

Dismounting ECAL barrel modules: status report

Summary

- Progress on restoring the dismantling tooling.
- Calorimeter support structure.
- Some verification on the extraction simulation.
- Conclusions.

Progress on restoring the dismantling equipment.

- The company has received the order (17-10-2022) to proceed with recovery of insertion tooling last week (Invoice data of 30-09-2022).
- The equipment is completely disassembled. All components had been sandblasted and this week painted.
- We have ordered all components to be replaced.



Wheels



Linear bearing + housing

Shaft



Collaboration meeting Frascati F. Raffaelli INFN Pisa

Progress on restoring the dismantling equipment.



Worm gearbox

Worm gear screw jack



Progress on restoring the dismantling equipment.



Materials on order

Codice	Pos.	U.M.	Q.tà	Descrizione Articolo	Prezzo	Sc.%	Importo	Data consegna
3722	40	NR	1,00	RIDUTTORE VF/W 44/86 U 1050 HS B3 CCW3	326,41000	NETTO	326,41	10/10

BO100480180		NR	1,00	alternativa: VF 44 P1 35 HS B3 Versione pendolare Albero lento cavo per linguetta. Dim.albero lento (dxl)= 18x64 mm	78,00000	NETTO	78,00	PRONTA S.V.
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Codice	Pos.	U.M.	Q.tà	Descrizione Articolo	Prezzo	Sc.%	Importo	Data consegna
SK18644	10	NR	4,00	SKF KR 35 PPA CUSC. A RULLINI nb con le protezioni	35,20610	NETTO	140,82	2GG
SK18653	20	NR	4,00	SKF KR 62 PPA CUSC. A RULLINI con le protezioni	70,16380	NETTO	280,66	PRONTA S.V.

Totale Valore Offerta escluso IVA EUR

421,48

Material on order

Codice	Pos.	U.M.	Q.tà	Descrizione Articolo	Prezzo	Sc. %	Importo	Data consegna
3101	10	NR	4,00	SUPPORTO FMN 50	546,00000	NETTO	2.184,00	7WEEK
3101	20	NR	4,00	SUPPORTO NIM50-1000-SL	281,45000	NETTO	1.125,80	7WEEK

Calorimeter linear bearing replacements 72 pieces
47 Keuro. May be we can save some money reused the
Aluminum housing.

Totale Valore Offerta escluso IVA EUR **3.309,80**

Codice	Pos.	U.M.	Q.tà	Descrizione Articolo	Prezzo	Sc. %	Importo	Data consegna
SK213	10	NR	6,00	SKF GX 30 F SNODI SFERICI	113,40560	NETTO	680,43	3GGL
SK213	20	NR	3,00	SKF GX 30 F SNODI SFERICI	222,76100	NETTO	668,28	10WEEK
				Disponibili in 10 setTimane D.R.O.				
SK19179	30	NR	5,00	SKF PWKRE 62.2RS CUSC. A RULLINI	149,00000	NETTO	745,00	15GG
RE16B1.00	40	MT	5,00	CATENA REGINA 1" S. 147	34,68600	NETTO	173,43	3GG

