



# QM-200 UNDERGROUND MINING PICK SCALER

QM-200 underground mining pick scaler, suitable for 3.24 x 3.24 meters mine tunnel. The scaler, it is a product developed to replace the manual scaler with machinery (mechanization of the scaler). The equipment is mainly suitable for scale operations such as roadways, tunnels and culverts in metal mines and various underground projects. It can quickly and effectively remove the landslides and collapse after blasting operations, and the relatively hidden working panels and the unstable rock suspensions. Prevent the occurrence of accidents. The QM-200 has been upgraded, and the safety level has been further improved, making operation and maintenance smoother.

The whole machine adopts full hydraulic proportional pilot control, equipped with rotary hammer cylinder. The hammer head can be rotated up and down, so that the impact hammer can realize space three-dimensional striking; the working device adopts the rotary reducer device, which has compact structure, stable movement and overturning moment. The main arm horizontal swing range is 170°, and the working radius of scaling is wide; the rear end of the working mechanism adopts a translation mechanism, which can move the working mechanism horizontally to increase the impact range without moving the equipment. Through the unique working mechanism, the work surface, the top plate, the side sill and the bottom plate can be scaled in all directions.

QM-200 scaler is equipped with double working positions. It is convenient for the operator to position the working mechanism and the scaling. The side sitting can better drive the driving equipment in the underground roadway. There are 4 frog-type hydraulic leg on both sides of the frame. The front shovel and the front body are integrated to improve the stability of the scaler. In case of danger, due to the function of quick retracting, it can escape the dangerous conditions quickly. After changing the bucket, the scaler can clean the drain.



## MAIN SPECIFICATIONS

Hammer impact energy	500J
Hammer impact power	4-10KW
Beat per minute	450~1100 bpm
Hammer working Pressure	95~130bar
Rod Diameter	68mm

## SPEEDS FORWARD & REVERSE WITH DEUTZF6L912W

1st gear	4.4 km/h
2nd gear	10.7km/h
3rd gear	19.4km/h

## WORK MECHANISM, OPERATION CAB

Boom Oscillation Angle	± 85°
Hammer maximum working height	7720mm
Hammer maximum working distance	6245mm
Cab	open

## MAIN SPECIFICATION

Total operating weight*	15100 kg
Dimension	8961mmx2047mmx2553mm
Min. Steering Radius	5309mm/2932mm
Minimum Ground Clearance	266mm
Grade ability	14° (25%)

\*Unit weight is dependent on the selected options



### OPERATIONAL CONDITIONS AND LIMITS

Environmental temperature	-15°C~+50°C
Standard operating altitude	With engine Deutz F6L912W from -1500 m to +1000 m at 25 °C without rated power derate

### DESIGN STANDARD

MT/T199-1996	General technical conditions for hydraulic drilling rigs for coal mines
JB 8518	Underground loader safety requirements
GB25518	Underground loader safety requirements
XYQB 004 - 2016	Scaler trolley enterprise standard

### POWER TRAIN

#### ENGINE

Diesel engine	DEUTZF6L912W
Output	63 kW @ 2300 rpm
Torque	298 Nm @ 1550 rpm
Number of cylinders	In Line 6
Displacement	6.128L
Cooling system	Air cooled and engine driven cooler fan
Combustion principle	4-stroke, direct injection
Air filtration	Prefilter and two stage filtration, dry type
Electric system	24 V
Emissions	Euro Stage II
Exhaust system	DOC+POC+Silencer
Average fuel consumption at 50% load	6.3L/h
Fuel tank capacity	170L

#### TORQUE CONVERTER

TORQUE CONVERTER	
Dana C272	

#### GEARBOX

Gearbox	
Dana R20000	Mechanical power shift three gears forward and reverse

### AXLES

Front Axle	
SAHR	WJ1.5(Normally closed)
Fixed	
Rear Axle	
SAHR	WJ1.5(Normally closed)
Oscillating ± 8°	

### TIRES

Tire size	12.00-24-20 PR SS1(L5S)TT
Tire brand	TIANLI / QIANJIN

### HYDRAULICS

Hydraulic oil radiator	Maximum heat dissipation can meet ≤ 50 ° C ambient temperature
Transmission oil radiator	
Fittings	H type (metric 24° cone seal)
Hoses	GB3683
Hydraulic oil tank capacity	276L
Sight glass for oil level	1 pc

### STEERING HYDRAULICS

Full hydraulic central articulated steering	Steering wheel handwheel operation
Two double-acting hydraulic cylinders	Full hydraulic steering gear control steering
Shifting	Mechanical handle control shift
Steering hydraulic cylinders	2 pcs
Steering pump	Gear type fixed pump

### WORK HYDRAULIC SYSTEM

Control mechanism	Hydraulic control handle operation (breaker control is electronically controlled) 2pcs
Work mechanism type	Folding working boom
Hydraulic rotary reduction gear	1 pc
Boom cylinder	1 pc
Second boom cylinder	1 pc
Rotary hammer cylinder	1 pc
Push shovel cylinder	1 pc
Outrigger cylinder	4pcs
Working main valve	Open system
Working pump type	Gear type metering pump

### BRAKES

Fully enclosed multi-disc wet brake with spring brake; integrated driving brake, parking brake and emergency brake; brake system performance in accordance with EN ISO 3450, AS2958.1 and SABS 1589.

