

GlueX fDIRC Optical Box

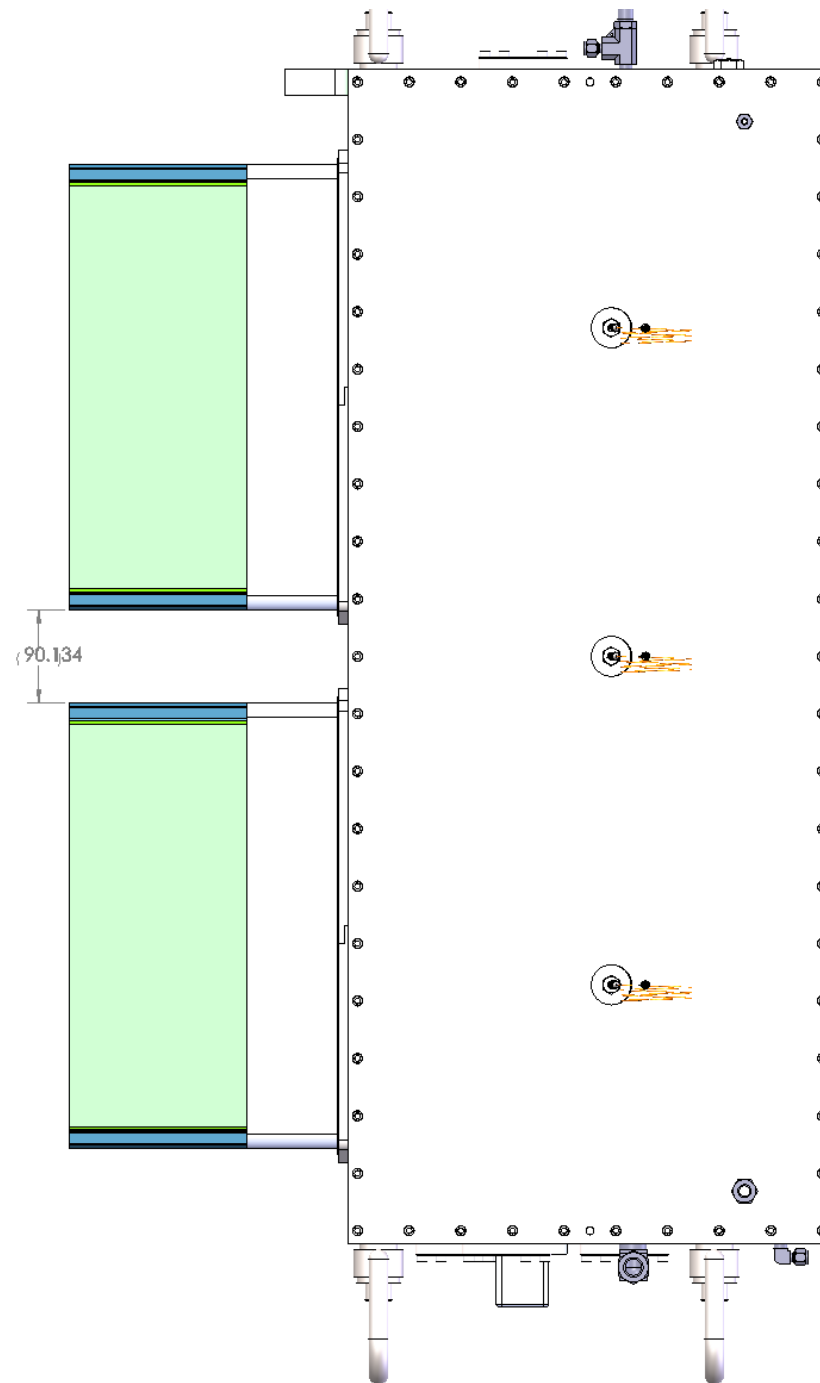
Notes for Discussion

13 January 2017

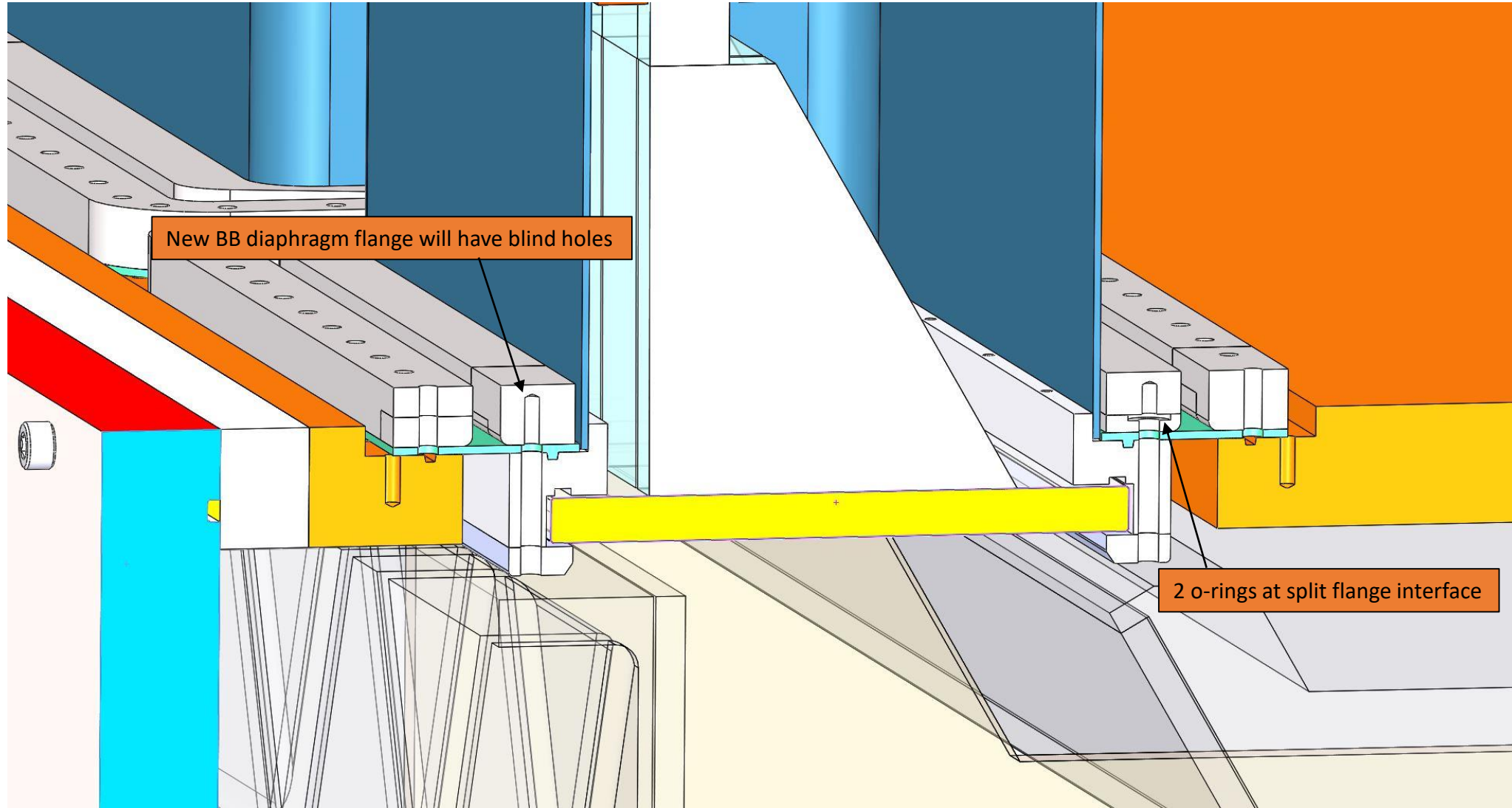
J. Bessuille

