

BULK DENSITY BASKET

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A bulk density basket (also commonly referred to as a density basket or aggregate density basket) is a specialized laboratory apparatus used in materials testing, particularly in civil engineering and construction, to measure the bulk density, specific gravity, and water absorption of coarse aggregates, concrete, or bituminous mixtures. It helps determine the mass per unit volume of materials, which is essential for calculating yield, cement content, air content, and overall mix proportions in concrete production.

FOLLOWING STANDARD

ASTM C127 or IS 2386.

Design and Specifications

Typical features of a bulk density basket include:

- **Material:** Constructed from brass or galvanized iron (GI) frame with stainless steel wire mesh (e.g., No. 8 mesh size, 6.3 mm or 4.75 mm openings) to allow water drainage while retaining aggregates.
- **Dimensions:** Approximately 20 cm diameter x 20 cm height (capacity around 3–30 liters depending on model).
- **Handle:** Bail-type or suspension handle for easy immersion in water and attachment to a balance or frame.
- **Accessories:** Often used with a specific gravity frame, electronic balance, and watertight tank for submerged weighing.

Component	Description	Typical Specs
Basket Body	Wire mesh for drainage	Stainless steel, 6.3 mm mesh
Frame/Handle	For suspension	Galvanized steel, rugged construction
Capacity	Volume for testing	3 L, 15 L, or 30 L variants
Weight	Overall apparatus	25–30 kg (including frame)

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