

### Advantage:

- >> Hole range: 90-140mm
- >> Hole depth: 35m
- >> 70kW YUCHAI engine
- >> Dry type dust collector
- >> Two hydraulic motor driven rotary head

# JC712

## DTH ROCK DRILLING RIG

### 潜孔钻机

#### INTRODUCTION 产品介绍

- >> Designed for medium-depth drilling with enhanced operational flexibility, **JC712** supports drilling depths up to 35meters, catering to a broad range of geological conditions. Its adaptable drilling rod lengths (2000mm or 3000mm) and hole diameter range of 90 to 140mm provide versatile solutions for construction, water well drilling, and geological exploration.
- >> The rig delivers a powerful maximum rotary torque of 2500N·m at variable speeds up to 140rpm, ensuring efficient rock penetration and stable hole formation. The robust hydraulic oil cylinder feed system offers a 3340mm stroke and 900mm extension with 15kN feeding force and 25kN lifting capacity, enabling smooth and controlled rod handling during drilling.
- >> Powered by a reliable Yuchai YC4A100-T20 diesel engine rated at 70kW, **JC712** balances power and fuel efficiency supported by a 70-liter fuel tank. Its pneumatic system requires an air compressor capable of supplying 10-18m<sup>3</sup>/min at 0.7-1.8MPa, suitable for a variety of air supply conditions.
- >> With a total weight of 5.3tons and compact transport dimensions of 5550x2290x2600 mm, **JC712** offers excellent mobility and site accessibility. Its 35° climbing capacity and 450mm ground clearance enable operation on rugged terrain, while the optional winch adds versatility for demanding environments.
- >> The rig features a 12-core dry-type dust collection system, enhancing environmental compliance and operator safety by minimizing airborne particulates. Combined with the machine's sturdy build and user-friendly control interface, makes **JC712** a dependable choice for efficient, clean, and flexible drilling operations.

#### >> CHARACTERISTICS 产品特点

- >> Equipped with Yuchai 70kW YC4A100-T20 engine, delivering stable power output and efficient fuel consumption for continuous drilling operations. Dual-motor rotary head provides a maximum torque of 2500N·m and rotation speed up to 140rpm, ensuring reliable performance across diverse rock conditions.
- >> The feed system utilizes an oil cylinder with 3340mm stroke and 900mm extension, providing a feeding force of 15kN and lifting force of 25kN for smooth rod handling. Supports drill rods of 64mm in 2000mm or 3000mm lengths, and compatible with 3" or 4" DTH hammers for versatile drilling needs.
- >> Compact and ergonomic design features an integrated operating platform, enhancing operator comfort and control during drilling tasks.
- >> Carefully engineered protective cover combines aesthetic appeal with ease of maintenance, reducing downtime and improving durability.
- >> Hydraulic dual-speed system with a compact structure enables a wide range of hole diameters (90-140mm), effectively reducing stuck rod incidents. Strong tramping ability with 35° climbing capacity and 450mm ground clearance, capable of towing air compressors over rugged terrain.
- >> Optional 12-core dry-type dust collection system improves site cleanliness and reduces environmental impact. Weighing 5278kg with transport dimensions of 5550x2290x2600mm, it balances mobility and stability for efficient site operations.



## Characteristics 产品特点

- >> Control System: Integrated rear control panel with intuitive layout simplifies drilling operations. User-centered design ensures comfortable handling and easy access to core controls during complex tasks.
- >> Power System: Equipped with a 70 kW Yuchai YC4A100-T20 engine. Combines 10-18m<sup>3</sup>/min air flow and 0.7-1.8 MPa pressure for flexible compatibility with both 3" and 4" hammers in various rock layers.
- >> Rotation & Feed Mechanism: Dual-motor rotary head delivers up to 2500N·m torque with smooth hydraulic dual-speed shifting. Oil-cylinder feed system offers 3340mm stroke and 15kN pushing force for stable hole-forming efficiency.
- >> Drilling Flexibility: Supports 90-140mm hole diameter with 64 rods in 2000mm or 3000mm lengths, offering adaptable configurations for different terrain and space limitations.
- >> Mobility & Maintenance: Rugged undercarriage ensures 35° climbing capacity even when towing a compressor. Compact 5278kg structure with streamlined hood design makes transport and maintenance easier on challenging job sites.

