भारत सरकार
अन्तरिक्ष विभाग
सतीश धवन अन्तरिक्ष केन्द्र
शार
श्रीहरिकोटा रेंज डा.घ.524 124,
नेल्लूर जिल्ला, आंप्र., भारत
टेलिफोन:+91-8623-245060 (10 जं)
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Government of India
Department of Space
Satish Dhawan Space Centre
SHAR
Sriharikota Range P.O. 524 121,
Nellore Dist., A.P., India
Telephones : +91-8623-245060 (10 Lines)
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निविदा सूचना सं. NOTICE INVITING TENDER
No. SDSC SHAR/Sr.HPS/PT/SOSE/05/2026-2027

भारत के राष्ट्रपति की ओर से वरि. प्रधान, क्रय एवं भंडार, सतीश धवन अंतरिक्ष केंद्र श्रीहरिकोटा निम्नलिखित वस्तुओं के लिए **ऑनलाइन निविदाएं** आमंत्रित करते हैं /On behalf of the President of India, Sr. Head, Purchase & Stores, SDSC SHAR, Sriharikota invites **online quotations** for the following:

क्र.सं. SlNo	संदर्भ सं.Ref. No.	विवरण Description	मात्रा Qty.
01	SDSC SHAR/SOSE Purchase/SOSE/202600088901 E-Procurement (Public Tender – Two Part basis)	Supply of Stainless Steel Air Receivers of Capacity: 5 Cu.M	02 Nos.

निविदा जमा करने की प्रारंभिक तिथि (ऑनलाइन)/Bid Submission Start Date (online)	:	25-06-2026, 16:00 hrs.
निविदा स्पष्टीकरण की अंतिम तिथि (ऑनलाइन)/Bid clarification Due date(online)	:	29-06-2026, 16:00 hrs.
निविदा जमा करने की अंतिम तिथि (ऑनलाइन)/Bid submission due date (online)	:	16-07-2026, 16:00 hrs.
निविदाएं खोलने की तिथि (ऑनलाइन)/Bid opening date(online)	:	16-07-2026, 16:05 hrs.
मूल्य निविदाएं खोलने की तिथि (ऑनलाइन)/Price Bid opening date(online)	:	23-07-2026, 16:05 hrs.

निविदाकार के लिए निर्देश Instructions to Tenderers:

ईजीपीएस के माध्यम से भेजी गईनिविदाओं पर निविदा शुल्क तथाबयाना जमा राशि लागू नहीं होगी।
Tender fee and EMD not applicable for tenders submitted through EGPS

1) कार्य के सम्पूर्ण विवरण/जानकारी तथा नियम व शर्तों इत्यादि के लिए संलग्न अनुलग्नक को देखें। / For full details/scope of work and terms and conditions etc., please see the enclosed annexures.
2) इच्छुक निविदाकार इसरो के ई-क्रय वेबसाइट **https://eproc.isro.gov.in** से ई-निविदा डाउनलोड कर सकते हैं तथा अपनी निविदा (बोली) को ई-क्रय पोर्टल पर ऑनलाइन जमा कर सकते हैं \Interested tenderers can download the e-tender from ISRO e-procurement website **https://eproc.isro.gov.in** and submit the offer online in the e-procurement portal.
3) निविदा दस्तावेज इसरो की वेबसाइट **www.isro.gov.in**, इसरो ई-क्रय वेबसाइट https://eproc.isro.gov.in तथा सतीश धवन अंतरिक्ष केंद्र शार की वेबसाइट www.shar.gov.in पर भी उपलब्ध हैं। इन्हें डाउनलोड करके अपनी निविदा (बोली) को ई-क्रय पोर्टल पर ऑनलाइन जमा किया जाना चाहिए। /Tender documents are also available on ISRO website **www.isro.gov.in**, ISRO e-procurement website https://eproc.isro.gov.in and SDSC SHAR, Sriharikota website www.shar.gov.in. The same can be downloaded and offer shall be submitted online in the e-procurement portal.
4) आखिरी समय पर होने वाली भीड़-भाड कम करने के लिए निविदाकार अपनी निविदा (बोली) ऊपर विनिर्दिष्ट समय के अंदर ही जमा कर दें। नए विक्रेता के रूप में अनुमोदन के लिए आवेदन / अनुरोध पत्र ई-मेल द्वारा निविदा दस्तावेज में अंकित निविदा संख्या का उल्लेख करते हुए ऑनलाइन जमा करें। / Tenderers shall submit their offers within the given time as specified above and last moment rush for bid submission shall be avoided. Request for new vendor approval shall be submitted online and the same shall be intimated by mail (mentioned in the tender document) referring the tender number.
5) चूँकि यह दो भागों वाली निविदा है, अर्थात् तकनीकी एवं वाणिज्यिक भाग और मूल्य भाग, इसलिए निविदाकर्ता को तकनीकी एवं वाणिज्यिक बोली के साथ मूल्य निर्धारण संबंधी कोई भी दस्तावेज़ संलग्न नहीं करना चाहिए। सामान्यतः, यदि भाग-I (तकनीकी प्रस्ताव) हमारी तकनीकी विशिष्टताओं को पूरा नहीं करता है, तो हम भाग-II (मूल्य बोली) नहीं खोलते हैं। निविदा दस्तावेज़/अनुसूची में उल्लिखित मूल्य बोली खोलने की तिथि केवल अस्थायी है। हालाँकि, मूल्य बोली केवल भाग-I के तकनीकी बोली मूल्यांकन के संतोषजनक समापन और विक्रेताओं को पूर्व सूचना के बाद ही खोली जाएगी। / This being a two part tender i.e. Technical & Commercial Part and Price Part, the tenderer should not attach any documents containing Pricing information along with Technical & Commercial Bid. Normally we do not open PART-II (Price bid), if PART-I (Technical Offer) does not meet with our technical specification requirements. Price bid opening date mentioned in the tender document/ Schedule is tentative only. However, price bid opening will be made only after satisfactory completion of Part-I technical bid evaluation and with prior intimation to vendors.
6) वरि. प्रधान क्रय एवं भंडार, सतीश धवन अंतरिक्ष केंद्र श्रीहरिकोटा के पास किसी भी या सभी निविदाओं को स्वीकार / अस्वीकार करने का अधिकार है। / Sr. Head, Purchase and Stores, SDSC-SHAR, Sriharikota reserves the right to accept or reject any/or all the quotations.

वरि. प्रधान क्रय एवं भंडार
Sr. HEAD, PURCHASE AND STORES
सतीश धवन अंतरिक्ष केन्द्र, श्रीहरिकोटा

Satish Dhawan Space Centre, Sriharikota
दिनांक DT: 24.06.2026

Signer: SRIRAM VENKATA SIVA REDDY
Thu Jun 25 16:25:48 IST 2026

GOVERNMENT OF INDIA
DEPARTMENT OF SPACE
SATISH DHAWAN SPACE CENTRE SHAR SRIHARIKOTA (SDSC SHAR)
TIRUPATI

Tender for Supply of Stainless Steel Air Receivers of Capacity: 5 Cu.M

Bids to be submitted online

Tender No.: SDSC SHAR/SOSE Purchase/SH202600088901 dated 25-06-2026

A. Tender Details

Tender No :	**SDSC SHAR/SOSE Purchase/SH202600088901**
Tender Date :	**25-06-2026**
Tender Classification:	**GOODS**
Purchase Entity :	**SOSE Purchase**
Centre :	**SATISH DHAWAN SPACE CENTRE SHAR SRIHARIKOTA (SDSC SHAR)**

Supply of Stainless Steel Air Receivers of Capacity: 5 Cu.M

Supply of Stainless Steel Air Receivers of Capacity: 5 Cu.M

[GEM Report Id:GEM/GARPTS/09062026/JJA5MCBMVXE1]

A.1 Tender Schedule

Bid Submission Start Date :	**25-06-2026 16:30**
Bid Clarification Due Date :	**29-06-2026 16:00**
Bid Submission Due Date :	**16-07-2026 16:00**
Bid Opening Date :	**16-07-2026 16:05**
Price Bid Opening Date :	**23-07-2026 16:05**

B. Tender Attachments

Technical Write-up/Drawings

Document : Indent Specification

Instructions To Vendors

2. INSTRUCTIONS TO TWO PART TENDER

1. We are proposing to invite Tenders in Two Parts viz., Part-I Techno and Commercial & Part-II Price. All Tenderers are requested to follow carefully the following instructions before preparing their offer.
PART- I- TECHNO COMMERCIAL BID:
(1)This part should contain detailed Specifications of the items quoted by you along with Technical Literature and Leaflets if any.
(2)All the Commercial terms and Conditions applicable also should be indicated separately under separate heads.
(3)The Commercial terms such as delivery terms, delivery period, payment terms, warranty, validity of the offer, Installation & Commissioning, Duties and Taxes etc shall come into this.
(4)Either Technical Specifications or Terms & Conditions as above should be very clearly reflected items wise with reference to the items called for in the tender.
(5)Please note that Prices should not be indicated in this part.
(6)Any deviations from the Technical Specifications and Commercial Terms shall be indicated separately.
PART II-PRICE BID:
(1)The prices applicable for the items, item wise in response to the tender shall come into this part.
(2)Tender shall indicate very clearly item wise prices with reference to their Technical Offer.

Note: 1. PLEASE NOTE THAT THE OFFERS SUBMITTED CONTRADICTORY TO ABOVE INSTRUCTIONS WILL BE LIABLE FOR REJECTION. PLEASE ENSURE OFFERS ARE SUBMITTED WITHIN THE DUE DATE.
2. BIDDERS SHALL NOT DISCLOSE ANY PRICES IN PART-1 BID AND IF INDICATED, THE OFFERS WILL BE REJECTED.
3. BEING TWO PART TENDER, WE REQUEST YOU NOT TO DISCLOSE / INDICATE ANY OF THE PRICE VALUE WHILE SEEKING / PROVIDING CLARIFICATION. YOU SHOULD INDICATE ONLY IN PERCENTAGE. IN CASE IF YOU DISCLOSE ANY OF THE PRICE AMOUNT YOUR OFFER WILL BE REJECTED.

3. STANDARD TERMS & CONDITIONS

1. Tele No.08623-225174/226377

Fax No.08623-225170/22-5028

e-Mail ID : hps@shar.gov.in, spsoscfpurchase@shar.gov.in, smpcu1-purchase@shar.gov.in

1. Instruction to Indigenous Suppliers:

a) Payment Terms shall be as specified in RFP. If not specifically mentioned Our Normal payment term is 100% within 30 days after receipt and acceptance of the item at our site. Please confirm acceptance in your quotation.

b) GST/IGST: Please specify GST percentage, if any, in your offer. Please mention HSN/SAC code in your offer and Our GST No. is. 37HYDF00385A1DZ.

c) Purchase / Price preference to MSEs

Purchase/Price preference will be applicable to the product reservation admissible to the Micro and Small Enterprises. Purchase/Price Preference shall be extended to the MSEs under the Public Procurement Policy for MSEs formulated under the Micro, Small and Medium Enterprises Development Act, 2006. The participating MSEs in a tender, quoting price within the band of L-1 plus 15% may also be allowed to supply a portion of the requirement by bringing down their price to the L-1 price, in a situation where L-1 price is from someone other than an MSE. Such MSEs may be allowed to supply up to 25% of the total tendered value. In case of more than one such eligible MSE, the supply will be shared equally.

Micro & Small Enterprises which have technical capability to deliver the goods & Services as per prescribed technical & quality specifications and may not be able to meet the qualification criterion relating to prior experience-prior turnover may be relaxed as per guidelines issued by Ministry of MSMEs & as amended from time to time.

Interested vendors shall specifically claim the benefit with supporting documents.

d) Purchase / Price preference to Make-in-India Products:

Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document 50%. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is make along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs. 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in-India) order 2017 dated 04.06.2020. In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.

2. Instruction to Foreign Suppliers:

a) Payment Terms shall be as specified in RFP. If not specifically mentioned Our normal payment term is SIGHT DRAFT, Please confirm acceptance in your offer, if you insist for L/C, and all bank charges shall be to your account. Confirm acceptance.

b) Please specify whether any export clearance is required in case of an order on you.

c)Warranty/Guarantee applicable for the item shall be mentioned in your offer

d)Special Certification for packing Material : as per Plant Quarantine (Regulation of Control into India) Order 2003, Articles packed with packing material of plant origin viz., hay, straw, wood shavings, wood chips, saw dust, wood waste, wooden pallets, Dunn age Mats, wooden packages, coir pith, pear or sphagnum moss etc., will be allowed entry by Customs only with a Phytosanitary Certificate. In case if a Purchase Order, if you propose to us any of the above material for packing such a certificate issued by your local Plant Quarantine Authority shall be furnished.

e) Confirm whether any Export License is required and for which End User Certificate is to be provided by us, in case of an Order on you. (Enclose format for EUC, if applicable)

f) Either Indian Agent on behalf of the foreign principals or the foreign principal directly can quote against this order, but not both. In either case an Indian agent cannot represent more than one principal against the same tender.

g) In case the quote is in INR we prefer to execute the same on HSS Basis and for which Concessional Customs duty as per Notification no.50/2017 Customs dated 30.06.2017,Serial No.539(A) as amended by Notification no.05/2018 dated 25.01.2018. In case the quote is on Indian Rupee (Outside High Sea Sale), the price shall include taxes and duties if any. We shall not able to provide any duty or IGST tax exemption/concession certificates. If the item quote is of USA make, please quote for all-inclusive price since we prefer to get the item on FOR destination basis.

h) Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with Competent Authority as specified in Office Memorandum no.F.No.6/18/2019-PPD, Ministry of Finance, Department of Expenditure, Public Procurement Division dated 23rd July 2020. All the conditions mentioned in the above OM is applicable for this tender.

Common terms to Indigenous and foreign suppliers:

3.Warranty

You shall provide applicable warranty for the items offered by you without fail. For the applicable period you shall provide necessary warranty certificate.

4.Performance Bank Guarantee

Towards the performance of the systems during the warranty period you shall submit a performance bank guarantee equivalent to 3% of the order value to cover the warranty period. This PBG shall be interest free and the same shall be returned to you on successful completion of all contractual obligations. The said PBG shall have a further claim period of 2 months.

5.Security Deposit

On acceptance of the order, you shall submit an interest free amount equivalent to 3% of the total contract/order value towards security deposit. This security deposit is collected towards the performance of the Contract. The said Security Deposit shall be submitted either in the form of Bank Guarantee/Demand Draft/FDR receipts duly endorsed in the name of the centre. The Security Deposit will be returned to you on successful completion of the Contractual obligations; failing which it shall be forfeited/adjusted.

