

SPECIFICATION FOR 220 - 250 TE MOBILE CRANE

S.N	Description	Specification for indent
I. A. General Specification		
1	Type	All Terrain crane
2	Capacity	220 to 250 MT
3	Boom Type	Telescopic
4	Boom Length (On fully extended condition) without JIB	Not less than 60 meters
5	Standards to be followed for manufacturing and testing etc	EN 13000 (latest) or ISO 4301 (latest) or Equivalent
B. Rated Capacity		
1	Maximum Capacity (On outriggers)	Vendor to specify
2	Radius at which Maximum Capacity	Vendor to specify
3	Minimum Capacity (On Outriggers)	Vendor to specify
4	Radius at which Minimum Capacity	Vendor to specify
5	Maximum Capacity with Fly Jib (On Outriggers)	Vendor to specify
6	Radius at which the maximum capacity (with fly Jib)	Vendor to specify
7	Maximum Capacity on Tyres	Vendor to specify
8	Minimum Capacity with Fly Jib	Vendor to specify
9	Radius at which the Minimum capacity (with fly Jib)	Vendor to specify
C. Engine		
1	No of Engine (Single for both carrier and superstructure or Two separate engine for carrier and super structure) incase two engine vendor has to submit the following detail for both the engines	Vendor to specify
2	Make	Should be of reputed make like Cummins, Caterpillar, Mercedes Benz, Volvo etc.
3	Engine model and type	Vendor to specify
4	Fuel	Diesel
5	No of Cylinders	Vendor to specify
6	Emission standards	Conforming to BS IV or latest or equivalent standard
7	Engine cooling media	Water/coolant cooled
8	Power	Vendor to specify
D. Electrical System (In case of two engines electrical system should be provided separately for both the engines)		
1	Voltage	Not more than 24 V
2	No of Batteries	Vendor to specify
3	Capacity of the battery(s)	Vendor to specify
4	Engine driven alternator for battery charging	Required
II. Crane Carrier		
A. Chassis		
1	Type of Chassis	The chassis shall be but not limited to all welded torsion resistant box type construction
2	No of Axles	Not less than Five
3	No of Axles to be driven	Minimum Three axles (Vendor shall specify the Nos of driven axles)
4	No of axles having steering provision	All axles shall be steered
B. Transmission		
1	Drive	Minimum 10x6x10 (for five axle carrier) If axles are more than Five, the drive combination should not be less than 10x6x10 arrangement
3	Transmission Type	Vendor to Specify
4	Number of Forward Speeds	Vendor to Specify
5	No of Reverse Speeds	Vendor to Specify
7	Maximum Speed	Vendor to Specify
8	Clutch	Vendor to Specify
C. Traveling speed and Gradeability		
1	Maximum Gradeability Angle	Should not be less than 45 degrees
3	Minimum Speed	Vendor to Specify
4	Maximum Speed	Vendor to Specify

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D.	Steering	
1	Type	Vendor to specify
2	Make of the transmission	Vendor to specify
3	No of Steering Modes	Vendor to specify
E.	Brake	
1	Type of Brake on wheels	Vendor to Specify
2	Type of Parking Brake	Vendor to Specify

