SJ-500C
Underground Mining Rock Breaker

SJ-500C is a Medium-sized underground rock breaker for use in 3.3×3.3 meter mining tunnels. It is used for secondary crushing in the underground mining process. The SJ-500C rock breaker has been upgraded for higher level of safety and more convenient operation and maintenance.

Higher productivity and efficiency is achieved by better stability and larger hammer size. The improved working mechanics of the rock breaker makes it easier to be positioned and stabilized.

The SJ-500C is equipped with dual working positions. The forward seat position is designed for the operator to operate the hammer. The side seat position is designed for the operator to drive. The frog-type leg structure is adopted on both sides of the frame, and the work is stable and reliable. The four leg cylinders can be controlled separately to keep stable.

MAIN SPECIFICATIONS

Hammer impact energy	1481J
Hammer impact power	10-21KW
Impact Rate	370～800bpm
Hammer working Pressure	140～170bar
Rod Diameter	100mm

SPEEDS FORWARD & REVERSE WITH DEUTZF6L912W

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

WORK MECHANISM, CAB

Boom Oscillation Angle	±30°
Hammer maximum working height	4629 mm
Hammer maximum working distance	5270mm
Maximum ground clearance when the drill rod is vertical	2868mm
Cab	open

MAIN SPECIFICATION

Total operating weight*	16000 kg
Dimension	8622mmx2050mmx2650mm
Min. Steering Radius	5487mm/2926mm
Minimum ground clearance	228mm
Gradeability	14.4° （25%）

*Unit weight is dependent on the selected options

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http://www.liononemining.com

OPERATIONAL CONDITIONS AND LIMITS

Environmental temperature	-15°C～+50°C
Standard operating altitude	With engine Deutz TCD2013L04 from -1500 m to +2000 m at 25 °C without rated power derate

DESIGN STANDARD

JB/T5503-2004 Backhoe loader
JB 8518 Underground Mining Loader Safety Requirement
GB25518 Underground Mining Loader Safety Requirement
Q/XY 008 - 2018 Rock Breaker Company Standard

POWER TRAIN

ENGINE

Diesel engine	DEUTZ TCD2013L04
Output	120 kW @ 2300rpm
Torque	618 Nm @ 1600rpm
Number of cylinders	In-line 4
Displacement	4.7L
Cooling system	water cooled and engine driven cooler fan
Combustion principle	4-stroke, direct injection,
Air filtration	Prefiltration and Two stage filtration, dry type
Electric system	24 V
Emissions	Euro Stage III
Exhaust system	DOC+POC+Silencer
Average fuel consumption at 50% load	6.3L/h
Fuel tank capacity	275L

CONVERTER

Dana C272	without lock-up

TRANSMISSION

Dana R20000	Mechanical power shift Three gears forward and reverse

AXLES

Front axle, spring applied hydraulic operated brakes. Fixed	WJ1.5(Normally closed)
Rear axle, spring applied hydraulic operated brakes. Oscillating ± 8°(rear axle)	WJ1.5(Normally closed)

TIRES

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

HYDRAULICS

Oil cooler for hydraulic and transmission oil	Capability up to 50°C ambient temperature
Fittings	H type (metric 24° cone seal)
Hoses	GB3683
Hydraulic oil tank capacity	265L
Sight glass for oil level	1 pc

STEERING HYDRAULICS

Full hydraulic central articulated steering Two double-acting steering hydraulic cylinder	Hydraulic pilot handle control
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 is foot hydraulic controlled) 2pcs
Work mechanism type	Folding working arm
Rotary hammer cylinder	2 pcs
Boom cylinder	1 pc
Second boom cylinder	1 pc
Rotary hammer cylinder	1 pc
Outrigger cylinder	4pcs
Working main valve	Open system
Working pump type	Gear type fixed pump

BRAKES

Service brakes are spring applied; hydraulically operated multidisc wet brakes on all wheels. Integrate service brake, park brake and emergency brake in a whole system. Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589

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

OPERATOR'S COMPARTMENT

SJ-500C cab provides a superior ergonomic operating environment. The seat direction is arranged at 45 degrees with the center line of the whole machine, which is convenient for the operator to work and drive. It is equipped with a three-point seat belt, and the seat is adjustable front and rear.

The cab has passed ROPS/FOPS certification to protect operator safety. The cab has sufficient strength to prevent falling rocks from rolling over to protect the operator's safety. The cab's high-strength protective grille prevents the falling stones from damaging the staff; and it is equipped with work lights that make the operator's line of sight clearer during rock-breaking operations; Increase legroom and optimize pedal position to reduce operator fatigue.

