

Hopper



Xi'an • China

energy

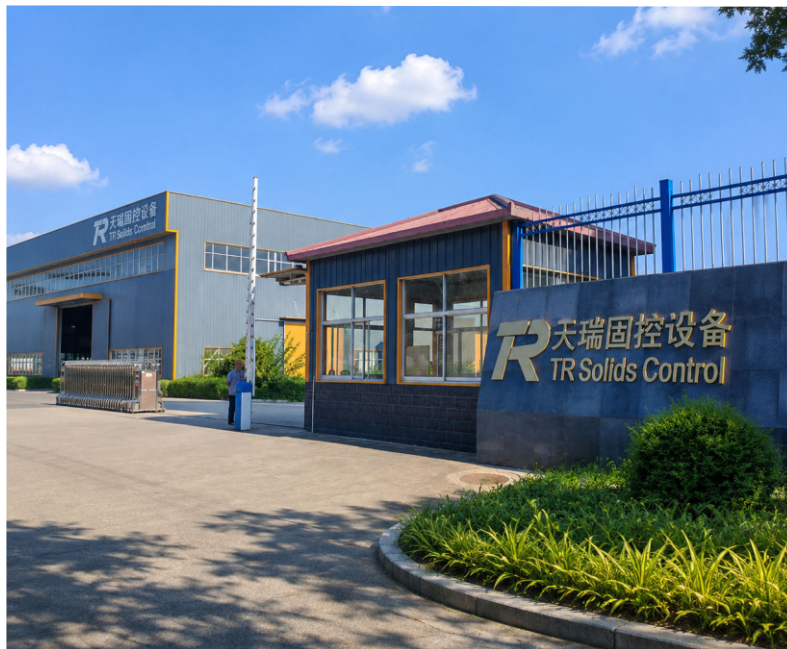


Q1

Registered
Manufacturer

About Us

- Established in December 2010, TR Solids Control is a professional manufacturer specializing in the R&D, production, sales and technical service of solids control equipment and mud recovery systems.
- Headquartered in Xi'an Economic and Technological Development Zone, the company covers an area of over 40 acres and employs 350-450 skilled professionals, including a dedicated R&D team of experienced engineers and technical experts.
- TR Solids Control has established a global presence, delivering reliable solutions to over 60 countries and regions across North America, South America, Europe, Asia, the Middle East and Africa.



About Us



Production Capacity

- Our company operates a modern manufacturing base covering a total area of approximately 35,000 square meters, including 22,000 square meters of standardized industrial workshops. We have established independent blanking, machining, welding, assembly, finished product inspection and warehousing & logistics centers, realizing a full-process closed-loop production system from raw material warehousing to finished product delivery.
- We have established a comprehensive quality control system, equipped with high-precision testing equipment such as coordinate measuring machines, ultrasonic flaw detectors, hardness testers and dynamic balance testing machines. All products are inspected in full accordance with international standards.



Company Qualification



Hopper

Introduction



- TR Jet Hopper is a professional mud mixing device designed for rapid drilling fluid preparation and additive feeding. It is widely used in oil and gas, shale gas, coalbed methane, and trenchless drilling operations.
- The unit uses high-speed jet flow to generate negative pressure, drawing bentonite, barite, and other drilling fluid additives into the mixing chamber for rapid and thorough dispersion. It mainly consists of a hopper body, jet piping, nozzle, and connection components, and can be integrated with sand pumps, mud tanks, and circulation systems.
- During operation, high-pressure drilling fluid passes through the nozzle to form a high-speed jet, creating a low-pressure zone that draws solid materials into the fluid. This reduces clumping and sedimentation, improving mixing efficiency and drilling fluid stability.



Hopper



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Hopper Operating Principle



- TR Jet Hopper utilizes high-velocity fluid flow to generate negative pressure and turbulent shear, enabling rapid additive feeding and uniform mixing.
- During operation, the sand pump pressurizes drilling fluid and delivers it through the nozzle, forming a high-speed jet and a localized low-pressure zone inside the mixing chamber. Bentonite, barite, and other additives are drawn into the fluid through the hopper and rapidly dispersed by turbulent flow, impact, and shear forces.
- The mixed drilling fluid then flows through the outlet into the circulation system. This continuous process improves mixing efficiency, reduces manual operation, and helps prevent additive clumping.



high-pressure fluid input → high-speed jet → additive suction → turbulent mixing → uniform mud output



Hopper

Hopper Features & Benefits

1

Rapid Additive Feeding

Fast suction of bentonite, barite, and additives.

2

Efficient Mixing

Strong turbulence ensures rapid and thorough mixing.

3

Uniform Dispersion

Promotes even distribution of solid materials.

4

Reduced Manual Feeding

Minimizes labor and manual handling.

5

Compact & Flexible

Compact structure for easy system integration.

6

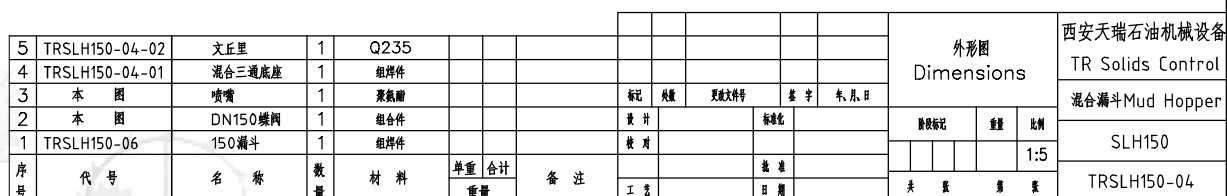
Easy Maintenance

Simple design for convenient operation and servicing.

Hopper Technical Specifications

Model	Working Pressure	Inlet Size	Hopper Dimensions	Weight
TRSL150-50	0.2 ~ 0.4mpa	DN150	600×600mm	170 kg
TRSL150-40		DN150	600×600mm	170 kg
TRSL150-30		DN150	600×600mm	170 kg
TRSL100		DN100	500×500mm	140 kg

Hopper Outline



Mobile Hopper

Introduction



- TR Mobile Jet Hopper uses high-velocity jet flow to generate negative pressure, rapidly drawing bentonite, barite, and other drilling fluid additives into the circulation system for efficient mixing.
- The unit typically consists of a mixing hopper, jet nozzle, connecting pipes, mobile frame, and auxiliary components. It can be flexibly connected to sand pumps, mud tanks, and circulation systems. With high mobility, quick installation, efficient mixing, simple operation, easy maintenance, and wide adaptability, the TR Mobile Jet Hopper provides a convenient and efficient solution for rapid drilling fluid preparation and mud treatment at various drilling sites.



Mobile Hopper Technical Specifications

Model	TRSL150-YD
Mud Mixing Capacity	240 m ³ /h
Working Pressure	0.32 ~ 0.42 MPa
Inlet Diameter	DN150
Outlet Diameter	DN150
Hopper Diameter	620 mm
Weight	150 kg



Xi'an Tianrui Petroleum Machinery Equipment Co., Ltd., established in 2010, is a modern manufacturer of solids control equipment certified to both API Q1 and ISO 9001 standards.

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