

Areometer (Hydrometer)



Density

The areometer is an instrument used to determine the specific gravity of drilling fluids and cement slurries.

Description

The areometer is an adequate measuring instrument for on-site determination of the mass density of drilling fluids and cement slurries. It is designed for field applications.

The instrument is calibrated for a water temperature of 20 °C (68 °F) but during field applications variations of water temperature can be neglected. When using the areometer in the laboratory the calibration temperature should be met.

The instrument is made of powder-coated aluminum as protection against alkali-corrosion. The density range of the instrument is from 0.9 kg/1000 cm³ to 2.4 kg/1000 cm³ and 8 lbs/gal to 20 lbs/gal.

Technical Specifications

Areometer

Height:..... 715 mm | 28.15"

Diameter:..... 35 mm | 1.38"

Weight:..... 0.4 kg | 0.88 lbs

Stand cylinder

Height:..... 750 mm | 31.77"

Diameter:..... 60 mm | 2.36"

Diameter base plate:..... 200 mm | 7.87"

Weight:..... 2.3 kg | 5.07"

Operation

The areometer is simple to operate and needs no additional qualification.

At the bottom of the device there is a small red-coloured cup attached to the areometer by a bayonet fitting. Unscrew the cup. Fill it to the limit with the testing fluid, and reattach the cup to the areometer. Ensure that there is no remaining testing fluid left outside the areometer.

Notice: The red-coloured cups must not be swapped among each other, as they are assigned to one particular areometer. By changing the cups measuring errors may occur.

Then immerse the areometer in a water filled cylindrical cylinder. We recommend a crystal-clear plastic cylinder, which is available separately – see ordering information.

For laboratory tests ensure a water temperature of 20°C (68°F).

For field tests the water temperature can be neglected.

The density or the specific gravity of the testing fluid is read from the graduation mark of the areometer at the water level.

Maintenance

Clean and dry the areometer after each use.

Order Information

Areometer with carrying case	7200.12.00000
Plastic cylinder	7200.99.0100090

We also recommend:



**Mud balance
8030.0000014000**

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



**Filter press
7100.11.00000**

The filter press is used to determine the filtration characteristic and water separation of drilling fluids and cement slurries.



**Ball harp
9000.00.8450200**

The ball harp is designed to measure the effective yield point of supporting slurries.



**Mud testing ring
7300.11.0000090**

The Mud Testing Ring allows a simplified determination of the water separation of drilling fluids and cement slurries.