



Government of India
Department of Atomic Energy
Bhabha Atomic Research Centre
Beam Technology Development Group
Pulsed Power & Electro-Magnetics Division
Visakhapatnam



Dr. Archana Sharma
Director, BTDG, BARC
HEAD, PPEMD

Ref. No.: BARCV/ PP&EMD/2021-22/R&D-44/MF/BKD/61

Dated: 15/12/2021

Subject: Fabrication and supply of vacuum components and accessories as per attached material list with drawing and specification. Qty: 01 set

Dear Sir/Madam,

Sealed Quotations are invited for and on behalf of President of India for the "Fabrication and supply of vacuum components and accessories as per attached material list with drawing and specification. Qty: 01 set"

The Sealed envelope for the quotation with the reference number of this enquiry shall be super scribed with "Fabrication and supply of vacuum components and accessories as per attached material list with drawing and specification. Qty: 01 set" and should reach on or before **25/12/2021** to

Dr. Archana Sharma
HEAD, PPEMD,
PEB-1, BARC, Gandivanipalem Village,
Dossuru Panchayat,
Atchutapuram Mandal,
Visakhapatnam – 531011

(Contact Person: Dr. B. K. Das)

Archana
16-12-2021

Dr. Archana Sharma
Director,
BTDG, BARC
HEAD, PPEMD

Contact Person: Dr. Basanta Kumar Das, Ph: 08019518831
Enclosure: General terms and conditions and detail specifications.

CC. Assistant Accounts Officer, BARC, Visakhapatnam.

डॉ. (श्रीमती) अर्चना शर्मा / ARCHANA SHARMA
निदेशक / Director
किरणपुंज प्रयोगिकी विकास वर्ग
Beam Technology Development Group
भारत सरकार / Government of India,
भा.प.अ. केंद्र / B. A. R.C.
ट्रॉम्बे, मुंबई / Trombay, Mumbai - 400 085.

General Specification

1. Quality surveillance, inspection and inspection report

- 1.0 All work covered by the inspections shall be subjected to quality surveillance by the purchaser or his authorized representatives for which purpose the fabricator shall allow access at all reasonable times during manufacture to
- 1.1 The premises in which the work is being carried out.
- 1.2 The drawings and or tooling involved.
- 1.3 Gauges, instruments etc. required for inspecting the work.
- 1.4 Inspection and tests shall be carried out by the fabricator as per the requirements detailed in the drawings and these specifications.
- 1.5 The fabricator shall submit three copies of inspection reports to the purchaser for approval.
- 1.6 Components found unsatisfactory as to workmanship or material shall be removed by the fabricator and replaced by the components which is satisfactory.
- 1.7 The finished components shall not be dispatched prior to approval by our Engineer.

2. Raw Material

- 2.0 Raw Material for all the components and hardware will be provided by the supplier.

3. Delivery

- 3.0 The bidder shall deliver the finished components after approval by our Engineer within 8 weeks from the date of work order.
- 3.1 In case any extension in delivery is to be granted to the contractor, parties should make request for extension in writing justifying the reason for extension.
- 3.2 Any delay which is attributable to the contractor is liable for penalty @ ½% per week (max. 5%) to be imposed on the contractor.

4. Sub Contract

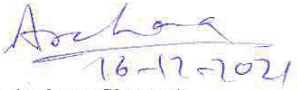
- 4.0 The fabricator shall not sub-contract any or all the work without written consent from the purchaser. The fabricator shall be responsible to the purchaser for all of the sub contractor of the fabricator, if at all allowed by the purchaser.

5. Payment

- 5.0 Payment will be made only after satisfactory completion of work and on production of Invoice with details of location of supply, separate tax components, GSTN and PAN, receipt cum issue voucher from stores, advance stamped receipt, and guarantee certificate.
- 5.1 It may be noted that Income Tax at 2% and surcharge on IT at the rate applicable will be deducted from the bill.
- 5.2 TDS @ 2% will be deducted towards GST wherever Work Order value exceeds 2.5 lakhs.

