

OFFICE OF THE EXECUTIVE ENGINEER (SDW) XIV,
DELHI JAL BOARD, GOVT. OF N.C.T. OF DELHI,
KILOKRI SPS, JAL VIHAR,
NEW DELHI-110024

No. DJB/EE (SDW) XIV/2014/ 157

Dated: 16-5-14

CIRCULAR

Sub: Rates for Hiring of Sewer Suction-cum-Jetting Machines for Sewerage Work.

Rates for hiring of Suction-cum-Jetting Machines of 8000 Ltrs. and 4000 Ltrs. capacity are given as under for preparing the proposals for Sewer Maintenance Works being undertaken in DJB:-

| S.No. | Capacity of Sewer Suction-Cum-Jetting Machine(SCJM) | Rates(Rs.) per Shift per machine(excluding cost of Diesel which shall be paid as per actual consumption as per terms & conditions) |
|-------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1. | 8000 Litres | Rs. 5353/- |
| 2. | 4000 Litres. | Rs. 4105/- |

These rates shall be applicable with effect from the date of issue of this circular. All divisions of DJB are requested to adopt these rates along with Technical Specification, Terms and Conditions enclosed herewith(as Annexure 'A') for 8000 Ltrs. and 4000 Ltrs. Capacity Suction-Cum-Jetting Machines.

It is issued with approval of the Competent Authority, Member (Dr.)'s order dated 16.05.2014.

Enclosure : as above

Copy to :-

1. P.S. to CEO : For kind information pl.
2. Member(Dr.), Member (WS), Member(F) : _____ do _____
3. C.V.O. /D.O.V./JL Director (Vig.)
4. Dir (F&A) /JL Dir. (F&A)-I & II : _____ do _____
5. All Chief Engineers : _____ do _____
6. All Superintending Engineers : _____ do _____
7. All Executive Engineers
8. All Account Officers

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Annexure-'A'Technical SpecificationsTechnical Specifications of the 8000 Litres & 4000 Litres capacity Suction-Cum-jetting

Machine : The 8000 Litres & 4000 Litres capacity Vehicle mounted combined Jetting cum suction machine(s) to be deployed for D.J.B. shall be as per following specifications:-

| S.No. | Name of Equipment/ Unit/Component | Description /Specification for 8000 Litres Capacity machine | Description /Specification for 4000 Litres Capacity machine |
|-------|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. | CHASSIS | Sufficient space shall be kept in the cabin for sitting accommodation of at least 6 persons. The firm shall make necessary arrangement for mounting the equipment on the chassis according to the rules laid by the Regional Transport Authority, Delhi. Chassis should not be less than 16 T (GVW) Engine Horse Power not less than 125 H.P. of make TATA/Ashok Leyland/Eicher having adequate power supply to run the equipment. Chassis to be provided should be suitable for operating the P.T.O. at required duty conditions and should be compatible to the total running load on vehicle in operation. | Sufficient space shall be kept in the cabin for sitting accommodation of at least 3 persons. The firm shall make necessary arrangement for mounting the equipment on the chassis according to the rules laid by the regional transport authority Delhi. Chassis should not be less than 9 T (GVW) engine horse power not less than 125 Ps @ 2400 RPM or equivalent of make TATA/Ashok Leyland/Eicher having adequate power supply to run the equipment. Chassis to be provided should be suitable for operating the P.T.O. at required duty conditions and should be compatible to the total running load on vehicle in operation. |
| 2. | TANK | <p>➤ Capacity for Sludge/Sewage Not Less Than : 3000 Ltrs.</p> <p>➤ Capacity for Water Not Less than : 5000 Ltrs.</p> <p>Total combined capacity : 8000 Ltrs.</p> <p>The cylindrical and Dish ends should be fabricated out of 6 mm thick MS plate conforming to IS: 2062 grade. The tanks made out of 6mm thick M.S. plate shall be suitable to withstand both the working pressure as well as vacuum and arrangement for hydraulic tipping. Rear door opening shall be available for unloading the material from the tank. It should consist of safety valves both for pressure and vacuum and with necessary arrangement for filling and draining of fresh water. The tanks shall be provided</p> | <p>➤ Capacity for Sludge/Sewage Not Less Than : 1500 Ltrs.</p> <p>➤ Capacity for Water Not Less than. : 2500 Ltrs.</p> <p>Total combined capacity : 4000 Ltrs.</p> <p>The cylindrical and Dish ends should be fabricated out of 6 mm thick MS plate conforming to IS: 2062 grade. The tanks made out of 6mm thick M.S. plate shall be suitable to withstand both the working pressure as well as vacuum and arrangement for hydraulic tipping. Rear door opening shall be available for unloading the material from the tank. It should consist of safety valves both for pressure and vacuum and with necessary arrangement for filling and draining of fresh water. The tanks shall be provided with level indicator for sludge tank and clear water tank.</p> |