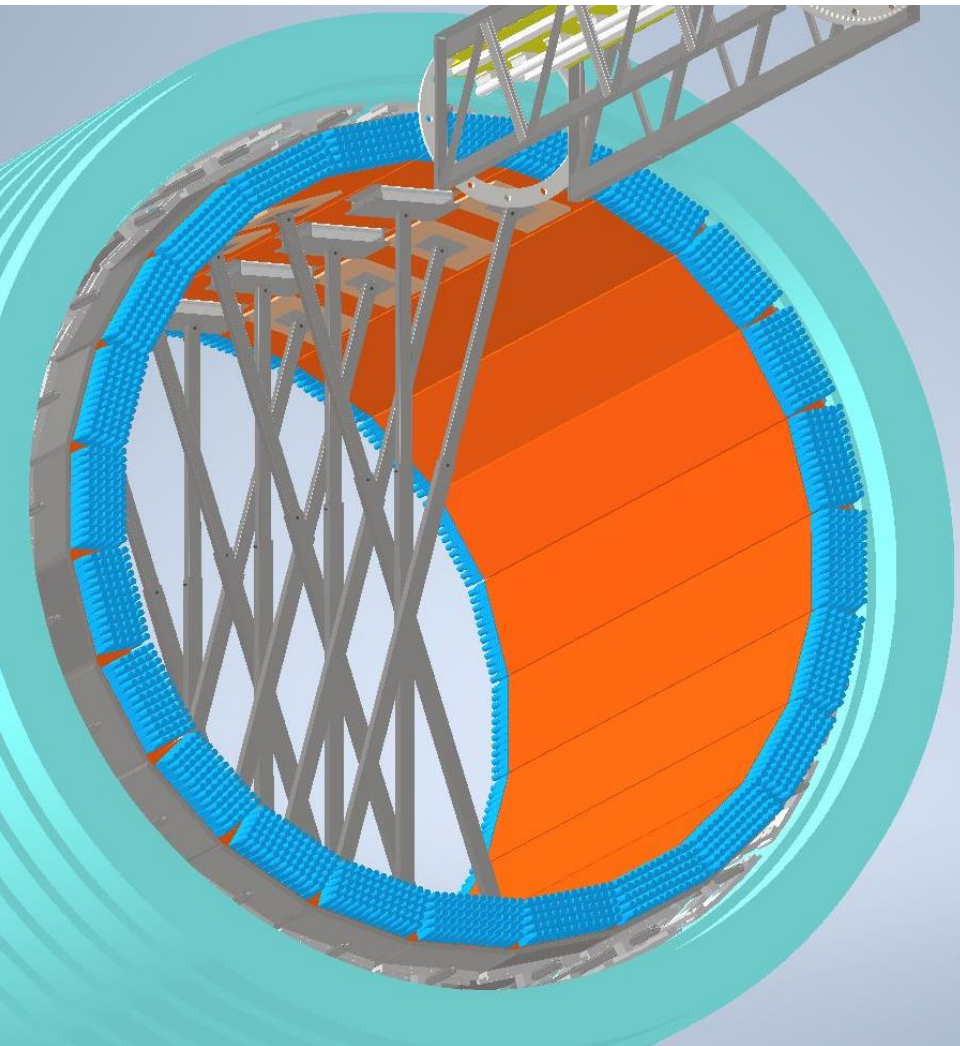
Totale Valore Offerta escluso IVA EUR **2.267,14**

Costs of components ordered.

