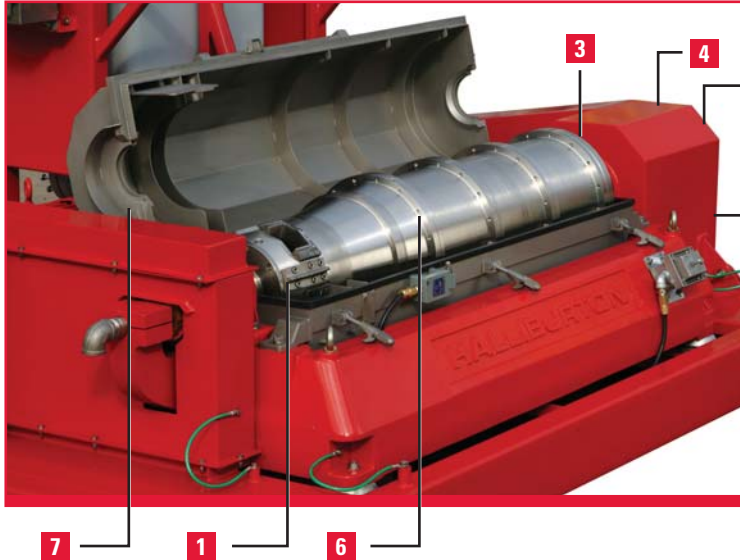


# Baroid Surface Solutions™

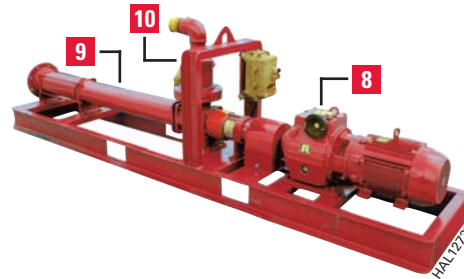
## Baroid 1458 Centrifuge – The Ultimate in Decanter Centrifuge System Design

### Baroid 1458 Centrifuge



- 1** Replaceable tungsten carbide discharge inserts
- 2** High torque planetary gear-box
- 3** Adjustable pond depth
- 4** GS torque overload coupling
- 5** 5 Speed adjustable back drive
- 6** High torque tungsten carbide tiled scroll
- 7** All wetted parts are stainless steel
- 8** Adjustable feed rate
- 9** Low solids degradation
- 10** Dry run protection

### Monoflo Progressive Cavity Feed Pump



The Baroid 1458 Centrifuge is a self-contained skid-mounted system. The decanter centrifuge and central control panel are mounted on one sub-frame with the feed pump mounted separately. This design allows for a quick, efficient rig-up.

The entire system is operated from an integrated control panel with a remote feed-pump start switch, differential speed conveyor setting, and automatic shut-down alarms. This centralized control panel eliminates the need to carry out operations at different deck levels and expedites re-configuring the centrifuge for maximum performance.



### Design Advantages:

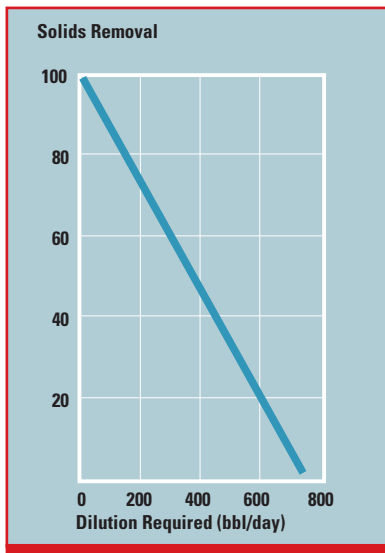
- Built for removing colloidal-sized drill solids and weight material or liquid phase recovery.
- Bowl speed adjustable from 1,373 to 4,000 rpm with 375 to 3,100 Gs of centrifugal force.
- Cut points of 2 microns attainable
- Pond depth easily adjusted
- Mechanically rugged design for oilfield applications
- Automatic shut-down features:
  - Thermal overload
  - Excessive vibration
  - Feed pump
  - High torque
  - Open covers

## Less Dilution Saves Money

A high-efficiency system for drill solids removal means drastically reduced fluid cost and significantly increased penetration rates, while reducing the risk of differential sticking and other associated hole problems.

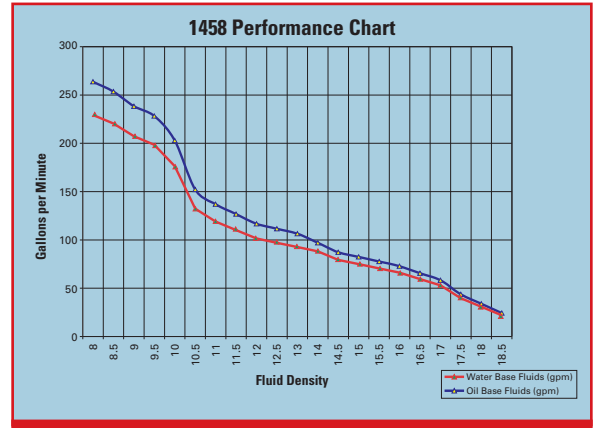
Dilution cost for maintaining the drilling fluid in optimum condition is directly related to the drill solids remaining in the system after processing by the solids control equipment. A small increase in solids removal efficiency can result in large savings.

