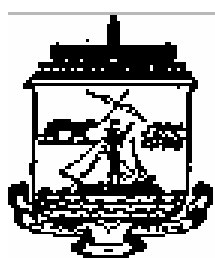


**M.E.D.C.No.M1/1497/ 10**

**CORPORATION OF CHENNAI**

**Mechanical Engineering Department**



**CONTRACT FOR THE SUPPLY OF 32 NOS. OF COMPACTORS OF  
14 CU.M CAPACITY, MOUNTED ON HMV CHASSIS WITH  
OPERATION & MAINTENANCE FOR 2 YEARS.**

**TECHNICAL BID**

**SUPERINTENDING ENGINEER (M)**

**Cost of forms: Rs.16,875/-**

**CORPORATION OF CHENNAI**

**RIPON BUILDINGS, CHENNAI – 600 003.**

**TENDER NOTICE**

Superintending Engineer (Mechanical), Corporation of Chennai invites sealed tenders in 'two cover system' (Techno commercial & Financial bids) from the reputed manufacturers of firms dealing in the line for the following work:-

S. No	Description of the Tender	Qty	EMD to be paid	Due date	Last date for issue of blank tender	Contract period
1.	Supply of 32 Nos. of Compactors of 14 Cu.M capacity, mounted on HVM Chassis as per specifications with Operation & Maintenance for 2 years.	32 nos	Rs.8.64 Lakhs (By way of Demand Draft or Bank Guarantee favouring Commissioner, Corporation of Chennai.	14/05/10	12/05/10	2 years

The tender documents can be purchased at the cost of Rs.16,875/- (including taxes), in the form of DD for each tender from the Office of Superintending Engineer (Mech), Ripon Buildings, Chennai 600 003 on any working day between 10.00 am to 3.00 p.m on all working days or can be downloaded from website <http://tenders.tn.gov.in>. The tender shall be submitted on or before 3.00 p.m on 14/05/2010.

Interested tenderers may obtain further informations from the office of Superintending Engineer (Mech) at the address given above.

The tenders shall be submitted in sealed covers up to 3.00 p.m. The covers "A" of the tenders will be opened on 14/05/2010 after 3.00 p.m, at the office of Superintending Engineer (Mech), Ripon Buildings. Opening of the price bid will be intimated separately.

Sd.

Superintending Engineer (M)  
Mechanical Engineering Department.

### **Scope of supply**

Under this contract, the successful tenderer has to supply,

- A. Suitable HVM Chassis with Engines with emission norms currently in vogue.
- B. Driver-cum-attendant cabin as per specifications.
- C. Supply & fitment of compactor equipment & body as per specifications.
- D. Operating & Maintaining the equipment on Annual Comprehensive basis.

### **ELIGIBILITY**

1. The tenderer or their principal / collaborator shall be in the line of the manufacturer of the compactors or such type of equipment for more than 5 years.
2. The tenderer or their principal / collaborator shall have manufactured and sold at least 50 such similar Mobile Compactors units (hopper type) in the last 5 years.
3. The tenderer shall have a capacity to manufacture at least 25 compactors in one stretch.
4. At least 25 Nos. of Hopper type compactors manufactured by the tenderer or their principal / collaborator shall be in operation as on 01.04.2010. The Performance Certificate to that effect (for 25 nos.) from the clients shall be attached along with the tender.
5. The tenderer shall have achieved total turnover of not less than Rs.9 Crores atleast twice during last 5 years. The certificate to that effect duly certified by Chartered Accountant shall be attached.
6. The tenderer shall produce the Solvency certificate of Rs.900 Lakhs from a reputed Nationalised bank. Bank guarantee can be accepted.
7. The tenderer or their local representative shall have their own workshops to accommodate at least 3 large vehicles at a time in and around Chennai or enter into MOU with local workshop within 30 days from the date of issue of order.
8. Should submit the list of major components and assemblies which will be indigenously manufactured and the list of major components and assemblies which will be imported.
9. Vehicle manufacturers can also take part in the tender if they fulfill the following requirements, apart from the other mandatory condition and eligibility requirements as per the document.
  - a) They should enter into MOU with any compactor Manufacturer Company.
  - b) The Compactor Manufacturer in turn should meet eligibility Criterion mentioned in Technical Bid.

Signature of Tenderer

- c) Eligibility criterion Nos.6,7 & 8 of technical bid can however be met jointly by vehicle manufacturer and the compactor manufacturer.
- d) The MOU entered upon between the vehicle manufacturer and the Compactor manufacturer should meet all the Criteria prescribed in the Annexure – I of technical bid.

Necessary documentary evidences shall be attached as proof for each of the above.

### **MANDATORY CONDITIONS**

The tender will be rejected if the tenderer

- a) Stipulates the validity period less than what is stated in the form of tender
- b) Does not disclose the full names and addresses of all his partners in the case of all partnership concern.
- c) Does not fill in and sign the Tender Form, Specification of the articles and works as well as Bill of Quantities and Rates completely.
- d) Does not submit the Tender in sealed envelope.
- e) Does not submit the Original Tender Form duly signed and stamped.
- f) Submit the tender without latest solvency certificate for Rs.900 Lakhs.
- g) Submit the tender without stating the rates in words and / or in figures and / or both.
- h) Does not submit the annexures duly signed and stamped.
- i) Does not submit a valid original “Notarized” Agreement between them and the principal/collaborators giving back up guarantee for design, manufacture and supervision of compactor units as required under technical supervision.
- j) Does not submit an original letter from the principal/collaborator stating that locally manufactured compactors in India will be fabricated under the technical guidance and direct supervision of principal/collaborator and will be certified by them.
- k) The tenderer should submit certified copies of PAN documents and certified copies of his/their photographs failing which ‘The tenderer shall be rejected outright’.**

Signature of Tenderer.

If the tenderer does not submit certified copies of PAN documents and photographs of the individuals, owners, Karta of the Hindu undivided family, partners of the partnership firms and director/Directors in case of private Limited/ Public Limited companies or the authorised representatives of the registered co-operative Societies /Semi Government Undertakings as the case may be (The documents can be certified by the Gazetted Officer or Notarised by the Notary, appointed by the Government of Tamilnadu.)

- l) Submit the tender without Manufacturer Documentary Evidence of supplying 50 Mobile Compactor units in India in the last 5 years.
- m) Does not submit details of local agent, his workshop, skilled workers, and supervisory staff working with him.
- n) Does not submit Manufacturer's original undertaking towards guarantee for spares and services for 10 years in Chennai.
- o) Does not quote for all the items stated in the schedule of quantities.
- p) Does not submit the certificate from the concerned authorities regarding 25 Compactors in operation as on 01.04.2010.
- q) Does not submit the certificate from Chartered Accountants for having achieved overall turnover of Rs.9 Crores atleast twice during last 5 years.

Signature of tenderer.

**NAME OF THE TENDERER M/S.....**

**ADDRESS.....**

**TENDER FOR THE SUPPLY OF 32 NUMBERS OF COMPACTORS OF 14 CU.M CAPACITY MOUNTED ON HMV CHASSIS WITH O & M FOR 2 YEARS**

**SPECIFIC INSTRUCTIONS TO TENDERERS**

The Corporation of Chennai invites sealed tenders for the **supply of 32 numbers of compactors of 14 cu.m capacity mounted on HMV Chassis with O & M for 2 years** to be mounted on Chassis as per the terms and conditions and specifications given below;

1. The tenders are invited in two cover system i.e., cover "A" containing Technical and cover "B" containing only Financial Bid. Both these covers will be sealed individually and they will be put in to an outer envelope which will also be sealed. The cover "A" will be opened on due dates as specified in the Tender Notice. The cover "B" will be opened only after receipt of clarification if any from the tenderers. The due date of opening of cover "B" will be communicated to the prospective tenderers three days in advance.

