OEM Supported Digger - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

The OEM Supported Digger is a purpose-engineered earthmoving asset designed for high-cycle construction, mining support, and agricultural trenching operations. Integrating proven powertrain architecture with OEM-grade manufacturing protocols, this machine delivers a balance of breakout force, fuel efficiency, and serviceability. It serves as a direct alternative to legacy backhoes and mini-excavators, offering fleet managers predictable total cost of ownership backed by original equipment manufacturer parts availability.

Positioned for contractors, quarry operators, and utility installers, the digger excels in confined trenching, foundation excavation, and material rehandling. Its modular design allows quick attachment changes (auger, ripper, grading blade), reducing machine idle time. The primary value proposition rests on OEM lifecycle support: guaranteed spare parts interchangeability, certified remanufacturing programs, and compliance with regional emissions and safety mandates.

STRUCTURAL INTEGRITY & POWERTRAIN

The main frame and boom arm utilize high-tensile QSTE650TM steel (minimum yield 650 MPa) with robotically welded box-section construction. Lower track frame (or stabilizer legs for wheeled versions) features induction-hardened pins and double-sealed track chain for 8,000-hour wear life under loaded slew cycles.

Engine option line includes Cummins QSF3.8 (74 kW / 99 hp) or Isuzu 4JJ1X (65 kW / 87 hp) both meeting EPA Tier 4 Final / EU Stage V. The closed-center load-sensing hydraulic system delivers 170 L/min at 250 bar, with separate pump for pilot control. Cooling pack design enables continuous operation at 45°C ambient with auto-reversing fan.

KEY FEATURES & OPERATOR COMFORT

- Load-Sensing Hydraulics with Flow Sharing: Independent metering reduces parasitic loss by 18% compared to open-center systems; simultaneous boom/arm/travel operation without function starving.

- ROPS/FOPS Level II Certified Cab: Integrated falling-object protective structure, tempered front glass (P5A rating), and pressurized cabin with dual-stage intake filtration (charcoal + particulate). Vibration isolation mounts meet ISO 7096.

- Smart 7″ Control Panel: CANbus 2.0B display showing real-time fuel rate, hydraulic oil temperature, maintenance countdown, and fault code diagnostics. Remote telematics ready (GSM/4G).

- Servo-Assisted Joystick Controls: Proportional thumb wheel for auxiliary flow (0-120 L/min adjustable), four programmable attachment modes, and automatic engine idle with hydraulic demand sensing.

- Ground-Level Service Access: Centralized grease bank for boom pivot points, swing-out cooling pack, and tilt-up cab floor for pump/inspection. 500-hour greasing interval on sealed rotating joints.

COMPLIANCE & SAFETY STANDARDS

CE Marking (2006/42/EC), EPA Certified for Tier 4 Final, EU Stage V, and UKCA. ISO 9001:2015 manufacturing facility certification. Machine safety compliance

includes ISO 10265 (operator protective structure), ISO 3457 (guarding), and EN 474-1 (earthmoving general safety). Acoustic emission at operator ear: 76 dB(A) external: 103 dB(A) under load.

TECHNICAL SPECIFICATIONS

Below are the primary technical parameters for the standard OEM Supported Digger (telescopic boom variant). Values based on SAE J1063 and ISO 9249 standards.

<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 QSF3.8 / Isuzu 4JJ1X</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Engine Power (Net)</td><td style='padding: 8px; border: 1px solid #ddd;'>74 kW (99 hp) @ 2200 rpm / 65 kW (87 hp) @ 2100 rpm</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Operating Weight</td><td style='padding: 8px; border: 1px solid #ddd;'>8,450 kg (cab + ROPS + standard bucket)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Digging Depth (max)</td><td

style='padding: 8px; border: 1px solid #ddd;'>4,150 mm (standard boom) / 5,020 mm (extendable dipper)</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Breakout Force (arm cylinder)</td><td style='padding: 8px; border: 1px solid #ddd;'>6,200 kgf</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Bucket Capacity (SAE struck)</td><td style='padding: 8px; border: 1px solid #ddd;'>0.28 - 0.45 m ³ </td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Hydraulic Flow (main)</td><td style='padding: 8px; border: 1px solid #ddd;'>170 L/min @ 2,500 psi</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Ground Clearance</td><td style='padding: 8px; border: 1px solid #ddd;'>365 mm</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Swing Speed</td><td style='padding: 8px; border: 1px solid #ddd;'>9.2 rpm</td></tr><tr><td style='padding: 8px; border: 1px solid #ddd;'>Fuel Tank Capacity</td><td style='padding: 8px; border: 1px solid #ddd;'>150 L</td></tr></table>