

1 Ton Mini Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Engineered for maximum productivity in space-constrained environments, the 1 Ton Mini Excavator represents a synthesis of compact design and heavy-duty performance. Designed to navigate narrow job sites, this machine is the ideal solution for urban construction, residential landscaping, agricultural maintenance, and utility projects. Its sub-1-meter width allows for access through standard doorways and gates, while delivering the hydraulic power necessary for serious excavation, grading, and material handling.

Built on a philosophy of durability and operator safety, this mini excavator provides a superior power-to-weight ratio. The value proposition is clear: reduce manual labor, increase job site efficiency, and lower operational costs with a machine that is as tough as it is versatile. This document serves as the comprehensive technical overview and supplier inspection protocol, ensuring that every unit meets the rigorous standards expected from top-tier heavy machinery manufacturers.

STRUCTURAL INTEGRITY & POWERTRAIN

The machine's backbone is a high-tensile steel chassis, engineered to withstand

the torsional stresses of heavy digging and rough terrain. This robust frame is coupled with a reliable, high-performance engine, often sourced from industry leaders like Mitsubishi, Kubota, or Yanmar, delivering approximately 10-15 kW of power . The hydraulic system, the heart of the excavator, utilizes advanced load-sensing technology to provide precise, efficient power distribution. This ensures smooth, simultaneous operation of the boom, arm, and bucket, maximizing fuel efficiency and cycle times while minimizing system heat buildup . The undercarriage, featuring heavy-duty tracks, is built for longevity and stability, with a focus on ease of maintenance for wear items like sprockets and rollers .

KEY FEATURES & OPERATOR COMFORT

- Load-Sensing Hydraulic System: Provides optimal flow and pressure to all functions, ensuring precise control and maximum efficiency regardless of engine speed. This system allows for smooth multifunction operation, significantly increasing productivity for experienced operators .
- ROPS/FOPS Certified Canopy: Operator safety is paramount. The Roll-Over Protective Structure (ROPS) and Falling Object Protective Structure (FOPS) provide a certified safety cell, meeting international standards for operator protection in the event of a rollover or impact .
- Zero Tail Swing / Compact Radius: The design minimizes the machine's tail

swing radius, allowing operators to work confidently against walls or in congested areas without fear of striking obstacles, drastically improving safety and maneuverability in tight spaces .

- Ergonomic Pilot Controls: Intuitive joystick controls reduce operator fatigue over long shifts. The pilot-operated system provides smooth, responsive control over all digging and swing functions, making the machine accessible to operators of all skill levels.

- Easy Maintenance Access: Hinged engine covers and tool-less service points allow for quick daily checks and routine maintenance. The layout is designed to ensure that fluid levels, filters, and critical components are easily accessible, reducing downtime .

COMPLIANCE & SAFETY STANDARDS

The 1 Ton Mini Excavator is manufactured in accordance with the strictest global standards to ensure quality, safety, and environmental compliance. All units are designed to meet or exceed ISO 9001:2015 standards for quality management systems, with rigorous testing procedures integrated throughout the production process . The machine holds CE certification, confirming its adherence to European health, safety, and environmental protection standards, and is available with engines compliant with EPA Tier 4 Final and Euro V emission regulations . Additionally, the standard safety package includes a

backup alarm, a functional seatbelt, and clearly legible safety decals, ensuring compliance with OSHA and international job site safety requirements .

TECHNICAL SPECIFICATIONS

The following table provides benchmark technical specifications for the 1 Ton Mini Excavator class. Actual values may vary based on specific model configurations and optional equipment, but serve as a reliable baseline for procurement and operational planning.

TECHNICAL SPECIFICATIONS

Parameter	Specification
Operating Weight	~1,000 - 1,200 kg (1.0 - 1.2 t)
Engine Model (Typical)	Mitsubishi / Kubota / Yanmar (Diesel)
Engine Power	

#ddd;'>~7.6 - 13.3 kW	
Bucket Capacity (Heaped)	
#ddd;'>~0.025 - 0.03 m ³	
Max Digging Depth	
#ddd;'>~1.65 - 2.2 m	
Max Digging Reach	
#ddd;'>~2.9 - 3.9 m	
Overall Width (Transport)	
#ddd;'>~0.94 - 1.1 m	
Track Width	
#ddd;'>180 - 230 mm	
Emissions Certification	
#ddd;'>CE, EPA Tier 4 Final / Euro V	