



# Technical Specification of Heavy Equipment

Item: Backhoe Loader

(Quantity: 1 unit)

S.No	CRITERIA	DEPARTMENTAL REQUIREMENT	OFFERED SPECIFICATION	REMARKS
1.	General	All-wheel drive, rigid frame back hoe loader with Steel cab, suitable for operation under rough working conditions, and adverse climate condition at operating altitude of 2000 m and ambient temperature varying between -5°C to 50°C.	Make: Model: Country of origin:	
2.	Capacity	<ol style="list-style-type: none"><li>1. Operating weight not less than 8000 kg</li><li>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 6000 kgf.<ul style="list-style-type: none"><li>• Dump Height: <math>\geq 2730</math> mm</li><li>• Load over height: <math>\geq 3200</math> mm</li><li>• Pin Height : <math>\geq 3440</math> mm</li></ul></li><li>3. Back hoe bucket with bolt on teeth of SAE rated capacity approx. 0.3 cu.m with tear out force 5600 kgf and following working ranges:<ul style="list-style-type: none"><li>• Maximum working height: <math>\geq 5700</math> mm</li><li>• Maximum digging depth: <math>\geq 4700</math> mm</li><li>• Maximum digging reach: <math>\geq 6900</math> mm (Ground Level to rear wheel center)</li><li>• Maximum Lifting capacity : <math>\geq 1400</math> kg</li></ul></li></ol> Out triggers with controls from cabin shall be provided.		
3.	Engine	Water-cooled diesel engine, developing SAE rated gross horsepower not less than 92 HP with minimum 384NM torque and displacement of 3.92litres (engine fully equipped with accessories) at		

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		governed RPM for efficient full load operation. Backhoe 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.	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, wiper and adjustable cushioned seat for operator shall be provided.		
6.	Tyres	Suitable <b>four tyres with tubes</b> for operating machine in rough road conditions shall be provided.		
7.	Hydraulics	Suitable hydraulic pumps flow <b>not less than 118 LPM</b> and system pressure <b>not less than 220 bar</b> for smooth operation of all the attachments.		
8.	Transmission	<b>Torque converter with at least four speed power shift type</b> of synchro shuttle transmission.		
9.	Steering	Power assisted hydrostatic steering.		
10.	Brakes	Hydraulically actuated, wet multiple disc/caliper disc type service brake and separate parking brake.		
11.	Axles	<b>Four wheel drive</b> with fixed rear axle and at least 15° oscillating front axles.		
12.	Ground Clearance	≥ 320 mm		
13.	Essential Accessories	1. Service hour meter 2. Work lights, road lights and fog lights 3. Cabin lights.		
14.	Instructions	All signs and instructions in the equipment shall be in English.		
15.	Manuals	One copy of the Owner's and Operator's Instructions and Maintenance manual including Spare parts catalogue and Comprehensive workshop manual in English shall be supplied with each equipment.		
16.	Tools	A set of tools as required for general maintenance shall be supplied with in a lockable tool box for each unit.		

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17.	Color	Standard		
18.	Proven performance	1. The machine offered shall be a current model under standard production by the manufacturer for at least one year. 2. The bidder should have supplied the equipment to the government sector before. 3. The bidder shall provide the manufacturer's data of the performance of the unit to include the fuel consumption, performance curve of the engine and machine's production capacity.		
19.	Warranty	Manufacturer shall provide a <b>minimum of one year warranty after acceptance.</b>		
20.	Delivery	Supplier should deliver 1 Unit of Backhoe Loader at <b>Sotang Rural Municipality, Sotang, Solukhumbu</b>		

**Note:**

1. The major items are indicated by bold and highlighted letters/alphabets/figures in the technical specification. Non-Compliance of these major items will result in non-responsiveness of the bid offer.

श्री एन. सी.  
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