



www.iter-india.org

ITER-India, Institute for Plasma Research

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Email : purchase@iter-india.org

ENQUIRY - LOCAL

OFFICE COPY ENQUIRY NO : I-IEN20059
Date : 26/11/2020
Due Date : 15/12/2020 by 5:00 PM (IST)

We invite your rate/s for the following item/s. The Instructions to bidders and Terms & Conditions are attached herewith.

Important Note :

1. Enquiry No., Date & Due Date should appear on the envelope otherwise your offer will be rejected.
2. Address quotation only to the Purchase officer.
3. ITER-India, IPR is entitled to avail concessional rate of GST @ 5% (2.5% CGST and 2.5% SGST) as per Central Goods and Services Tax (CGST) Notification No. 45/2017-Central Tax (Rate) dated 14th November, 2017, State Goods and Services Tax (SGST) Notification No. 45/2017 – State Tax (Rate) dated 15th November, 2017 and IGST @5% as per Notification No. 47/2017-Integrated Tax (Rate) dated 14th November, 2017. Therefore, please consider GST in your quotation accordingly.

Sr No.	Material Description	Quantity	Unit
1	3D PRINT OF ITER TOKAMAK MODEL	1	NOS

Note :

- (1) Submit your quotation in hard copy AT THE ABOVE ADDRESS.
- (2) Any clarification on this enquiry may be sought from the Purchase Officer, ITER-India
- (3) Quote with complete technical details.
- (4) Quotation should invariably be submitted in the attached format (Quotation Format) ONLY else ITER-India may not consider your offer.
- (5) Attached herewith Annexure -I for Technical Specifications. (Total pages 09)
- (6) Payment shall be made within 30 days from the date of final acceptance of ordered items of purchaser and on receipt of error free invoice and other necessary documents at our end.
- (7) Bidder shall sign & stamp each & every page of Enquiry and Annexures which will be considered as an acceptance by the bidder.
- (8) Bidder under the category of Micro & Small Enterprise (MSE) for the quoted item shall attach MSE certificate. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible under the policy. Traders are excluded from the purview of this Policy.
- (9) QUOTATIONS TO BE SUBMITTED IN INDIAN CURRENCY ONLY. QUOTATIONS RECEIVED OTHER THAN INDIAN CURRENCY WILL BE REJECTED. NO CUSTOMS DUTY EXEMPTION CERTIFICATE WILL BE ISSUED.

Encl:- as above

Rakhi Dharamdasani
OFFICER-I (PURCHASE & STORES)
ITER-India (IPR)

