

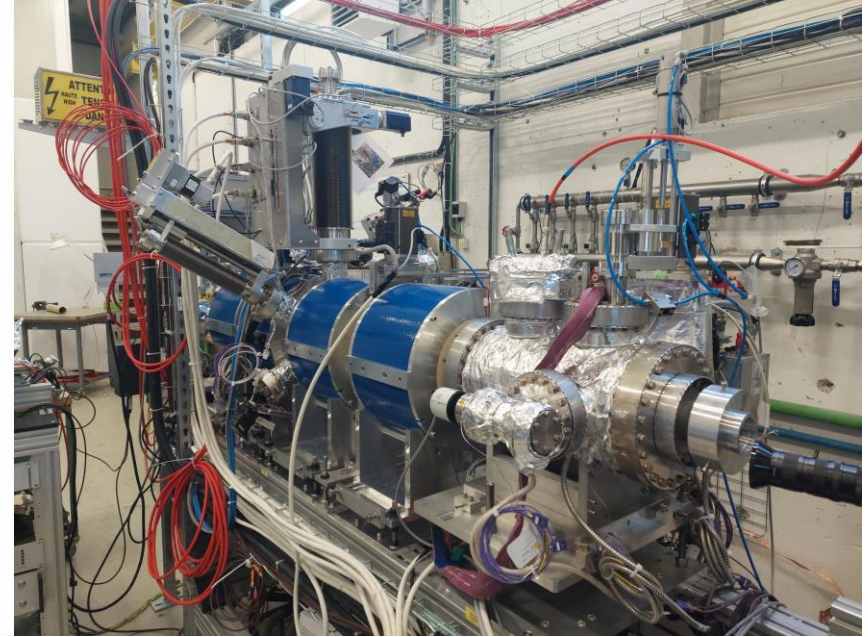
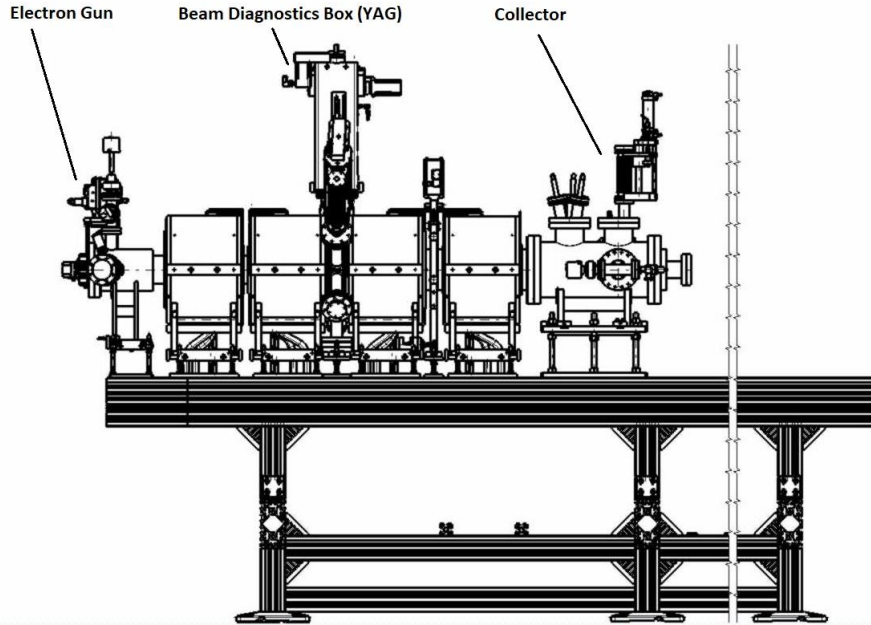
Beam Gas Curtain V3 (BGC) on the Electron Beam Test Stand (EBTS)