6. Confidentiality:

- 6.0 No party shall disclose any information to third party concerning the matters under this contract generally. In particular, any information identified as "PROPRIETARY" in nature by the disclosing party shall be kept strictly confidential by the receiving party and shall not be disclosed to any third party without the prior written consent of the original disclosing party.
 - 6.1 "RESTRICTED INFORMATION" categories under section 18 of the Atomic Energy Act, 1962 and "OFFICIAL SECRETS" under section 5 of the Official Secrets Act, 1923:-
Any contravention of the above mentioned provisions by any contractor, sub-contractor, consultant, advisor or the any employees of a contractor will invite penal consequences under the aforesaid legislation.
 - 6.2 Prohibition against use of BARC's name without permission for publicity purpose:-
The contractor or sub-contractor, consultant, advisor or the employees engaged by the contractor shall not use BARC's name for publicity through any public media like press, radio, T.V., or internet without the prior written approval from BARC. (vide circular ref: 2/Misc-9/Lg1/2001/92 dated April 30, 2001)
7. Director, BTDG reserves the rights to accept/ reject any or all quotations without assigning any reasons.

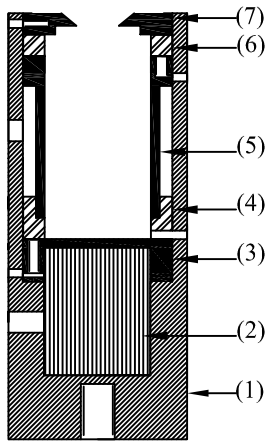

16-12-2021

(Dr. Archana Sharma)
Director,
BTDG, BARC
HEAD, PPEMD

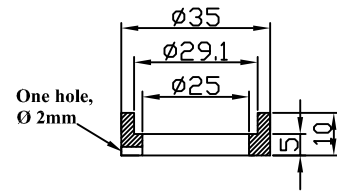
डॉ. (श्रीमती) अर्चना शर्मा / ARCHANA SHARMA
निदेशक / Director
किरणपुंज प्रौद्योगिकी विकास वर्ग
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ट्रॉम्बे, मुंबई / Trombay, Mumbai - 400 085.

Material list with specification

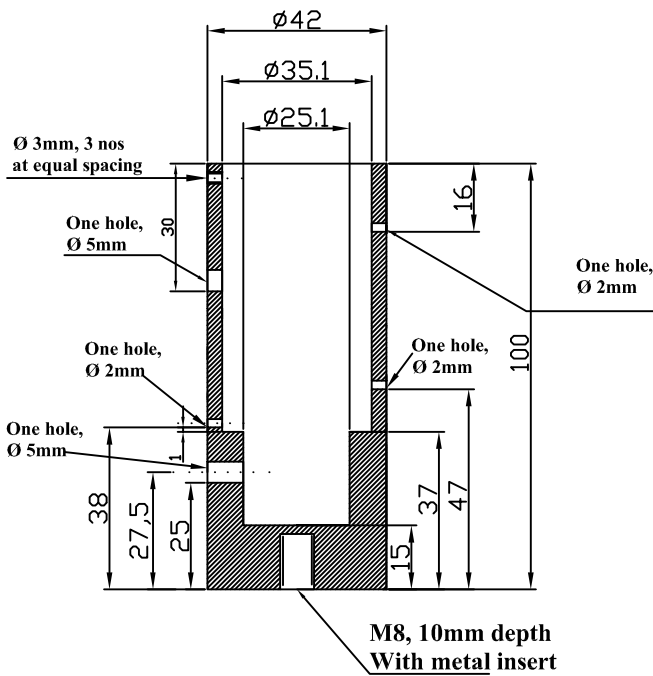
Sr. No.	Material Description	Qty	Remarks
01	1-1/2" Three piece Ball valve with 35 CF end flange, Valve body SS 316, PTFE sheet and seal Suitable for high heat, Pressure range: ~ 1000 psi	1 no.	Supplier has to prepare the drawing and take approval before production
02	63 CF flange with fine tuned gas leak needle valve swagelock type, Valve body- SS316, Wetted materials: SS316 and PTFE , Pressure range: ~ 1000 psi	1 no.	Supplier has to prepare the drawing and take approval before production
03	Ceramic and SS components as per attached drawing	1 set	Drawing attached
04	Delryn bush with accessories as per drawing	1 set	Drawing attached
05	100 CF flange with 3 nos. 16 CF zero length transition with one exactly at the centre	2 nos.	Drawing attached
06	Intertwisting of the wire of Titanium, Zirconium and Vanadium of 1 mm diameter and purity 99.99 %	1 m	
07	16 CF Feedthrough, single pin, 5 KV, 25 A, copper conductor, baking temperature- 250 °C, Helium leak rate < 10 ⁻⁹ mbar L/sec	4 nos.	
08	63 CF manually operated UHV gate valve, Material: SS304/316, vacuum ~ 10 ⁻¹⁰ mbar, Max. pressure- 1.6 bar, Bonnet seal- metal, gate seal – Viton, mounting position – any, Temperature – 200 °C	1 no.	
09	OFHC copper disc; Diameter-30 mm, thickness-1mm	20 nos.	
10	SS 16 KF centre ring with viton O rings	20 nos.	
11	16 CF SS flexible bellow, length 1/2 meter	2 nos.	
12	Tungsten coil heater, Current-74 Amp, Power-377 watt, Temperature - 1800 °C	20 nos.	
13	Tungsten basket crucible heater, Current-71 Amps, Power-693 watt, Temperature - 1800 degree	5 nos.	
14	Alumina thermal crucibles, OD-25.4mm, Wall thickness-1.524, Height-25.4 mm	2 nos.	
15	M4 Silver plated SS LN head stud, 15 mm length with one washer and one SS nut	50 set	
16	M6 Silver plated SS LN head stud, 30 mm length with one washer and one SS nut	100 sets	
17	M8 silver plated SS LN head stud, 40 mm length with one washer and one SS nut	100 sets	
18	M4 SS bolt, 20 mm length with one washer and one silver plated SS nut	50 sets	
19	M6 SS bolt, 35 mm length with one washer and one silver plated SS nut	100 sets	
20	M8 SS bolt, 40 mm length with one washer and one silver plated SS nut	100 sets	
21	M8 SS bolt, 50 mm length with one washer and one silver plated SS nut	100 sets	
22	Torr seal 118 gm (Base resin + Hardener)	1 pack	
23	Apiezon L Ultra High Vacuum Grease, Silicone & Halogen Free, 50g	2 tubes	