TERMS AND CONDITIONS

1. The quotation and any order resulting from this enquiry shall be governed by our Conditions of Order and supplier quoting against this enquiry shall be deemed to have read and understood the same in to
2. Where counter terms and conditions have been offered by the Tenderer, the same shall not be deemed to have been accepted by ITER-India unless our specific written acceptance thereof is obtained.
3. Quotation: Your quotation superscripting our enquiry No., date, due date and brief description of item should be submitted to the Purchase Officer, ITER-India in sealed envelope on or before the due date. Late/ Delayed/incomplete quotations will not be considered. Envelopes received without Enquiry number, date, due date and brief description of item may be rejected. The quoted prices should be firm for a period of 90 days from due date for placing order. ITER-India is not bound to accept lowest rate/s. Bidder shall submit the price bid/offer on Bidder's letter head with official seal and sign on each page.
4. The bid documents shall be prepared in English language only
5. All pages of the bid documents shall be numbered. Each page of the bid document shall be stamped and initialized.
6. In the event of any date indicated above is a declared Holiday, the next working day with the same time limit shall become operative for the respective purpose mentioned herein
7. In case of deviation in payment terms including demand of advance other than specified in payment schedule and accepted by ITER-India, prevailing Prime Lending Rate (PLR) of SBI will be loaded for price comparison purpose
8. ITER-India and their authorized representatives may visit the Contractor/Sub-contractors if required as part of technical evaluation process
9. ITER-India reserves the right to place order on one or more parties.
10. Specifications: Material should be offered strictly conforming to our specifications/drawings, if any. Deviation, if any, should be clearly indicated by the supplier in their quotation. The Tenderer should also indicate the Make/Type number of the materials offered and catalogues, technical literature and samples, wherever necessary should accompany the quotation. Clarification/s on specifications/drawings should be obtained from Purchase Officer before submitting quotation.
11. Terms of Prices: Quotation should be submitted on door delivery basis, duly packed & insured without extra charge wherever possible. In the case of Indian suppliers, the material is to be delivered at our stores free of charge duly packed & insured.
12. Unit rate/s should be valid throughout the validity of Purchase Order for addition/deletion purposes. Break-up of price should be furnished. The quoted price should not be subject to price escalation for whatsoever reasons. The quoted price shall be firm, fixed and non-revisable during the validity/ extended validity of Purchase Order.
13. Prices are required to be quoted according to the units indicated in the tender form/Enquiry. When Quotations are given in terms of units other than those specified in the tender form, relationship between the two sets of units must be furnished.
14. Tender should be free from Correction and Erasures. Corrections, if any, must be attested. 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. Unsigned quotations will summarily be rejected.
15. ITER-India 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 the quantity offered and the tenderers shall supply the same at the rates quoted. ITER-India also reserves the right to split the order at its sole discretion.
16. Octroi is not applicable at present.
17. Delivery Date/Period: Delivery period is essence of the Order. Supplier must indicate the firm delivery date by which the materials will be dispatched / delivered by them from the date of our order.
18. Delivery period shall be clearly indicated against each item separately.
19. Inspection: Materials on its arrival at ITER-India will be inspected by our Engineer/Stores In-Charge, and his decision in the matter will be final. However, where the items are required to be inspected at the Suppliers Premises, Supplier has to give advance notice to the Purchaser regarding readiness of the material to enable Purchase/Stores section to depute his representative for inspection.
20. Payment: Payment will be arranged for accepted materials only within 30 days from the date of acceptance of materials at ITER-India and receipt of error free bills in our accounts section, complete in all respects.
21. No correspondence will be entertained within 30 days from the date of receipt of material and bills, whichever is later.
22. Warranty: The Stores/Items offered should be guaranteed for a minimum period of twelve months from the date of acceptance, against defective materials, design, workmanship, operation or manufacture. For defects noticed and communicated during the Guarantee period, replacement/rectification should be arranged free of cost within a reasonable period of such notification. In case where our specifications call for a guarantee period more than 12 months specifically, then such a period shall apply.
23. The Contractor/Supplier shall at all times indemnify the purchaser against all claims which may be made in respect of the stores for infringement of any right protected by Patent, Registration of design or Trade Mark and shall take all risk of accidents or damage, which may cause failure of supply from whatever cause arising and the entire responsibility for sufficiency of all means used by him for the fulfillment of the Order.
24. Successful tenderer will have to furnish in the form a Bank Guarantee or in Indemnity Bond form as called for by the Purchaser towards adequate security for the materials/property provided/issued by the Purchaser as Free Issue Material for the due execution of the Order. Insurance for the Free Issue Material shall be arranged by the Supplier/Contractor at his risk and cost.
25. Non-compliance to tender specifications and/or tender scope and/or tender terms and conditions are liable for rejection. Decision of ITER-India in respect of non-compliance shall be final and binding on the bidders.
26. Canvassing in any form with regard to this tender will lead to rejection of the bid.
27. The Project Director, ITER-India reserves the right to accept or reject any quotations fully or partly or to cancel the enquiry without assigning any reasons.
28. This enquiry is not a commitment and the Purchaser reserves the right to reject or cancel any or all offers.
29. Jurisdiction: The Order shall be governed by the Laws of India for the time being in force. The Courts of Ahmedabad/Gandhinagar only shall have jurisdiction to deal with and decide any legal or dispute arising out of this Order.
30. Unsuccessful bidders will not be intimated about the results of the enquiry/tender.
31. Purchase will not be responsible for payment of any interest to the Supplier, in case of delay in releasing payment.
32. The price evaluation shall be carried out on Landed price.

