



**DIRECTORATE GENERAL  
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,  
ODISHA**

**SHORT TENDER CALL NOTICE  
NO.-7/2020-21.**

1. Sealed tenders are invited from the original equipment manufacturer (OEM) or their authorized agent/ dealer for purchase of different types of equipment during 2020-21. The details of equipments with requirement are as follows.

Sl No.	Name of the item	Approximate Quantity
1	Portable Pump (1300 LPM)	84 Nos
2	Equipment Rack	18 Nos
3	Fire Fighting Mist Pump	28 Nos

2. The tender document with detail technical specification may be seen from the state website [www.odisha.gov.in](http://www.odisha.gov.in) and Odisha Fire Service website [www.odishafshgscd.gov.in](http://www.odishafshgscd.gov.in). The tender document may be obtained by depositing `300/- (Rupees three hundred) only between 11.00 A.M to 5.30 P.M each working days from the office of the undersigned at the address given below or downloading from state website and should be submitted duly signed in each page of the tender document with seal in token of having read understood and accepted the terms and conditions of the contract in the address given below. The tender should be submitted in prescribed format along with a Demand Draft Non-A/C payee of `300/- (Rupees three hundred) only payable at SBI, Main Branch, Cuttack (Code No-0059) in favour of D.D.O, Directorate General of Fire Services, Odisha, Cuttack, towards the cost of tender paper in case of firms submitted tender by downloading the tender document from website. However, the authorities shall not be responsible for postal or any other delay.
3. The bidder has right to quote any one of the item and it is not mandatory to quote all items mentioned in the tender.
4. Bids submitted other than the manner prescribed in the tender document shall be rejected.
5. The Tender Calling Authority has right to accept or reject the tender(s) without assigning any reason thereof. The bidder should drop the sealed tender packet in the "Tender Box" available in the office of the undersigned by the stipulated date and time at his own risk and responsibilities.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**  
**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

Page 2 of 2

6. Sale of tender document w. e. f. dt.13-02-2021.
7. Last date for sale of tender document dt.01-03-2021, 5.30 P.M.
8. Last date for receipt of tender document dt.01-03-2021, 5.30 P.M.
9. Date for opening of tenders/Technical Bids dt.02-03-2021, 11.30 A.M. onward.
10. Date of **Technical Committee** for evaluation of samples dt.**03-03-2021, 11.30 A.M** onwards at O/o the Chief Fire Officer, Kanika Chhak, Odisha, Cuttack.
11. The bidders are required to depute their representatives to remain present during opening of Tender/ Technical Bid as per dates mentioned above.
12. The tenders received after the stipulated date shall not be taken in to consideration and liable for rejection.
13. The tender calling authority has the right to cancel or alter quantity of any of above item without assigning any reason thereof.
14. Address.  
Directorate General of F.S, H.Gs & C.D,  
At-3<sup>rd</sup> Floor of Vigilance Directorate,  
Nuapatna, Cuttack, Pin-753001  
FAX-0671-2300201/ 2303387.



**I.G of Police, Fire Service,  
Home Guards & Civil Defence,  
Odisha, Cuttack.**

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Address - 3<sup>rd</sup> Floor, Vigilance Building, Nuapatna, Buxibazar, Cuttack-753001  
Tel. - 0671-2300317, Fax : 0671-2300201,  
E-mail : [dfoprov-ofs@gov.in](mailto:dfoprov-ofs@gov.in), [afoprov-ofs@gov.in](mailto:afoprov-ofs@gov.in)

**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**



**DIRECTORATE GENERAL  
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,  
ODISHA**

Letter No. \_\_\_\_\_/Prov., Dated. -02-2021.

To

M/s

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIFFERENT TYPES OF EQUIPMENTS FOR ODISHA FIRE  
SERVICE ORGANIZATION DURING THE  
FINANCIAL YEAR 2020-21.**

**DIRECTORATE GENERAL  
FIRE SERVICES, HOME GUARDS & CIVIL DEFENCE,  
ODISHA**

Certified that the book contains Page- 1 to 19.

1. Sale of tender document W.e.f - dt.13-02-2021
2. Last date for sale of tender document - dt.01-03-2021, 5.30 P.M
3. Last date for receipt of tender document - dt.01-03-2021, 5.30 P.M
4. Date of opening of sealed Tender/  
Technical Bids. - dt.02-03-2021, 11.30 A.M
5. Date of Technical Committee for  
evaluation of samples - dt.03-03-2021, 11.30 A.M onwards  
at O/o the Chief Fire Officer, Kanika  
Chhak, Odisha, Cuttack.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
TENDER DOCUMENT NO-(I)**

