



SJ-700

Underground Mining Rock Breaker

SJ-700 is a high capacity rock breaker for use in 3.5×3.5 meter mining tunnels. It is used for secondary crushing in the underground mining process. The SJ-700 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-700 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. An additional passenger seat is designed in the cabin to carry assistant personnel.



MAIN SPECIFICATIONS

Hammer impact energy	2709J
Hammer impact power	31-42KW
Impact Rate	340~680bpm
Hammer working Pressure	160~180bar
Rod Diameter	120mm
Hammer Model	Epiroc MB1200

SPEEDS FORWARD & REVERSE WITH DEUTZ BF4M1013EC

1st gear	4.2 km/h
2nd gear	8.4 km/h
3rd gear	20.0 km/h

WORK MECHANISM

Boom Oscillation Angle	±30°
Hammer maximum working height	4980mm
Hammer maximum working distance	5828mm
Maximum ground clearance when the drill rod is vertical	2650mm

MAIN SPECIFICATION

Total operating weight*	21 300 kg
Dimension	9748mmx2200mm x2639mm
Steering Radius	5308mm/2879mm
Min.Ground clearance	261mm

*Unit weight is dependent on the selected options



OPERATIONAL CONDITIONS AND LIMITS

Environmental temperature	-15 °C~+50 °C
Standard operating altitude	With engine Deutz BF4M1013EC 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 BF4M1013EC
Output	115 kW @ 2300 rpm
Torque	572 Nm @ 1400 rpm
Number of cylinders	In-line 4
Displacement	4.76L
Cooling system	Liquid cooled and engine driven cooler fan
Combustion principle	4-stroke, direct injection, turbo with intercooler
Air filtration	Two stage filtration, dry type
Electric system	24 V
Emissions	Tier 2, Euro Stage II
Euro II certificate number	e1*97/68FA*2001/63*0128*03
Exhaust system	DOC+POC+ Silencer
Average fuel consumption	13.5L/h
at 50% load	
Fuel tank capacity	300L

CONVERTER

Dana C273 Converter	Without torque converter lockout
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TRANSMISSION

Dana R32360 Transmission	Shift buffer function Integrated control of shift operation and steering handle
Electric control transmission	three gears forward and reverse

AXLES

Front axle, spring applied	Kessler D81,
hydraulic operated brakes.	Limited slip differential
Fixed	
Rear axle, spring applied	Kessler D81,
hydraulic operated brakes.	Limited slip differential
Oscillating $\pm 8^\circ$	

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	JIC Standard
Hoses	PARKER
Hydraulic oil tank capacity	300L
Sight glass for oil level	1 pcs

STEERING HYDRAULICS

Full hydraulic, centre-point articulation, power steering with	Electro-hydraulic integrated handle
Two double acting cylinders.	Steering for hydraulic pilot control
Steering main valve	Shifting is electronically controlled
Steering hydraulic cylinders	Open circuit type
Steering pump	2 pcs Gear type quantitative pump

WORK HYDRAULIC SYSTEM

Control mechanism	Hydraulic control handle operation (hammer control is electronically controlled)
Work mechanism type	2pcs
Boom cylinder	Folded work boom
Small boom cylinder	1 pc
Hammer cylinder	1 pc
Swing cylinder	1 pc
Supporting foot cylinder	2pcs
Main valve	4pcs
Work pump type	Open circuit type Gear type quantitative 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. Two independent circuits: one for the front and one for the rear axle. Service brakes also function as an emergency and parking brake. Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589

Features	Service brake and parking brake are spring brake and hydraulic release Integrate with hydraulic oil tank
Brake oil tank capacity	

OPERATOR'S COMPARTMENT

SJ-700 cab provides a superior ergonomic operating environment, and the cab driver seat can be rotated 90°, which is easy for the operator to change the work position. SJ-700 is equipped with dual throttle control system for operators to work in double position easily

SJ-700 cabin is ROPS/FOPS certified to protect the operator in case of roll over or falling objects. The front part is designed with a high-strength protective grille to prevent debris from splashing during work. (The optional enclosed cab interior is pasted with 25mm flame-retardant noise-reducing interior fabric. The cab is soft and comfortable, and has effective dust-proof and noise-reduction functions. Laminated glass windows are used and four-port sealing strips are used for installation, which can be installed inside and outside. Disassemble the glass for emergency use when a dangerous situation occurs.)