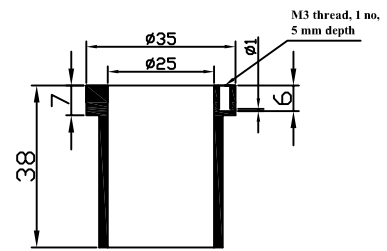
Assembly



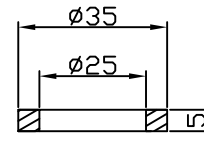
Part-4
Material: Macor Machinable ceramic



Part-1
Material: Macor Machinable Ceramic

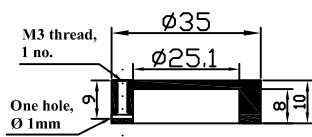


Part-5 (Anode, Material: SS)

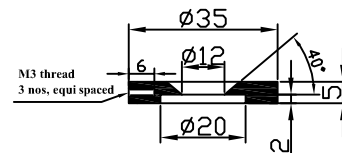


Part-6
Material: Macor Machinable ceramic

Part-2
(Will be provided by us)



Part-3 (Material- SS)

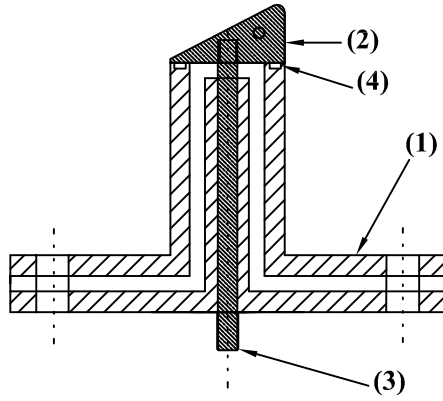


Part-7 (Material: SS)

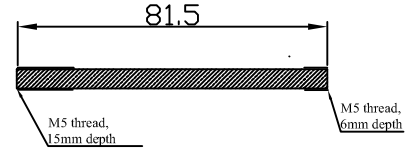
Part-8 (Fastners)

- a. Gruv screws, M3, length 10mm, 10 nos.
- b. Gruv screws, M3, length 4 mm, 10 nos.
- c. Round head screws, M3, length 10mm, 10 nos.