**GENERAL CONDITIONS OF THE CONTRACT.**

1. The bidder/supplier should either be an Original Equipment Manufacturer (OEM) or their agent /dealers authorized to sell, supply and service their products. The latest authenticated documentary proof of this shall be submitted. The proof submitted earlier in some other context shall not be treated as valid and sufficient.
2. All the information as called for in the tender document should be submitted truly, clearly, legibly, transparently, unambiguously and without the use of abbreviations. It shall be submitted in English.
3. All the crucial figures, like, rates and amount should written in figures followed by words in a bracket.
4. There shall be no over writing in the tender document and other papers submitted.  
All the addition, alterations, deletions and cuttings should be initialed with rubber stamp (or seal) by the same person, who signs the tender document. Failing so, the tender may be rejected.
5. The tenders (also call bids) not submitted in prescribed format or in the prescribed manner, shall be rejected at the risk and responsibility of the bidder.
6. All the rates and amounts shall be quoted in Indian Rupees (IR) and shall be presumed to be in Indian Rupees unless specifically permitted to be quoted otherwise in these tender documents.
7. The rates quoted shall be valid for a period of one year counted from last date of receipt of bids/ tenders.
8. Each page of this tender document should be signed by the bidder with seal in token of having read, understood and accepted the terms and conditions of this contract.
9. For the Companies and Corporation making the bids, the tender document shall be signed by the Managing Director. If it is otherwise, the authority to sign the tender papers on behalf of the Company/Corporation shall be enclosed. In case of partnership Firm, it shall be signed by the active partner. In case of a Proprietary Firm, the tender document shall be signed by the proprietor.
10. "Legal Status" of a bidder shall mean either proprietorship or partnership of private/Public limited Company or otherwise (to be specified) as the case may be.
11. All the documents and papers submitted with the bid should either be in English or in Oriya and shall be authenticated under the seal and signature of the bidder unless specified otherwise in this tender document. If the documents are in any other language, a true translation in English, duly certified by an independent person of repute, shall be submitted.

## SHORT TENDER CALL NOTICE NO.-7/2020-21.

### DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

12. All the promotional and technical literature of the products intended to be supplied should be submitted for proper appreciation of the bid, whether or not specifically call for in this tender document. This literature should also be in English.
13. Submission of more than one competitive bid by the same firm in response to the tender call notice is prohibited. All such bids, except one, will be cancelled at the discretion of the authority calling the bids. A bidder may, however, offer in his bid more than one product of the same Original Equipment Manufacturer (OEM) if in his opinion, all such products meet the prescribed technical specifications. In that case, he should submit "Technical Bid" of all such products separately but in the same prescribed format, in the same sealed single cover. Separate "Financial Bids" should also be submitted similarly in the same sealed single cover (see below for the meaning of sealed cover).

#### NOTE

- i) A bidder can not bid the same item for more than one OEM firm.
14. The bidder may use separate piece of paper, where the space provided in the formats in this tender document for submission of information, is not sufficient. The information in the separate sheet of paper shall be prescribed format and each page should be serial numbered and duly authenticated.
15. All the information submitted or supplied in the formats in this tender document shall be presumed to be true to the best of knowledge of the bidder.
16. No firm/Company without valid Value **GST Registration number** and PAN shall be eligible for submitting bids. Firms blacklisted shall also not be eligible for participating in the bid.
17. Copy of Valid Registration Certificate issued by competent Authorities under the **GST Act** and copy of PAN shall be enclosed to the Tender document. In no case other certificates issued by authorities in lieu of such certificates shall be accepted.
18. Copies of income Tax return and Annual VAT and CST returns of previous year along with copies of Audited Balance Sheets, P/L a/c and Trading a/c of previous year where ever applicable need also be enclosed to the Tender document by the Original Equipment Manufacturer / Authorised Agent of OEM.
19. At the time of opening of Tender/Financial bid the bidder will have to satisfy the competent authority that he is not only authorised as per his Registration Certificates to deal in the tendered item but he has also a running business in such items and he has the ability to supply the tendered quantity in prescribed time limit and to meet the warrantee conditions of the product.
20. The Bid Security/ Earnest Money Deposit (EMD) shall either be in the form of Demand Draft/Banker's Cheque of a scheduled Bank payable at Cuttack or by pledging of NSC/FDR/Postal Saving Pass Book all in favour of D.D.O, Directorate General of Fire Service & Home Guards & Civil Defence, Odisha, Cuttack. EMD shall be returned immediately after the rejection of a Bid. The DD/Banker's

## SHORT TENDER CALL NOTICE NO.-7/2020-21.

### DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

Cheque/NSC/FDR/Postal Saving Pass Book etc. shall be returned in original with or without reverse endorsement as required for the refund. EMD of the successful bidders shall be retained till the supplied materials/articles are successfully delivered as ordered or adjusted against performance security. After that it shall be returned in the same manner as in the case of unsuccessful bidders.

