



QM-060

Underground Mining Movable VIBRAORY PICK SCALER

QM-060 is a multifunctional underground mobile skid trolley, suitable for 3.3 × 3.3m mine tunnel. This underground mobile skid-lifting trolley is also called a laneway cleaning trolley, skid-lifting trolley, slag skid-lifting trolley, and skimming machine. It is a product researched and developed for realizing mechanical replacement of manual skimming operation (mechanization of skimming operation). This equipment is mainly applicable to the prying operation of roadways, tunnels and culverts in metal mines and various underground projects. It can quickly and effectively remove the easy to fall and collapse after blasting operations, the relatively hidden working panels and two unstable rock suspensions. Prevent top film accidents. QM-060 has been improved and upgraded on the basis of the original underground skid trolley, and the safety level has been further improved to make the operation and maintenance smoother.

The whole machine adopts full hydraulic proportional pilot control, equipped with rotary oil cylinder and rotary hammer oil cylinder. The hammer head can be rotated up and down, left and right, which can make the impact hammer achieve three-dimensional strike in space. The working device adopts a rotary reducer device, which has a compact structure, stable operation and overturning torque Large; the horizontal swing range of the main arm is 90 °, and the prying operation radius is wide; the working mechanism adopts a translation mechanism and a telescopic arm mechanism, which can move the working mechanism horizontally forward to increase the hitting range without moving the vehicle. Through the unique working mechanism, the work surface, top plate, side help and bottom plate can be fully pried. QM-060 can take the prying operation to a new level.

QM-060 skid trolley is equipped with dual working positions. It is convenient for the operator to locate the working mechanism and skid the work. The slanting seat can better drive the equipment in the underground roadway. The front pusher is integrated with the front body stabilizing outriggers to improve the stability of the body during prying operation. In dangerous situations, it can quickly retract the outriggers and quickly withdraw from dangerous conditions. After the bucket is replaced, the drainage ditch can also be cleaned; after the bucket is replaced, the staff can also perform aerial work.



Main Parameters

Breaker impact energy	350 J
Hammer impact power	3.5-7 KW
Hammer striking frequency	600~1100 bpm
Working oil pressure of hammer head	90~120 bar
Drill rod diameter	53 mm

Forward and backward speed (equipped with DEUTZ D914L06)

1st gear	4.6 km/h
2nd gear	10.0 km/h
3rd gear	23.1 km/h

Work agency, cab data

Work arm swing angle	± 45°
Max working height of hammer head	9400mm
Maximum working distance of hammer head	8820mm
Cab lift height	400mm
Cab tilt angle	25°

Machine data

Operating weight *	14300 kg
Dimensions	8746mmx1800mm x2300mm
Turning radius	6202mm/4108mm
Minimum ground clearance	252mm
Gradeability	15° (25%)

* Operating weight depends on selected options



Revision Date: 2019-09
<http://www.liononemining.com>

Operating conditions and restrictions

Use ambient temperature	-15 °C ~ +50 °C
	Using DEUTZ D914L06 Engine from -1500m to + 1000m, No power loss at ambient temperature of 25 °C
Standard working altitude range	

Equipment design standards

MT / T 199-1996 General technical requirements for hydraulic drilling rigs for coal mines
JB 8518 underground scraper safety requirements
GB25518 Safety requirements for underground scrapers
XYQB 004-2016 Enterprise Standard

Motion transfer system

Power system

Diesel engine	DEUTZ D914L06
Rated power	86.5 KW @ 2300 rpm
Rated torque	375 Nm @ 1600 rpm
Number of cylinders	Inline 6-cylinder
Displacement	6.47 L
cooling system	Water-cooled engine, radiator uses engine to drive cooling fan
Combustion principle	4-stroke direct injection engine
Intake air filter	Dry air filtration, pre-filtration + two-stage filtration
Electrical System	24 V
Emission Standards	EuroIII
Euro III certification number	C3CI86A
Exhaust system	DOC+POC+silencer
Average fuel consumption at 50% load	8.6 L/h
Fuel tank volume	181 L

Torque converter, transmission integrated

	Shift buffer function
DANA 1201FT20321	Single-stage three-element with hydraulic pump drive
Electronically controlled transmission	Three forward and backward gears

Axle

Front axle,	
Spring brake hydraulic release	XINGYE YR14
Rigid axle	Standard differential
Rear axle	
Spring brake hydraulic release	XINGYE YR14
Rear axle swing, swing angle ± 8 °	Standard differential

Tires

Tire size	10.00-20NHS-16
Tire brand	Tianli tire / Qianjin tire

Hydraulic system

Hydraulic oil radiator	Maximum heat dissipation can meet the ambient temperature of ≤50 °C
Transmission oil radiator	
Connector Standard	JIC standard
Hose Standard	GB3683
Hydraulic oil tank volume	276L
Level Viewing Mirror	1 pc

Steering hydraulics system

Full hydraulic central articulated steering	Integrated handle operation
Two double-acting steering cylinders	Hydraulic pilot-controlled steering Electronically controlled joystick for shifting
Shift	
Steering main valve	Open center type
Steering hydraulic cylinder	2 pcs
Steering pump type	Gear-type fixed displacement pump