**The Covers "A" & "B" shall be clearly marked as Cover "A" & Cover "B" . If the tenderers fail to mark these Covers then their tenders will not be opened.**

The tenderers will have to submit their tender before due date in the Tender Sales Counter, Chief Engineer's Office , PRO's Office and Vigilance Officer office , Ripon Buildings, Chennai – 600 003. The tenderers shall produce the copy of the receipt confirming the payment of tender deposit and obtain the acknowledgement from the concerned staff in token of submission of the tender, if purchased from Tender Sales Counter, Ripon Buildings.

The tenderer are expected to fill their tender carefully and scrutinize them before delivering them to the Corporation authorities stated above. No variation on any ground such as mistake is misunderstanding will be allowed after the tender is opened, recommended or accepted.

The rates and amount must be quoted in figures as well as in words

Signature of tenderer

**2. Cover “A” shall contain the “Certified Copies” of the following documents.**

- a) EMD in the form of Demand Draft or Bank Guarantee from any nationalized Bank in favour of Commissioner, Corporation of Chennai shall be placed inside Cover “A” only. If on opening cover “A” is not found, then the tender shall be rejected.
- b) Registration Certificate of the Company
- c) Sales Tax Registration certificate from Tamilnadu.
- d) Latest Bank Solvency Certificate for Rs.900 Lakhs
- e) Latest registered partnership deed, in case of partnership firm.
- f) Original tender document duly signed in all pages.
- g) Details of the manufacturer’s country of origin,
- h) Manufacturer’s or authorised dealers’ documentary evidence for establishing the supply of minimum 50 Mobile compactors units during last 5 years.
- i) The documentary evidence certified by Chartered Accountant showing that the tenderer has got total turn over of not less than Rs.9 Crores twice during last 5 years.
- j) The documentary evidence showing that the tenderer has got workshop or MOU with local workshop to accommodate 3 large vehicles at a time.
- k) The documentary evidence from the manufacturer of compactor equipment giving back up service to the tenderer if the tender is fulfilled by the collaborator to manufacturer.
- l) A copy of the MOU to be attached that the tenderer has entered into any 3<sup>rd</sup> party for executing including undertaking to supply his spares.
- m) Copy of PAN card with photo duly notarised
- n) The original “Notorised” agreement between the manufacturer or their principal/collaborator duly signed by both the firms confirming the collaboration for design, manufacture and supervision of compactor units as required under technical specifications.
- o) The original letter from the tenderer or their principal/collaborator giving information that the compactors will be produced under their technical guidance and direct supervision, if fabricated totally.
- p) An undertaking from the manufacture to supply all the spares required for the equipments for next 10 years.
- q) All the literature in support of the product

Signature of Tenderer.

3. **Cover “B” shall contain the schedule of rates and quantities duly filled**

1. The price of the goods, quoted shall be ex South Chennai Lorry Depot, 30, Adhithanar Salai, Chennai 600 002.
2. The rates of taxes, duties & custom duties applicable on the day of opening shall be clearly shown in the offer.
3. Prices quoted shall be fixed for both Chassis and Compactor.
4. Charges for transportation, insurance and other incidental expenses for delivery of the equipment shall be included in the cost.
5. The prices, cost stated in the tender shall be in Indian Currency only.
6. Prices quoted by the tenderer shall be fixed except for statutory levies (In case of Chassis only). The tenderers shall have to attach a certificate from vehicle manufacturer certifying that the rates stated for Chassis are special Government prices and applicable to Government departments or D.G.S & D rates where available. In case of any increase in special Government Prices of chassis the tender will have to get certified from the vehicle manufacturers. During the contract no other price variations will be allowed under any circumstances. Tender submitted with variable price, tender will be treated as non-responsive and will be rejected out rightly.
7. Documents establishing Tenderer’s eligibility and qualifications:

**The documentary evidence of the Tenderer’s qualifications to perform the contract if its tender is accepted. Shall establish to the departments satisfactions before the opening of cover “B”.**

- a) That in the case of a Tenderer offering to supply goods under the contract which the Tenderer does not manufacture or otherwise produce, the tenderer has been duly authorised by the good’s manufacturer to produce and supply the goods.
- b) That the tenderer has the financial, technical and production capability necessary to perform the contract.
- c) That, in the case of a tenderer not doing business with the purchaser’s country, the tenderer is or will be (if successful) represented by an agent in that country equipped and able to carry out the supply and supplier’s maintenance, repair and spare parts stocking obligations prescribed by the conditions of the contract and / or Technical Specifications.

Signature of Tenderer.

- d) The tenderer shall have own workshop facility or MOU with a workshop in Chennai for having such facilities for maintenance of at least three unit in a time. Such workshops facility shall be available in and around Chennai. It is desired that the workshop shall have all facilities including maintenance of hydraulic system used in the unit. In case of MOU the same shall be for minimum period of 2 years. The copy of the same shall be attached along with the tender in Cover 'A'
8. The tenderer shall quote only for the brand stated in the tender. In case of imported components, the makes shall be approved by principals and international originations with due certificate. The tender will be rejected if any other brands are quoted.
9. The tender deposit shall be submitted in the form of Demand draft/Bank Guarantee from Government Banks only payable to the Commissioner, Corporation of Chennai.
- 4 The Tender Security may be forfeited :**
- a. If a Tenderer withdraws the tender during the period of validity specified by the Tenderer on the Tender form; or
- b. In case of a successful Tenderer, if the Tender fails ;
- I. To sign the contract in accordance or
- II. To furnish performance security in accordance with relevant clause.
5. The tender shall remain valid for 90 days after the date of Tender opening prescribed by the Department. The tenders valid for less period will be out rightly rejected.
6. All pages of the Tender shall be initiated by the person or persons signing the Tender.
7. The tender shall contain no inter lineation. Erasures or over writing expect as necessary to correct errors made by the persons or persons signing Tender. Any correction in the tender document shall be endorsed by the tenderer with the signature.
8. Tenders must be received by the departments at the address specified above not later that 3.00 pm of 14/05/2010.

Signature of Tenderer.

**Please note that tenders will not be accepted after the hour and date fixed for opening of tenders.**

9. Any tender received by the Departments after the deadline for submission of the Tenders prescribed by the Department shall be outright rejected.
10. The department will open "A" cover of the tender, in the presence of Tenderers representative who chooses to attend, after 3.00 pm on the same day at the following location;  
Office of Superintending Engineer (Mech)  
Corporation of Chennai  
Ripon Buildings, Chennai – 600 003
11. If the date of opening of the tender happens to be a holiday then the tender shall be opened on the next working day.
12. The tenderers representatives who are present shall have to sign a statement in respect of witnessing of tender opening.
13. The tenderers names, Tender prices, modifications, Tender withdrawals and the presence or absence of the requisite Tender security and such other details as the department, at its discretion, may consider appropriate will be announced at the opening.
14. The tenderers should quote separately for O & M, failure to do so the tender shall be rejected.
15. The department reserves the rights at the time of award of Contract to increase or decrease by up to 25% the quantity of goods specified in the Schedule of Requirements without any change in the price or other terms and conditions.
16. The Commissioner, Corporation of Chennai reserves the right to accept or reject any or all the tenders at any time prior to award of contract without assigning any reasons.

Signature of Tenderer.

17. **Performance Security**

- Within 30 days of the receipt of notification of award from the department, the successful tenderer shall furnish the contract deposit in accordance with the conditions of the contract in the contract deposit form provided in the tendering documents or another form acceptable to the department. The contract deposit of 2% will be calculated on the total contract cost including Chassis, Compactor equipment and O & M cost for 2 years and also sign an agreement for faithful performance. The Security Deposit or Contract deposit can be in the form of Small savings Scripts or Bank Guarantee.
18. The tender must be accompanied by PAN certificate duly notarised.
19. The tender shall be faultless in figures and entirely free from erasures. Any tender containing corrections, alterations, overwriting, erasures, or mistakes, in figures shall be rejected if not countersigned.
18. The tenderer in their offer shall clearly mention whether the compactor will be manufactured indigenously fully or partly. In case the same is to be manufactured partly, the list of components and assemblies to be indigenously made and those imported shall be clearly stated in the Annexure "H". The equipment should be indigenously manufactured/assembled.
19. The tenderers shall submit layout dimensional drawings, literature, brand name, ISO Certification number (if available) along with the tender.
20. The increase in statutory taxes or any other Govt. Levies will be accepted only against production of documentary proofs.
21. The tenderer shall note that any claim, dispute or difference arisen in respect of the contract the cause of action there shall deem to have arising in Chennai and all legal proceedings in respect of any such claim, dispute or difference shall be instituted in the competent Court in Chennai city.

