

Mud Filtration Ring

Product Information



Filtration

The mud filtration ring is used to determine the free water content, filtration characteristics and fluid loss of drilling fluids and cement slurries.



Description

Free water is defined as water not required for cement hydration. Free water in a drilling fluid is able to react with other substances. This can be problematic when reacting with swellable formations leading to borehole instabilities and a thickening of the mud. High free water content is often a sign of an unstable slurry which may lead to fluid separation at the top of long columns or in pockets to be filled. The required sealing effect cannot be achieved. The amount of free water can be classified by the filtration characteristics (fluid loss) of a slurry. The mud filtration ring is used to determine the free water content, filtration characteristics and fluid loss of drilling fluids and cement slurries and thus can make the use of an API filter press unnecessary in many cases.

The mud filtration ring consists of a stepped, polished base plate and a funnel, which is positioned in the middle of the base plate by means of two positioning stoppers. A filter paper is placed between the base plate and the funnel. The funnel is filled with slurry up to the top edge, and at the same time a stopwatch is started. Time is taken until the filter paper is completely wetted with the water from the slurry tested. In contradiction to the API filter press water binding capacity of the mud is tested rather than water loss. The longer it takes until the filter paper is completely wetted, the better the water binding capacity.

Compared to previous models with an embedded and breakable glass plate, the MUDTEST mud filtration ring is made entirely of stainless steel. It is robust and suitable for field operation. A shock proof aluminum box is part of the product and protects the precision instrument during transport.

The mud filtration ring is mentioned in the German regulations of DVGW W 116.



Technical Specifications

 Diameter
 :
 75 mm | 2,95"

 Height
 :
 22 mm | 0,86"

 Weight
 :
 0,3 kg | 0,66 lbs



Operation

1. Place a sheet of filter paper with diameter 50 mm on the base plate.

The filter paper is larger than the polished surface of the base place. This allows the filter paper to easily get moist and to avoid false, extended fluid loss measurement due to the filter paper sticking to the surface of the base plate.

- 2. Center the funnel on the plate and fill the drilling fluid into the cone hole of the funnel.
- 3. Start the stop watch as soon as the drilling fluid gets into contact with the filter paper.
- 4. To avoid evaporation in dry hot climate the mud filtration ring should be covered with a wettened glass bowl.
- 5. Stop the watch when the filter paper is comparably soaked and note the time. According to the German standard DVGW W 116 this time span shall be higher than around 17 minutes (1000 seconds).





Maintenance

The mud testing ring is maintenance free. Please pay attention to cleanliness and appropriate storage. Keep the paper dry and free of grease!

Order Information

Mud filtration ring	7300.11.00000
Filter paper	7300.11.00007
Stopwatch	3600.00.00000

