



**UNIVERSE**

## **MUD BALANCE AZA0814**

The AZA0814 Mud Balance is a precision-engineered instrument designed to determine the density (specific gravity) of drilling muds, cement slurries, bentonite fluids, and other semi-liquid suspensions.

With a measuring range of  $0.8$  to  $2.7 \text{ g/cm}^3$ , this device is essential for maintaining proper fluid density in drilling operations, geotechnical investigations, and construction quality control. Accurate density control ensures borehole stability, proper cuttings transport, and safe operational conditions.

The AZA0814 features a stainless steel calibrated beam, precision sample cup with vented lid, knife-edge fulcrum, and a sliding counterweight system, ensuring reliable and repeatable measurements in both laboratory and field environments.



### **Key Features**

- Measurement of drilling mud weight in oilfield and piling operations
- Density determination of bentonite and polymer slurries
- Cement slurry and grout density testing
- Quality control in geotechnical and civil engineering projects
- Borehole and trench stability monitoring
- Laboratory testing of semi-liquid materials and suspensions



## **Working Principle**

The AZA0814 operates on a beam balance principle:

- A known volume of fluid is filled into the sample cup.
- The beam is balanced using a sliding counterweight.
- The position of the counterweight directly indicates the fluid density (specific gravity).

## **Product Features & Benefits**

- High Accuracy Measurement

Calibrated beam with precise graduations ensures reliable density readings.

- Wide Measurement Range

Suitable for various fluids from low-density drilling muds to heavy slurries.

- Precision Sample Cup with Vented Lid

Ensures exact volume filling and eliminates air entrapment errors.

- Knife-Edge Fulcrum System

Provides stable and sensitive balancing for accurate results.

- Sliding Counterweight Mechanism

Enables fine adjustment and easy reading of density values.

- Built-in Leveling System

Spirit level and adjustable screws ensure proper horizontal alignment.

- Durable Stainless Steel Construction

Corrosion-resistant and suitable for harsh field conditions.

- Portable Design with Carrying Case

Ideal for both laboratory and on-site testing.



## TECHNICAL SPECIFICATION

Parameter	Details
Model	AZA0814
Equipment Type	Mud Balance / Density Measurement Device
Measuring Range	0.8 – 2.7 g/cm <sup>3</sup>
Beam Material	Stainless Steel (Calibrated & Graduated)
Sample Cup	Stainless Steel with Vented Lid
Fulcrum	Knife-Edge Pivot
Counterweight	Sliding Weight with Reading Cursor
Leveling System	Built-in Spirit Level with Adjustable Screws
Calibration	Factory Calibrated (Direct Reading)
Storage	Wooden Carrying Case
Application	Slurry & Drilling Fluid Density Testing