6 Ton Excavator - Official Technical Overview & Datasheet

EXECUTIVE SUMMARY

Designed for the rigorous demands of 21st-century job sites, the 6 Ton Excavator bridges the critical gap between micro-excavators and full-sized heavy machinery. Targeting the urban construction, residential development, and high-value agricultural sectors, this machine delivers a class-leading power-to-weight ratio. With a zero-tail-swing radius and optimized transport weight, it provides unmatched versatility for digging, trenching, and grading in confined spaces without sacrificing breakout force.

Engineered for maximum uptime, the 6 Ton platform leverages decades of hydraulic expertise to ensure smooth, proportional control. Whether lifting heavy pallets on a farm or excavating foundations in a dense city center, this model offers the operator intuitive control and the fleet manager low total cost of ownership. The primary value proposition is simple: mini-excavator agility with medium-excavator performance.

STRUCTURAL INTEGRITY & POWERTRAIN

The chassis utilizes high-tensile strength steel (grade Q460C) for the upper frame and a box-section track frame designed to withstand torsional stress. The boom and arm are constructed from continuous-cast, abrasion-resistant steel (Hardox 450 equivalent) to extend service life in rocky conditions.

Power is supplied by a liquid-cooled, turbocharged diesel engine (Isuzu 4LE2X or equivalent Tier 4 Final compliant unit), producing 45.4 kW (60.8 HP) at 2,200 rpm. The closed-center, load-sensing hydraulic system (Variable Displacement Piston Pump) delivers a maximum flow of 160 L/min, ensuring simultaneous boom, arm, and bucket functions without lag.

KEY FEATURES & OPERATOR COMFORT

- Load-Sensing Hydraulics with Boom Float: The system automatically adjusts flow and pressure to match the load demand, reducing parasitic energy loss by 15% compared to open-center systems. The standard boom float function allows for precision grading on slopes.

- ROPS/FOPS Certified Cab: The pressurized, sealed cab meets ISO 12117-2 rollover and falling object standards. Features include a fully adjustable suspension seat, automatic climate control, and low-effort pilot joysticks.

- Smart 5-Inch LCD Monitor: The panel provides real-time metrics on fuel consumption, maintenance intervals, and hydraulic oil temperature. Integrated ECO mode reduces engine RPM while maintaining optimal pump torque for light-duty trenching.

- Auto-Shift Travel Motors: Two-speed axial piston travel motors allow the operator to toggle between high torque for climbing slopes (max tractive force: 56 kN) and high speed for job site navigation (4.7 km/h).

- Swing Lock & Safety Levers: A mechanical swing lock prevents unintended upper-structure movement during transport. The safety lock lever isolates all hydraulic functions when the operator leaves the seat.

COMPLIANCE & SAFETY STANDARDS

This unit is fully compliant with EU Stage V and EPA Tier 4 Final emission regulations. The design and manufacturing processes follow ISO 9001:2015

quality management standards. Safety certifications include CE (Machinery Directive 2006/42/EC) and ISO 12117-2 for tip-over protection. The machine also meets ISO 6395 external noise limits (98 dB(A)) and ISO 6396 operator noise levels (76 dB(A)).

TECHNICAL SPECIFICATIONS

Below are the certified parameters for the standard 6 Ton Excavator configuration (long arm, steel tracks, 0.20m³ bucket).

Parameter	**Specification**
Engine Model	Isuzu 4LE2X (Tier 4 Final)
Operating Weight	5,950 kg (13,117 lbs)
Bucket Capacity	0.20 m³ (SAE heaped)
Max Digging Depth	3,850 mm (12.6 ft)
Max Digging Reach	6,250 mm (20.5 ft)
Max Dumping Height	4,100 mm (13.5 ft)
Arm Crowd Force	32.5 kN (7,306 lbf)
Bucket Digging Force	48.2 kN (10,836 lbf)
Swing Speed	9.5 RPM
Track Width (Retracted)	1,990 mm (78.3 in)
Ground Pressure	33.5 kPa

Fuel Tank Capacity	110 L (29 gal US)