



# WJ-1 Underground Mining Loader

The WJ-1 is a small underground mining loader for 2.5 x 2.5 m mine tunnels. It uses lateral driving and operation. The cab is spacious, with a wide view and comfortable operation.

The whole machine adopts the central hinged and slewing bearing type body swing structure, which has better stability and passing ability.

The transmission system uses a hydrostatic transmission system (pump & motor) for continuously variable speed.



## MAIN SPECIFICATIONS

|                      |                      |
|----------------------|----------------------|
| Tramming capacity    | 2 000 kg             |
| Dimension            | 6030mm*1340mm*2000mm |
| Max. Break out force | 48kN                 |
| Max. Tractive force  | 50kN                 |
| Standard bucket      | 1.0m <sup>3</sup>    |

## SPEEDS FORWARD & REVERSE

|  |          |
|--|----------|
|  | 0-10km/h |
|--|----------|

## BUCKET MOTION TIMES

|               |         |
|---------------|---------|
| Raising time  | 4.4sec  |
| Lowering time | 2.6 sec |
| Dumping time  | 2.3sec  |

## OPERATING WEIGHTS \*

|                        |          |
|------------------------|----------|
| Total operating weight | 6 600 kg |
| Front axle             | 3 050 kg |
| Rear axle              | 3 550 kg |

## LOADED WEIGHTS \*

|                     |          |
|---------------------|----------|
| Total loaded weight | 8 600 kg |
| Front axle          | 5 800 kg |
| Rear axle           | 2 800kg  |

\* Unit weight is dependent on the selected options

### OPERATIONAL CONDITIONS AND LIMITS

|                           |             |
|---------------------------|-------------|
| Environmental temperature | -10°C~+40°C |
|---------------------------|-------------|

### 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

#### ENGINE

|                                      |   |
|--------------------------------------|---|
| Diesel engine                        | DEUTZD914L04  |
| Output                               | 58 kW @2300rpm  |
| Torque                               | 273 Nm @ 1500rpm                                      |
| Number of cylinders                  | 4   |
| Displacement                         | 4.314 L   |
| Cooling system                       | Air cooled  |
| Fuel System                          | 4-stroke direct injection supercharged engine,        |
| Intake air filter                    | Dry air filtration, Pre-filter + two-stage filtration |
| Speed governor                       | Mechanical governor                                   |
| Electrical System                    | 24V   |
| Emission Standards                   | Euro Stage III  |
| Exhaust system                       | DOC+POC+ silencer                                     |
| Average fuel consumption at 50% load | 5.8 L/h   |
| Fuel tank capacity                   | 105L  |

### VARIABLE PUMP

|         |     |
|---------|-----|
| Danfoss | T90 |
|---------|-----|

### VARIABLE MOTOR

|            |      |
|------------|------|
| Eslovaquia | MV23 |
|------------|------|

### TRANSFER CASE

|        |         |
|--------|---------|
| XINGYE | WJD1-8A |
|--------|---------|

### AXLES

|                           |                              |
|---------------------------|------------------------------|
| Front axle<br>Fixed axle  | PC15                         |
| Rear axle                 | PC15<br>NO-SPIN differential |
| Central articulated swing | Swing angle $\pm 8^\circ$    |

### TIRE

|       |          |
|-------|----------|
| Model | 10.00-20 |
|-------|----------|

### HYDRAULICS

|   |   |
|---|---|
| Hydraulic oil radiator<br>Transmission oil radiator | Capability up to 40°C ambient temperature |
| Fittings  | Type C (metric 74° cone seal)             |
| Hoses   | GB 3683                                   |
| Working Hydraulic oil tank capacity                 | 160 L                                     |
| Driving Hydraulic oil tank                          | 83L                                       |

### STEERING HYDRAULICS

|   |  |
|---|--|
| Full hydraulic, centre-point articulation, one power steering with two double acting cylinders. | Direction handwheel operation<br>Full hydraulic steering gear control steering |
| Hydraulic Steering Unit   | Open center type   |
| Double acting steering cylinder   | 1 pc   |
| Steering pump   | Gear type Quantitative pump  |

### BUCKET HYDRAULICS

|                            |                             |
|----------------------------|-----------------------------|
| Control Mechanism          | Hydraulic pilot control     |
| Working mechanism          | 5-link                      |
| Lift cylinders             | 1 pcs                       |
| Dump cylinder              | 1 pc                        |
| Main working valve         | Open center type            |
| Pump for bucket hydraulics | Gear type Quantitative pump |

### BRAKES

|   |
|---|
| Spring apply, fully closed multi-disc wet brake with spring brake;<br>Integrated service brake, parking brake and emergency brake<br>Brake system performance complies with requirements of EN ISO 3450, AS2958.1 and SABS 1589 |
|---|

### OPERATOR'S COMPARTMENT

WJ-1 cab provides superior ergonomic operating space to reduce operator fatigue by increasing legroom and improving pedal position. It is equipped with 2-point safety belt and the seat is adjustable. The operator drives and works sideways.

WJ-1 cab has passed ROPS/FOPS certification to protect operator safety.

The steel framed cab has sufficient strength to prevent falling rocks from rolling over to protect the operator's safety; with work lights, the operator's line of sight is clearer during operation.

### CABIN

ROPS certification according to ISO 3471

FOPS certification according to ISO 3449

Open Cabin

Portable fire extinguisher

Full hydraulic pilot proportional control handle

Floor washable with water to reduce dust

Three-point contact access system to cabin

Seat belt.

Master circuit breaker switch

### DASHBOARD AND DISPLAYS

Equipped with 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.

XINGYE Standard Control System Standard

|                              |                                |
|------------------------------|--------------------------------|
| Critical warnings and alarms | Displayed with sound and light |
|------------------------------|--------------------------------|

|                  |  |
|------------------|--|
| Instrument Panel | Icon form panel<br>Full-featured rocker switch control |
|------------------|--|



### 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 | 5-LINK |
|-------------|--------|

### ELECTRICAL SYSTEM

#### MAIN COMPONENTS

|            |            |
|------------|------------|
| Alternator | 28 V, 35 A |
|------------|------------|

|           |              |
|-----------|--------------|
| Batteries | 2×12 V, 80Ah |
|-----------|--------------|

|         |          |
|---------|----------|
| Starter | 24V/4 kW |
|---------|----------|

|                            |  |
|----------------------------|--|
| Driving and working lights | LED<br>2PCS in cab<br>2PCS in rear frame |
|----------------------------|--|

|       |  |
|-------|--|
| Alarm | Oil pressure warning/<br>Rotation Warning Lamp |
|-------|--|

|      |          |
|------|----------|
| Horn | Standard |
|------|----------|

## INCLUDED SAFETY FEATURES

### FIRE SAFETY

|                                     |          |
|-------------------------------------|----------|
| Portable fire extinguisher          | 2kg 1PCS |
| Hot side - cold side design         | Standard |
| Cooling fan guard                   | Standard |
| Front and rear frame locking device | Standard |
| Boom locking device                 | Standard |

## DOCUMENTATION

### STANDARD MANUALS

|                                   |                    |
|-----------------------------------|--------------------|
| Operator's and Maintenance Manual | English or Chinese |
| Parts Manual                      | English or Chinese |
| Decals                            | English or Chinese |

## ELECTRICAL OPTIONS

Monitoring camera system

## OTHER OPTIONS

Optional engine F6L912W/ BF4L914/QSF3.8

0.75m<sup>3</sup> Bucket Capacity

Side dump bucket



## OPTIONS

In-line remote control system

Tele remote control system

Ansul manual fire extinguishing system and automatic shutdown

Emergency steering function

