Mud Balance

LT-CE0042 | Density measurement by fixed volume and mechanical balance

Graduated arm • Movable rider • Built-in spirit level



550 mm

APPARATUS LENGTH

1 kg

APPARATUS WEIGHT

Field and laboratory use • No electrical connection required

LT-CE0042

Photograph and Measuring Components

Sample cup, spirit level, movable rider and carrying case

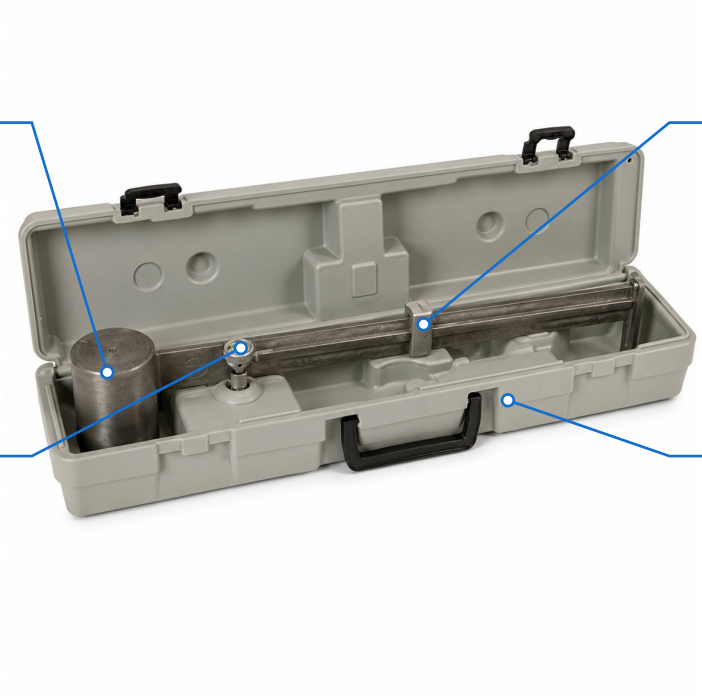
LT-CE0042 measures drilling-fluid density by mechanical balance. Place the filled constant-volume cup and arm on the support, adjust the rider until the arm is level, then read density from the graduated arm.

SAMPLE CUP

The constant-volume cup holds the specimen. Close the lid, remove excess fluid and clean the outside.

SPIRIT LEVEL

A centred bubble indicates horizontal balance. Take the reading after equilibrium is established.



MOVABLE RIDER

Slide the rider along the arm to establish balance. Use the same reading edge for each measurement.

CARRYING CASE

The case shown protects the apparatus during transport. Available separately as LT-CE0042/1.



Sample cup and spirit level detail

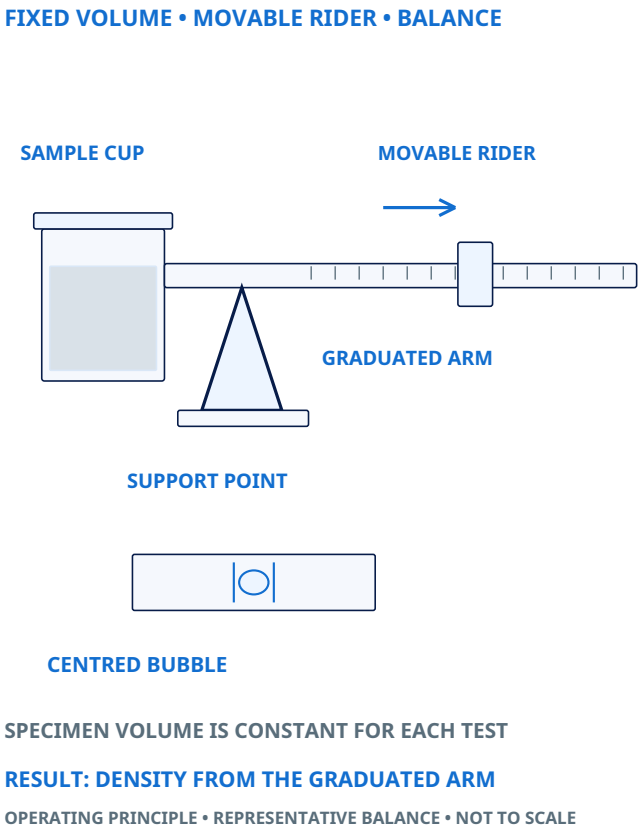


Graduated arm and movable rider detail

LT-CE0042

From Mechanical Balance to Density

Fill the cup • Balance the arm • Read density



Fill the Sample Cup

Fill the cup completely. Fit the lid without leaving air voids; remove overflow and clean the exterior.

Establish Horizontal Balance

Place the arm on its knife-edge support. Slide the rider until the spirit-level bubble is centred.

Read and Record Density

Read the scale once balance is established. Record the density unit, specimen identity and temperature.

The mass of the fixed-volume specimen is balanced by the position of the movable rider. The graduated arm converts that position directly into density. Air voids inside the cup and residual fluid on its exterior can affect the result.

Filling and Balance Checks

Prepare the specimen according to the selected procedure. Fill the cup completely and seat the lid correctly. Reduce air bubbles in the specimen as prescribed by the method.

Keep the support point, arm and rider clean. Do not read the scale before the bubble is centred. Check apparatus verification and calibration requirements before measurement according to the selected procedure.

Drilling-Fluid Method Selection

API RP 13B-1 covers field testing of water-based drilling fluids; API RP 13B-2 covers field testing of nonaqueous-based drilling fluids. Density is among the properties evaluated by these methods.

Choose the procedure appropriate to the specimen. Report the result with its unit and temperature. After measurement, clean and dry the cup, lid and arm; protect the apparatus during transport.

LT-CE0042

Technical Specifications and Measurement Control

LT-CE0042 • Mechanical mud balance

Specification	Technical Information
Product Code	LT-CE0042
Measured Property	Fluid density
Measuring Principle	Constant volume and mechanical balance
Sample Cup	Constant-volume cup with lid
Balance Adjustment	Movable rider
Horizontal Position Check	Built-in spirit level
Support Arrangement	Knife-edge support
Result Reading	Directly from the graduated arm
Power Requirement	No electrical connection required
External Dimensions	550 × 110 × 100 mm
Weight	Approximately 1 kg
Optional Accessory	LT-CE0042/1 • Carrying case

Fixed Volume, Clean Exterior and Level Balance

Fill the cup completely; remove air voids and fluid on the exterior. Read the scale after centring the bubble. Record density together with the unit used.

From Specimen to Density Result

01
Fill
Fill the cup completely and fit the lid.

02
Clean
Remove overflow and clean the exterior.

03
Balance
Slide the rider and centre the bubble.

04
Read
Read density from the scale and record it.

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