Signature of tenderer.

**22. Evaluation**

The tender shall be evaluated on the total cost of the following:-

As in the Annexure "G" of Cover 'B' in the price bid. While evaluating the total cost, the taxes, and custom duties applicable on the day of quotations shall be taken into consideration. Subsequently deductions or additions of the taxes will not affect the ranking of the tenders

The Tender shall be evaluated on the price quoted for supply of chassis, Fabrication & Erection of Driver's cabin on the chassis, mounting of compactor body, Operation & Maintenance cost { (A) + (B) + (C) + (D) + (E)}.

23. The tender deposit will be refunded, if the tender is not accepted by the competent authority. In case of successful tenderer, the deposit will be retained as security till execution of the written contract.
24. The prices quoted shall be firm and no variation will be allowed on any account.
- 25. The tenderer shall quote only for one make and model of chassis as well as compactor unit. If not, the tender will be summarily rejected.**
- 26. Only standard model of compactor units with chassis from reputed manufacturers should be quoted and tenderers should attach 3 copies of drawings with brochures/printed literature of model quoted.**
27. The increase in statutory taxes or any other Govt. levies will be accepted only against production of documentary evidences.
28. In the event of tender being accepted, full amounts of contract must be signed by all the partners of the firms and shall one or more partners if not available for this purpose, signatory must produce a power of attorney authorising him to sign on behalf all absent partners. All such power of attorney must be registered in the office of Chief Accountant and the Chief Engineer (General) shall be informed accordingly.
29. The Commissioner, Corporation of Chennai, does not bind himself to accept the lowest or any tender, and reserved the right to select one or more items of the tender and the tenderer will be required to supply any items of items so selected at the rate or rates tendered.

Signature of Tenderer

30. The tender shall be quoted only for one make of equipment, i.e., the tenderer should not collaborate with more than one company, the tender will be rejected out rightly. However, the tenderer may submit alternative offer into with same make and collaboration with indigenous; partly imported, fully imported components and assemblies. Separate schedule of quantity and rates should be used for each alternatives,. However, the responsibility for supply of quality product duly tested and certified rests with principal manufacturer.
30. The work of fabrication of the compactor if done locally shall be carried out under the direct supervision of the principals / collaborators. A letter to that effect in original from the principal /collaborator shall be attached with the tender or else the tender will be rejected.
31. If the successful tenderer brings the components in CKD form from the principal/collaborator, the tenderer should assemble these components strictly under the supervision of principal /collaborator in assembled condition and mount the same on the chassis in their workshop. A certificate to that effect will have to be produced from the principal / collaborator at the time of submission of the tender. The list of components which will be obtained from the principals and those manufactured locally shall be clearly stated in the tender.
- Only popular models of leading chassis manufacturer should be quoted. The chassis manufacturer should issue a certificate to the performance of the model quoted.
32. The tenderer should clarify the type of body to be mounted with its drawing to the chassis manufacturer so that the chassis manufacturer can offer suitable chassis for the said design. The tenderer shall be fully responsible for procurement of suitable chassis from the manufacturer and in no way any kind of relaxation, will be given if there is any problem with the chassis received. The tenderer should see that the design should be such that it can be mounted on the standard manufacturer by the Chassis manufacturer. The tailor made chassis for the purpose will not be accepted.
33. The tenderers shall submit dimensional drawings, literature, brand name, ISO certification no. (If available) along with the tender. The successful tenderer will be required to submit detailed technical and dimensional drawings with material specifications and weight calculations within 15 days from the receipt of order or acceptance letter. However, the

Signature of Tenderer.

submission of such drawing and approval thereof will not absolve the successful tenderer from his responsible of complying of the contractor. Delay in submission of drawing or its approval will not be considered for extension of delivery period.

34. Tenders containing contradictory onerous and vague stipulations and hanging conditions such as “Subject to prior sale” “Offer subject to availability of Stock” “Offer subject to confirmation at the time of order” “Rates subject to Market Fluctuation” etc., are liable to be rejected out rightly.
35. The tenderer shall quote for complete job. The tender which does not include the complete job as specified in schedule of quantities will be rejected.
36. The Corporation of Chennai will not provide any import License or any other such type of licenses for the supply of compactors and the bins.

**GENERAL:**

**1. R.T.O. Requirements**

The tenderer has to take necessary care of insurance, registration etc., of the vehicle till the final handing over. The tenderer has to observe RTO restrictions regarding height, width and overhang of equipment and the tenderer shall make his own arrangement to get the vehicle registered from RTO Chennai as per latest emission norms. All necessary fees like registration fee, FC Fees, Insurance premium etc., will be refunded on production of necessary challan. The vehicle with the compactor has to be registered at Chennai RTOs.

**2. Guarantee**

The complete equipment including rubber parts, seals, hoses, cylinders and other hydraulic equipments shall be guaranteed for 12 months from the date of commissioning of equipment. The tenders will have to give the maintenance guarantee. Any damages defects are observed during this guarantee period, the same shall be made good by the tenderer at his own cost. The same conditions as above hold good for chassis as well.

**3. Technical Detail**

The following details of the Compactor equipment shall be supplied by the tenderer along with the tender cover “A”

- a) The General description of the equipment
- b) The drawing of the equipment

Signature of Tenderer.

- c) The continuous working capacity.
- d) The compaction ratio expected to be achieved.
- e) The details of hydraulic oil to be used. ( The Oil grade shall be that manufactured by Nationalised Oil Companies )

The tenderer will have to supply the following with the vehicles;

- a. Workshop manual for chassis - 6 nos.
- b. Spare parts catalogue for chassis - 6 nos.
- c. Workshop manual for compactor with Preventive maintenance schedule - 6 nos.
- d. Spare Parts catalogue for Compactor - 6 nos.
- e. Price list for all the components of the Compactor equipment. - 6 nos.

#### **4. Availability of spares**

The tenderer shall state the details of availability of spares after completion of guarantee period and name of authorised dealers etc., from where the genuine spare parts can be obtained.

#### **5. Delivery**

The shortest delivery period is the essence of this tender. The delivery period is stated in the Annexure "E". The tenderers are expected to follow the said delivery period. If the tenderers fail to complete the delivery as per the given schedule the following penalty will be levied.

#### **6. Payment**

- a) 70% of the chassis cost only will be paid to the tenderer on production of Invoice in the name of Commissioner, Corporation of Chennai.
- b) The 90% payment of "the 100% cost of the equipment less 70% of the chassis" will be made within 30 days of registration of vehicles in the name of Commissioner, Corporation of Chennai.
- c) The balance 10% payment will be released only after 60 days after confirmation that the vehicles are adhere to Technical Specifications in actual use.
- d) The payment for O & M will be made every month on submission of bills after satisfactory working of equipment, within 30 days.

## **7. Penalty**

- a) Subject to Force majeure, if the supplier fails to deliver any or all of the goods or perform the services within the time period(s) specified in the contract, the department shall deduct from the contract price a sum equivalent to 0.5% of the delayed goods or unperformed services for each day's delay up to maximum deduction of 10% of the delayed supply or services. Once the maximum is reached the department may consider termination of contract.
  
- b) In case, if any of the material is rejected because of inferior quality, the Commissioner reserves the rights to levy penalty for such inferior supply from the manufacturer / supplier at 20% of the cost of the material including replacement of parts / materials free of cost.

