



Tooling for transfer RFD FPC from test box to outer pipe

SY Accelerator Systems department | Radio-Frequency

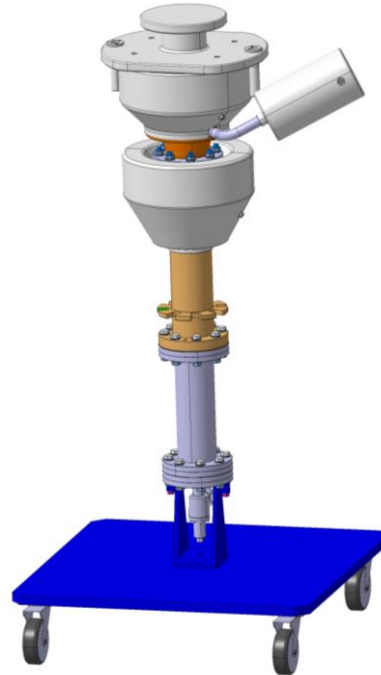
Antoine.boucherie@cern.ch on behalf of SY-RF-AC



29/03/2021

Flipbook: FPC RFD Mounting

Location : CLEAN ROOM CERN ISO4

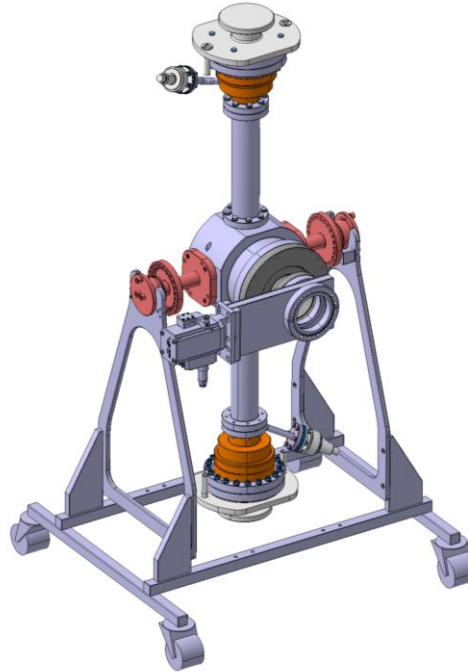


VACUUM TRANSFER CHAMBER
LHCACFMC0208

Flipbook: FPC RFD Mounting

Removing FPC from test box

Slow venting with nitrogen (N2 60)



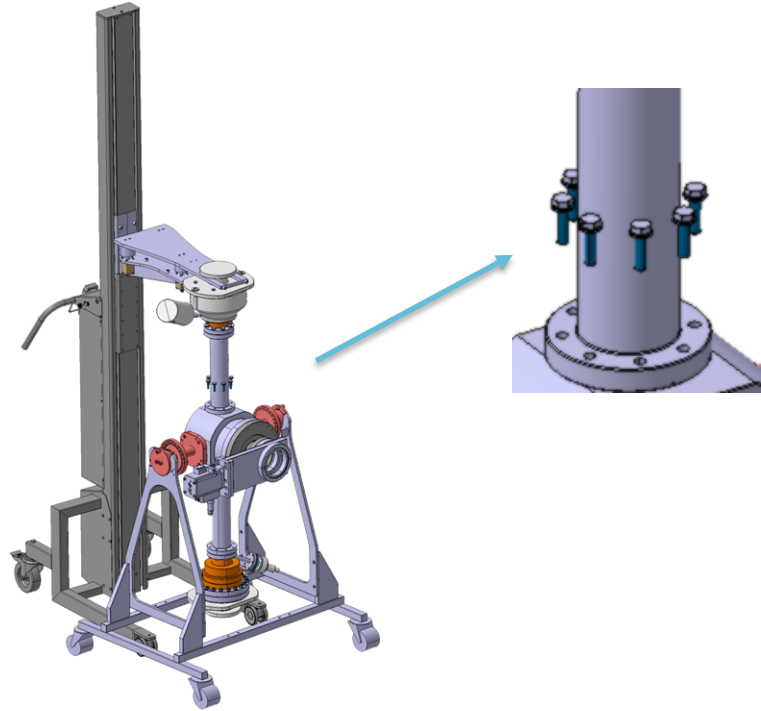
CRAB FPC RFD TEST BOX ASSEMBLY
LHCACFMC0215