Cab

High-strength protective grille
Enclosed cabin (optional)
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 makes 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

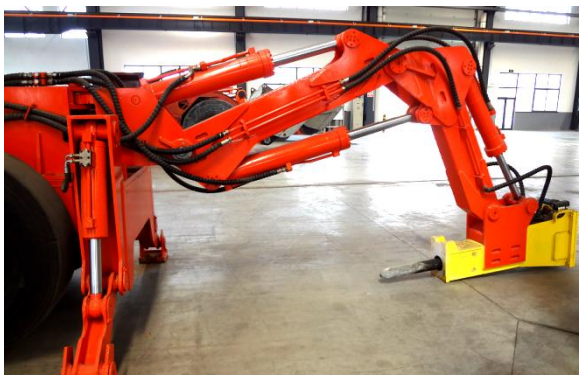
Warning and alarm system	Sound and light alarm prompt
Dash board	Icon dashboard
	Full-featured knob and push button switch control

FRAME

Structure

The rear frame adds a heavy-duty design which can stabilize the machine while working. The heavy-duty rear frame and tail frame minimize damage due to the roadway wall impact.
High-strength alloy steel plate is used to optimize material thickness, reduce self-weight, improve overall transportation capacity, and have 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 SJ-500C 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 Centralized fire extinguishing system	2kg 1PC optional
Hot side - cold side design	standard
Heat source isolation cover	standard
Exhaust pipe insulation cotton protection	optional

ENERGY ISOLATION

Lockable main switch	Standard
Accumulator manual pressure relief device	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

