



DC-10 Low Profile Loader

DC-10 underground mining loader is suitable for 4.5×4.5m mine tunnel. It is highly intelligent, safe and reliable to use, which has good overall machine stability and can greatly improve mine productivity and profitability.

The whole machine is very low, the height is only 1600mm, the unloading height can reach to 1960mm; the working mechanism adopts Z-link, and the breaking force is large, which can meet the requirements of low profile 30T truck or less.

The whole machine is equipped with three radiators, in which the hydraulic oil and transmission oil are cooled by independent radiators, and the air-cooled water cooling is integrated into the medium-cooling radiator, which effectively reduces the system temperature, reduces energy consumption and improves overall efficiency.

Two monitors are arranged in the cab, and the rear display screen always displays the rear view. The front display switches to display the view of side camera or the front camera.



MAIN SPECIFICATIONS

| | |
|---------------------|---------------------|
| Tramming capacity | 10000 kg |
| Max.Break out force | 195kN |
| Max. Tractive force | 224kN |
| Standard bucket | 4.6m ³ |
| Size | 9185x3285x1600 (mm) |

SPEEDS FORWARD & REVERSE(Mercedes Benz OM926)

| | |
|----------|----------|
| 1st gear | 4.6km/h |
| 2nd gear | 9.6km/h |
| 3rd gear | 16.1km/h |
| 4th gear | 27.2km/h |

BUCKET MOTION TIMES

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|---------------|---------|
| Raising time | 7.2sec |
| Lowering time | 2.5 sec |
| Dumping time | 2.3sec |

OPERATING WEIGHTS *

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|------------------------|----------|
| Total operating weight | 27000kg |
| Front axle | 12000 kg |
| Rear axle | 15000 kg |

LOADED WEIGHTS *

| | |
|---------------------|----------|
| Total loaded weight | 37000 kg |
| Front axle | 25000 kg |
| Rear axle | 12000kg |

* Unit weight is dependent on the selected options

OPERATIONAL CONDITIONS AND LIMITS

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|-----------------------------|--|
| Environmental temperature | -15°C~+45°C |
| Standard operating altitude | With engine MTU OM926 LA from -1500 m to +2500 m at 25 °C without rated power derate |

REQUIREMENTS AND COMPLIANCE

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| 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

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|--------------------------------------|--|
| Diesel engine | MTU OM926LA |
| Output | 240 kW @2200rpm |
| Torque | 1300Nm @ 1300rpm |
| Number of cylinders | In-line 6 |
| Displacement | 7.2 L |
| Cooling system | Water cooled With 725mm fan |
| Combustion principle | 4-stroke, direct injection, turbo with intercooler |
| Air filtration | Pre-filtration+two stage filtration, dry type |
| Control System | Fuel electronically controlled injection system |
| Electric system | 24 V |
| Emissions | Euro Stage III Certificate Number 032441 |
| Exhaust system | DOC+POC+ Silencer |
| Average fuel consumption at 50% load | 26L/h |
| Fuel tank capacity | 360L |

CONVERTER

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| Dana C5502 Convertor |
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TRANSMISSION

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|--------------------------|---|
| Dana TRANSMISSION R36420 | Electric control shifting Power shift transmission with modulation Integrate shift and steering operation four gears forward and reverse |
|--------------------------|---|

AXLES

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| Front axle spring applied hydraulic operated brakes Fixed | Kessler D101 Limited slip differential |
| Rear axle spring applied hydraulic operated brakes Self-oscillation frame, Oscillating ± 8° | Kessler D101 Limited slip differential |

TIRES

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|------------|--------------------|
| Tire size | 20.5-25 L-5S 28ply |
| Tire brand | TIANLI |

HYDRAULICS

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| Door interlock for brakes, | Standard |
| Oil cooler for hydraulic and transmission oil | Capability up to 45°C ambient temperature |
| Fittings | JIC Standard |
| Hoses | GB3683 |
| Working Hydraulic oil tank capacity | 520L |

STEERING HYDRAULICS

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|---|---|
| Full hydraulic, centre-point articulation, power steering with two double acting cylinders. | Hydraulic pilot + electronic shifting integrated joystick |
| Steering main valve | Open system |
| Steering hydraulic cylinders | 2 pcs |
| Steering pump | Gear pump |

BUCKET HYDRAULICS

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|---|-------------------------|
| 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 system |
| Pump for bucket hydraulics | Gear pump |

BRAKES

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|--|---------------------------------------|
| 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. 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 hydraulic oil tank |

OPERATOR'S COMPARTMENT

DC-10 cab provides superior ergonomic operating space to reduce operator fatigue by increasing legroom and improving pedal position. The front part of the pedal protrudes outward, and the upper front part and the left and right sides protrude outward to make the cab space larger.

DC-10 cab has passed ROPS/FOPS certification to protect operator safety. The 7" display is equipped in the cab to display the operating parameters in real time.

Two monitors are arranged in the cab, and the rear display screen always displays the rear view. The front display switches to display the view of side camera or the front camera. When the gearbox reverses, it automatically switches to display the side view to improve the driver's field of view. .