CABIN

ROPS certification according to ISO 3471

FOPS certification according to ISO 3449

Enclosed Cabin with Air Conditioner(optional)

Sound absorbent material to reduce noise(Closed)

Laminated glass windows(enclosed cab)

Powered pre-filter for A/C device(Closed)

Adjustable joysticks and arm rest

Emergency exit(Closed)

Floor washable with water to reduce dust

Three-point contact access system to cabin

12V / 24V output(optional)

Remote circuit breaker switch

DASHBOARD AND DISPLAYS

Icon dashboard has all the needed information and alarms on the dashboard giving the operator more time to keep eyes on the road

XINGYE Intelligent Control System Standard

Critical warnings and alarms Displayed with sound and light

Instrument Panel	Icon dashboard
	Full-featured rocker switch control

OPERATOR'S SEAT

SJ-700 driver's seat adopts an adjustable mechanical suspension seat, equipped with a safety belt; the seat is adjustable up and down, front and rear; equipped with padded arm rest and adjustable joystick.

Mechanical suspension

Height adjustment

Adjustment according to the operator's weight

Adjustable arm rests

Adjustable lumbar support

FRAME

REAR AND FRONT FRAME

A new heavy duty rear frame with added weight in the rear of the loader balances the machine perfectly when lifting and pushing into the muck pile. Heavy duty rear frame and mask with integrated reaction bars minimizes damage from wall impacts.

High strength structure with optimized material thicknesses and reduced own weight contribute to higher overall hauling capacity and long structural lifetime.

Welded steel box structures used in the frame and boom provide strong resistance to shock loads and are optimized to reduce stresses and extend frame lifetime

Central hinge	Adjustable bearing
Tanks	Independent
Automatic central lubrication	Standard

ELECTRICAL EQUIPMENT

MAIN COMPONENTS

Alternator	28 V, 55 A
Batteries	2 x 12 V, 100Ah
Starter	4 kW, 24 V
Driving and working lights	LED lights 2PCS in front frame 4PCS inside the cabin 2PCS in the rear frame Single controller
Control system	Inbuilt system diagnostics
Dual horn configuration	Standard
Rotation beacon	Standard
Red and green indicator lights	2PCS in the front frame 2PCS inside the cabin

INCLUDED SAFETY FEATURES

FIRE SAFETY

Portable fire extinguisher	2kg 2PCS
Hot side - cold side design	Standard
Heat insulation on exhaust manifold	Standard

ENERGY ISOLATION

Lockable main switch	Standard
Starter isolator	Standard
Emergency stop push buttons according to EN ISO 13850	1 pc inside the cabin 2 pcs in the rear frame
Pressure release in the expansion tank cap	Standard
Manual discharge for pressure accumulators	Standard
Frame articulation locking device	Standard

DOCUMENTATION

STANDARD MANUALS

Operator's Manual	English
Maintenance Manual	English
Parts Manual	English
Service and Repair Manual	English
Decals	English

OPTIONS

SAFETY OPTIONS

In-line radio remote control system
Retrieval hook (hydraulic brake release by pulling the hook)
Ansul Manual Fire suppression system with auto shutdown
Emergency steering
Tele remote control system

