

10TON OFF-ROAD TELESCOPIC FORKLIFT

An off-road telescopic forklift with a minimum lifting capacity of 10,000 kg, designed for heavy-duty operations, suitable for uneven, unpaved surfaces, construction sites and rough terrain is required. Fitted with a diesel engine, developing not less than 100kW power.

1. MASS

- The forklift truck should have a operating mass of not less than 14,000 kg; this excludes the rated load capacity.
- The full load weight on the rear axle must be not less than 3,000 kg.

2. ENGINE

- The machine is powered by a 6-cylinder electric start diesel engine having a rated power of not less than 100kW and a minimum torque of 500Nm.
- Engine oil, hydraulic oil and fuel filters are required.
- An engine hour meter is to be fitted.
- Provision is to be made to secure the battery/ies against theft.
- Ignition key engine stop is to be fitted.
- Aspiration is to be via a heavy-duty two stage cyclone type dry element air cleaner incorporating a safety element.
- A heavy-duty radiator is required.
- The engine is to comply with European Union EU Stage II emission for non-road engines. Proof is to be submitted with the bid.

3. TRANSMISSION

- A full power shift or hydrostatic transmission is required.
- The transmission must provide forward and reverse gears appropriate for construction operations.
- The transmission must have an over-speed protection or alarm.
- The machine should have an automatic reverse buzzer.
- The machine must have a grade-ability of at least 40% with full load and 45% unloaded.

4. WHEELS AND TYRES

- The machine must be fitted with heavy-duty rough-terrain tyres.
- Tyres must be of standard sizes that are locally available in South Africa.
- Rims must be reinforced and suitable for off-road operation.

5. CAB

- The fully enclosed cab is to accommodate the operator only.
- ROPS - must meet the requirements of SAE-J1040 and ISO 3471:1994
- FOPS - must meet the requirements of SAE-J1043 and ISO 3449:1992 Level I
- Fully enclosed, Sealed pressurized cab with heater/defroster,
- Air conditioning,
- Side windows with all round vision,
- The seat must be weight adjustable. A safety device should be incorporated that allows the operation of the machine only when the driver is seated.
- The seat must be fitted with a seatbelt.
- The floor of the cab should be rubberized.
- All controls required to operate the forklift must be situated inside the cab.
- Access steps to allow the driver/operator easy entrance and exit from the cab, are essential.
- The cab is to be suitably isolated from the engine and transmission so that vibration and noise transmission to the driver is minimised. A maximum noise level of 85 dB (A) at the operators' ear is required.

- Fuel level and water temperature gauges are to be fitted, with oil pressure and charge warning indicators.

6. FORKS

- The machine must be fitted with standard class III heavy-duty pallet forks suitable for 10-ton operation.
- Fork carriage must be quick-attach type.
- The mast must be fitted with integral side shift forks which must be adjustable from approximately 250mm spread to approximately 1900mm spread (outside dimensions) and must be locked in place with locking pins.
- The length of the forks must be not less than 1,200mm.
- The operator should have clear visibility of the fork tips when seated.
- The forks must only be operable when the engine is running.

7. BOOM (TELESCOPIC ARM)

- The machine must be fitted with a telescopic boom.
- Minimum maximum lifting capacity: 10,000 kg.
- Minimum maximum lift height: 7 metres.
- Boom extension and retraction must be smooth and controllable.
- Boom must be fitted with a load moment indicator (LMI) or equivalent safety system.
- A boom suspension or cushioning system must be fitted to reduce shock loads.
- The machine should contain a wide view to give the driver an unobstructed view of the forks and the load that is being carried.
- A load back rest of at least 1m in height must be fitted to stabilise the load.

8. STEERING AND AXLES

- Four-wheel drive is required.
- Multiple steering modes must be provided:
 - Front-wheel steering
 - Four-wheel steering
 - Crab steering
- Axles must be heavy-duty planetary type, suitable for off-road operation.

9. SAFETY

The machine must comply with the following specifications:

- ISO 1074 Counter Balanced Lift Trucks, Safety and Stability Test.
- ISO 3691 Powered Industrial Trucks – Safety Code.
- The machine must have a double action parking brake.
- An anti-rollover device is to be fitted to the rear axle.
- A neutral start safety device must be fitted.
- A lift lock to prevent the load lowering when the engine is off is to be fitted.
- All travel and load operations are to be stopped if the operator is not in the operator's seat.

10. GENERAL

- Full power steering is required.
- Lighting in terms of the Road Traffic and Road Transport Legislation must be fitted.
- A rotating orange light must be fitted.
- A hooter must be fitted.
- A toolkit (containing front and rear wheel spanners, a power bar, screwdrivers and spanners) must be supplied with the forklift.
- Provision must be made to waterproof electronic components so that the machine can be washed using a high pressure cleaner.

11. PAINT

- Machines or equipment are preferably to be painted yellow unless otherwise specified

12. SPARE PART

- Bidders must stock an adequate supply of spare parts in RSA for machines or equipment offered.
- All filters must be available locally.