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| 3. | SUCTION SYSTEM (Minimum Requirement) | <p>Vacuum Pump : (Exhauster/Compressor) Delivery : Minimum 612 M3 /Hr. (10,200 LPM free air flow).</p> <p>Minimum Vacuum – 92%, Suction Pipe – 100 mm Minimum Operating vacuum – 80%, Max. Depth of suction – 10 mtrs. Minimum Pressure – 2 Bar(Absolute) Minimum Operating pressure – 1 Bar</p> <p>Safety Features:- The following safety features shall be incorporated in vacuum system.</p> <ul style="list-style-type: none"> ➤ Pressure relief valve. ➤ Vacuum relief valve. ➤ Ball float assembly. ➤ Primary shut off. ➤ Silencer breather to minimize noise & air pollutions. | <p>Vacuum Pump : (Exhauster/Compressor) Delivery : Minimum 612 M3 /Hrs. (10,200 LPM free air flow)</p> <p>Minimum Vacuum – 92%, Suction Pipe – 100 mm Minimum Operating vacuum – 80%, Minimum Depth of suction – 7 mtrs. Minimum Pressure – 2 Bar(Absolute) Minimum Operating pressure – 1 Bar</p> <p>Safety Features:- The following safety features shall be incorporated in vacuum system.</p> <ul style="list-style-type: none"> ➤ Pressure relief valve. ➤ Vacuum relief valve. ➤ Ball float assembly. ➤ Primary shut off. ➤ Silencer breather to minimize noise & air pollutions. |
| 4. | Jetting System (Minimum Requirement) | <p>System : Triplex Plunger Pump Delivery Capacity : Minimum 210 LPM Pressure : 155 Bar (Rated)</p> | <p>System : Triplex Plunger Pump Delivery Capacity : Minimum 225 LPM Pressure : 130 Bar (Rated)</p> |
| 5. | Jetting Hoses & Hose Reel (Along with Nozzle) | <p>Length : 120 Mtrs. Working pressure : 3300 PSI Jetting dia : 25 mm Size of Nozzle : As required Material of hose : Thermoplastic</p> | <p>Length : 120 Mtrs. Working pressure : 2200 PSI Jetting / hose pipe dia : 25 mm Size of Nozzle : As required Material of hose : Thermoplastic</p> |
| 6. | Suction Hose | <p>Size : 100 mm dia Length : 15 mtr. (3x5 M)</p> | <p>As per requirement Length : 15 mtr. (3x5 M)</p> |
| 7. | Power Transmission System(Power Take Off System) | <p>Throughput torque : 2000 Kgm on main drive shaft No. of out puts : 4 (four) PTO output ratio : 1:28 PTO output torque : 130 Kg. meters per shaft</p> <p>The following safety features shall be incorporated in high pressure jetting system.</p> <ul style="list-style-type: none"> ➤ Pressure Regulating Valve. ➤ Safety Valve. ➤ Low Water Level Alarm/Cut Off. <p>The P.T.O. Unit shall be suitable to deliver minimum torque and duties required and fulfil the requirements.</p> | <p>Throughput Torque : 400 Kgm on main drive shaft No. Of Output: 4(Four) PTO Type : Split Shaft PTO Other parameters as per requirement.</p> <p>The following safety features shall be incorporated in high pressure jetting system.</p> <ul style="list-style-type: none"> ➤ Pressure Regulating Valve. ➤ Safety Valve. ➤ Low Water Level Alarm/Cut Off. <p>The P.T.O. Unit shall be suitable to deliver minimum torque and duties required and fulfil the requirements.</p> |
| 8. | Hydraulic System/control | <p>The hydraulic system includes hydraulic pump driven by vehicle PTO, hydraulic tipping cylinder, door opening cylinder, hydraulic motor for winding/unwinding of jetting hose, hydraulic tank, oil pipe and</p> | <p>The hydraulic system includes hydraulic pump driven by vehicle PTO, hydraulic tipping cylinder, door opening cylinder, hydraulic motor for winding/unwinding of jetting hose, hydraulic tank, oil pipe and control valve. The</p> |