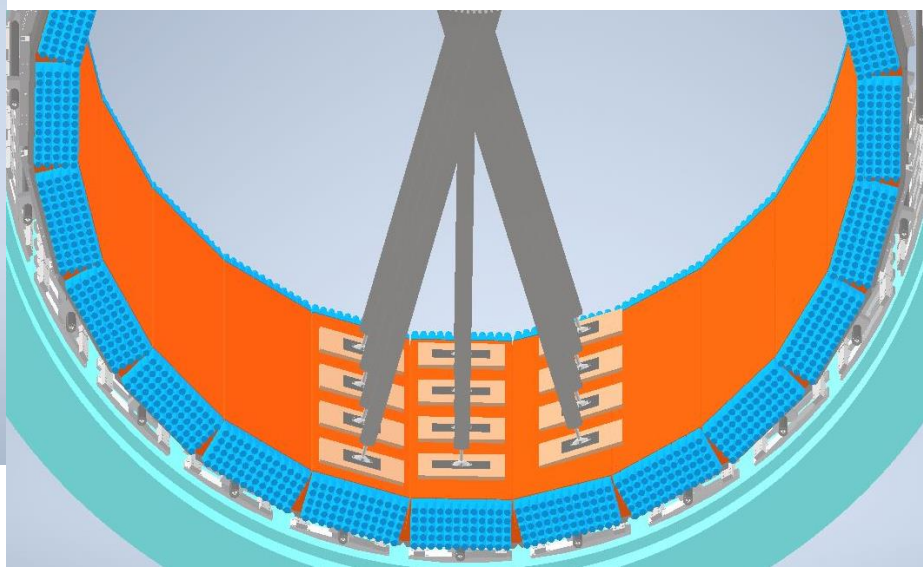
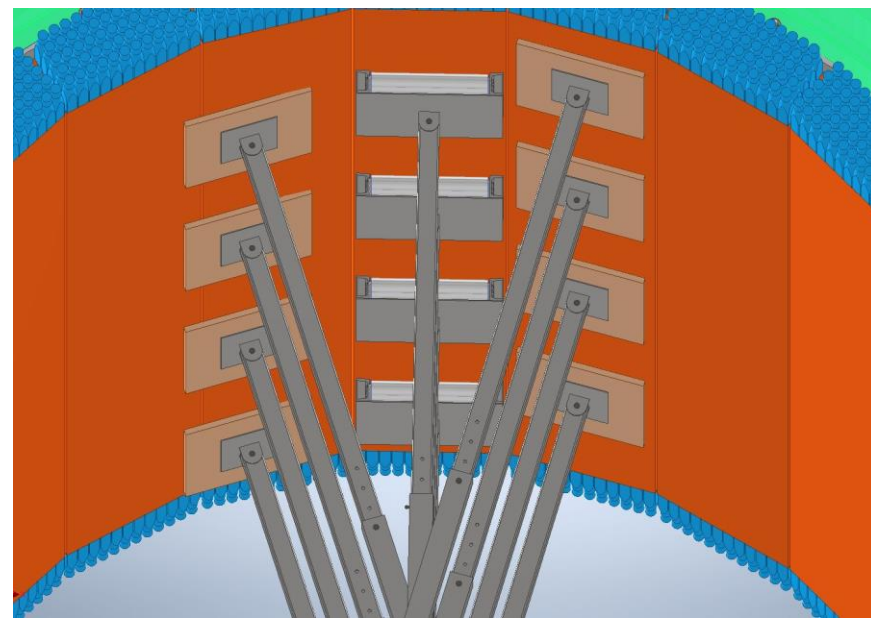
Components	Unit Cost	N. Comp	Total cost	Total+VAT
Catena passo 25 largh 30 4m	173.43	1	173.43	
Riduttore Bonfiglioli	326.41	1	326.41	
Martinetti meccanici	708	3	No	
Manicotti PMN 50	546	4	2184	
Albero Dia =50mm l= 900mm	281.45	4	1125.8	
Rotelle Dia 62 L30 M24 PWKRE 62.2RS SKF	149	5	745	
Snodi sferici assiali Di30 De76 Sp27 SKF Gx 30F	113.4	6	680.4	
Snodi sferici assiali Di30 De76 Sp27 SKF Gx 30F	222.76	3	668.28	
Rotelle Dia 35 cuscinetti a rullino SKF	35.2	4	140.8	
Rotelle KR62 con cuscinetti a rullini	70.16	4	280.64	
Copertura in PVC				
			6324.76	7716.2072