FORMAT FOR SUBMISSION OF QUOTATION

Enquiry No. : I-IEN20059
Name Of Party : OFFICE COPY
Quotation No. & Date :
Due on : 15/12/2020 by 5:00 PM(IST)

Sr No.	Material Description	Qty	Unit	Rate	Total
1	3D PRINT OF ITER TOKAMAK MODEL	1	NOS		
				Grand Total	

COMMERCIAL TERMS & CONDITIONS *

Sr.No	Description	Bidder's Compliance
1	Free Door delivery	
2	Packing & Forwarding (To Specify, if any)	
3	Safe Delivery Charges (Please mention if not included in rate mention above)	
4	Delivery Period (Please refer Sr. No. 6 of attached Annexure - I)	Comply Yes/No (In case of No Please provide details)
5	Payment:ITER-India payment terms will apply (Refer Sr. No. 6 of Note)	Comply Yes/No (In case of No Please provide details)
6	Warranty (Refer Sr. No. 23 of Terms and Conditions)	Comply Yes/No (In case of No Please provide details)
7	Validity Period (Refer Sr.No. 3 Of Terms and Condition)	Comply Yes/No (In case of No Please provide details)
8	GST (Not to be included in quoted rates)	
9	GST(Refer Sr.No.3 of Important Note)	Comply Yes/No (In case of No Please provide details)
10	GST Registration No. (To specify)	
11	Udhyog Aadhar No. & Category (Micro/Small/Medium Enterprise)	
12	Discount(if any)	
13	Remarks	

* Fill in the applicable details

Place:

Authorised Signatory:

Date:

Company Seal



Annexure-1 Technical Specification for 3D Printing of ITER Tokamak Model

Enq. No. : I-IEN20059

Date: 26.11.2020

Technical Specification for 3D Printing of ITER Tokamak Model

1. Introduction

This document aims to describe all parts of the 3D printable ITER Tokamak Model. The models are made ready for printers that have 300mmx300mmx300mm. The models are 1:100 scale to the original device size. To print the model, .stl files are created. The approximate weight of the used material shall be of 4kg and the final product will be about 3kg. However, vendor can decide the material required based on the machine requirements. The parts can be printed in any order.

Following details will be provided to vendors for printing the models.

- a. Models (.Stl files)
- b. Filament type and colors details

Link for downloading the files

<https://user.iter.org/FileSharing/?uid=069fb095-b066-46ee-81f1-2d92e150625b>


2. Scope of supply

- Vendor shall print all the parts defined in section 4.
- Assembly of all the parts shall be demonstrated by vendor. Assembly sequence for reference is shown in section 5.
- Delivery of all the parts shall be done at the delivery location mentioned in section 6. Vendor shall also demonstrate the assembly of parts at the delivery site.

3. General Instructions:

- Vendor has to use the material and colour for printing the specific part as defined in the annexure A of this technical specification.
- The surface quality of the printed models shall be as shown in figures of section.
- In case of any damage during transportation, vendor shall replace the part of the assembly.

4. Part Description:

	Annexure-1 Technical Specification for 3D Printing of ITER Tokamak Model	Enq. No. : I-IEN20059
		Date: 26.11.2020

The fully printed model contains 56 parts altogether.

- 4 Cryostat part
- 1 Central solenoid
- 6 Poloidal field (PF) coils
- 9 Vacuum vessel (VV) part
- 18 Toroidal field (TF) coils
- 18 Divertor parts

a. Cryostat

The cryostat has the largest components, with about 30 cm in diameter. There are 4 cryostat parts.

b. Central Solenoid

This part will be installed almost lastly

c. Poloidal Fields (PF) Coils

The 6 poloidal field coils are numbered from 1 to 6, number 1 will be on the top and number 6 will be on the bottom

