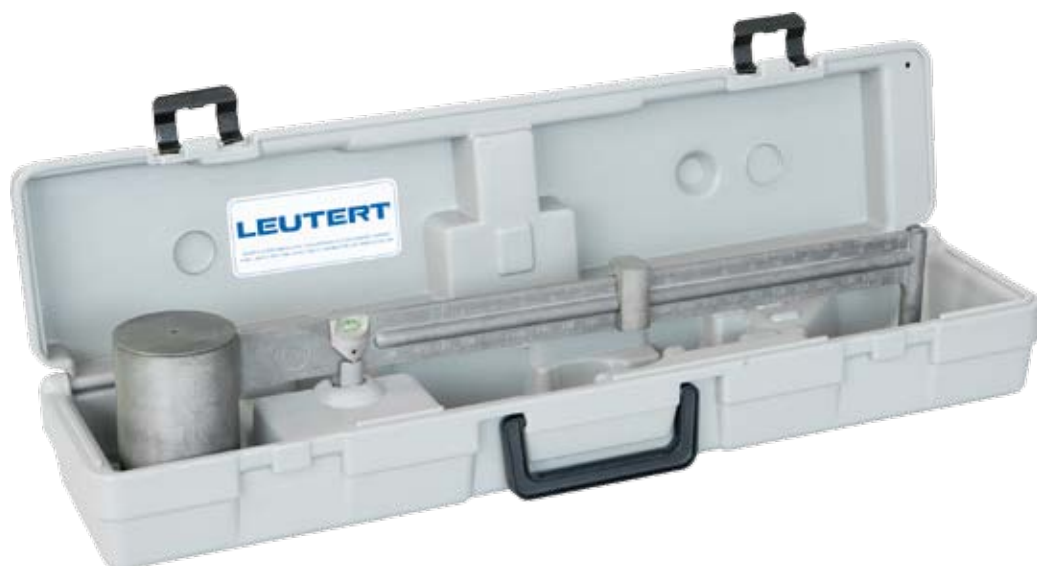


Mud Balance

Product Information



Density

The four-scale mud balance is an accurate, self-contained measuring device used to determine the density of drilling fluids and cement slurries.

Description

The four-scale mud balance is used to determine the density or weight of drilling fluids or cement slurries. One of the most important properties monitored throughout the drilling operation is the mud density.

The mud balance is designed so that the mud cup at one end of the arm is balanced by a fixed counterweight at the opposite end, with a sliding weight rider free to move along a graduated scale. A level bubble is mounted on the beam to ensure accurate balancing.

On the front side are measuring scales with ranges of 6 to 23 lbs/gal and specific gravity of 0.79 to 2.72 g/cm³. At the back side there are scales for 49 to 172 lb/ft³ and for 340 to 1190 psi/1000 ft.

Drilling fluids and foam cements often have a considerable amount of air entrained or trapped within the fluid that may give erroneous results when determining fluid density using conventional equipment. By using a TRU WATE mud balance this air volume may be decreased to a negligible quantity by pressurizing the sample cup, which will then give more accurate density readings of the fluid itself.

