATOR - BOROSIL GLASS - VACUUM 300 MM with vacuum pump of rocker make.

4) Deep freezer of -40°C.

Technical Specifications

1. CFC free refrigeration system.
2. Heavy duty Castor wheels for easy movement
3. Control of temperature within 3°C of set temperature.
4. Duly Polished 304 Grade Stainless Steel inner chamber.
5. Outer made of Mild Steel with powder coated.
6. Fin & Tube type air-cooled condenser.
7. Double walled main door **(interior lined with stainless steel)** with sub doors.
8. Sub doors made of stainless steel sheet.
9. Gasket system for leak proof.
10. Heavy duty hinges.
11. Lock with key for door.
12. Polyurethane Insulation (PUF).

Alarm Configuration

1. Audio Alarm for high and low temperature values
2. Door Open alarm
3. Power failure alarm

Technical Specification

•Working Chamber Size	:	90 x 43 x 45 mm (H x W x D)
•Chamber volume	:	174 Liters
•Inner chamber	:	Fabricated from Stainless Steel Material S.S. - 304 Grade
•Exterior body	:	Fabricated from Mild Steel material
•Paint	:	Powder coating in attractive shades
•Temperature Range	:	-20°C to -40°C
•Temperature controller	:	Microprocessor based Auto-Tune PID Temp controller
•Temperature sensor	:	PT-100 sensor
•Temperature Resolution	:	0.1 °C
•Temperature Accuracy	:	± 3 °C
•No. of trays	:	03 Numbers adjustable trays
•Sub doors	:	Stainless Steel Sub doors
•Main door	:	Double walled main door (With interior stainless steel lining)
•Mobility	:	On Castor wheels

5) Constant temperature water bath to cure samples at 60°C.

Double walled water bath. Inner chamber is made of mirror polished stainless steel material S.S. - 304 Grade, Exterior body is fabricated from Mild steel material, which is powder coated in attractive shades. Temperate ranges from : 5 °C above ambient to 100 °C, Temperature accuracy will be of ± 0.5 °C. Detailed specification as follows:

Salient Features:

- The bath is so designed that it can accommodates at least **6 Nos. of 6" diameter (150mm) marshal moulds** and breaking head assembly on heavy platform.
- Supplied complete with handle to lift or place the moulds easily before or after completion of test
- Working size - **22" X 16" X 6" (W X D X H)**

Salient Features:

- Double walled water bath
- Inner chamber is made of mirror polished stainless steel material S.S. - 304 Grade, **Fully Argon welded**
- Exterior body is fabricated from Mild steel material, which is powder coated in attractive shades.
- The gap between the inner chamber and exterior body is filled with glass wool insulation to prevent the thermal heat loss
- Temperature inside the bath is controlled by Microprocessor based Auto-tune Digital temperature controller cum indicator.
- Temperate ranges from : 5 °C above ambient to 100 °C,
- Temperature accuracy will be of ± 0.5 °C
- The bath is also fitted with a constant speed stainless steel stirrer to maintain uniform temperature distribution within the bath chamber.
- The bath is so designed that it can accommodates at least 6 Nos. of 6" diameter marshal moulds and breaking head assembly on heavy platform.

Technical Specification

•Type	: Double walled water bath
•Inner chamber	: Made of mirror polished stainless steel material S.S. 304 Grade
•Exterior body	: Fabricated from Mild steel material, which is powder coated in attractive shades
•Insulation	: 75 mm glass wool insulation to prevent the thermal heat loss
•Temperature controller	: Microprocessor based Auto tune Digital temperature controller cum indicator.
•Temperature Range	: 5 °C above ambient to 100 °C
•Temperature accuracy	: ± 0.5 °C
•Temperature Display	: LED Display
•Motorized Stirrer	: To maintain uniform temperature distribution within the bath chamber.
•Stirrer material	: Fabricated from S.S. 304 material to prevent rusting
•Heater Types	: Booster Heater & Permanent Heater
•Heater watts	: 1000 Watts x 02 Nos.
•Drainage	: Fitted with drain valve to release the chamber water after completion of test.
•Power Consumption	: 2.0 Kw
•Operates on	: 230 Volts, 50 Hz, Single Phase, AC Supply

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