The longest delivery time is 10 weeks

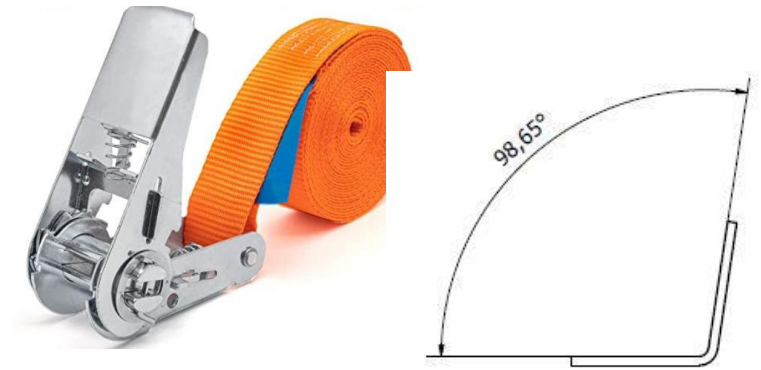
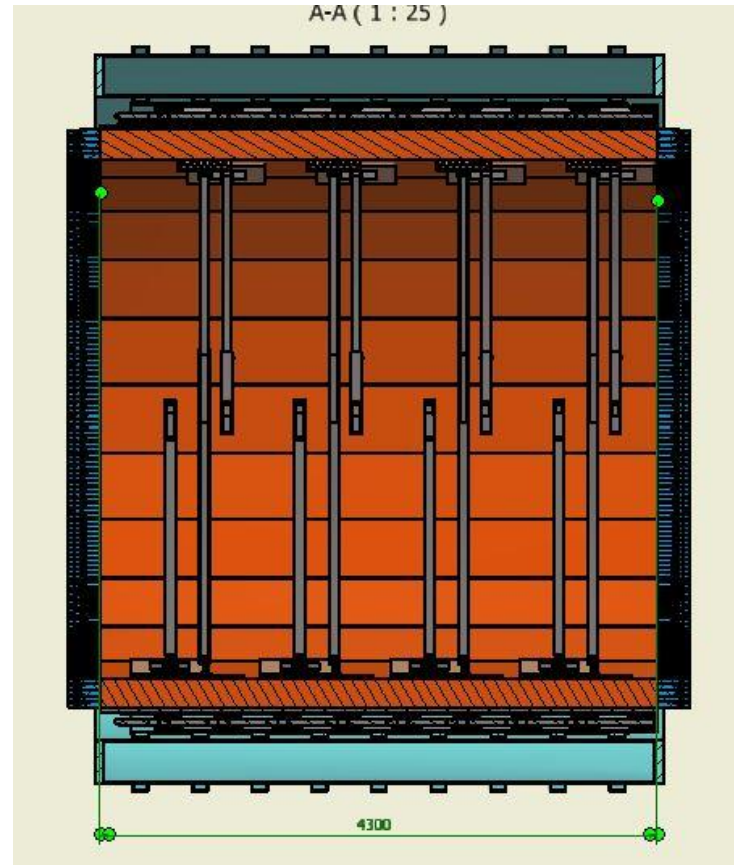
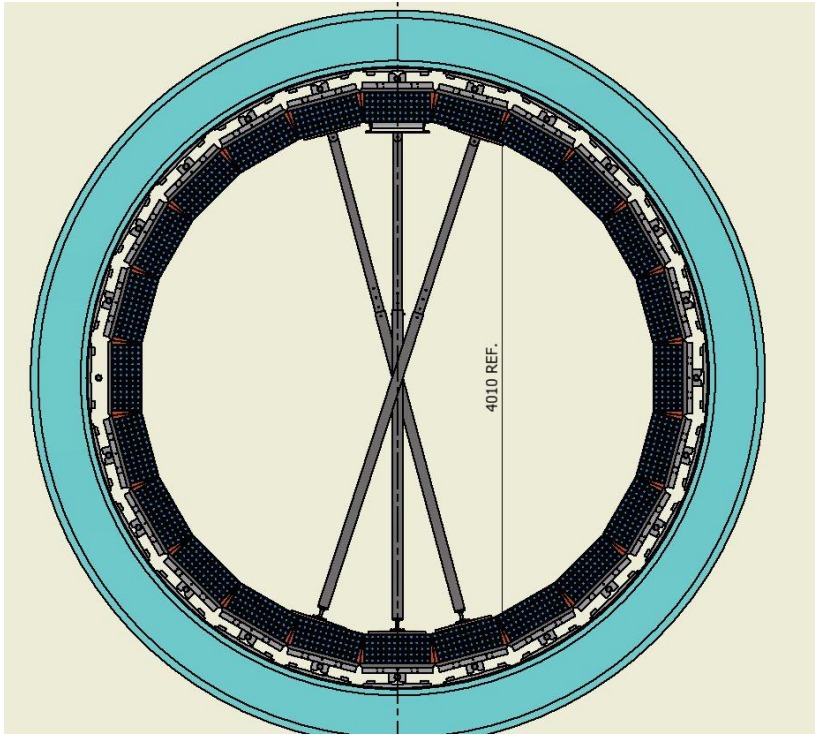
Calorimeter support structure.



