

1.5m³ Bucket Backhoe Loader - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Introducing the next-generation 1.5m³ Backhoe Loader, a pinnacle of engineering designed to redefine versatility and efficiency across the most demanding job sites. This machine is purpose-built for a multitude of applications, serving as an indispensable asset in construction for material handling and site preparation, in mining for light aggregate work, and in agriculture for large-scale loading and excavation tasks. Its primary value proposition is delivering class-leading digging forces with exceptional fuel economy, ensuring maximum return on investment and unmatched productivity in every cycle.

Engineered for the modern workforce, this backhoe loader combines heavy-duty durability with superior operator comfort and smart technology. It offers the perfect balance of power and precision, enabling operators to tackle a wide variety of tasks—from trenching and backfilling to loading trucks and grading—with a single, reliable machine. By integrating advanced hydraulic systems and an ergonomic cabin, it minimizes operator fatigue and maximizes efficiency, setting a new standard for performance in its class.



STRUCTURAL INTEGRITY & POWERTRAIN

At the core of this machine lies an exceptionally robust chassis, constructed from high-grade, high-yield strength steel to withstand the rigors of heavy-duty use. The main frame is designed for maximum torsional rigidity, ensuring long-term durability and a stable platform for all operations. This is complemented by a heavy-duty, full-floating axle and a durable pin-on loader bucket connection, providing a solid foundation for demanding work cycles .

The powertrain is built around a proven, high-torque engine, such as a Cat C4.4 ACERT™, delivering reliable, solid performance . This engine is engineered to meet stringent emission standards (like U.S. EPA Tier 4 Final/EU Stage IV) , incorporating advanced technologies like Selective Catalytic Reduction (SCR) and a Diesel Oxidation Catalyst to reduce emissions without compromising power. The entire drivetrain, from the engine to the torque converter and power

shuttle transmission, is calibrated for optimal efficiency and smooth, responsive power delivery.

KEY FEATURES & OPERATOR COMFORT

- Advanced Load-Sensing Hydraulics: The variable displacement, load-sensing piston pump is the brain of the hydraulic system, delivering full hydraulic lifting and digging forces at any engine speed . This system intelligently matches hydraulic flow to the specific work demand, reducing parasitic power loss, improving fuel efficiency, and ensuring precise, responsive implement control. It allows operators to adjust auxiliary flow to match attachment specifications seamlessly .

- ROPS/FOPS Certified Operator Cab: Safety and comfort are paramount in the design of the spacious, pressurized cab. It meets and exceeds ROPS (Roll Over Protective Structure) and FOPS (Falling Object Protective Structure) standards , providing a secure environment for the operator. The cab is equipped with an air-suspension seat, tilt steering, and excellent visibility, significantly reducing operator fatigue during extended shifts .

- Ergonomic Joystick Controls: The machine features intuitive, seat-mounted joystick controls that place loader and backhoe functions at the operator's fingertips . Whether facing the loader or the backhoe, the controls are ergonomically positioned to maximize comfort and minimize movement. An

integrated pattern changer allows operators to switch between excavator and backhoe control patterns instantly .

- Integrated Technology & Smart Controls: An advanced LCD operator display provides real-time data on critical machine parameters including engine diagnostics, fuel levels, and hydraulic oil temperature . The system also includes features like an Automatic Engine Speed Control (AESC) to reduce fuel consumption during idle periods and programmable loader bucket kickout and return-to-dig functions for enhanced productivity .

- Superior Versatility & Attachment Integration: Designed for maximum job site adaptability, the machine is compatible with the Integrated Tool Carrier (IT Coupler) system for single tilt loader arms, enabling quick and secure connection to a wide variety of Cat attachments . From general-purpose and multi-purpose buckets to hammers and brooms, the machine is truly ready for any task .

COMPLIANCE & SAFETY STANDARDS

This backhoe loader is engineered and manufactured in strict adherence to the highest global safety and quality standards. The machine complies with and often exceeds critical international regulations, including ISO 20474-4, which specifies the safety requirements for backhoe loaders . It is designed to meet the essential health and safety requirements of the EU Machinery Directive

(2006/42/EC) . The integration of ROPS/FOPS structures is standard, and the machine is built following robust quality management principles aligned with ISO 9001 standards, ensuring reliability, safety, and long-term value for the end-user.

TECHNICAL SPECIFICATIONS

The following parameters highlight the exceptional capabilities of the 1.5m³ backhoe loader, demonstrating its performance, efficiency, and robust construction.

Parameter	Specification
Engine Model	Cat C4.4 ACERT [™] / Tier 4 Final Compliant
Gross Power	~101 hp (75 kW)
Operating Weight	8,428 - 10,892 kg (18,581 - 24,013 lb)

Loader Bucket Capacity	1.5 yd ³ (1.15 m ³)
Hydraulic System Type	Closed Center, Load-Sensing
Pump Capacity	~125-163 L/min
System Pressure (Loader/Backhoe)	~3600 psi (25000 kPa)
Transmission Type	Power Shuttle (4F/3R) or Auto-Shift (6F/4R)
Travel Speed (Max)	Up to 40 km/h (25 mph)