

Flare Ignition Device



>>> Xi'an • China

energy

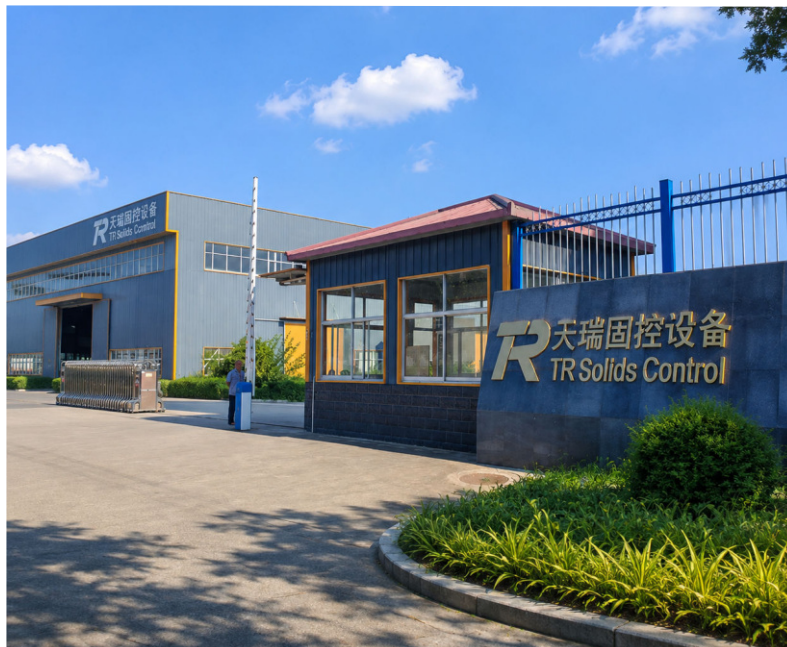


Q1

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.



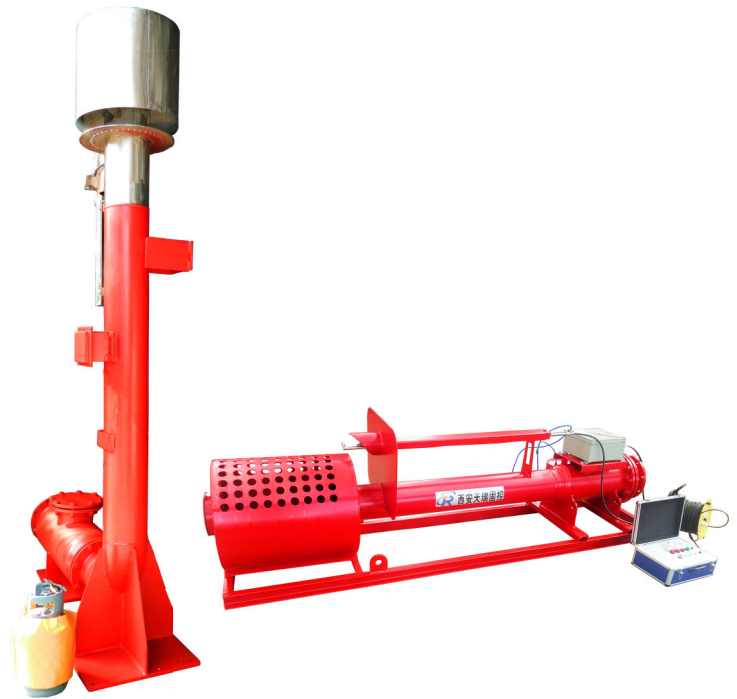
Company Qualification



Flare Ignition Device

Overview

- TR Ignition Device is a safety and environmental protection system designed for oil and gas drilling operations. It is mainly used to safely ignite and burn combustible gases discharged from vacuum degassers, gas separators, and well control equipment, widely applied in oil, natural gas, shale gas, coalbed methane, and geothermal drilling projects.
- Featuring modular design, reliable safety protection, and automatic control, TR Ignition Device offers high ignition reliability, stable combustion, easy operation, and strong adaptability, providing a safe and efficient gas combustion solution for modern drilling operations.