CERN LIFTER
ST1340765_01

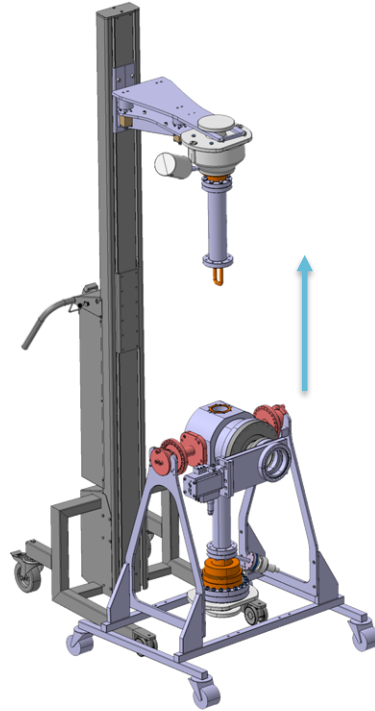
Flipbook: FPC RFD Mounting

Removing FPC from test box



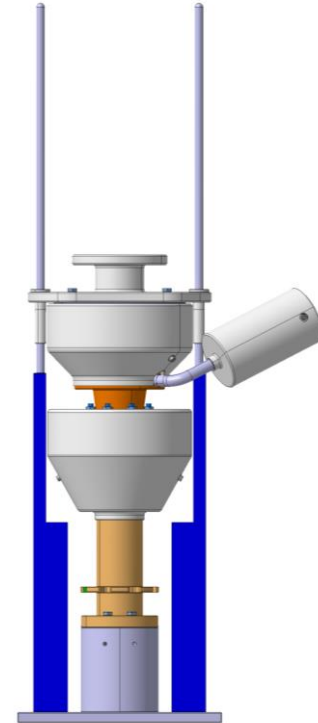
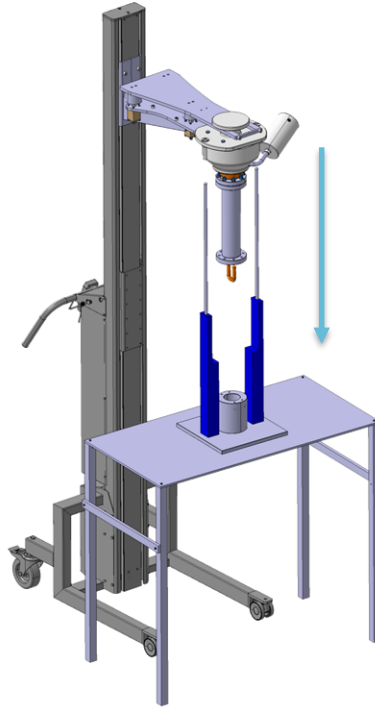
Flipbook: FPC RFD Mounting

Removing FPC from test box



Flipbook: FPC RFD Mounting

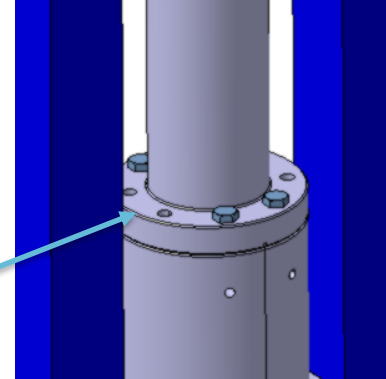
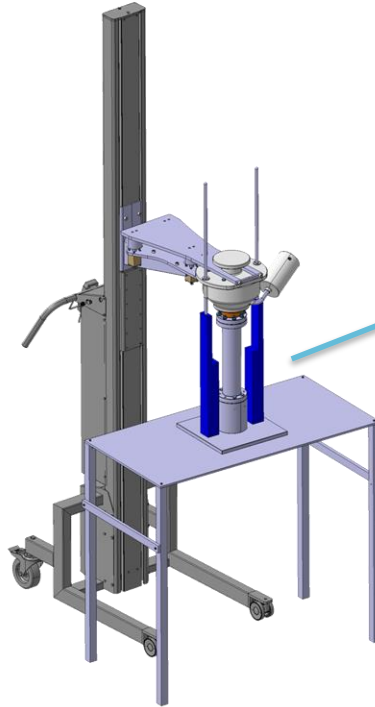
Removing FPC from test box pipe



