

<b>Braking</b>	
Service Brake	Double loop shoe type gas brake
Auxiliary Brake	Engine in-cylinder braking system as an option
Pressure	10 bar
Air Tank Capacity	200 L
Slope Degree	30° (uphill) / 20° (downhill)
<b>Clutch</b>	
Model	430 pull type, single plate
<b>Air filters</b>	
Type	Oil-bath multi-stage air filter
Air Flow	2,500 m <sup>3</sup> /h
<b>Cooler</b>	
Heat Dissipation	155 kW
<b>Suspension</b>	
Front	Longitudinal steel plate spring
Rear	Balanced suspension
<b>Lifting mechanism</b>	
Model	Front suspended, four section telescopic, single action lifting cylinders
Rated Pressure	20 MPa
Maximum Tilt Angle	46°
<b>Cab</b>	
Type	Left side mounted, half-floating
<b>Air conditioner</b>	
Type	Cold and warm dual-purpose air conditioning with electric control
<b>Defroster</b>	
Heating Power	5.8 kW
Air Speed	≥15 m/s
<b>Seat</b>	
Type	Suspension seat, four directional adjustable, adjustable backrest angle
<b>Sound</b>	
Sound Level	105-125 dB(A)
<b>Frame</b>	
Type	High strength rigid and flexible frame
<b>Truck body</b>	
Struck Capacity	30 m <sup>3</sup>
Type	Rectangular box; Bottom 16 mm; Side 12 mm
Material	Q345B (NM400 or T700 is optional)
<b>Tire and rim</b>	
Type	Front - single tire, middle and rear - double tires
Tire Model	14.00R25 E3
Rim	10-25
Tire Pressure	10 bar
Maximum Load at 10 km/h	10,000 kg
<b>Electrical System</b>	
Power Supply	24 V
Start	Key

<b>Engine</b>	<b>DW90A</b> CUMMINS QSM11
<b>Rated Power</b>	306 kW @ 1900 rpm
<b>Vehicle Weight</b>	31,000 kg
<b>Payload</b>	59,000 kg
<b>Carrier Capacity</b>	30 m <sup>3</sup>

## DW90A MINING TRUCK



TOUGH WORLD. TOUGH EQUIPMENT.



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# SPECIFICATIONS

<b>Weight</b>	
Total mass (kg)	90000
Vehicle weight (kg)	31000
Payload (kg)	59000
<b>Carrier</b>	
Carriage size (mm)	5800*3200*1650
Capacity Stuck (m <sup>3</sup> )	30
Heaped capacity SAE (2:1) (m <sup>3</sup> )	36
<b>Power</b>	
Engine model	OSM11 Stage III
Rated power / rated speed (kW/rpm)	306 / 1900
Maximum torque / speed (Nm/rpm)	1898 / 1100-1400
Fuel injection	Electronic control
Number of cylinders	6
Displacement (L)	10.8
<b>Transmission</b>	
Model	10JSD220
Retarder model (optional)	Eddy current
<b>Axle</b>	
Rated load (kg)	20000
Suspension form	Leaf spring
Rated axle load (kg)	35000*2
<b>Performance</b>	
Maximum speed (km/h)	40
Max. gradeability	≥45%
Turning radius (front) (mm)	≤11000
<b>Lift system</b>	
Lifting time (s)	≤33
Lowering time (s)	≤22
<b>Tire</b>	
Tire size	14.00R25
Rim	10.0/2.0-25
<b>Overall size</b>	
Overall length (mm)	9075
Overall width (mm)	3450
Overall height (mm)	4385
Loading height (mm)	4300
Wheel base (mm)	3800+1550
Minimum ground clearance (mm)	372
Dump angle	46°



