

## ● 'S' SERIES FHD CENTRIFUGE



The Scomi Oiltools 'S' Series FHD Centrifuge brings to the drilling industry the most advanced design from one of the world's leading manufacturers of decanting centrifuges. These designs are the result of over fifty years of development activity utilising experience gained in the mining, drilling and chemical industries. In a drilling environment the 'S' Series FHD Centrifuge can be used on both unweighted and weighted drilling fluid systems to achieve optimum removal of undesired solids whilst retaining the valuable liquids and / or solids. In a weighted drilling fluid application, it can be used to great effect to control both viscosity and to salvage weighting material.

Prior to Scomi Oiltools introducing the present design to the drilling industry, an extensive testing and development programme was undertaken to determine the most efficient combination of the many variables available. This programme has led to the introduction of a reliable, virtually unpluggable product with automated operation.

### CONCEPT

In addition to existing features such as counter-current design, the 'S' Series FHD Centrifuge incorporates several new concepts which help to improve performance. The traditional ability to convey solids along the bowl has been further enhanced by redesigning the angle of the scroll flights. This new design, called 'G' scroll is particularly helpful during high load applications.

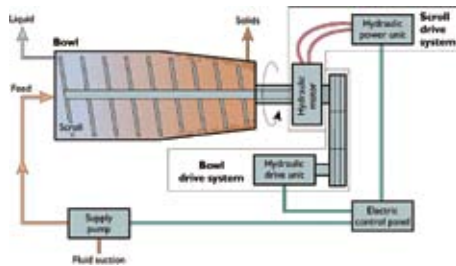
Together with the 'G' scroll design, independent scroll and bowl drive systems have been introduced to give Full Hydraulic Drive (FHD) capabilities allowing infinite and instantly variable control of the bowl and scroll speeds. In addition, the scroll drive system automatically boosts the power required to the scroll as the feed conditions fluctuate, thereby minimising the chances of plugging – historically a major problem with centrifuges of this type.

These features, coupled with a constant programme of research and development to improve on existing designs and develop new ideas, make the Scomi Oiltools 'S' Series FHD Centrifuge the most advanced available to the drilling industry.

### APPLICATION

The 'S' Series FHD Centrifuge can be used to process drilling fluid in:

- **Low speed barite recovery mode**
- **High speed solids removal mode (either independently or as a second stage of the barite recovery system)**
- **Control drilling fluid rheological properties**
- **Process fluid from the underflow of cuttings drying equipment (e.g. Hi 'G' Dryer) in solids removal mode**
- **Process flocculated slurries**



## FEATURES

Safety System includes:

- **Automatic boost control** – the scroll torque is controlled by a hydraulic system.
- **Automatic pump shutdown** – activates if the automatic boost control is unsuccessful. The pump comes back on once the pressure drops.
- **Automatic system shutdown** – system shutdown occurs if the automatic pump shutdown fails.

Unique Scroll Design:

- **'G' Scroll** – to prevent particle slippage and particle re-suspension.
- **Solid construction** – hard faced with tungsten carbide.

Integrated System:

- **Centrifuge, Hydraulic Unit and Control Panel can be located on an optional integrated skid.**

Control system allows:

- **Infinitely variable bowl speed.**
- **Infinitely variable scroll speed.**
- **Scroll boost on and off.**

## BENEFITS

- **Semi-automatic operation** – personnel requirements are greatly reduced.
- **Increased fluid throughput** – relative to standard gearbox driven model.
- **Practical** – meets changing formation conditions and feed rates instantly without the need for pulley or belt change.
- **Dryer discharge** – thus minimising waste volume.
- **Less stop / start operations** – reduces system maintenance and minimises loss of wall cake.
- **No gear box** – gear box failure is eliminated and torsional vibration is minimised.
- **No back drive, brake system or sheerpins** – maintenance costs are greatly reduced.
- **Self Cleaning** – cleaning is self-initiated on shutdown therefore reducing possible problems on start up.

## SPECIFICATIONS

	S2 FHD	S3 FHD
<b>General</b>		
Bowl length	1350 mm (53 in)	1565 mm (62 in)
Bowl diameter	450 mm (18 in)	532 mm (21 in)
Swallowing capacity	Up to 200 gpm	Up to 250 gpm
Maximum bowl speed	3000 rpm	2575 rpm
Minimum and maximum differential scroll speed	1 – 82 rpm	1 – 82 rpm
Maximum 'G' force	2254	1972
Minimum and maximum weir plate settings	84.2 – 136.5 mm (3.3 – 5.4 in)	100 – 152 mm (3.9 – 6 in)
Centrifuge type	Solid contour bowl decanting centrifuge	
Bowl drive	Hydraulic	
Bowl speed control	Via a Handwheel	
Bowl speed indication	Via a Tachometer	
Scroll speed control	Manual and automatic adjustment	
Scroll speed indication	Via optical indicator	
<b>Dry Weight</b>	1818 kg (4007 lb)	2041 kg (4500 lb)
<b>Dimensions</b>		
Length	2641 mm (104 in)	2921 mm (115 in)
Width	1370 mm (54 in)	1397 mm (55 in)
Height	940 mm (37 in)	940 mm (37 in)
<b>Utility Requirements</b>		
<b>Electrical</b>		
Voltage	380 / 460 V	
Phase	3 Phase	
Frequency	50 / 60 Hz	
Maximum typical power	30 – 38 kW (40 – 51 Hp)	44 – 53 kW (59 – 71 Hp)
	Total power required depends upon the pump and power unit supplied	
Safety	Explosion proof electrics	
Water	76 L / m (20 US gpm) – for dilution / washdown	

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