CLEAN ROOM TOOLING
LHCACFMC0212

Flipbook: FPC RFD Mounting

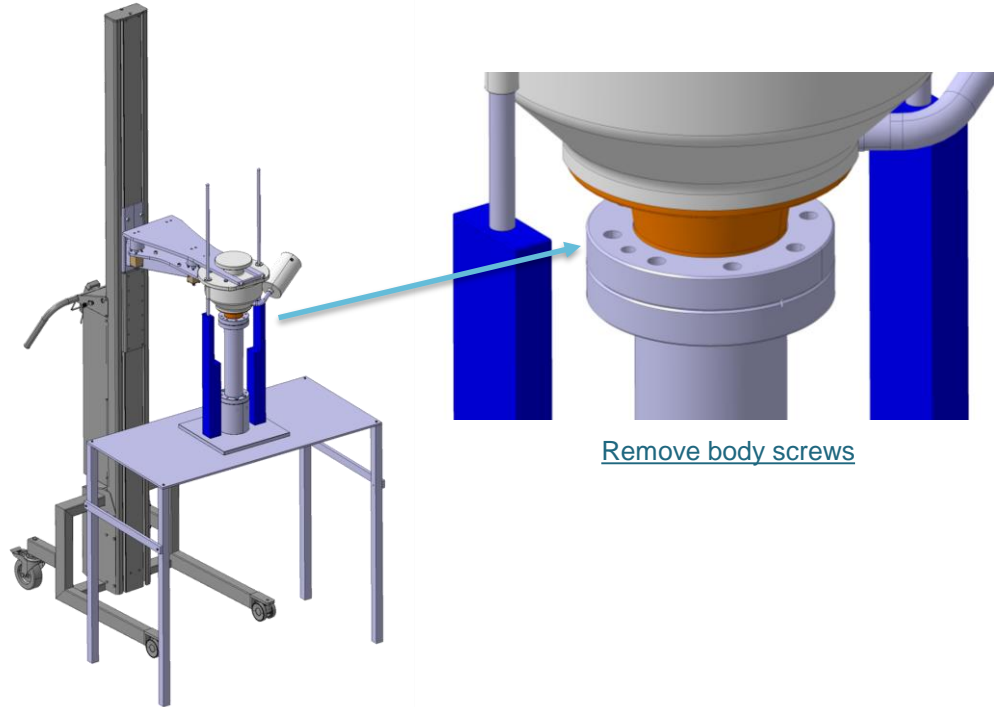
Removing FPC from test box pipe



Install 4 screws
ISO 4017_M840-A4

Flipbook: FPC RFD Mounting

Removing FPC from test box pipe



Remove body screws

Flipbook: FPC RFD Mounting

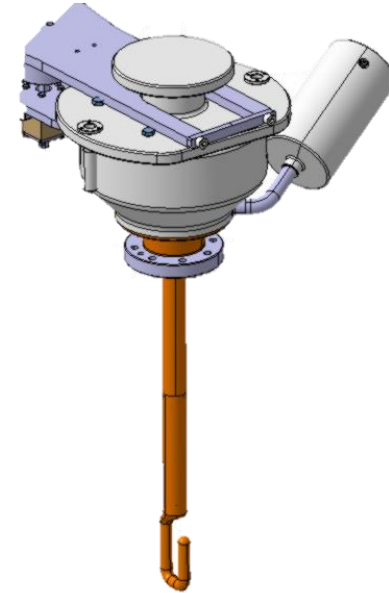
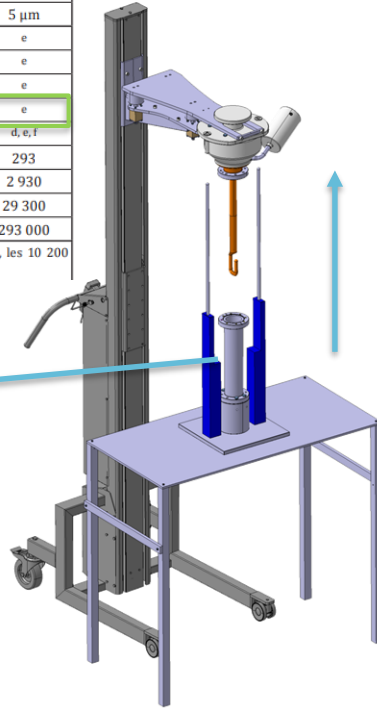
Removing FPC from test box pipe

Tableau 1 — Classes ISO de la propreté particulaire de l'air

Numéro de classe ISO (N)	Concentrations maximales admissibles (particules/m ³) en particules de taille égale ou supérieure à celles données ci-dessous					
	0,1 µm	0,2 µm	0,3 µm	0,5 µm	1 µm	5 µm
1	10 ^b	d	d	d	d	e
2	100	24 ^b	10 ^b	d	d	e
3	1 000	237	102	35 ^b	d	e
4	10 000	2 370	1 020	352	83 ^b	e
5	100 000	23 700	10 200	3 520	832	d, e, f
6	1 000 000	237 000	102 000	35 200	8 320	293
7	c	c	c	352 000	83 200	2 930
8	c	c	c	3 520 000	832 000	29 300
9g	c	c	c	35 200 000	8 320 000	293 000

^a Toutes les concentrations données dans le tableau sont cumulées. Par exemple, pour la classe ISO 5, les 10 200 particules indiquées à 0,3 µm incluent toutes les particules de tailles égales ou supérieures à cette taille.

Remove false outer pipe



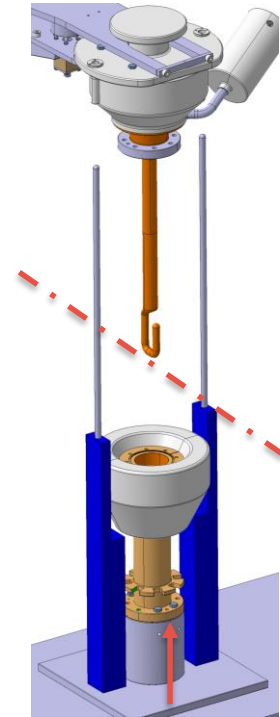
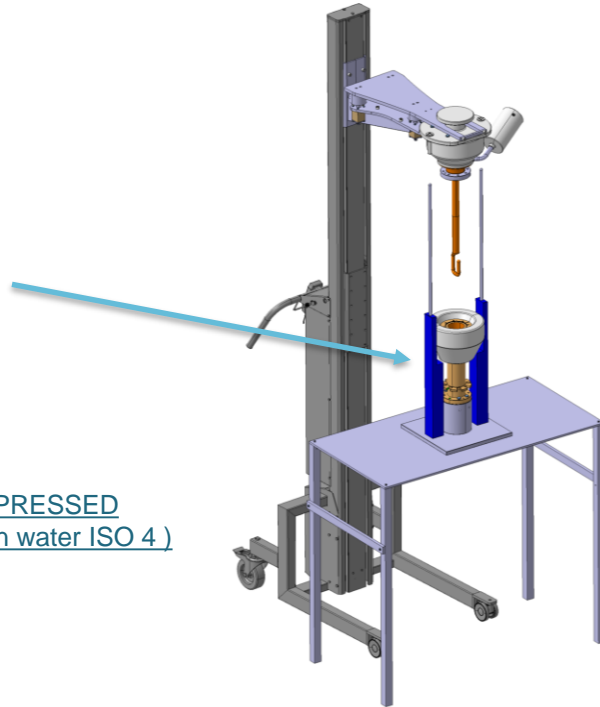
Clean antenna with nitrogen according to ISO 4

