

DETAILED SPECIFICATIONS FOR

NAME OF WORK: Supply of Rescue Tools & Equipment for Fire & Emergency Services of Urban Local Bodies

Preamble:

There are numerous hydraulic rescue tools and equipment used in fire and emergency services for rescue purposes required for lifting, stabilizing, cutting, spreading etc. but there are no define Indian Standards and as such standards specified by National Fire Protection Association (NFPA) or European Norms (EN) are to be relied upon for construction, performance and testing of such life saving equipment.

The said specification is prepared with a view that the equipment given in the said documents formed as "One Complete Set" and thus procurement shall be done as "One Complete Set" by the purchaser.

Some of the general condition of the tender shall be as follows:

- 1) The Bidder should be registered firm / company and the date of incorporation of firm / company should be more than 03 years before the last date of submission of the tender documents.
- 2) Authorizations letter along with the test report for Rescue Equipment certified by the third party / authorized test lab should be submitted from the respective rescue tool manufacturers along with the tender documents.
- 3) The Bidder, if manufacturer should have an experience of supplying minimum half the number of quantity (set) mentioned in the tender in the last 5 years. If the Bidder is a dealer, then they shall have experience of supplying three times of quantity (set) mentioned in the tender from the principal manufacturer in the last 5 years.

Note:

1. Wherever makes of any equipment is given it shall always be read in continuation word "or equivalent"
2. Wherever the numerical is used indicating dimensions / measurement of any equipment or material, tolerance of +/- 10% shall be accepted.
3. Wherever the items / equipment is mentioned having NFPA or EN requirement, for all those equipment, proper third party certificate regarding the same shall be supplied by the OEM / Dealer.



TECHNICAL SPECIFICATIONS

Sr. No.	Description.
01.	Hydraulic Spreader 1. The hydraulic spreader shall comply with International Standards EN 13204 & NFPA 1936. CERTIFICATES SHOULD BE ATTACHED. 2. The tool should be able to perform spreading / pulling & squeezing operations as per relevant standards. 3. The tool should be hydraulically operated. 4. The Spreader weight should not be more than 20 kg. 5. The Spreading force for the spreader should not be less than 600 kN. 6. The Closing force should not be less than 120 KN. 7. The Spreading distance should be at least 720 mm. 8. The pulling force should not be less than 60 KN & pulling distance shall not be less than 550 mm. 9. The Max. operating pressure shall not be less than 700bar. 10. The spreader jaws shall open & close symmetrically. 11. The jaw tips shall be of multipurpose type for spreading, peeling, pulling and squeezing. 12. The arms should be made up of high strength aluminum alloy with wear-resistance finish. 13. The tools must have self-locking or mono couplings with dust cap. 14. The spreader should be supplied with set of pulling chains and pulling attachments
02.	Hydraulic Cutter 1. The hydraulic Cutter shall comply with International Standards EN 13204 & NFPA 1936 CERTIFICATES SHOULD BE ATTACHED. 2. It shall be hydraulically operated. 3. The tools shall be capable to perform cutting operation.





Sr. No.	Description.
	4. The minimum tip opening shall not be less than 200 mm. 5. The Cutter's weight shall not exceed 22 Kg. 6. The tool should have a cutting force not less than 1350 kN. 7. The blades will have a recess to enable the cutting of round steel bars of not less than 45 mm dia. 8. The Max. operating pressure shall not be less than 700 bar. 9. The cutter blades shall open and close symmetrically. 10. The blades shall be regrindable and easily replaceable. 11. Cylinder body and housing should be made of high strength aluminum alloy with wear resistant surface 12. The tools must have self-locking or mono couplings with dust cap. 13. The tools must comply all the requirements and safety features stipulated in EN 13204 and NFPA 1936 15. The Cutter should meet EN class 1K,2K,3K,4K,5K and NFPA class A9/B9/C8/D9/E9
03.	Hydraulic Comb Tool 1. The hydraulic Combi Tool shall comply with International Standards EN 13204 & NFPA 1936 CERTIFICATES SHOULD BE ATTACHED. 2. The tools shall be able to perform spreading & cutting operations. 3. The Tool should be Lightweight, compact and flexible 4. The cylinder body and housing should be made of high strength aluminum alloy with wear resistance surface. 5. Maximum spreading force should not be less than 1500 kN. 6. Cutting capacity in the recess shall be able to cut min. 35 mm steel bars, with cutting force up to 492 kN. 7. The pulling width should not be less than 250 mm. 8. The spreading distance should be at least 360 mm. 9. The Max. operating pressure shall not be less than 700bar.