## Specification 技术参数

Specifications	Unit	JC712
<b>Drilling Specifications</b>		
Hole Depth	m	35
Hole Diameter	mm	90- 140
Drilling Rod Diameter	mm	64
Drilling Rod Length	mm	2000/ 3000
DTH Hammer Size	inches	3" / 4"
<b>Rotation</b>		
Maximum Rotary Torque	N·m	2500
Rotation Speed	rpm	0- 140
Lifting Force	kN	25
<b>Feed System</b>		
Feed Type		Oil cylinder
Feed Stroke	mm	3340
Feed Extension	mm	900
Feed Force	kN	15
<b>Engine</b>		
Engine Brand		Yuchai
Engine Model		YC4A100-T20
Rated Horsepower	kW	70
Fuel Tank Capacity	L	70
<b>Air Compressor Demand</b>		
Working Pressure	MPa	0.7- 1.8
Air Consumption	m <sup>3</sup> /min	10- 18
<b>Weight &amp; Dimensions</b>		
Weight	kg	5278
Transport Dimensions (L×W×H)	mm	5550 × 2290 × 2600
<b>General Specification</b>		
Tramming Speed	km/h	0- 2
Climbing Capacity	°	35
Ground Clearance	mm	450
Winch		Optional
Dust Collector		12 Core Dry Type

具体参数变化以实物为准The specific parameter changes are subject to the actual object.

## Main Structure 主要结构

### Power System

70kW Yuchai engine, 10-18m<sup>3</sup>/min airflow, 0.7-1.8MPa pressure.



### Rotation & Feed

Dual motors, 2500N·m torque, dual-speed, 3340mm stroke, 15kN thrust.



### Drilling Capacity

Supports 90- 140mm holes with 64 rods (2000 / 3000mm).



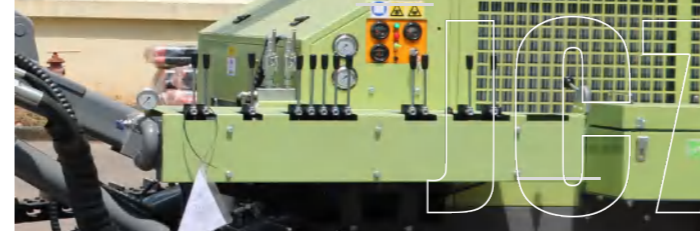
### Mobility System

Crawler chassis, 35° climbing, can tow compressor, 5278kg total weight.



### Control System

Rear integrated panel with intuitive layout and easy access.



### Protective Structure

Compact hood design for easy transport and convenient maintenance.



# DTH Drilling Know How

Down-the-hole drilling (DTH) essentially involves a drilling hammer at the bottom of a drill string. It relies on three elements for drilling holes: bit loading (weight), rotation and air. These active elements combine to be efficient at crushing rock. As the drill string slowly rotates, the drilling hammer is forced into the rock repeatedly. Striking power is provided by compressed air driving a piston inside the hammer.

### Where is it used?

DTH drilling is often used in the mining industry (blast hole drilling), on construction sites, drilling water wells, and in the oil and gas industry.