## **8. Inspection**

1.1 The department or its representative shall have right to inspect and/or to test the goods to confirm their conformity to the contract. The special conditions of contract and/or the Technical Specification shall specify what inspections and tests the supplier will carry out, in writing to the identity or any representatives retained for these purpose.

1.2 The inspections and test may be conducted on the premises of the supplier or manufacturer or its subcontractor(s) at point of delivery and/or at the goods final destination. Where conducted on the premises of the Supplier or manufacturer or its subcontractor(s), all reasonable facilities and assistance including access to drawings and productions data shall be furnished to the inspectors at no charge to the department. Any to & fro Travelling and stay on duty for carrying out such inspection by the purchaser's representatives shall be to the supplier's account.

1.3 Shall any inspected or tested goods fails to conform the specifications, the department may reject them and the supplier shall either replace the rejected goods or make alternations necessary to meet specifications, requirements free of cost to the department.

1.4 The department's right to inspect, test and where necessary, reject the goods arrival at the departments destination shall in no way limited or waived by any reason of the goods having previously been inspected, tested and passed by the department or its representative prior to the good's transportation from the manufacturer's workshop or godown.

Signature of Tenderer.

1.5 Nothing in above in any way release the supplier from any warranty or other obligations under this contract.

The successful tenderer will arrange for the inspection of the compactors at their works at the following stages:

1. Completion of structure
2. Completion of paneling and mounting of tailgate
3. Completion of painting
4. Final trial with actual load

1.6 All the inspection expenditure will have to be borne by the tenderer.

1.7 The successful tenderer will have to produce a certificate at the time of inspection from the steel manufacturers or reputed laboratory regarding the quality and type of steel supplied. In case of important equipments a certificate from the principals/collaborators or MOC certificate shall be produced.

1.8 The vehicle should at least have capacity to work 16 hours continuously for 2 shifts without any break.

#### **1.9 Insurance**

The goods supplied under the contract shall be fully insured in a freely convertible currency against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in the Special conditions of Contract.

Signature of Tenderer.

### **Special directions to the tenderers on Tech.specifications**

1. The work involves fabrication, erection, supply and commissioning of Garbage compactors having minimum 14Cu.M capacity mounted on Suitable Chassis to be purchased by Tenderer, as per specifications attached.
2. These specifications only show the requirement briefly each tenderer shall attach descriptive literature along with a detailed description of the machine covering all the silent features.
3. The machine shall have mechanised container loader system operated hydraulically.
4. The compactor shall be built to withstand the strength and vibration of the roads as well as those at landfill site. The tenderers are requested to see landfill site in order to ensure the conditions under which the vehicles are expected to operate.
5. All moving parts shall be provided with adequate means of lubrication by providing nipples etc.
6. All reciprocating parts shall be suitably guarded
7. The equipment shall be capable of being operated under average conditions for 8 hrs. continuously.
8. The refuse compactor will meet the requirement of Motor vehicle Act 1989 with the latest emission norms,
9. The compactors offered shall be able to give a compaction ratio of minimum 1:2.
10. The tenderer will have to give the demonstration of the compactor offered whenever called for by the department
11. The tenderer shall offer the equipments/components of the makes stated in the specifications. If any deviation is made the tender is likely to be rejected. However, imported components shall be approved by principals and international organisation with certificates.
12. Every part of the equipment including rubber hoses shall be guaranteed for a period of one year.
13. **The rates quoted for chassis shall be DGS & D rates or special rates applicable to the Government departments. The certificate regarding the same from the vehicle manufacturer or their authorised dealer shall be attached along with the offer. The rates quoted shall be ex-Chennai and no entry tax will be paid by the department.**
14. The rates applicable to the Government department at the time of delivery for the chassis will be accepted subject to production of a certificate from the manufacturer regarding the prevailing price of the said chassis.

Signature of Tenderer.

15. It will be the responsibility of the tenderer to collect the chassis from the regional sales office of the manufacturer or their authorised dealer and transport the same to their workshop. Any charges applicable for the same shall be included in the tender.
16. It will be the responsibility of the tenderer to deliver the vehicle after the completion of the fabrication of the compactor equipment to Chennai. The charges applicable for the same including Octroi/Entry tax if any shall be included in the tender.
17. The prices for the Compactor equipment shall be inclusive of all taxes & duties namely, Custom duty, Excise duty, Octroi duty, Transit insurance, incidental & other expenses, extra fitment etc., however any change in statutory levies/charges after award of work may be accepted if supported by documentary evidence.
18. The successful tenderer will be fully responsible for the safety of the chassis when in their workshop. The successful tenderer will take out the necessary insurance, for risk against fire, theft, etc., the successful tenderer will have to sign an indemnity bond on the stamp paper in this regard.
19. 70% of the chassis cost only will be paid to the tenderer on production of invoice in the name of Commissioner, Corporation of Chennai and necessary certificates to state that the prices are DGS & D or Special Government prices.
20. The delivery schedule of the vehicles shall be as shown in Annexure “E” of this Tender document.
21. **The delivery of the compactors will have to be given at the office of Assistant Executive Engineer (M)-III, South Chennai Depot, 30, Adhithanar Salai, Chennai-600 002 or at other places mentioned by Corporation of Chennai within Chennai Corporation jurisdiction.**

Signature of tenderer

## DETAILED TECHNICAL SPECIFICATIONS

The model of chassis to be quoted should be a popular model and from only leading chassis manufacturers like Tata Motor, Ashok Leyland, Eicher, Swaraj Mazda and Volvo. The vehicle manufacturer should give a certificate for the performance of the model.

### I. Vehicular Chassis

The vehicular chassis supplied shall be as per following specifications for mounting compactor equipment suitable for use with containers as per specifications attached.

Make of Chassis	:	Any suitable chassis
Type	:	Full forward only Single axle at the rear
Engine	:	6 cylinder water cooled engine developing suitable BHP. The engine shall be operated with diesel as a fuel and <b>shall meet emission norms currently in vogue</b> . A certificate to this effect shall be produced from the manufacturer.
GVW	:	15 Tonnes minimum.
Tyre sizes	:	1000 X 20 –( 6 + 1) nos.
Gear Box	:	5 Forward and 1 Reverse gear (Synchromesh)
Fuel Tank	:	Capacity of 100 litres (Approx)
Starter/Alternator	:	Lucas or equivalent make only.
Battery	:	Exide / Amco/ Amaron or equivalent only.
Wheel Base	:	Suitable to accommodate driver-cum-attendant compartment and compactor body of 14 Cu.M with out exceeding the permitted overhang as per RTO norms.
Drive	:	Right Hand drive only.
Steering	:	Power Steering only.
Brakes	:	Full Air Brakes or Air drier kit and automatic slack adjustor or Air assisted hydraulically operated brakes.

Signature of Tenderer.

#### Requirement of Spares

1. Spare Wheel Rim with spare Tyre & Tube.
2. Free Service coupons
3. Hydraulic Jack& Tool Kit.

The rates quoted for the vehicular chassis shall not be more than the DGS & D rates if available or rates available to Govt. Departments including transportation to Chennai. The letter from the manufacturer confirming the DGS & D or Special Government prices quoted shall be attached. Tenderer shall purchase the Chassis from the authorized dealer or the manufacturer. No Entry Tax will be paid by the Corporation. However, payment for chassis will be made by Corporation of Chennai on production of invoice and necessary certificates. The tenderer shall make their own arrangement to take delivery of chassis from the dealer and transport it to their workplace at no extra cost to Corporation of Chennai.

The Excise duties, Taxes, Octroi, Transportation charges, fuel, freight and insurance charges shall be clearly specified. No Octroi exemption form shall be supplied by Corporation of Chennai.

The Tenderer should quote for suitable models chassis having engine meeting emission norms currently in vogue.

### **COMPACTOR EQUIPMENT**

#### **CONSTRUCTION:**

##### **General:-**

The rear loading compactor shall be mounted on suitable model of chassis of suitable Wheel Base. The compactor shall comprise of three main parts.

- a) The body and Ejector plate
- b) The tailgate and compaction hydraulic unit at rear body.
- e) The bin lifter unit.