Vertical Ignition Device



- The device uses natural gas (or LPG) as ignition fuel and combines high-energy electronic ignition technology to achieve rapid ignition, stable combustion, and remote automatic control. It is widely applied in oil, natural gas, shale gas, coalbed methane, and geothermal drilling projects.
- During operation, the ignition fuel enters the combustion rod and is ignited by a high-energy electric spark to create a stable pilot flame. When discharged combustible gas enters the combustion zone, it is immediately ignited and continuously burned. The control system provides automatic ignition, flame monitoring, and fault alarms to ensure safe and reliable operation.

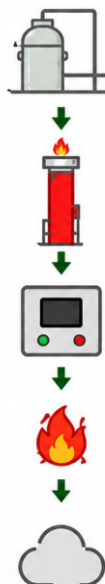


Flare Ignition Device

Vertical Ignition Device Working Principle



- The Vertical Ignition Device uses natural gas or LPG as ignition fuel combined with high-energy electronic ignition technology.
- During operation, the ignition fuel enters the combustion stack and is ignited by an electric spark to create a stable pilot flame. When combustible gases from drilling operations enter the combustion zone, they are rapidly ignited and continuously burned.
- The automatic control system monitors flame status, provides ignition control and fault alarms, and ensures continuous, safe, and reliable combustion performance.



- 1 Exhaust Gas Collection**
Flammable exhaust gas is collected by equipment or pipelines and directed to the ignition device.
- 2 Vertical Ignition and Combustion**
The exhaust gas enters the vertical ignition device and is combusted in the top burner area.
- 3 Automatic Ignition Control**
The control system automatically detects the signal, activates the electronic igniter, and achieves automatic ignition.
- 4 Stable Combustion Treatment**
The flammable gas is fully combusted under the flame, ensuring safe and environmentally friendly treatment.
- 5 Safe Emission**
The combusted exhaust gas is discharged into the atmosphere, reducing environmental pollution.

Vertical Ignition Device Features & Benefits

1

Reliable Ignition

Fast ignition with stable flame performance

Smart Control System

Automatic ignition and real-time monitoring

2

3

Stable Combustion

Ensures continuous and complete gas combustion

Safe Treatment, Low Emission

Reduces combustible gas risks and pollution

4

5

Robust Structure, Long Service Life

Designed for harsh drilling environments

Flexible Application, Easy Maintenance

Suitable for various drilling conditions

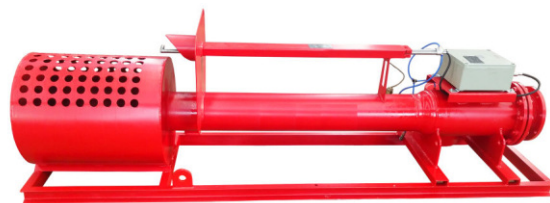
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Flare Ignition Device

Horizontal Ignition Device



- Horizontal Diesel Ignition Device combines diesel atomization with electronic ignition to safely ignite and continuously burn combustible gases from drilling operations.
- During operation, diesel is delivered to the burner and finely atomized through a high-pressure nozzle to form a uniform fuel mist. The electronic ignition system generates a high-energy spark, rapidly igniting the mist and creating a stable pilot flame. When combustible gases from well discharge or gas separators enter the combustion zone, they contact the pilot flame and burn continuously.
- The system integrates fuel supply, atomization, ignition, gas combustion, and automatic monitoring for safe and efficient operation.



