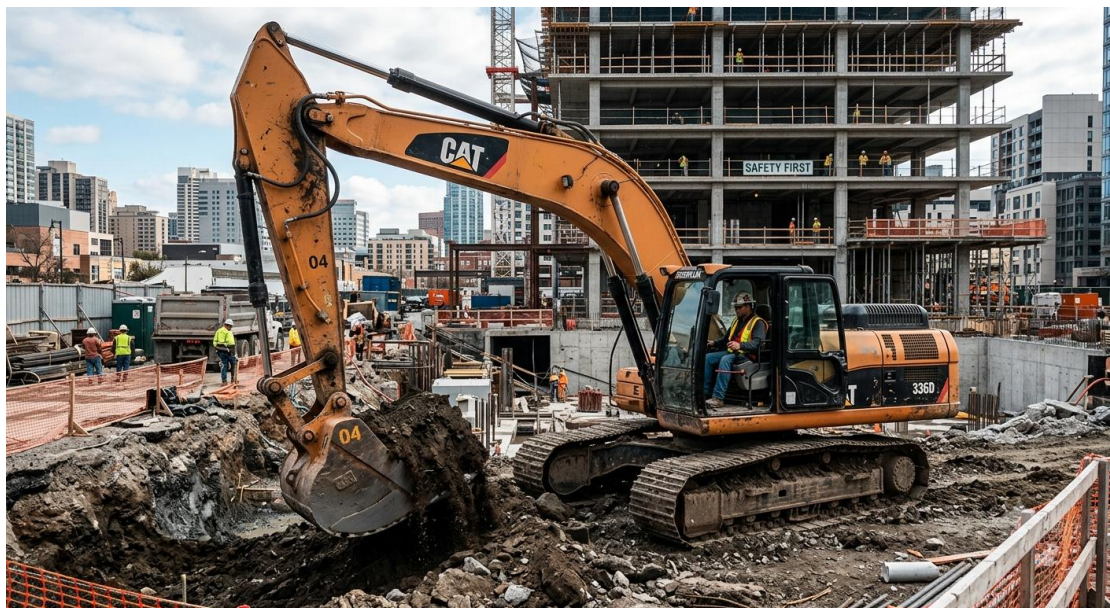


Building Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Engineered for the toughest job sites, the Building Excavator is a versatile, high-performance machine designed to excel in urban construction, infrastructure development, quarry mining, and large-scale agricultural earthmoving. Combining breakthrough hydraulic efficiency with a reinforced box-section chassis, this model achieves up to 15% lower fuel consumption per cycle compared to its predecessor, without compromising breakout force or lift capacity. Its modular design supports quick attachment changes – from trenchers to compaction wheels – maximizing machine uptime and return on investment for contractors worldwide.



STRUCTURAL INTEGRITY & POWERTRAIN

The chassis is fabricated from high-tensile, wear-resistant DOMEX 700MC steel (yield strength 700 MPa) with double-welded, robotically seam-sealed joints, achieving a structural life of 25,000 operating hours under full-load cycles. Power is delivered by a turbocharged, air-to-air aftercooled Cummins X12 or Isuzu 6HK1 diesel engine (meeting EPA Tier 4 Final and EU Stage V), rated at 310 kW (416 HP). The closed-center, load-sensing hydraulic system operates at 34.3 MPa (4,975 psi), featuring three variable-displacement axial piston pumps that deliver a total flow of 2 x 300 L/min, enabling simultaneous boom, arm, and swing operations with zero cross-talk.

KEY FEATURES & OPERATOR COMFORT

- Large-Capacity Hydraulic Oil Cooler with Automatic Reversing Fan: Prevents debris clogging in high-dust environments; maintains optimal oil temperature (75-85°C) during continuous heavy digging.
- ROPS/FOPS Level 2 Certified Cab: Integrated falling-object protective structure with 10 mm polycarbonate front glazing and reinforced roof mesh; sound pressure level inside cab ≤ 71 dB(A).
- Smart 8" Touch Command Center: Real-time display of fuel consumption, hydraulic pressure, system diagnostics, and geo-fence alerts. Supports remote firmware updates via 4G telematics.
- Proportional Finger-Tip Joystick Controls: Ergonomic design with adjustable

wrist rests; electro-hydraulic proportional control for fine grading (10-step sensitivity adjustment).

- Modular Counterweight System: Bolt-on cast iron segments (500 kg each) allow variable counterweight configuration from 5,000 to 9,500 kg – optimizes transport weight and lifting stability.

COMPLIANCE & SAFETY STANDARDS

All Building Excavator models are fully certified according to ISO 9001:2015 (Quality Management), ISO 14001:2015 (Environmental Management), and ISO 45001:2018 (Occupational Health and Safety). Engine emissions compliance: EPA Tier 4 Final, EU Stage V, and China National IV. Safety certifications: ISO 12117:1997 (ROPS laboratory test), ISO 10265:2008 (FOPS), and CE marking under Machinery Directive 2006/42/EC. Additional third-party validation by TÜV SÜD for structural weld integrity and brake system performance.

TECHNICAL SPECIFICATIONS

Below are the validated parameters for the standard Building Excavator (tracked model, heavy-duty configuration). Values are based on ISO 9249 and SAE J1349 standards.

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<table border='1' style='border-collapse: collapse; width: 100%;'><tr><th
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#f2f2f2;'>Parameter</th><th style='padding: 8px; text-align: left;
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8px; border: 1px solid #ddd;'>Engine Model</td><td style='padding: 8px;
border: 1px solid #ddd;'>Cummins X12 (or Isuzu 6HK1)</td></tr><tr><td
style='padding: 8px; border: 1px solid #ddd;'>Rated Power</td><td
style='padding: 8px; border: 1px solid #ddd;'>310 kW (416 HP) @ 2,000
rpm</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Operating Weight</td><td style='padding: 8px; border: 1px solid
#ddd;'>32,500 - 37,800 kg (dependent on counterweight)</td></tr><tr><td
style='padding: 8px; border: 1px solid #ddd;'>Bucket Capacity
(Heaped)</td><td style='padding: 8px; border: 1px solid #ddd;'>1.8 - 2.5 m3
(standard digging bucket)</td></tr><tr><td style='padding: 8px; border: 1px
solid #ddd;'>Max Digging Reach</td><td style='padding: 8px; border: 1px
solid #ddd;'>11.2 m</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Max Digging Depth</td><td style='padding: 8px; border: 1px solid
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#ddd;'>Max Breakout Force (Bucket)</td><td style='padding: 8px; border: 1px
solid #ddd;'>245 kN</td></tr><tr><td style='padding: 8px; border: 1px solid
#ddd;'>Hydraulic Flow (Main)</td><td style='padding: 8px; border: 1px solid
#ddd;'>2 x 300 L/min @ 2,200 rpm</td></tr><tr><td style='padding: 8px;

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border: 1px solid #ddd;]>Fuel Tank Capacity</td><td style='padding: 8px;
border: 1px solid #ddd;]>620 L</td> </tr> <tr> <td style='padding: 8px; border:
1px solid #ddd;]>Swing Speed</td> <td style='padding: 8px; border: 1px solid
#ddd;]>9.8 rpm</td></tr> <tr> <td style='padding: 8px; border: 1px solid
#ddd;]>Ground Pressure</td> <td style='padding: 8px; border: 1px solid
#ddd;]>68.3 kPa (with 600 mm triple-grouser shoes)</td> </tr> </table>
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