### DTH advantages

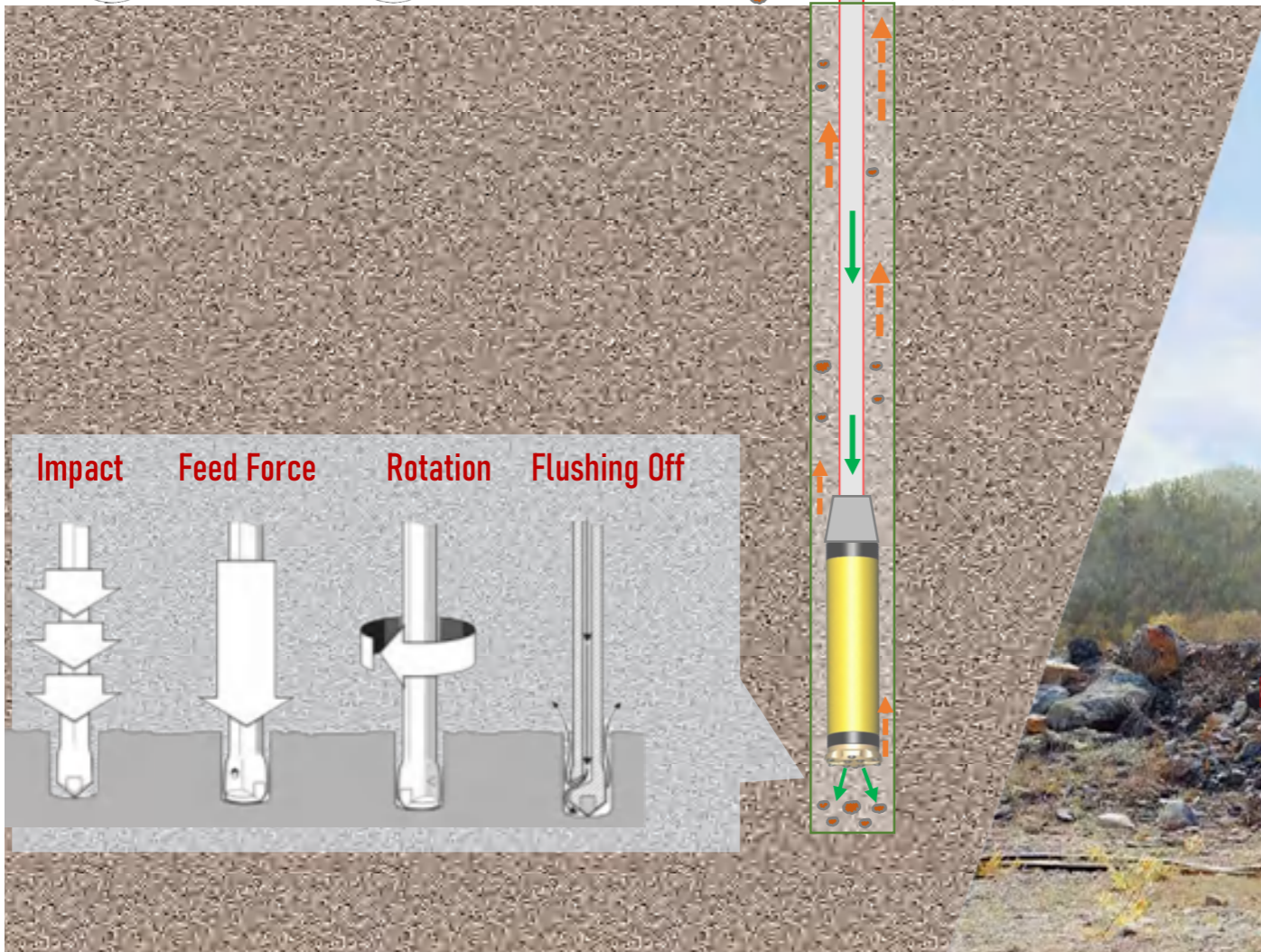
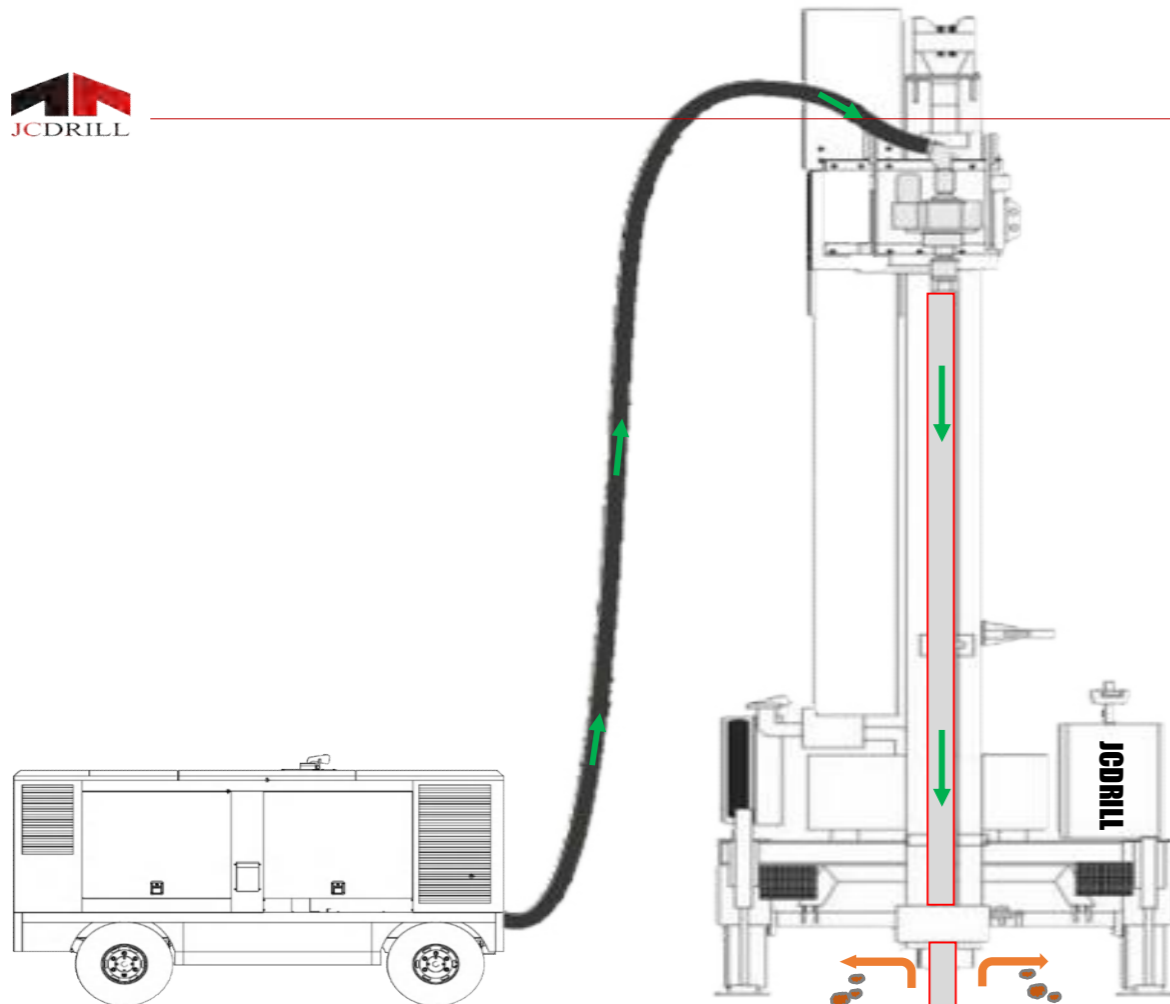
DTH drilling offers several advantages over top-hammer drilling for larger, deeper holes in medium-hard formations. Because the hammer is at the bottom of the hole, power loss is minimal as the hole deepens. That means energy is not lost in the drill string and penetration rates do not markedly decline with depth—provided that back pressure does not rise significantly in the borehole.

### Compressed air power

The DTH hammer is pneumatically powered, with the compressed air propelling it forward to impact and fracture rock. Compressed air also travels through the drill bit into the hole (air exhaust), which blows the chips and dust out of the hole.

### Quieter drilling

From environmental and social perspectives, DTH is a good option because it produces much less noise and vibration than many other drilling methods.





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