21. This tender document has prescribed a two bid format for submitting the offers. It contains the "TECHNICAL" and 'FINANCIAL' bid formats. Both the bids shall be submitted in separate sealed cover identified as 'TEHCNICAL' or 'FINANCIAL' bid after detaching their formats from this tender document. Both the sealed covers, the remaining part of this tender document and all the other papers/documents should be put inside a bigger sealed cover and shall be delivered as per conditions published in the tender call notice. All the sealed covers shall have boldly written with the name of the supplier/bidder, the tender call notice number and the last date for submission.
22. The tenders or the bids can be sent by Regd. Post or courier as well. However, the authorities shall not be responsible for the postal and other delays in receipt of bids. The Tenders/ Bids can also be dropped in the sealed "Tender Box" kept in the office of the Tender Calling Authority.
23. If the last date for submission of the tender/bid turns out to be a holiday, it will automatically be extended to next working day.
24. The tender calling authority shall make arrangements in his office for issuing a written acknowledgement, under proper seal and signature of the filled in tenders, provided those are submitted on or before the due date. The acknowledgement shall be issued even if the tenders are required to be dropped in a sealed box. The acknowledgement receipt shall mention, among others, the tender call notice number.
25. A bid submitted can not be withdrawn. The bidder or his authorized representative (one person only) will be allowed to be present at the time of opening of tenders. They will not participate in the discussions. Clarifications sought, if any, may be provided by them.
26. All or any of the tenders (or bid) submitted can be rejected without assigning any reason thereof. No claim, whatsoever, shall be admissible for; the alleged loss/damage suffered by the bidders on account of such rejections.
27. The sealed Tenders and Technical Bids shall be opened by the Technical Committee in 1<sup>st</sup> stage. The documents like EMDs, GST Regd. No. etc shall be verified to ensure that the bidders have been found to have fulfilled all the prescribed criteria and conditions of this tender document other than technical specifications of the products.
28. All the products, failing to fulfill the prescribed technical specifications, will be rejected. Decision of the Technical Committee in this respect shall be final and binding. A bidder can improve the technical specifications of the product offered

## SHORT TENDER CALL NOTICE NO.-7/2020-21.

### DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

before the opening of 'Financial Bid'. Decision of the Technical Committee on, whether or not, the revised specification is an improvement, shall be final. Improvement in the technical specifications offered as above, may be accepted or rejected at the discretion of the Tender Calling Authority.

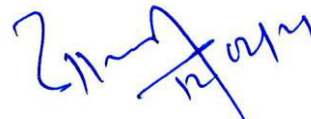
29. Notwithstanding an offered product meeting the prescribed technical specifications, it may be rejected, if it has not been tried and tested or used in Orissa Fire Service with satisfaction. It may also be rejected if the bidder fails to successful demonstration before the Technical Committee.
30. 'Financial Bids' shall be opened only in those cases, where one or more of the offered products have fulfilled the prescribed technical specifications. No preference or extra payment shall be admissible for the superior technical specifications or quality of the like if any. All the financial documents like Registration Certificate issued under GST Act and IT Acts, IT, S.T returns, Audit Balance Sheet, Trading Account and P/L Account shall be verified at the time of opening of Financial Bids.
31. All the prices quoted shall be FOR Cuttack, Odisha. This means that the prices shall include the cost of delivery at Cuttack.
32. The authorities are not bound to accept the lowest Financial Bid.
33. The order for supply may be placed on the successful bidders but the technical specifications (or quality requirements) for the purpose of supply shall be those, which were offered and accepted by the Technical Committee and not those specified in the tender document.
34. On delivery, the supplies or products shall be inspected to verify the quantity and to see whether those are in accordance with the technical specifications (or quality requirements) for which the order was placed. If it turns out to be otherwise the acceptance of delivery shall be refused at the risk and responsibility of the supplier. Further, the articles found damaged shall not be counted as accepted until repaired or replaced to the satisfaction of the authority.
35. Short deliveries may not be accepted. All the items ordered must be supplied in full for claiming even the part payment.
36. All the transit risks shall be the responsibility of the supplier.
37. User manuals of the product shall be supplied without being asked for or even if it is not mentioned in the supply order. Moreover, it should be in English.
38. Failure to supply the order in full within the stipulated period or supply of substandard goods may lead to forfeiture of EMD and blacklisting of the suppliers. If at all the delivery is allowed to be accepted after the due date, Liquidated Damages (LD) @ 0.5% of the total amount of order (excluding taxes) per week or part thereof shall be charged from the bidder, however, that the L.D. shall not exceed 5% of the amount of order.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

