

Cuttings Transport System



- **CUTS** is a new-generation, innovative, safe and versatile cuttings containment, transport and storage system, where the CUTS Blower acts as the prime mover of the WBM/SBM/OBM drill cuttings for the containment and bulk transport of drill cuttings.

The CUTS Blower is a 0,08m³ pressure vessels with an inlet valve, an outlet valve and a feed hopper mounted on top. The CUTS Blower pneumatically conveys cuttings at rates of up to 18m³/hr (40 MT/hr) over typical rig installation distances and heights.

The CUTS Blower can operate through the rig air system with an air accumulator tank, with working pressure of 3-5 bar and min. 10m³/min air supply for the standard configuration. The CUTS Blower, respectively the entire system, is scalable and can be designed and manufactured to client requirements and project specifications.

How It Works

Gravity feeds WBM/SBM/OBM drill cuttings into the CUTS Blower via a feed chute/auger assisted by air and vibration. Once the unit has been filled with material, the inlet valve is closed. Once closed, the vessel is pressurized and compressed air activates the material in the vessel and discharges it in a batch (approx. 80liter). The CUTS unit can also be operated through an adjustable timer, where cycle times can be varied/adjusted according to cuttings generation (ROP - rate of penetration and related section diameter) and type.

The CUTS Blower is normally discharged through a 5" steel pipe and/or 5" flexible hoses. All exposed internal faces are coated for corrosion resistance and lower friction coefficient, in addition a low-friction special epoxy paint or plastic liner is fitted to the feed chute.

The 8" discharge elbow can optionally be supplied with ceramic inner lining for better wear and tear resistance and to reduce friction coefficient within the exposed discharge area.

The CUTS Blower is configured and certified to Zone 1 hazardous-area specification including controls. All valves and air hammers are pneumatically activated and operated.

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Features

Commercial models. The CUTS System can be offered commercially as a rental, lease/purchase or purchase item(s).

Scalability. The CUTS Blower is scalable in size (LxWxH) and processing rate (MT/hr) and can be designed/manufactured to fit customer/project requirements or to adapt to (rig) space restrictions.

Environmentally sound design. Drill cuttings are contained into a closed system and isolated from personnel contact, then being discharged by compressed air, no requirement for electricity.

Safety. The CUTS System is supplied in a Zone 1 hazardous-area configuration as standard, safe, quiet and clean in operation, with limited to no exposure of personnel to contaminated drill cuttings or moving parts.

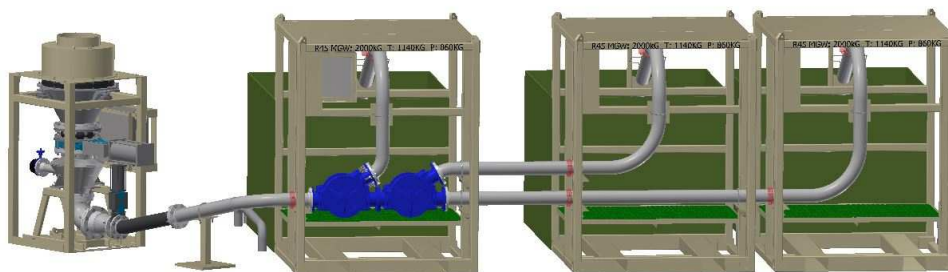
Small footprint. The standard CUTS Blower has a footprint of 1,000 x 1,622 x 2,131 (LxWxH), The CUTS Blower is scalable and can be designed and manufactured to fit customer/project requirements or (rig) space restrictions.

Flexibility. The CUTS Blower can be used to convey cuttings in a variety of applications, including filling Energized Cuttings Tanks and/or skips, feeding cuttings re-injection installations and cuttings dryers.

Efficiency. The CUTS Blower will convey cuttings at rates of up to 18m³/hr (40 MT/hr) in its standard configuration, to sufficiently convey cuttings over horizontal and vertical distances on a typical rig installation.

Reliability. The CUTS Blower is a reliable device, using only compressed air to open and close valves, operate the air hammers and move material.

Ease of installation & use. The CUTS Blower runs automatically on a pneumatic timer that opens/closes valves, starts/stops air hammers in set sequences – fill and empty phases. The CUTS Blower is a “plug & play” device, requiring only sufficient air supply and to be operated through a control box/panel mounted on the CUTS Blower frame.



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Benefits

- Scalability - can be designed & fabricated to fit customer/project specifications.
- Compact design – saving valuable rig-floor space.
- CUTS Blower moves a maximum amount of material with a minimum of equipment.
- Closed system minimizes worker exposure to drilling fluids, moving parts and reduces slippery areas.
- The CUTS Blower can be operated in Zone I hazardous environments with no modifications, providing maximum safety in an economical package.
- Minimizes/eliminates personnel exposure to contaminated drill cuttings due to its closed system operation.
- Eliminates/limits spills and exposure to slippery areas.
- Eliminates/limits requirements for augers/conveyors
- Favorable commercial models – rent, lease/purchase/purchase

Application

The CUTS Blower is the first component of the CUTS System, receiving cuttings from shale shakers' ditch/trough and conveying them to Energized Cuttings Tanks, skips or other destinations (onshore/offshore).