d. Vacuum Vessel (VV) Parts

There are 9 parts each identified with a number from 1 to 9

e. Toroidal Fields (TF) coils

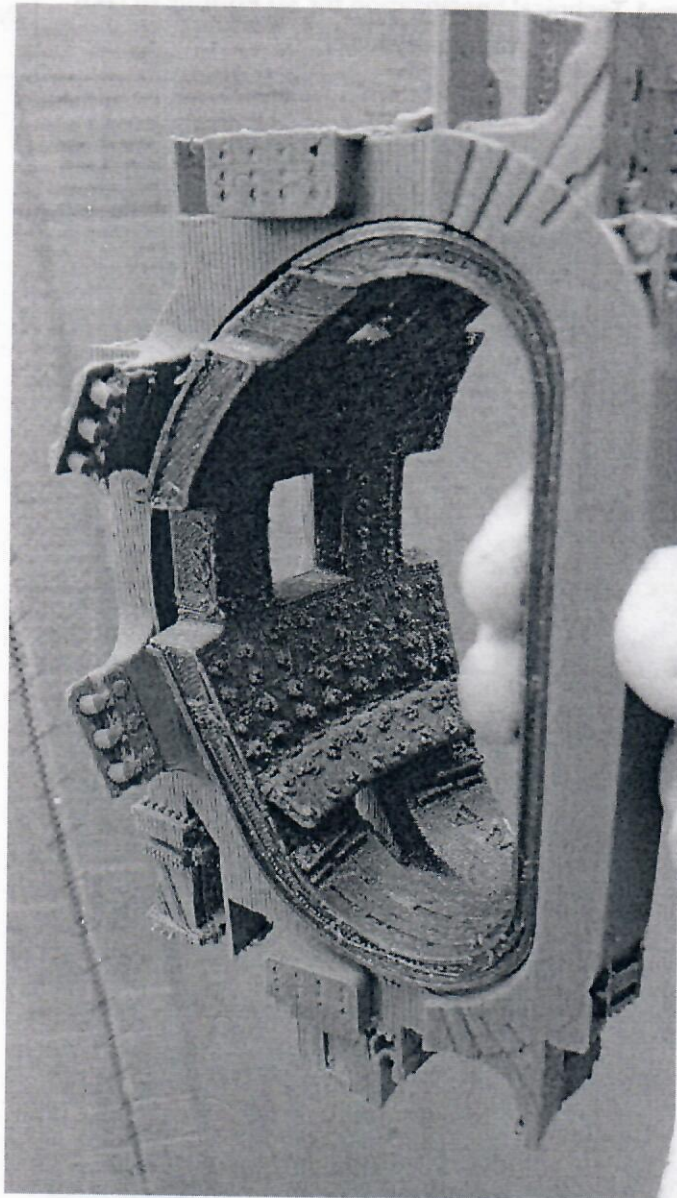
There are 7 types of TF coils, each vacuum vessel (VV) sector has 2 TF coils, their order in counterclockwise direction starting from VV sector 1: BC-DE-FG-BC-DE-FA-BC-DE-FA

f. Divertor

The divertor parts are all the same so there is no order how to install them

5. Printing and Assembly the parts

Images of the already printed model using these files are shown here for reference.