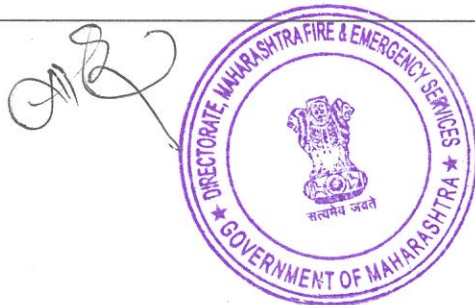




Sr. No.	Description.
	10. Weight of ready to use unit shall not be more than 21 kg. 11. The Blades should be made of high-quality tempered tool steel. 12. The tools must comply all the requirements and safety features stipulated in EN 13204 and NFPA 1936 13. The tool should meet EN class 1J,2J,3J,4J,5J and NFPA class A7, B8,C7,D8, E7
04	Hydraulic Telescopic Ram 1. The hydraulic Telescopic Ram shall comply with International Standards EN 13204 & NFPA 1936 CERTIFICATES SHOULD BE ATTACHED. 2. This tool shall be telescopic type and the extended height shall not be less than 1500 mm. 3. The retracted (insertion) height of the tool shall not be more than 650 mm. 4. The lifting capacity 1st plunger shall not be less than 230 kN. 5. The lifting capacity 2nd plunger shall not be less than 110 kN. 6. The weight of the ready to use tools shall not be more than 21 kg. 7. The Max. operating pressure shall not be less than 700bar. 8. The piston rods of the tools shall have hardened surface and hard chrome-plated finish. 9. The cylinder body should be made of aluminum. 10. The tool should have self-locking or mono couplings. 11. The tool must comply all the requirements and safety features stipulated in EN 13204 and NFPA 1936
05	Hydraulic Power Unit 1) The Hydraulic power pack and the hoses should have EN 13204 & NFPA 1936 approval. CERTIFICATES SHOULD BE ATTACHED 2) The power pack unit shall be of low weight, of compact dimensions.



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	3) The Power unit should be a 4-stroke petrol engine 2.2 KW of rugged construction. 4) It should be designed for connection and simultaneous operation of two rescue tools. 5) The Max. operating pressure shall not be less than 700bar 6) The weight of the power unit must not exceed 35 kg. 7) The power pack unit shall be equipped with quick connect couplings. 8) The hydraulic oil shall be non-toxic, environmentally friendly and shall be available in local market. 9) The Hydraulic Oil volume should not be less than 3.5 liters. 10) The Power unit should be supplied with 02 nos of 10 m hoses.
6	Hand Operated Pump 1) A lightweight hydraulic hand pump shall be offered as a standby unit for power pack to operate the tools. It should have EN 13204 & NFPA 1936 approval. CERTIFICATES SHOULD BE ATTACHED 2) The oil capacity shall not be less than 1500 cc and hand pump shall be capable of developing adequate pressure for operating all the tools including the telescopic ram to their full capacity. 3) It shall be possible to operate the pump even when placed in an inclined/vertical position. 4) The weight shall not be more than 14 kgs. 5) The hand pump unit should be supplied with 01 no. of 5 m hose.