6.Offer Validity : - In case of single part tender - the validity of offers/tenders should be 90 days. In case of two part tender - 120 days from the date of opening of Part-I bid and 60 days from the date of opening of Part-II bid. Tenders shorter than offer validity mentioned above will not be considered for evaluation.

7.Liquidated Damages:

If you fail to deliver the ordered items satisfactorily within the time specified or any extension thereof, Liquidated Damage @ 0.5%(zero point five percent) of the order value or part thereof the un-delivered items for each calendar weeks of delay shall be recovered from your bill. However total Liquidated Damage shall not exceed 10% (ten percent) of the order value.

FORCE MAJEURE:

Should a part or whole work covered under this contract be delayed in delivery/completion of work due to reasons of Force majeure which shall include legal lockouts, strikes, riots, civil commotion, fire, accidents, quarantines, epidemic, acts of God & War, stoppage of deliveries by the Government , freight embargoes etc; the delivery period/completion of work referred to in this Contract shall be extended by a period not in excess of duration of such Force Majeure. The occurrence shall be notified by either party within reasonable time.

8.Offers received through post, courier, fax or email will not be considered.

9. Technical and commercial bid (Part-I) shall not contain any price details. Optional accessories or other price details, if any shall be uploaded in Supporting documents related to Price Bid, to be opened along with Price Bid.

10. In respect of FIM being issued, the fabricator shall submit Bank Guarantee for equivalent sum compulsorily. In case, submission of Bank Guarantee is not possible, the reasons there for shall be clearly mentioned. However, for such cases the fabricators at their cost shall secure such FIM through Insurance Policy with Director, SDSC SHAR as beneficiary. In case of PSU and Government Organization, Indemnity Bond in lieu of Bank Guarantee is acceptable. Balance FIM/Scrap, if any shall be returned along with the supply of the items. Please confirm acceptance in your quotation.

11. SDSC SHAR shall have the right to place part order among the parties for the items for which they are the lowest.

12. Arbitration:

In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Contract, such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Offices of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30

days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 as amended from time to time. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only.

Work under the Contract shall be continued by the CONTRACTOR during the pendency of arbitration proceedings, without prejudice to a final adjustment in accordance with the decision of the Arbitrator unless otherwise directed in writing by the DEPARTMENT or unless the matter is such that the works cannot be possibly continued until the decision (whether final or interim) of the Arbitrator is obtained.

4. General Instructions to Vendor

1. Instructions to tenderers

TeleNo.08623-225174/226377
Fax No.08623-225170/22-5028

e-Mail ID : hps@shar.gov.in, smpcu1-purchase@shar.gov.in, spsoscfpurchase@shar.gov.in
1. Interested tenderers may, at their option, login to https://eproc.isro.gov.in and submit your offers.

2. TENDER FEE IS NOT APPLICABLE.

3. EARNEST MONEY DEPOSIT IS NOT APPLICABLE IF NOT MENTIONED IN THE RFP SPECIFICATION.
4. Indian agents while quoting on behalf of their principals are requested to attach Principals original quote, necessary authorization letter from their Principals, copy of agency agreement etc. in their bid.

5. TWO PART BIDS: In case of Two part tender, price details shall not be uploaded in the Technical & Commercial Bids (Part I), failing to which the bid will be treated as INVALID.
6. VALIDITY OF OFFER: - In case of single part tender - the validity of offers/tenders should be 90 days. In case of two part tender - 120 days from the date of opening of Part-I bid and 60 days from the date of opening of Part-II bid. Tenders shorter than offer validity mentioned above will not be considered for evaluation.
7. Due date & time: Sufficient time has been allotted for Bid submission. Vendors are requested to complete Bid submission well in advance. Last minute requests for due date extension citing server problems etc. will not be entertained. Bids will not be entertained after the due date and time.

7 (A). Request for the extension of the due date will not be considered.

8.
(a) Bid Opening for Public Tender: In case of Public Tender-Two Part Tenders: Technical and Commercial Bids will be opened on the first day specified for Tender opening. Interested vendors can attend the tender opening session to know the bidding details (Bidders presence is not mandatory to consider the quote for evaluation). Price Bid opening of the selected vendors will be scheduled later and it will be intimated to the selected Bidder (s).

(b) For Limited Tender: Bidders participation is not allowed.

9. Prices are required to be quoted according to the units indicated.

10. Preference will be given to those tenderers offering supplies from ready stocks and on the basis of FOR destination delivery at site.

11. (a) All available technical literature, catalogues and other data in support of the specifications and detail of the items should be furnished as attachments.

(b) Samples, if called for, should be submitted free of all charges by the tenderer and the Purchaser shall not be responsible for any loss or damage thereof due to any reason whatsoever. In the event of non-acceptance of tender, the tenderer will have to remove the samples at his own expense.

(c) Approximate net and gross weight of the items offered shall be indicated in your offer. If dimensions details are available the same should be indicated in your offer.

(d) Specifications: Stores offered should strictly conform to our specifications. Deviations, if any, should be clearly indicated by the tenderer in their quotation. The tenderer should also indicate the Make/Type number of the stores offered and provide catalogues, technical literature and samples wherever necessary. Test certificates wherever necessary should be attached. Whenever options are called for in our specifications, the tenderer should address all such options. Wherever specifically mentioned by us the tenderer could suggest changes to specifications with appropriate response for the same.

12. The purchaser shall be under no obligation to accept the lowest or any tender and reserves the right of acceptance of the whole or any part of the tender or portion of quantity offered and the tenderers shall supply the same at the rates quoted.

13. All amounts shall be indicated both in words as well as in figures. Where there is difference between amounts quoted in words and figures, amount quoted in words shall prevail.

14. The tenderer will be required to furnish a document containing the name of his bankers as well as the latest income-tax clearance certificate duly counter signed by the Income-tax Officer of the Circle concerned under the Seal of his office, if required by the Purchaser.

15. The Purchaser reserves the right to place order on the successful tenderers for additional quantity up to 25% of the quantity offered by them at the rates quoted.

16. Sr. Head, Purchase and Stores, SDSC SHAR SRIHARIKOTA reserves the right to accept or reject any bid in part or full without assigning any reason thereof.

17. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with Competent Authority as specified in Office Memorandum no.F.No.6/18/2019-PPD, Ministry of Finance, Department of Expenditure, Public Procurement Division dated 23rd July 2020. All the conditions mentioned in the above OM is applicable for this tender.

18. Micro and Small Enterprises [MSEs]

a). In order to avail the benefits extended by Government of India to the Micro and Small Enterprises [MSEs] in respect of Goods and Services as per provision of the policy, MSEs registered with District Industries Centre [DIC] or Khadi and Village Industries Commission [KVIC] or Khadi and Village Industries Board [KVIB] or Coir Board or National Small Industries Commission [NSIC] or Directorate of Handicrafts and Handlooms or Udyog Aadhar Memorandum, or any other Body specified by Ministry of MSME have to submit a copy of Valid Certificate with self-attestation along with the Technocommercial bid. No Certificate claiming exemption will be entertained after Tender due date.
b) .MSEs are entitled for [i] issue of Tender documents Free of Cost [ii] Exemption of Earnest Money Deposit [EMD]. However, Performance Security is mandatory for Goods and Services.
c). If the Tenderer[s] is/are SC/ST/Woman entrepreneur owned MSEs, specific mention for the same should be there in the valid certificate submitted by the tenderer.
d) .Tenderers claiming MSME benefit shall furnish copy of UAM No. as uploaded on CPP portal to avail benefit.

19. Public Procurement [Preference to Make in India]:

Public Procurement (Preference to Make in India) order 2017- revision issued by Government of India, Department of Promotion of Industry andInternal Trade [DPIIT] Public Procurement [preference to Make in India] vide Order No P-45021/2/2017-PP(BE II) dated 16/09/2020 or as amended thereafter. The Tenders submitted are subjected these orders.

Bidders are required to submit necessary certificates & documents as detailed in the above referred

GOI Order in support of their claim to avail benefit against this order. The bidders who claim Purchase Preference under Make in India Policy shall fulfill all requirements of tender document applicable for Indigenous Manufacturer. FAILURE TO SUBMIT THE REQUIRED DOCUMENTS MAY RENDER A TENDER UNACCEPTABLE.

Local Content means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

Local Supplier: Class-I Local Supplier means a supplier whose product offered for procurement has local content equal to or more than 50%. Class-II Local Supplier means a supplier whose product offered for procurement has local content more than 20% but less than 50%. Non-Local Supplier means a supplier whose product

Margin of Purchase Preference: For being eligible for purchase preference under this clause, the Margin of purchase preference shall be 20% (i.e. L1 plus 20% band). Preference: Purchase Preference shall be given to Class-I Local Supplier only in the manner specified here under:
(a) In the procurement of Goods which are divisible in nature:

i. If L1 is from a Class-I local supplier, the contract for full quantity will be awarded to L1.

ii. If L1 is not a Class-I local supplier, 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the Class-I local supplier will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier(s)quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such Class-I local supplier subject to matching the L1 price. In case such lowest eligible Class-I local supplier fails to match the L1 price or accepts less than the offered quantity, the next higher Class-I local supplier within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local supplier, then such balance quantity may also be ordered on the L1 bidder

(b)In the procurement of Goods which are not divisible in nature:

i. If L1 is Class-I local supplier, the contract for full quantity will be awarded to L1
ii. If L1 is not Class-I local supplier, the lowest bidder among the Class-I local supplier will be invited to match the L1 price subject to the Class-I local supplier(s) quoted price falling within the margin of purchase preference, and the contract shall be awarded to such local supplier subject to matching the L1 price.

iii. In case such lowest eligible Class-I local supplier fails to match the L1, the Class-I local supplier with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and

so on and contract shall be awarded accordingly. In case none of the local suppliers within the margin of purchase preference matches the L1 price, then the contract may be awarded to the L1bidder

(c) Class-II local supplier will not get purchase preference

Verification of local content:

i. The Class-I local supplier / Class-II local supplier at the time of biding shall be required to indicate percentage of Local Content and provide self-certification that the items offered meet the local content required for Class-I local supplier/ Class-II local supplier and shall give the details of the location(s) at which the local value addition is made .

ii. False declarations will attract banning of business of the bidder or its successor(s) for a minimum period of three years along with any other penal action as may be deemed fit including rejection of the offer, forfeiture of all dues including EMD/ Security Deposit / banning of the firm.

iii. A supplier who has been debarred by any procuring entity for violation of this order shall not be eligible for preference for procurement for the duration of debarment. It will be the bidders responsibility to provide self-certification, clearly stating that the bidder is not serving debarment from any procuring entity for the tendered item at the time of tendering.

5. Format for MII declaration

1. (to be printed in letter head) -

Self-Certification under preference to Make in India order Certificate

2. In line with Government Public Procurement Order No. P-45021/2/2017-PP(BE-II)-Part(4)Vol.II dated 19.07.2024 its latest directives/amendments there of, we hereby certify that we M/s. _____are local suppliers and the offered item having local content of _____% [Local content means the amount of value added in India which shall, unless otherwise prescribed by the respective Nodal Ministry, be the total value of the item procured (excluding Net Domestic Indirect Taxes, Transportation, Insurance, Installation, Commissioning, Training and after sales service support like AMC/CMC etc.) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent] as defined in above orders for the material against Tender/Bid No _____ dated _____

3. Details of location at which local value addition will be made as follows:

_____

4. We also understand, false declaration will be breach of the code of integrity under the rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

5. Thanking You

_____
Signature with date
Name
Designation
Official Seal

6. Format for Land Border Sharing Declaration under Rule 144 (X) of GFR 2024

1. (to be printed in letter head)
DECLARATION BY AUTHORISED SIGNATORY OF THE FIRM

2. I, the undersigned, _____ (full names), do hereby declare, in my capacity as _____ of M/s _____ (name of bidder entity), that:

3. 1) I have read the Order (Public Procurement No.1, 2 & 3) dtd 23 Jul 2020 & 24 Jul 2020 office memorandum (OM) No. F.18/37/2020-PPD Dt:08.02.2021, OM NO. F.12/1/2021-PPD (Pt) dated 02.03.2021 and OM No. F.7/10/2021-PPD dated 08.06.2021 and OM No.F.7/10/2021-PPD dated 23.02.2023 on the subject of Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 regarding restrictions on procurement from a bidder of a country which shares a land border with India and comply to all the provisions of the Order.

4. I certify that M/s. _____ (name of bidder entity)

5. (A) IS NOT FROM SUCH A COUNTRY

6. (B) IS FROM SUCH A COUNTRY AND HAS BEEN REGISTERED WITH THE COMPETENT AUTHORITY i.e., Department for Promotion of Industry and Internal Trade (DPIIT) (attach evidence of valid registration obtained from DPIIT)

7. (Select any one of the above (A) or (B) and strike off the other)
I hereby certify that this SUPPLIER fulfils all requirements in this regard and is eligible to be considered.

