

BITUMIN PENETERO METER

BE 87

The bitumen penetration apparatus, also known as a penetrometer, is a laboratory instrument used to measure the consistency (hardness or softness) of bituminous materials like asphalt or bitumen. This test determines how deeply a standard needle penetrates into a bitumen sample under specified conditions of load, time, and temperature, providing a penetration value in tenths of a millimeter (0.1 mm units). It's essential for classifying bitumen grades, ensuring suitability for road construction, and assessing performance in different climates—e.g., softer bitumen (higher penetration) for cold weather to prevent cracking, and harder grades for hot conditions.

Grades bitumen based on penetration values (30/40, 60/70, 80/100), as per standards like ASTM D5, AASHTO T49, and IS 1203. Values range from 40–300, grouped into hardness categories. Tests pure bitumen, oxidized bitumen, and residues from emulsions; also used for tars, waxes, greases, and soils

BALAJI ENTERPRISES

(with adaptations). Not suitable for very soft, low-viscosity materials like tars.

FOLLOWING STANDARD

IS 1448 (Part 60), IS 1203, ASTM D 5, IP 49, ASTM D1321, ASTM D 2884, ASTM D1403, IP 310, BS 1377, BS:2000-(Part 49), BS:4691, BS:4698, ASTM D 937, ISO 2137, IP 50, IP 179, ASTM D 217, AASHTO T49

DISCRIPTION

Base	Accurately machined aluminum with a built-in spirit level and adjustable feet for leveling over a wide sample area.
Vertical Rod and Head Support	Adjustable height for positioning the needle above the sample.
Rack & Pinion Assembly	Allows fine adjustments of the needle or cone tip to the sample surface.
Plunger and Needle	Stainless steel needle (2.5g) with a brass ferrule; total weight with plunger is 50g for bituminous tests (100g load applied).
Dial Gauge or Digital Timer	For measuring penetration depth and timing the 5-second penetration period.
Weights	Additional 50g and 100g weights for varying loads
Sample Containers	Aluminum dishes (55mm diameter x 35mm or 53mm height) for holding the bitumen sample.

Two models are available Manual models feature a slipping clutch for easy resetting, while automatic versions use a button release with a digital timer.

BE 87-01	Manual models feature a slipping clutch for easy resetting,
BE 87-02	While Electric versions use a button release with a digital timer.
BE 87-03	Fully automatic bitumen Pentrometer

BALAJI ENTERPRISES

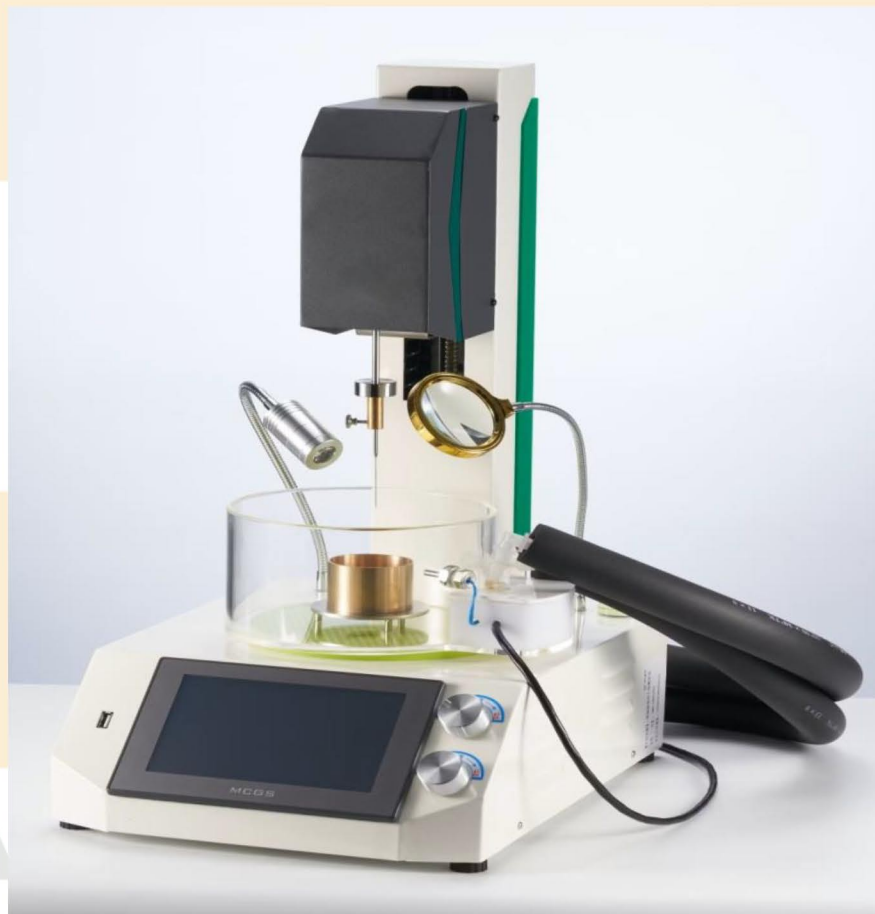
BE 87-01



BE 87-02



BE 87-03



BALA