

StimCommander Proppant

Automated proppant delivery system

APPLICATIONS

- Hydraulic fracturing in unconventional and conventional formations
- Single- and multiwell pad
- Vertical and horizontal gas and oil wells

BENEFITS

- Reduces footprint on location by optimizing traffic flow
- Improves inventory management
- Enhances reliability with electrically controlled gates and valves
- Lowers HSE risk by automating processes, requiring fewer people on location
- Minimizes dust and noise using a conveyor and bucket delivery system
- Streamlines traffic by eliminating the needs for trucks to back in using the delivery platform

FEATURES

- Proppant storage with a total rated capacity of 10,000 ft³ [284 m³]
- Ability to unload two sand haulers at the same time
- Sand and proppant loading at 10,000 lbm/min [4,536 kg/min]
- Compatibility with automated control system in the FracCAT* fracturing computer-aided treatment system
- Ability to accurately read proppant weight in silos
- Compressor for dust collection in silos

The StimCommander* automated stimulation delivery platform automates and streamlines surface operations, resulting in a smaller footprint, increased efficiencies, and reduced NPT. A combination of bulk material delivery and storage systems, equipment designed for continuous operations, automated processes, and accurate inventory management enables more-efficient, reliable, and cost-effective fracturing operations with reduced HSE risks.

As part of the StimCommander platform, the StimCommander Proppant* automated proppant delivery system stores proppant for gravity-fed delivery into the blender or process trailer. Silos are transported with the erector trailer, which is used to install the silos on the mobile base frame structure.

A complete set includes four silos. Each silo has two compartments with a total storage capacity of 2,500 ft³ [71 m³] (compartments are divided into 1,200 ft³ [34 m³] and 1,300 ft³ [37 m³]). Individual compartments contain a level sensor to prevent overfilling and the silo design minimizes spillage and blowing of sand. Each silo is supported on a set of load cells that comprise the inventory management control system. Proppant can be transferred to the silos either using mechanical conveyance via the proppant loader trailer or using bulk pneumatic haulers. As the proppant is transported to the top of the silos, the type of proppant is identified and directed to predetermined bins, limiting contamination of proppant types and reducing the risk of human error. Each belt can offload a full sand truck in less than 15 minutes.

The proppant loader trailer is gravity-fed from the sand hauler into the designated silo chamber. The proppant loader trailer is electrically powered and can be positioned on both sides of the base frame. When proppant is delivered with the bulk pneumatic haulers, the silo compartments are equipped with a dust-collection system that allows proppant transfer in a dust-controlled environment.

Each compartment has a dedicated discharge gate with a 30,000 lbm/min [13,608 kg/min]



StimCommander Proppant system for the StimCommander platform.

rated proppant flow. The proppant delivery is controlled remotely from the command and control cabin with the FracCAT system. The refilling mechanism for the silos is fully redundant, which reduces downtime and increases reliability.

StimCommander Proppant Loader Specifications

Trailer Chassis

Length, ft [m]	52.75 [16.1]
Width, ft [m]	12 [3.68]
Height, ft [m]	13.5 [4.11]
Trailer weight, lbm [kg]	62,000 [28,123]

Silo System Specifications

Overall Dimensions

Height, ft [m]	45.9 [14]
Length, ft [m]	12 [3.7]
Width, ft [m]	12.1 [3.7]

Bin Dimensions

Height, ft [m]	32.7 [10]
Length, ft [m]	12 [3.7]
Width, ft [m]	10 [3]
Weight (empty), lbm [kg]	40,000 [18,143]