

VACUUM COLLECTION SYSTEM (VCS)



The VACUUM COLLECTION SYSTEM[†] (VCS[†]) from M-I SWACO collects, moves and stores drilled cuttings within a totally enclosed environment that minimizes spills and contamination.

Rigs and/or other installations requiring an enclosed system for: cuttings collection and transportation; slurrification and re-injection; rig, pit and tank cleaning; vessel cleaning; and fluid recovery.

With growing concerns for personnel safety, environmental issues and an increased emphasis on saving costly rig time, the industry has required a totally enclosed system for collecting and storing drilled cuttings.

Features and Benefits

Field-Proven

- Operated successfully on several hundred wells for operators around the world since 1993

Versatile

- Suitable for most applications: cuttings collection and transportation; waste injection; rig, pit and tank cleaning; vessel cleaning; and fluid recovery

Safe

- No hazardous moving parts
- Fill sensors for automatic shut-off
- Vacuum power skid is completely contained
- Customized, non-sparking blower design with hazardous-duty class electric motors
- Explosion-proof (Class I, Zone I) 100 hp electric motor

Efficient

- Maximizes filling of cuttings-collection modules
- Cuttings collection and continuous vacuum does not interrupt drilling

- Conveys fluids and cuttings horizontally and vertically, saving valuable rig-floor space
- Skid-mounted diaphragm pump for recycling and fluid transfer

Environmental Compliance

- Designed to meet the most stringent discharge regulations

Total Containment

- Contains all drilling waste streams
- Minimizes potential contamination during drilling

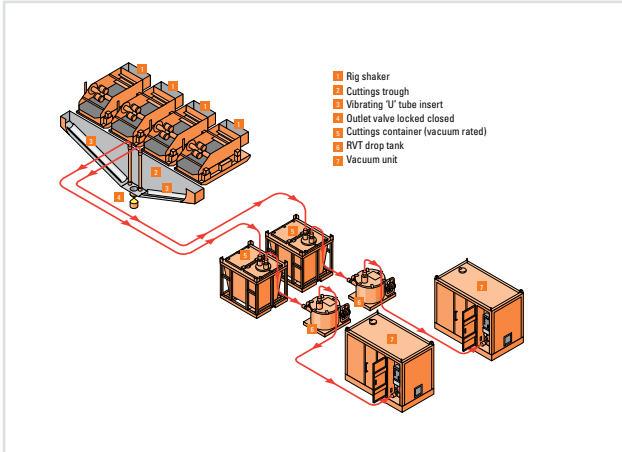
Modular Design

- Flexible design allows central rig location with remote on/off
- Suitable for all rig configurations

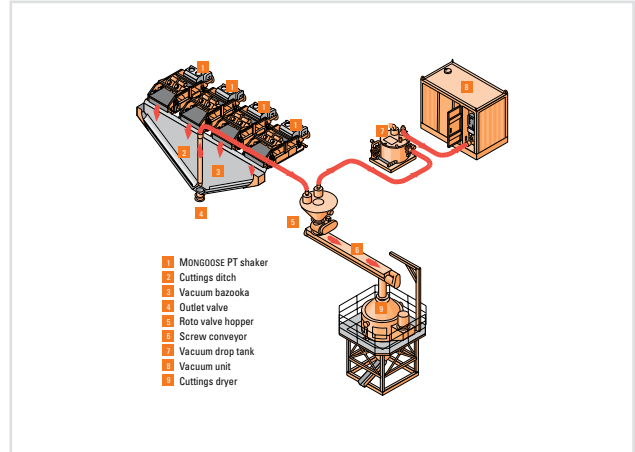
Simple Installation

- Minimal or no welding required
- Makes hookup faster and safer
- Preinstalled collection pipe serves multiple collection locations
- Equipment tool box with spare parts includes connections, pipe, wands and hoses

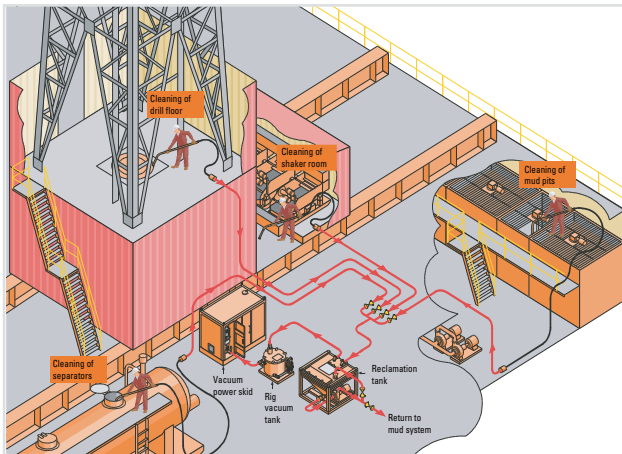
Technical specifications for the VACUUM COLLECTION SYSTEM