8. 3) I understand that the submission of incorrect data and / or if certificate / declaration given by M/s _____ (name of bidder entity) is found to be false, this would be a ground for debarment and further legal action in accordance with law as per Clause 18 of Procurement Policy Division OM No.F.7/10/2021-PPD dated 23.02.2023

9. AUTHORIZED SIGNATURE: DATE: _____

(Seal / Stamp of Bidder)

C. Bid Templates

C.1 Technical Bid - Supply of Stainless Steel Air Receivers of Capacity: 5 Cu.M

1. AIR RECEIVER Fabrication, Inspection, Testing & Supply of Stainless Steel Air Receivers for Breathing Air System of Capacity: 5 Cu.m, Design Pressure - 20 bar as per ASME SEC. VIII-DIV-1 Latest Edition including Foundation bolts as per specifications

Common Specifications (Applicable for all items)

Sl No	Specification	Value	Compliance	Offered Specification	Remark
1	Type	Vertical, cylindrical with dished ends	Yes / No / Explain		
2	Capacity (water volume)	5 cu.m	Yes / No / Explain		
3	Service Medium	Compressed Air	Yes / No / Explain		
4	Operating Pressure	15 bar(g)	Yes / No / Explain		
5	Design Pressure	20 bar(g)	Yes / No / Explain		
6	Operating Temperature	50 Deg. C	Yes / No / Explain		
7	Design Standard	ASME SEC.VIII-DIV-1, Latest edition	Yes / No / Explain		
8	Hydro Test Pressure	As per Standard	Yes / No / Explain		
9	Pneumatic Leak Test	6 bar(g)	Yes / No / Explain		
10	Welding process	100% by TIG with Pure argon purging. SMAW is not acceptable	Yes / No / Explain		
11	Radiography Testing	Full Radiography of Butt joints	Yes / No / Explain		
12	Heat Treatment	Solution annealing of dished ends and Total vessel stress relieving after fabrication	Yes / No / Explain		
13	Pickling & Passivation	For all internal and external surfaces as per Tender specification.	Yes / No / Explain		

14	Approval	Approval by Purchaser/TPI for all documents prior to dispatch	Yes / No / Explain		
15	Material of Construction (Shell & Dish End)	SA 240 Gr 304L	Yes / No / Explain		
16	Nozzles specification	All the nozzles pipes shall be of seamless type and schedule shall be as per drawings	Yes / No / Explain		
17	Earth Boss	Two numbers of earth boss shall be provided on the supports.	Yes / No / Explain		
18	Name Plate	Tank should have a name plate permanently fixed on support.	Yes / No / Explain		
19	Accessories required	Foundation bolts & Nuts of suitable size to be supplied. (Material: SS) M24 x 900mm length as per drawing	Yes / No / Explain		
20	Supporting Legs	Shall be provided as per IS: 2825 and minimum number of supports as shown in the drawing	Yes / No / Explain		
21	Third Party Inspection (TPI)	The Air receivers shall be fabricated under the inspection of Third Party DNV/LLOYDS/TUV/BV	Yes / No / Explain		
22	Stage Inspection as per QAP	During the course of fabrication, different stages of inspection are to be identified as per QAP and at every stage, clearance has to be obtained.	Yes / No / Explain		

Supporting Documents required from Vendor

1. TPI Agency Documents

2. Documents - Fabrication equipment & Manpower

3. Make in India Declaration

4. Documents - WPS, PQR and Welder qualification records

5. ISO 9001 Documents

6. Previous Purchase orders

7. Format – IV: Evaluation Criteria

8. Format – III: Bidder Minimum Qualification Criteria

9. Format – II: Compliance to Technical Specifications

10. Format – I: Compliance to General Terms & Conditions

11. Indent Specifications - Signed & Stamped

12. Do not upload any price related documents above

13. Furnish Latest UDYAM Registration Certificate

14. Land Border Sharing Declaration

15. MII Local Content Declaration

5 additional documents can be uploaded by the vendor

C.2 Commercial Terms / Bid

Sl. No.	Description	Compliance	Vendor Terms
1	Supplier should quote the Unit price for each item which includes GST, Testing & Inspection charges, Packing & Transportation charges also.	Yes / No / Explain	
2	SDSC SHAR reserves the right to reject any supplier if technically/commercially not meeting the requirement/ terms & conditions. Such decisions by the SDSC SHAR shall bear no liability whatsoever consequent upon such decision.	Yes / No / Explain	
3	During evaluation, SDSC SHAR may request supplier for any clarifications or additional documents.	Yes / No / Explain	
4	Bidder shall meet the Bidder Evaluation criteria and shall submit relevant documents to establish their credentials.	Yes / No / Explain	
5	Bidder should sign, stamp & upload all the pages of Indent specifications as part of acceptance.	Yes / No / Explain	
6	Pre?delivery Inspection (PDI) to be carried out at Supplier premises by Third Party Inspector(TPI) & Purchaser representative as per QAP of Tender specifications.	Yes / No / Explain	
7	Supplier should fill, sign and submit the compliance to all the Formats(I, II, III, IV) along with the offer.	Yes / No / Explain	
8	Technical Bids forwarded by the Bidders will be technically evaluated by the Department with reference to the Tender specifications. Price Bids of only those Bidders whose Technical Bids would clear the technical evaluation, will be opened.	Yes / No / Explain	
9	Prices should not be disclosed in Technical evaluation part. Disclosing of prices lead to disqualification during technical evaluation.	Yes / No / Explain	
10	Bidder shall clearly indicate the deviations taken from the Tender documents/specifications separately in his offer.	Yes / No / Explain	
11	Warranty for the supplied item shall be from the date of receipt & acceptance of the item at our site for a minimum period of one year	Yes / No / Explain	

12	Delivery Period: 8 months from the date of release of Purchase Order	Yes / No / Explain	
13	GST AND OTHER COSTS, IF ANY: As per the Notification No. 9/2025 - Integrated tax dated 17.09.2025, S. No. 462 and as per Notification No. 9/2025 - Central tax dated 17.09.2025, S. No. 462 issued by Ministry of Finance (Dept. of Revenue) & Government of Andhra Pradesh, Revenue (Commercial Taxes) Department, G.O.MS.No. 345, Dated: 20.09.2025, S.No.462, SDSC SHAR is eligible to avail GST/IGST @5% for the procurements related to Scientific and technical instruments, apparatus, equipment, accessories, parts, components, spares, tools, mock ups and modules, raw material and consumables required for launch vehicles and satellites and payloads. We will issue End Use Certificate for availing GST/IGST @5%. Hence, kindly confirm your acceptance and submit your price quotation accordingly.	Yes / No / Explain	
14	Please confirm here whether your quoted "UNIT PRICE" in our Price Bid is EXCLUDING GST or INCLUDING GST. ---------- NOTE: If you are not clearly stating "GST is Inclusive OR Extra in basic cost" it will be treated as "GST is included in the quoted Basic/Unit cost in the price bid". Your offer will be evaluated as INCLUSIVE OF GST.	Yes / No / Explain	
15	BEING A TWO PART TENDER, WE REQUEST YOU NOT TO DISCLOSE/INDICATE ANY OF THE PRICE VALUE WHILE SEEKING/PROVIDING CLARIFICATION. IN CASE IF YOU DISCLOSE ANY OF THE PRICE AMOUNT, YOUR OFFER WILL BE REJECTED.	Yes / No / Explain	
16	DELIVERY PERIOD: Material is to be supplied within 08 MONTHS from the date of release of Purchase Order.	Yes / No / Explain	
17	DELIVERY TERM: FOR - Sriharikota	Yes / No / Explain	
18	PAYMENT TERM:100% payment will be made through PFMS within 30 days of receipt and acceptance of the ordered items by our Central Level Inspection Panel (CLIP) at SDSC SHAR site.	Yes / No / Explain	

19	EVALUATION CRITERIA: As all the items within Specification are inter dependent, splitting of the order is not possible. Hence, Overall-L1 bidder will be considered.	Yes / No / Explain	
20	LIQUIDATED DAMAGES: The Delivery Date stipulated in this Order is the essence of the Contract. You should adhere to delivery schedule as stated above and execute the order before the stipulated date. In case of delay, Liquidated Damages @ 0.5% (Half Percent) per week or part thereof on undelivered portion as pre-estimated damages subject to a maximum of 10% of total order value.	Yes / No / Explain	
21	WARRANTY: The offered items shall have warranty for a period of Twelve Months from the date of Receipt and acceptance against any manufacturing defects/ bad workmanship. If any defects are noticed during the above period, the same should be rectified/ replaced at FREE OF COST.	Yes / No / Explain	
22	PERFORMANCE BANK GUARANTEE (PBG): A Bank Guarantee for 3% of the order value (or as notified by Govt. Of India/ISRO from time to time) shall be provided towards the performance of the system. PBG may be furnished in the form of Insurance Security Bonds, Account Payee Demand Draft, Fixed Deposit Receipt from a commercial Bank, Bank Guarantee from a Commercial bank executed on Rs.200/- non-judicial stamp paper or in any acceptable form valid till the successful completion of warranty period plus 60 days. This will not carry any interest and shall be returned to you after successful completion of warranty period against your request. In case of nonperformance/poor performance the Bank Guarantee shall be forfeited.	Yes / No / Explain	

23	SECURITY DEPOSIT (SD): Security Deposit shall be submitted for 3% of the order value (or as notified by Govt. Of India/ISRO from time to time) in single instalment through Insurance Surety Bonds/ Account Payee Demand Draft/ Bankers Cheque/ Fixed Deposit Receipts or Bank Guarantee from a Commercial bank executed on Rs.200/- non-judicial stamp paper or in any acceptable form within 14 days after receipt of Purchase Order valid till completion of the Delivery period plus 60 days claim period. This security deposit shall not carry any interest and shall be returned to you only after successful completion of total scope of work. In case of poor performance/ non performance of the contractual obligation security deposit shall be forfeited. In case of non submission of Security deposit within the stipulated period, this order shall be liable to be cancelled.	Yes / No / Explain	
24	COMBINED BANK GUARANTEE: In case, if You are unable to provide two separate BGs, i.e., one for SD and one for PBG, You can submit a combined BG for SD & PBG for 3% of the Order value valid till the completion of total contractual obligation (i.e. Delivery period plus Warranty period plus 60 days). Please confirm.	Yes / No / Explain	
25	INSURANCE: Being a Govt. Of India Dept., Insurance is not required at our cost. Please ensure the safe delivery of the ordered item with proper transport worthy pack.	Yes / No / Explain	
26	Compliance to the Technical specifications, Terms and conditions and Annexure shall be mentioned.	Yes / No / Explain	

27	Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1 plus 15% (Selected by Buyer) of margin of purchase preference/price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 100% (selected by Buyer) percentage of total QUANTITY. Please specify whether you belong to MSE or not. If YES, supporting documents shall be uploaded.	Yes / No / Explain	

28	The following are Minimum Qualification Criteria required to be fulfilled by the bidders: (a)The Bidder should be a Company/Society/Firm registered in India since last 5 (five) years or more and involved in Fabrication of Pressure Vessels. (b)Party should have executed a contract in the last five years ending with 31.03.2026 involving Fabrication and Supply of Stainless-Steel Pressure vessels for a values mentioned in Format-III. (c)PO copies issued by the End Users for the previous executed orders shall be submitted (d)Supplier should be ISO 9001 certified company and shall submit valid certificate (e)Supplier shall submit the Details of WPS, PQR and Welder qualification record in compliance with ASME SEC. VIII-DIV-1 (Pressure Vessel Code). Please note that MSEs are not exempted from the above Experience, qualification criteria for evaluation purpose. Previous Experience of the bidders is very essential to meet the technical qualification requirements including ASME Pressure Vessel Code compliance.	Yes / No / Explain	
29	Do you have Unique GeM Seller ID? If YES, provide details. If NO, As per Office Memorandum No 6/9/2020-PPD dated 24/08/2020 of Department of Expenditure, it is mandatory for sellers providing Goods and Services to Central Government Organizations to be registered on GeM and obtain a Unique GeM Seller ID, at the time of Placement of Order/acceptance of contract. Tenderer shall ensure the same.	Yes / No / Explain	

30	FORCE MAJEURE: If at any time during the continuance of the order the performance in whole or part by either party of any obligation under this order shall be prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fire, floods, lightening, epidemic, quarantine restrictions, strikes, go-slow, lockout or acts of God, notice of which is given either party to the other within 21 days from the date of occurrence thereof, neither party shall be reasons of such eventually be entitled to terminate this order nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance.	Yes / No / Explain	
31	ARBITRATION: The Contract shall be interpreted, construed and governed by the Laws in India. In the event of any dispute/s, difference/s or claim/s arising out of or relating to the interpretation and application of the Work Package Order(s), such dispute/s or difference/s or claim/s shall be settled amicably by mutual consultations of the good Office of the respective Parties and recognizing their mutual interests attempt to reach a solution satisfactory to both the parties. If such a resolution is not possible, within 30 days from the date of receipt of written notice of the existence of such dispute/s, then the unresolved dispute/s or difference/s or claim/s shall be referred to the Sole Arbitrator appointed by the Parties by mutual consent in accordance with the rules and procedures of Arbitration and Conciliation Act 1996 as amended from time to time. The arbitration shall be conducted in Bengaluru in the Arbitration and Conciliation Centre - Bengaluru (Domestic and International) as per its rules and regulations. The expenses for the Arbitration shall be shared equally or as may be determined by the Arbitrator. The considered and written decision of the Arbitrator shall be final and binding between the Parties. The applicable language for Arbitration shall be English only.	Yes / No / Explain	

32	The bidder shall provide compliance to Order No. F.No.6/18/2019 PPD dated 23.07.2020 and amendments thereof by Ministry of Finance, Department of Expenditure, Public Procurement Division regarding restrictions on procurement from a bidder of a country which shares a LAND BORDER with India and comply to all the provisions of the Order. In this regard, you shall certify that the bidder entity is not from such a country or, is from such a country, has been registered with the Competent Authority.	Yes / No / Explain	
33	MAKE-IN-INDIA: Vendors shall submit Self-Certification under preference to Make in India order Certificate as per attached format mandatorily.	Yes / No / Explain	
34	Vendors may note the Guidelines on Debarment of Firms vide O.M No. F.1/20/2018-PPD dated 02.11.2021 in line with rule no.151 & 175 (Code of Integrity) of GFR (General Financial Rules)	Yes / No / Explain	
35	Please send your queries through clarification provision. However, bidder may also send a copy to smpcu1- purchase@shar.gov.in duly quoting tender number. Contact No.08623-22-6377.	Yes / No / Explain	
36	Please furnish DETAILS of your PERSON TO CONTACT, i.e. Name of the person, valid E-mail id, Mobile no/ Landline no. etc. for further communication.	Yes / No / Explain	
37	OTHERS: Items are to be delivered on Working days ONLY i.e Monday to Friday (excluding Public Holidays).	Yes / No / Explain	
38	Remarks, if any.	Yes / No / Explain	
39	VALIDITY OF OFFER: In case of single part tender - the validity of offers/tenders should be 90 days. In case of two part tender - 120 days from the date of opening of Part-I bid and 60 days from the date of opening of Part-II bid. Tenders shorter than offer validity mentioned above will not be considered for evaluation.	Yes / No / Explain	

40	Pre-delivery Inspection: Pre-delivery inspection of the material shall be carried out by our CLIP team at your site before dispatch. Please inform readiness of the material in advance of 20 days for arranging pre-delivery inspection.	Yes / No / Explain	
41	OPTION CLAUSE: The purchaser reserves the right to increase/decrease the ordered quantity by up to [25] per cent at any time, till the final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period).	Yes / No / Explain	

C.3 Price Bid

Sl. No.	Item	Quantity	Unit Price	Currency	Total Price	Remark
1	AIR RECEIVER Fabrication, Inspection, Testing & Supply of Stainless Steel Air Receivers for Breathing Air System of Capacity: 5 Cu.m, Design Pressure - 20 bar as per ASME SEC. VIII-DIV-1 Latest Edition including Foundation bolts as per specifications	2.00 Nos.		-		

Common charges (Applicable for all items)

Additional Charges, if any (P&F, Freight etc.)	

