

Mini Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Engineered for urban construction, confined mining support, and high-value agricultural earthmoving, this Mini Excavator redefines the 1.5–2.5 metric ton class. Its variable-gauge undercarriage and zero-tail-swing design enable operation within 50 cm of obstacles, while auxiliary hydraulic flows up to 45 L/min power breakers, augers, and grapples without performance loss.

For fleet owners, the value proposition centers on lower total cost of ownership: 2,000-hour hydraulic oil change interval, transverse-mounted engine for service access, and standard remote telematics for utilization tracking. Compatible with ISO 23810 interface standards for quick couplers and third-party attachments.



STRUCTURAL INTEGRITY & POWERTRAIN

The mainframe and boom arm utilize DOMEX 700 MC hot-rolled martensitic steel (minimum yield 700 MPa), laser-cut and robotic-welded to ISO 5817 Class B. Lower track frame incorporates sealed and lubricated triple-flange track rollers with grade 5 chromium carbide bushings.

Engine: YANMAR 3TNV80F direct-injection diesel, 15.3 kW (20.5 hp) @ 2,500 rpm, EPA Tier 4 Final / EU Stage V compliant with DOC+DPF aftertreatment. Optional electric powertrain (24 kWh Li-Ion, 8-hour runtime).

Hydraulic system: Twin gear pumps delivering 47.2 L/min total flow. Load-sensing priority valve for simultaneous boom/swing/travel functions with $\pm 2\%$ flow regulation. Pilot-operated joysticks with progressive proportional auxiliary thumbwheel. Maximum breakout force at bucket: 20.2 kN.

KEY FEATURES & OPERATOR COMFORT

- ROPS/FOPS LEVEL 2 CAB: ISO 3471 and 3449 certified, 48 dB internal sound pressure, tempered front and top glazing (impact class P5A), 12V outlet for personal devices, removable lower door panel for side-trench visibility.
- SMART CONTROL PANEL: 5-inch LCD color display with real-time fuel burn, regeneration status, hydraulic oil temperature, and 3 selectable auxiliary flow

presets. Bluetooth connectivity for smartphone tool syncing.

- VARIABLE UNDERCARRIAGE: Hydraulically adjustable track width from 980 mm (transport) to 1,360 mm (working). Independent track drive with auto-tensioning and 2-speed travel (2.5 / 4.8 km/h). Gradeability: 30°.

- PIPE-CRUSH PROTECTION: Dual-layer reinforced hydraulic hoses routed through boom internal channels with polyurethane spiral guards. All cylinders equipped with integrated overload relief valves and holding valves.

- QUICK-HITCH READY: Standard mechanical wedge coupler with hydraulic hose bridge for semi-automatic attachment change. Bucket pin center distance optimized for 4 brands of universal quick hitches.

COMPLIANCE & SAFETY STANDARDS

CE marked (2006/42/EC Machinery Directive), EPA 40 CFR Part 1065 (Tier 4 Final), EU 2016/1628 Stage V. ISO 9001:2015 certified manufacturing. Additional certifications: ISO 21281 (access and escape ladder), ISO 13539 (digging force measurement), ANSI/SAE J1178 (turbocharger heat shielding), and UL 1004-1 for optional electric motor version. Standard safety equipment includes: auto-deceleration at neutral, swing lock pin, travel alarm (105 dB(A)), and engine hood gas strut with secondary mechanical lock.

TECHNICAL SPECIFICATIONS

All values at standard configuration (rubber track, ROPS cab, 300 mm bucket, 75 kg operator).

Parameter	Specification
Engine Model	YANMAR 3TNV80F (Diesel) / REM24 (Electric option)
Operating Weight	2,420 kg (5,335 lb)
Rated Power	15.3 kW @ 2,500 rpm
Hydraulic Flow	47.2 L/min total (25.6 + 21.6 L/min)
Max Dig Depth	2,560 mm (8 ft 5 in)
Max Dump Height	2,600 mm (8 ft 6 in)

Swing Speed	9.6 rpm
Ground Pressure	27.8 kPa (4.03 psi) - standard track
Fuel Tank Capacity	24 L (6.3 gal)
Travel Speed (low/high)	2.5 / 4.8 km/h (1.55 / 2.98 mph)
Track Width (retracted/extended)	980 / 1,360 mm (38.6 / 53.5 in)
Breakout Force (bucket)	20.2 kN (4,541 lbf)
Armor Protection	Boom, stick, and frame: DOMEX 700 MC steel
Noise Level (LpA, cab)	78 dB(A) external / 48 dB internal