Sr. No. -4

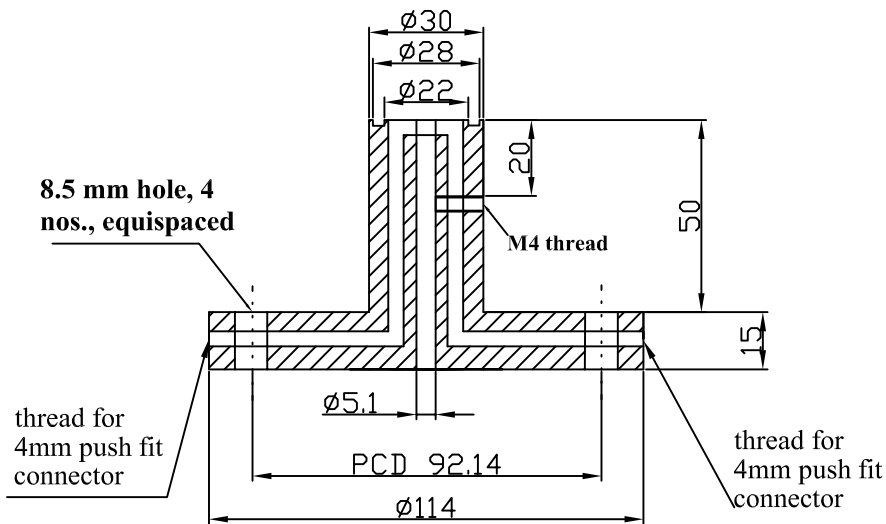


Assembly

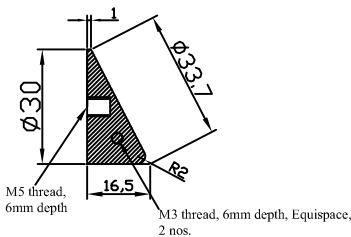


Part-3
Material: SS

Part-4
Material: Viton 'O' ring
OD: 28 mm, ID: 22 mm,
Qty: 05

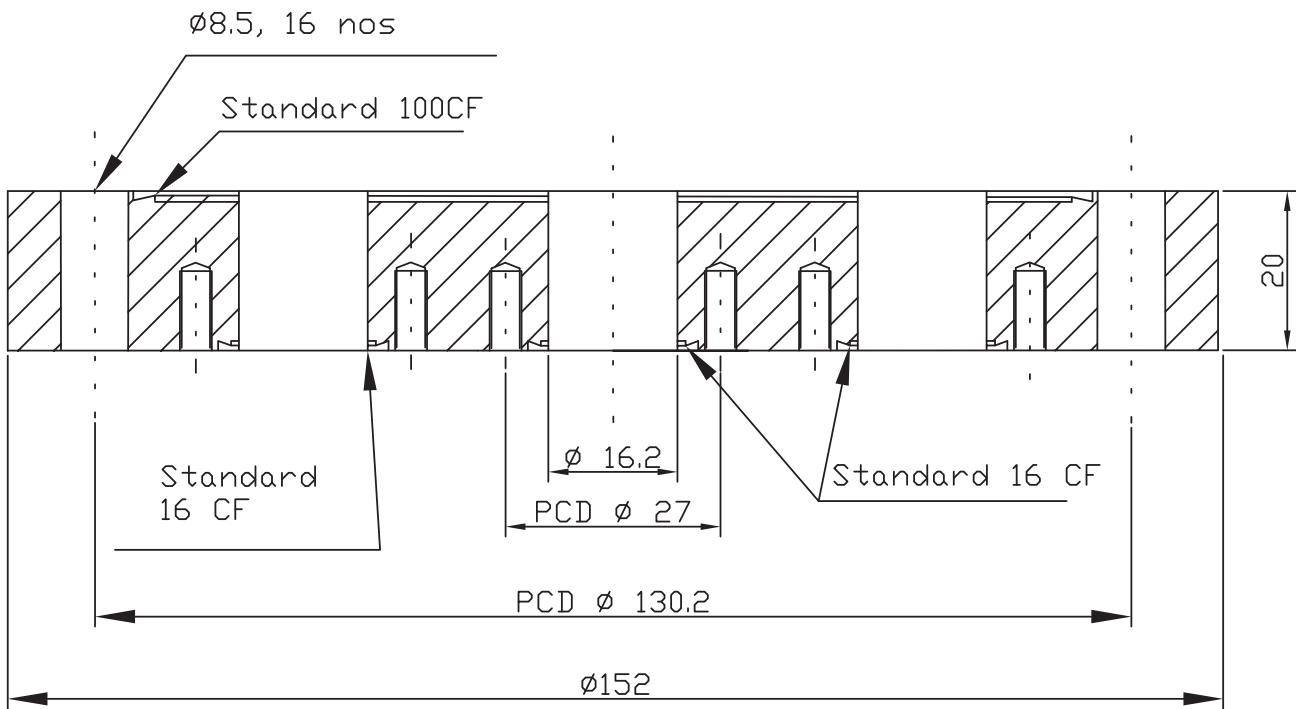


Part No.-1
Material: Delryn



Part-2
Material: Macor machinable ceramic, 2 nos.

Sr. No. -5



Description: 100 CF flange with 3 16 CF zero length transition, one exactly at the center

Material: SS 304L

Qty: Two