

SCM-EXTRACTOR CUTTINGS DRYER



In many parts of the world, government regulatory agencies are placing increasingly stringent limitations concerning the discharge of Non-Aqueous Fluid (NAF) contaminated drill cuttings to the environment. To comply with these requirements, specialized technology has been developed to further treat the drill cuttings after the normal Solids Control equipment; a waste stream traditionally disposed of directly to the environment.

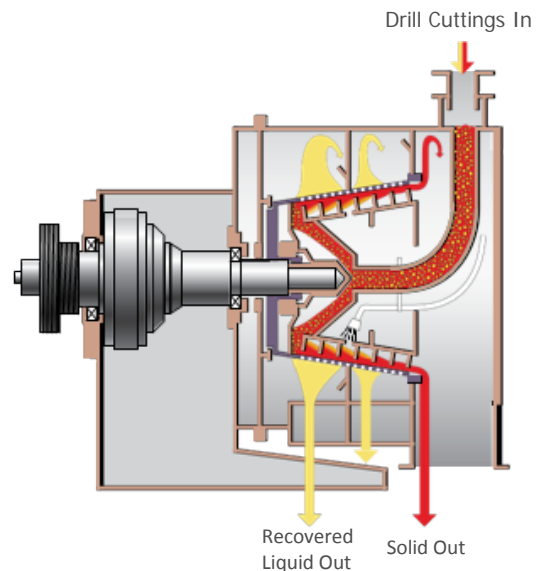
To meet this new challenge, Midgard now offers the new Extractor Cuttings Dryer. This dryer offers improved performance to Operators and Drilling Contractors striving to meet increasingly strict environmental regulations while reducing waste volume at source by reclaiming drilling fluids.

CONCEPT

The Extractor Cuttings Dryer consists of a horizontally configured conical screen placed within a balanced cage that is driven at high speed via an electric motor through a Cyclo- Gear drive gearbox. Positioned within the cage is a scroll that turns and transports the filtered solids from the machine to obtain maximum cuttings dryness. The conical basket contains a proprietary screen specially designed to minimize screen blinding. The unit is attached to an isolated sub-frame which in turn is mounted on a rugged Oilfield skid for transport.

The Extractor Cuttings Dryer receives drill cuttings from the Solids Control equipment via screw conveyor, vacuum system, and / or solids pump. Drill cuttings are fed into the center of the feed cone and distributed evenly through feed holes by centrifugal action into the flighting channels between the scroll and the screen. As the drill cuttings pass through the conical screen, the solids layer becomes thinner and exposed to progressively more G force. The high gravitational force allows the liquid portion of the feed to pass through the cake bed and screen while the cake bed itself is continuously turned and swept outward to be discharged at the outer diameter of the screen. The dried drill cuttings exit from the front of the machine where they are either discharged to the environment or collected for further handling and / or treatment. The effluent exits tangentially from the base of the unit into a holding tank. This effluent is normally processed via a high speed centrifuge prior to return to the active system.

- Horizontal basket – easier access for feed and maintenance
- Scroll – internal scroll acts as a solids retention device to control solids discharge
- Screen – proprietary screen design minimizes particle plugging
- Rosetta – torque overload protection
- Belt drive – c/w Anti-Static belts
- Ports – for sampling



TREATMENT AND DISPOSAL

FEATURES & BENEFITS

Lower operator intervention due to:

- Superior feed system
- Horizontal design allowing easier access

Lower maintenance

- Screen basket does not need to be removed to be cleaned
- Improved rotational balance minimizes wear on rotating parts
- More durable, longer wearing scroll, due to 1-piece construction
- Cyclo-Gear drive has a 2-year warranty show negligible wear after 50,000 hours

Reduced environmental impact

- Lower power requirements – due to low friction Cyclo-Gear drive (input / output efficiency approaches 95%)
- Lower noise – due to v-belt and Cyclo-Gear drive

Reduced size

- Footprint – smaller than equivalent vertical type dryers
- Minimized height – due to horizontal feed
- Cyclo-Gear – reducer drive is up to 60% smaller than a worm drive, allows smaller motor to be utilized thus overall power train is reduced

Improved performance due to:

Scroll design

- Prevents solids packing. No dense 'cake' is formed to blind the screen
- Turns over solids exposing them to the screen thus assisting in further removal of liquid trapped between solids particles
- Minimizes fluid loss and prevents blinding and product loss by ensuring consistent distribution of cuttings
- Minimizes particle breakage and promotes longer screen life, due to machined scroll flights

Cyclo-Gear Drive

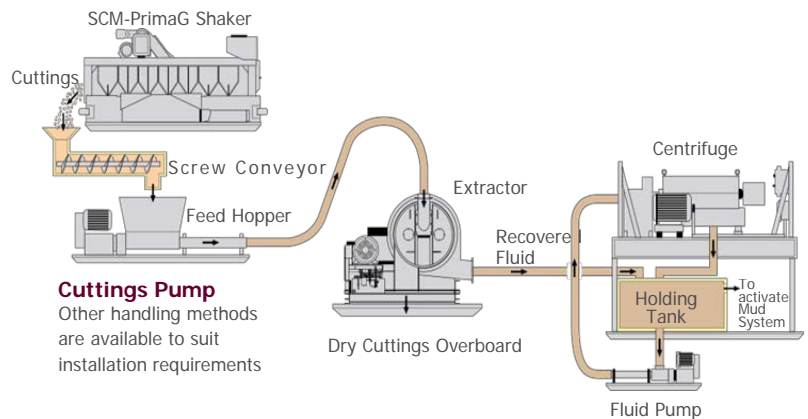
- Processing more consistent due to the high torque Cyclo-Gear drive, which improves handling of shock loads caused by feed surges

Lower operating / installation costs and downtime due to:

- Improved performance
- Lower operator intervention
- Lower maintenance
- Reduced size
- Reduced environmental impact

SPECIFICATIONS

General	
Model	SCM-Extractor
Feed Capacity Range	30-60 metric tons per hour
G Force Range	300 to 650 g's
Bowl Speed Range	500 to 1200 rpm
Centrifuge Type	Basket Centrifuge
Transport Method	Scroll
Gearbox Ratio	59:1
Weight	
Gross	9,500 lbs (4,300 kg)
Net	8,000 lbs (3,630 kg)
Dimension	
Length	92" (2,337mm)
Width	96" (2,438 mm)
Height	80" (2,032mm)
Utility Requirements	
Voltage	380 /460 V
Phase	3 Phase
Power	75-100 hp (56-75 kW)
Safety	Explosion proof electrics and gearbox
Water	None required
Air	None required



Cuttings Pump
Other handling methods are available to suit installation requirements