Flipbook: FPC RFD Mounting

Assembly FPC with outer pipe



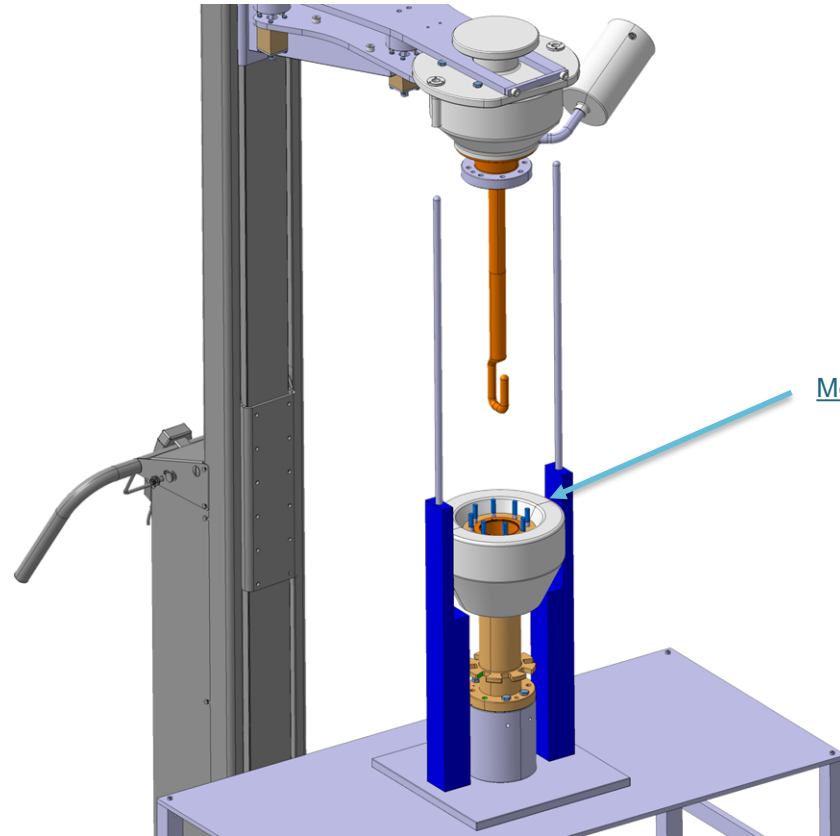
OUTER TUBE BELLOWS COMPRESSED
(already rinsed by low pressure clean water ISO 4)
LCHACFMC0235



Alignment M8 outer tube on support.