Characteristics	Working brake and parking brake are SAHR type
Brake hydraulic tank volume	Integrated with the hydraulic tank

### OPERATOR'S COMPARTMENT

QM-200 cab provides a superior ergonomic operating environment, the cab is equipped with mechanical shock-absorbing suspension seats, 90° rotation, easy to change the operator's driving position and work position, equipped with three-point seat belt. The seat is adjustable front and rear. Reduce operator fatigue by increasing legroom and improving pedal position.

QM-200 cab has passed ROPS/FOPS certification to protect the operator's safety. The cab has sufficient strength to prevent falling and rolling protection of the operator; the cab is equipped with a high-strength protective grille to prevent the flying stone from injuring the staff; and the working light is provided, and the operator's line of sight is clearer; The spray system of the scaler eliminates the dust generated by the impact hammer operation and has a wider field of view, which greatly reduces the content of harmful silicon particles in the air.



#### Cab

ROPS certification according to ISO 3471
FOPS certification according to ISO 3449
Open cabin
High-strength protective grille
Dry powder fire extinguisher
Full hydraulic pilot proportional control handle
Washable cab floor to reduce dust
Three-point access to the cab
All power circuit breaker power off switch
Mechanical suspension

#### Cab dashboard

The icon form panel to make it easier for the operator to identify the switch information of the alarm and have more time to look at the road and work.

XWD Standard Control System	
Warning and alarm system	Sound and light alarm prompt
dash board	Icon dashboard
	Full-featured knob and push button switch control

#### Push plate

The front plate is integrated with the front body to achieve rapid retracting function in case of danger conditions, quickly evacuate dangerous conditions; Push plate can be adjusted independently to keep stable in rough road condition; the plate can also support the leg at the same time, to improve the stability of the body of the scaler.

Integration
Fast retraction
Independent adjustment control

#### Frame

##### Structure

The sturdy chassis features a newly designed high-strength steel frame that minimizes damage to the impact of the roadway wall; long service life; the rear-mounted large-capacity water tank can be used as an active counterweight to provide stability for equipment operations; High-strength alloy steel plate, optimized material thickness, reduced self-weight, improved overall transportation capacity, and long structural life.

The boom of the working mechanism is box-shaped and provides a strong impact load resistance and is optimized to reduce stress and extend boom life; All articulation systems of the XYQM-200 are equipped with lubrication points and are equipped with a multi-door wraparound hood that is well designed, saves time and effort, is easy to maintain, and is durable.

Central articulation	Adjustable bearing connection
Boom	Box structure
Engine cover	Multi-door combination
Automatic centralized lubrication system	Optional

## ELECTRICAL EQUIPMENT

### MAIN COMPONENTS

Alternator	28 V, 35 A
Batteries	2 x 12 V, 100Ah
Starter	4 kW, 24 V
Driving and working lights	LED lights 2PCSinside the cabin 2PCSin the rear frame
Dual horn configuration	Standard
Alarm	Oil pressure alarm, rotating alarm light

### CONTAINED SECURITY FEATURES

#### FIRE SAFETY

Portable fire extinguisher	2kg 1PC
Centralized fire extinguishing system	optional
Hot side - cold side design	standard
Heat source isolation cover	standard
Exhaust pipe insulation cotton protection	optional

#### ENERGY ISOLATION

Lockable main switch	Standard
Manual discharge for pressureaccumulators	Standard
Frame articulation locking device	Standard

## DOCUMENTATION

### STANDARD MANUALS

Maintenance Manual	English
Parts Manual	English
Decals	English

## OPTIONS

### SAFETY OPTIONS

Sight remote control system
Retrieval hook (hydraulic brake release by pulling the hook)
Ansul Manual Fire suppression system with auto shutdown
Emergency steering function
Remote control system

### OPTIONAL CONFIGURATION OF THE ELECTRICAL SYSTEM

Imaging system
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### OTHER OPTIONS

Closed cab and air conditioning system
Fast fueling, hydraulic oil and transmission oil interface
Customizable other breakers

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**GOOD WORKING RANGE**

Equipped with Hi-tech HTB200 breaker

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**GOOD PERFORMANCE**

F6L912W, Tier 2 engine (3 % friction coefficient)

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