Horizontal Ignition Device Features & Benefits

1

Reliable Ignition, Fast Response

Quick ignition with stable flame performance

Efficient Combustion, Low Emission

Ensures complete gas burning and safe treatment

2

3

Automatic Control, Easy Operation

Smart ignition control and flame monitoring

Robust Structure, Long Service Life

Designed for continuous operation in harsh conditions

4

5

Flexible Installation, Wide Application

Suitable for various drilling and gas treatment sites

Simple Maintenance, Low Cost

Easy inspection with reduced maintenance requirements

6

Flare Ignition Device

Vertical Electronic Ignition vs. Horizontal Diesel Ignition



VERTICAL ELECTRONIC IGNITION DEVICE
Clean, High-Efficiency, Automatic Safety



- Electronic Ignition, Automatic Control**
Utilizes an efficient electronic igniter with an automated ignition sequence for safe control.
- Natural Gas-Fueled, Environmentally Friendly**
Uses natural gas for a cleaner burn with low emissions, minimizing environmental impact.
- Vertical Design, Broad Applicability**
Space-saving vertical structure suitable for a wide range of fields, including offshore platforms.
- Operationally Safe, Structurally Stable**
Built with multi-layered safety interlocks to ensure stable and reliable operation.
- Versatile Field and Off-Shore Use**
Meets various terrain and off-shore platform operational requirements, very durable.

SPECIFICATIONS / FEATURES

- ✓ Electronic automatic re-ignition capability
- ✓ Low-emission environmental design
- ✓ Integrated structure for quick setup
- ✓ Integrated structure for quick setup
- ✓ Remote monitoring and control option
- ✓ Corrosive-resistant for coastal conditions

HORIZONTAL DIESEL IGNITION DEVICE
High Heat Intensity, Remote Ignition



- Integrated Diesel Fuel System**
Features a self-contained fuel tank and supply system for standalone operation.
- High-Pressure Atomization**
Uses high-pressure misting for complete and high-intensity diesel combustion.
- Robust, Safe Ignition**
High-performance design ensures safe ignition even in harsh conditions.
- Mobile and All-Terrain Adaptable**
Skid-mounted or trailer-mounted design for easy deployment in varied outdoor terrains.
- Remote Control, Adjustable Duration**
Allows for precise remote control of ignition timing and operation duration.

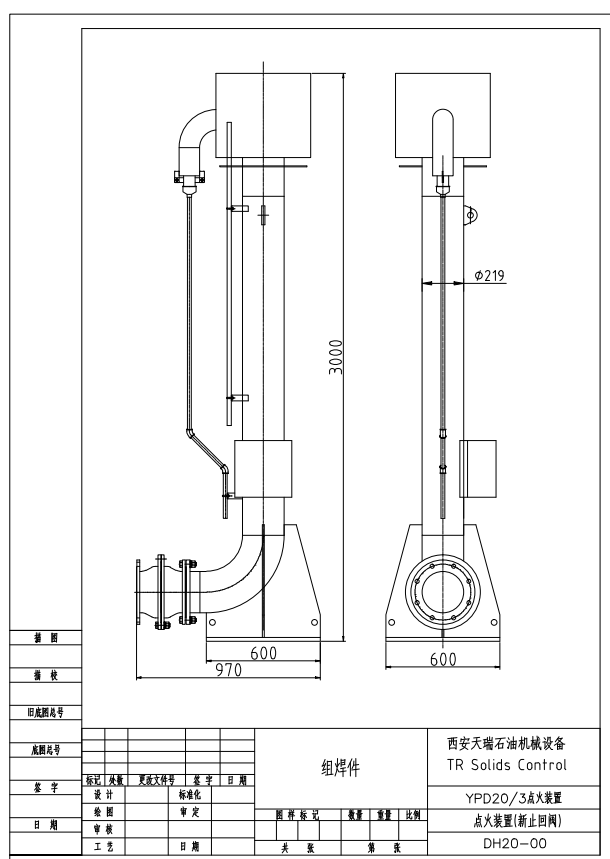
SPECIFICATIONS / FEATURES

- ✓ Adjustable flame intensity and duration
- ✓ Integrated control console
- ✓ High heat release for rapid response
- ✓ High heat release for rapid response
- ✓ Reliable operation in extreme cold or heat
- ✓ Rugged construction for heavy field use

Vertical Ignition Device Technical Specification



Model	TRYPD-20/3		TRYPD-20/3T
Main Conduit	DN200		
Charging Voltage	12V / 220V		
Ignition Medium	Natural gas / LPG		
Ignition Voltage	16kV		
Ignition method	AC	AC / AC from solar power	
Dimensions	1610X650X3000mm	1610X650X3000mm	
Weight	520kg	590kg	





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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