New BarBox Spacing

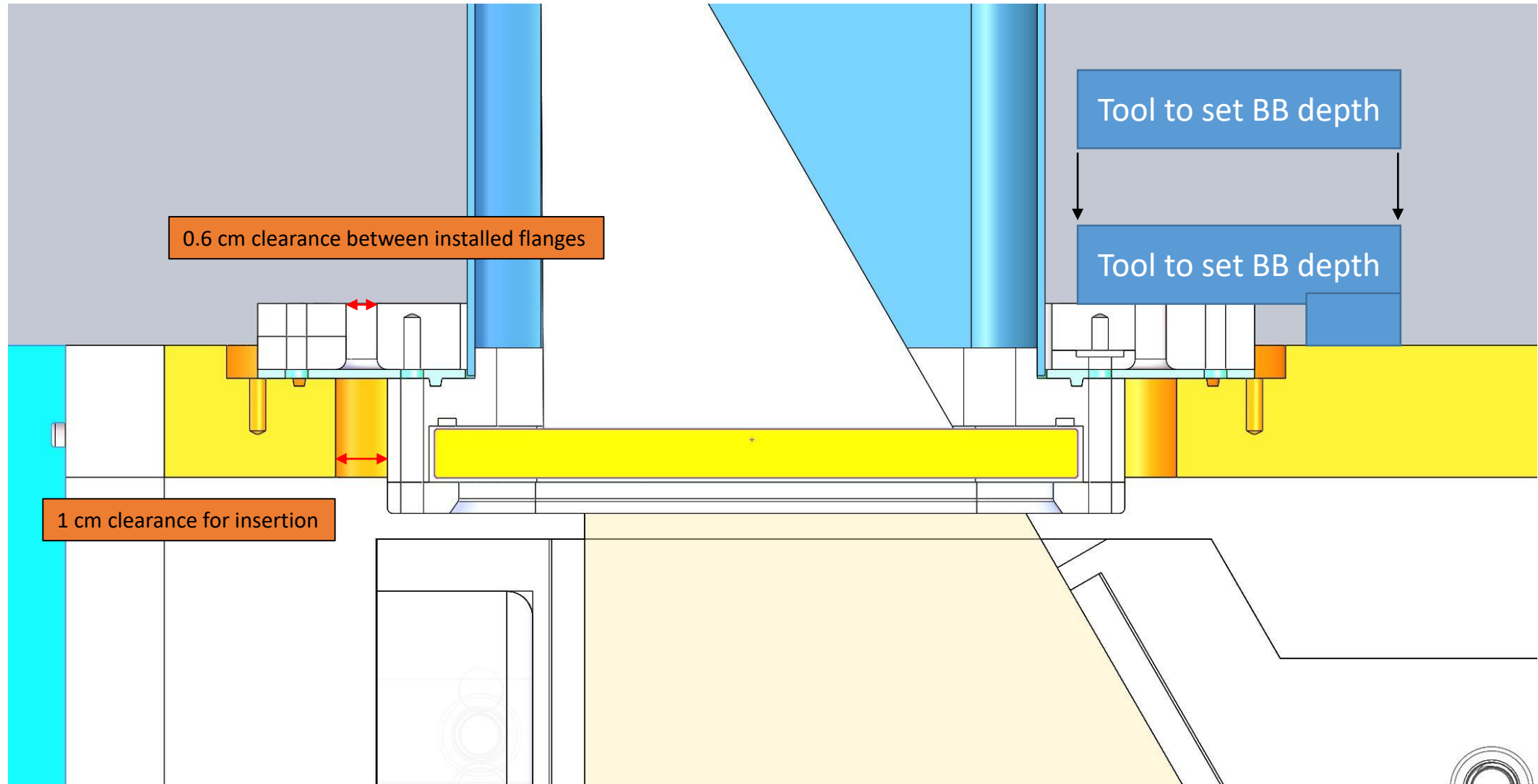
- Last model sent out had increase BB spacing by 21 mm (to the 90.134 mm as shown here.)
 - This was due to changes in the diaphragm clamping flanges
- Further changes to clamping flanges have reduced this by 11 mm, so new dimension will be 79.134 mm.