Flipbook: FPC RFD Mounting

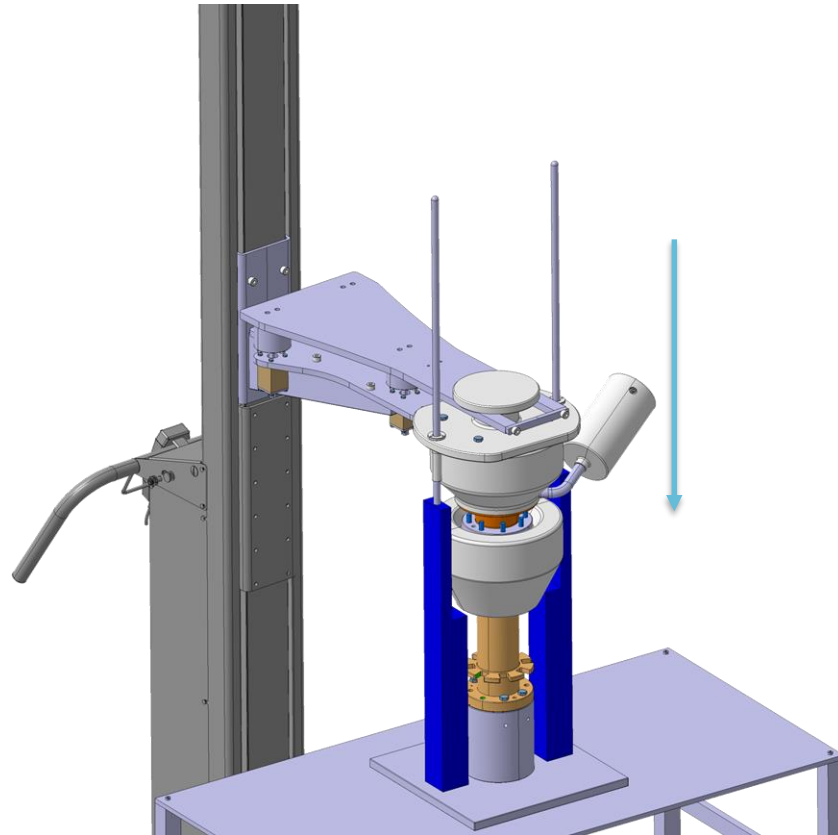
Assembly FPC with outer pipe



Mount RFC seal and M8X30 silver stud

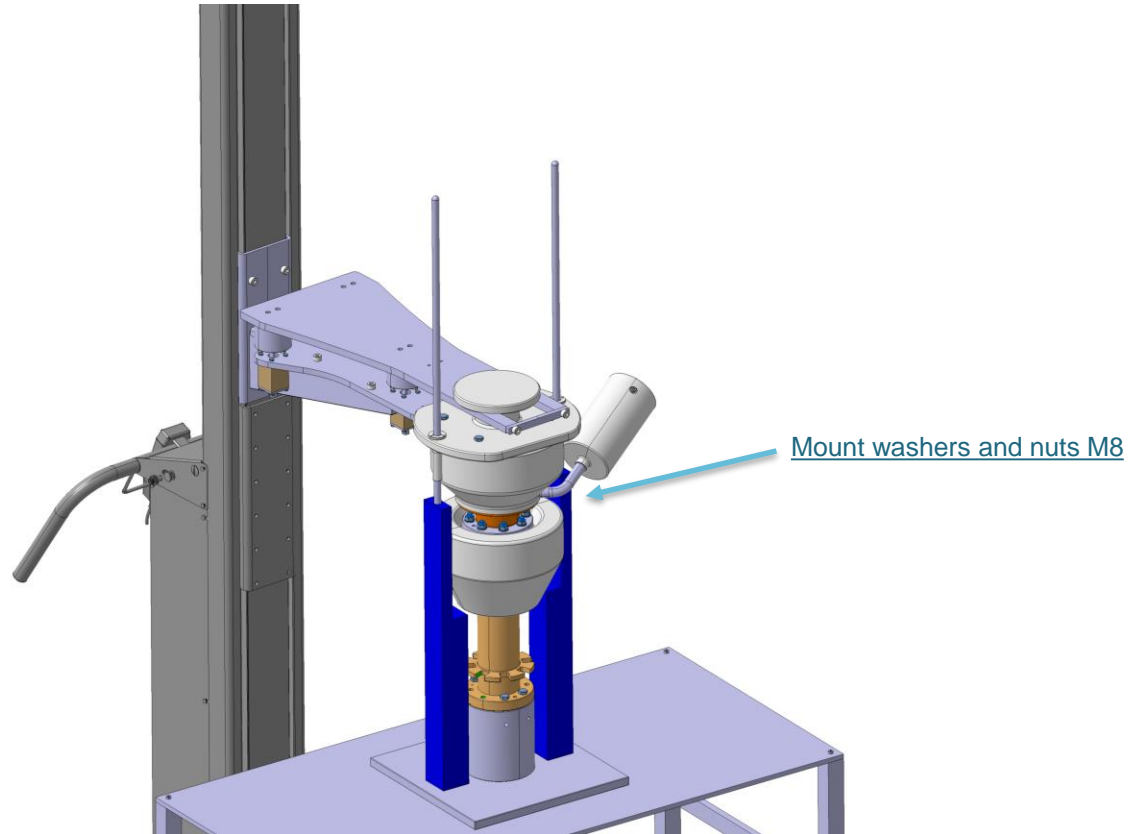
Flipbook: FPC RFD Mounting

Assembly FPC with outer pipe



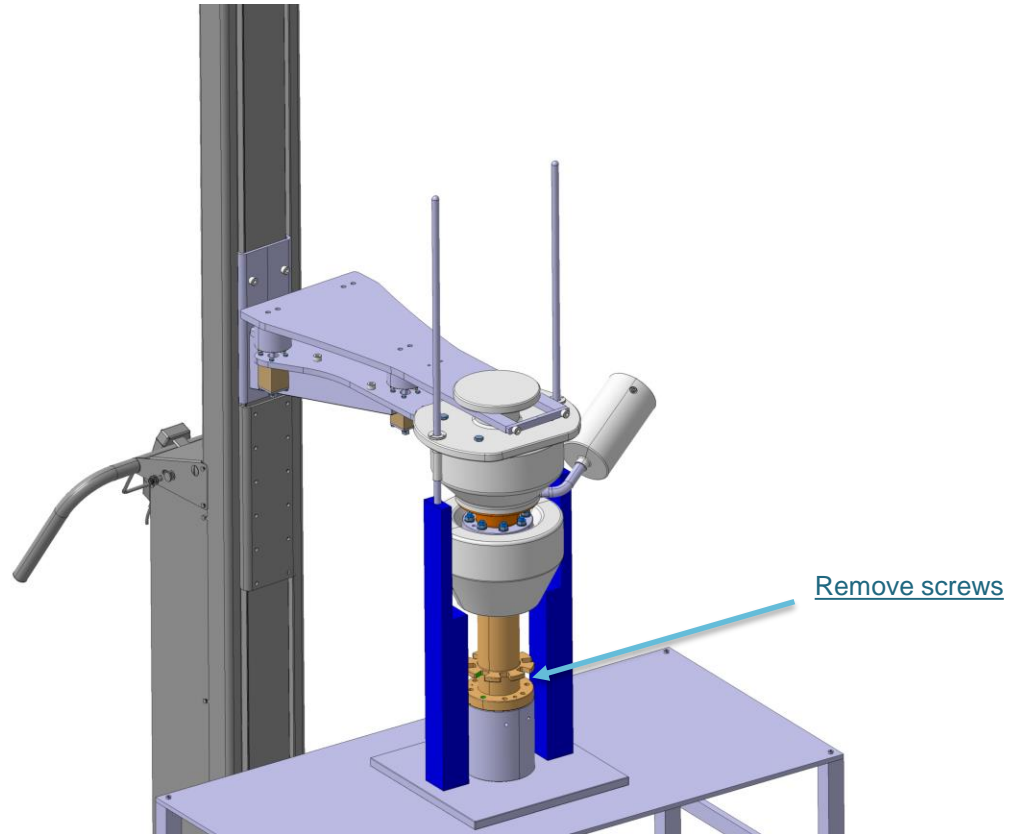
Flipbook: FPC RFD Mounting

Assembly FPC with outer pipe