Technical Specifications

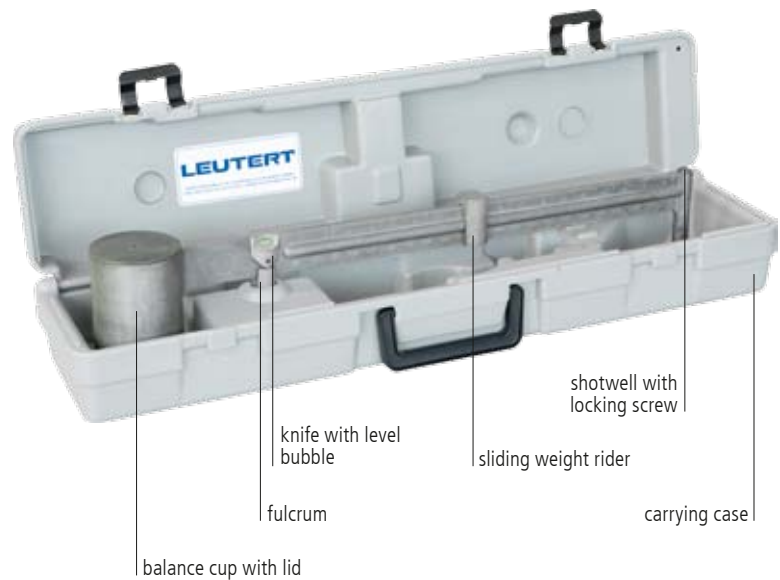
	Mud Balance	TRU WATE Mud Balance
Length	approx. 550 mm 21.5"	approx. 570 mm 22.5"
Width	approx. 110 mm 4.5"	approx. 140 mm 5.5"
Height	approx. 100 mm 4.0"	approx. 140 mm 5.5"
Weight	approx. 1.9 kg 4.19 lbs	approx. 4.3 kg 9.5 lbs

all details incl. carrying case

Operation

1. Place the base (preferably in the carrying case) on a flat level surface.
2. Fill the balance cup with the sample to be tested to the limit. Put the lid onto the balance cup by pushing it downward with a slow rotating motion until it is firmly seated. Make sure that some of the test sample is forced out through the vent hole in the lid. This action will also help to rid the sample of any entrained air of gas.
3. Cover the hole in the lid with a finger and wash all mud from the outside of the cup and arm. Then thoroughly dry the entire balance.

4. Fit the knife edge of the balance arm into the fulcrum and balance the assembly by moving the rider along the arm. The Mud Balance is horizontal when the level bubble fluctuates an equal distance to either side of the center line.
5. Read the sample weight from the side of the rider nearest the balance cup. The measurement reading is equivalent to specific gravity of the sample.



Maintenance

The mud balance should be re-calibrated, if necessary, on site.

1. Clean and dry the mud balance before doing a re-calibration.
2. Fit the knife edge of the balance arm into the fulcrum.
3. Set the rider on 8.3 pounds per gallon or 1.0 specific gravity.
4. Fill the cup with fresh water at around 70°F (21°C).
5. Add or remove lead shot from the shotwell until the instrument is in balance.

Order Information

Mud Balance with carrying case	8030.0.00000140
TRU WATE Mud Balance with carrying case	8031.00100-60000

Conversion Table for Density

pounds per gallon lb/gal	pounds per cubic foot lb/ft ³	specific gravity sg = g/cm ³	kg per cubic meter kg/m ³
6,5	48,6	0,78	780
7,0	52,4	0,84	840
7,5	56,1	0,90	900
8,0	59,8	0,96	960
8,3	62,3	1,00	1000
8,5	63,6	1,02	1020
9,0	67,3	1,08	1080
9,5	71,1	1,14	1140
10,0	74,8	1,20	1200
10,5	78,5	1,26	1260
11,0	82,3	1,32	1320
11,5	86,0	1,38	1380
12,0	89,8	1,44	1440
12,5	93,5	1,50	1500
13,0	97,2	1,56	1560
13,5	101,0	1,62	1620
14,0	104,7	1,68	1680
14,5	108,5	1,74	1740
15,0	112,5	1,80	1800
15,5	115,9	1,86	1860
16,0	119,7	1,92	1920
16,5	123,4	1,98	1980
17,0	127,2	2,04	2040
17,5	130,9	2,10	2100
18,0	134,6	2,16	2160
18,5	138,4	2,22	2220
19,0	142,1	2,28	2280
19,5	145,9	2,34	2340
20,0	149,6	2,40	2400
20,5	153,3	2,46	2460
21,0	157,1	2,52	2520
21,5	160,8	2,58	2580
22,0	164,6	2,64	2640
22,5	168,3	2,70	2700
23,0	172,1	2,76	2760
23,5	175,8	2,82	2820
24,0	179,5	2,88	2880