

Demolition Excavating Machine - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

The Demolition Excavating Machine is engineered as the ultimate solution for high-risk, high-reward dismantling operations. Positioned at the apex of the heavy construction and mining equipment pyramid, this machine is specifically designed for the selective demolition of skyscrapers, bridges, and industrial plant infrastructures. Its primary value proposition lies in its unique combination of maximum destructive force and unparalleled operator protection, ensuring project milestones are met with surgical precision in the most hazardous environments.

Unlike standard excavators, this purpose-built demolition tool integrates a fortified, falling-object protective structure (FOPS) with a heavy-lift capacity that remains stable at maximum reach. It bridges the gap between brute force and finesse, allowing contractors in the construction, mining, and heavy infrastructure sectors to tackle complex tear-downs, concrete crushing, and scrap handling with a single, versatile attachment platform, thereby maximizing return on investment and minimizing site logistics.



STRUCTURAL INTEGRITY & POWERTRAIN

At the core of the Demolition Excavating Machine is a stress-relieved, high-tensile steel chassis manufactured from WELDOX 700-grade material. This provides an exceptional strength-to-weight ratio, ensuring the undercarriage and upper structure can withstand the high cyclical loads and impact forces generated during primary breaking. The boom and arm assemblies are reinforced with internal baffle plates and feature heavy-duty pin connections to eliminate play and ensure long-term alignment, effectively mitigating the 'whip' effect common in high-reach applications.

Powering this beast is a next-generation, electronically controlled diesel engine, compliant with EPA Tier 4 Final and EU Stage V emissions regulations. This powerplant delivers a net power output of over 500 horsepower, utilizing a

selective catalytic reduction (SCR) and a diesel particulate filter (DPF) system to reduce NOx and particulate matter without sacrificing fuel efficiency. The engine drives a closed-center, load-sensing hydraulic system with a variable-displacement piston pump. This system intelligently directs flow priority to the attachment circuit, offering a maximum auxiliary flow of over 450 liters per minute, enabling the use of the most demanding multi-tool processors and primary breakers.

KEY FEATURES & OPERATOR COMFORT

- **Advanced Multi-Function Control System:** The machine utilizes an electro-hydraulic joystick control system with programmable attack modes. Operators can instantly switch between 'Impact Mode' for maximum breaker frequency and 'Precision Mode' for delicate shearing and sorting. The system automatically adjusts engine RPM and hydraulic pressure to match the selected tool, reducing fuel consumption by up to 15%.

- **Next-Generation ROPS/FOPS Cab:** The pressurized, sound-insulated cab is certified to ISO 12117-2 (FOPS) for falling object protection and ISO 3471 (ROPS) for rollover protection. It features 70mm-thick, laminated shatter-proof glass and a heavy-duty mesh screen over the front windscreen. The air-suspension seat is fully adjustable, reducing Whole Body Vibration (WBV)

and operator fatigue during extended 12-hour shifts.

- Smart 360-Degree Awareness: The excavator is equipped with a factory-installed, 360-degree intelligent surround-view camera system. Utilizing four high-definition cameras and a centralized processing unit, it provides a bird's-eye view of the machine's perimeter. Integrated with object detection radar, the system provides audible and visual alerts to prevent collisions with site personnel and infrastructure, a critical safety feature for confined demolition sites.

- Modular Attachment Interface: The machine features a quick-coupler with an integrated auto-lubrication system for the main pin joints. The auxiliary hydraulic circuit includes a high-flow return filter and a pressure relief valve, allowing for rapid changeovers between concrete pulverizers, multi-processors, and hydraulic breakers without leaving the cab, significantly reducing attachment swap times.

COMPLIANCE & SAFETY STANDARDS

Our Demolition Excavating Machine adheres to the strictest global safety and manufacturing protocols. The manufacturing facilities are certified under ISO 9001 for quality management and ISO 14001 for environmental management.

The machine carries the CE marking, confirming compliance with all applicable European health, safety, and environmental protection directives. Furthermore, the engine system is fully compliant with EPA Tier 4 Final regulations and includes an automatic shutdown system to prevent catastrophic failure in case of low oil pressure or high coolant temperature, safeguarding the customer's long-term investment.

TECHNICAL SPECIFICATIONS

The following technical parameters define the superior capabilities of this demolition machine, engineered for optimal performance in heavy-duty applications.

Parameter	Specification
Engine Model	Cummins X15 (or equivalent Tier 4 Final)
Engine Net Power	523 hp (390 kW) @ 1,800 rpm

Operating Weight (with boom)	110,000 kg (242,500 lbs)
Max Reach (horizontal)	25.5 m (83.6 ft)
Max Dismantling Height	30.0 m (98.4 ft)
Hydraulic Main Pump Flow	2 x 450 L/min (119 gpm)
Max Hydraulic Pressure	350 bar (5,076 psi)
Fuel Tank Capacity	1,200 L (317 gal)