An essential component in a first-class solids control system is the Baroid 1458 Decanter Centrifuge. It efficiently removes most of the fine particles that traditional solids removal equipment can not capture.



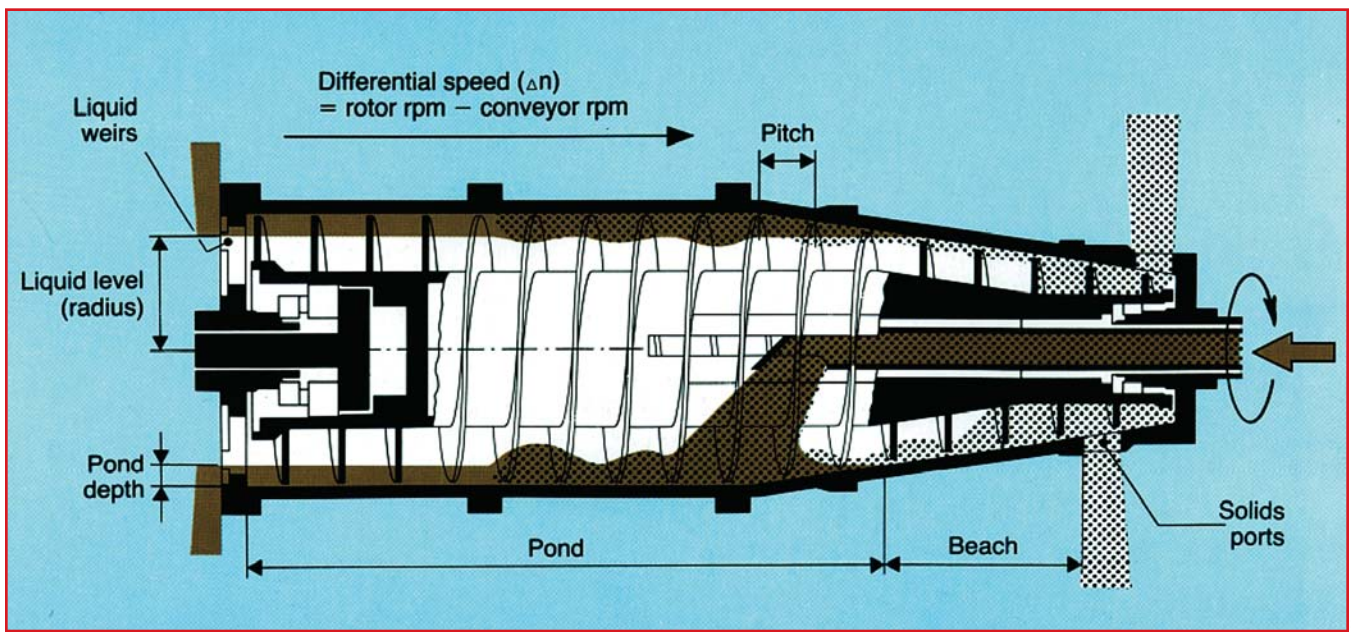
## The Baroid 1458 Centrifuge in Summary

The decanter centrifuge features slender cylindrical/conical bowl sections with a relatively large aspect (length/diameter) ratio. A tungsten carbide tiled screw conveyor is fitted inside the bowl for continuous removal of separated solids. Typical bowl speeds are 1,373 to 4,000 rpm and the developed G-force is between 375 and 3,100 Gs.



## Operation

The drilling fluid is fed into the rapidly spinning cylindrical section. Through centrifugal force, the fluid and solids form in layers (the pond) around the bowl wall. The thickness of this layer is determined by a series of discharge weirs at the end of the cylindrical section through which the clean liquid



is decanted. The solids, being heavier, collect at the bowl wall. From there they are continuously removed by the screw conveyor. The solids are transported along the conical section (the beach) where they are dried, and then out the discharge ports.

Built for heavy-duty jobs, the decanter centrifuge handles high solids loading and can cope with abrasive, coarse particles. The Baroid 1458 Centrifuge is unique because it can easily be adjusted to help optimize performance over a wide range of fluid densities and drilling conditions.

The separation result, solids recovery, solids dryness and liquid clarity can be optimized during operation. Parameters influencing the result are easily regulated and include: feed rate, rpm (G-force), pond depth, and differential conveyor speed.

### Superior Performance

Decanter centrifuges for drilling fluids are subjected to widely fluctuating working conditions. During the drilling of various hole intervals, they must cope with varying particle densities and sizes, changes in feed rate, solids volume, and drilling fluids. Continuous optimum performance under such circumstances can be achieved with the quickly adjustable Baroid 1458 Centrifuge.