CABIN

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| ROPS certification according to ISO 3471 |
| FOPS certification according to ISO 3449 |
| Enclosed Cabin with Air Conditioner (Optional) |
| Air conditioner and cab installed separately (if equipped) |
| Adjustable joysticks and arm rest |
| Floor washable with water to reduce dust |
| 12V/24V output |
| Master circuit breaker switch |

OPERATOR'S SEAT

The cabin is fitted with an adjustable mechanical suspension seat with three-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 side wall

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| Mechanical suspension |
| Height adjustment |
| Adjustment according to the operator's weight |
| Adjustable arm rests |
| Adjustable back support |
| Three-point seat belt |

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.

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| XINGYE Intelligent Control System Standard | |
| Critical warnings and alarms | Sound and light alarm |
| Instrument Panel | IFM 7-inch color display Full-featured rocker switch control |

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

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|---------------|---------------------|
| Central hinge | Adjustable bearing |
| Tanks | Welded to the frame |
| Boom system | Z-LINK |

ELECTRICAL EQUIPMENT

MAIN COMPONENTS

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|--------------------------------|---|
| Alternator | 28 V,80 A |
| Batteries | 2×12 V, 120Ah |
| Starter | 24V/4kW |
| Driving and working lights | LED lights 2pcs in front 1pc in cabin 4pcs in rear frame |
| Sensors | Hydraulic oil level sensor, diesel level sensor, working, steering, brake system pressure sensor |
| Alarm | Low oil level warning/ Oil pressure warning Rotation Warning Lamp |
| Control system | Dual controller Inbuilt system diagnostics |
| Dual horn configuration | Standard |
| Red and green indicator lights | 4PCS in front and rear frame |

INCLUDED SAFETY FEATURES

FIRE SAFETY

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|--|----------|
| Portable fire extinguisher | 8kg 1pcs |
| Hot side - cold side design | Standard |
| Isolation of combustibles and ignition sources | Standard |
| Heat insulation on exhaust manifold | Standard |
| Cover on turbo | Standard |
| Cooling fan shield | Standard |

ENERGY ISOLATION

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|--|-----------------------------------|
| Lockable main switch | Standard |
| Starter isolator | Standard |
| Emergency stop push buttons | 2 pcs on rear frame/1 pc on cabin |
| Pressure release in the expansion tank cap | Standard |
| Manual discharge for pressure accumulators | Standard |
| Frame articulation locking device | Standard |
| Mechanical boom 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

SAFETY OPTIONS

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| In-line or tele remote control system |
| Brake release function tow hook |
| Ansul manual fire extinguishing system and automatic shutdown |
| Emergency steering |
| Enclosed cabin |
| Remote control system |

ELECTRICAL OPTIONS

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| Imaging system |
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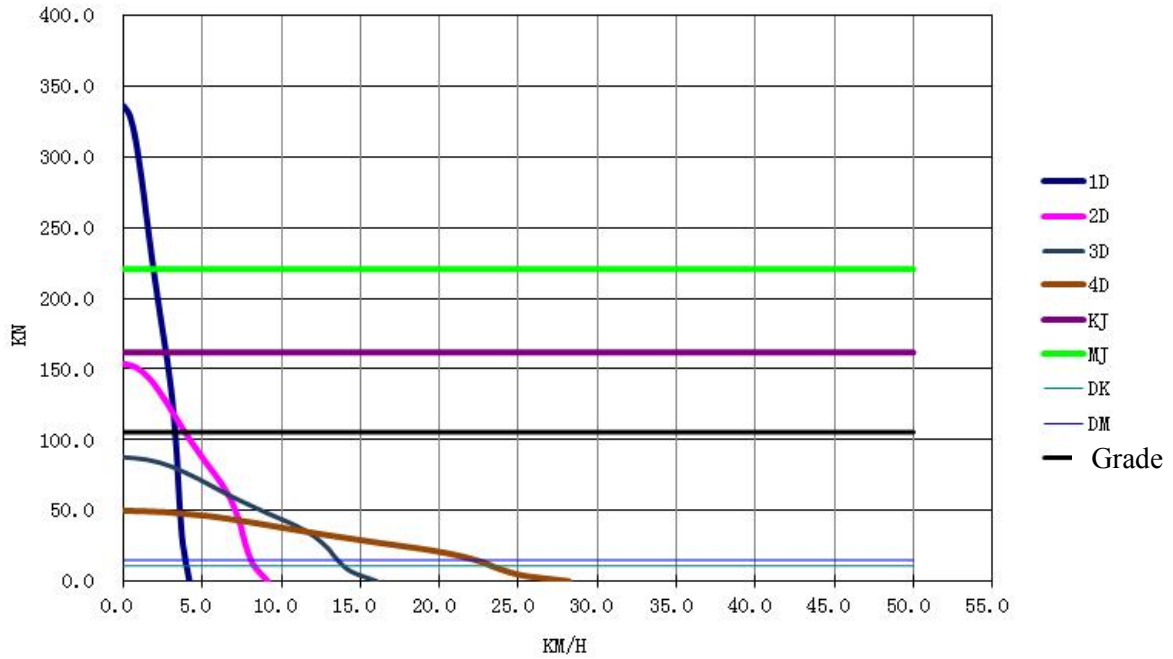
OTHER OPTIONS

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

GRADE PERFORMANCE

Mercedes Benz MTU OM926LA, Euro Stage III emissions (3 % rolling resistance)

EMPTY AND LOADED SPEED



1D, 2D, 3D, 4D: Gear Positions;

KJ is the static friction force at empty load, and MJ is the static friction force at full load;

DK is the dynamic friction force at empty load, and DM is the dynamic friction force at full load;



