



# SUZUKI INSTRUMENTS

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## STANDARD PENETROMETER - FULLY AUTOMATIC - (ASTM D5, ASTM D217)-

Supplied with standard accessories to perform the Bitumen Penetration test. The Instrument can be used to perform penetration test on a wide variety of materials such as grease, petroleum, Wax, Polish, foodstuff, rubber asphalts and Pharmaceutical creams with the appropriate penetration tools and Cups, which are available at extra cost on demand

### **Complies to following International Standard:**

ASTM D5, ASTM D217, ASTM D937, ASTM D1321

### **Silent Features:**

- Fully Automatic operational Design
- Compact design and rugged construction ensures long service life and facilitates easy transport for field applications.
- Touch screen display
- **Opto-electronically depth detection & measurement through imported Opto-electronic sensor**
- Automatically timed programmable penetration measurements - Preset penetration time at factory (Operator can also enter the user defined penetration interval through touch screen)
- Motorized placement of penetrator on sample surface
- Penetrometer arm automatically comes back to its home position at the end of 5 seconds penetration test
- In-built Facility to tare and reset the measurement results
- **Display resolution of penetration depth in tenths of units (0.01mm)**
- Magnifying lens for adjusting needle tip/cone tip exactly on the sample surface
- Low voltage Illuminator mounted on flexible arms to assist an operator during testing
- Built-in spirit level and leveling screws to ensure proper alignment
- Micrometer differential gearing mechanism for fine movement of head
- Weight of the Needle/Cone and plunger match the criteria of ASTM and IP requirements.
- The base of the instrument is also user adjustable - It can be lifted up or down with the jack provided at the bottom.

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- The Opto-electronic sensor installed within the instrument detects the penetration d in 10th of millimeter (0.01mm)
- The penetration value is measured and indicated on digital LCD display
- Supplied complete with Needle/cone, container and applicable weight

**Supplied complete with following Accessories in case of Bitumen penetration:**

- Weight of 50 Grams **1 No.**
- Penetration cup of 55mm diameter x 35mm height **1 No.**
- Transfer dish **1 No.**
- Penetrometer Needle **1 No.**
- Needle Holder  $47.5g \pm 0.05g$  **1 No.**
- Thermometer ASTM 17C (+19 to 27 °C) **1 No.**

**OR**

**Supplied complete with following Accessories in case of Grease penetration:**

- Sample container of 76.5mm dia x 63.5mm height **1 No**
- Transfer dish **1 No**
- Penetrometer Hollow 90° brass cone, Highly polished stainless steel tip **2 Nos**

**Note:**

Please specify the intended penetration test at the time of placing the order. Instrument will be supplied with corresponding penetration accessories only.

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BITUMEN PENETROMETER

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## STANDARD / DIGITAL PENETROMETER - FULLY AUTOMATIC - (ASTM D5, ASTM D217)-

Supplied with standard accessories to perform the Bitumen Penetration test. The Instrument can be used to perform penetration test on a wide variety of materials such as grease, petroleum, Wax, Polish, foodstuff, rubber asphalts and Pharmaceutical creams with the appropriate penetration tools and Cups, which are available at extra cost on demand

### Complies to following International Standard:

ASTM D5, ASTM D217, ASTM D937, ASTM D1321

### Silent Features:

- Fully Automatic operational Design
- Compact design and rugged construction ensures long service life and facilitates easy transport for field applications.
- Graphical display
- **Opto-electronically depth detection & measurement through imported Opto-electronic sensor**
- Automatically timed programmable penetration measurements - Preset penetration time at factory (Operator can also enter the user defined penetration interval through touch screen) In-built Facility to tare and reset the measurement results
- **Display resolution of penetration depth in tenths of units (0.01mm)**
- Magnifying lens for adjusting needle tip/cone tip exactly on the sample surface
- Low voltage Illuminator mounted on flexible arms to assist an operator during testing
- Built-in spirit level and leveling screws to ensure proper alignment
- Micrometer differential gearing mechanism for fine movement of head
- Weight of the Needle/Cone and plunger match the criteria of ASTM and IP requirements.
- **The penetration time is controlled and indicated on Digital LCD display with least count of 0.1 second.**
- The Opto-electronic sensor installed within the instrument detects the penetration depth in 10th of millimeter (0.01mm)
- The penetration value is measured and indicated on digital LCD display
- The average of three samples will automatically calculated and given one number only
- Saves last 50 average readings
- Supplied complete with Needle/cone, container and applicable weight



### Supplied complete with following Accessories in case of Bitumen penetration:

- Weight of 50 Grams 1 No.