The packing system will comprise of two moving plates the packing plate and the sweeping plate. The packing plate will travel on cured track. At the end of this track the sweeping plate will be activated and clean the hopper. At the end of its travel the packing plate will reverse its travel thus drawing and compressing the refuse into the body. The tailgate shall be provided with a hydraulic bin lifter which shall be suitable to lift standard containers of size 120, 240, 600 and 1100 ltrs.

#### A. The Body & Ejector plate:-

The body shall be of 14 Cu.M. approx., the hopper shall be of suitable size to carry min. 1 Cu.M. of garbage. The body shall be mounted on the chassis with the help of cross member and suitable 'U' bolts. The cross member shall be of minimum size 100 x 50 x 6 mm size.

Signature of Tenderer

The paneling of the body shall be as follows:-

- 1. Material : EN 24/2052 Steel ID specifications
- 2. Sides : 3 mm Thick
- 3. Flooring : Min. 4 mm Thick
- 4. Rear cross bar : Min. 4 mm Thick

The body shall be reinforced with equitable size channel at appropriate distance so as to with stand the compression force of the garbage. The complete structure shall be fully welded to with stand the compaction. The body shall be open at the rear end.

**B. Tailgate:-**

- a) Side : 4 mm EN 36 Steel/2062 Steel IS Specification
- b) Rear Side of Hopper : 5 mm EN 36 Steel/2062 Steel IS Specification
- c) Bottom of Hopper : 5 mm High Tensile Steel
- d) Reinforced with suitable structure on member : 6 mm thick Super Structure member
- e) Sweep/Packer Blade Thickness : 2.5 mm Thick.

**C. Ejector System:-**

- a) Ejector plate : 4 mm ST 36 mm Tensile/Steel/2062 Steel IS Specification
- b) Pads : 8 nos. of bronze pads

**D. Hydraulic System:-**

- a) Hydraulic Pump : Suitable to be directly mounted on power take off or on gear box (shaft connection between PTO & Pump will not be accepted)
- b) Pressure developed : Minimum 140 Kg/sq.cm.
- c) Working Speed : 1200 rpm approx.

**E. Hydraulic cylinder:-**

- a) Maximum No. of Cylinders: 9 Nos. (7 Nos – Double acting & 2 Single Acting). If the manufacturer design incorporates more or less number of cylinders the design shall be accepted on submission of proof that the said compactor has performed satisfactorily for at least 5 years.

Signature of Tenderer

**DESCRIPTION:-**

The compactor body shall be constructed of steel as per the details given:-

1. The compactor body must be sufficiently strong and will have inside volume of minimum 14Cub.M. This shall be suitably proved during inspection both physically and by CAD drawings.
2. The equipment i.e. the compactor shall be suitable to carry pay load of minimum 9 tonnes.
3. The equipment shall be rear loading type and shall be able to unload 120,240, 600 and 1100 ltrs. Containers Universal loading comb arm arrangement to be provided.
4. Arrangement shall be provided to manually load the vehicle also. The height of hopper for manual loading shall not be more than 800 mm to 1000mm.
5. The construction of the vehicle will consist of the body, the ejector system, the tailgate and hydraulically bin loading system
6. The garbage will be loaded in the hopper either manually or by emptying the containers hydraulically with the help of lifting mechanism. The garbage from the hopper shall be swept by sweeping plate fitted at the end of packing plate and pushed inside the body and then compressed against the ejection plate.
7. The tailgate shall be equipped with heavy duty turn buckle one on each side to hold tailgate and body together.
8. Grab handles shall be located on each side of the tailgate. The tailgate shall be fixed with heavy duty pins at the top with the compactor body.
9. The tailgate shall be provided with sturdy arrangement for raising and controlling of descent.
10. The tailgate shall be provided with one piece removal rubber gasket extending across the entire bottom width of the tail gate and vertically up to 600 mm.
11. The operation of the tailgate mechanism shall include operation by two hands so that the possibilities of accidents are minimum.
12. Hose burst non return valves shall be provided to prevent the tailgate descending in the event of hydraulic failure.
13. The packer plates shall be designed as per the specifications given.
14. Lever shall be provided on the rear side of the vehicle to start packing mechanism. Arrangement shall be provided to stop the system instantaneously with the help of switches provided at the rear of the vehicle.
15. The packer blade shall be fitted with sturdy mounting to the cylinders.

Signature of the Tenderer.

16. There shall an inter lock valve fitted to prevent packing/occurring when the hopper is raised.
17. Arrangement shall be provided to control the speed of the engine automatically at the time of operation of Compacting system so that the speed is not depend on the throttle opening of the engine when the vehicle is stationery.
18. The ejector plate shall be suitably angled & so that proper ejection takes place when operated.
19. Arrangement shall be provided such that the tailgate will not come down even in case of hydraulic failure.
20. Ejector plate shall be supported as well as guided on two C-beams located on both sides of the garbage hold. Free sliding replaceable guider shoes made of high wear resistant polyamide shoes shall be used between the plate and the C-Beam.
- 21 Pressure regulation switch shall be provided for setting desired pressure of telescopic cylinder on the ejector plate. The regulation switch shall have a key lock arrangement for pressure setting & for safety of the system.

The ejection panel shall run on a synthetic/bronze guide block (pads) within the lateral longitudinal guides of the boat type bottom group of the refuse collection body and must be operated by a telescopic hydraulic ram. It must serve during loading as a resistance for the refuse compaction process.

#### **HYDRAULICS:-**

- a. The vehicle chassis shall be selected to mount hydraulic equipments easily
- b. Arrangement to have direct drive or shaft drive from P.T.O. to the hydraulic pump shall be made.
- c. P.T.O hydraulic pump and the hydraulic system fitted including valves shall be manufactured by reputed manufacturers like Wipro, U.T.Ltd./Wipro/Dowty/ Vickers and International equivalent.

The pump shall be directly coupled with power take off and shall develop sufficient pressure to operate the complete hydraulic system. The necessary valves shall be provided, so as to have the simultaneous operation of the system.

Suitable Hydraulic tank with Air breather-cum-filter shall be provided. The filter shall be provided at the inlet line and return line.

Signature of tenderer.

### **SPECIFICATION FOR DRIVER – CUM – ATTENDANTS CABIN ;**

The driver – cum – Attendants Cabin shall be fabricated as per the specifications given below;

#### **FRONT SHOW**

The full forward Chassis shall be supplied with original front end structure as supplied by the chassis manufacture and the original structure from show, radiator grill, head light etc., will have to be retained by the tenderer.

#### **WIND SCREEN;**

Wind Screen, if not supplied with the Chassis, shall have to be fabricated by the tenderer. Approved quality 6mm thick safety glasses shall be used for the wind screen.

#### **FLOORING**

The driver cabin can be fabricated in continuation and in line of front end structure. The under frame cross members shall be fabricated and made out of rolled MS channel of 100mm x 50 mm – 6mm thick and MS angles of 50mm x 50mm – 6mm thick and fitted on the chassis by “U” bolts and welding.

Each cross members shall be secured to the chassis frame by 10mm dia MS “U” clamps with self locking nuts.

Bellata packing of thickness 12mm shall be provided in between the chassis and cross members.

The complete floor of the driver cabin shall be fabricated from 3mm aluminum chequered plated rigidly fixed to the under frame structural member by means of nuts and bolts. The joints of the sheet shall be made water proof. Traps doors for topping up where ever necessary shall be provided. Above this floor approved type good quality rubber matting shall be provided.

Suitable two steps non projecting foot board shall be provide on the sides to climb into the cabin.

**In case of fully built cabin is supplied by chassis manufacturer, the standard cabin shall comply functionally in design, ergonomics, strength, durability etc.**

Signature of tenderer

## **Superstructure**

- I. The superstructure of the cabin shall be constructed out of MS pressed top hat section. The superstructure shall be strengthened specifically on the members where the door and window frames are to be fitted and also to the other members by providing brackets and gussets of MS plates securely welded.

