

SPECIFICATION FOR TRACTOR

Specification No. Mech/M&P/3100/GM/21

1.0 IMPORTANT INSTRUCTIONS TO TENDERERS FOR FILLING TECHNICAL BID

- 1.1 Bidders are required to give clause wise comments on the technical specifications, confirming compliance/non-compliance with details of deviations if any along with their effect on the performance. Back references to be avoided, offers are likely to be ignored in case of non-compliance of these instructions for furnishing the information.
- 1.2 Unless otherwise stated, latest alterations/ revisions of specifications/ standards/ drawings shall be applicable. In respect of safety standards and environmental standards relevant to the machine, the machine manufacturers shall ensure compliance with international (CE/ISO/DIN/JIS)/National standards (IS) (where applicable).
- 1.3 Tenderers should offer and quote for all the specified concomitant accessories, as these are considered essential for commissioning and utilization of the machine. Even if bidder does not recommend the purchase any of these accessories, the price must be quoted for comparison purposes and their recommendation/suggestion indicated in the offer. Tenderers should also quote for optional accessories, spares and consumable spares as asked in the specifications.
- 1.4 In case, any item is required in sets, please specify nos./pieces per set. This is essential for proper technical evaluation of the offer. Offers received without this may be considered as incomplete and liable to be rejected.
- 1.5 The bidder should quote only for the specified make of sub-assemblies and equipment wherever specified. Makes of sub-systems other than the specified ones will normally not be acceptable. In case, some other make is quoted, specific reasons for the same including its features/advantages over specified makes must be brought out in the offer.
- 1.6 In case there is a contradiction in any information provided (some parametric values given in the specification and those given in the brochure or some other document enclosed by the tenderer), unless specifically mentioned in the deviation cum confirmation statement the values as given in the specification shall be taken as confirmed by the tenderer and offer evaluated accordingly.
- 1.7 The Purchaser may accept internationally accepted alternative specifications which ensure equal or higher quality than the specifications mentioned in the Technical Specification. However, the decision of the Purchaser in this regard shall be final.
- 1.8 Purchaser reserves the right to verify the details submitted by the bidder by actual site visits.

Prepared By	Checked By	Approved By

2.0 DESCRIPTION:

Tractor

3.0 SCOPE OF SUPPLY

The scope of this specification covers supply, commissioning and proving out of Tractor at Rail Coach Factory, Kapurthala as per schedule-I

4.0 CAPABILITIES

The Tractor should be capable of :

- a Transporting the loads efficiently over rough surfaces with excellent torque.
- b High order of maneuverability in order to operate in narrow aisles and to negotiate sharp turns.
- c Efficient working in hot, humid and dusty atmosphere of Railway Workshops. Temperature variation may be from 0°C to 50°C and relative humidity may be upto 98%.
- d Heavy duty working round the clock.

5.0 STANDARDS

Tractor should be confirming to Road Motor Vehicle Act. Firm shall submit all the necessary documents required for registration from RTA.

6.0 DESIGN FEATURES

- 6.1 **Size and Maneuverability:** The tractor should be of compact design so as to be capable of operating in narrow aisles and negotiating sharp turns. The tractor should also be of rugged and sturdy design, capable of working round the clock in railway workshops and township areas.
- 6.2 **Chassis:** The chassis frame should be of robust construction made of rolled steel sections and heavy steel plates adequately braced and gusseted.
- 6.3 **Steering and gear box:** A modern power steering system shall be provided for easy maneuverability. Tractor should be provided with fully synchromesh gear box of reputed make and best quality with at least eight forward and two reverse speeds and heavy duty clutch. The speed reduction from the engine to the rear driving wheel should be through a reliable system.
- 6.4 **Brakes:** Self adjusting, Hydraulically actuated, oil immersed brakes shall be provided for each rear wheel. There shall be provision for mechanical hand brakes as well.
- 6.5 **Seat:** Cushioned adjustable seat for the driver with back rest should be provided for maximum comfort to the driver.