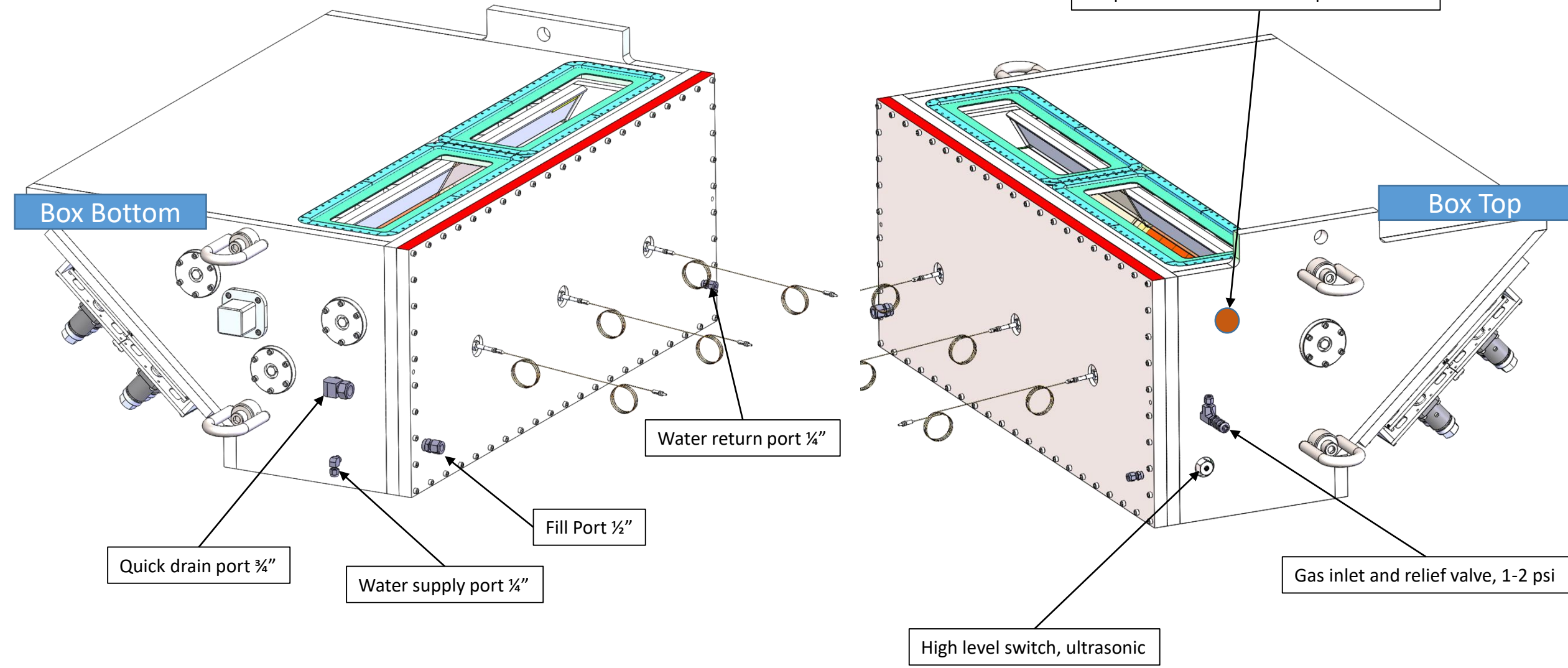
New diaphragm design



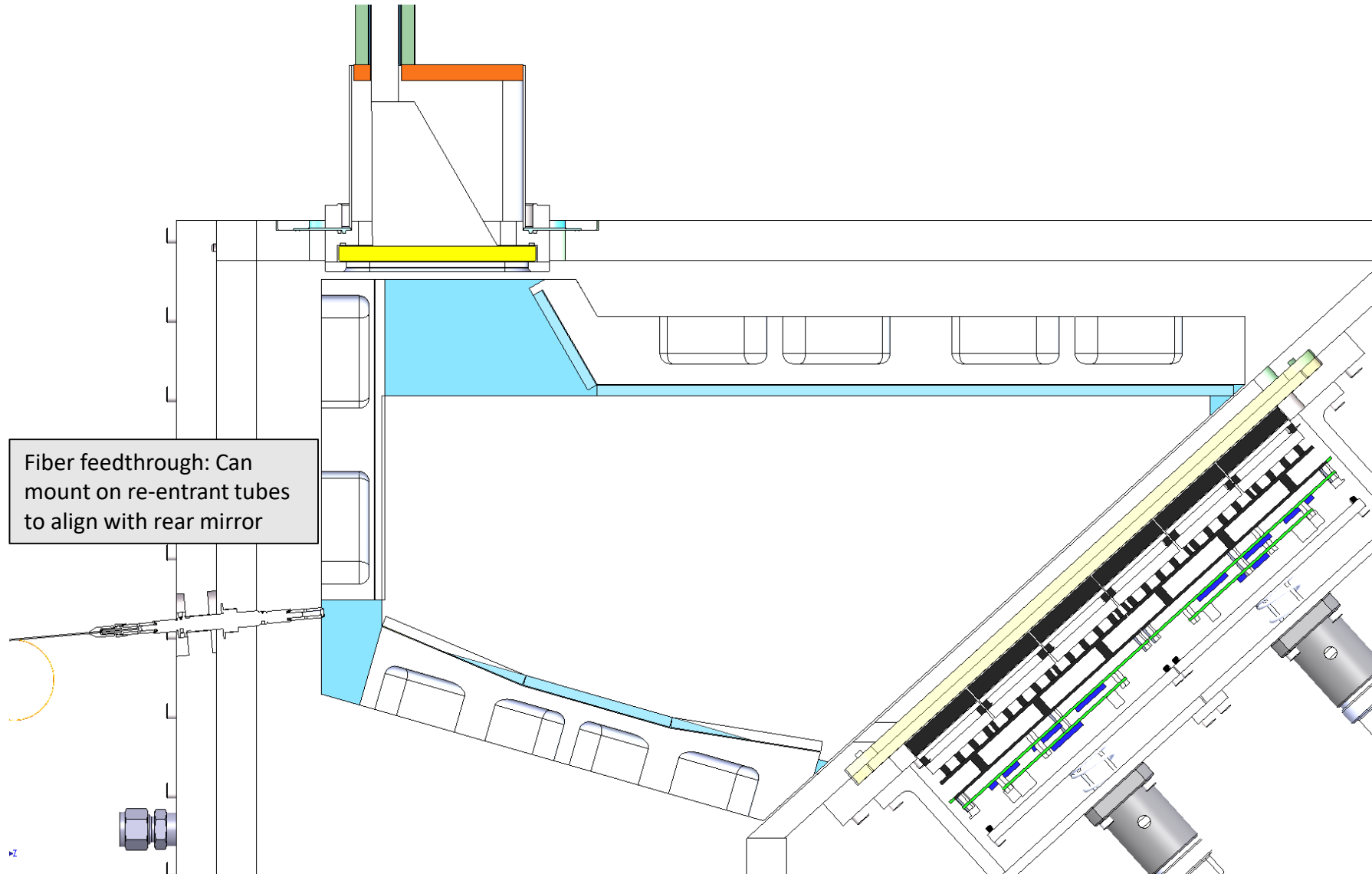
New diaphragm design



Water System Components



Fiber feedthrough



Hermetic feedthrough from SEDI Fibres Optiques

Fiber Feedthrough

TECHNICAL SPECIFICATIONS

- Material : Stainless steel 304L
- Panel drilling diameter : $\varnothing 12.2$ mm 0/+0,3
- Panel Thickness max : 20 mm
- Tightening torque : 25 N/m max
- Temperature : -40°C / $+125^{\circ}\text{C}$
- Storage max.temperature : 200°C