FABRICATION, INSPECTION, TESTING AND SUPPLY OF STAINLESS STEEL AIR RECEIVERS

Technical Specifications, Requirements, Terms & Conditions for Fabrication, Inspection, Testing and Supply of Stainless Steel Air Receivers

SATISH DHAWAN SPACE CENTRE
Indian Space Research Organization
Department of Space, Government of India
Sriharikota 524124
Tirupati District, Andhra Pradesh State, India

This Technical specification document is organized in three sections as follows.

Section – A General Terms and Conditions

Section – B Technical Specification for Fabrication, Inspection, Testing and Supply of Stainless Steel Air Receivers

Section – C Formats to be filled by bidder

Section – A
General Terms and Conditions

1.0 Terms and Conditions for Bids

Offers shall be submitted in TWO-PARTS as per the details given below:

Part-I – Techno-commercial Bid

Part-II – Price Bid

2.0 Details to be furnished in Techno-commercial Bid & Price Bid as follows:

2.1 Part-I – Techno-commercial Bid

The tenderer shall furnish point-wise confirmation for the technical specifications given in the enquiry. However, change of specifications/ deviations (if any) shall be brought out in the offer as deviation summary with detailed justification. Exclusions, if any from scope of supply shall be clearly indicated in the offer.

Tenderer need to furnish the details related to commercial terms indicating payment terms, details of bank guarantee etc.

Tenderer shall quote the prices on "FOR-Sriharikota".

The overall landed cost to SDSC SHAR will be taken as the basis towards finalization of the purchase order.

2.2 Format to be filled signed and shall be uploaded by the supplier in Techno-commercial bid:

Format-1	Compliance to General Terms & Conditions
Format-2	Compliance to Technical Specifications
Format-3	Bidder Minimum Qualification Criteria
Format-4	Evaluation Criteria

2.3 Part-II: Price bid indicating the price.

- Price bid should be submitted by the Tenderer in ISRO E-procurement portal as per the price break-up format.
- In view of Two Part Tender, the Offers submitted contrary to above instructions will be summarily rejected.

3. Delivery Period:

Eight months (08) from the date of release of Purchase Order.

4. TAXES AND DUTIES

i. GST

As per Ministry of Finance, Dept. of Revenue, Notification No. 7/2018 – Integrated Tax (Rate) dated 25.01.2018 (Amendment to Notification No. 1/2017 -Integrated Tax (Rate) dated 28.06.2017) Schedule-I, Sl. No. 243A, Applicable GST is 5% for Scientific and technical instruments, apparatus, equipment, accessories, parts, components, spares, tools, mock ups and modules, raw material and consumables required for launch vehicles and satellites and payloads. Suppliers are requested to submit your offer by considering GST@5%.

ii. INCOME TAX

Income tax at the prevailing rate as applicable and if applicable from time to time shall be deducted from the supplier's bills as per Income Tax Act and a certificate issued (TDS Certificate).

5. Make in India:

General Terms & conditions for Bidders: For this procurement, bids from Class-I & class-II Local Suppliers are admissible. hence provisions contained in Public Procurement (Preference to Make in India), Order 2017 issued by Department for Promotion of Industry and Internal Trade (DIPP), Ministry of Commerce & Industries vide letter No. P-45021/2/2017-PP(BE-II) dated 04.06.2020 and subsequent amendment & directives shall be followed. Accordingly, offer will be evaluated & processed in conformation with above referred GOI order (Specially mentioned below). The bidder shall provide compliance and undertaking as per order and hereafter amendments:

(a) Order no: F.No.6/18/2019 PPD dated 23.07.2020 of Department of Expenditure), Ministry of Finance Under Public procurement division for the General Financial rule (GFRs).

(b) Class-I local supplier means a supplier or service provider, whose goods, service or works offered for procurement, has local content equal to or more than 50%, as defined under order.

(c) Class-II local supplier means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Order

(d) Verification of local content:

(i) The Class I local supplier/ Class- II local supplier at the time to tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for Class-I local supplier / Class II local supplier as the case may be. They shall also give details of the location(s) at which the local value addition is made.

(ii) In case bid value is in excess of Rs. 10 Cr., Class-I local supplier / Class-II local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

(iii) False declarations will be in breach of the code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules (GFR) for which a bidder or its successors can be debarred for up to two years as per Rule 151(iii) of the general Financial Rules along with such other actions as may be permissible under Law.

(iv)A supplier who has been debarred by any procuring entry for violation of this order shall not be eligible for preference under this order for procurement by any other procuring entity for the duration of the debarment.

(e) The percentage of local content should be specifically mentioned in the offer, without which it will be summarily rejected.

(f) Preference will be given to Class-I Local supplier and in their absence, Class-II Local supplier will be considered.

6. Terms of Payments:
Our standard payment terms are 100% payment within 30 days after receipt and acceptance of items at purchaser's (SDSC-SHAR Sriharikota) Site.

7.Liquidated Damages (LD):

Since delivery is the essence of this order, LD @ 0.5% per week or part thereof subject to a maximum of 10% of the order value for the delayed period of supply/ scope of work.

8.Warranty:
Warranty for the supplied item shall be from the date of receipt & acceptance of the item at our site for a minimum period of one year.

9.Combined Performance Bank Guarantee (PBG) & Security Deposit (SD): Combined Bank Guarantee towards security deposit and Performance bank Guarantee for 3% of Order value shall be submitted within 10 days after release of Purchase Order and valid till completion of total contract for obligation (i.e., supply period + warranty period + 60 days). Combined PBG & SD shall be from nationalized/schedule bank.

10. Force majeure

For the purpose of the contract, the term "force majeure" shall means strikes, lockouts and other conflicts, acts of an enemy, war hostile blockade, disturbance of the public order, stroke of lightning, fire under thunderstorm, flood explosion and acts of god and government acts beyond the reasonable control of the party claiming force majeure. If due to circumstances of force of majeure, either of the parties to this contract partially of completely unable to fulfill its obligations in accordance with this contract, the said party shall be obligated to immediately inform the other party of occurrence of the circumstances of force majeure in writing. The party claiming force majeure shall also be obligated to keep the other party informed of the events in the process related to the occurrence of the said force majeure circumstances and of the possible degree of non-fulfillment or delay in fulfillment of the obligations in accordance with this contract. All the obligations of the party that invokes the plea of force majeure shall be suspended as long as the said force majeure circumstances continues to exist and not longer, and the said party shall not be regarded as having committed breach or failure, nor shall be held responsible to make compensation for losses suffered by either party. The terms of fulfillment of the obligation shall be duly extended for the period during which the circumstances of force majeure lasts. The fulfillment of the obligations shall be resumed immediately after the cessation of the said circumstances of force majeure. If the said force majeure circumstances last for more than sixty days, parties to this Contract shall discuss and agree upon further action. Should the state of non-fulfillment of obligation under the Contract be more than three (3) months and nothing could be done to make a statement about ceasing of obligations of Contract, within not more than three (3) months either party has the right to cancel the Contract mentioned below. The ownership of all materials, parts and unfinished work paid for by the SDSC SHAR shall vest with the SDSC SHAR or transferred to

the SDSC SHAR as soon as they have paid for. The amount of compensation payable/recoverable shall be fixed on the basis of evidence produced by party and acceptable by the purchaser.

11. Secrecy:

The party shall take all reasonable steps necessary to ensure that all persons employed in connection with the Purchase Order have full knowledge of the Official Secrets Act and the regulations framed there under. Any breach of the aforesaid conditions shall entitle the purchaser to cancel the Purchase Order and if necessary,to go ahead with the purchase at the risk and cost of the party in addition to any other penal action it may take at its discretion.

12. Compliance with security requirements:

The party shall strictly comply with the security rules & regulations of the purchaser. The party shall complete the required formalities including verification of character & antecedents, of the persons engaged or deployed by him, through police or any other authority.

13. Confidentiality and proprietary right protection:

The party shall be obliged to preserve the confidentiality of the proprietary information received, exchanged between each other during the period of the Contract. Technical documentation published and/or claimed for a patent shall be effected by both the parties only on mutual decisions and approval of both the parties, during the existence of this agreement.

14.Terms & Conditions to Bidder

In case of any conflict/contradiction, the documents shall prevail over one another in the following order:

I. Any contradiction either between various parts of document or in the content of the document itself shall be a matter of clarification to be obtained by the bidder from the purchaser. The purchaser's decision shall be final and binding.
II. The Bidder shall satisfy the department that he possesses the necessary technical experience for execution and has at his disposal suitable facilities and crew to ensure that his work shall be of the best quality and workmanship. Necessary particulars in this regard shall be furnished with the offer.
III. Successful Bidder shall obtain approval from department for selecting sub-suppliers and makes for any of the equipment/ parts.
IV. An unpriced copy of the order on the sub-suppliers comprising all detailed specifications and the quantities of the material ordered, bill of material including necessary drawings thereof, shall be sent to department immediately after such order is placed by the successful Bidder.
V. The approval of drawings and/or inspection by Department and/ or their authorized representative shall not absolve or relieve the bidder from any of his obligation under this contract and they shall be wholly and solely responsible for the satisfactory operation and guaranteed performance of the systems and equipment forming part of the system.
VI. All material, dimensional standards, tolerances, process of manufacture and testing procedures shall be in accordance with the latest revision of the standard codes specified in this Tendering Specification. In case where such suitable standards are not mentioned, any acceptable Indian/International Standards shall be adopted with prior approval of purchaser.
VII. All documents, instructions, name plates etc. shall be written in English language. All weights, dimensions and units shall be in metric system.

VIII. The Bidder shall quote for earliest delivery of the equipment / supplies as well as earliest completion of the entire work.

IX. The Bidder shall submit the Quality Assurance Plan containing the overall quality management and procedures which he proposes to follow for performing the work during various phases of execution.

X. At the time of award of contract, the detailed Quality Assurance Plan to be followed for execution of the contract will be mutually discussed & agreed to.

XI. Materials used and equipment supplied shall be new and the best of their kind and shall comply with the latest revisions of all relevant standards. Manufacturer's certificates shall be furnished by the successful Bidder for the material used.

XII. Bidder shall clearly indicate the deviations taken from the Tender documents/specifications separately in his offer.

XIII. Compliance statement to the technical specification given is to be duly signed & stamped and submitted as a part of acceptance.

XIV. Detailed QAP shall be submitted by the party after placement of order. Quality Assurance Plan mutually agreed by successful bidder and purchaser shall be complied. Party shall confirm the broad guidelines mentioned in the technical specification document.

XV. Deviations, if any, w.r.t technical and commercial terms & conditions shall be clearly brought out and deviation list to be added. If deviations are not listed separately, it will be presumed that the bidder is adhering to all the technical specifications and commercial terms & conditions given in this document.

XVI. The delivery date is from the date of issue of PO to delivery of the material to SDSC by shall be quoted by the Purchaser. The successful Bidder shall adhere to the material delivery date.

XVII. Progress report shall be submitted by the successful Bidder at regular intervals on a format prescribed by purchaser giving the status of approval of drawings, ordering and other materials ordered, manufactured, fabricated etc.

XVIII. After placement of PO, the following documents to be submitted for approval.

a) Schedule of work, technical data sheets/Specification of bought out items
b) Fabrication drawings
c) Welder qualification, PQR, WPS
d) Procedure for qualification of fabricated receiver or pipe lines
e) Quality assurance plan.

15.Unit Rates:

The Bidder shall quote item wise units and unit price and total units and total price of itemsas perPrice Bid format. The rates shall be valid until handing over the systems to purchaser.

16.Surveillance Inspection by Department:

- The Department, at their own discretion and on surveillance basis, shall have the right to depute their representative(s) to perform material receipt/ in-process/ final pre-delivery inspection at any phase during fabrication/ manufacture of any system/subsystem at the Contractor's/ Sub-contractor's/ sub vendor's premise. The Contractor shall obtain the necessary permission for the Department's representatives to visit the sub-contractor's/ Sub-vendor's premise.
- The participation and approval by the Department's representatives during the inspection/ review shall not absolve the Contractor of their responsibility to comply with the specification/ obligation of the Contract.

Section – B
TECHNICAL SPECIFICATIONS FOR FABRICATION, INSPECTION, TESTING AND SUPPLY OF STAINLESS STEEL AIR RECEIVERS

1.1 GENERAL SPECIFICATIONS

i) Stainless steel Air Receivers

The stainless steel Air receivers are meant for storing compressed air, meant for breathing air requirements of the operating personnel wearing Breathing air suits. The detailed specifications are given in the articles described below and drawings enclosed.

- Overall dimensions and internal details shall be as per the drawings enclosed.

Drg. No. SS/AIR RECEIVER /5CUM/01 to 03.

- The supplier has to fabricate, inspect & test the vessel as per ASME SEC.VIII-DIV-1 latest edition.

1.2 SCOPE OF WORK

Fabrication, Inspection, testing and Supply of Air Receivers to SDSC, SHAR as per the details given below:

Design Parameters for Air Receiver

	Design Parameters:		**Air Receiver**
i.	**Type**	:	Vertical, cylindrical with dished ends.
ii.	**Capacity (water volume)**	:	**5m³ - 2 nos.**
iii.	**Service**		
a)	Medium	:	Compressed Air
b)	Operating Pressure	:	15 bar
c)	Design pressure	:	20 bar
d)	Operating Temperature	:	50 Deg. C
iv	**Design standard**	:	ASME SEC.VIII-DIV-1, Latest edition
v	**Testing**		
a)	Hydro test Pressure	:	As per code.
b)	Pneumatic Leak Test	:	6 bar
vi.	**Fabrication Process**		
a)	Welding 100% by TIG with Pure argon purging.		
b)	Full Radiography of Butt joints.		
c)	i. Solution annealing of dished ends.		
	ii. Total vessel stress relieving after fabrication.		
d).	Pickling & Passivation of internal and external surfaces as per Tender specification		
vii.	**Approval**		
	Approval by Purchaser/TPI for all documentsprior to dispatch		

The Supplier shall prepare the Fabrication Drawings based on PO Drawing and shall be sent to the Purchaser for approval. **Fabrication shall be taken up only after the approval from the Purchaser**.

viii. Material of Construction: SA 240 Gr 304L. The fabrication shall be carried out using tested and qualified materials only.