A typical configuration includes one CUTS Blower, but either a second CUTS Blower in parallel or the CUTS Dual Blower model may be required, where extremely high rates of WBM/SBM/OBM drill cuttings are anticipated.

Rig surveys for installation and operational optimization purposes are essential, and ideally the CUTS Blower is positioned/installed right underneath the shale shaker ditch/trough, alternatively augers might be used to feed the CUTS Blower.

The blower is pneumatically operated.

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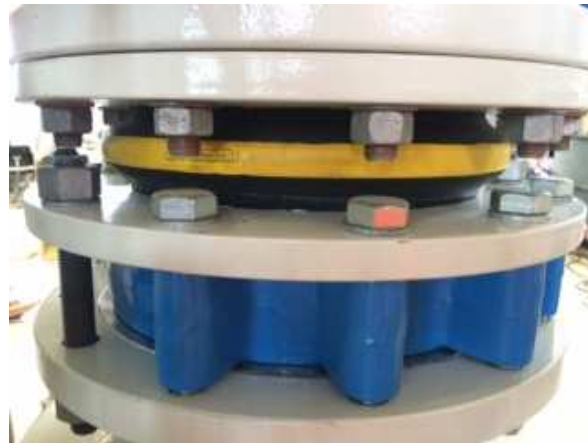
Technical Data

Standard Single CUTS BLOWER

MEDIA:	WBM/SBM/OBM Cuttings
TANK VOLUME:	0.08m ³
DESIGN PRESSURE:	9.2 barg
DESIGN CODE:	DNV Class III
DESIGN TEMPERATURE:	-20°C / +50°C
OPERATING PRESSURE NORMAL:	5 barg
OPERATING PRESSURE MAXIMUM:	9 barg
HYDROSTATIC PRESSURE TEST:	13.8 barg
OPERATING TEMPERATURE:	Ambient
OPERATING DENSITY:	2.2 – 2.6 S.G.
CORROSION ALLOWANCE:	1mm
NDT:	DNV Pt.4 Ch.7 Sec.8 - D103
NET WEIGHT:	285 kg
OPERATING WEIGHT (FULL):	485 kg



Air Hammer



Rubber Compensator – Knife Gate Valve and Cone

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Pneumatic Actuator on 3" air inlet



8" Outlet and 8" to 5" Reducer



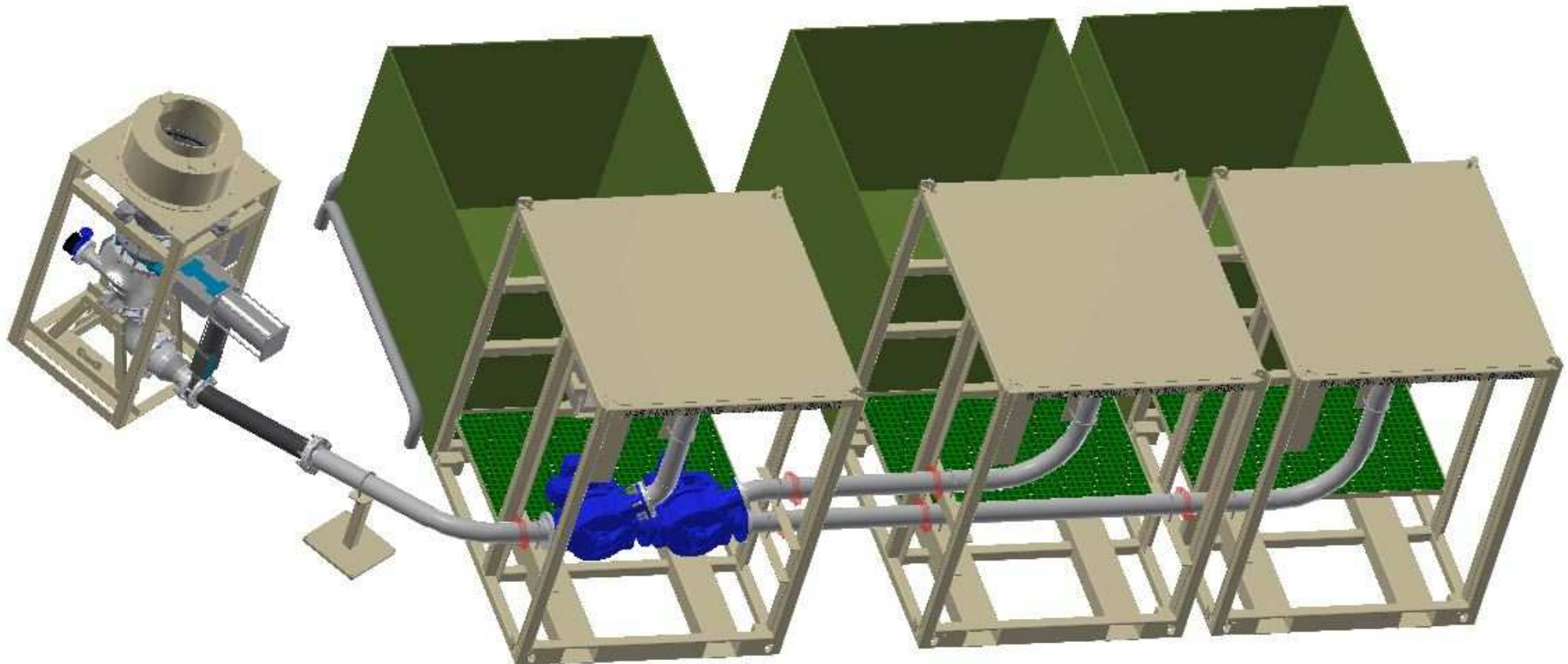
Control Box with Timer and Start/Stop Lever