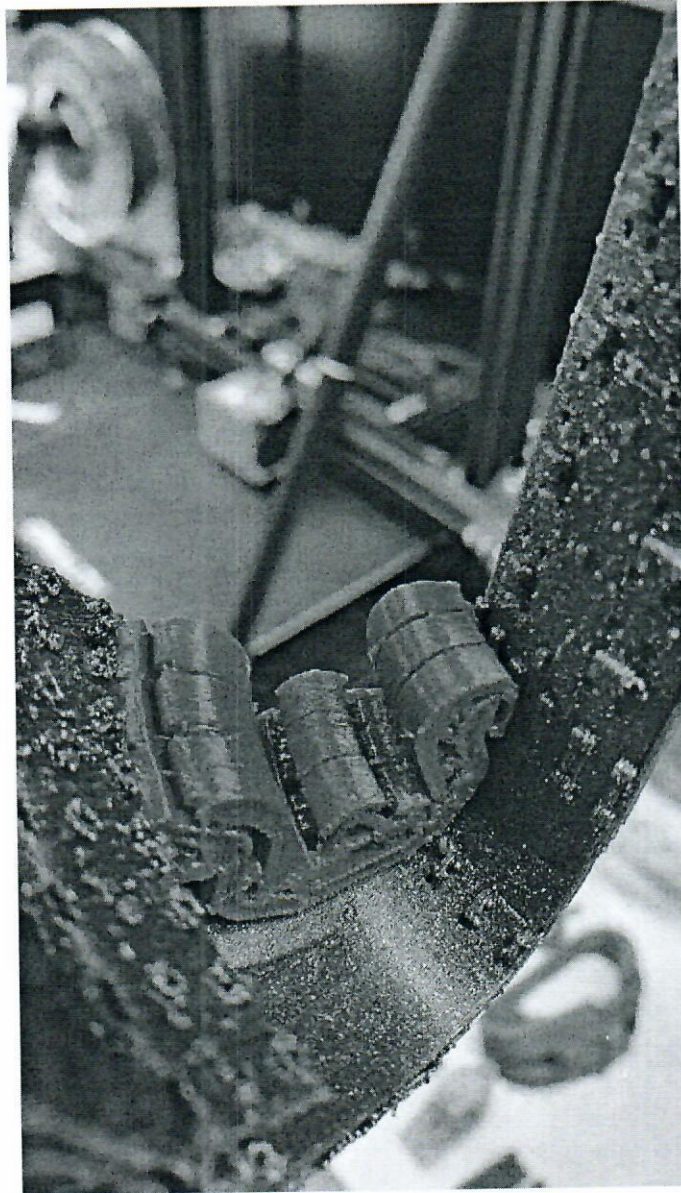


VV sector with 2 TF coils

Assembly sequence for VV and TF

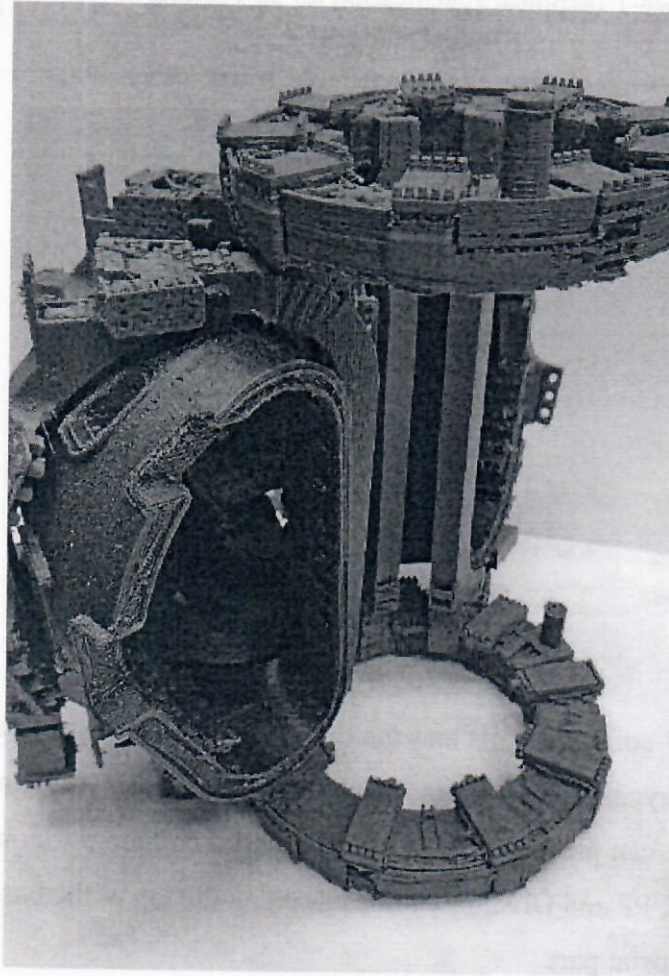
VV	1	2	3	4	5	6	7	8	9									
TF	b	c	d	e	f	g	b	c	d	e	f	a	b	c	d	e	f	a

For assembling the diverter, 2 pieces for each VV sector.