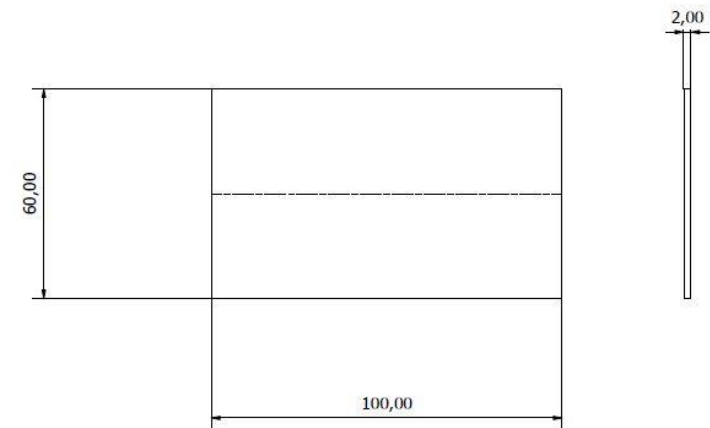
Supports are necessary before extracting modules.



Progress on support structure.



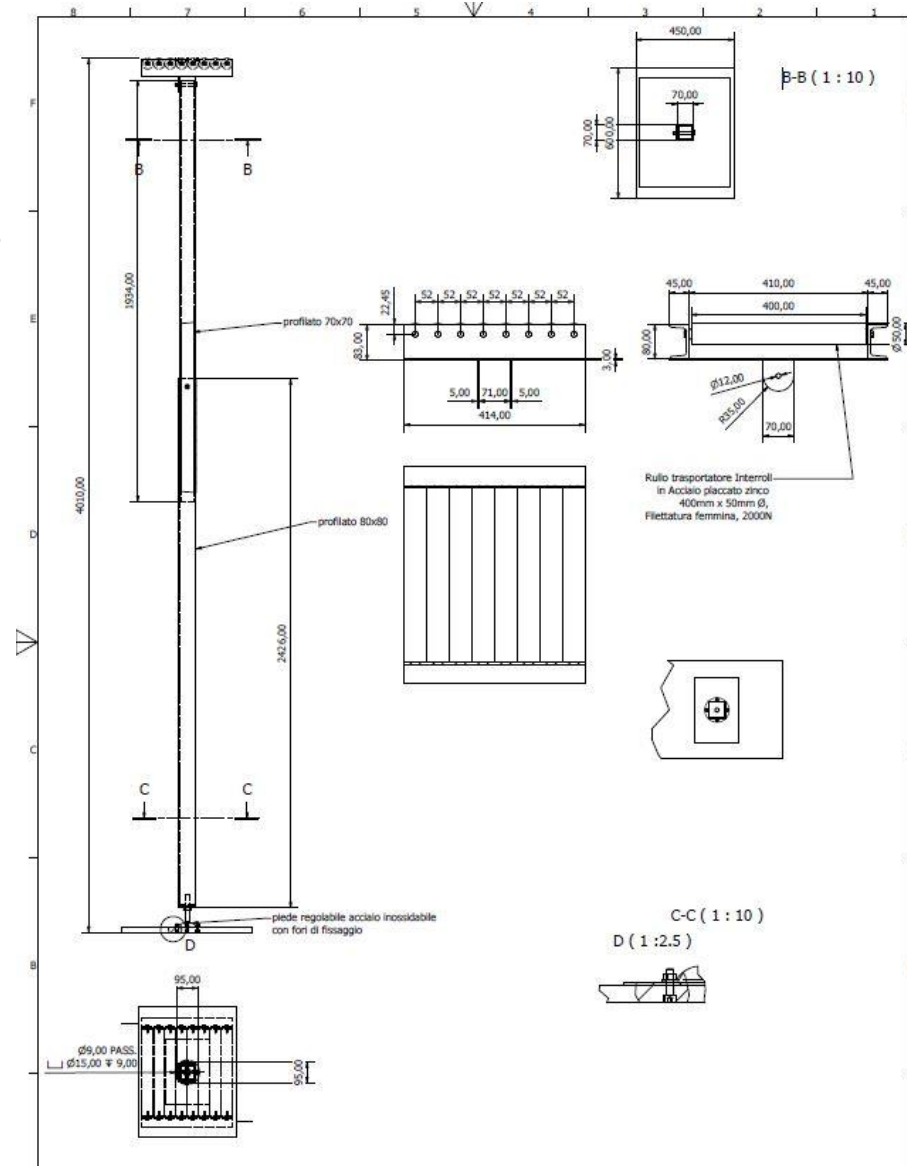
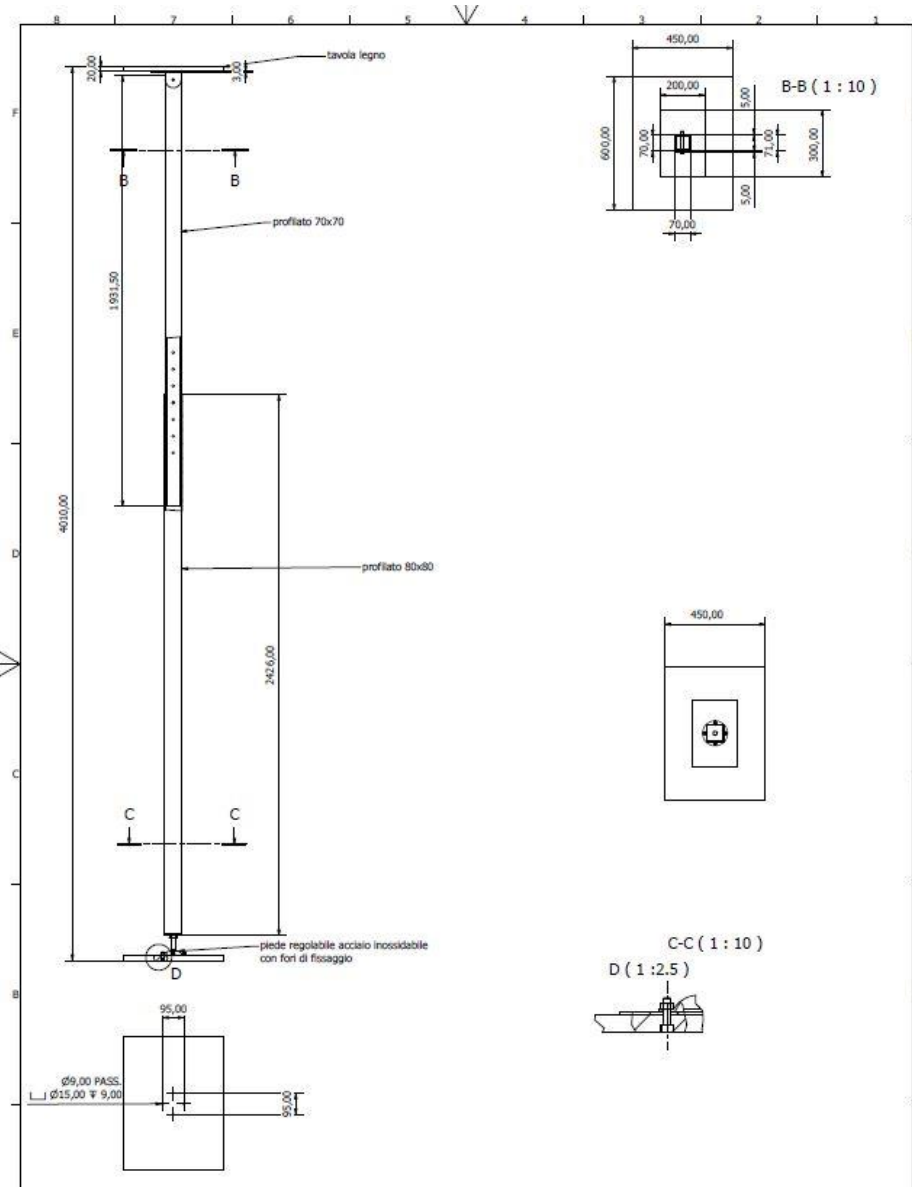
Aluminum corner protection.