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F.	Suspension	
1	Suspension of All axles	All axle shall have minimum Hydro-pneumatic type suspension such that all wheels remain on ground in all ground conditions, with locking system
G.	Outriggers	
1	No of outriggers	Minimum Four
2	Outrigger pads	Detachable type
3	Minimum Requirement	Hydraulically telescopable into horizontal and vertical direction
4	Operation of Outrigger	Independent horizontal and vertical movement control on each side of the carrier and from the operator cabin
5	Levelling	Automatic levelling with electronic display
H.	Lighting and other electricals	
1	Front light	Two front lights required with low beam and high beam facility
2	Rear Light	Two rear lights required
3	Side indicator	Side indicators are required on the front, rear side as well as on the sides of the crane at different distance
4	Rotating beacon	Two rotating beacons required
5	Working light on the outriggers	Two Working lights on the left side outriggers
6		Two Working lights on the right side outriggers
7	Reverse light	Required
8	Alarm on reversing the crane	Audible alarm on reversing the cranes required
I.	Cabin	
1	Cabin Type	All weather type
2	Display	Full Graphic display with LED/LCD screen
3	Operator seat	Ergonomically designed Seat
4	Steering wheel	Ergonomically designed multifunction steering wheel
5	Front Glass	Atlest made up of Tinted Safety Glass
6	Pull-Down Sun visor and Light Curtains	Required
7	Rear view mirrors	on Both side of the crane
8	Cabin Fan	Required
9	Socket for extra lighting with 12V/24 V supply	Vendor to specify
10	Extra working light with cable suitable to the above	Vendor to specify
11	Complete Instrumentation and driving controls	Required and should be Easily accessible to the operator
12	Indications/Instrumentations available in the cabin/dashboard	Vendor to specify
III.	Super Structure	
H.	Boom	
1	Telescopic Boom (in all extended condition, without JIB)	Not less than 60 metres
2	Base boom length	Vendor to Specify
3	No of Telescopic sections	Vendor to Specify
4	Boom Type	Telescopic, Full power, sequence synchronized, single lever control, sliding on adjustable & Replaceable low friction wear pads
I.	JIB	
1	Type	Folding Swing Away Type
2	Operation	Hydraulically adjustable type
3	Numbers of Adjustment angles and values in degrees	Vendor to specify
4	Length of the JIB	Vendor to specify

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J.	Slewing	
1	Slewing angle	360 degrees
2	Slewing Brake	Required, Vendor to specify the type
3	Slewing Lock	Required, Vendor to specify the type
L.	Luffing	
1	Type of cylinders	Double acting, Hydraulically operated
2	No of Luffing cylinders	Vendor to specify
3	Minimum Luffing angle	Not more than minus (-) 1 degrees
	Maximum Luffing angle	Not less than 78 degrees
M.	Safety system	
1	Load indicator	Required
2	Hoist limit switches	Required
3	Pressure safety valves in the Hydraulic system	Required
N.	Cabin	
1	Cabin Type	All weather type
2	Operator seat	Ergonomically designed Seat to accessible to display unit, switches, control levers
3	Furnishing	Comfort furnishing
4	Controls	Through switch, touch buttons and joystick
5	Display	Full Graphic display with large LED/LCD screen
6	Working light	Adjustable type working light for focusing boom/hook block
7	Cabin Fan	Required
8	Fire extinguisher	Required
	Minimum Displays required (But not limited to the following)	
9	Safe load	Required
10	Actual load	Required
11	Boom Length	Required
12	Luffing Angle	Required
13	Radius	Required
O.	Alarm/indication required	
1	Over loading	Required
2	Over hoisting	Required
P.	Counter weight	
1	Fixed counter weight (fitted with crane)	Required, Party to specify the weight
2	Detachable type counter weight	Required, Party to specify the weight, No of pieces
3	Attaching / Detaching counter weight	Through Hydraulically from cabin, as well as provision for manual attachment/detachment

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Q.	Hoist system	
1	Type	Hydraulic
2	Winch Capacity	Vendor to specify
3	Drum Type	Grooved
4	Wire Rope Type	Vendor to specify
5	Wire Rope Diameter	Vendor to specify
6	Line Speed (Unladen)	Vendor to specify
S.	Main Hook Block	
1	Capacity	SWL Equal to the capacity of the crane
2	No of Sheaves	Vendor to specify
3	Type of Sheaves	Vendor to specify
4	Maximum No of Falls	Vendor to specify
5	Type of Hook	Rams-Horn Type
T.	Additional Hook Blocks	
6	Hook Block with sheaves with SWL to 50 % of the SWL of the crane	Required
	No of Sheaves	Vendor to specify
	Type of Sheaves	Vendor to specify
	Maximum No of Falls	Vendor to specify
	Type of Hook	Swivel type
7	Hook Block with sheaves with SWL to 25 % of the SWL of the crane	Required
	No of Sheaves	Vendor to specify
	Type of Sheaves	Vendor to specify
	Maximum No of Falls	Vendor to specify
	Type of Hook	Swivel type
8	Hook without sheaves (for single fall)	Required, Swivel type
U.	Overall Dimensions	
1	Length	Vendor to Specify
2	Width	Vendor to Specify
3	Height	Vendor to Specify
4	Weight	Vendor to Specify
5	Minimum Ground Clearance	Vendor to Specify