QUESTIONNAIRE

10TON OFF-ROAD FORKLIFT TRUCK

In accordance with the invitation to bid and subject to the conditions of this bid, I/we, the undersigned, offer to supply at the prices stated:

- Bidders are requested to use only that portion of the tender questionnaire to the right of the vertical line to describe the equipment offered.

MAKE	
MODEL	
COUNTRY OF ORIGIN	
1. MASS	
1.1 Basic (no load)	
1.2 Total (full load)	
1.3 Mass on front wheels (no load)	
1.4 Mass on rear wheels (no load)	
1.5 Mass on front wheels (full load)	
1.6 Mass on rear wheels (full load)	
2. ENGINE	
2.1 Make	
2.2 Model	
2.3 Type	
2.4 Maximum rated power	_____ kW at _____ rpm
2.5 Maximum rated torque	_____ Nm at _____ rpm
2.6 Give details of the provision against the theft of batteries	
2.7 Oil Filter: Type	
2.8 Hydraulic Filter: Type	
2.9 Fuel Filter: Type	
2.10 Where is the engine hour meter fitted?	
2.11 Is the engine stopped by the ignition key?	
2.12 Is a UDF or similar filter fitted?	
2.13 Is the engine emission compliant with EU Stage II for nonroad engines? Proof must be submitted.	
3. TRANSMISSION	
3.1 Make	
3.2 Model	
3.3 Type	
3.4 Is the transmission full power or hydrostatic shift?	
3.5 Number of forward speeds?	
3.6 Number of reverse speeds?	
3.7 Speed in forward gear at maximum governed engine rpm	
3.8 Speed in reverse gear at maximum governed engine rpm	
3.9 Is there over-speed protection?	
3.9 Is there an over-speed alarm?	

3.10 Does the machine have an automatic reverse buzzer?	
3.11 Gradeability:	Full load: _____ Unloaded: _____
4. TYRES	
4.1 What is the size of the tyres?	Front: _____ Rear: _____
4.2 Are the tyres locally available?	
5. CAB	
5.1 Does the cab only accommodate the driver?	
5.2 Is the cab ROPS certified? (SAE-J1040 and ISO 3471:1994)	
5.3 FOPS - must meet the requirements of SAE-J1043 and ISO 3449:1992 Level I	
5.4 Is the cab fully enclosed, Sealed pressurized cab with heater/defroster,	
5.5 Air conditioning fitted?	
5.6 Side windows with all round vision,	
5.7 Is the seat weight adjustable?	
5.8 Does the seat have a seatbelt?	
5.9 Is the floor of the cab rubberized?	
5.10 Are the controls within the cab?	
5.11 Can the machine be operated if the driver/operator is not seated?	
5.12 Are there access steps to enter and exit the cab?	
5.13 Provide details of how the cab is isolated from vibration and noise.	
5.14 What gauges and warning lights are fitted?	
6. FORKS	
6.1 What type of forks are fitted on the machine?	
6.2 Is the machine fitted with integral side shift forks?	
6.3 What is the minimum fork spread? (Outside dimension)	_____ Mm
6.4 What is the maximum fork spread? (Outside dimension.)	_____ mm
6.5 What is used to secure the forks after they have been adjusted?	
6.6 What is the length of the forks?	
6.7 Are the tips of the forks visible to the driver when seated?	
6.8 Can the forks be operated when the engine is not running?	
6.9 Are the forks removable?	

7. BOOM (TELESCOPIC ARM)	
7.1 Is the machine must be fitted with a telescopic boom.	
7.2 What is the minimum lifting capacity (kg):	
7.3 What is the minimum lifting height: (m)	
7.4 Is the boom fitted with a load moment indicator (LMI) or equivalent safety system.	
7.5 What system is fitted to reduce shock loads.	
7.6 Is a load back rest of at least 1m in height fitted to stabilise the load.	
8. STEERING AND AXLES	
8.1 Does the machine have a four-wheel drive system	
8.2 Multiple steering modes must be provided:	
8.3 Front-wheel steering	
8.4 Four-wheel steering	
8.5 Crab steering	
8.6 Axles must be heavy-duty planetary type, suitable for off-road operation.	
9. SAFETY	
9.1 Does the lift truck comply with ISO1074?	
9.2 Does the lift truck comply with ISO3691?	
9.3 What type of parking brake is fitted?	
9.4 What type of anti-roll over device is fitted to the rear axle?	
9.5 Is a neutral start safety device fitted?	
9.6 Is a lift lock fitted to prevent the load dropping when the engine is switched off?	
10. GENERAL	
10.1 Is full power steering fitted?	
10.2 Is the lighting on the machine compliant with the Road Traffic and Road Transport Legislation?	
10.3 Is a rotating orange light fitted?	
10.4 What tools are supplied with the forklift?	
10.5 Are electronic components waterproofed so that the forklift can be washed by high pressure cleaner?	
10.6 Are full particulars and illustrations furnished?	
10.7 What services are included in the tender price?	
10.8 What colour is the machine painted?	
10.9 What is the warranty on the machine?	