# BaraG-Force<sup>™</sup> Centrifuges

### SLIMLINE VFD CENTRIFUGES THAT ENHANCE SEPARATION AND IMPROVE FLUID RECOVERY

#### **OVERVIEW**

Excessive concentrations of unwanted solids can quickly undermine the performance of any fluid system. As the low-gravity solids (LGS) percentage rises, the rate of penetration (ROP) falls, and bit performance is affected, resulting in more trips. The mud becomes thicker and harder to pump, causing a higher equivalent circulating density (ECD). Dilution rates and chemical additions increase, along with operating costs.

Predictable fluid densities and rheologies are critical in order to keep wellbore integrity intact, and effective solids removal is a key component to ensure fluid consistency. Positioned downstream of the shakers, the centrifuge is the last line of mechanical defense against LGS buildup in the active mud system. A good centrifuge can deliver better drilling performance by achieving fine cut points, and can also enable lower fluid maintenance costs by providing effective barite recovery.

#### **BARAG-FORCE CENTRIFUGES: A NEW GENERATION**

The robust BaraG-Force<sup>™</sup> centrifuges, with variable frequency drive (VFD), are designed to process high volumes at high G-forces to optimize drilling fluid performance while simplifying installation, operation and maintenance.

This technology provides high bowl speeds coupled with high G-forces to achieve solids removal and barite recovery targets. The portfolio includes 16-inch and 20-inch bowl size options to address a wide range of operational conditions and mud types.



#### FEATURES

- » 16-inch and 20-inch bowl size options
- » High-torque gearbox with reinforced guard and mounting system
- » High-processing capacity
- » Optimized feed accelerator design
- » Engineered shipping blocks minimize bearing damage during transport
- » Preprogrammed modes of operation: LGS removal and barite recovery
- » Intuitive HMI touch screen
- » Remote log-in for performance monitoring and offsite troubleshooting
- » Field-replaceable tungsten carbide components
- » Sensor package: Gearbox proximity and temperature, bearing vibration and temperature, and open cover sensors

#### BENEFITS

- » Maintains fluid properties at high processing rates
- » Maximizes solids removal efficiency and fine cut points
- » Addresses a wide range of operational conditions and mud types
- » Offers precise control and adjustability for optimized performance
- » Decreases downtime associated with equipment repair
- » Enhances operational safety

The centrifuges were designed to simplify operation, maintenance and repairs. Tungsten carbide tile is used throughout the feed zone, and the conveyor flights are hardfaced with tungsten carbide. Field-replaceable components include tungsten carbide protection in the solids discharge area and feed nozzles, along with a tungsten hardfaced accelerator plate in the feed chamber.

Preprogrammed operation modes offer defined set points for LGS removal and barite recovery. The user-friendly and intuitive human-machine interface (HMI) touch screen allows technicians to make real-time assessments and adjustments that keep pace with changing fluid and/or drilling conditions.

#### MAXIMIZE UPTIME AND HSE WITH BETTER CONNECTIVITY

Equipment reliability is an asset, and the BaraG-Force centrifuges offer continuous self-check capabilities to minimize any risk of malfunction. The systems are equipped with a multiple-sensor package to improve preventive maintenance and reduce the likelihood of health, safety or environmental (HSE) incidents. The bearing vibration and temperature sensors help maintain optimal parameters to maximize uptime and performance. Gearbox alignment and temperature sensors can help avoid failures or malfunctions so that operations run safely and efficiently. Cover sensors ensure that technicians are notified via the HMI if the cover is not closed properly. Each unit has a spring-assisted lid cover that helps prevent injuries during maintenance or inspection activities. Additionally, remote log-in through cellular or network connectivity can be used for performance monitoring and offsite troubleshooting.

## ENHANCE FLUID PERFORMANCE WITH ENGINEERED SEPARATION SOLUTIONS

As leaders in solids control design and execution, the Halliburton Baroid team ensures that every aspect of the solids control system is optimized in order to improve drilling fluid performance, maximize safety and minimize environmental impact. Our interlinked mainstay processes, combined with our drilling fluids expertise, support our focus on customized solutions that enhance fluid performance and drilling efficiency.





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