- Pressure : 500 bars/ 125°C , 1000 bars/ 20°C (incursion 1000 bars/ 200°C)
- Certification ATEX : NF EN 60079-1 Category 3 Zone 2 (IIIG d IIc)
- Hermeticity : 10^{-8} mbar.l/s
(Helium Test, after $95^{\circ}\text{C}/90\%$ RH during 14 days, storage $125^{\circ}\text{C}/14\text{d}, \dots$)

SMA VERSION

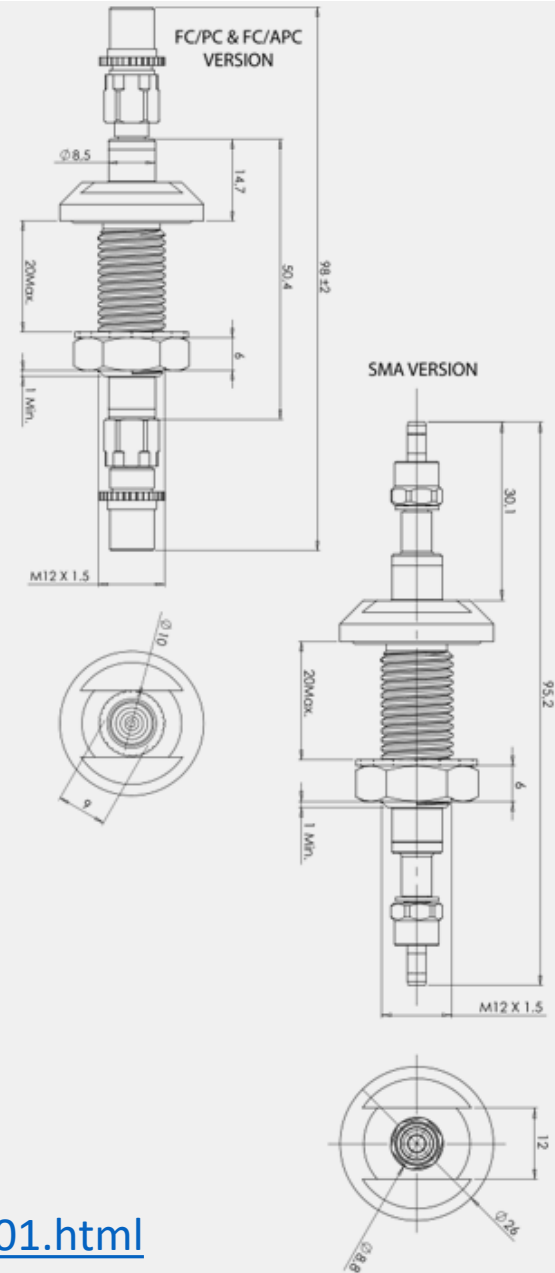
- Insertion Loss : $< 3\text{dB}$ max. @ 850nm (Large core fibers)
- Fibers : Silica/Silica $< 400\mu\text{m}$ core (Fiber $> 400\mu\text{m}$ on request)

FC/PC VERSION

- Insertion Loss : $< 1\text{dB}$ max. @ 1550nm (0,3 dB typ. (fibre SMF28e @ 1550nm))
- Fibers : Singlemode, PM Fibers, GI50/125, GI62,5/125, LCH50/125, LCH105/125 (Large core fibers on request)

FC/APC VERSION

- Insertion Loss $< 1,5\text{dB}$ max. @ 1550nm (0,7 dB typ. (fiber SMF28e @ 1550nm))
- Fibers : Singlemode, PM Fibers, GI50/125, GI62,5/125, LCH50/125, LCH105/125 (supplied with specific bulkhead)



http://www.sedi-fibres.com/m12_hermetic_feedthroughs_5_101.html