- All raw materials shall be new and properly identified and stamped by TPIA after review of original Mill Test Reports.
- Plates shall be procured with suitable sizes to minimize weldment and preferably with 100% UT done at plate manufacturer site under TPIA.

ix. Nozzles:

a) All the nozzles pipes shall be of seamless type and schedule shall be as per drawings.

b) The nozzles shall be provided on to the tank as shown in the drawing. All the nozzle flanges are WNRF (serrated face) of SS forged quality & shall conform to ANSI B 16.5.

c) All the nozzles shall be provided with blind flanges as per ANSI B 16.5 withnecessary SS studs & nuts and SS spiral wound gaskets.

x.	**Earth Boss**	**:**	Two numbers of **earth boss** shall be provided on the supports.
xi.	**Name Plate**	**:**	Tank should have a **name plate permanently fixed on support.**
	Note: Name plate **shall not be** welded to the shell or dish. This is mainly to minimise welding on the pressure parts**.**		
xii.	**Lifting lugs**	**:**	shall be provided for each tank.
xiii.	**Accessories required**	**:**	Foundation bolts & Nuts of suitable size to be supplied. (Material: SS) M24 x 900mm length as per drawing
xiv.	**Supporting Legs**	**:**	Shall be provided as per **IS: 2825** and minimum number of supports as shown in the drawing
xv.	**Third Party Inspection (TPIA)**	**:**	The Air receivers shall be fabricated under the inspection of Third Party **DNV/LLOYDS/TUV/BV**
xvi.	**QAP** is enclosed as **Annexure-I** for reference. However, detailed quality assuranceplan to be prepared prior to fabrication and testing and shall be submitted to the Purchaser for approval.		
xvii.	**Stage Inspection**	**:**	During the course of fabrication, different stages of inspection are to be identified as per QAP and at every stage, clearance has to be obtained.

1.3 Design pressures, Tank capacities, shell and Dome Thickness & Allowances and schedule of quantity: Service: Breathing Air

Sl. No.	**Tank volume (Cu.m approx.,)**	**Design pressure bar**	**Design Temperature (Deg.C)**	**Corrosion Allowance**	**(Inclusive of Allowances)**		**Qty.**
					Shell Thickness	**End Dome Thickness**	
1.	5 Cu.m	20	70^0C	3 mm	18mm	18mm (Minimum) 20 mm (Nominal)	2 Nos.

Note:

- Each end dome shall be made out of Max. two number of joints only.

1.4 WELDING

i) **100% by TIG process**, shall be adopted with high purity Argon gas purging and shielding, right from root to final passes for all butt welds (Long seams,

'C' seams, nozzles, pipe to flange joints) and all internal and external welds including fillets welds. **SMAW is not acceptable**.

ii) Welding consumables (filler wire) shall be used as per AWS classification or ER 308L

iii) It is recommended to minimize no. of circumseam weld joints on the cylindrical portion of the tank. The shell of tanks shall be fabricated with standard width plates.

iv) The welding procedure qualification and welder performance qualification shall be carried out. Only qualified welders shall be employed for the fabrication of tank.

v) The dye used for Dye-penetrant test shall not have chlorides more than 50 PPM.

vi) Any re-work / repair have to be carried out as specified in ASME boiler and Pressure vessel code with the approval of Third party/purchaser.

1.5 RADIOGRAPHY:

i) 100% on butt welded joints. All welds other than butt welds shall be DP tested.

ii) Radiography has to be carried out with x-ray machine with a sensitivity of 2-2T as per ASTM E-94.

1.6 HEAT TREATMENT:

i) Solution annealing of the end domes shall be carried out to relieve stresses caused due to cold working as per code. Stress relieving of tank shall be preferably carried out in an electric furnace. If oil furnace is used, the fuel shall be of lower Sulphur content oil like High-speed diesel.

Loading temperature	:	300°C (Max.)
Soaking temp	:	1040°C
Soaking time	:	50 Minute (Min.)
Rate of cooling	:	As per Standard procedure

ii) The total fabricated vessel has to be stress relieved at 420± 10 Deg. C as per standard practice (this operation shall be carried out prior to Hydrostatic test).
The detailed stress relieving cycle is as given below

Loading temperature	:	300°C (Max.)
Rate of heating	:	100°C/Hr±20°C (Max.)
Soaking temp	:	420°C/Hr±15°C
Soaking time	:	2 Hrs (Min.)
Rate of cooling	:	100°C/Hr (Max.)
Unloading temperature	:	300°C (Vessel to be air cooled at Atmospheric conditions after unloading)

1.7 TESTING:

a) Testing of materials:

Materials of construction shall be as given in Clause No. 1.8 Bill of Materials Table:1. All materials used shall be tested as per Code in the Reputed Govt. approved testing labs before fabrication. All the plates proposed to be used for fabrication of Air receivers, shall be subjected to mechanical, chemical and IGC tests as per A-262 Practice-E in spite of availability of Mill test certificates. **The plates used for construction of Air receivers shall also be ensured free from any lamination and manufacturing defects by 100% ultrasonic testing as per Practice ASTM A-435.**

Ferrite number in weldment shall be measured by testing and this shall be within the specified limit of 3% to 12%. Test certificates shall be furnished to purchaser for approval.

b) Hydraulic Pressure Test:

The Air receivers shall be tested as per ASME Sec VIII, Div-1, Clean potable water with chloride content of less than 25 PPM, shall be used for testing.

i) **Before Hydro test all the internal surfaces of the tanks shall be mechanically cleaned.**

Heat Treatment of entire vessel shall be carried out prior to Hydro test. After the final hydro test the vessel has to be degreased, pickled and passivated & painted **as per the procedure given in Annexure-II.** The cleaning, pickling and Passivation is to be carried out for both inside and outside surfaces of the vessel by filling/swabbing method.

c) Pneumatic Leak Test

After Hydro test the tank shall be tested at 6.0 bar (g) using dry Nitrogen gas with dew point of minus 40 Deg. C or better and leak check with soap solution at all welds and flangedjoints.

1.8 Material of construction of tanks shall be strictly as given below.

Table-1 MATERIAL SPECIFICATION

Sl. No.	Components	Material of Construction
1.	Shell and Dished ends	SA 240 GR 304 L
2.	Nozzle pipes	A 312 TP 304 L (Seamless)
3.	Nozzle flanges	A 182F 304 L
4.	Supports and all RF pads	SA 240 GR 304 L
5.	Studs and nuts	A193GrB8M/A194 Gr.8M
6.	Gaskets	SS 304 Spiral wound with Teflon sand witched with SS 304 inner and outer rings

7.	Blind flanges	A 182 F 304
8.	All internals	SS 304 L
9.	Name plate / bracket	SS 304 L
10.	Pad plate	SA 240 GR 304 L
11.	Lifting Lugs	SA 240 GR 304
12.	Material Wherever not mentioned	SS 304 L
13.	Foundation Bolts & Nuts	SS 304 /304L
14.	Wherever not mentioned	SS 304L

PART-II GENERAL CONDITIONS

a) Monitoring -The progress of work during the course of fabrication will be monitored by the Purchaser.

b) Submission of Fabrication drawings to the purchaser for approval prior to taking up fabrication.

c) The Bidder has to engage **DNV/LLOYDS/TUV/BV** as Third party inspection agency.

d) Production Master File

Three copies of production master files shall be supplied by the supplier along with the consignment. Each production master file should contain the following.

- Purchaser Order
- Fabrication Drawings (As – built)
- Bill of Materials
- Materials Test Certificates
- WPS, PQR and Welder qualification record
- Radiographic reports
- Pneumatic and Hydrostatic test certificates
- Name plate details.

All the above reports / test results shall be bound neatly.

e) One set of **soft copy** of as-built drawings shall be supplied to the Purchaser.

f) All radiography films pertaining to the tanks shall be supplied to the Purchaser.

ANNEXURE-A

SCOPE OF INSPECTION: AS PER QAP the vessel should be fabricated under the inspection of Third party/Purchaser representative as per QAP.

QUALITY ASSURANCE PLAN (QAP)

Sl. No.	Characteristics / type of check	Ref. Document	Method of check	Quantum of check		
				Manufacturer QC	Third party	Purchaser
1	Identification of material with Mill T/C & ultrasonic T/C & witness of Physical, Chemical, IGC Test and Ultrasonic test for plates.	As per PO	Visual	100% H	100% R	R
2	Identification of material & witness of Physical, Chemical& IGC Test for pipes, fittings, gaskets, etc.,	As per PO	Visual	100% H	100% R	R
3	Review of welding procedure & Qualification	AWS	Review	100% H	100% R	R
4	Checking of root run & final weld by dye Penetrant test (butt welds)	As per PO	Visual	100% W	100% R	R
5	Marking of nozzle orientation	As per drawing	Location of nozzle	100% W	100% W	R
6	Dye Penetrant test on all fillet welds.	As per PO	Visual	100% W	100% R	R
7	Visual & Dimensional inspection	As per approved drawing	Dimensional inspection	100% W	100% W	R
8	Shell rolling, long seam & Cir. Seam fit up	As per std	Visual	100% W	100% W	R
9	Circularity of shells after rolling	As per std	Visual	100% W	100% W	R
10	Forming of dished ends & solution annealing	As per std	Visual	100% W	100% W	R
11	Fit up of nozzles, saddles and supports and welding	As per std	Visual	100% W	100% W	R
12	Evaluation of radiography films of all butt welds	As per PO	Film evaluation	100% W	100% R	R
13	Stress relieving of total fabricated tank	As per PO	Graph	100% W	100% W	R
14	Mechanical cleaning and buffing	As per PO	Visual	100% W	100% R	R
15	Hydraulic test as per design code	As per PO	Pressure hold method	100% W	100% W	W
16	Pneumatic leak test	As per PO	Pressure hold method	100% W	100% W	W
17	Picking, Passivation and painting	As per PO	Visual	100% W	R	R

Sl. No.	Characteristics / type of check	Ref. Document	Method of check	Quantum of check		
				Manufacturer QC	Third party	Purchaser
18	Filling with dry nitrogen at 0.5 bar (g)	As per PO	Gauge reading	100% W	R	R
19	Stamping of the vessel and issue of certificates	As per PO	Visual	100% R	100% W	---
20	Verification of Material test certificates	As per PO	Review	100% R	100% R	R
21	Production master file	As per PO	Document	100% R	R	R
22	Issue of Inspection Release Note (IRN)				To be given by TPI	R

Legend: R – Review, W – Witness, H – Hold

Note: The purchaser reserves right to participate in the Inspection at any stage of fabrication & the bidder shall intimate the work progress periodically.

ANNEXURE-B

PROCEDURE FOR PICKLING, PASSIVATION & PAINTING

i) Mechanical Cleaning:

All metallic surfaces inside and outside having scales and foreign materials and all welded surfaces have to be cleaned. This can be done by scrubbing with metallic brush (Stainless Steel). The loose scales and powders obtained from the above process can be cleaned by blowing, sucking or washing with water. Mechanical cleaning shall be carried out before stress relieving.

ii) Degreasing, pickling and Passivation shall be carried out as per the following method for the tank after hydro testing.

a) Degreasing:

Degreasing has to be done by soaking with hot detergent solution of Lissapol for at least 2 hours till satisfaction.

b) Pickling and Passivation (Filling Method or Swabbing Method) Swabbing method using Barium Sulphate as an acid carrier for both inner and outer surfaces of the tanks.

The pickling and Passivationis done with barium sulphate as carrier (chloride levels 25 ppm) in the form of paste. For each of pickling and Passivation operations, the paste has to be applied on the surface and has to be kept for atleast two hours. Paste has to be removed with waste cotton in each operation and finally the surface has to be rinsed with DM water.

iii) Checking

All the relevant tests shall be carried out to ensure proper pickling and passivation as per ASTM A 380.

iv) Drying

The drying is done to remove water and this is done as given below:

Passing dry Nitrogen /Air having dew point less than –40 Deg. C and free from oil and grease (less than 10 PPM) at 60 Deg. C till the moisture level at the exit comes to the inlet concentration value.

v) Sealing

After drying, the tank should be sealed so that ambient moisture never enters inside. The tank is to be pressurized to 0.5 bar with dry Nitrogen Gas at –40 Deg. C dew point or better.

vi) Painting

After surface preparation, painting with high build epoxy primer suitable for Stainless Steel surface of 120 +/- 10 micron Dry Film Thickness (DFT) followed by a finish coat of aliphatic / acrylic, polyurethane finish paint of 40 microns DFT shall be applied so that the total DFT achieved will be 150 +/- 10 microns.

Finish Coat Colour code: Sky blue (ISC 101 as per IS:2007)

Preferable manufactures: Berger/Bombay paints/CDC/GP

Section – C
Formats to be filled by bidder

Format – I: Compliance to General Terms & Conditions

The Supplier shall confirm the following points. With regard to agreement on the scope defined in the specifications without which the order will not be considered.

Sl. No.	Description	Confirmation / Remarks	Deviations, If any
1	Fabrication, Inspection, Testing and Supply of Stainless Steel Air Receivers for Breathing Air System of Capacity: 5 Cu.m, Design Pressure - 20 bar as per ASME SEC. VIII-DIV-1 Latest Edition as per enclosed specifications.		
2	Offer be submitted in two parts 1) Techno-Commercial Bid 2) Price bid		
3	Formats as per 2.2 in Section-A filled and submitted		
4	Delivery period: As per General terms and condition, Section-A, S.No. 3 is understood and Accepted.		
5	Taxes and Duties: As per General terms and condition, Section-A, S.No. 4 is understood and Accepted.		
6	Make in India: As per General terms and condition, Section-A, S.No. 5 is understood and Accepted.		
7	Payment term: As per General terms and condition, Section-A, S.No. 6 is understood and Accepted.		
8	Liquidated damages: As per General terms and condition, Section-A, S.No. 7 is understood and Accepted.		
9	Warranty: As per General terms and condition, Section-A, S.No. 8 is understood and Accepted.		
10	Combined Performance Bank Guarantee (PBG) &Security Deposit (SD): As per General terms and condition, Section-A, S.No. 9 is understood and Accepted.		
11	Force majeure: As per General terms and condition, Section-A, S.No. 10 is understood and Accepted.		
12	Secrecy: As per General terms and condition, Section-A, S.No. 11 is understood and Accepted.		
13	Compliance with security requirements: As per General terms and condition, Section-A, S.No. 12 is understood and Accepted.		
14	Confidentiality and proprietary right protection: As per General terms and condition, Section-A, S.No. 13 is understood and Accepted.		
15	Terms & Conditions to bidder: As per General terms and condition, Section-A, S.No. 14 is understood and Accepted.		
16	Unit rates: As per General terms and condition, Section-A, S.No. 15 is understood and Accepted.		
17	Surveillance Inspection by Department: As per General terms and condition, Section-A, S.No. 16 is understood and Accepted.		