The detail is given below;

1.	Under frame cross members	100 x 50 x 600 – 1 No.
2.	Floor longitudinal angles	50 x 50 x 600 – 3 Nos.
3.	Vertical member on each side	45 x 45 x 20mm – 4 Nos. top hat section
4.	skit member	45 x 45 x 20mm – 1 No.
5.	Waist Member	45 x 45 x 20mm – 1 No.
6.	Roof Horizontal	45 x 45 x 20mm – 4 Nos.
7.	Roof Longitudinal ( Including end ones)	45 x 45 x 45mm – 5 Nos.

- II. All the super structural members shall be painted with three coats of anti corrosive paint.
- III. The complete internal paneling of the Door, cabin and door shall be from 1.219mm (18SWG) or equivalent aluminum sheet with all joints riveted and bidden. The domes and corners shall be as small as possible and shall be of 1.626mm (16SWG) aluminum sheet or equivalent. The external paneling shall be of 18SWG sheet with all joint; riveted to the structural members. The foot top plates shall be over-lapped by 10mm and riveted in double row.
- IV. The floor of the cabin shall be fabricated from 3mm MS plates rigidly fixed to the under frame cross-work and shall be covered with 3mm aluminum chequered plates by means of riveting or nuts and bolts. The joints of the sheet shall be soldered. Trap doors for toping up wherever necessary be provided/ Above this floor, approved type good quality rubber matting shall be provided and fitted by means of nuts and bolts.
- V. Behind the driver seat a partition shall be provided in a stool frame upto the width of driver seat. From the floor upto a height of 1 metre the frame shall be paneled with 1.219mm ( 18SWG) or equivalent aluminum sheet and the remaining portion upto the height be fitted with GI crimp mesh of 3.257 mm x 25mm square. The steel frame shall be of 38mm x 38mm x 6mm size rigidly fixed to the floor and side by means of nuts and bolts.

Signature of tenderer

VI. The driver cum attendant's cabin shall have the following dimensions approximately.

- a) Length - Minimum 2133mm (84" approx)
- b) Width (External ) - 2300mm ( 90" approx)
- c) Height ( Internal ) - 1625mm ( 60" approx)

Note: The exact length of Driver cum attendants Cabin will be communicated at the time of fabrication. However, it shall not be less than 2133mm.

#### **Doors and Windows;**

- a. The cabin shall be equipped with full doors two numbers. One on driver side so as to enable the driver to enter his cabin and another on off side in attendant's compartments so as to enable the attendant and cleaner to enter this cabin.
- b. The two doors shall be fitted on the superstructure members each hung upon three numbers invisible each type stout MS hinges and fitted with best quality handles. In addition to the door handles MS positive door locking shall be provided on each door from inside and outside.
- c. A glass window having dimension approximately 1050mm x 425mm width shall be provided on the rear of driver cabin at exactly the middle of cabin rear.
- d. The window on the door at driver side & cleaner side shall be of full lift or sliding type.
- e. Apart from door window, two more windows of half lift type shall be provided. one at cleaner side ( off side ) another attendant compartment (On driver side)
- f. A peep window of suitable size is provided at the cleaner side bottom panel above the floor level for the use driver to see clearly at the off side.
- g. At both the sides in driver's cabin, quarter glasses in aluminum frame shall be provided and fitted. One in between the wind screen and driver's door and another in between the wind screen and cleaner window.
- h. For the entire above window, 5mm thick toughened safety glasses in aluminum frame shall be used. For half lift type window the top glass in aluminum frame shall be fixed and the bottom glass in aluminum frame shall be sliding or vice versa.
- i. Suitable two steps foot board & 225mm aluminum door handles shall be proved on both the sides to climb into the cabin.
- j. Suitable size of door in aluminum frame with a peep glass at the backside of attendant seat shall be provided for inspection and maintenance f rear body.

Signature of tenderer

**Seat**

- I. The driver seat shall be adjustable type both vertically forward and backward and fixed to the floor of the cabin by means of nuts and bolts.
- II. The cleaner seat shall be of fixed type rigidly fixed to the for by means of nuts and bolts.
- III. The seat cushion shall be of latex foam rubber 75 x 50 mm thick upholstered in good quality rexin of approve shade. The back rests shall be of latex foam rubber 50mm thick upholstered in good quality rexin of approve shade.
- IV. The frames of the seats shall be constructed from tubular steel of 25mm outside dia. x 16 gauge
- V. Safety Belts to be provided for both driver & cleaner seats.

**SPECIFICATION FOR THE COMPACTOR EQUIPMENT**

- 1. Compactor Capacity - 14 Cub. Metre
- 2. Compaction Ratio - Not less than 1: 2
- 3. Control Valves and Cylinders - To be of reputed Indigenous make
- 4. Control Valves of the following make
  - a. Dowty
  - b. Wipro
  - c. UT
  - d. Vickers or equivalent
- 5. Heavy duty hoses to be provided
- 6. Hopper capacity - Minimum 1 Cub. M.
- 7. Hopper height from ground level - not more than 1metre
- 8. Comb arm arrangement for universal bin loading to be provided. The Bin loading arrangement should be capable of loading bins of the following sizes;  
120 Litres / 240 Litres / 600 Litres / 1100 Litres

The hydraulic pump should be of standard makes capable of delivering around 140 Ksc oil pressure @ 1200 RPM

Signature of tenderer

## **MISCELLANEOUS**

- I. The cabin shall be provided and fixed with
  - a) Roof Light - 02 Nos.
  - b) Heavy duty Wiper Machine (Elgi Pneumatic) - 02 Nos.  
(with Arm & Blade)
  - c) Heavy duty Bracket type convex mirror - 02 Nos.
  - d) Hand operated Traffic Signal - 01 No.
  - e) Extra wiring wherever necessary
- II. Suitable size battery box of 10 SWG aluminum sheet to accommodate two 12V 25Plates batteries shall be provided under the attendant's seat. The extra length of battery cable shall be provided by the tenderer.
- III. Stop lights, direction indicator lights and tail lamps shall be provided and fitted.
- IV. The dash board shall be fixed behind the steering wheel near driver's seat so as to enable him to see the dash board comfortably and also enable him to operate the switches without bending or stretching his hand too long.
- V. All controlling switches for lights, driver cab light and wiper machines shall be provided on dash board panel or near driver's seat to operate easily.
- VI. The cabin shall be painted externally and internally in IEL Dulux paint or equivalent, of approved shade.

## **PAINING**

The under chassis parts and the portion shall be painted with anticorrosive black.

Complete unit including cross and super structure member shall be painted with superior quality anti-rust paint. All the paint material shall confirm to ISI specifications and shall be of specified makes.

The cabin shall be painted with three coats of dulux paint externally and internally. The colour scheme will be informed at the time of fabrication.

The compacting unit shall be sandblasted and painted with anti-corrosive primer before painting with two coats of polyurethane paint of ISI approve make. All necessary indicative labels shall be pasted on for easy operation.

The rear body shall be painted from outside with Dulux. The colour scheme will be intimated later.

Signature of tenderer

### **BIN LIFTER**

- I. The Bin lifter will be made from hardened steel for wear and tear.
- II. The length of bin lifter shall be minimum 1.40 metres.
- III. Two double acting hydraulic cylinders (one on each side) shall be provided for lifting the bins.
- IV. The bin lifter shall be suitable to lift the standard containers of size 120,240, 600 & 1100 Lts. ( 120 Ltrs. & 240 Ltrs. of HDPE & 1100 Ltrs of GI)
- V. The bin lifter will contain a bin catcher made from hot deep galvanised steel/ Cortian steel.
- VI. A control panel shall be installed at convenient position such that the working of hydraulic cylinder can be controlled safely. The arrangement shall also to provide to accelerate the automobile engine automatically from the rear.
- VII. A safety valve shall be provided to avoid sudden descent of bin lifter in case of failure of hydraulic pressure.
- VIII. Safety shall be of utmost priority while designing & during fabrication of each component and aggregate of the compactors.