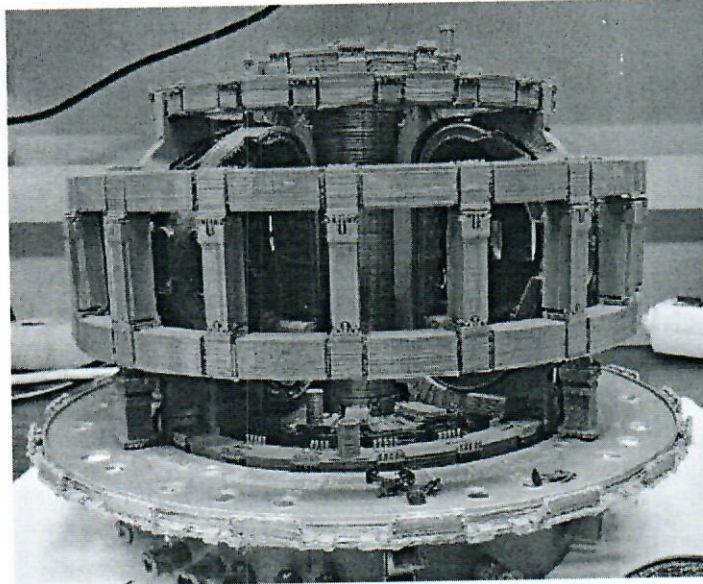


Divertor piece attached to a VV sector

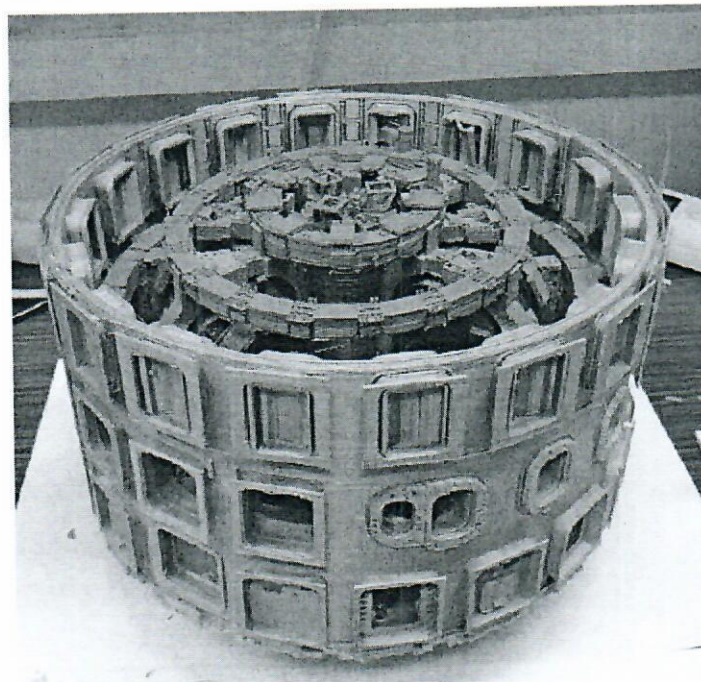
We recommend now to attach the PF coils to the assembled sectors. PF coil number 6 is the lowest one and it'll attach to the TF coils like on this photo below. You can also attach PF number 1 to the top.




PF coil no 2 and 5 will follow, they're place after the sectors are assembled. The largest PF coils, 3 and 4 can be placed like on the photo below: PF 4 will be the first.



After the VV sectors, TF coils, PF coils and the divertor assembled we recommend to continue with the cryostat. The cryostat has 4 parts, the base which is the very first component to be installed. On the base we can place the lower cryostat part then the sectors we assembled earlier together with the VV, TF, PF and Divertor can be placed on the top of the base. After that you can put the top and upper cryostat part.



	Annexure-1 Technical Specification for 3D Printing of ITER Tokamak Model	Enq. No. : I-IEN20059
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Finally, insert the central solenoid that should fit in the center and on the top cryostat top part will go. This is how the ITER 3D printed model should be assembled.

For More details, please visit the below link

<https://www.iter.org/newsline/-/3477>

6. Delivery time

3-4 Weeks after placing the PO.

7. Delivery Address:

ITER-India, Institute for Plasma Research

Bhat Koteshwar Road, Ahmedabad, Gujarat – 380005

Bidder Signature		
Name of the signatory & Title	Name	Title
	Bidder's Official seal	
Place & Date	Place	DD-MM-YYYY

Annexure A - Technical Specification for 3D Printing of ITER Tokamak Model

Filament for ITER 3D printable model

	Filament type
Cryostat	PLA Extrafill Metallic grey
Central solenoid	PLA Extrafill Green grass
TF coils	PLA Extrafill Sky blue
PF coils	PLA Extrafill Traffic purple
Vacuum vessel	PLA Extrafill Vertigo grey
Divertor	PLA Extrafill Signal red

	Filament usage(g)	Weight (gm)
Sectors	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	
	9	
Total		

	Weight (gm)
Cryostat	
Base	
Lower	
Upper	
Top	
Total	

	Weight (gm)
PF coils	
1	
6	
2	
5	
3	
4	
Total	

	Weight (gm)
Central solenoid	1x
Total	

	Weight (gm)
TF coils	
2xa	
3xb	
3xc	
3xd	
3xe	
3xf	
1xg	
Total	

	Weight (gm)
Divertor	18x
Total	

Total	0
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