Signature of Authorized Person with Seal

Format –II:Compliance to Technical Specifications

Sl. No.	Description		Compliance (Yes / No)
1.	General Specifications: as per PART-I		
2.	Scope of Work as per S.No. 1.2 is understood and Accepted.		
	Design Parameters for AirReceiver: As per S.No 1.2		
	i.Type:	Vertical, cylindrical with dished ends	
	ii. Capacity (water volume)	$5m^3$ -2 nos.	
	iii. Service		
	a) Medium	Compressed Air	
	b) Operating Pressure	15 bar	
	c) Design pressure	20 bar	
	d) Operating Temperature	50 Deg. C	
	iv. Design standard	ASME SEC.VIII-DIV-1, Latest edition	
	v.Testing		
	Hydro test Pressure	As per code.	
	Pneumatic Leak Test	6 bar	
	vi. Fabrication process is understood and Accepted.		
	vii.Fabrication shall be taken up only after the approval from the Purchase ris understood and Accepted.		
	viii. Material of Construction is understood and Accepted.		
	ix. Nozzles is understood and Accepted.		
	x. Earth boss is understood and Accepted.		
	xi. Name plate is understood and Accepted.		
	xii. Lifting lugs is understood and Accepted.		
	xiii. Accessories required is understood and Accepted.		
	xiv. Supporting legs is understood and Accepted.		
	xv. Third party inspection is understood and Accepted.		
	xvi. Submission of QAP is understood and Accepted.		
	xvii. Stage inspection is understood and Accepted.		
3.	Design pressures, Tank capacities, Shell and Dome Thickness & Allowances and Schedule of quantity: as per S.No 1.3 is understood and Accepted.		
4.	Welding as per S.No. 1.4 is understood and Accepted.		
5.	Radiography as per S.No. 1.5 is understood and Accepted.		

Sl. No.	Description	Compliance (Yes / No)
6.	Heat treatment as per S.No. 1.6 is understood and Accepted.	
	i. Solution annealing of end domes is understood and Accepted.	
	ii.Stress relieving of total fabricated vessel is understood and Accepted.	
7.	Testing as per S.No1.7 is understood and Accepted.	
	a. Testing of materials is understood and Accepted.	
	b. Hydraulic pressure test is understood and Accepted.	
	i. Before Hydro test all the surfaces of the tanks shall be mechanically cleaned is understood and Accepted.	
	c. Pneumatic Leak Test is understood and Accepted.	
8	Material of Construction as per Table-I, S.No 1.8 is understood and Accepted.	
9	General Conditions: as per Part – II of Section-B is understood and Accepted.	
10	Scope of Inspection: Quality Assurance Plan(QAP) as per Annexure-A of Section-B is understood and Accepted.	
11	Procedure for Pickling, Passivation and Painting as per Annexure-B of Section-B is understood and Accepted.	

Signature of Authorized Person with Seal

Format – III: Bidder Minimum Qualification Criteria

The following are the minimum essential criteria to further validate/accept the bid. Vendor is requested to provide all necessary supporting documents. If any deviation/non-compliances/lack of supporting document, bid shall be summarily rejected.

Sl. No	Description	Vendor Compliance With Supporting Documents
1	The Bidder should be a Company/Society/Firm registered in India since last 5 (five) years or more and involved in Fabrication of Pressure Vessels. Company Profile along with documentary evidence of Fabrication of Pressure Vessels and all relevant enclosures.	
2	Party should have executed a contract in the last five years ending with 31.03.2026 involving Fabrication and Supply of Stainless-Steel Pressure vessels for a value not less than Rs. 30 Lakhs as a single order (or) atleast two orders of worth Rs. 20 Lakhs each (or) atleast three orders of worth Rs.15 Lakhs each.	
3	PO copies of the previous executed orders shall be submitted without which offer will not be considered.	
4	Vendor must undertake Fabrication, Inspection, Testing and Supply of SS Air Receivers as per the specifications and requirements indicated in the specifications.	
5	Technical compliance to the specifications shall be vetted by the bidder.	
6	Supplier should be ISO 9001 certified company and shall submit valid certificate	
7	Supplier shall submit the Details of WPS, PQR and Welder qualification record in compliance with ASME SEC. VIII-DIV-1	
8	Supplier shall submit the Details of Fabrication equipment/machineries and skilled manpower available with the party.	
9	Supplier shall submit Make in India Declaration indicating percentage of local content for Class-I local supplier / Class II local supplier as the case may be.	
10	Supplier shall submit the details of TPI Agency proposed to be engaged for inspection as per Quality Assurance Plan (QAP)	

Note:

- Technical proposal of the bidder, which is not able to substantiate/satisfy the claims made by it with respect to the technical requirements laid down in this specification, will be summarily rejected.
- Offers of those bidders taking full scope of the work including fabrication, inspection, testing and supply of SS Air Receivers as per the requirements indicated in the specifications only will be considered.

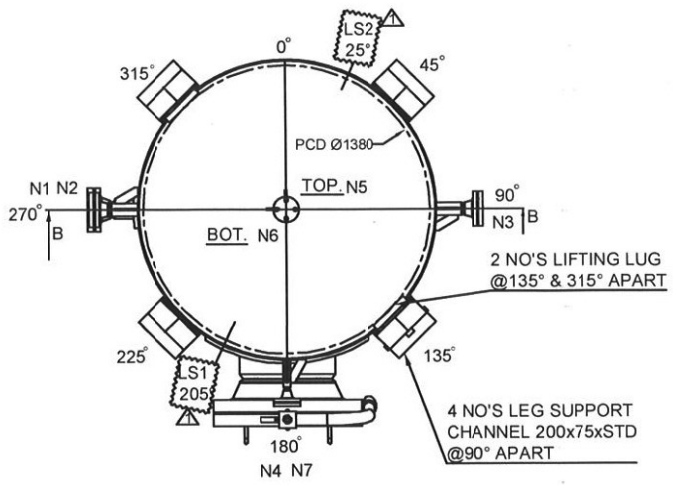
Signature of Authorized Person with Seal

Format – IV: Evaluation Criteria.

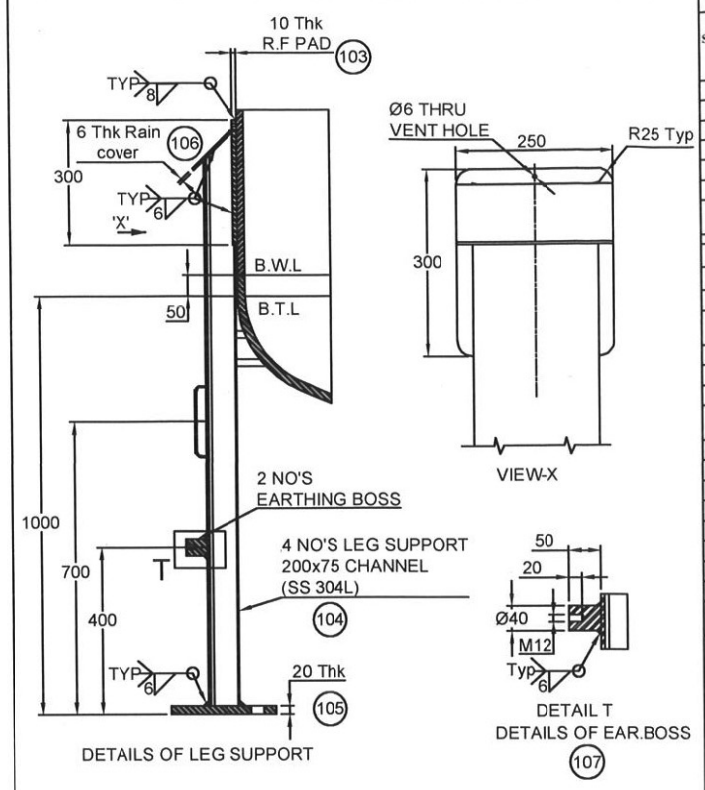
The broad guidelines for evaluation of Bids will be as follows:

Sl.No	Description	Vendor Compliance
1	In respect of Two-Bid system, the technical Bids forwarded by the Bidders will be evaluated by the Department with reference to the technical specifications as mentioned in the Tender specifications. The compliance of Technical Bids would be determined on the basis of the parameters specified in the specifications. The Price Bids of only those Bidders will be opened whose Technical Bids would clear the technical evaluation.	
2	During evaluation, SDSC SHAR may request Bidder for any clarification on the bid, additional documents.	
3	Bidder must provide the point-by-point compliance to the technical specifications along with deviations. The tender can be rejected if the deviations are not acceptable to the Department.	
4	Performance of Bidder on similar nature of works executed/ under execution shall be taken into consideration before selecting the Bidder for opening his price bid.	
5	The time schedule for completion is given in the Proposal document. Bidder is required to confirm the completion period unconditionally.	
6	SDSC SHAR reserves the right to reject any bid if technically/commercially not meeting the requirement/terms & conditions. Such decisions by the SDSC SHAR shall bear no liability whatsoever consequent upon such decision.	
7	Total price inclusive of all taxes, duties, shall be considered for arriving L1 (Overall Lowest) and awarding the contract as per the procedures.	
8	If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price will prevail and the total price will be corrected. If there is a discrepancy between words and figures, the amount in words will prevail for calculation of price.	
9	As all the items within specification are inter dependent, splitting of the order/work is not possible. Hence Overall lowest bidder will be considered	
10	Department reserves the right to inspect the contractor shop floor/premises for evaluation, if required. After evaluating the contractor, decision of the Department is final.	

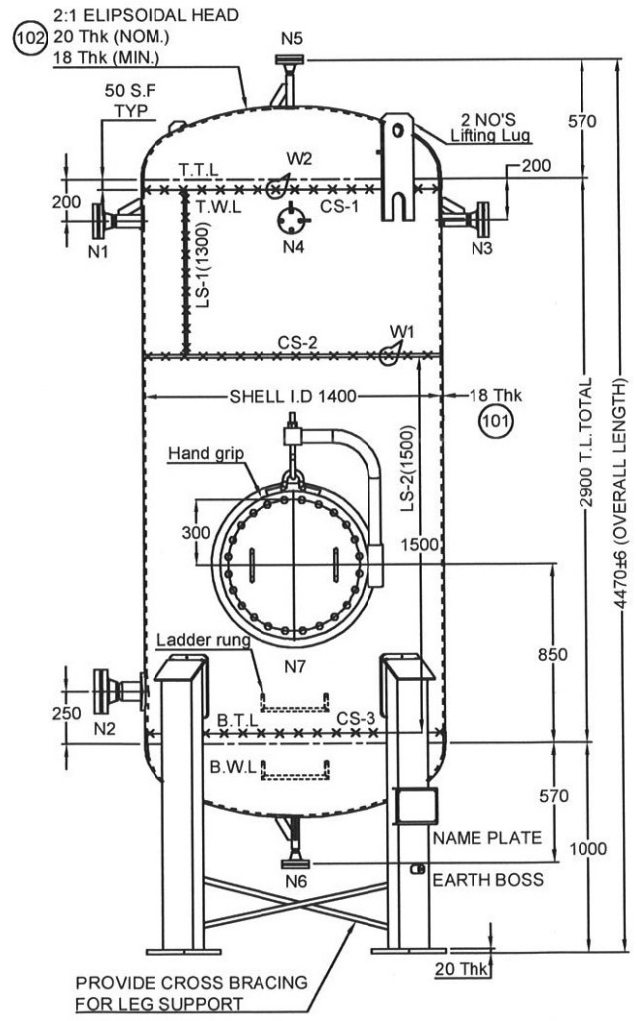
Signature of Authorized Person with Seal

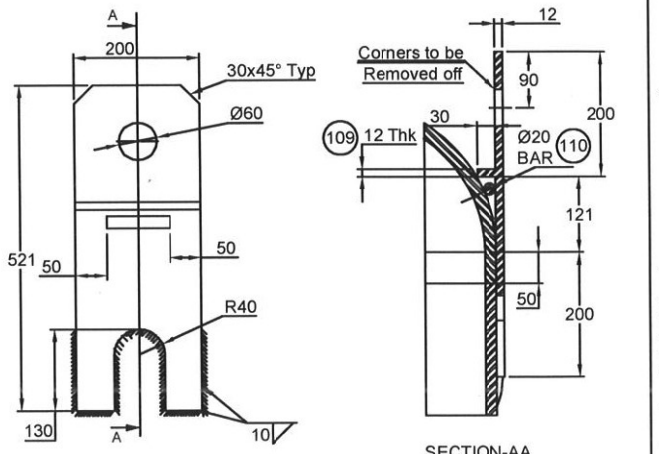


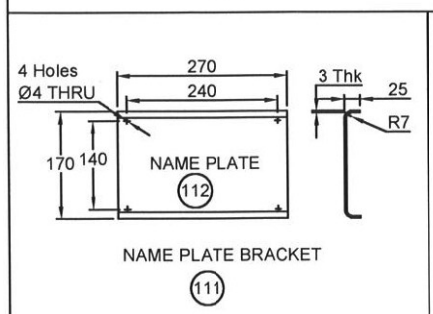
NOZZLE ORIENTAION

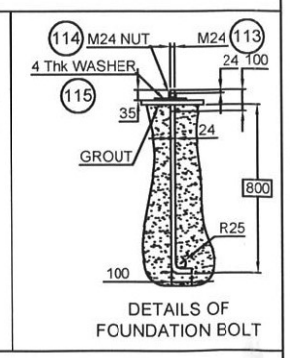


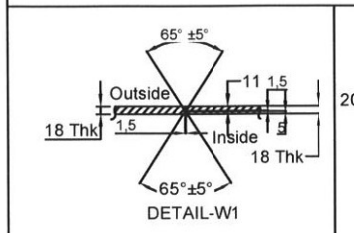
DETAILS OF LEG SUPPORT

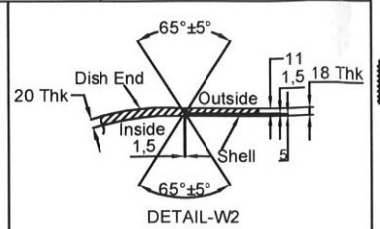












NOZZLE DATA

S.NO.	SERVICE	QTY	NOZZLE PROJ.	PIPE		FLANGE ASME B16.5				R.F PAD ODXT	REMARK
				SIZE / NB	SCH. / THK	RATING	TYPE	FACE	STD		
N1	GAS INLET	1	9'18	80	SCH.160	300#	WN	RF		-	WITH B.F
N2	GAS OUTLET	1	9'18	50	SCH.160	300#	WN	RF		-	WITH B.F
N3	TEMP.CONNECTION	1	9'18	50	SCH.160	300#	WN	RF		-	WITH B.F
N4	PI/PT CONNECTION	1	9'18	25	SCH.XXS	300#	WN	RF		-	WITH B.F
N5	SRV CONNECTION	1	570	25	SCH.XXS	300#	WN	RF		-	WITH B.F
N6	DRAIN	1	570	25	SCH.XXS	300#	WN	RF		-	WITH B.F
N7	MANHOLE WITH COVER	1	968	450	18 THK	300#	WN	RF		785x18	WITH DAVIT