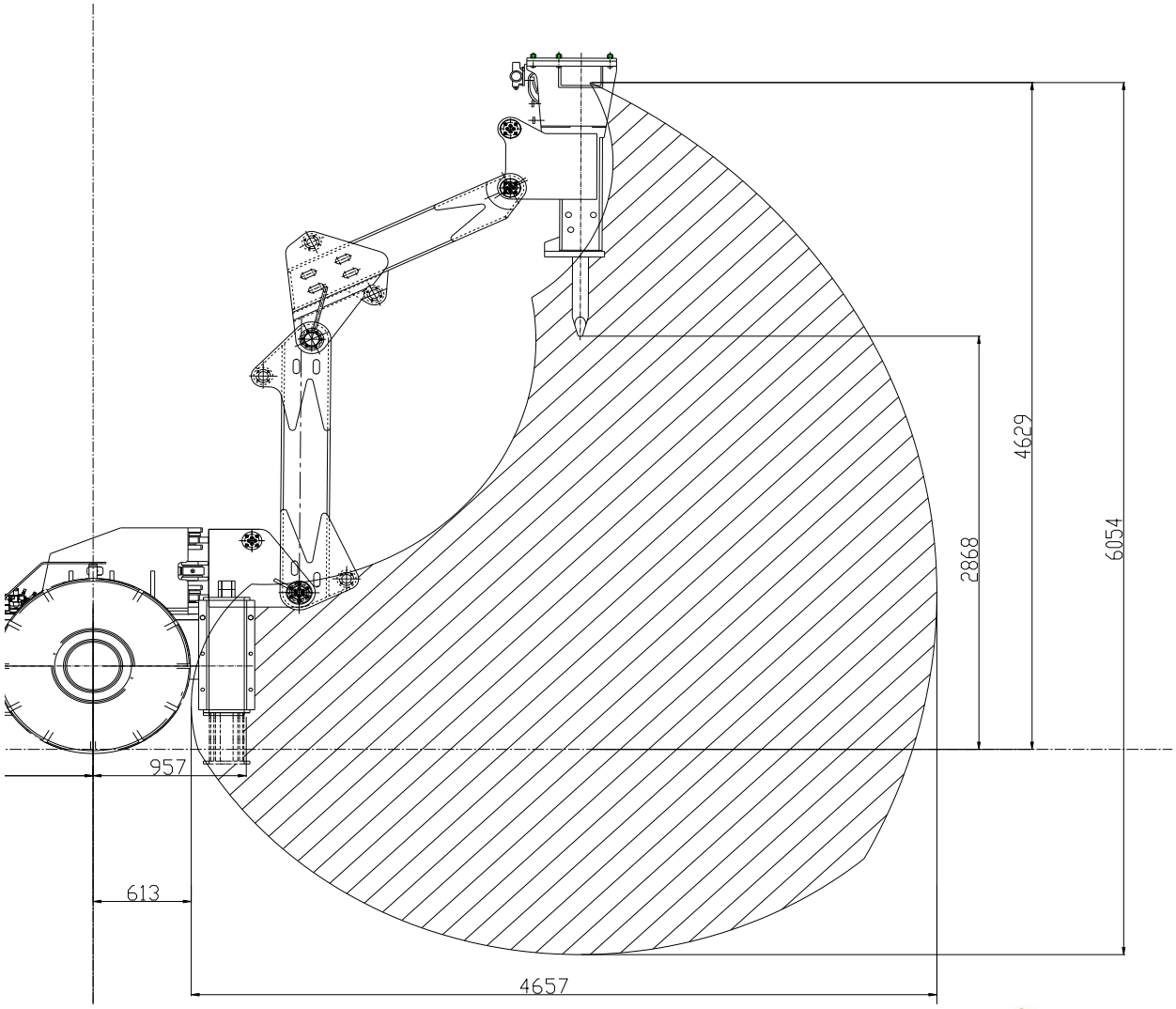
Imaging system

OTHER OPTIONS

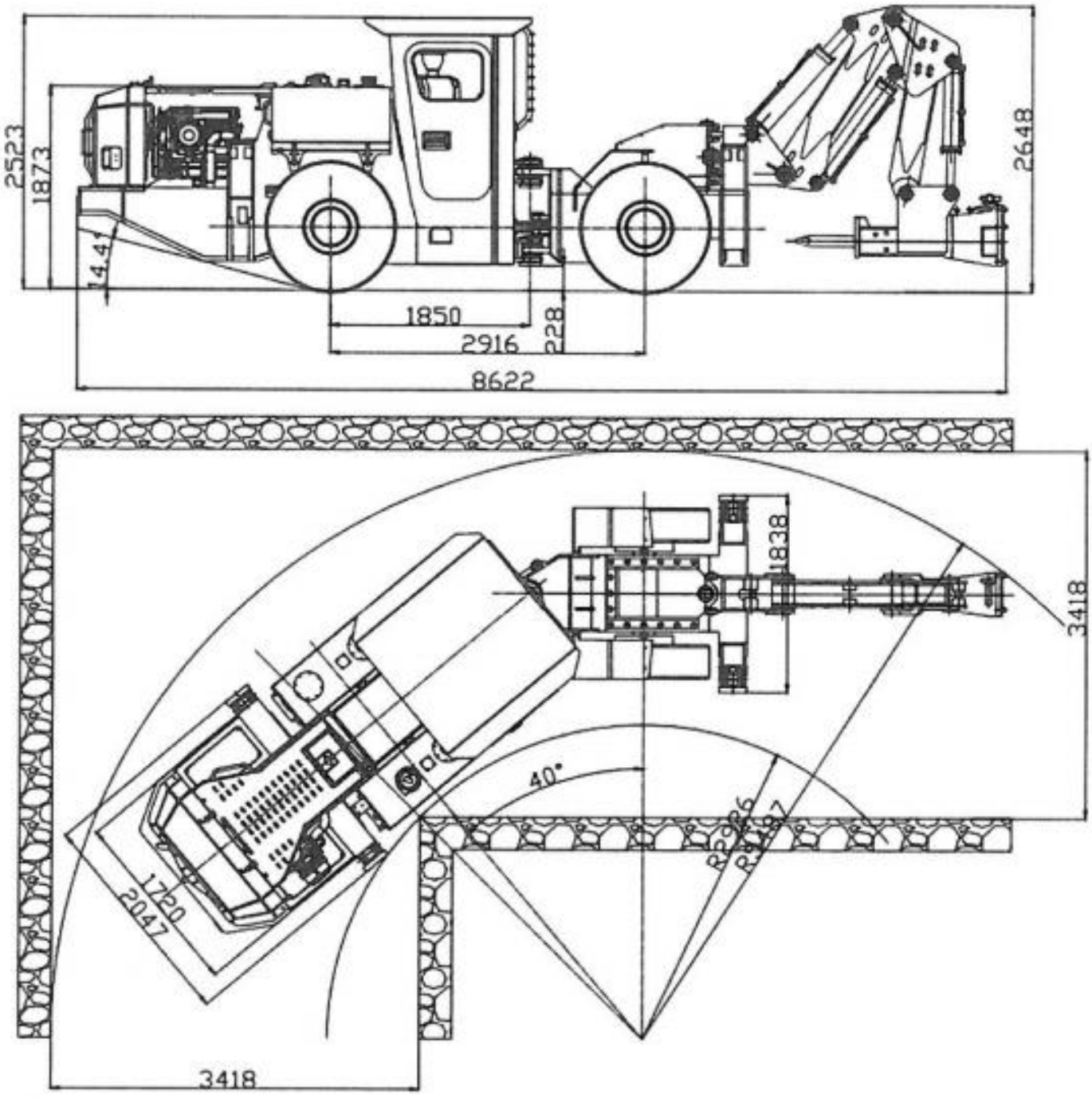
Closed cab and air conditioning system
Wiggins quick filling set for fuel, coolant and oil
Customized other hammers

GOOD WORKING RANGE

Equipped with Atlas MB750 breaker



THE HIT RANGE OF THE HAMMER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40°
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