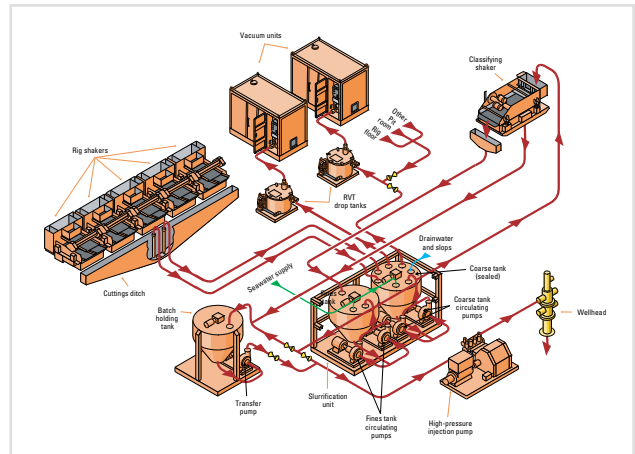
Vacuum Cuttings Collection



Cuttings collection to feed dryer



Rig- and tank-cleaning operations



Slurrification and re-injection



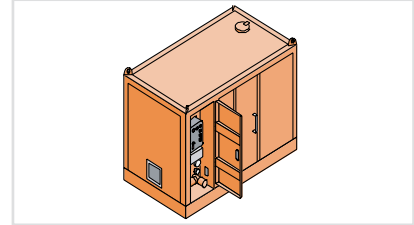
The VCS modular components enable usage in a wide variety of rig operations including:

- Total cuttings containment
- Secondary recovery where total cuttings containment is not required
- Secondary mud-recovery systems
- Cuttings waste injection systems
- Tank and vessel cleaning
- Mud-spill cleanup on rig floor
- Pit cleaning for mud-systemchange out
- Liquid-waste-stream transfer
- Non-hazardous oilfield-waste minimization, recycling and cleanup

Technical specifications for the VACUUM COLLECTION SYSTEM

Vacuum Power Skid

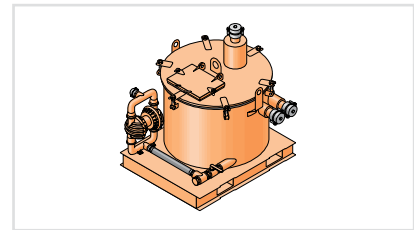
The VACUUM COLLECTION SYSTEM is a powerful drill cuttings collection system designed specifically for the oil industry. Easy to install with little or no welding required, it minimizes costly rig time for preparation and installation. At the heart of the system is the VACUUM POWER SKID. Patented,¹ the "QUIET VAC™" Power Skid features a sound-insulated enclosure and an explosion-proof Class I, Zone II electric motor.



Vacuum unit specifications				
Model	Length in. (mm)	Width in. (mm)	Height in. (mm)	Weight lb (kg)
100 hp Unit	109 (2,762)	74.5 (1,892)	72 (1,828)	12,000 (5,443)
Motor: 480 volts, 3-phase 200 amp		Air Flow: 1,541 ft ³ /min (2,618.1 m ³ /hr)		

Rig Vacuum Tank (RVT)

The RVT is an interceptor tank for liquids and solids which sits in front of the VACUUM POWER SKID. It has a level switch which will stop vacuuming operations when the tank need emptied, preventing carryover of material to the VPS. The RVT is used in conjunction with vacuum cuttings box filling to prevent any carryover of material from a full box.



RVT tank specifications				
Model	Length in. (mm)	Width in. (mm)	Height in. (mm)	Weight lb (kg)
Rig Vacuum Tank (RVT)	60 (1,270)	53 (1,651)	60 (1,524)	2,000 (907)

Continuous vacuum rotary hopper

Versatile vacuum-fed rotary hopper is an ideal solution for operations where vacuumed materials need to be discharged into separate non-vacuum-rated receptacles. The hopper allows continuous vacuum collection along with continuous discharge of materials into open-top waste injection units, standard open-top cuttings containers, or feeding of materials to cuttings dryers.



Rotary hopper specifications				
Model	Length in. (mm)	Width in. (mm)	Height in. (mm)	Weight lb (kg)
Rotary Hopper Specifications	56 (1,422)	59 (1,499)	72 (1,829)	3,200 (1,451)
Holding Tanks: (2) capacity 5 bbl each		Motor (2 hp): 480 volts, 3-phase 10 Amp		

¹Protected by one or more of the following: U.S. Patent Nos. 5,402,857; 5,564,509; Des. 296,027; Des. 337,809; UK Patent No. GB 2 286 615. Other domestic and foreign patents pending.