WJD-6
Underground Electrical Mining Loader

WJD-6 is a high capacity electric underground mining loader for use in 4.6 x 4.6 meter mining tunnels. This loader is driven by electrical motor, which is simple to maintain and has no pollution of exhaust gas, effectively reducing the requirement of the underground ventilation system.

The horizontal cable system is adopted, which is flexible in operation, saves the reversing time and has high production efficiency; it is not necessary to excavate the underground chamber. No complicated cable arranging device is required, the cable tension is small, and the cable is not easily damaged.

The two electrical boxes are arranged, and the high voltage and low voltage electrical are separately arranged to facilitate on-site inspection and maintenance.

MAIN SPECIFICATIONS	
Tramming capacity	14 000 kg
Max.Break out force	220KN
Max. Tractive force	270KN
Standard bucket	6.0m³

SPEEDS FORWARD & REVERSE	
1st gear	3.0km/h
2nd gear	5.4km/h
3rd gear	9.2km/h
4th gear	17.7km/h

BUCKET MOTION TIMES	
Raising time	7.4 sec
Lowering time	3.9 sec
Dumping time	1.3 sec

OPERATING WEIGHTS *	
Total operating weight	36 000 kg
Front axle	16 500 kg
Rear axle	19 500 kg

LOADED WEIGHTS *	
Total loaded weight	50 000 kg
Front axle	35 000 kg
Rear axle	15 000kg

* Unit weight is dependent on the selected options

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http://www.liononemining.com

OPERATIONAL CONDITIONS AND LIMITS	
Environmental temperature	-15°C～+40°C
Standard operating altitude	With HM2-315L1-4(B35) electrical motor from -1500 m to +2000 m at 25 °C without rated power derate

REQUIREMENTS AND COMPLIANCE
JB/T5500 Underground Mining Loader
JB/T5501 Underground Mining Loader Test Method
JB 8518 Underground Mining Loader Safety Requirement
GB25518 Underground Mining Loader Safety Requirement
XY13.1-2013 Underground Mining Loader Company Standard

POWER TRAIN

ELECTRIC MOTOR	
Electric motor	HM2-315L1-4(B35)
Type	Three-phase, squirrel-cage motor
Output	160 kW@1480rpm
Working voltage	1000V
Protection	IP55

CONVERTER
Dana C8672 Convertor

TRANSMISSION	
Dana 6421 Transmission	Electric control shifting Power shift transmission with modulation four gears forward and reverse

AXLES	
Front axle spring applied hydraulic released brakes Fixed	Kessler D106 Limited slip differential
Rear axle spring applied hydraulic released brakes Self-oscillation frame, Oscillating ± 8°	Kessler D106 Limited slip differential

TIRES	
Tire size	26.5-25 L-5S 36ply
Tire brand	TIANLI

HYDRAULICS	
Door interlock for brakes,	Standard
Oil cooler for hydraulic and transmission oil	Capability up to 50°C ambient temperature
Fittings	JIC Standard
Hoses	GB3683
Working Hydraulic oil tank capacity	720L

STEERING HYDRAULICS	
Full hydraulic, centre-point articulation, power steering with two double acting cylinders.	Hydraulic pilot
Steering main valve	Open circuit type
Steering hydraulic cylinders	2 pcs
Steering pump	Gear type Quantitative pump

BUCKET HYDRAULICS	
The oil flow from Steering hydraulic pump is directed to Bucket hydraulics when steering is not used.	Hydraulic Pilot control
Boom system	Z-LINK
Lift cylinders	2 pcs
Dump cylinder	1 pc
Main valve	Open circuit type
Pump for bucket hydraulics	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. Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589	
Automatic brake activation system, ABA	Standard
Manually driven emergency brake release pump	Standard
Brake oil tank capacity	Share with working oil tank

OPERATOR'S COMPARTMENT

WJD-6 cabin offers superior operator ergonomics through increased leg space and improved pedal position to reduce operator fatigue. The front of the pedal protrudes outward, and the cabin upper front portion and the left and right sides protrude outward provide operator with spacious room.