39. The supplier shall submit an undertaking given by him or the OEM committing to supply spare parts for the maintenance of the supplied items for a period at least 18 months from the date of supply.
40. The supplier shall give a "Performance Warranty" for a minimum period mentioned in the special condition or one year of the contract. 5% of the amount of the order (excluding taxes) as mentioned in the special conditions of the contract shall be deposited in shape of FDR/Irrevocable Bank Guarantee duly pledged in favour of Tender Calling Authority and shall be returned after the performance warranty period is over. The said amount may be forfeited partially or fully for failure to fulfill the terms and condition of supply and post sales commitment/obligations. The Bank Guarantee should be enforceable and payable at Cuttack. The Performance Security should remain valid for a period of 60 days beyond the date of completion of the obligation of the supplier including warranty obligations.
41. The bidder must submit in a separate paper mentioning "complied or not complied" against each column of the Tender Specification given in the Tender document.
42. Terms and conditions of this tender document can not be negotiated for variation without obtaining the prior approval of the Govt.
43. All the clarifications sought from the bidders/suppliers on technical specifications of the products or otherwise shall be promptly submitted in a transparent and unambiguous manner.
44. Entire tender document duly filled in shall be treated as part or the contract agreement for supplies in case of the successful bidders.
45. All the disputes shall be subject to jurisdiction of Civil Courts situated at Cuttack.
46. The bidder shall submit all required documents along with tender. Under no circumstances a bidder would be allowed to make any addition/ alteration if any, related to tender or to submit required documents after receipt of the tender by the tender calling authority.

**Seal & Signature of the Bidder**



**I.G of Police, Fire Service  
Home Guards & Civil Defence,  
Odisha, Cuttack.**



**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**TECHNICAL BID**

<b>SL.NO.</b>	<b>NAME OF THE ITEMS.</b>	<b>WHETHER OFFERED PRODUCTS FULFILLS THE DETAILED TECHNICAL SPECIFICATIONS KINDLY ANSWER YES OR NO ONLY.</b>	<b>OFFERED SPECIFICATIONS AND DETAILS OF VARIATIONS IF ANY.</b>
<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

**Signature & Seal of the Bidder.**

**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**FINANCIAL BID**

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**NAME OF THE ITEMS..... PER UNIT IN INDIAN RUPEES**

1. Price including all the duties & levies :
2. Basic Unit Price :
3. IGST @ - % - :
4. CGST @ - % - :
5. OGST @ - % - :
6. Other Charges (To be specified)
7. Total Unit price of the Item :
8. Total amount payable for supply of  
entire quantity of the item mentioned  
in the tender document. :
9. Name of the Original Manufacturers and  
The brand name or trademark of the item :

**Signature & Seal of the Bidder.**


**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**GENERAL BID FORM**

**(SHORT TENDER CALL NOTICE NO.-7/2020-21)**

1. Name, Full Address, Fax No.  
Telephone No. & E-Mail of the firm. :
2. Legal status of the firm :
3. Items for which you have submitted  
the Bid :
4. For which of the items above you are the  
ORIGINAL EQUIPMENT MANUFACTURER  
(OEM) :
5. Give the location and Address of your  
Factory. :
6. For the items listed at (3) above and  
where you have submitted the bid but  
you are not the O.E.M. indicate against  
each the names of the O.E.M :
7. Kindly confirm by writing 'yes' or 'no' only  
that you have been authorized by the  
respective O.E.Ms either as dealer or as  
sale, supply and servicing agent in respect  
of the items you are not the (OEM) :
8. Which of the items, you have submitted  
the bids for, will be fully or substantially  
imported. Indicate the country to be  
imported from. :
9. Have you enclosed the EMD? If yes,  
mention the amount and its identifying  
details.
10. Have you enclosed all the documents  
and papers called for in this tender  
document? Kindly enclose a list(use  
a separate sheet of paper) :
11. If the answer to (10) above is 'No' which  
is the documents/document have not been  
enclosed.(Kindly enclose a list of such  
documents/papers).Use a separate sheet  
of paper if necessary. :
12. Do you have a post sales servicing,  
center in Odisha? If yes, give its name,  
full address, Fax and Telephone numbers.

**Seal & Signature of the Bidder**

  
**I.G of Police, Fire Service,  
Home Guards & Civil Defence,  
Odisha, Cuttack.**

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**  
**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**SPECIAL CONDITION OF THE CONTRACT.**

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**TENDER DOCUMENT NO. (II)**

1. The Special Conditions given here shall prevail over the General Conditions.
2. **Bid Security:** - The tender document shall accompany with Earnest Money Deposit (EMD) at the rate quoted at Col-5, Para-3 without which tender shall be rejected. The EMD deposited instrument should be available outside the sealed covers of "Technical" and "Financial" Bid. (EMDs available in the Technical Bid also be accepted). However the MSEs registered in Odisha with respective DICs, Khadi Village, Cottage and Handi craft Industries, OSIC and NSIC shall pay 25% of the prescribed security deposit while participating in tender.
3. **Quantity:** - Sealed Bids in this tender document have been invited for the supply of the items listed below. The approximate quantity required has been mentioned against each. The detailed technical specifications of each item are available in the **Annexure-'A'** to "Special Conditions of the contract" identified against each.

