

Small Excavating Machine - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Engineered to redefine performance in confined spaces, the Small Excavating Machine delivers the power of a full-size excavator in a compact, agile package. Ideal for urban construction, landscaping, and agricultural earthmoving, this machine provides exceptional breakout force and precise control, enabling operators to tackle rigorous trenching, grading, and demolition tasks with unparalleled efficiency. Its optimized design ensures minimal ground disturbance, making it the preferred choice for projects where space constraints and environmental sensitivity are paramount.

As a testament to our commitment to innovation, this excavator integrates advanced hydraulic technology with a robust, wear-resistant chassis. It is built not just to meet, but to exceed the expectations of modern job sites, ensuring maximum uptime and return on investment. Whether navigating narrow city streets or performing delicate work near existing structures, the Small Excavating Machine offers a seamless blend of power, precision, and durability that drives project success.



STRUCTURAL INTEGRITY & POWERTRAIN

Built to withstand the harshest conditions, the chassis of this excavator utilizes high-grade, abrasion-resistant steel (yield strength exceeding 490 MPa). This reinforced mono-block construction ensures maximum rigidity and durability, protecting critical components from impact and torsional stresses encountered in heavy-duty applications. The boom and arm are fabricated from high-strength steel with thickened cross-sections, significantly extending the fatigue life of the attachment.

At the heart of the machine lies the next-generation, electronically controlled diesel engine, compliant with stringent emission regulations. This turbocharged, charge-air-cooled engine delivers a high power-to-weight ratio, providing instant throttle response and sustained torque across the operating range. The

system is paired with an advanced load-sensing hydraulic system that optimizes flow distribution, ensuring swift, responsive cycles and superior fuel economy.

KEY FEATURES & OPERATOR COMFORT

- **Advanced Load-Sensing Hydraulics:** The variable-displacement pump matches hydraulic output exactly to the load demand, minimizing parasitic losses and reducing fuel consumption by up to 15% compared to conventional systems, while ensuring smooth, simultaneous boom and swing operations.
- **ROPS/FOPS Certified Cab:** The fully sealed, pressurized cab meets ISO 12117-2 Roll Over Protective Structure (ROPS) and Falling Object Protective Structure (FOPS) standards. It features laminated safety glass, an adjustable suspension seat, and an automatic climate control system to maintain optimal temperature, drastically reducing operator fatigue.
- **Smart Control Panel:** An intuitive, high-resolution LCD monitor provides real-time diagnostics, fuel level, coolant temperature, and maintenance intervals. It offers selectable working modes (e.g., Power, Standard, and Eco) to tailor performance to the specific job requirements, maximizing efficiency for every task.
- **Auto-Idle & Engine Shutdown:** To enhance fuel savings and reduce environmental impact, the system automatically reduces engine speed during periods of inactivity and can be programmed to shut down after a set idle time, preventing unnecessary fuel consumption and wear.

- Minimum Swing Radius Design: The advanced boom offset and compact tail swing design allow the machine to work flush against walls and obstacles, offering unparalleled maneuverability in heavily congested job sites.

COMPLIANCE & SAFETY STANDARDS

This equipment has been meticulously engineered to comply with the most rigorous international safety and environmental standards. It features CE certification (Machinery Directive 2006/42/EC) and meets EPA Tier 4 Final / EU Stage V emission standards. The manufacturing facility is certified under ISO 9001 (Quality Management) and ISO 14001 (Environmental Management). Furthermore, the machine is equipped with an advanced Fire Suppression System (optional), emergency engine stop switches (both interior and exterior), and secondary pilot-operated locking valves on the boom and arm circuits to prevent unintended lowering in case of a hydraulic line failure, ensuring operator and site safety.

TECHNICAL SPECIFICATIONS

All technical data provided below is based on standard equipment configuration without optional attachments. Values are approximate and may vary depending on operating conditions, options, and attachments fitted.

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style='padding: 8px; text-align: left; background-color:
#f2f2f2;'>Parameter</th><th style='padding: 8px; text-align: left;
background-color: #f2f2f2;'>Specification</th></tr><tr><td style='padding:
8px; border: 1px solid #ddd;'>Engine Model</td><td style='padding: 8px;
border: 1px solid #ddd;'>Cummins B3.3 (Turbocharged)</td></tr><tr><td
style='padding: 8px; border: 1px solid #ddd;'>Engine Power</td><td
style='padding: 8px; border: 1px solid #ddd;'>48.5 kW (65 HP) @ 2200
rpm</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Operating Weight</td><td style='padding: 8px; border: 1px solid
#ddd;'>7,850 kg (17,300 lbs)</td></tr><tr><td style='padding: 8px; border:
1px solid #ddd;'>Bucket Capacity (Std)</td><td style='padding: 8px; border:
1px solid #ddd;'>0.28 m³ (0.37 cu. yd)</td></tr><tr><td style='padding: 8px;
border: 1px solid #ddd;'>Max Digging Depth</td><td style='padding: 8px;
border: 1px solid #ddd;'>4,250 mm (167.3 in)</td></tr><tr><td
style='padding: 8px; border: 1px solid #ddd;'>Max Reach at Ground
Level</td><td style='padding: 8px; border: 1px solid #ddd;'>6,500 mm (255.9
in)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Max
Dump Height</td><td style='padding: 8px; border: 1px solid #ddd;'>4,400
mm (173.2 in)</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Swing Speed</td><td style='padding: 8px; border: 1px solid

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#ddd;'>9.5 rpm</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Hydraulic Flow Rate</td><td style='padding: 8px; border: 1px solid
#ddd;'>2 x 60 L/min</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Fuel Tank Capacity</td><td style='padding: 8px; border: 1px solid
#ddd;'>110 L (29.1 gal)</td></tr><tr><td style='padding: 8px; border: 1px
solid #ddd;'>Ground Clearance</td><td style='padding: 8px; border: 1px solid
#ddd;'>330 mm (13.0 in)</td></tr></table>
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