Durable Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Engineered for the most punishing job sites from sub-Arctic mines to tropical plantations, the Durable Excavator series redefines mean time between failures (MTBF) in the 20-45 metric ton class. Designed for contractors, quarry operators, and large-scale agricultural developers, this machine delivers a primary value proposition of 15% lower total cost of ownership (TCO) compared to industry benchmarks through a patented high-resilience undercarriage and load-sensing variable displacement hydraulics.

Built on a modular platform that shares 70% common parts across three weight classes, the Durable Excavator ensures maximum fleet uptime. Whether excavating hard-packed clay, loading shot rock, or handling heavy timber, operators benefit from a 12% increase in dig force and 9% lower fuel consumption versus previous generation equipment. Backed by a global 5-year structural warranty, this machine is the answer to rising operating costs and tightening emissions regulations.

STRUCTURAL INTEGRITY & POWERTRAIN

The chassis utilizes DOMEX 700MC high-yield-strength steel (700 MPa minimum yield) for the boom, arm, and upper frame, with a fully cast, robot-welded turntable bearing joint that eliminates stress concentration points. Lower carriages feature triple-flanged track rollers and manganese steel bushed links, achieving 4,200 hours of typical wear life under severe conditions.

Power comes from a turbocharged, air-to-air aftercooled Isuzu 6HK1 (EPA Tier 4 Final / EU Stage V compliant) or optional Cummins X12 for export markets, delivering 285 kW (382 HP) at 1,900 rpm. The closed-center, load-sensing hydraulic system operates at 34.3 MPa (4,975 psi) maximum pressure, utilizing a variable displacement axial piston pump with 2 x 290 L/min flow. Overall hydraulic efficiency measured at the attachment reaches 88% due to reduced

back-pressure architecture.

KEY FEATURES & OPERATOR COMFORT

- Smart Hydraulic Management (SHM): Electronic pump flow control reduces standby losses by 22%. Six working modes (Power, Economy, Lift, Breaker, Shear, Attachment) automatically adjust engine speed and pump torque.
- ROPS/FOPS Level 2 Certified Cab: Integrated falling object protective structure (ISO 3449 Level II) and roll-over protective structure (ISO 3471). Features viscous-damped mounts, full flat floor, and 5% less interior noise (69 dBA measured under load).
- 8-Inch Touchscreen Telematics Hub: Real-time fuel burn per cycle, predictive filter change alerts, geofencing, and remote engine inhibit. Compatible with all major fleet management systems (API available).
- Heavy-Duty Auto-Lubrication Ready: Standard central greasing manifold with 25-point distribution block. Optional automatic chain lubrication for high-hour applications (over 3,000 hours/year).
- Reverse Cooling Fan with Reversible Mode: Automatic 15-second reverse cycle every 60 minutes to eject debris from coolers, plus manual one-touch reverse for dusty environments.

COMPLIANCE & SAFETY STANDARDS

CE Certified (2006/42/EC), EPA Tier 4 Final / EU Stage V, ISO 9001:2015 (manufacturing), ISO 14001:2015 (environmental). Safety features include ISO 13849-1 (PLr d) certified circuit redundancy for swing and travel, secondary pilot-operated travel brake valves, and standard rearview camera with object detection zone audible alert. Also compliant with ANSI/SAE J1176 (fire suppression ready) and meets ISO 6395 external sound pressure level of 102 LpA.

TECHNICAL SPECIFICATIONS

Below are the key dimensional and performance ratings for the Durable Excavator 360LC (baseline model). Variations for standard boom or long-reach configurations available.

<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 (360LC)</th></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Engine Model</td><td style='padding: 8px; border: 1px solid #ddd;'>Isuzu 6HK1 (Tier 4 Final) or Cummins X12</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Operating Weight</td><td style='padding: 8px; border: 1px solid

#ddd;'>38,500 kg (84,878 lbs)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Bucket Capacity</td><td style='padding: 8px; border: 1px solid #ddd;'>1.6 - 2.2 m³ (SAE heaped)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Max Digging Depth</td><td style='padding: 8px; border: 1px solid #ddd;'>7,420 mm (24 ft 4 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;'>11,110 mm (36 ft 5 in)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Max Breakout Force (ISO)</td><td style='padding: 8px; border: 1px solid #ddd;'>256 kN (57,550 lbf)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Arm Crowd Force (ISO)</td><td style='padding: 8px; border: 1px solid #ddd;'>201 kN (45,200 lbf)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Swing Speed</td><td style='padding: 8px; border: 1px solid #ddd;'>10.6 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;'>5.5 / 3.3 km/h (3.4 / 2.1 mph)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Fuel Tank Capacity</td><td style='padding: 8px; border: 1px solid #ddd;'>650 L (172 gal)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Hydraulic Tank / System</td><td style='padding: 8px; border: 1px solid #ddd;'>280 L / 380 L (74 / 100 gal)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Tail Swing Radius</td><td style='padding: 8px;

border: 1px solid #ddd;'>3,450 mm (11 ft 4 in)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Track Shoe Width</td><td style='padding: 8px; border: 1px solid #ddd;'>700 mm (28 in) triple grouser</td></tr></table>