Sl No.	Name of the item	Approximate Quantity	Technical Specification	E.M.D Value
1	2	3	4	5
1	Portable Fire Pump (1300 LPM)	84 Nos	Technical Specification as Annexure-A	`8,40,000/-
2	Equipment Rack	18 Nos	-- do --	`1,800/-
3	Fire Fighting Mist Pump	28 Nos	-- do --	`3,92,000/-

4. The quantities mentioned above are subject to variations. The rates quoted per Unit shall continue to be valid even if the quantities of items mentioned above are varied. Further, the bidder should certify that the rates quoted by it or any item listed above shall remain valid subject to variation in any Govt. Tax Structure on the same (i.e. base price of the item quoted shall remain valid irrespective of variation in the Tax Structure) for a period of one year from the date of finalization of the rate by the Purchase Committee.
5. It shall not be necessary to bid for all the items above.
6. The bidder shall submit along with this tender document a list of names, complete address, Telephone/FAX number of the customers to whom, the

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

item, for which the bid has been submitted, have been supplied and installed in last three year, if any. A clear, unambiguous statement shall be made if an item has not been sold anywhere in India so far.

7. The supplies shall be delivered at Cuttack.
8. Working of the equipment shall also be demonstrated and the expenditure incurred thereof shall be borne by the supplier.
9. The supplier shall train at their cost our employees.
10. **Performance Security:** - The successful bidder shall have to enter into an agreement with the Tender Calling Authority for successful completion of supply/ installation of the tendered items after proper inspection within the stipulated period and also for performance warrantee of the items from the date of supply/ installation up to a period of one year. In this regard the selected firm shall have to deposit 5% of the cost of stores excluding taxes as security deposit called as Performance Security in shape of FDR/ irrevocable Bank Guarantee duly pledged to the Tender Calling Authority which will be returned back after performance warrantee period is over. The Performance Security should remain valid for a period of 60 days beyond the date of completion of the obligation of the supplier including warranty obligations.
11. All the supplies made shall be subject to a minimum period of one year warrantee for all items.
12. OEMs/ Authorized venders should mention the price of the quoted tender items including respective period of AMC cost as mentioned in the specification. The basic price of quoted items mentioned in the Financial Bids of OEM/ Authorized Vender should be treated along with the AMC Cost.
13. Other things being equal, preference shall be given to a bidder, who has opened his sale and service center in Odisha.
14. If an equipment or supply goes out of order within the warranty period and the supplier is informed above it, It must be attended to within 48 hours counted from the time the service call is placed.
15. **Payment:** - No advance shall be paid. 100% of the payment will be made on delivery of supplies after successful installation and demonstration.
16. The firms located outside the State of Odisha should include their transportation charges with the basic price.
17. Entry Taxes, if any should be clearly indicated in the tender. The amount if paid by the party should be supported with documentary evidence, failing which the said amount shall be deposited by way of Treasury challan.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

18. The bidder must attend the Technical Committee with samples for evaluation/ demonstration purpose. Without sample the offer will be not taken into consideration.
19. Before under taking the final contract the successful tenders will have to enter into an agreement with the department at their own cost in Govt. stamp paper.
20. **Sample:** - The tender shall accompany samples of the items quoted. No rate shall be quoted without furnishing the sample. In case the rates are quoted without samples, the tender is liable for rejection. The parcel containing samples should be freight paid. A label with seal and the details of manufacturing unit/ company with trademark of the articles so tendered, if any should be affixed to the sample. The label should contain a reference to the serial number of the articles quoted/ indicated in the tender. In respect of all ISI products mentioned in the tender the relevant ISI mark shall be printed on the sample. For each item not more than 2 (two) variety of samples shall be submitted by a vender.
21. As regards ISI marked, the attested copies relating to valid Registration of IS number of the item, if obtained from Indian Standard Bureau, New Delhi are to be enclosed.

**Seal & Signature of the Bidder**



**I.G of Police, Fire Service,  
Home Guards & Civil Defence,  
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**SHORT TENDER CALL NOTICE NO.-7/2020-21.  
DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**Annexure-A.**

**TECHNICAL SPECIFICATION OF DIFFERENT TYPES OF EQUIPMENTS FOR  
ODISHA FIRE SERVICE ORGANIZATION VIDE SHORT TENDER CALL  
NOTICE NO.-7/2020-21.**

<<<>>>

**1. PORTABLE FIRE PUMP (1300 LPM).**

The portable pump shall be CE certified as per EN 14466 & shall have minimum output of not less than 1300 LPM (343 US GPM) at 7Kg/cm<sup>2</sup>. The detailed technical specifications are mentioned below.