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7	<u>Pneumatic High Pressure Lifting Bags:</u>																								
	1. Lifting bags should be lightweight, handy & thin with maximum insertion height of 25 mm for all size of bags.																								
	2. The operation of inflating the bags should be easy & fast.																								
	3. The bidder must submit test certificate complying to EN 13731: 2007																								
	4. The bag should have Aramide reinforcement for high flexibility & lower weight.																								
	5. The bags should be capable of using on all types of surfaces i.e. flat, uneven or sloping surfaces.																								
	6. The bags bursting pressure shall not be less than 48 bar																								
	7. The maximum operating pressure should be less than 12 bar.																								
	8. Maximum Lifting heights should not be less than & weight of the bags should not be more than following;																								
<table><tr><th>Sr No</th><th>Lifting capacity not less than (Metric ton)</th><th>Lifting height not less than (mm)</th><th>Weight not more than (kg)</th></tr><tr><td>1</td><td>30</td><td>299</td><td>10</td></tr><tr><td>2</td><td>50</td><td>393</td><td>16</td></tr></table>		Sr No	Lifting capacity not less than (Metric ton)	Lifting height not less than (mm)	Weight not more than (kg)	1	30	299	10	2	50	393	16												
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9.	The bags should have information and the warning labels in English language and in pictograms for clear understanding.																								
One set of airbags will comprise of the following: -																									
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THE COMPLETE SET WILL CONSIST OF FOLLOWINGS
(As per the detailed specification mentioned above) –

Particular		Quantity
A	Hydraulic Rescue tools	
1	Hydraulic Spreader	01 No.
2	Hydraulic Cutter	01 No.
3	Hydraulic Combi tool	01 No.
4	Hydraulic RAM	01 No.
5	Hydraulic Power unit with 2 X 10 mtrs hose	01 No.
6	Hand operated hydraulic pump with 5 mtrs hose	01 No.
B	Pneumatic Air Bags	
	Pneumatic Air Bags comprising of the following items:-	1 set
Sl	Description	Quantity
1	Lifting bag min 30 metric tons capacity	2 nos
2	Lifting bag min 50 metric tons capacity	2 nos
3	Pressure reducer 300 bar to 12 bar	2 nos
4	Dual controller in box with pressure gauges	2 nos
5	Air hose 10 mtrs. With couplings	4 nos.
6	Shut off hose with safety valve	4 nos.
7	Connection piece to connect two air cylinder	2 nos

TESTING & INSPECTION :-

- The Purchaser and or his authorized representative will carry out the inspection and the testing of the rescue tools at the factory premises of the manufacturer at the country of origin prior to dispatch. The entire to-and-fro travelling, local accommodation & all other incidental charges for local logistic support shall be included in the basic cost of the Rescue Tools to be supplied.
- ALL expenses of inspecting team members should be borne by the contractor. To and from expenses towards the travelling of the team members by minimum Railways A.C.-class II tier or Air fare to the nearest destination and local transport and local lodging and

boarding of optimum standards from the journey place to the works will be borne by the successful bidder and the offer includes all such expenses.

- It is obligatory on the bidder to provide all the assistance and equipment for the inspection and testing of the rescue tools at their premises.
- Vendor shall inform an inspection schedule well in advance if he intends to offer the Rescue Tools in batches for inspection to avoid wastage of time and effort of inspection team.

Warranty / Guarantee

- Warranty / Guarantee Period: - Warranty / Guarantee period shall be 1 year from the date of supply against any defect in workmanship or material /equipment
- Return of Security Deposit: - Total security deposit will be returned only after completion of the Warranty / Guarantee period of 1 year.

15. COMPREHENSIVE SERVICE MAINTENANCE CONTRACT (CSMC):

- The Contractor shall offer the rescue tools and equipment with three years COMPREHENSIVE SERVICE MAINTENANCE CONTRACT which includes the cost of repairing of equipment at periodic intervals or at the time of break down of rescue tools including the supply of original spare parts.
- The servicing of the rescue tools shall be carried out strictly as per the manufactures recommendations at periodic intervals.
- During the contract the rescue tools shall be checked periodically at the interval of every three months and all the test and checks shall be carried out as per manufacturers recommendations.
- The spare parts used at the time of periodical servicing shall be original and brand new.
- Any break down of the rescue tools shall be attended within 72 hrs. from the time of intimation of break down (telephonic / written) to the contractor.
- The servicing and repairing of the rescue tools shall be carried out either at the purchasers premises or at the authorized workshop of the manufacturer.