Prepared By	Checked By	Approved By

- 6.6 **Controls:** All controls should be designed to give maximum accessibility to the driver taking into consideration the comfort of the driver.
- 6.7 **Engine:** The highly efficient engine of reputed make with maximum torque and horse power should be provided to facilitate hauling of specified loads at specified speeds. Tractor should be capable of Auto Starting the alternator and starter should be of Lucas or Bosch make only.

7.0 LEADING PARAMETERS

The Tractor should be designed according to the leading dimensions should be given in Schedule-I.

8.0 DEVIATION:

Any deviation from the above stipulations shall be brought out clearly giving advantages of the proposed deviation and approval shall be taken from Dy.Chief Plant Engineer-III/RCF before supply of material to RCF.

9.0 MAINTAINABILITY

The design of equipment will ensure that all important equipments like engine, gear box and transmission system are so positioned as to ensure easy accessibility for normal maintenance and removal for repairs etc. Grease nipples/oil cups should be provided to ensure positive lubrication at required locations.

10.0 SPARE PARTS

- 10.1 The tenderer should quote separately item-wise for spare parts (with rates) along with catalogues, recommended for two years of normal maintenance. The list should also include battery.
- 10.2 List of recommended consumables, oil & lubricant for two years shall be quoted separately.
- 10.3 List of recommended spares for normal maintenance after expiry of warranty period to till useful life of the equipment.
- 10.4 Life estimated/expected for each equipment and its sub assembly.
- 10.5 Two years maintenance spares / consumables are also required along with spares.
- 10.6 List of source of suppliers for OEM spares/Assemblies e.g self starter, electrical & electronic items etc.

11.0 ACCESSORIES

- 11.1 List of standard accessories which will be supplied free of cost with Tractor should be furnished.
- 11.2 List of optional accessories which may be useful to improve the working /efficiency of Tractor duly indicating price of each should be furnished.

Prepared By	Checked By	Approved By

12.0 TECHNICAL LITERATURE

The bidders should provide a list of literature to be supplied along with the machine in the tender offer. The successful tenderer will also have to furnish, for each machine 4 copies of spare parts catalogue giving the part list number of each component and assembly drawings of major assemblies, maintenance manual, trouble shooting guide, operation manual and all electrical circuit diagrams of the Tractor to the consignee. The technical literature shall be provided in English/Hindi language.

13.0 COMMISSIONING AND PROVING OUT

The tenderer shall arrange the commissioning and testing of the equipment at site Rail Coach Factory, Kapurthala (Punjab), and after successful commissioning, will demonstrate the performance of the equipment, to the staff of Rail Coach Factory at consignee's premises.

The tenderer will be required to commission the equipment within one week from date of supply to the material at destination.

14.0 WARRANTY:

As per IRS terms and conditions of the contract

Prepared By	Checked By	Approved By

SCHEDULE-I

Spec.No. Mech/M&P/3100/GM/21

S.no	Leading Parameter	Details
1.	Engine Power	55-70 HP
2.	No. of Cylinders	3 or 4
3.	No. of Strokes	04
4.	Engine Speed	1800 RPM to 2500 RPM
5.	Cooling System	Water/Coolant Cooled
6.	Fuel Air Mixture	Naturally Aspirated/ Turbo Charged
7.	Gear Box	Synchromesh having 8 forward and 2 rear speeds (min)
8.	Braking System	Self-adjusting, Hydraulically actuated, oil immersed brakes.
9.	Parking Brakes	Hand operated
10.	Lift	Lifting capacity 1800 kg approx. or better, 3 point linkage, Automatic depth and draft control.
11.	Canopy	Heavy duty steel canopy.
12.	PTO System	Independent six splines @ 540 RPM
13.	Steering	Power Steering
14.	Should meet all statutory requirements for Tractor as applicable for its Class/Power.	

Note: Tenderer to furnish following detail of the make/model of Tractor offered

S.no.	Technical Parameter	Offered by Tenderer

Prepared By	Checked By	Approved By