### **OTHER EXTRA FITMENTS**

- a) Two Footsteps shall be provided one each on left and right side at the rear & Two Hand bars one on each side at the rear side shall be provided for the equipment operators to stand and travel safely when the compactor is moving.
- b) One large flashing light shall be provided in the front in the centre at the highest point so as to be seen clearly.
- c) Two emergency stop switches shall be provided on either side of the body to instantly stop the operation in case of emergency.
- d) A level indicator shall be provided to indicate hydraulic oil level in the tank
- e) The rear door shall be provided with packing so that fluid does not flow out.
- f) The necessary safety features shall be provided to safeguard the operators. The details of these features shall be clearly stated in the tender.
- g) All extra wiring will have to be carried out by the successful tender.
- h) The vehicle shall be provided with reverse horn so that it gives the indication at the time of reversing.

Signature of tenderer

- i) Arrangement shall be provided to get an indication as soon as the garbage contained reaches its maximum. Arrangement shall also be provided to stop the operating cycle as soon as the Compactor is full.
- j) The complete compactor shall resemble in design/dimensions/fabrication and incorporate all special features / safety features as per the existing 14 Cu.M compactor vehicles currently in Operation in Corporation of Chennai.

### **OPERATION**

Each Compactor shall have to be driven by a Driver (holding valid Heavy Commercial Driving License).

The compactor shall be operated for 8 hours in a shift for 2 shifts each day, if required.

All necessary preventive maintenance activities shall be carried out by the tenderer during the Night at places where the Compactors are designated to be parked.

Signature of tenderer

## **COMPREHENSIVE MAINTENANCE OF COMPACTOR EQUIPMENT**

### **(INCLUDING CHASSIS)**

The equipment shall be fully guaranteed including all rubber parts and hoses for a period of one year. The tenderers will have to enter into a comprehensive maintenance contract for a period of 2 years (total 2 years including warranty period extendable to 10 years) for the equipment (Including chassis) as per the details given below. The chassis maintenance will also be carried out by the tenderer

- a) The scope of work includes routine maintenance of the machines and chassis as per manufacturer's guidelines. Therefore, it covers day to day maintenance of mobile compactor with prescribed level of maintenance service , adjustments, settings, etc., The preventive maintenance shall be carried out in a required sequence for which , trained personnels shall be appointed who are fully conversant with operation and maintenance including mechanical , technical ,electrical and hydraulic circuit system of the unit and the chassis.
- b) **The work includes replacement of normal routine items like oil and parts like pipes, nuts, bolts, washers and all electrical and hydraulic spares, etc and any other spare parts and items which are required to be changed under normal wear and tear. The spare parts and items which are required to be changed on account of established accidental damages and which cannot become part of routine maintenance will be supplied by Corporation of Chennai or the cost of such spare parts / items will be reimbursed by Corporation of Chennai on actuals. Such spares should be sourced only from the manufacturers or their Authorised Dealers,. However, the labour charges shall be borne by the successful tenderer. The tenderer shall keep adequate essential parts / spares in their stock to render satisfactory services without any interruption.**
- c) **Only fuel will be supplied by Corporation of Chennai. All other spares/accessories including batteries & tyres shall be supplied by the successful Tenderer.**

Signature of Tenderer.

- d) All the spare parts supplied shall be original. The spare parts cost shall be charged as per the prevailing price list of the manufacture, only in case of accidentally damages. In case if the tenderer wants to add any taxes or other charges on the above price list the same shall be clearly stated in the tender. No variation in this respect will be allowed once the tender is finalized.,
- e) The complete compacting equipment supplied shall have a guarantee for one year. However the routine preventive maintenance i.e., the replacement of consumables, like Filter, replacement / filtration of oil etc., will have to be carried out by the tenderer during the warranty period. The rates quoted shall include the cost for the said servicing and maintenance.
- f) In case of major servicing, the vehicle will be taken by the Tenderer to workshop of the tenderer. However, all the toll taxes required to be paid will be paid by the successful tenderer.
- g) The successful tenderer/ their authorised dealer shall have their own workshop.
- h) The work also includes the cost of labour, all parts, accessories, replacement of oil etc.
- i) The replacement of such parts will be carried out by the successful tenderer under the proper supervision and as per the recommendations of the manufacturers.
- j) The Hydraulic Oil for topping up will have to be supplied by the successful tenderer and the Oil will have to be filtered and changed as per the recommendations of the manufacturers. The Oil grade used shall be that easily available in India.
- k) It will be necessary for the successful tenderer to submit periodical reports duly signed by competent authority in hard copy of the maintenance works carried out each vehicle wise.
- l) Necessary records showing operation and maintenance of the compactors (with the chassis) shall be duly maintained. They shall be subjected to inspection as and when called for.

Signature of Tenderer.

- m) The successful tenderer shall see that their representative attends the faults regarding the Compactor within 24 hours, if he fails to do so a penalty of Rs.500/- per day will be charged to the contractor even if the vehicle is in operation
- n) Any damages to the Corporation and other properties while carrying out the work shall be rectified by the successful tenderer free of cost.
- o) Corporation of Chennai will not be responsible for any human accident or hazard if occurred to the person of the contractor while carrying out the work.
- p) The successful tenderer shall bring their own tools and accessories for carrying out the maintenance work.
- q) If the event of any vehicle being off road for more than 5 days, the tenderer should make suitable arrangements to provide another alternative Compactor on hire basis.
- r) In the event of the Tenderer not arranging for another compactor even after 30 days, then penalty to the extent of hiring charges for hiring private Lorries.
- s) The successful tenderer will have to inspect and check all the hydraulic components of Compactor equipments once in a month irrespective of whether any problem arises or not. The programme for the same will be submitted to the department in advance. In addition to the above in case of any problems the tenderer will have to attend the work within 24 hours.
- t) THE TENDERER SHALL QUOTE OPERATION COST ALONE FOR THE FIRST YEAR AND II YEAR OPERATION AND MAINTENANCE COST SHALL BE QUOTED ONLY FOR II YEAR. THE FIRST YEAR MAINTENANCE COST WILL BE FREE AS PER WARRANTY CONDITIONS.
- u) THE TENDERER SHALL NOTE THAT THE COST OF OPERATION & COMPREHENSIVE MAINTENANCE QUOTED SHALL BE TAKEN INTO CONSIDERATION FOR EVALUATION OF TENDER.

Signature of Tenderer.

- v) The successful Tenderer shall ensure the march-out of the equipment everyday. In case of non-march-out of the equipment /break-down of the equipment, the payment shall not be made.

### **PENALTY FOR NON – OPERATION OF COMPACTOR**

The vehicle shall not be under repair for more than 24 hours. If after 24 hours the vehicle is under repair, then the tenderer has to pay penalty.

#### **Penalty for Non-March-out:**

At the rate of Rs.500/day shall be imposed for every day's non-march out due to vehicle repair.

If the non-march out is due to vehicle repair, spare vehicle shall be provided and if the repair continues beyond more than 2 days, penalty shall be imposed at the rate of Rs.500/vehicle/day.

Every vehicle should be compulsorily water washed and lubricated once a week. Failure to do so, shall attract penalty at the rate of Rs.200/vehicle/week. Necessary documents for the same shall be maintained and certificate obtained from the specified officers. Any penalty as and when imposed by competent authorities of Corporation shall also be deducted from the bills.

#### **Payment for the Maintenance**

For **everyday** March-out payment shall be made as quoted. The payment shall be claimed every month after getting the bill duly certified by AE/JE and AEE (M) of North Chennai/South Chennai Depot or operating depots to which the compactor is attached.