**i). Engine:-**

The engine shall be petrol driven, four stroke of minimum 37 HP engine power and minimum rotational speeds of 3600 RPM, Air or Water Cooled of sufficient capacity to deliver rated output of minimum 1300 LPM (343 US GPM) at 7Kg/cm<sup>2</sup>. Engine shall be of reputed make. Design of pump & selection of engine shall be such that rated duty point is achieved at optimum capacity (hp) of engine for best overall efficiency & thereby avoiding unnecessarily high powered engines than required. The engine exhaust is arranged so as to discharge the gases as far as possible from the pump operational position.

**ii). Fuel System:-**

A fuel tank of suitable capacity shall be provided for a minimum Continuous run of not less than one hour without re-fueling. The fuel tank shall be one piece & shall not be welded at all. Cap of fuel tank shall be sufficiently sized for easy refueling. Fuel breather shall be incorporated in fuel cap itself.

Material of fuel tank shall be such that it shall protect inside fuel from radiated heat generated by engine, exhaust manifold & silencer thereby maintaining inside fuel temperature in safe range even in prolonged working. A low fuel level warning provision on the control panel shall also be provided.

**iii). Pump:-**

- (a) The pump shall be CE certified centrifugal type, and single stage with self adjusting Mechanical seal. Entire pump along with its priming system shall be made of Stainless Steel (ASTM A 351 Gr. CF-8). A drain plug provision shall be provided at the bottom of the casing for complete drainage of water in the casing. The pump shall have output of not less 1300 LPM (343 US GPM) at 7Kg/cm<sup>2</sup> while working at 3 Mtrs. Suction lift at NTP conditions. All parts, which come in direct contact with water, shall be of corrosion resistance material or to be treated for corrosion resistance.
- (b) The pump shall be provided with male round threaded suction eye with standard 100mm suction connector complete with blank cap and S.S. chain. Pump shall have two delivery valves with 63mm male instantaneous

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

Connections with screw down valve having hose pressure relief knob and blank caps fitted with S.S. Chain.

- (c) The overall dry weight (without Battery, engine oil, fuel and water) of the portable pump (complete unit) shall not exceed 140 kgs (+/- 5 kg). Overall design shall be compact which can be carried by two firemen and Positioned close to the fire even in narrow and rugged places.

Overall dimensions shall not exceed length 720 mm x Width 580 mm x Height 700 mm.

- (d) The pump tested by manufacturer at hydrostatic pressure test with 1.5 times the rated output pressure for 5 minutes, and there shall be no leakage. Pump shall be tested for performance i.e. Discharge capacity at a suction height of 3 meters at NTP condition.

**iv). Primer: -**

A suitable priming system shall be provided. Primer shall be capable of lifting water from 7 meters depth in less than 24 seconds when connected by 4 length of suction hose of 2.5 meter each (100 mm dia.). Depth measurable from the eye of the impeller to surface of water. Primer shall be button operated & engagement through mechanical linkage shall not acceptable.

All parts, which come in direct contact with water, shall be of corrosion resistance material or to be treated for corrosion resistance.

**v). Electrical System: -**

An electric starter and back - up recoil starter shall be provided for quick starting of engine under any conditions. The pump shall be provided with a 12 Volt system. The low maintenance battery of sufficient capacity to be provided for the easy start in cold climate.

**vi). Frame Work: -**

The combined unit being permanently mounted on a stainless steel carrying frame having four spring loaded lifting handles folding inside and lockable in various position and easily carried by two persons.

**vii). Control & Instrumentation: -**

The pump shall be fitted with the following and other necessary controls, instruments that are conveniently grouped on the control panel or at suitable visible location.

- (a) Compound gauge (suction)
- (b) Pressure gauge (delivery)
- (c) On /off switch
- (d) Low Fuel level indicator /alarm
- (e) Ignition indication lamp
- (f) Throttle
- (g) Push buttons for primer engage/dis-engage
- (h) Flood light
- (i) Run Hours Meter



**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**viii). Workmanship and Finish: -**

All parts of the unit shall have good workmanship. The pump shall be painted in fire red color except the parts built of stainless steel namely, tubular frame work etc.

Following points must be checked for better workmanship -

1. Control panel shall be ergonomically designed considering ease in operation.
2. Lifting handles shall be located in such a way that entire equipment can be lifted by two persons without fatigue.
3. Fuel tank shall be single piece & not welded at all.

**ix). Marking: -**

Pump unit shall be clearly and permanently marked with the following information.

- (a) Manufacturer's Name
- (b) The discharge capacity of pump in Litre/ min
- (c) Weight of the pump set
- (d) Year of manufacture.
- (e) Serial Nos. and types of engine & pump
- (f) Short instruction for operations of the pump set
- (g) CE marking on the pump

**x). Primer Test: -**

Pump shall be capable of lifting water from a depth of 7.0 meter in less than 24 seconds at NTP conditions when connected by 4 lengths of suction hose of 2.5m each {100mm dia.}. (The depth will be measured from the eye of the impeller to surface of water).