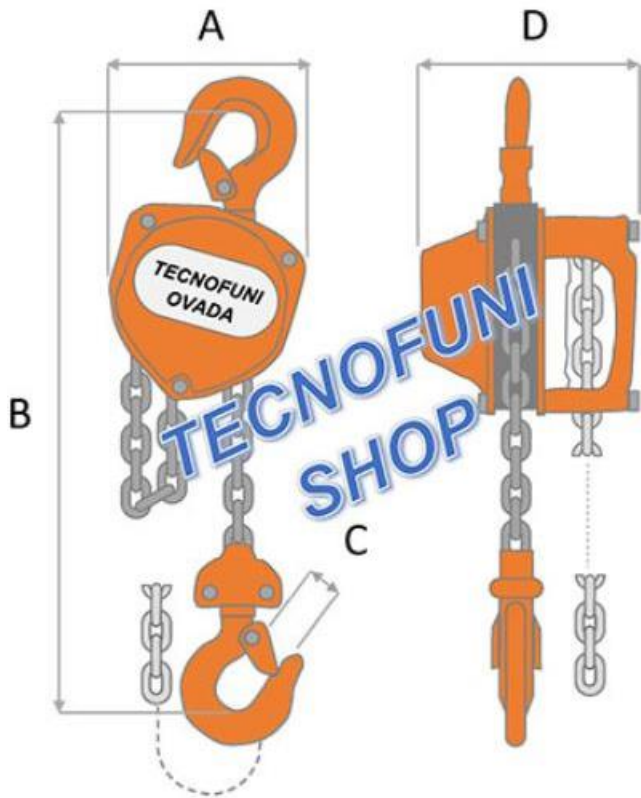
As soon the module is out of the kloe we are going to use a belts to keep the lead structure together using a corners protection.

Progress on support structure.

Polacchi is going to arrange the support of the calorimeter module.



Calorimeter pulling tooling.



250 kg	500 kg	1.000 kg	2.000 kg
Portata: 1.000 kg			
Lunghezza catena di sollevamento: 3 m			
Dimensioni catena di sollevamento (diametro x passo): 6,3 x 19 mm			
Numero tratti catena di sollevamento: 1			
Lunghezza catena di manovra: 2,5 m			
Dimensioni catena di manovra (diametro x passo): 5 x 23,7 mm			
Trazione alla catena di manovra: 28,4 kg			
A = 150 mm			
B min = 330 mm			
C = 26 mm			
D = 142 mm			
Peso: 12 kg			

Polacchi is also provide the pulling equipment.

Conclusions.

- The equipment right now has been sand blasted and will be painted Yellow.
- It is necessary to discuss the disassembly procedure with Polacchi that is going to make the calorimeter temporary supports and provide the pulling tooling, and the scientific, technical, safety coordinator.
- Some additional simulation on the module extraction can be done considering the platform size on which the extraction tooling will be placed.
- We need to discuss the acceptance test at the factory and at LNF with the safety office of the extraction tooling.
- The delivery of the extraction tooling is scheduled January 2023 at LNF.