


Er. Ravindra Chaudhary
Bachelor in Mechanical Engineering
Nepal Engineering Council
Reg. No. 2136 "Mechanical"

Mahendranagar-01, Kanchanpur
Mobile No: 9848145916/9818524100
Email: rvndra9@gmail.com/crvndra@gmail.com

Backhoe Loader Technical Specification

S.N	CRITERIA	MAJOR REQUIREMENT
1	General	All wheel drive, rigid frame back hoe loader with Steel cab, suitable for operation under rough working conditions, and adverse climatic conditions.
2	Capacity	<ol style="list-style-type: none"> 1. Operating weight not less than 8000 kg 2. Loader: General purpose bucket with (6 in1) bolt on teeth of SAE rated capacity nominally heaped approx. 1 cu. m with shovel break out force not less than 6600 kgf. <ul style="list-style-type: none"> • Dump Height: \geq 2900 mm • Load over height: \geq 3350 mm • Pin Height : \geq 3600 mm 3. Back hoe bucket with bolt on teeth of SAE rated capacity approx. 0.3 cu. m with tear out force 5650 kgf and following working ranges: <ul style="list-style-type: none"> • Minimum working height: \geq 6000 mm • Minimum digging depth: \geq5000 mm • Minimum digging reach: \geq6900 mm (Ground Level to rear wheel centre) • Minimum Lifting capacity: \geq1480 Kgs. • Minimum Bucket tear out force: \geq 5680kgf out triggers with controls from cabin shall be provided.
3.	Engine	Water Cooled diesel Engine, developing SAE rated Gross HP not less than 92 HP @ optimum rpm with Torque 408NM @optimum rpm, Displacement 4.4 litres (engine fully equipped with accessories) at governed RPM for efficient full load operation. Back hoe shall be equipped with heavy duty radiator, cold starting device, direct electric starting system, heavy duty battery, heavy duty air cleaner, heavy duty fuel filter, with water trap and drainage in fuel line and drain tap in fuel tank.
4	Gauges	To include ammeter, water temperature, fuel, oil pressure, transmission and hydraulic gauges as necessary for efficient operation and maintenance
5	Transmission	Torque converter with four speed power shift type of synchroshuttle transmission.
6	Axles	Four wheel drive with fixed rear axle and at least 15° oscillating front axles.
7	Tires	Suitable four tires with tubes for operating machine in rough road conditions shall be provided.
8	Steering	Power assisted Hydrostatic steering.
9.	Brakes	Hydraulically actuated, wet multiple disc/calliper disc type service brake and separate parking brake.
10.	Cab	All steel enclosed cab with laminated glass windscreen insulated roof, suitably located controls for back hoe and loader operation, rear view mirror, cabin light,


Mechanical Engineer
Nepal Engineering Council
Reg No: 2136

Er. Ravindra Chaudhary
Bachelor in Mechanical Engineering
Nepal Engineering Council
Reg. No. 2136 "Mechanical"

Mahendranagar-01, Kanchanpur
Mobile No: 9848145916/9818524100
Email: rvndra9@gmail.com/crvndra@gmail.com

		wiper and adjustable cushioned seat for operator shall be provided.
11.	Hydraulics	Suitable hydraulic pumps flow not less than 116 LPM @operating rpm and system pressure PSI (bar) not less than 3300(225) for smooth operation of all attachments smoothly.
12.	Essential Accessories	1. Road lights, work lights and fog lights 2. Cabin Lights 3. Service hour meter
13.	Instructions	All signs and instructions in the equipment shall be in English.
14.	Manuals	1. One copy of the Operator's and Owner's Instructions and Maintenance manual in English shall be supplied with the each equipment. 2. Two copies of following manuals in English shall be supplied with each equipment : <ul style="list-style-type: none">• Spare parts catalogue• Comprehensive workshop manual.
15.	Tools	A set of tools as required for general maintenance shall be supplied with in a lockable tool box for each unit.
16.	Warranty	Manufacturer shall provide a minimum of one year warranty after acceptance

Note: The major items are indicated by Bold and highlighted letters/alphabets/figures in the technical specifications.

By looking at the technical specification of the backhoe loader, the estimated cost of the loader is Rs. Approx 46,00,000/- (forty six lakh only) including VAT and other taxes as provided by the authorized dealer.


Mechanical Engineer

Nepal Engineering Council
Reg No: 2136