Calibrated stopwatch shall be used for measuring priming time. Stop watch shall ON immediately after pressing priming button till water is out from delivery outlet.

**Note:** - Allowances to suction height shall be applicable as per IS 12717.

**xi). Accessories: -**

The following accessories shall be supplied with each unit and offer price shall be inclusive cost of these accessories.

Sl. No.	Name of the item / pump accessory	Quantity
1	Tool kit comprising of all essential tools required for normal maintenance of the pump.	1No.
2	Search light	1No.
3	PVC suction hose of 4" (100mm)x2.5 meters	4No.
4	Gun metal suction strainer of 4"(100mm)	1No.
5	Basket strainer	1No.
6	Universal suction wrenches for suction hose.	2No.
7	Gunmetal suction adapter (100mm x 63mm Inst.)	1No.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**  
**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**xii). Operation & Maintenance Manual: -**

Operation & Maintenance manual shall be provided along with each pump with a fully illustrated booklet and item wise spare part lists

**xiii). Inspection & Testing: -**

Pump shall be endurance tested for 2 continuous hours at rated duty point of 1300 LPM at 7 kg/cm<sup>2</sup> at NTP conditions. Geodetic suction height shall be 3 meters from the centre of pump impeller. Allowances as per IS 12717 shall be applicable as & where required. During the test, engine coolant, engine oil or pump oil shall not be changed. If engine is water cooled, cooling water temperature shall not exceed the permissible limits.

After every 50 minutes, engine shall be allowed to shut down for refueling. The cost of fuel shall be borne by the supplier.

Deep lift priming test shall be immediately conducted after endurance test as per clause No. 10.

**xiv). Warranty: -**

The pump supplied shall be subjected to warranty period of minimum one (1) year from the official acceptance date.

**xv). Other Important Condition: -**

Bidder shall confirm in writing to provide back up support for essential spares for 10 year.

**2. EQUIPMENT RACK: -**

- Height 6 feet, Width 4 feet, Breadth 18 inch and 4 Nos parallel shelves including lower and upper.
- Each shelves should be equidistance from there adjacent one 25 mm × 3 mm size supporting flats are used in between the two channel.
- 30 mm × 5 mm size channel should be used for the outer side of each self.
- 35 mm × 5 mm size channel should be used for four vertical columns.
- The bottom self should be so placed that it will have 6 inch distance from the floor so that the bottom end portion of each vertical columns of the rack will support the whole rack to avoid tilting/ falling.
- The whole construction should be strong enough to with hold the weight of the hoses/ equipment i.e. to be stored in it.
- The rack should be painted with one coat red oxide and two coating of enamel paint (Gray Colour).
- Three 25 mm × 3 mm size flats shall be used parallel with the channel i.e. used for outer side of each self. So that gaps in each self will allow to flow the drained water for used hoses.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**3. FIRE FIGHTING MIST PUMP.**

**1. WATER MIST FIRE FIGHTING SYSTEM.**

The water mist fire fighting system shall have a filling volume of minimum 300 liters of water and 50 Liters of foam. It should be designed to be mounted on most pickups and other small vehicles. It should have minimal requirements of space and weight while optimizing on manpower requirement and minimizing the water and other collateral damage to negligible in comparison to conventional water tender. The unit design shall incorporate foam induction system which provides variable foam dosing and suction of water from an external source for direct fire fighting or filling of the tank.

**a). SPECIFICATION/ DETAILS OF UNIT.**

Weight of empty 300 lts. Unit-	-< 150Kgs.(Max)
Max Measurements of the unit (in mm).-	-As compact as possible.
Usable water capacity-	-300 Ltrs (Minimum)
Usable Foam capacity-	-50 Ltrs (Minimum)
No. of deliveries-	-2 Nos.

**b). MAIN EXTINGUISHING GUN.**

Flow Rate.-	-22 lts/ min ( $\pm 5\%$ ).
Weight of extinguisher gun.-	-2 kgs Max.
Gun Dimensions.-	-As per compact as possible.
Working pressure on the nozzle.-	-100 bars Max with normal reaction.
Throw.-	-Jet: not less than 15 mtrs. ( $\pm 10\%$ ) Spray: not less than 6 mts ( $\pm 10\%$ )
Hose reel-	-60 mtrs (Standard) on manual drum.
Max. set operation pressure.-	-100 bars.
Starter.-	-Electric starter with provision of pull cord over-ride.
Level indicator.-	-Mechanical.

**c). MAIN PUMP.**

The pump should be capable of suction of water from tank or open source and to maintain adequate discharge rate and pressure for operation of nozzle at optimum efficiency.