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| | control valve. The entire controls/operation of the system is affected from a single location. The above tanks/equipments shall be mounted on suitable vehicle chassis with all safety measures for smooth operation of equipments and hour meter is to be separate for jetting machine and suction machine. | entire controls/operation of the system is affected from a single location. The above tanks/equipments shall be mounted on suitable vehicle chassis with all safety measures for smooth operation of equipments and hour meter is to be separate for jetting machine and suction machine. |
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SCHEDULE OF MAKES FOR JETTING CUM SUCTION SEWER CLEANING MACHINES (for 8000 Litres and 4000 Litres capacity machines) :-

| S.No. | Description of item | Makes |
|-------|----------------------|--------------------------------------------------------------------------------|
| 1. | Jetting pump | Woma GB Ltd., UK/Pratissoli, Italy/Myers, USA/MORO, Italy |
| 2. | Vacuum Pump | Mannesmann-Demag, Germany/Jourop, Italy/ Masport USA/MORO Italy/Battloni Italy |
| 3. | Power Take Off (PTO) | PZB, Italy/Omsi, Italy |
| 4. | Jetting Hose | Parker, USA/Vector/Euro Power/Pirana, USA/AEROQUOP, Italy. |
| 5. | Suction Hose | Duraflex/Kamalflex |
| 6. | Nozzel | Nova Contec |
| 7. | Hydraulic Pump | Danfoss/Vickeks/Dowty |

TERMS & CONDITIONS:-

1. The rates includes all taxes as applicable to govt./semi govt. department till deploying the machine in Delhi except Govt. levies/taxes, if applicable, on hiring of these machines which will be paid extra as per statutory provisions /rules.
2. Payment shall be made on monthly basis. The Divisional Engineer will verify the log book latest by 7th of next month, so as to submit these documents to the concerned Division for payment. Income tax etc. will be deducted from the bills as per prevailing directions of govt. of Delhi.
3. The reimbursement of diesel consumption charges are to be a paid along with bill at the prevailing market rates @ 1 Litre for 4 Kilometer running of vehicle and 3 Litre per hour for running of suction cum jetting machine. The charges towards diesel consumption shall be paid towards running of the vehicle only during duty hours and no charges for running of vehicle prior to reporting for duty and after the duty hours shall be paid.
4. Bill should be based on per month/machine for 8 hours shift exclusive of ½ hours lunch break.
5. The prices are firm and no price variation shall be paid on any account.

6. The suction machine and jetting machine shall be provided with hour run meter of reputed make and tested by approved Govt. Institution; required test certificate is to be provided by the firm. The meter is to be separate for jetting machine and suction machines. The chassis should be equipped with meter for reading Kilometers (Kilometer Meter). Initial reading and final reading be recorded on log book and got signed from Engineer-In-charge (EIC) / authorised Departmental representative every day.
7. The firm shall depute the machines at various locations as per the direction of Engineer In-Charge.
8. The firm will engage the required staff for operation and maintenance of each machine. The vehicle cum machine operator should be well trained and have proper HMV license issued by Regional Registration Authority.
9. The department will provide the staff for all the activities in the manhole and sewer line like opening and clearing of manhole, de-silting of manhole if required to handle suction and jetting pipes including nozzle in sewer line.
10. The machine shall be parked at local/nearby DJB store/site and the firm shall be fully responsible for round the clock safety of the machines throughout the contract period. Any loss on account of theft or faulty operation or any type of accident shall be borne by the firm. The firm shall be permitted to erect a suitable temporary shed with locking arrangement for safety of the machine at place of posting. The design of the temporary shed shall be got approved from the Engineer-In-Charge and the expenses shall be borne by the firm.
11. Consumable lubricant, spare parts and replacement of all required material shall be provided by the firm to ensure uninterrupted operation of the machines and shall record the items used.
12. The normal working hours of the machine will be from 9 A.M. to 5.30 P.M. with half an hour lunch break. The timing can be changed by the Engineer In-Charge as per site requirements. The vehicle shall be available for work for 25 days in a month. If machine is operated for additional hours the payment will be given on pro-rata basis and if operator reports late on duty or goes early, then deduction shall be made on pro-rata basis.
13. Equipments shall meet all the Regional Transport Officer (RTO) regulation from time to time.
14. The vehicles having valid registration certificate, latest fitness certificate, Road tax paid receipt, insurance and pollution check certificate shall be provided to the department and shall not take up and work, other than of the Delhi Jal Board. In case, it is found so, engagement of vehicles shall be terminated and the firm shall be blacklisted