### Features:

- Fine particle separation to 2 micron
- Variable bowl/conveyor speed, adjust G-force for particle density and size
- Five differential conveyor speeds to suit both solids volume and solids characteristics

The Baroid 1458 centrifuge is available with either a pulley system (normal range 1373, 2800, 3250 or 4000) for a fixed speed drive, or a variable speed hydraulic turbo arrangement on the main drive, enabling the operator to adjust the bowl speed between 1000 and 3415 rpm within a few seconds. This option, combined with the 5 variable conveyor speeds, gives a new dimension to the use of centrifuges for drilling fluids treatment.

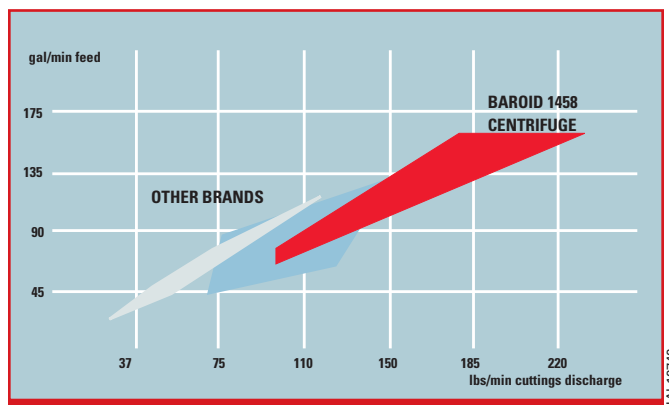
The Baroid 1458 Centrifuge can be optimized for all working conditions, even at high solids loading and with very fine particles.

### It Pays to Insist on Perfection

When choosing a decanter centrifuge for drilling fluids, it pays to insist on quality. To achieve its designed performance, in this tough environment, with constantly varying operating conditions, the system must be tailored to the project. The highly successful Baroid 1458 Centrifuge was designed by experts with vast knowledge in separation and drilling process technologies.

### Built for the Oilfield

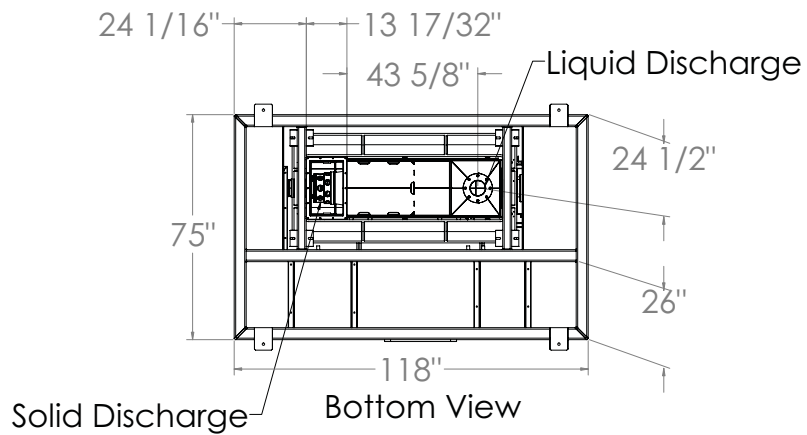
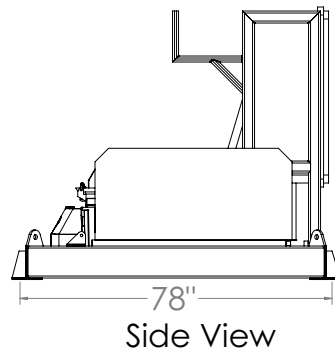
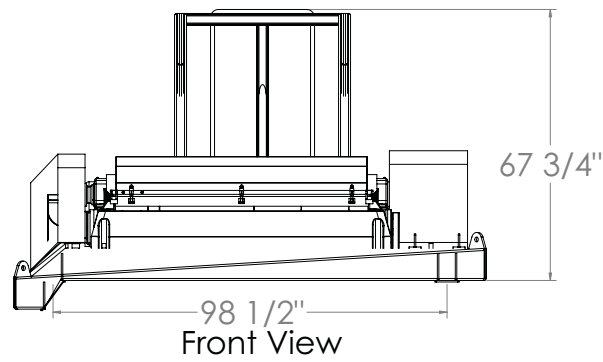
The geometry of the bowl and the pitch of the screw conveyor are also of paramount importance when treating drilling fluids. The Baroid 1458 Centrifuge can be optimized to process the most difficult drilling fluids.



Baroid 1458 Centrifuge	
Max flow rate (hydraulic capacity)	265 gpm
Dimensions (L x W x H)	118" x 79" x 69"
Weight	6,800 lbs
Motor hp (main/backdrive)	40/20
Power requirements	70 kVA (combined)
Bowl rpm	
460V, 60Hz with standard step sheave	1373/2800 (375g/1558g)
380V, 50Hz with custom step sheave	2000/3200 (795g/2036g)
Conveyor rpm	5 speed variable
Feed Pump Flow rate	adjustable
	0 - 220 gpm
Dimensions (L x W x H)	129" x 24" x 32"
Weight	1,200 lbs
Motor hp	10

HAL12742

## Schematics



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