Working hydraulic system

Institutional control	Hydraulic control handle operation (the breaker is controlled by electric control) 2pcs
Form of work organization	Foldable telescopic working arm (with translation function)
Rotary reducer	1 pc
Boom cylinder	1 pc
Second arm cylinder	1 pc
Telescopic cylinder	1 pc
Third arm cylinder	1 pc
Rotary hammer cylinder	1 pc
Rotating cylinder	1 pc
Shovel cylinder	1 pc
Outtrigger cylinder	2 pcs
Working main valve	Open center type
Working pump type	Gear-type fixed displacement pump

Brake hydraulic system

The parking uses spring brakes, fully enclosed multi-disc wet brakes; the performance of the braking system meets EN ISO 3450, AS2958.1 and SABS 1589 standards.

Features	Service brake and parking brake are spring brake and hydraulic release.
Brake hydraulic tank volume	Integrated with the hydraulic oil tank

Driver operation

QM-060 cab provides a superior ergonomic operating environment. The cab is equipped with a mechanical shock-absorbing suspension seat that can be rotated 90 °, which facilitates frequent replacement of the operator's driving and working positions. Seat belt, seat up and down, front and rear adjustable.

QM-060 cab has passed ROPS / FOPS certification to protect the safety of the operator. The cab has sufficient strength to prevent falling rocks and rollovers to protect the safety of the operator; the cab is equipped with a high-strength protective grille to prevent flying stones from smashing the staff; the cab can be lifted (up to 400mm) as a whole, and the cab can be tilted ((Maximum) 25 degrees, and equipped with a luffing work light, the operator's line of sight is wider when prying; with the water spray (spray) system of the prying trolley to eliminate the dust generated by the impact hammer operation, the vision is clearer, which greatly reduces the air Content of harmful silicon particles.

Cab

ROPS certification according to ISO 3471

FOPS certification conforms to ISO 3449

Open cab

High-strength protective grille

Dry powder fire extinguisher

Full hydraulic pilot proportional control handle

Washable cab floor to reduce dust

Three-point cab entry system

All power circuit breakers of the machine

Mechanical suspension

Height adjustable

Adjustable hand rest

Cab dashboard

Configure icon form panel, make it easier for the operator to identify the switch information of the alarm, and have more time to watch the road and work operations.

Industrial Standard Intelligent Control System

Warning and alarm system Sound and light alarm

Dash board Icon Dashboard
Full-featured knob and button
switch control



Shovel, outriggers

The front-end shovels are integrated with the front body stabilizing outriggers, which can realize the function of quickly retracting the outriggers in case of danger, and quickly evacuate from dangerous working conditions. Achieve the removal of roadblocks at different heights; the shovel, left leg, and right leg can be independently adjusted to stabilize the bumpy road; the shovel can also support the leg at the same time, increase the support surface and improve the prying operation stability.

Translation mechanism

Integration

Quickly retract

Independent adjustment control

Frame

Frame structure

The sturdy chassis has the latest design of high-strength steel frame, which minimizes the impact damage from the wall of the roadway; long service life; the rear-mounted large-capacity water tank can be used as a mobile counterweight to provide stability for equipment operation; High-strength alloy steel plate, optimize material thickness, reduce self-weight, improve overall transport capacity, and long structure life.

The boom of the working mechanism adopts a box-type structure, which provides a strong ability to resist impact loads, and is optimized to reduce stress and extend the service life of the boom;

All QM-060 articulated systems are equipped with lubrication points and equipped with a multi-door wrap-around hood, which is well-designed, saves time and effort, is easy to maintain, and is durable.

Adjustable bearing connection

Central hinge

Working arm

Grille door

Automatic centralized

lubrication system

Box structure

Side open

Optional

Electrical System

Main configuration

Generator	28 V, 35 A
Accumulator	2 x 12 V, 100Ah
Starter	4 kW, 24 V

Lighting and work lights	LED lights
	4PCS in front rack
	2PCS in the cab
	2PCS in rear rack

Speaker configuration	Standard
Rotating alarm light	Standard

Included safety features

Fire Safety

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

Energy isolation

Main power switch can be locked	Standard
Accumulator manual pressure relief device	Standard
Front and rear rack locking device	Standard

Vehicle protection function

Engine broken belt protection system	Standard
Neutral Brake Parking Protection System	Standard
Electrical short circuit, overload protection system	Standard

Document

Standard Manual

Operation Manual	English
Maintenance Manual	English
Spare Parts Manual	English
Maintenance manual	English
Label	English or icon