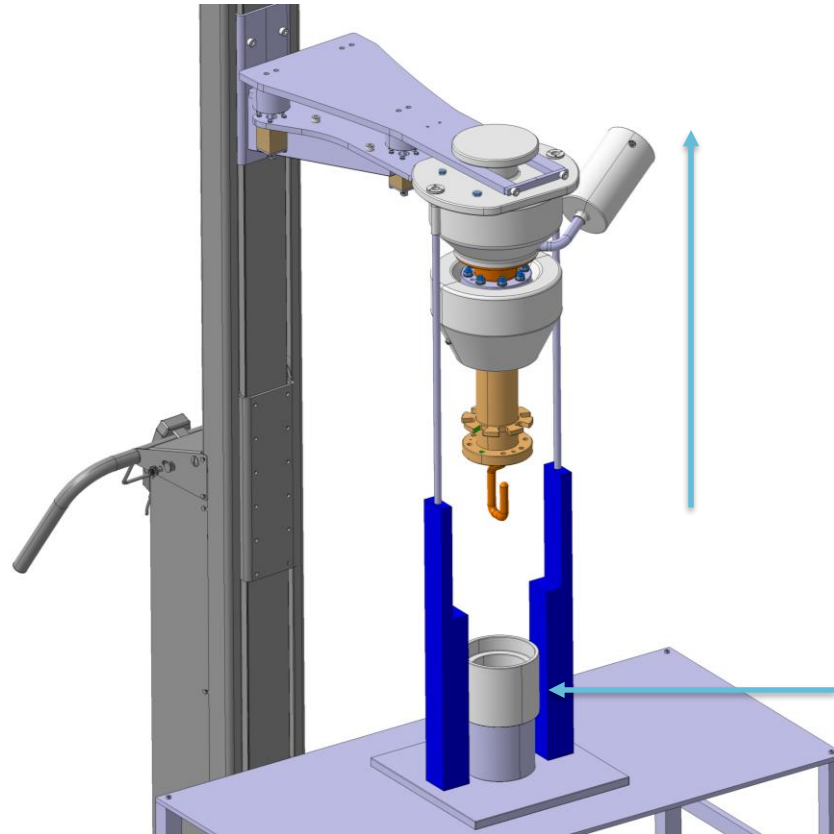
Flipbook: FPC RFD Mounting

Assembly FPC with outer pipe



Flipbook: FPC RFD Mounting

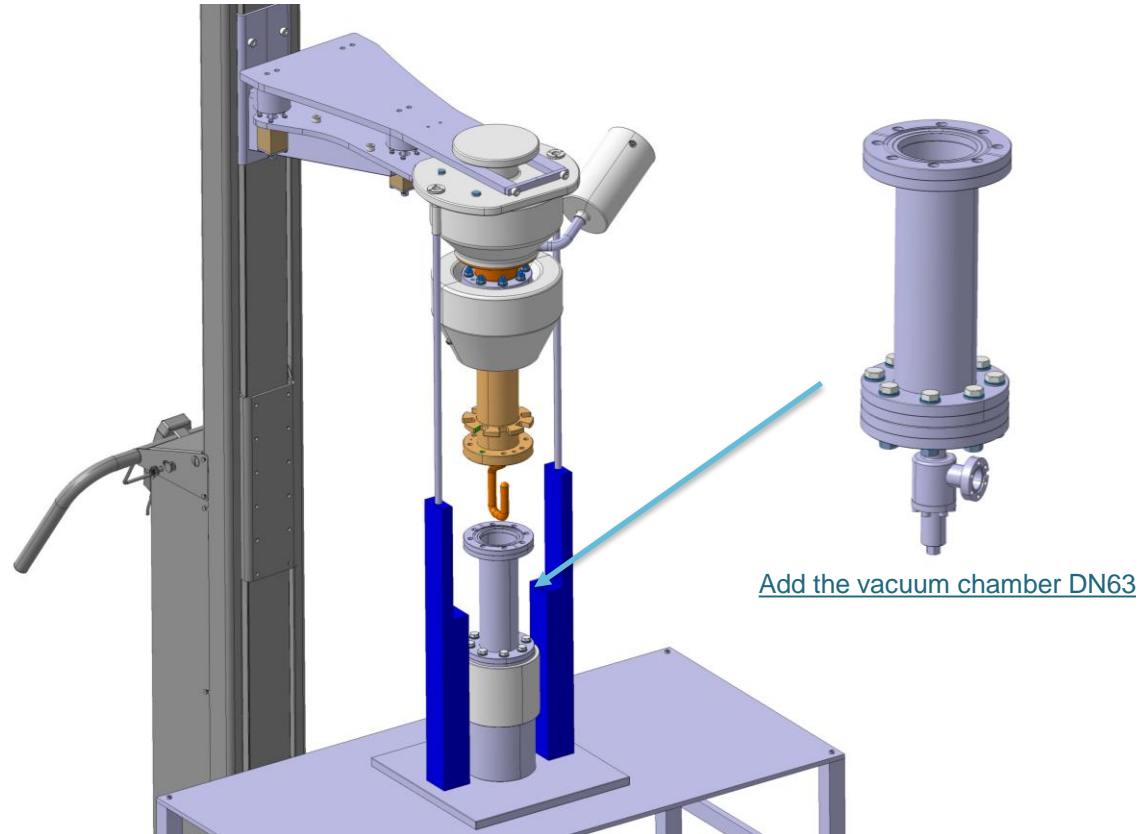
Assembly FPC with outer pipe



Add the spacer
ST1425694_01

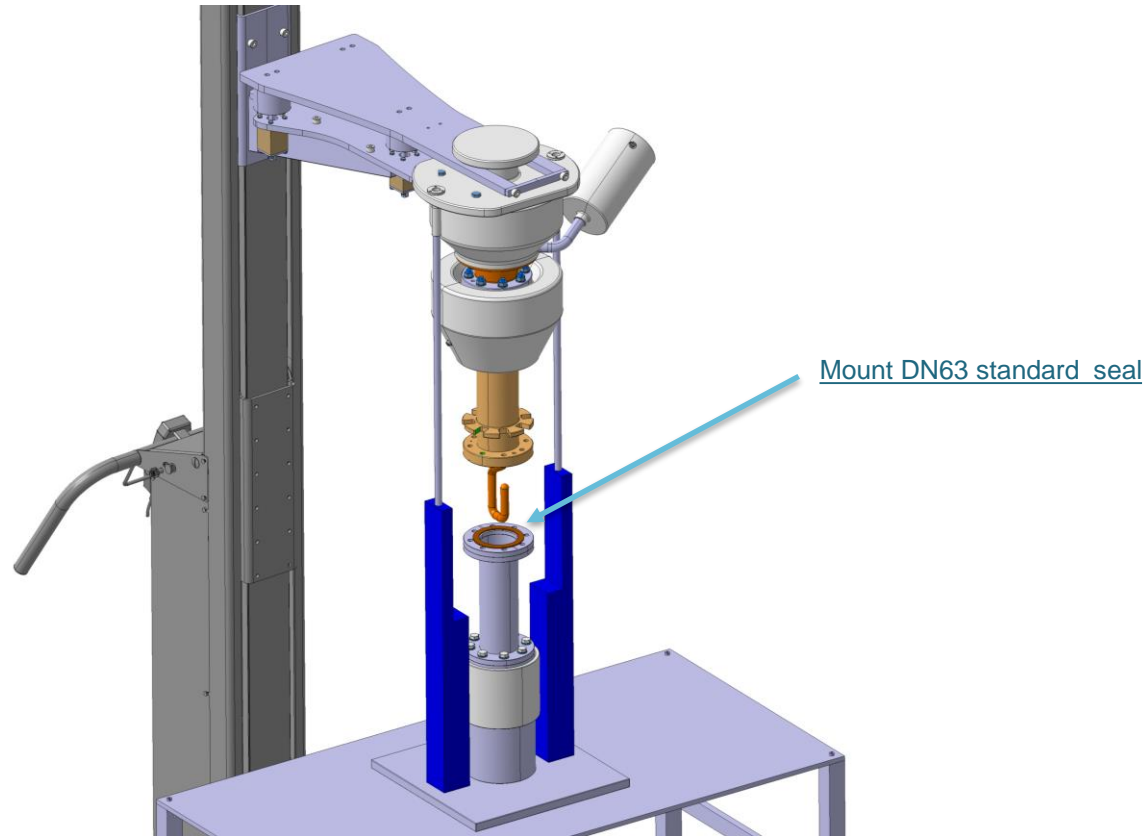
Flipbook: FPC RFD Mounting

Assembly FPC with vacuum chamber



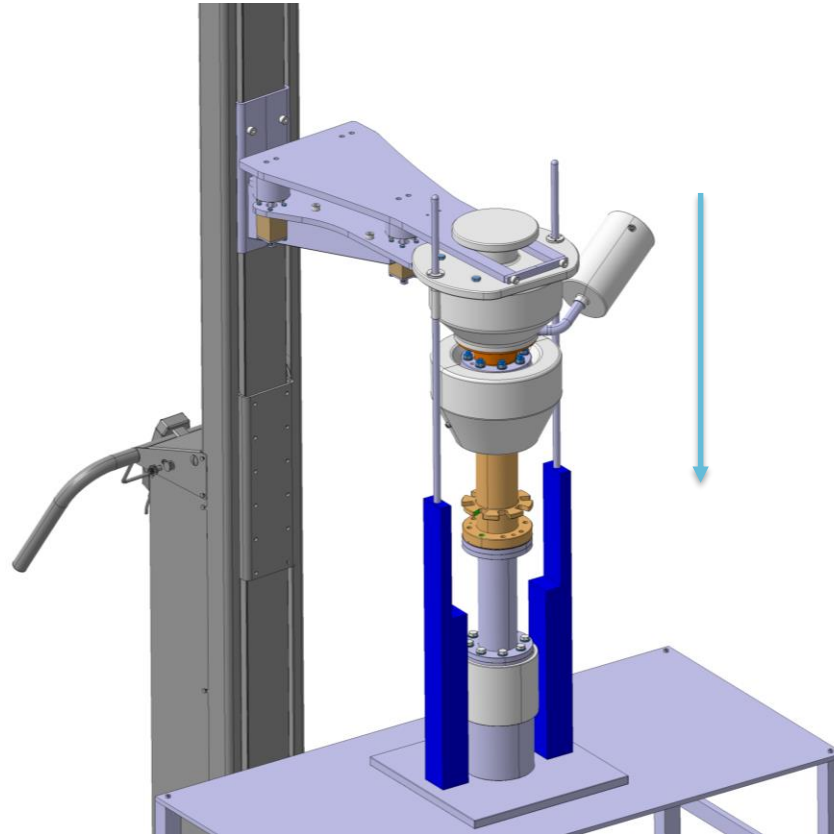
