The Linac4 windows
(developed by E. Montesinos)

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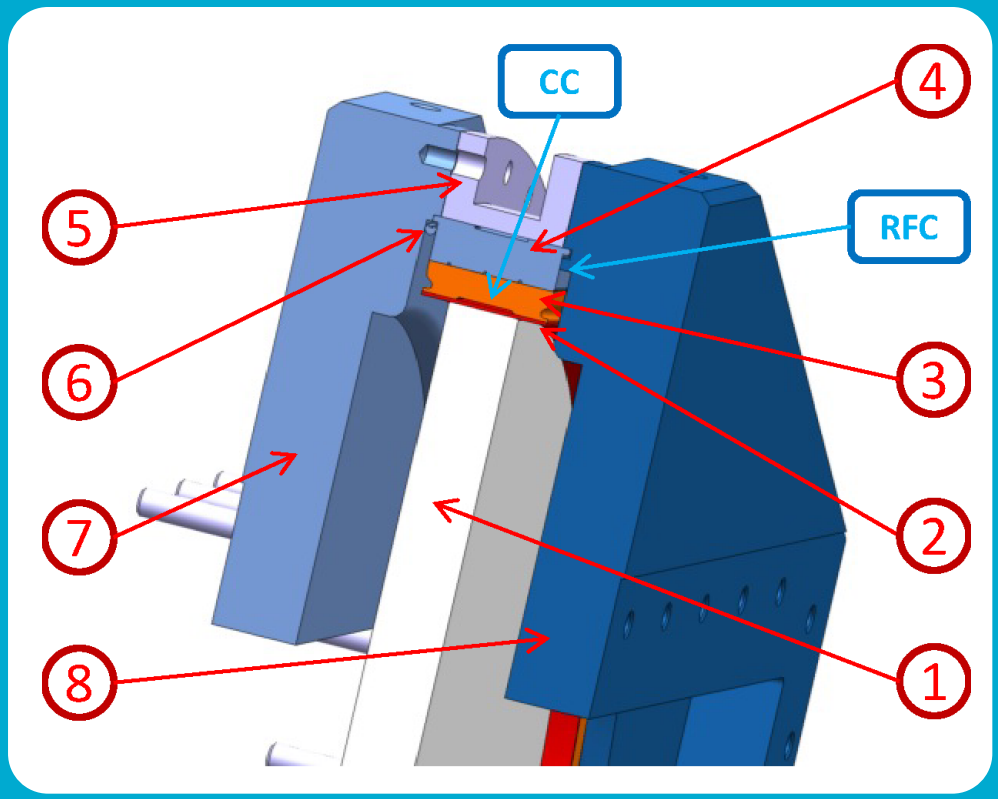
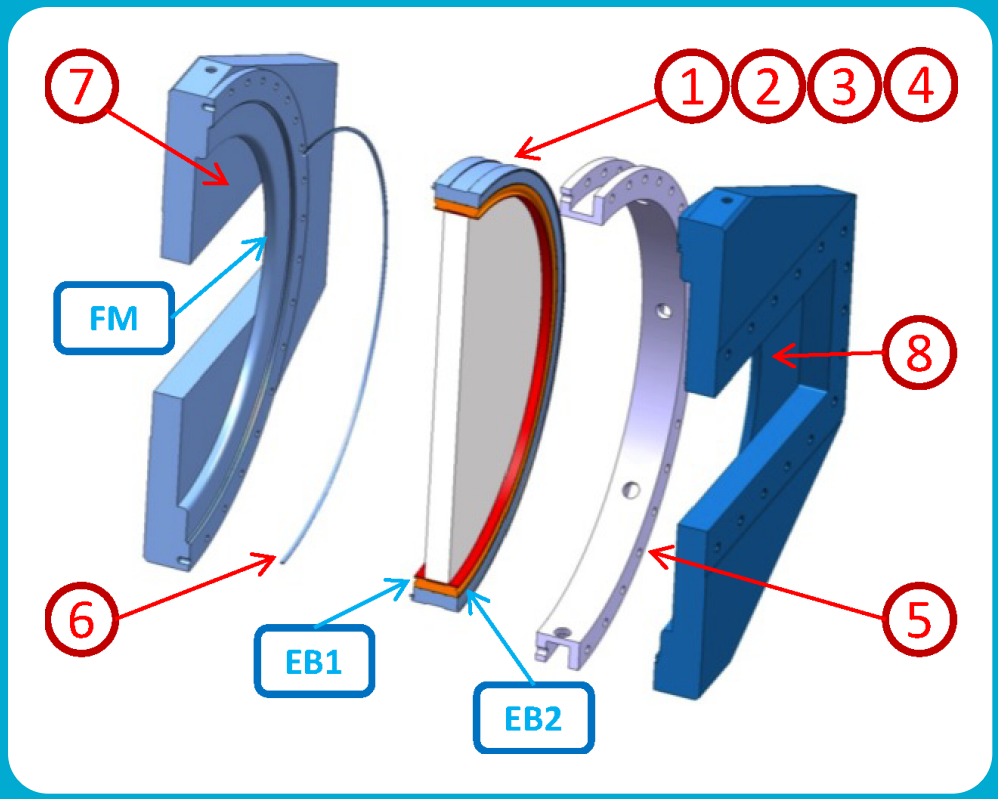
elements