ELECTRICAL OPTIONS

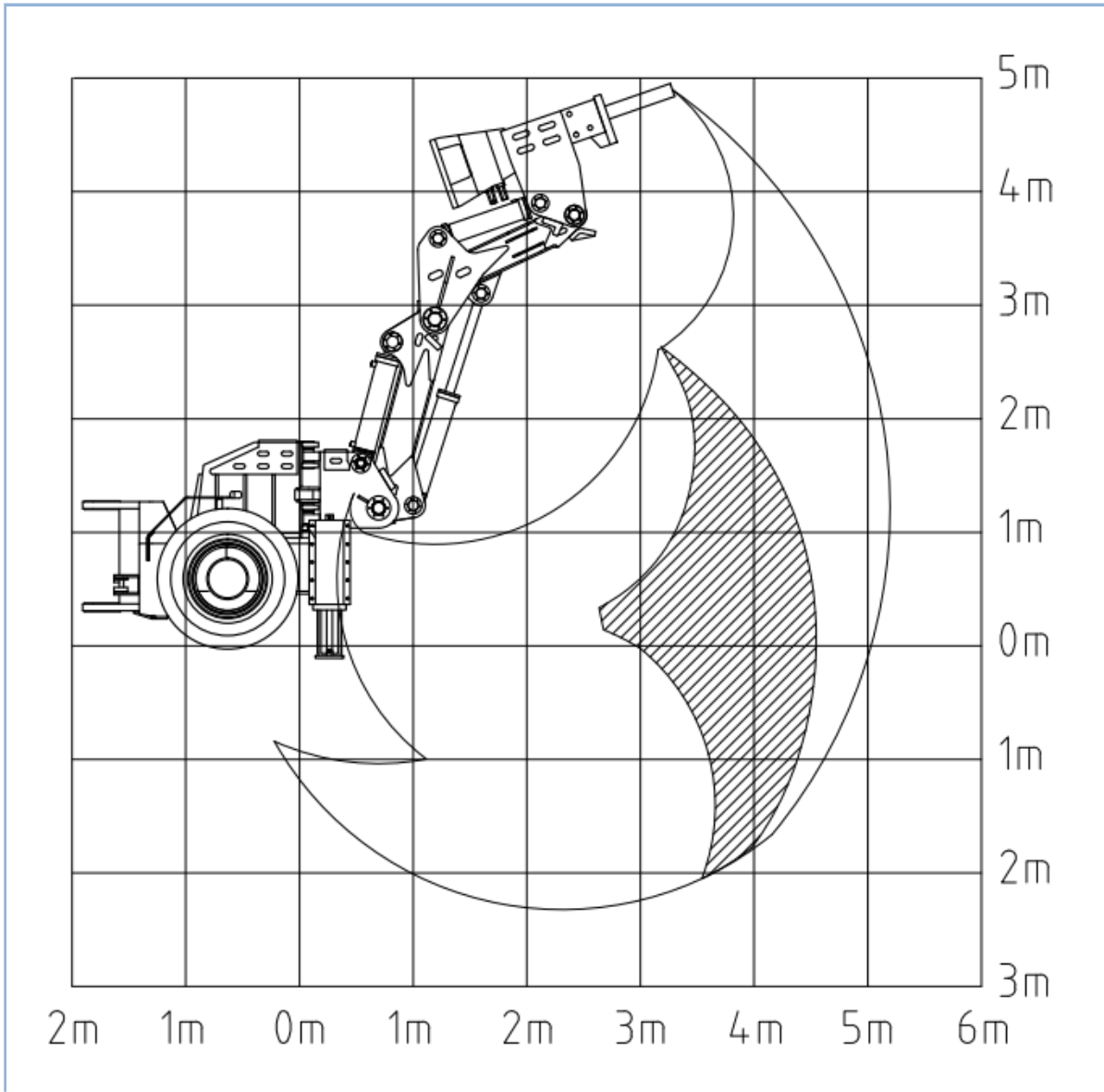
Imaging system

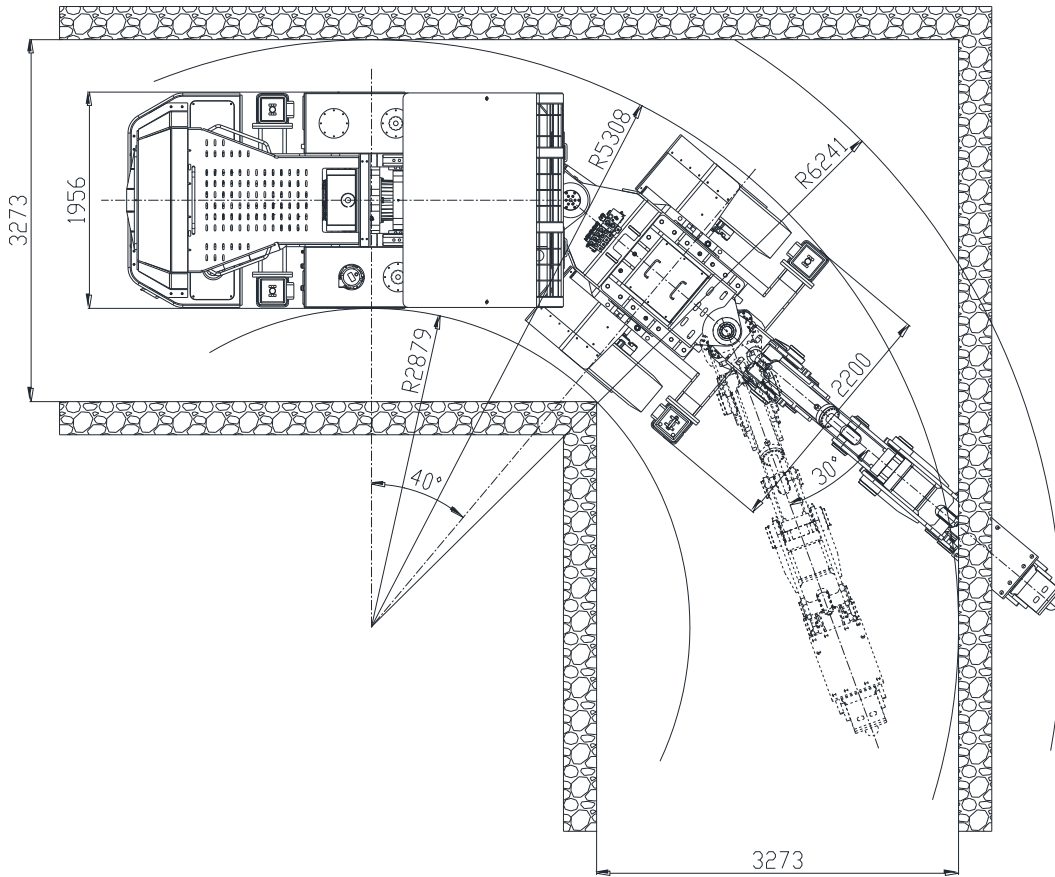
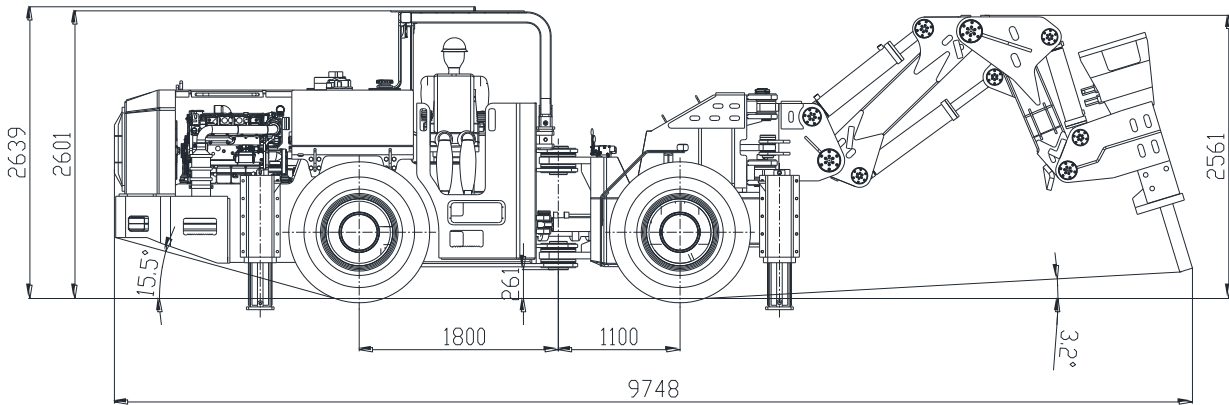
OTHER OPTIONS

Additional cabin heater element for air conditioning
Wiggins quick filling set for fuel, coolant and oils (hydraulic, engine and transmission)
Customized other hammers

WORK SCOPE

Equipped with Epiroc MB1200 rock breaker





Dimension