

Mud Solid Control Unit



Profile

The Mud Solid Control Unit is mainly used in the active flushing system for weighted flushes. This is known as the dual-stage principle. It is based on the principle that two centrifuges are switched after each other. The first centrifuge is loaded with a partial flow of the circulation flushing. The separated solids, essentially weighted matter, is fed back to the flushing system. The remaining centrate (liquid phase) is not rejected but fed to the second centrifuge. Normally, the first centrifuge is run more slowly (low-speed) than the second (high speed). The harmful drilled solids and the just as harmful barite crushed to fine grain are now segregated and rejected (in cutting box) in the second centrifuge. On the other side, the liquid centrate containing the dissolved chemicals and largely freed from the fine solids is fed to the flushing system. However, a good cut point - particularly in the second centrifuge - can generally only be achieved by flocculation of the hydratable solids.

Therefore, barite recovery takes place in the first (low-speed) centrifuge and discharge of the fine solids in the second (high-speed) centrifuge.

20 ft Poly – Dissolution Container

- Flocculation station, SST 304 stainless steel
 - Vessel / tank 3,000 L, three different chambers (one for preparation, one for maturation & one as stock chamber)
 - Meetering, hopper 100 L with inspection glass, material SST 304, variable speed delivery chute, adjustable speed motor, ATEX proved
 - Mixers, three electric agitators, 0.37 kW ATEX proved, reduction gear, SST shaft with mixing-screw
 - Operation Panel, ATEX proved
- Barite tank and ATEX pumps
- Metering ATEX pump, BTE 10-20, 5 m³/h
- Centrifuges ATEX feed pumps with gearbox, 5,7 – 22,7 m³
- ATEX Electric Control System

20 ft Centrifuge Container

- Two Brand HS 3400 VSD centrifuges, bowl dimension 350 mm diameter x 1260 mm, speed 1500 – 4000 rpm
- Option: centrifuges high-frequency electric driven
- ATEX electric – boxes for centrifuges

Approvals by TÜV Nord Systems

- ATEX – Ex II 3G IIB T3
- Elektrobergverordnung – ElBergV-
- Tiefbohrverordnung – BVOT
- DIN VDE 0100, DIN VDE 0165, BGV A3

Mud Solid Control Unit

Dimensions

Length	6,096 mm / 20 ft
Width	2,438 mm / 8.0 ft
Height	2,591 mm / 8.5 ft
Weight Container 1	3,000 kg / 6,614 lbs
Weight Container 2	10,500 kg / 23,149 lbs

Ambient and Ex-Protection

ATEX specification	Ex II 3G IIB T3
Range of ambient	-20 / +40 °C

Electric parameters

Connected load

Centrifuge	2 x 38 kW 2 x 125 A
Flocculation station	1 x 20 kW 1 x 63 A
Voltage / Frequency	400 V (AC) / 50 Hz

Connections

Tank system - mono pump I+II	2" coupler FE
Tank system - mono pump III (barite)	2" coupler FE
Centrifuges - mud tank	6" KG pipe
Fresh water	1"



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