Optional

Security Options

Line-of-sight remote control system

Ansul manual fire suppression system

~~W Emergency steering function~~

Remote control system

Optional electrical system configuration

Imaging system

Other optional configurations

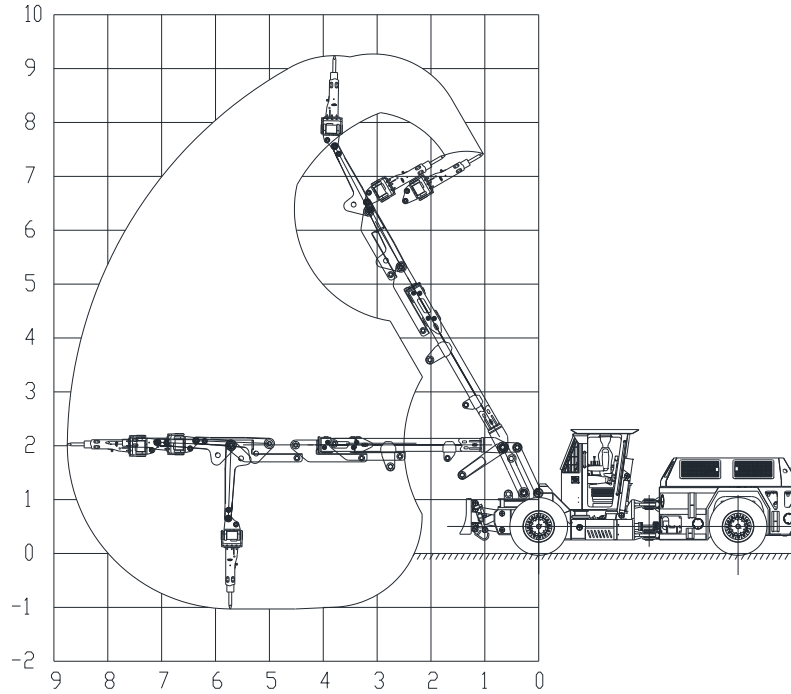
Closed cab and air conditioning system

Quickly add fuel, hydraulic oil and transmission oil interfaces

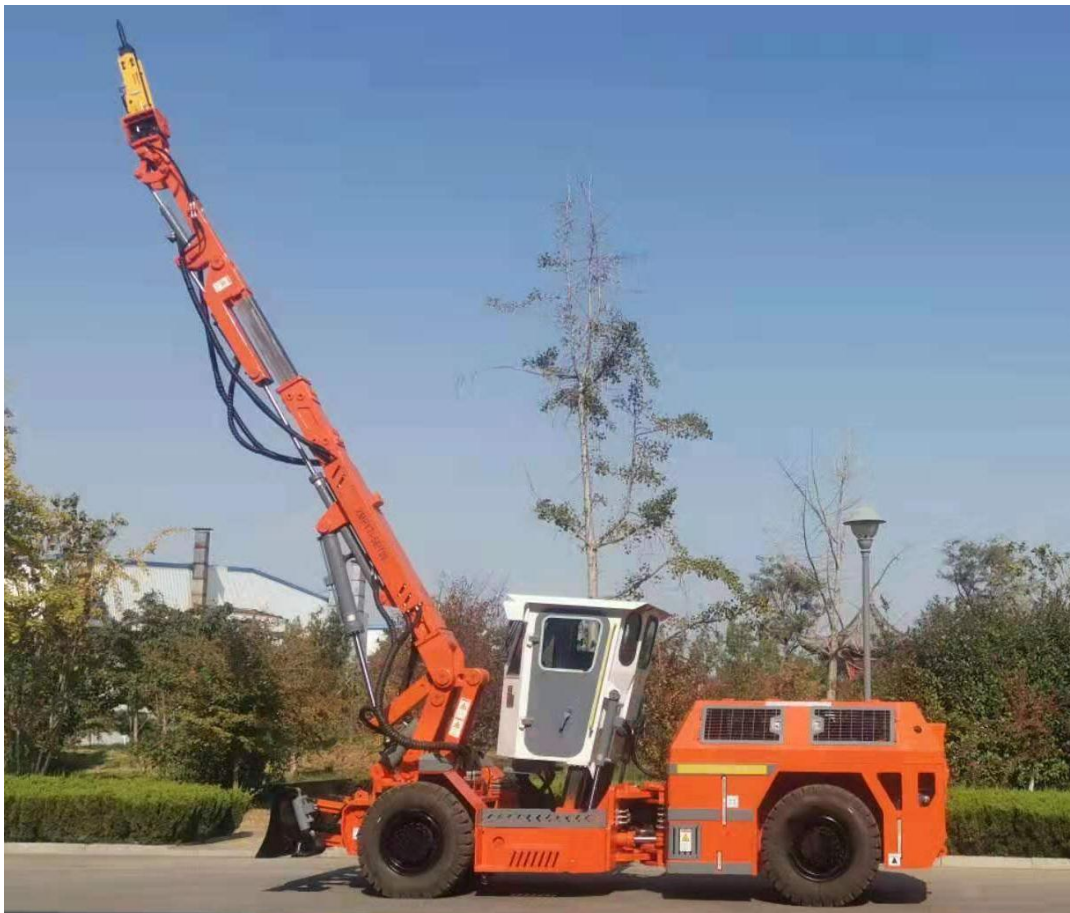
Customizable other brands of breakers

Good working range

Equipped with SB30 breaker of Shuishan



Vertical Working Range



Dimension