BILL OF MATERIAL (FOR 1 NO)

ITEM NO.	S.NO.	DESCRIPTION	QTY	SIZE	MATERIAL	W.Kg	REMARK
101	1	SHELL	1	L2800x4455CIRxT18	SA-240 Gr.304L	1796	
102	2	DISH END (2:1 ELLIPSOIDAL	2	BLANCK Ø1740xT20	SA-240 Gr.304L	760	
103	3	LEG SUPPORT PAD	4	L300xW250xT10	SA-240 Gr.304L	24	
104	4	LEG SUPPORT CHANNEL	4	CHANNEL(200x75)L1380	SA-240 Gr.304L	124	
105	5	LEG SUPPORT PLATE	4	L250xW250xT20	SA-240 Gr.304L	40	
106	6	LEG SUPPORT RAIN COVER	4	L250xW130xT6	SA-240 Gr.304L	6	
107	7	EARTHING BOSS	2	Ø40xL50	SS404L	1	
108	8	LIFTING LUG	2	L530xW200xT12	SA-240 Gr.304	20	
109	9	SUPPORT PLATE	2	L200xW30xT12	SA-240 Gr.304	1	
110	10	SUPPORT BAR	2	Ø20xL100	SA-479 Gr.304L	1	
111	11	NAME PLATE BRACKET	1	L230xW270xT3	SA-240 Gr.304L	3	
112	12	NAME PLATE	1	STD x T1	SS404L	1	
113	13	BOLT FOR FOUNDATION	4	M24 AS PER DWG.	SA 193 Gr.B.8M	11	
114	14	NUT FOR FOUDATION	8	M24xSTD	SA 194 Gr.8M	1	
115	15	WASHER FOR FOUNDATION	4	M24xT4xSTD	SA 194 Gr.8M		

NOTES:

1. ALL DIMENSIONS ARE IN mm, UNLESS OTHERWISE SPECIFIED.
2. ALL NOZZLES BOLT HOLES TO STRADDLE VESSEL MAIN AXIS UNLESS OTHERWISE SHOWN.
3. WELDING SHALL BE DONE BY 100% TIG PROCESS WITH 99.99% PURE ARGON PURGING.
4. ALL GASKETS ARE SPIRAL WOUND SS 304L TEFLON FILED WITH INNER AND OUTER SS 304L CENTERING RING, DIMENSIONS OF GASKETS AS PER ANSI B 16.20.
5. ALL WELDING SURFACES THOROUGHLY CLEANED OF SCALE DUST ETC.. BEFORE COMMENCING WELDING.
6. ALL SHARP CORNERS SHALL BE ROUNDED OFF TO A SMOOTH RADIUS.
7. DIMENSIONS OF FLANGES AS PER ANSI B-16.5 300# STANDARD.
8. NO CARBON STEEL PARTS WELDED TO S.S PARTS.
9. DISHED ENDS AFTER FORMING SHALL BE SOLUTION ANNEALED. (AS PER STANDARD PROCEDURE)
   SOLUTION ANNEALING CYCLE
   LOADING TEMPERATURE : 300°C
   SOAKING TEMPERATURE : 1040°C
   SOAKING TIME : 50 MINUTE (MIN.)
   COOLING : AS PER STANDARD PROCEDURE
10. VESSEL SHALL BE COMPLETELY STRESS RELIEVED FOR RELIEVING REAM STRESSES AFTER FABRICATIONS BUT BEFORE HYDRO TESTING, PNEUMATIC TESTING, PICKLING PASSIVATION Etc.. AS PER GIVEN CYCLE. NO WELDING ON PRESSURE PART IS PERMITTED AFTER STRESS RELIEVING PROCESS COMPLETED.
    STRESS RELIEVING CYCLE (AS PER STANDARD PROCEDURE)
    LOADING : 300 C
    HEATING RATE (Max) : 100°C/Hr +20°C
    SOAKING TEMPERATURE : 420°C/ Hr + 15°C
    SOAKING TIME : 2 Hours (AS PER STANDARD PROCEDURE)
    COOLING RATE : 100°C/ Hr (AS PER STANDARD PROCEDURE).
    MEDIUM OF COOLING : AIR COOLING (AS PER STANDARD PROCEDURE).
11. ALL NOZZLES R.F PADS ARE TO BE PROVIDED WITH 1 NO NPT TELL HOLE & TESTED PNEUMATICALLY AT 1.25 kg/sq.cm(g) USING SOAP SUDS, BEFORE & AFTER HYDRO TEST.
12. ALL NOZZLE PIPE TO FLANGE BUTT JOINTS SHALL ALSO BE 100 % RADIOGRAPHED & D.P TESTED.
13. GASKET CONTACT FACES OF ALL FLANGES SHALL HAVE A SURFACE FINISH OF 250 Ra (AARH)
14. PLATES SHALL BE "UT" TESTED.
15. ALL NOZZLE TO SHELL WELDS (ROOT + FINAL RUN) SHALL BE EXAMINED BY DP TEST.
16. AFTER ALL INSPECTIONS AND TESTING, VESSEL SHALL BE DRIED WITH FILLED WITH DRY N2 GAS AT 0.5 kg/sq.cm AFTER PROPERLY BLANKING, ALL NOZZLES WITH BLIND FLANGES.
17. PICKLING AND PASSIVATION SHALL BE CARRIED OUT INSIDE & OUTSIDE THE TANK AS PER "ANNEXURE-II" (PROCEDURE FOR PICKLING, PASSIVATION & PAINTING)
18. PAINTING: AFTER PICKLING & PASSIVATION EXTERNAL SURFACES OF SS PARTS, PAINT SHALL BE APPLIED ON ALL EXTERNAL SURFACES WITH ONE COAT OF
    i). HIGH BUILD EPOXY PRIMER (120-130 MICRONS).
    ii). ALIPHATIC POLYURETHANE PAINT(30-40 MICRONS).
19. WHILE HYDROTEST OF THE EQUIPMENT CAF GASKET SHALL BE USED, BEFORE DESPATCH OF THE EQUIPMENT SPIRAL WOUND GASKET SHOULD BE REPLACED ON EVERY NOZZLES.
20. ABBREVIATION LEGEND
    SB 1LS 1 : SHELL BELT 1LONG. SEAM 1
    S.CS : SHELL CIRC. SEAMS
21. WELDING CONSUMABLES (FILLER WIRE) SHALL BE USED AS PER AWS SPECIFICATION or ER 308L.
22. HYDRO TEST TO BE MADE AS PER ASME SEC. VIII Div.1 WITH CLEAN POTABLE WATER WITH CHLORIDE CONTENT OF LESS THAN 25 PPM, SHALL BE USED FOR TESTING.
23. ALL WELDS AND FLANGE JOINTS ARE TO TESTED AT 6 bar(g) USING DRY NITROGEN GAS AND LEAK CHECK WITH SOAP SOLUTION AFTER HYDRO TEST.
24. LS & CS WELD SEAMS ARE TO BE SHOWN IN THE DRAWING IS TENTATIVE AND ACTUAL AT AVAILABILITY OF PLATE SIZE
25. (a) ALL NOZZLE ON SHELL PROJECTIONS ARE REFERRED FROM VESSEL CENTER LINE TO FLANGE CONTACT FACE.
    (b) ALL NOZZLES ON HEAD PROJECTIONS ARE REFERRED FROM HEAD T.L TO FLANGE CONTACT FACE.
26. BILL OF MATERIAL IS TENTATIVE EXACT REQUIREMENT TO BE WORKED OUT AS PER DETAIL GIVEN IN DRAWING
27. FERRITE NUMBER IN WELDMENT SHALL BE MEASURED BY TESTING AND THIS SHALL BE WITHIN THE SPECIFIED LIMIT OF 3% TO 12% TEST CERTIFICATES SHALL BE FURNISHED TO PURCHASER FOR APPROVAL.
28. PNEUMATIC LEAK TEST:
    AFTER HYDROTEST THE TANK SHALL BE TESTED AT 6 bar(g) USING DRY NITROGEN GAS WITH DEW POINT OF MINUS 40 DEG.C OR BETTER AND LEAK CHECK WITH SOAP SOLUTION AT ALL WELDS AND FLANGED JOINTS.
29. ALL THE PLATES PROPOSED TO BE USED FOR FABRICATION OF AIR RECEIVERS, SHALL BE SUBJECTED TO MECHANICAL, CHEMICAL AND IGC TESTS AS PER A-262 PRACTICE-E IN SPITE OF AVAILABILITY OF MILL TEST CERTIFICATES AND 100% ULTRASONIC TESTING AS PER PRACTICE ASTM A-435.
30. AS BUILT DIMENSIONS ARE SHOWN IN BRACKETS HAVING DIFFERENCE MORE THAN + 3 mm AND OTHER CHANGES ARE ALSO SHOWN IN BRACKETS.

DESIGN DATA

DESIGN CODE		ASME SEC.VIII DIV.-1, EDITION-
TYPE		VERTICAL
OPERATING MEDIA		DRY COMPRESSED AIR (FOR BREATHING AIR PURPOSE)
CAPACITY	M3	5
DESIGN PRESSURE (INT./EXT.)	bar (g)	20 / N.A
DESIGN TEMPERATURE (INT./EXT.)	°C	70 / N.A
OPERATING PRESSURE	bar (g)	15
MAXIMUM ALLOWABLE WORKING PRESSURE	bar (g)	20
OPERATING TEMPERATURE	°C	50
MINIMUM DESIGN METAL TEMPERATURE	°C	0
HYDROTEST PRESSURE	bar (g)	28.8
PNEU.TEST PRESSURE	bar (g)	6
RADIOGRAPHY	%	100% ON ALL BUTT JOINTS
JOINT EFFICIENCY	-	1
CORROSION ALLOWANCE	mm	3
WIND SPEED SPECIFICATION	m/s	55
STRESS RELIEVING	-	YES.REFER NOTES:9 & 10
SEISMIC SPECIFICATION	-	ZONE 3 / AS IS1893
WELDING PROCESS	-	100% BY TIG WITH ARGON PURGING
SURFACE FINISH	-	REFER NOTE : 17 & 18
INSULATION	mm	NA
INSPECTION	-	DNV/LLOYDS/TUV
QUANTITY	NOS.	2
EMPTY WEIGHT	Kgs	3550 (APPROX.)
TEST WEIGHT (FULL OF WATER)	Kgs	8700 (APPROX.)

FOUNDATION LOAD DATA TABLE

LOADS FOR FOUNDATION/SUPPORT DESIGN

MAX. SHEAR ON ONE LEG (TOP & BOTTOM)	Kg	465
MAX. MOMENT AT BASE OF ONE LEG	Kg-m	640
MAX. VERTICAL LOAD ON ONE LEG	Kg	2900

DRAWINGS DETAILS

S.NO.	DRAWING NO.	REV	DESCRIPTION	REMARKS
1	SS/AIR RECEIVER /5CUM/01	00	GA DRAWING OF SS AIR RECEIVER CAPACITY 5m^3	
2	SS/AIR RECEIVER /5CUM/02	00	NOZZLE DETAIL DRAWING	
3	SS/AIR RECEIVER /5CUM/03	00	DISH END DRAWING	

Purchase order	
Client	Government of India Department of Space Satish Dhawan Space Centre SHAR Sriharikota
Project	Fabrication, Testing and Supply of SS Air Receivers
Title	GA Drawing of SS Compressed Air Receiver

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS. SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:

	NAME	DATE	SIGNATURE
DRAWN			
CHK'D			
CHIEF D'MAN			
APPD (DGN			

DEBUR AND BREAK SHARP EDGES
DO NOT SCALE DRAWING

SAFETY SYSTEMS - SOSE
SDSC SHAR SRIHARIKOTA

MATERIAL: SA-240 GR.304L

TITLE: VERTICAL COMPRESSED AIR RECEIVER (CAPACITY: 5 cu.m)

FINISH:

DWG NO. SS/AIR RECEIVER/5CUM/01

REVISION 00

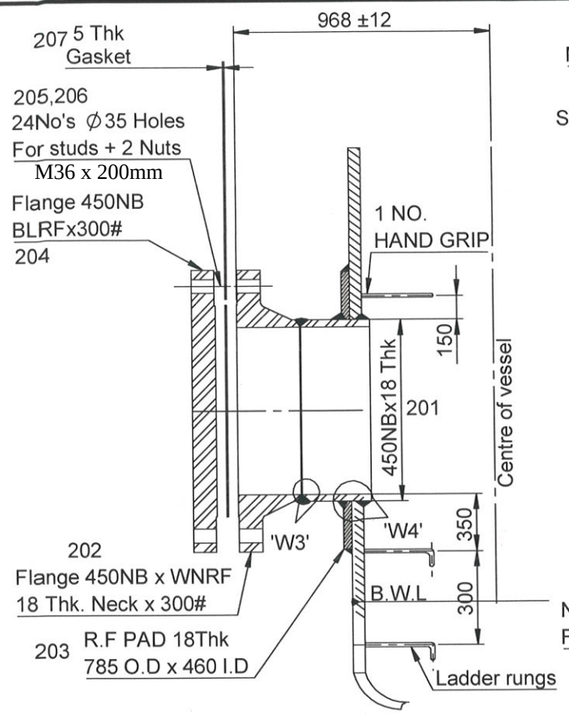
WEIGHT:

SCALE:

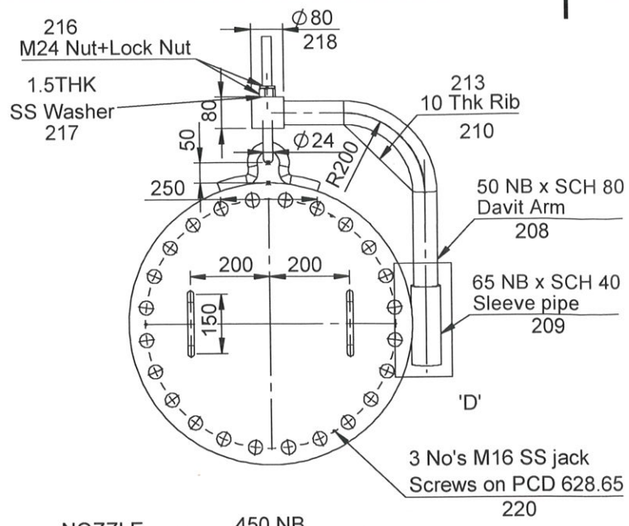
SHEET 1 OF 3

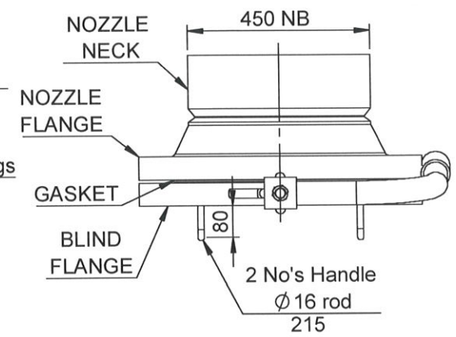
A3

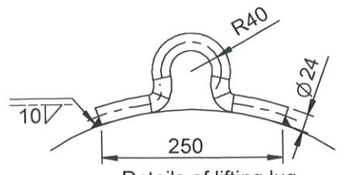
R. No.	DATE	AUTHORITY	ZONE	BRIEF RECORD	DATED INITIALS



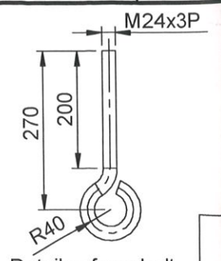
NOZZLE DETAIL FOR 'N7'



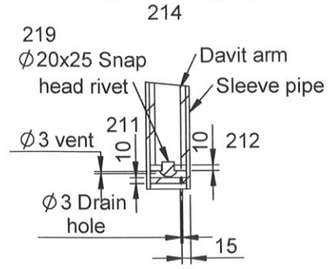




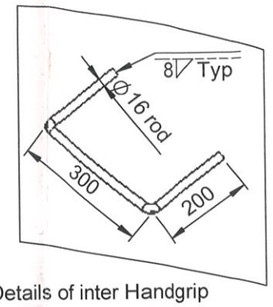
Details of lifting lug
214



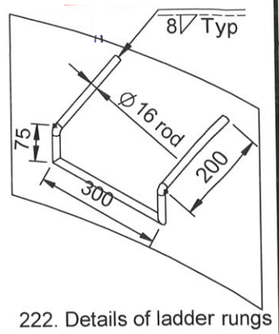
Details of eye bolt
213



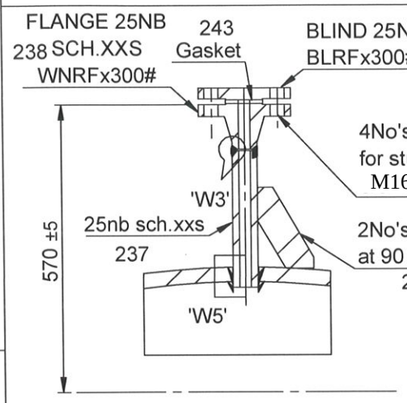
Details 'D'



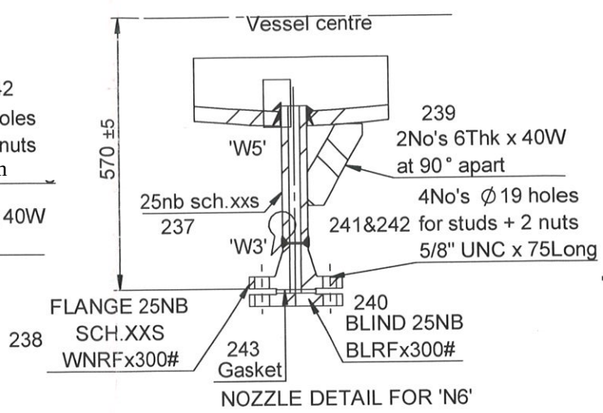
221. Details of inter Handgrip



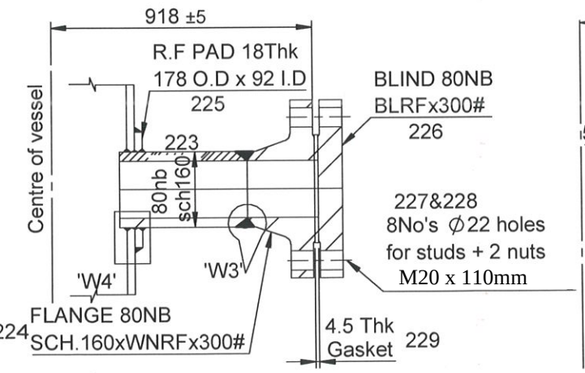
222. Details of ladder rungs



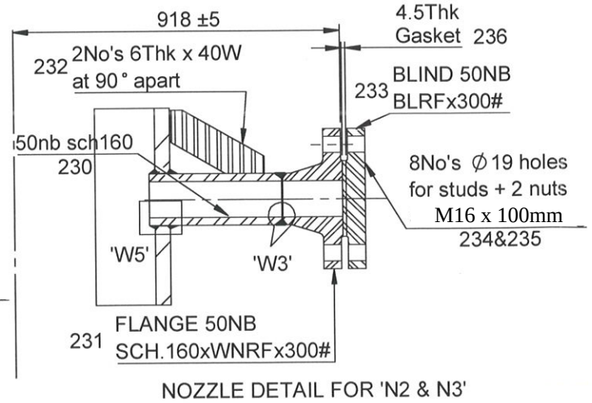
Vessel centre
NOZZLE DETAIL FOR 'N5'



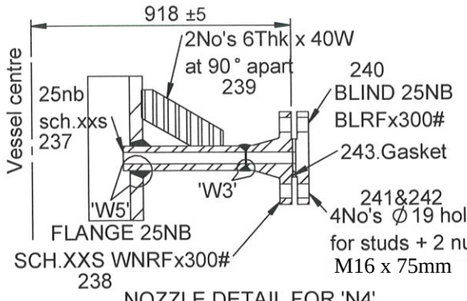
NOZZLE DETAIL FOR 'N6'



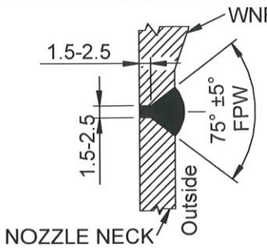
NOZZLE DETAIL FOR 'N1'



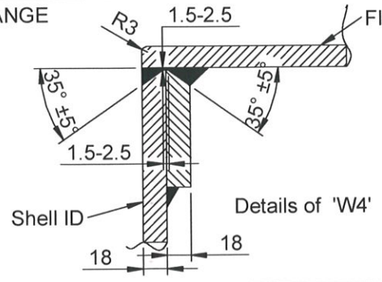
NOZZLE DETAIL FOR 'N2 & N3'



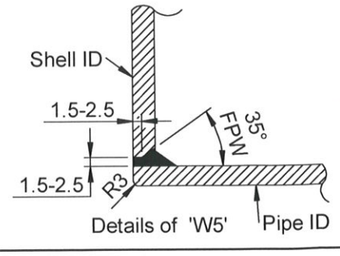
NOZZLE DETAIL FOR 'N4'



NOZZLE NECK
Details of 'W3'



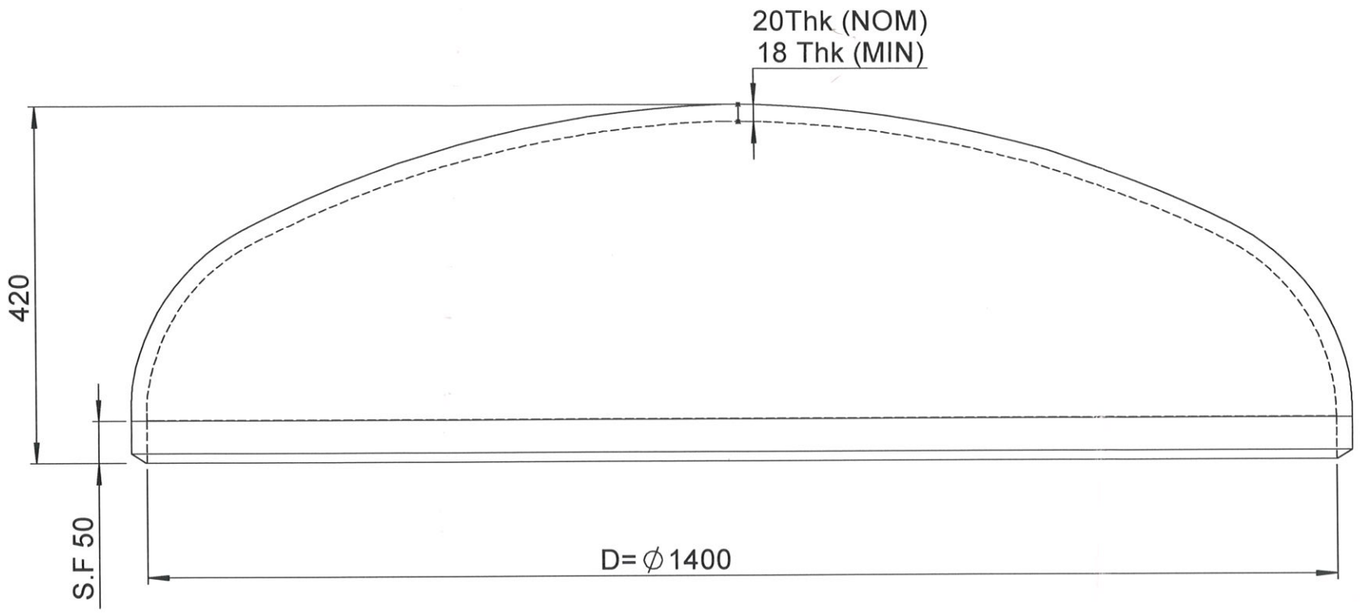
Details of 'W4'



Details of 'W5' Pipe ID

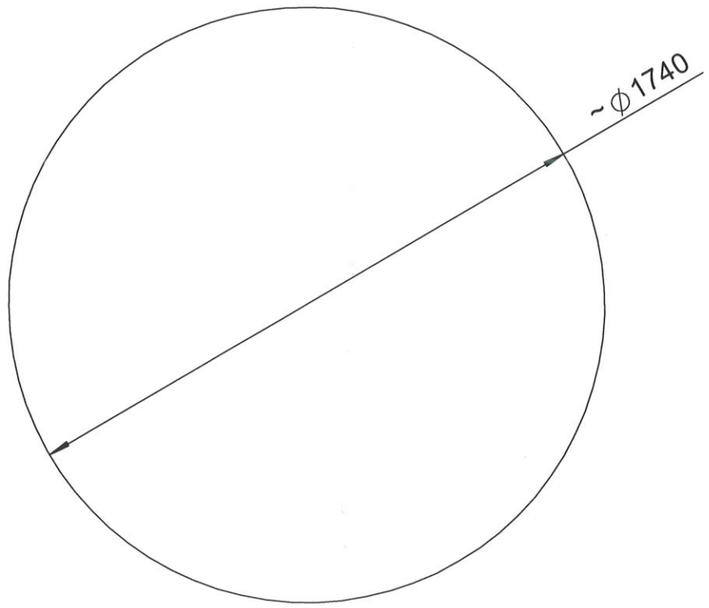
UN TOLERANCED DIMENSIONS(IS : 2012 MEDIUM GRADED)		NOTE :	SAFETY SYSTEMS SDSC SHAR
DIA & LENGTH (UPTO & INCL)	ANGLE (UPTO & INCL)	UNLESS OTHER WISE SPECIFIED 1.ALL THE DIMENSIONS AREIN MM. 2.BREAK ALL SHARP EDGES BY 0.2 x 45° 3.ALL INTERNAL RADII TO BE 0.2 MM MAX. 4.DO NOT SCALE THE DRAWING. 5.HANDLE COMPONENTS GENTLY.	DRG NO: SS/AIR RECEIVER/5CUM/02
6 ±0.1 120 - 315 ±0.3 6 - 30 ±0.2 315 - 1000 ±0.8 30 - 120 ±0.3	1-6 ±1°00' 6 - 30 ±0°30' 30 - 120 ±0°20' 120 - 315 ±0°10'		
MATERIAL -			VERTICAL SS AIR RECEIVER CAP. 5 CU.M
SURAFCE FINISH -	APRX.WT Kg'S		
PROJECTION METHOD	SHEET 2 OF 3 / SIZE A3 / REV 00		

2:1 ELIPSOIDAL DISH END



Design Data	
Design and Manufacturing Code	ASME SEC VIII DIV 1 Edition 2023
TYpe of Head	2:1 Ellipsoidal
Joint Efficiency	1
Radipgraphy	100%
Inspected by	DNV
Blank Diameter	~∅1740 (approx)
Material	SA 240 Gr. 340L

Notes:
1. All Dimensions are in mm. unless otherwise sepcified
2. Do not Scale the Drawing ask if in doubt
3. Dished end Manufacturer's Name. Trade mark to be stamped on SF
4. Dish ends after forming shall be solution annealed (see annealing cycle in sheet-1)



Detail of Blank Plate Size

UN TOLERANCED DIMENSIONS(IS : 2012 MEDIUM GRADED)		NOTE :	SAFETY SYSTEMS SDSC SHAR
DIA & LENGTH (UPTO & INCL) 6 ±0.1 120 - 315 ±0.3 6 - 30 ±0.2 315 - 1000 ±0.8 30 - 120 ±0.3	ANGLE (UPTO & INCL) 1-6 ±1°00' 6 - 30 ±0°30' 30 - 120 ±0°20' 120 - 315 ±0°10'	UNLESS OTHER WISE SPECIFIED 1.ALL THE DIMENSIONS AREIN MM. 2.BREAK ALL SHARP EDGES BY 0.2 x 45° 3.ALL INTERNAL RADII TO BE 0.2 MM MAX. 4.DO NOT SCALE THE DRAWING. 5.HANDLE COMPONENTS GENTLY.	DRG NO: SS/AIR RECEIVER/5CUM/03
MATERIAL SA 240 Gr.304L			VERTICAL SS AIR RECEIVER CAP. 5 CU.M
SURAFCE FINISH -	APRX.WT Kg'S		
PROJECTION METHOD	SHEET 3 OF 3	SIZE A3	REV 00