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15. The firm is bound to deploy the machine on holidays if required by the department and the payment shall be made on pro-rata basis and nothing extra shall be payable.
16. The firm shall abide by the prevailing guideline issued by the transport authority regarding the fitness of the vehicle on road. Any modification in rules issued by the authorities from time to time shall be binding on the firm and no claim shall be entertained on this account.
17. For any violation of traffic rules by the operating staff of vehicles, the firm shall be fully responsible.
18. In case of any accident, to the equipment/operational staff or to public during transportation and operation of machines, the firm shall be exclusively and fully responsible for its cause and consequences.
19. The firm will provide fifteen copies of contract agreement & the log book/attendance register shall be maintained wherein the total record of running of vehicles/equipment should be maintained as per the direction of Engineer-in-Charge by the firm.
20. The supervisory/operational staff shall constantly maintain communication with the Engineer-in-Charge and work is to be carried out as per his guidance for running of machines and keep the machinery in perfect running order.
21. Firm shall ensure the periodical maintenance of the vehicles/machines to avoid/minimize the breakdown. In case of minor break down if the machine remains un-operated for more than three days, the firm shall be penalized Rs.1000/ per day from the day one. In the event of major break down/accident, the firm shall intimate to the Engineer-in-Charge in writing and also provide the alternative suction-cum-jetting machine of the same capacity and specifications.
22. All tools and spare parts required for routine and preventive maintenance shall be provided by the firm at his own cost.
23. Security/safety of equipment shall be responsibility of the firm.
24. For payment purposes, the initial reading and the final reading will be recorded on log sheet and is to be certified by engineer-in-charge for release of payment.
25. The chassis of the vehicle should not be older than one year from the date of issue of work order and suction -cum -jetting machines shall be brand new
26. The firm should have experienced manpower and repair facilities along with back up arrangements for maintenance, breakdown & repair etc.
27. Water to be used for jetting purposes will be supplied by the department free of cost from the nearest available filling point in the zone.
28. Disposal of sewage/sludge taken out from the sewer line shall be as per the decision of the department Engineer.

29. The suction-cum-jetting machine shall be painted in Royal Blue colour with writing on all sides 'On EMERGENCY DUTY OF DELHI JAL BOARD' under Delhi Govt. in EE(Name of the Division). The serial No. Of the machine should be displayed on the machine.
30. The meter for reading Kilometers (Kilometer -meter) of vehicle must be in working order all the time. No vehicle shall be taken on duty without Kilometer- meter working.
31. In case of any leakage from water/sludge tank or tanks without lids will not be taken on duty.
32. The firm will be absolutely and solely, responsible for any accident that may occur during the operation of vehicle/machine and for injuries or damage to the person or the property of any description ,whatsoever, which may be caused by or result from the operation of vehicle/machine for which the firm shall be liable at it's own risk and cost. The firm will take every necessary and timely precaution against injuries or accident to any person or property. In the event of accident to any person or persons or death or injury of any description to any person ,structure , animal or other things , the firm will be solely responsible for the same and will indemnify Delhi Jal Board (on behalf of whom the vehicles/machines are being operated) from paying any claim or expense whosoever on account thereof.
33. The contract in part or full can be terminated at any time without assigning any reason by the department by giving three months' notice without any liability on DJB.
34. The site of work shall be intimated on day to day basis or as and when complaint is received. The firm shall have to operate the machine at short notices irrespective of the quantum of work involved and difficult site conditions prevailing even on Sundays or on gazetted holidays as per urgent requirement.
35. Machine will be tested by the departmental engineers at the firm's works for the required duty points before engaging by the department. The cost of inspection will be borne by the firm.
36. Any other related work of opening of blockage from the sewer line will be done by the contractor, as this is a turnkey project.
37. The firm shall confirm to DJB standard terms and conditions and special terms and conditions a per requirement of the department.
38. The firm shall in all matter arising in the performance of the contract, confirm in all respects with the provision of any national or state stature, ordinance or other law or any regulation of Bye Law of any local or other duly constituted authority that shall be applicable to the work.
39. In case the work is checked by Chief Technical Examiner (CTE) , the payment against final bill and Earnest Money(as applicable) will be released only after clearance of CTE. Any action proposed by CTE will be binding to the firm.

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40. This contract shall be governed by the Indian laws for that time being in force.
41. Latest ISO certificate of the manufacturer of Vacuum Pump, Jetting pump and PTO valid till supply of equipments be submitted.
42. Manufacturer's Test Certificate for all the equipment is to be submitted by the firm to the Deptt.
43. Any point/clarification/conditions not covered above or discrepancy(if any), shall be dealt as per subsequent clarifications/amendments issued with the approval of the Competent Authority.

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