

Medium Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

The Medium Excavator, typically defined within the 20 to 34 metric ton operating weight class, represents the critical balance between raw power and operational agility demanded by modern job sites . It is the definitive workhorse for the construction, quarrying, roadbuilding, and agricultural sectors, engineered to excel where larger machines cannot maneuver and smaller units lack the necessary breakout force . This class of equipment is purpose-built to deliver superior productivity in foundation digging, heavy trenching, mass excavation, and demolition, providing fleet owners with an optimal return on investment through a combination of durable design and operational efficiency.

Positioned as the cornerstone of any mixed fleet, the Medium Excavator offers a compelling value proposition centered on unmatched versatility and cost-effectiveness. It seamlessly transitions from tight urban worksites to expansive mining and quarrying operations, adeptly handling a wide array of attachments to perform tasks ranging from fine grading to heavy lifting . Its design philosophy marries high-strength steel structures with advanced, fuel-efficient powertrains, ensuring that it delivers the robust performance of a larger machine while maintaining the lower transportation costs, reduced fuel

consumption, and extended service intervals that drive profitability .



STRUCTURAL INTEGRITY & POWERTRAIN

The backbone of the Medium Excavator is its robust chassis and upper structure, fabricated using high-grade, high-tensile strength steel to withstand torsional stress and the punishing demands of heavy-duty applications . To ensure longevity in the most demanding terrains, the undercarriage features heavy-duty track frames, sealed and lubricated track links to minimize internal wear, and thick, durable bottom guards to protect critical components from debris . The boom and arm structures are robotically welded in a box-section design, often incorporating internal baffles, to absorb shock loads and provide exceptional resistance to bending and fatigue, a testament to OEM manufacturing precision .

At the heart of the excavator lies a globally-proven, turbocharged diesel engine, such as the Cummins QSB6.7 or Cat C3.6, delivering a net power output of approximately 122 kW to 128.5 kW . The powertrain is meticulously paired with a high-efficiency closed-center hydraulic system engineered for optimal flow and pressure. This system leverages advanced load-sensing and positive flow control technologies to intelligently deliver hydraulic power precisely where and when it is needed, significantly reducing fuel consumption without compromising digging forces or cycle times . The integration of electronic tandem pumps and the Engine Control Module (ECM) ensures seamless communication between the engine and hydraulics, resulting in smooth, precise, and highly responsive machine operation .

KEY FEATURES & OPERATOR COMFORT

- Advanced Electrohydraulic System: Features a cutting-edge, electronically controlled hydraulic system that maximizes efficiency through precise pump and valve control. This system provides exceptional controllability for fine grading while delivering the power needed for heavy digging, optimizing fuel consumption via an intelligent Smart Mode that automatically adjusts engine and hydraulic output to match the task at hand .
- Spacious ROPS/FOPS Certified Cab: The operator environment is designed as a 'command center' with exceptional visibility, comfortable air-suspension

seating, and low-effort joystick controls. The cab is designed and certified to ISO standards for Rollover Protective Structure (ROPS) and Falling Object Protective Structure (FOPS), ensuring operator safety on the most challenging job sites .

- High-Resolution Touchscreen Monitor: An intuitive, high-resolution touchscreen monitor (up to 8 inches) provides the operator with real-time data on machine performance, fuel consumption, and filter life. This interface allows for easy navigation through machine settings, such as joystick pattern preferences and power modes, while also providing a clear view for the standard rearview camera system .

- Advanced Lifting & Safety Technologies: To enhance jobsite safety and operational efficiency, the excavator integrates innovative features such as Lift Assist, which provides visual and audible alerts to prevent tipping when handling heavy loads. This is further supported by a robust heavy-duty counterweight (up to 4000 kg) and sturdy eight-roller undercarriage, ensuring unparalleled stability during demanding lifting operations .

- Optimal Cooling & Durability: Designed for extreme operating environments, the excavator features a single-plane cooling package that ensures high-ambient temperature capability of up to 52 ° C (126 ° F) and reliable cold-start capability down to -10 ° C (14 ° F). The cooling system' s design improves airflow, reduces fan speed for fuel savings, and includes a reverse function for automatic core cleaning to maintain optimal performance .

COMPLIANCE & SAFETY STANDARDS

The Medium Excavator is engineered and manufactured in strict compliance with the highest global quality, safety, and environmental standards. The machine is fully certified to meet stringent U.S. EPA Tier 4 Final and EU Stage V emission regulations, reflecting a commitment to sustainable and responsible operation . Comprehensive safety is ensured through adherence to international standards, including ISO 12117-2:2008 for ROPS/FOPS certified cabs and ISO 2867:2011 for access systems . The manufacturing process is guided by ISO 9001 quality management protocols, guaranteeing that each unit is built with the precision and reliability expected from a top-tier OEM. Service and maintenance points are designed for ground-level accessibility to minimize workplace injuries, underscoring the machine's focus on total safety .

TECHNICAL SPECIFICATIONS

The following technical parameters define the performance characteristics of the Medium Excavator. These figures represent the benchmark for the 24-28 metric ton weight class, demonstrating exceptional capabilities in power, digging force, and operational range.

Parameter	Specification
Engine Model	Cummins QSB6.7 / Cat C3.6
Engine Power	122 - 128.5 kW (164 - 172 hp)
Operating Weight	24,000 - 28,400 kg (52,900 - 62,600 lb)
Bucket Capacity	0.8 - 1.6 m ³
Max Digging Depth	6,450 - 6,730 mm
Max Digging Reach	9,745 - 10,225 mm
Arm Digging Force	~120 - 150 kN
Bucket Digging Force	~158 - 175 kN