The WJD-6 cabin is ROPS/FOPS certified to protect the operator in case of roll over or falling objects. The interior side of the cab adopts 25mm flame-proof and noise-reducing materials and the external covering has flame-proof ABS material, which is not only beautiful and comfortable, but also effective in dustproof and noise-reducing functions. The cab has laminated safety glass windows, emergency exits which adopts sealing strip to remove the glass inside and outside for emergency escape. In addition, the cabin is mounted with rubber shock absorbers to reduce whole body vibration

CABIN
ROPS certification according to ISO 3471
FOPS certification according to ISO 3449
Enclosed Cabin with Air Conditioner (Optional)
Flame resistance and Sound absorbent material to reduce noise (enclosed cab)
Laminated glass windows (enclosed cab)
Air conditioner and cab installed separately(If equipped)
Powered pre-filter for A/C device(If equipped)
Adjustable joysticks and arm rest
Emergency exit
Floor washable with water to reduce dust
Three-point contact access system to cabin
12V/24V output
Master circuit breaker switch

DASHBOARD AND DISPLAYS	
A new 7”colour display with advanced screen functionality has all the needed information and alarms on one large display giving the operator more time to keep eyes on the road. New background graphics with clear symbols are designed for the underground mining environment to reduce eye fatigue, while red zone in display is also designed to not affect night vision during driving.	
XINGYE Intelligent Control System Standard	
Instrument Panel	IFM 7” Color display Full-featured rocker switch control

OPERATOR’S SEAT
The WJD-6 cabin is fitted with an adjustable mechanical suspension seat with four-point seat belt. The seat can be adjusted back and forth, up and down. New softer padded arm rests and adjustable joysticks can be configured either fixed on the cabin door or on the cabin right wall
Mechanical suspension
Height adjustment
Adjustment according to the operator’s weight
Adjustable arm rests
Adjustable back support
Three-point seat belt

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	Welded to the frame
Boom system	Z-LINK

ELECTRICAL EQUIPMENT

MAIN COMPONENTS	
Driving and working lights	LED lights 1PC under boom 2PCS on front frame 4PCS in Cabin 4PCS in rear frame
Sensors	Hydraulic oil level sensor, working, steering, and braking system pressure sensor
Alarm	Low oil level warning/ Oil pressure warning Rotating warning light
Control system	Controller control Inbuilt system diagnostics
Dual horn configuration	Standard

INCLUDED SAFETY FEATURES

FIRE SAFETY	
Portable fire extinguisher	8kg 2PCS
ENERGY ISOLATION	
Lockable main switch	Standard
Starter isolator	Standard
Emergency stop push buttons	1 pc inside the cabin,2pcs rear rack
Frame locking device	Standard
Mechanical boom locking device	Standard

DOCUMENTATION

STANDARD MANUALS	
Operator's Manual	English or Chinese
Maintenance Manual	English or Chinese
Parts Manual	English or Chinese
Service and Repair Manual	English
Decals	English or Chinese

OPTIONS

SAFETY OPTIONS
Emergency steering
Ansul Manual fire extinguishing system and automatic shutdown

