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DIGITAL BLAINE AIR PERMEABILITY APPARATUS AZA0798

The Digital Blaine Air Permeability Apparatus AZA0798 is a high-precision laboratory instrument used to determine the fineness of cement by measuring its specific surface area using the air permeability method.

This advanced digital model enhances testing accuracy, repeatability, and operational efficiency, making it ideal for cement plants, quality control laboratories, research institutions, and academic facilities.

Key Features

- Digital display for time and vacuum pressure readings
- Integrated electric vacuum pump for independent operation
- High accuracy with $\pm 2\%$ fineness error margin
- Programmable digital timer for precise test control
- User-friendly interface with minimal training requirement
- Compact and durable powder-coated construction
- Reduced operator error compared to manual systems

Applications

- Cement manufacturing plants (QC & R&D)
- Construction site laboratories
- Material testing laboratories
- Academic and research institutions
- Quality assurance departments





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Working Principle

The apparatus determines cement fineness by measuring the resistance to airflow through a compacted cement bed.

Procedure:

1. Prepare and compact the cement sample in the permeability cell.
2. Pass air through the sample using a controlled vacuum.
3. Measure the time taken for air to flow between two pressure levels.
4. Calculate the specific surface area (cm^2/g) using standard formulas.

Standards & Compliance

- IS 4031 (Part 2) – Determination of Fineness of Cement by Air Permeability Method
- ASTM C204 – Fineness of Hydraulic Cement by Air Permeability
- EN 196-6 – Methods of Testing Cement

Advantages

- Accelerated testing compared to conventional methods
- High accuracy and repeatability
- Automated control reduces operator dependency
- Ensures compliance with international standards
- Enhances reliability of cement quality assessment

Applications

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TECHNICAL SPECIFICATION

Parameter	Specification
Model	AZA0798
Test Range	1500 – 6000 cm ² /g
Display	Digital (Timer & Vacuum Pressure)
Accuracy	±1 sec (time), ±2% (fineness value)
Vacuum Source	Built-in Electric Pump
Timer	Digital, Programmable
Sample Type	OPC, PPC, PSC, Fly Ash Blends
Power Supply	230V, 50 Hz, Single Phase
Construction	Powder-coated Steel Body
Standards Compliance	IS 4031 (Part 2), ASTM C204, EN 196-6

Standard Supply

- Digital Blaine Apparatus Unit
- Blaine Flask
- Perforated Disc & Plunger
- U-Tube Manometer
- Filter Papers
- Power Cable
- User Manual