Pneumatics inside Control Box

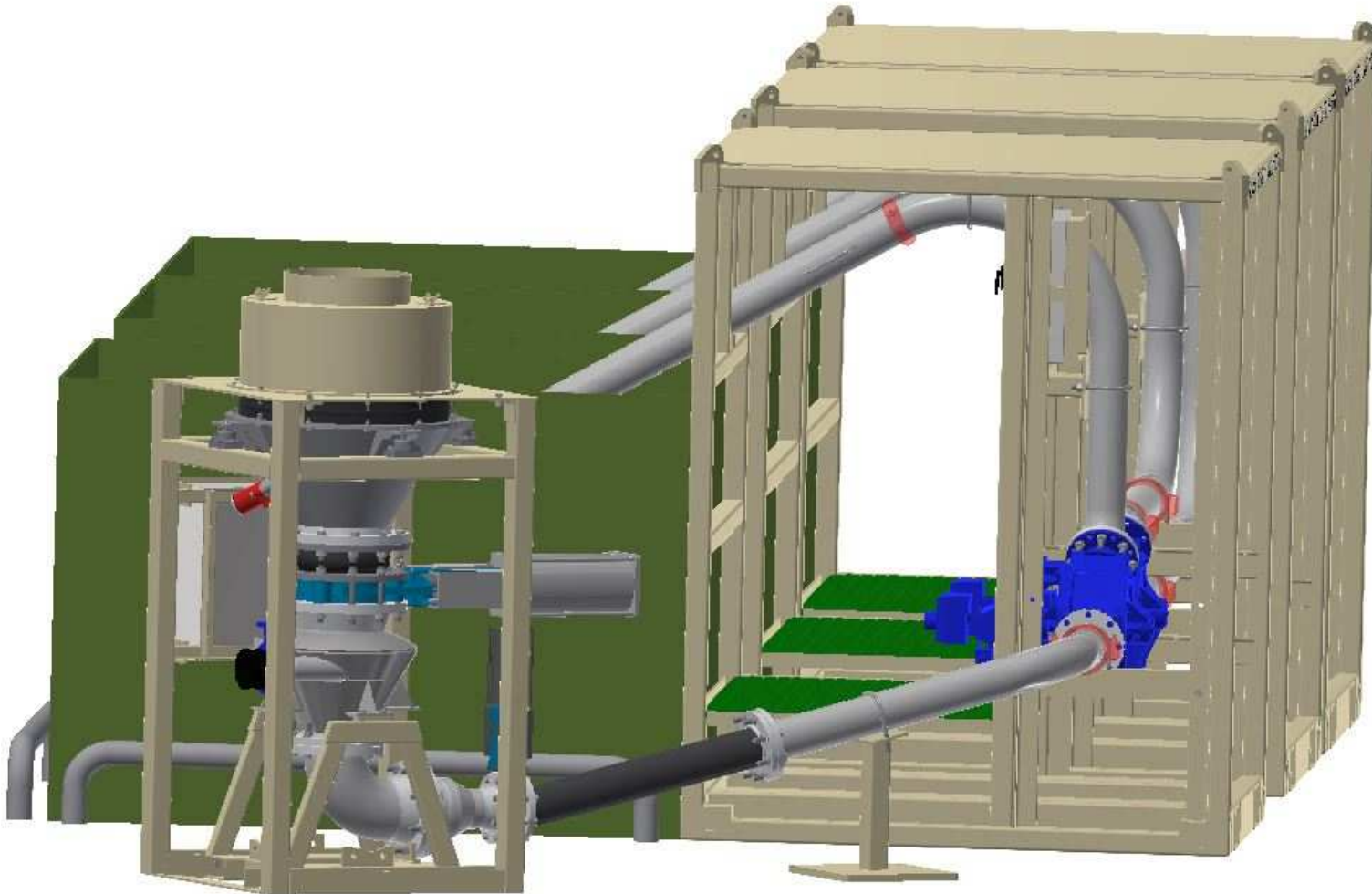
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RANDABERG CUTS System as delivered to 4-off SONGA CAT-D rigs



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