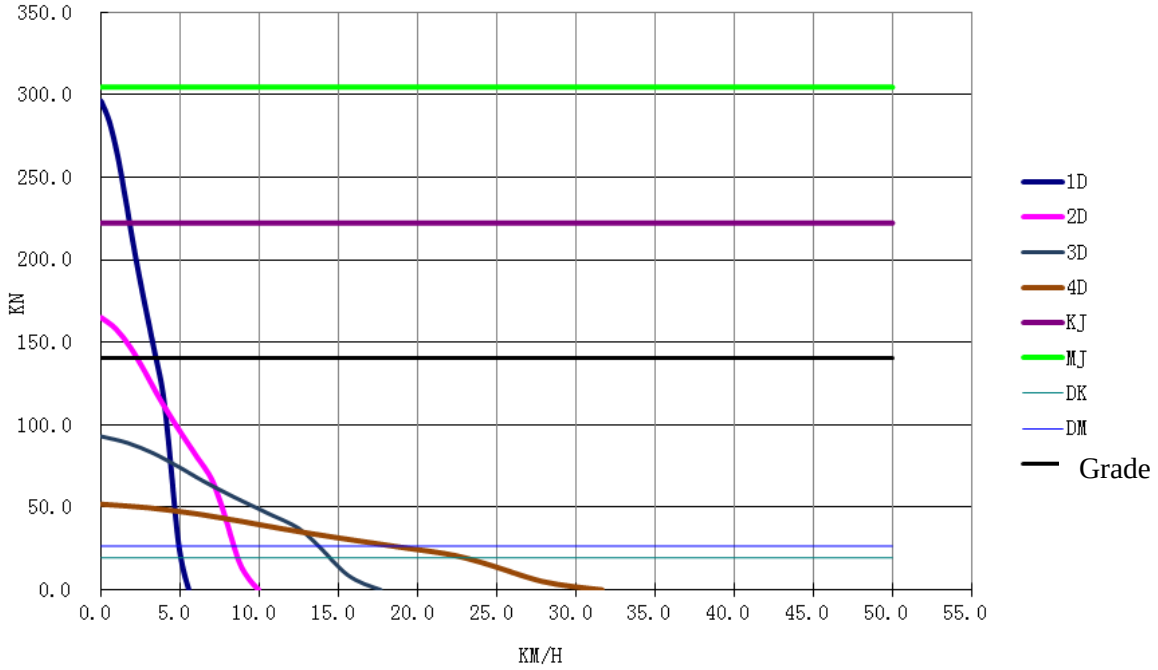
ELECTRICAL OPTIONS
Imaging system

OTHER OPTIONS
Additional cabin heater element for air conditioning
26.5R25 radial steel tires
Customized Bucket Capacity
Enclosed Cab
Radio Remote control system

