CE Certified Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Designed for the rigorous demands of global construction, quarrying, and large-scale agricultural projects, this CE Certified Excavator represents a paradigm shift in mid-size hydraulic machinery. Combining a high-strength box-section chassis with a Tier 4 Final / Stage V emissions-compliant powertrain, the unit delivers exceptional breakout force while maintaining up to 15% lower fuel consumption than previous generation models. The machine is specifically positioned for contractors and mining operators who require uninterrupted shift cycles, reduced total cost of ownership, and full regulatory compliance for European and international work sites.

Beyond raw power, the excavator integrates smart load-sensing hydraulics and a certified ROPS/FOPS cab to reduce operator fatigue and increase daily material moved tonnage. With standard CE marking, ISO 9001 manufacturing protocols, and advanced telematics readiness, this platform offers fleet managers real-time diagnostics and predictive maintenance scheduling. Whether trenching, mass excavation, or handling attachments like hydraulic breakers and grapples, the unit delivers verified performance under extreme ambient temperatures and dusty conditions.

STRUCTURAL INTEGRITY & POWERTRAIN

The upper and lower frames are fabricated from high-tensile DOMEX 700 MC steel (yield strength exceeding 700 MPa), reinforced at all pivot points and track frame mounting locations. The X-frame design distributes torsional loads evenly, eliminating stress risers during swing-circle operations. Track chains are heat-treated, through-hardened steel with sealed and lubricated track bushings, extending undercarriage life by up to 35% in abrasive mining conditions.

The powertrain centers on a turbocharged, air-to-air aftercooled diesel engine (Cummins QSB6.7 or Isuzu 4HK1X, depending on market configuration), rated at 174 hp (130 kW) at 2,050 rpm. The engine integrates a diesel oxidation catalyst (DOC) and diesel particulate filter (DPF) for CE Stage V compliance, with no diesel exhaust fluid (DEF) required for most models. The closed-center,

load-sensing hydraulic system features a variable-displacement piston pump delivering 320 l/min at 34.3 MPa (4,975 psi), achieving lift capacities and swing torque that outperform the weight class average by 12%.

KEY FEATURES & OPERATOR COMFORT

- Load-Sensing Hydraulic Optimization: The hydraulic management system (HMS) actively adjusts flow and pressure based on attachment and joystick input, reducing parasitic loss. Operators can select Power, Standard, or Eco modes with a rotary dial, directly managing fuel consumption without changing digging cycles.
- ROPS/FOPS Certified Cab: The cab meets ISO 12117-2 rollover protection and ISO 3449 falling object protection Level II standards. Features include tempered front and overhead windows, a high-strength steel mesh on the front screen, and an emergency escape hatch. Sound levels are reduced to 72 dBA internally.
- 8-Inch Smart Control Panel: A high-brightness, glove-friendly touchscreen displays real-time coolant temperature, hydraulic oil temperature, fuel rate (l/hr), active power mode, and maintenance intervals. Integrated rearview and right-side camera feeds activate automatically when reverse is engaged.
- Automatic Swing Brake & Travel Management: The electronic swing parking brake engages immediately when the operator releases the swing control, preventing drift on slopes. Two-speed travel with auto downshift maintains traction torque when grading or pushing into stockpiles.

- Hydraulic Attachment Ready: Standard auxiliary hydraulic lines reach the boom tip with proportional control via an additional pedal or thumb wheel on the joystick. The system supports single-acting or dual-acting attachments up to 180 l/min flow, with a one-touch flow reversal for breakers.

COMPLIANCE & SAFETY STANDARDS

This excavator is fully CE certified (Machinery Directive 2006/42/EC) and carries the CE marking visible on the chassis and cab. The design complies with ISO 12117-2 (ROPS), ISO 3449 (FOPS Level II), and ISO 10265 (operator restraint systems). The engine meets EU Stage V emission limits (Regulation (EU) 2016/1628) and US EPA Tier 4 Final equivalency. The hydraulic system complies with ISO 16063 (pressure testing) and ISO 4413 (hydraulic safety requirements). Additionally, the manufacturer operates under ISO 9001:2015 for quality management and ISO 14001:2015 for environmental assembly processes. Acoustic tests confirm exterior sound power level at 101 dBA (LWA) per ISO 6395.

TECHNICAL SPECIFICATIONS

All parameters measured under standard operating conditions (SAE J/ISO 9249). Weight includes full fuel, hydraulic oil, coolant, operator (75 kg), and standard

bucket with teeth.

<table border='1' style='border-collapse: collapse; width: 100%;'><tr><th 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 QSB6.7-C174 or Isuzu 4HK1X</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Engine Power (Net)</td><td style='padding: 8px; border: 1px solid #ddd;'>174 hp (130 kW) @ 2,050 rpm</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Operating Weight</td><td style='padding: 8px; border: 1px solid #ddd;'>22,500 kg (49,604 lb)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Bucket Capacity (SAE heaped)</td><td style='padding: 8px; border: 1px solid #ddd;'>1.2 - 1.6 m³ (1.57 - 2.09 yd³)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Max Digging Depth</td><td style='padding: 8px; border: 1px solid #ddd;'>6,750 mm (22 ft 2 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;'>10,200 mm (33 ft 5 in)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Max Dump Height</td><td style='padding: 8px; border: 1px solid #ddd;'>7,120 mm (23 ft 4

in)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Swing Speed</td><td style='padding: 8px; border: 1px solid #ddd;'>10.8 rpm</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Travel Speed (High/Low)</td><td style='padding: 8px; border: 1px solid #ddd;'>5.4 / 3.1 km/h (3.4 / 1.9 mph)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Hydraulic Flow (Main Pump)</td><td style='padding: 8px; border: 1px solid #ddd;'>320 l/min (84.5 gal/min)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Fuel Tank Capacity</td><td style='padding: 8px; border: 1px solid #ddd;'>400 L (106 gal)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Ground Pressure</td><td style='padding: 8px; border: 1px solid #ddd;'>48.2 kPa (7.0 psi)</td></tr></table>