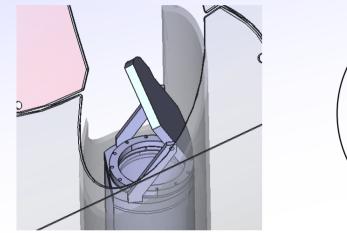


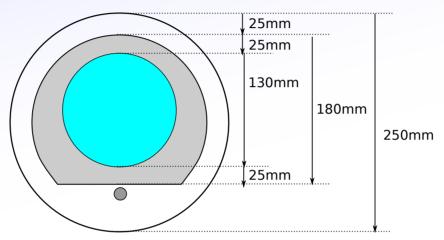
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K2 AEM21 Vacuum Window

AEM21 Port tube is 250mm. Need 25mm space because of inaccuracies and changes during baking. Also need space for mirror drive rod. Rough initial design looks like:



50% of light from the 130mm design:



Would be easiest to use a standard ConFlat flange with window, but sizes are: No standard flanges with 25mm rim.

From standard CF range, only 152mm fits, but 90mm aperture loses

CF160: 205mm, 136mm aperture CF100: 152mm, 90mm aperture

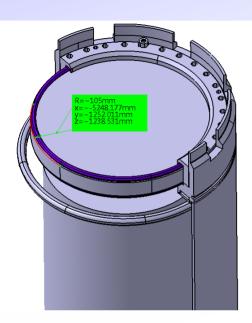
Collected light vs window aperture 10000 Source Solid Angle / µSR core 150mm 8000 sma 130mm 6000 110mm σ Δ 4000 90mm 2000 ASDEX Upgrade collection optics (COR) 0**⊏** 5.5 5.6 5.7 5.8 5.9 6.0 R/m





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K2 AEM21 Vacuum Window



M-port from Thomson scattering uses almost full 250mm of port, as port tube is flexible and can move with port.

Window is 210mm. Ring outer edge = 230mm, clear aperture =190mm, rim width 20mm.

Uses Delta Helicoflex seal.

Design already W7X approved, thoroughly vacuum tested and used during OP1.1.

Can we reduce this a 130mm window? Can then use something similar for the A-port (150mm tube, 110mm window)