1	planar disk ceramic, thickness: 25 mm, ⦰ 400 mm
2	thin Cu ring, thickness: 1.25 mm
3	2nd Cu ring
4	stainless steel ring (316 LN)
5	stainless steel spacer (304)
6	HELICOFLEX® gasket
7	vacuum side: waveguide to cylindrical transition incl. stainless steel flange (316 LN)
8	air side: waveguide to cylindrical transition incl. stainless steel flange (304)

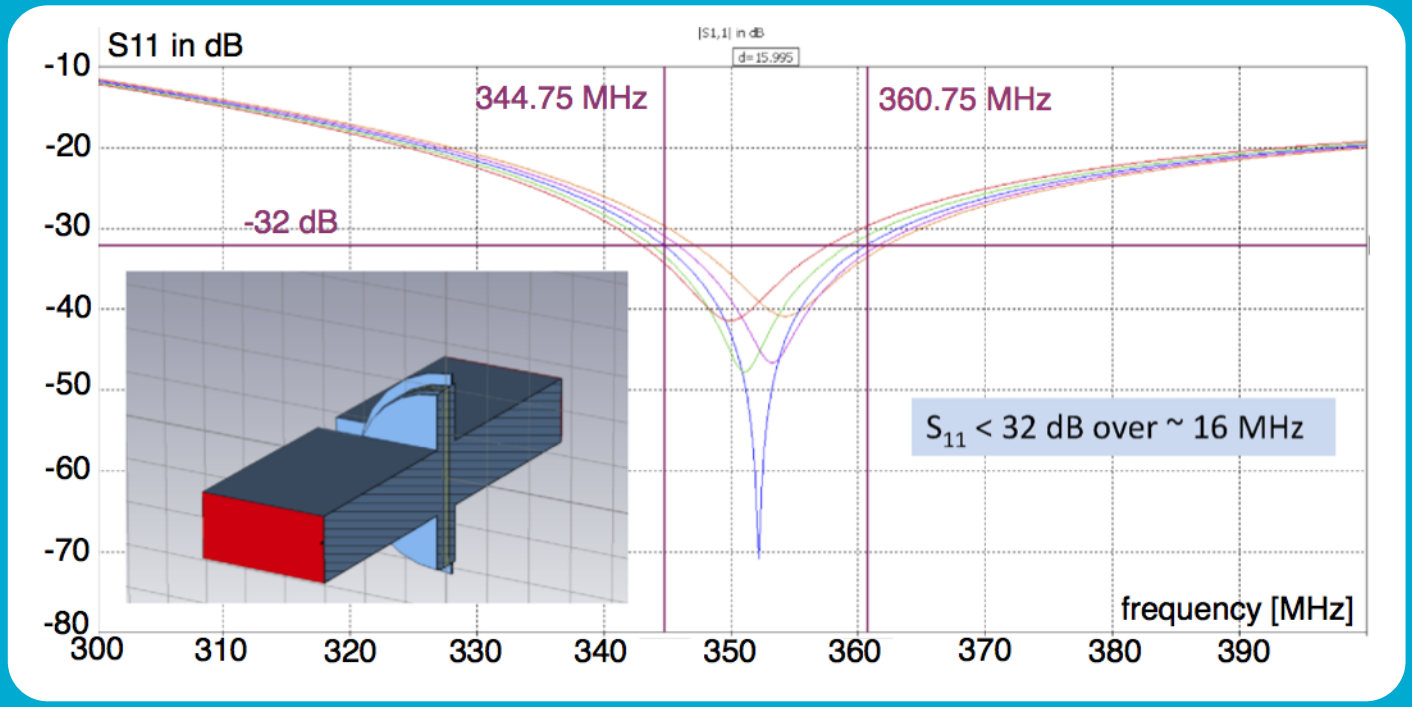
assembly sequence



i)	machining of all parts
ii)	brazing of thin Cu ring (2) to ceramic (1)
iii)	brazing of 2nd Cu ring (3) and stainless steel ring (4)
iv)	EBW of both ensembles
v)	assembly of all pieces with HELICOFLEX® gasket

prototype status

- Brazing of Cu/ceramic was done at CERN and is vacuum tight.
- 2 aluminum dummy flanges were manufactured and tested (max. transmission was 0.2 MHz off-frequency).
- Ti sputtering of ceramic on vacuum side is being prepared.
- A 2nd prototype w/o Helicoflex® is prepared.
- Discussions with CERN technology transfer have started to protect the design.



frequency	352.2 MHz
forward power	1 MW
waveguide flange	WR 2300 half height
ceramic diameter	400 mm
ceramic thickness	25 mm
window bandwidth (-32 dB)	> 16 MHz