Flipbook: FPC RFD Mounting

Assembly FPC with vacuum chamber



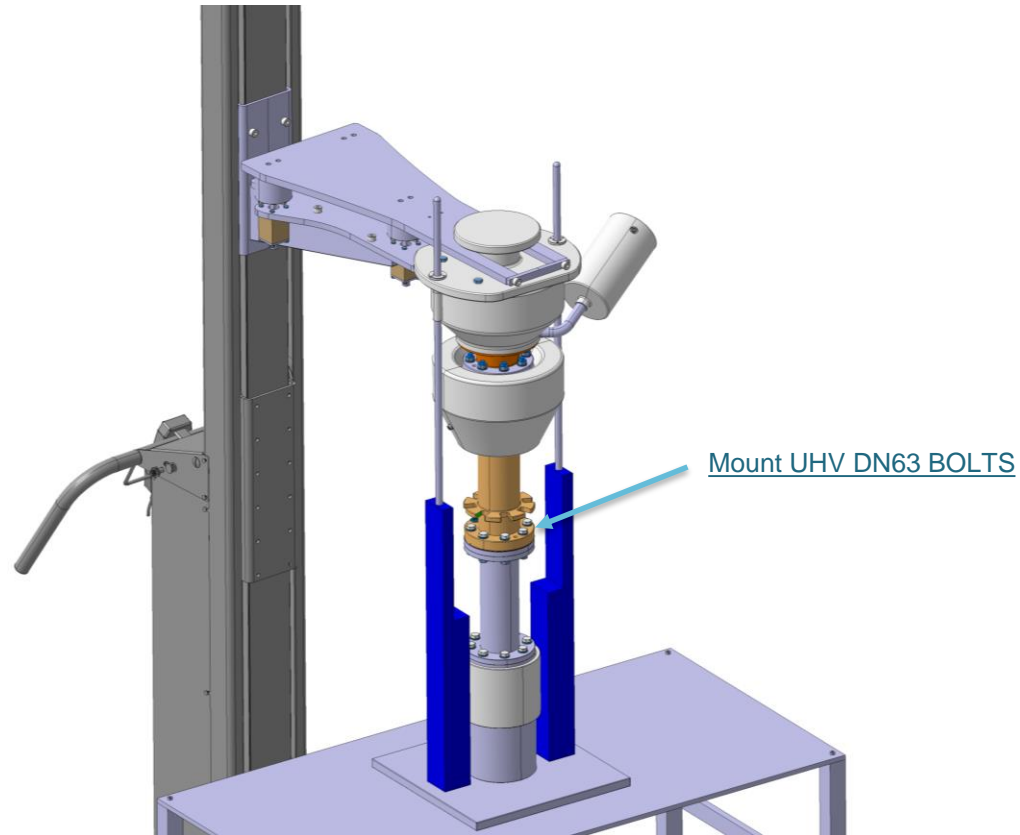
Flipbook: FPC RFD Mounting

Assembly FPC with vacuum chamber



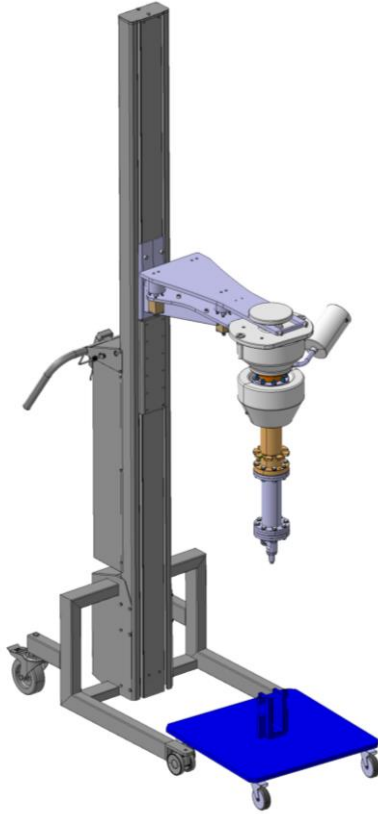
Flipbook: FPC RFD Mounting

Assembly FPC with vacuum chamber



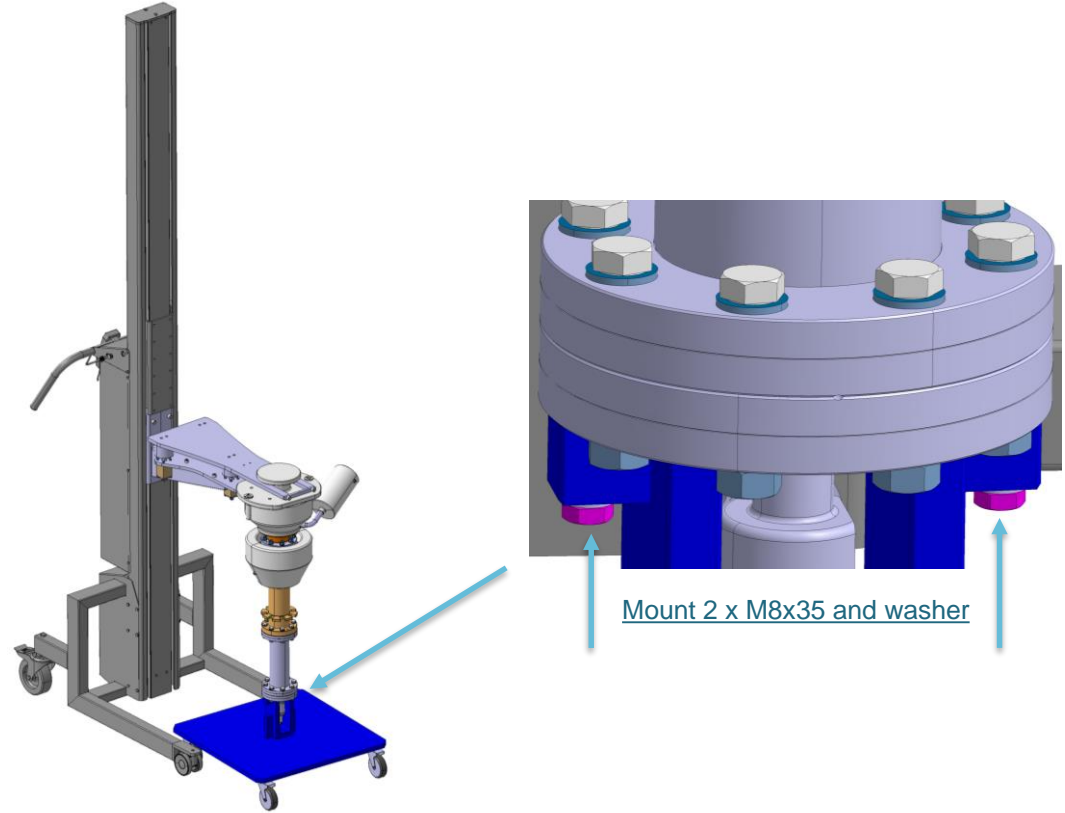
Flipbook: FPC RFD Mounting

Assembly FPC with trolley



Flipbook: FPC RFD Mounting

Assembly FPC with trolley

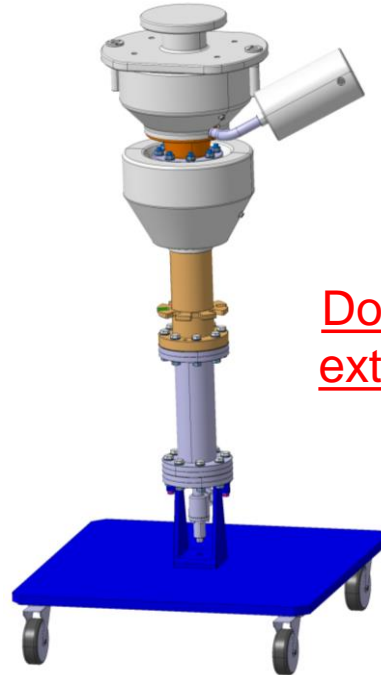


Flipbook: FPC RFD Mounting

Assembly FPC with vacuum chamber

Ready for helium leak test
inside clean room

Double plastic bag before
extract the assembly from
the clean room



VACUUM TRANSFER CHAMBER
LHCACFMC0208