Signature of tenderer

Annexure – A  
Technical and infrastructure ability of tenderer

1.	Name of the Tenderer's firm/ company	
2.	Whether proprietorship / partnership / Pvt Ltd., / Ltd / Govt. / Semi. Govt. / Undertaking / any other	
3.	Names of proprietor / partners / directors / C.E.O. etc.,	
4.	Power of Attorney , if any	
5.	Address of the business with telephone / mobile / fax nos.	
6.	Address of the works / factory	
7.	Area of the works / factory	
8.	Line of business, manufacture & experience	
9.	Present deployed manpower; Technical Administrative Others	
10.	Name of the collaborator / principals / address & country of origin	
11.	Address & area of the workshop of the collaborator / principal / agents with M.O.U.	
12.	Name of the Bankers of the tenderer and their full address	
13.	Latest solvency certificate Bank Amount Date	

14.	Whether the tenderer is listed with Govt / Semi-Govt. Department. If so , details of Registration etc.,	
15.	Whether the tenderer or his partner or his principal / collaborator have been blacklisted by any of the Govt. / Semi Govt. department any time	
16.	<b>No. of similar compactors supplied by the tenderer with list of customers , quantity, year of supply and addresses during last 5 years</b>	
17.	<b>No. of similar compactors supplied by the principal / collaborator of the tenderer with list of customers , quantity, year of supply and addresses during last 5 years</b>	
18.	<b>Details of mobile compactors working with various organizations as on 01.04.10 with list and addresses</b>	
19.	Turnover during last 5 years	
	Financial Year	
	2004-05	
	2005-06	
	2006-07	
	2007-08	
	2008-09	

Signature of tenderer

Annexure – B  
Details of the Collaborator

1.	Name of the company	
2.	Country of origin	
3.	Business address / works address	
4.	Sister concern or Tie-up in any other country	Yes / No
5.	If yes, Names and address	
6.	Year of incorporation of parent Co.	
7.	Year since manufacturing of similar units of compactors started	
8.	No. of similar units of compactors manufactured so far. Please give year wise breakup	
9.	Manufacturing capacity per year	
10.	List of customers performance certificates from different users during last 10 years	
11.	Details of authorised manufactures / distributors in Chennai ( India )	
12.	Details of after sales service of the manufacturer in Chennai ( India )	
13.	Details of authorised manufacturer's distributors	

Note: The above details should be obtained from the Collaborator duly signed and sealed and attach with the tender.

Tenderer's signature with stamp and seal

**ANNEXURE – C**

Sl. No.	Description	Corporation of Chennai Specification	Offer
	Body		
1	Material	EN 24 / 2062 IS Specification Steel	
2	Roof Paneling Thickness	3 MM	
3	Side Paneling Thickness	4 MM	
4	Flooring Thickness	5 MM	
5	Rear Cross Bar Thickness	5 MM	
<b>TAIL GATE</b>			
1	Material	En 36 Steel / 2062 IS Specification Steel	
2	Side Paneling Thickness	4 MM	
3	Rear side of Hopper Plate Thickness	5 MM	
4	Hopper Bottom Plate Thickness	6 MM	
5	Superstructure Member Thickness	6 MM	
<b>EJECTOR SYSTM</b>			
1	Ejector Plate Material	En 36 High tensile / 2062 IS specification Steel	
2	Pads	Bronze Pads / Synthetic Pads	
<b>HYDRAULIC SYSTEM</b>			
1	Power Take off	Preferably Vehicle Manufacturers	
2	Hydraulic Pump Pressure	Minimum 140 Kg per Sq. Cm	
3	Hydraulic pump working speed	1200 RPM approx.	
4	Hydraulic Cylinders Quantity	09 Nos.	
5	Hydraulic Cylinder Make		
6	Hydraulic Cylinders single acting	02 Nos.	
7	Hydraulic Cylinders double acting	07 Nos.	

8	a) Packer Plate Hydraulic Cylinder Internal Diameter		
	b) Packer Plate Hydraulic Cylinder Stroke		
9	a) Tailgate Hydraulic Cylinder internal Diameter		
	b) Tailgate Hydraulic Cylinder Stroke		
10	a) Bin Lifter Cylinder internal Diameter		
	b) Bin Lifter Cylinder stroke		
11	a) Carrier Plate Cylinder internal Diameter		
	b) Carrier Plate Cylinder Stroke		
12	a) Ejector Cylinder	<b>Telescopic Type</b>	
	b) Ejector Cylinder no. of stages		
	c) Ejector Cylinder Internal Dia.		
	d) Ejector Cylinder Stroke		
13	Hydraulic Valve	<b>Vehicle manufacturer / Vickers International</b>	
14	Oil Capacity		
15	Size of Suction Filter		
16	Size of Return line Filter		
17	Size of Ejector Plate		
18	Cycle duration for Compaction system		
19	Cycle Duration for Bin Lifter		
20	Loading Height of the Hopper		
21	Duration of Ejection		
22	Volume of Sweeping Plate		
23	Pump & PTO Mounting	<b>Directly coupled without any intermediate shaft</b>	
24	Compaction Ratio obtained	<b>Minimum 1 : 2</b>	
25	Additional Accessories provided if any		

The department had specified the thickness of various types of steel sheets in the Annexure C. The thickness of the plates in the tender specifications is specified considering availability of Indian Steel Plates. These plates need to be high tensile steel conforming to IS 1079 or equivalent. However considering the parameters towards fulfillment of required yield strength as per this IS, the manufacturer can use their standard thickness plates provided the required yield strength other parameters of GVW and payload specified are maintained . However in Annexure “C” they will clearly state the thickness and grade of steel which will be used in fabrication of Compactor body.

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**ANNEXURE – D**

**CHASSIS DETAILS**

SL. No.	Description	Corporation of Chennai Specification	Offer
1.	Make	Suitable Chassis	
2.	Type	Full Forward	
3.	Engine	6 Cylinders meeting prevailing emission norms	
4.	GVW	15 Tonnes Approx. minimum	
5.	Tyre Size	1000 x 20	
6.	Gear Box	5 forward 1 reverse synchromesh	
7.	Wheel Base	Suitable to accommodate 14 Cu.M Compactor body	
8.	Brakes	Preferably full Air Brake with Air Dryer kit and automatic Slack Adjuster	
9.	Weight Distribution a) On Front Axle b) On Rear Axle	As specified by the Manufacturer	Front Axle      Kg Rear Axle      Kg
10.	Emission Standard	Meeting Emission Norms currently in vogue.	

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**ANNEXURE 'E'**

FULLY BUILT COMPACTOR  
AFTER REGISTRATION



90 DAYS  
from the date of  
award of work order

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ANNEXURE – 'H'

List of components to be imported from the principal

Sl. No.	Description of Item	Make
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

List of components which will be manufactured locally

Sl. No.	Description of Item	Make
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

NOTE: PLEASE ATTACH ADDITIONAL SHEET, IF NECESSARY

Signature of tenderer

ANNEXURE – ‘I’

1. The MoU should clearly designate one of the Consortium Member as the Lead Member
2. The Lead Member shall be responsible for ensuring the individual and collective commitment of each of the Consortium Members in honoring the Project Company’s obligations. The Lead Member would be overall responsible for the execution of the Project. The MoU should be duly signed by each of the Consortium Members.
3. The MoU should be executed on a non-judicial Rs.100/- stamp paper.
4. The MoU should be specific to this Project.
5. The MoU should be valid for a minimum of twelve months from the date of award of work. The validity period of the MoU should be extendible on the original terms , if required by Corporation of Chennai.
6. All members of the Consortium shall be liable jointly and severally for the execution of the project in accordance with the terms of the Concession Agreement and a statement to this effect shall be included in the MoU.
7. The MoU entered into between the members of the Consortium should be specific to the Project.

**EXHIBIT – 5 ; DESCRIPTION OF THE BIDDING COMPANY / BIDDING CONSORTIUM**

Name of the Bidding Company / Bidding Consortium	
Name of the Lead Member ( In case of a Bidding Consortium )	

**In case of a Bidding Consortium:**

<b>Sl. No.</b>	<b>Name of each Consortium Member</b>	<b>Proposed % equity contribution into the Project</b>	<b>Role as per the MoU signed by and between all the Consortium Members</b>

Tenderer’s Signature & Stamp/Seal.