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- Penetration cup of 55mm diameter x 35mm height **1 No.**
- Transfer dish **1 No.**
- Penetrometer Needle **1 No.**
- Needle Holder 47.5g  $\pm$  0.05g **1 No.**
- Acrylic transferent water bath to place the sample (non controllable) **1 No.**

OR

**Supplied complete with following Accessories in case of Grease penetration:**

- Sample container of 76.5mm dia x 63.5mm height **1 No**
- Transfer dish **1 No**
- Penetrometer Hollow 90° brass cone, Highly polished stainless steel tip **2 Nos**

Digital Penetrometer, Automatic Penetrometer Exported in Russia, Bangladesh, Nepal, Bhutan, Sri Lanka, Indonesia, Taiwan, South Africa, Kenya, Morocco, Egypt, Malaysia.

**Note:**

Please specify the intended penetration test at the time of placing the order. Instrument will be supplied with corresponding penetration accessories only.

Please link on the link to watch the video of this instrument. <https://www.youtube.com/watch?v=WEWXyfbKpn0>

**Technical Specification**

•Measuring Range	: 0-40 mm
•Timer Range	: 0-99,999 Seconds
•Overall Dimensions	: 330 X 390 X 790(L X W X D) mm
•Operation on	: 230 Volts, 50 Hz, Single Phase, AC Supply
•Weight (Approx.)	: 28 kg

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## STANDARD PENETROMETER FOR BITUMEN - AUTOMATIC DIGITAL TIMER - BASIC MODEL - DIAL GAUGE



*Bitumen Penetrometer*

### Compliance Standards

IS 1203, IS 1448. ASTM D5

### Details

The apparatus consist of a cast aluminum base with an iron stand on which moves an aluminum arm. A 6" dial is fixed on this arm and a brass chromium plated rod slide through the lower portion of the arm. A needle with weights is fitted to this rod. The dial is graduated from 0-400 in one tenth millimeter sub division. Supplied complete with adjustable needle holder, penetration needle sample container, transfer dish and weight of 50 gms. With automatic DIGITAL timer with electrical arrangement.

### Optional Accessories at Extra cost

1. Low Temp.waterbath to maintain 25 deg C
2. Digital readout of Penetration Value (In stead of Analog Dial Gauge)
3. Penetration cup 55 mm dia X 70 mm depth
4. Penetration cup 70 mm dia X 45 mm depth
5. Thermometer ASTM 17C (+19 to 27 °C)

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## STANDARD PENETROMETER FOR SOAP - AUTOMATIC DIGITAL TIMER - WITH GEARED HEIGHT ADJUSTMENT & DIAL GAUGE

**Complies to following International Standard:**

ASTM D5

**Test Objective:**

The test objective is to evaluate the hardness/firmness of Soap using a Needle according to ASTM methods. A standard needle is released from a Penetrometer and allowed to drop freely into the sample for 5 seconds (or a different specified interval) at constant temperature.

**Silent Features:**

- Compact design and rugged construction ensures long service life and facilitates transport for field applications.
- Sturdy cast iron base provides excellent support.
- Built-in spirit level and leveling screws ensure proper alignment during testing.
- Supplied with Needle (2.5 gm), weight (50 gm) and Digital time controller



**Brief construction details:**

- The apparatus consists of a cast aluminum base with an iron stand on which moves an aluminum arm.
- A 6" dial is fixed on this arm and a brass chromium plated rod slide through the lower portion of the arm.
- A Needle with plunger is fitted to this rod.
- The dial is graduated from 0-400 in one tenth millimeter sub division.
- Weight of the Needle and plunger match the criteria of ASTM requirements.
- The base of the instrument is also user - adjustable.
- It can be lifted up or down with the jack provided at the bottom.
- The penetration time is controlled and indicated on Digital Timer Panel with least count of 0.1 second.
- The automatic digital timer and electrical arrangement, which on push of a button, automatically releases the plunger with Needle by a magnetic device.
- The penetration value is measured and indicated on dial gauge.

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- Dial Gauge measures the penetration distance in 1/10th mm accuracy.

**Supplied complete with following Accessories:**

1. Digital time controller with auto magnetic clutch release mechanism on push of a button. 1 No.
2. Having timing range 0.1-9999.9 seconds (No need of stop watch).
3. Weight of 50 grams - 1 No.
4. Penetrometer Needle -1 No.
5. Plunger Assembly 47.5 grams
5. Thermometer ASTM 17C (+19 to 27 °C)-1 No.

**Note :** The Constant Temperature waterbath to maintain the constant temp. can be supplied at an extra cost.

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