# KEY COMPONENTS

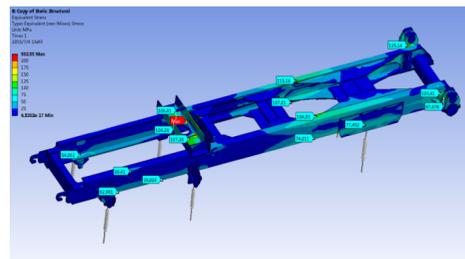


汉德车桥  
HANDE AXLE

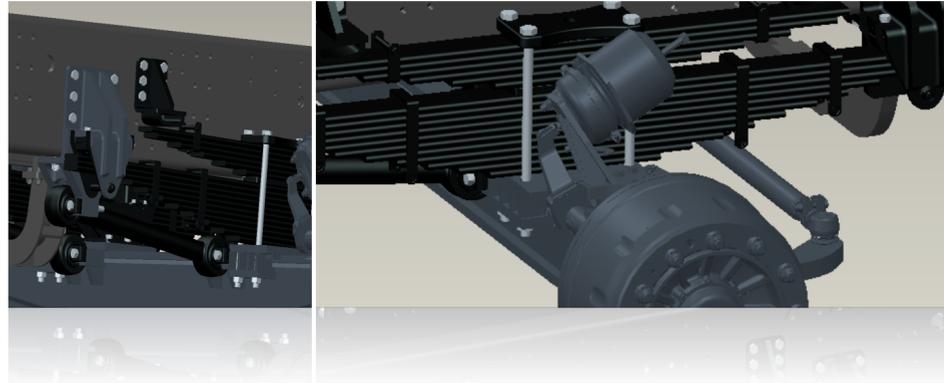


# CHASSIS FRAME

- Two-layer/three-layer trapezoidal beam structure provides better bending and torsion resistance performance, which perfectly adapt to any harsh working environments in the mining areas.
- Single beam structure lowers the vehicle's center of gravity by 100 mm.
- 1,200 mm outer width of the frame ensures the stability of the upper body of the truck.
- Advanced analysis tools including dynamics and durability simulations have been utilized to ensure the chassis frame is strong and stiff enough for working at mines.
- The frame and all beams are connected with grade 10.9 M20 high-strength bolts, providing longer life.
- The high-strength M20 bolts are also used for connecting rear suspension crossbeam and the balance shaft to the frame which ideally improve the stability of the rear suspension system.
- Spirallock retaining locknuts are fitted to stop any bolts on the frame from loosening.
- Larger contacting area between the balance shaft base and the frame decomposes the stress distribution, improving the torsional performance of the rear suspension system and service life of the truck.

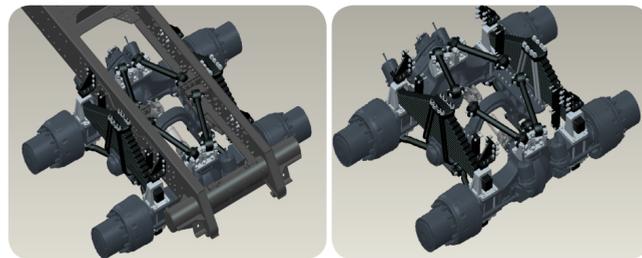


# FRONT SUSPENSION



- Front spring damper – combination of 15 pieces of rubber pads, 100 mm of width, with uneven thickness for each, not only provides the rigid strength required in your job site but also maximizes the cushioning effect needed for driving comfort.
- Usage of M14 U bolts avoids the damage from the spring dampers misalignment.
- The front spring damper is fixed thereto by M30 U bolts from bottom up and rigidly supported to the front axle.
- Front bracket and nut locking structure fundamentally solve early failures of the front spring damper.
- We have simplified the structure of the rear bracket putting an end to the deformation and fracture of damper lug.
- Each piece of the damper has non-slip grooves to prevent it from dislocation and damage.
- Zero failure rate of the entire front suspension system within two years.

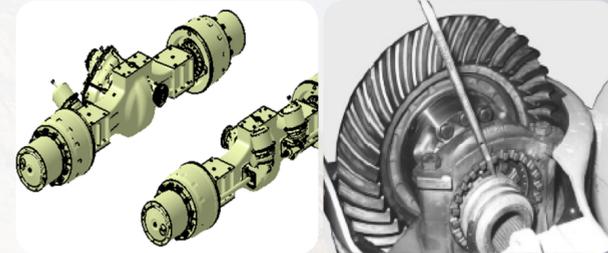
# REAR SUSPENSION



- V-shape 8-bars suspension structure is designed for even distribution of stress loads.
- Enhanced frame type balance shaft ensures the frame to be tough and reliable.
- Integrated equalization suspension bracket can disperse the forces into vertical beam direction, avoid fatigue failure causing by high stress on frame.

# AXLES

- Front axle from HanDe which is specially designed for MINING TRUCK, provides the maximum loading capacity in the same size class.
- Box-shaped welded front axle with stronger bearing capacity
- Casting rear axle, reinforced gearbox and planetary gears.



# COOLING

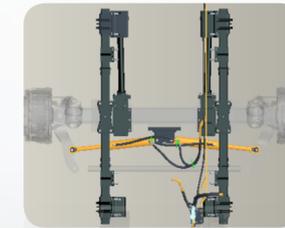
- Mechanical suction type large size annular fan gives large ventilation and ensures high system reliability.
- 30% higher cooling capacity enables the truck working properly in mines and tropical zone.
- Series connection heat exchangers keep the coolant temperature below boiling point.
- Aluminum fin type cooling system from construction machinery industry, solves leaking or breaking issues in mining area or other tough applications.



# STEERING AND FUEL

## STEERING SYSTEM

- High flow, large torque steering unit.
- Vane pump, small in size yet large at displacement.
- Steel tube heat exchanger has been added to the return oil line reducing oil temperature.
- Large capacity oil reservoir helps in lowering oil temperature perfectly matching up with mining work conditions



## FUEL SYSTEM

- 600 liters fuel tank saves your time from servicing, increasing jobsite productivity.
- Three mounting support brackets keep the fuel tank secured.
- Electrical fuel refilling pump, water level alarm.

# CAB



- Outstanding visibility
- Semi-floating suspension, rubber bushing structure
- Spacious room with comfortable air suspension seat
- Foaming sound-insulating layer, good noise suppression effect.