- Maximum Pressure. -100 bars.
- Minimum flow. -38 lmn.
- Power of the engine. -Not less than 13 BHP.
- Fuel. -Unleaded petrol.
- The pump shall be UL/CE marked.
- Priority will be given in technical assessment to equipment with upgraded/ advance features.

**d). ENGINE.**

The primer mover for pump shall be 4 stroke Petrol driven engine and shall have compatible electrical and lubrication system. The engine should

## SHORT TENDER CALL NOTICE NO.-7/2020-21.

### DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.

preferably be on 12 Volt Battery for which adequate charger shall also be provided. Suitable electronic instruments shall be provided on the body of engine/ panel for fuel level, battery and temperature.

#### e). FOAM INDUCTION.

A suitable means shall be provided for induction of foam tank so that protection for single or double delivery remains constant and foam quality is maintained.

Size of foam tank.- -50 Lts (Min) (Included in the water tank and rested from the water tank which will remain with 300 ltrs).

Maximum Induction.- -6% (Foam 0.5 to 6 adjustable).

#### f). ACCESSORIES.

Electric Starter (Enabling the unit to be Electrically started) -1No

Additional Hose length of 30 mtrs with Drum. -1 per set.

Aqueous Film Forming Foam (AFFF) - 50 Ltrs (filled in the foam tank and 50Ltrs spare).

Tool kit comprising of 1 no, Adjustable Spanner 12"-1 No. Cutting plier- 1 No, Flat Spanners-1 Set, Adjustable screw driver-1 Set, Suction key-1 Set and other special tools as per the requirement of the unit.

#### g) DESIGN & DEVELOPMENT.

i. Equipments details.

ii. The Water Mist Fire Fighting System will be a self driven fire fighting unit operated with inbuilt Petrol Engine coupled to a pump and attached with a reducer & Hose pipes, Mist generating Guns.

iii. Water Mist System shall be capable of carrying 300 ltrs of water and foam tank of 50 made of GRP shape T (In order to reduce the gravity centre of the vehicle) and for AFFF a separate system to pump and mix the required ratio, which can be discharged in the foam of a mist from a gun.

iv. The discharge gun shall be of light weight having stainless steel nozzle capable of producing Water Mist with the ability to control the discharge in short burst and long shots.

v. The size of mist particle shall be in the range of 150 to 300 microns.

vi. A suitable pressure reducer with a safety valve, capable of reducing to a low pressure not more than 100 bars & jerk free working pressure shall be incorporated. The main vessel shall be corrosion free.

vii. The foam required shall be Aqueous Film Forming Foam (AFFF).

viii. The unit shall have adequate provisions for safety of the system.

#### h). SAFETY DEVICE.

The following safety devices shall form part of equipment.

(i). The system shall be provided with pressure safety valve.

(ii). The system will have proper heat & exhaust outlet for the engine without causing any interference to the operator while operating the unit.

(iii). Any other safety device which is felt to be necessary to be a part of the equipment.

**SHORT TENDER CALL NOTICE NO.-7/2020-21.**

**DIRECTORATE GENERAL F.S., H.Gs & C.D., ODISHA, CUTTACK.**

**i). MAIN WATER TANK.**

The water tank shall be made of GRP giving a free corrosion for life and a lightweight of the WATER MIST SYSTEM, having useable water strong capacity of 350 ltrs (300 for water and 50 ltrs capacity for foam) properly baffled into segment to reduce water surge. The water tank shall be 'T' Shaped and the thickness of the water tank should be of 5 mm thick minimum. A man hole of 330 mm avec overflow pipe and an optical level of water should be part of the tank. The tank should resist to the flame and be anti ignition complying with the international standards.

**j). GUN.**

The Gun shall be provided with a suitable stain less steel filter. The discharge rate of main gun shall not be less than 20 ltrs/ Min. at pressure not exceeding 100 bars. The second gun should have a flow rate not exceeding 20 LPM. The design of gun shall be such that there is no appreciable re-coil pressure and the throw shall not be less than 15 mtrs (Jet Mode) and shall not be less than 6 meters (Spray Mode). The second gun shall have an attachment for discharging foam with suitable aeration facility.

**k). HOSES.**

- i) The Hoses provided in the system shall be high quality and shall be capable of holding the temperature ranges  $-20^{\circ}$  to  $+55^{\circ}$  C. The material specification, working pressure, test pressure and cracking pressure should be indicated for each type of hose. The minimum length of each hose should be 60 mtr.
- ii) The seals and O-rings used in the system should be of synthetic material like Nitrile rubber or equivalent.

**l). MARKING.**

Marking shall give details of capacity, manufacturer's name, month/ year of manufacturing of the system etc.

**m.) TEST OF ACCEPTANCE OF FIRE FIGHTING SYSTEM.**

Physical dimensions, performance & weight check of equipment as given under different items above shall form part of test of acceptance

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