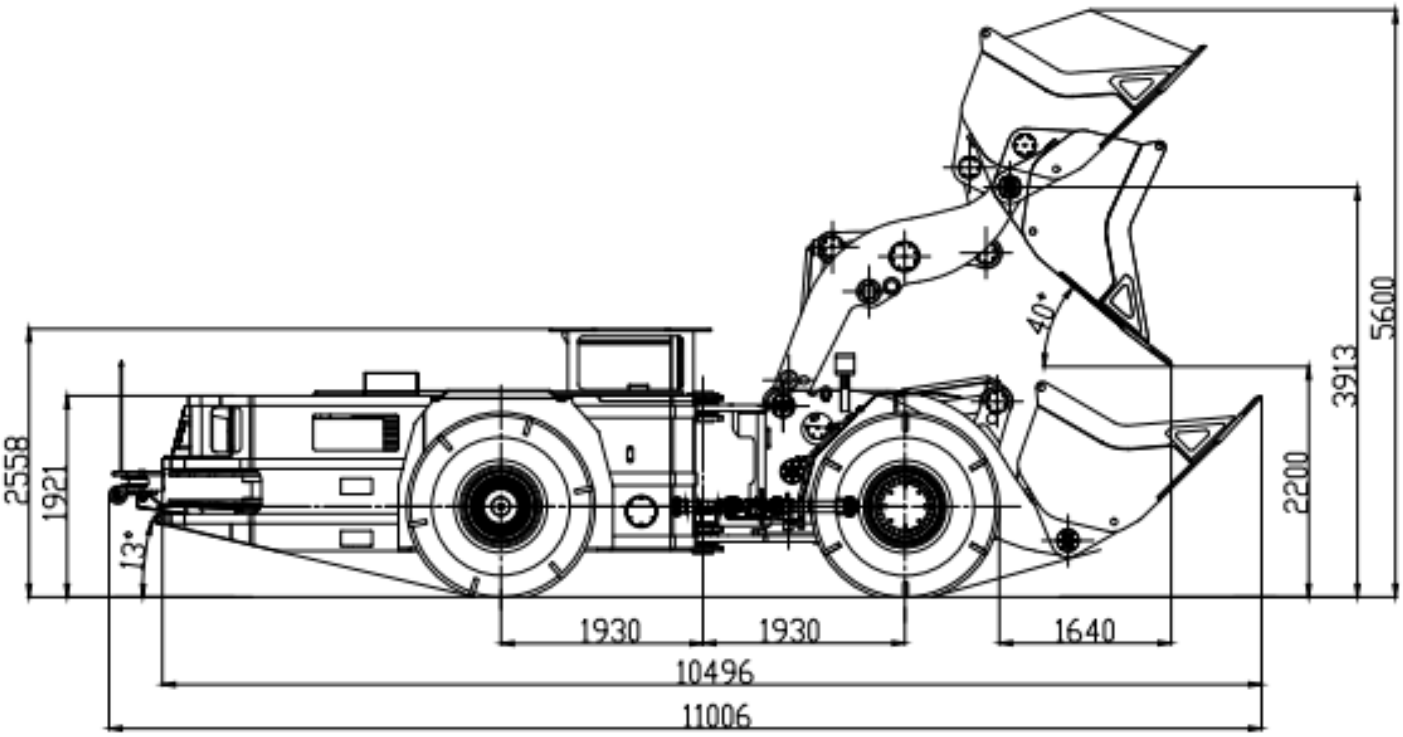
GRADE PERFORMANCE

HM2-315L1-4(B35), (3 % rolling resistance)

EMPTY AND LOADED SPEED



1D, 2D, 3D, 4D: Gear Positions;
KJ is the static friction force at empty, and MJ is the static friction force at full load;
DK is the dynamic friction force at empty, and DM is the dynamic friction force at full load;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1930
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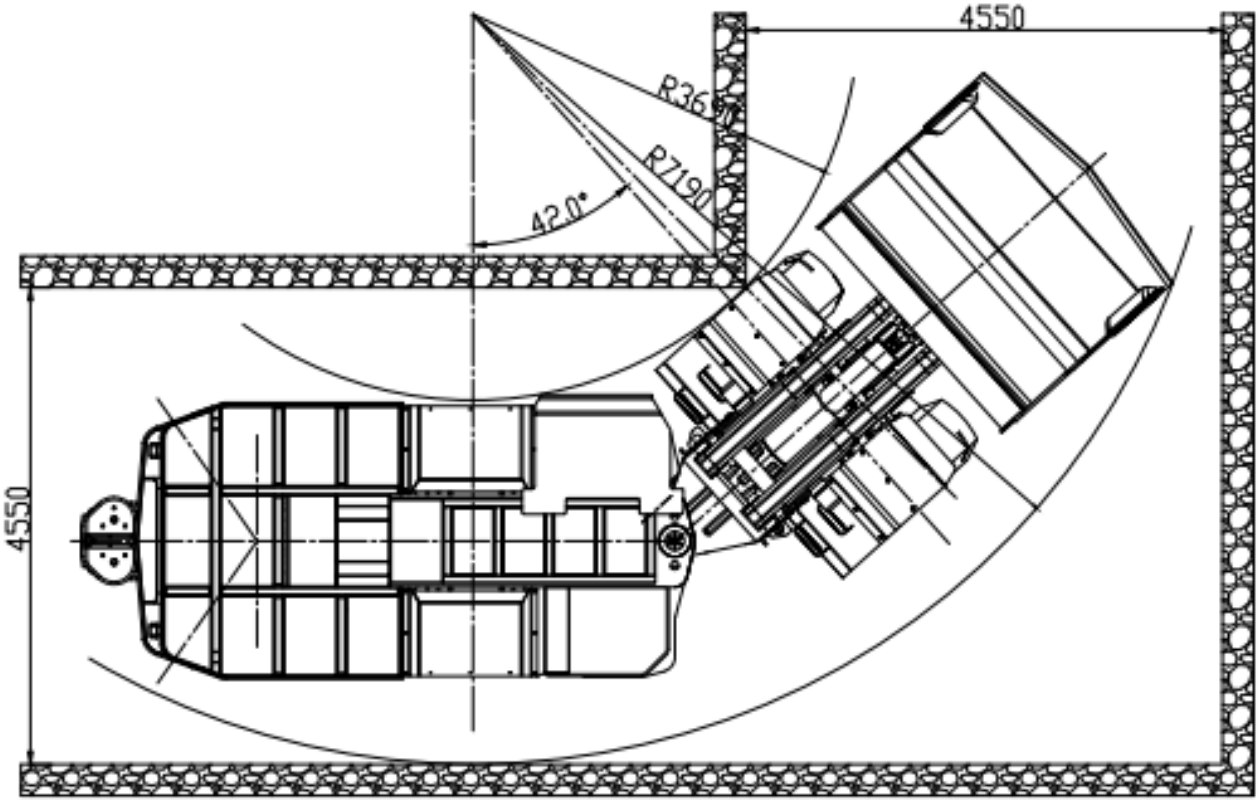
11006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R7190
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4550