

SEM Machinery

Wide Body Dump Truck

SEM 3090F



A Caterpillar Brand

Efficient and Productive

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- The Perkins original imported engine + mining-specific transmission combination provides a golden powertrain, delivering high torque output and strong climbing ability.
- Modular cooling system with a standard 43°C cooling capacity, supporting prolonged high-intensity continuous operation.
- Seamless regeneration technology for engine aftertreatment, requiring no user downtime or manual intervention; fully automatic and intelligent regeneration improves uptime.
- Diamond-shaped cargo box, compared to a trapezoidal structure, increases volume by 4%, shifts the vehicle's center of gravity forward, shortens the wheelbase, reduces the turning radius, and improves maneuverability, increasing work efficiency.
- Customized cargo box configurations based on different materials and working conditions enhance production efficiency.
- Compact front and rear overhang design, shorter overall vehicle length, high vehicle maneuverability, high operating efficiency, and large ground clearance after cargo box tilting, providing good adaptability for soil removal.
- Optimized suspension layout, with the same cargo box side panel height, results in a lower loading height, improving loading efficiency.





Economic and Energy-efficient Features

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- The Perkins Euro IV engine, with its integrated systems (fuel, air, electrical, and thermal) optimized based on a database, improves efficiency and reduces fuel consumption by 5% under the same operating conditions, resulting in higher fuel economy.
- Equipped with an industry-leading in-cylinder braking retardation function, its self-designed braking program integrates auxiliary braking within the cylinder, eliminating the need for external maintenance and reducing maintenance costs. This also reduces wear on the main brakes while improving active safety.
- Perkins engine overhaul cycles are extended by 25%, increasing uptime and ensuring production efficiency.
- Air filter replacement cycles are extended by 100%, reducing routine maintenance costs.





Reliable and Durable Features

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- Employs a mining-specific four-piece integrated flexible frame with large-section longitudinal beams, providing strong bending and torsional resistance.
- No subframe, simplifying assembly, lowering the center of gravity, and improving overall stability.
- Verified through finite element analysis and OMSA testing, the integrated frame offers a more rational stress distribution, reduces high-stress points, and minimizes fatigue cracking.
- The service brake system employs a dual-circuit braking system. A failure in one circuit does not affect the braking effect of the other. Larger brakes and brake chambers result in faster and more sensitive braking response, enhancing active safety.
- A through-type front crossbeam, combined with a reinforced rear cab support beam, ensures stable platform and cab support, making it torsionally resistant and durable.





Comfort and Smart Features

4



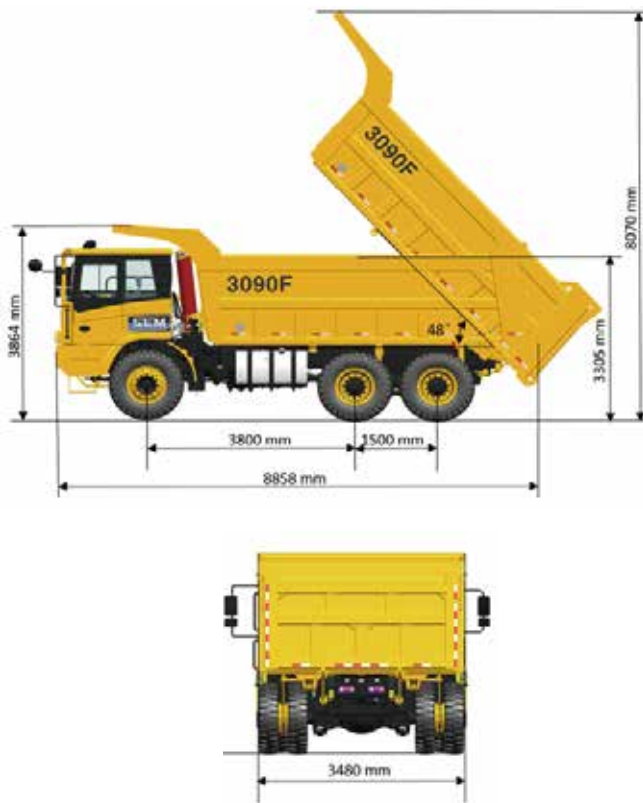
- The newly developed cab assembly is ergonomically designed, with all controls within easy reach. Utilizing CAT vision analysis technology, it offers a wide field of vision.
- The elegant instrument panel features a large embedded LCD screen, providing a more comprehensive and intuitive display of vehicle operating information. It includes a reversing camera, a fault code lookup interface and indicator, and audible alerts for urea fill and fault alarms.
- The Caterpillar Information System (PLCN1) monitors the vehicle's operating status in real time, enabling timely maintenance and facilitating fleet management.
- A wide range of optional configurations are available, including an air-suspension continuously variable shock seat, an adjustable steering wheel, and a multimedia player.







Main Specifications



Vehicle weight	t	32
Rated payload	t	60
Max. total weight	t	92
Engine model	Perkins 2406	
Rated power	kW/PS	340/460
Emission	Tier 3	
Displacement	L	12.5
Transmission	Fast 7DS220	
Axle	20T+35T+35T	
Tire	14.00-25	
Struck capacity	m ³	30
Gradeability	%	32
Max. speed	km/h	40
Suspension	Front and rear leaf spring suspension	
Steering type	Hydraulic steering	
Braking system	Dual-circuit air assisted drum brake	
Frame	Integrated flexible riveted frame	
Length	mm	8858
Width	mm	3480
Height	mm	3864