Ashley Churchman – SY-BI-ML, CERN

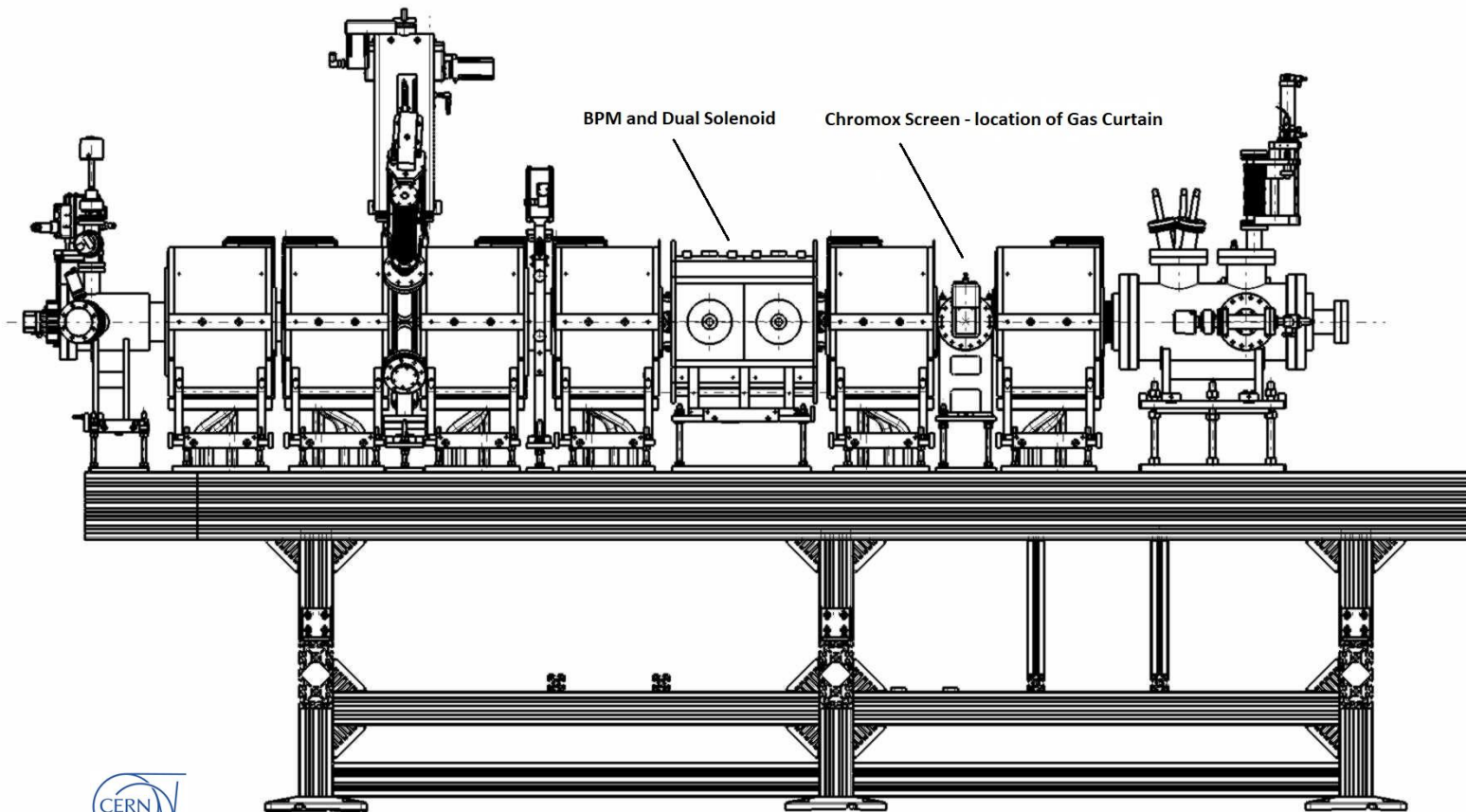
BGC Collaboration meeting
30/03/2022
CERN



EBTS – Phase 1; Electron Gun & Collector. Current situation



EBTS – Phase 2; BPM & Chromox Screen

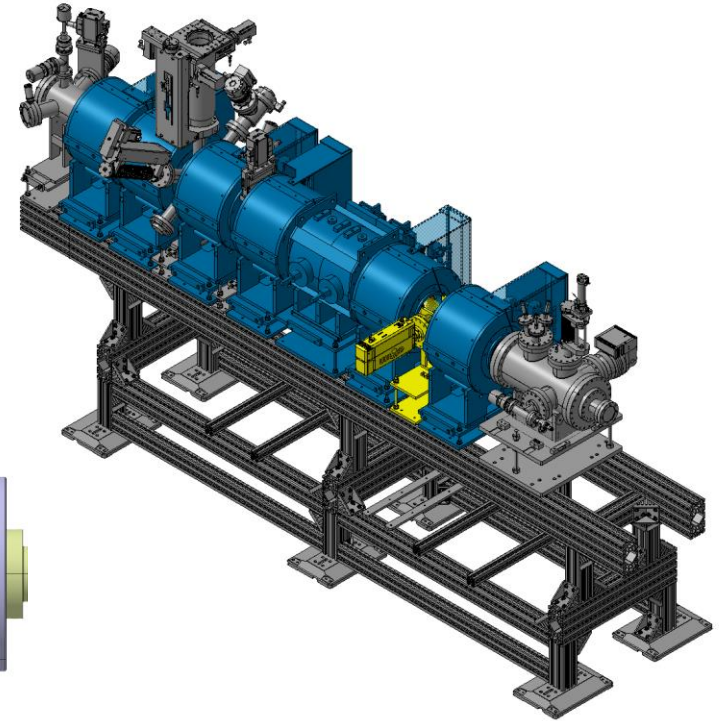
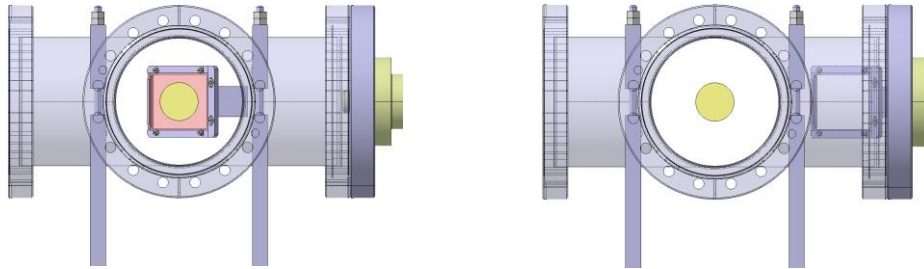


EBTS – Phase 2; Chromox Screen details

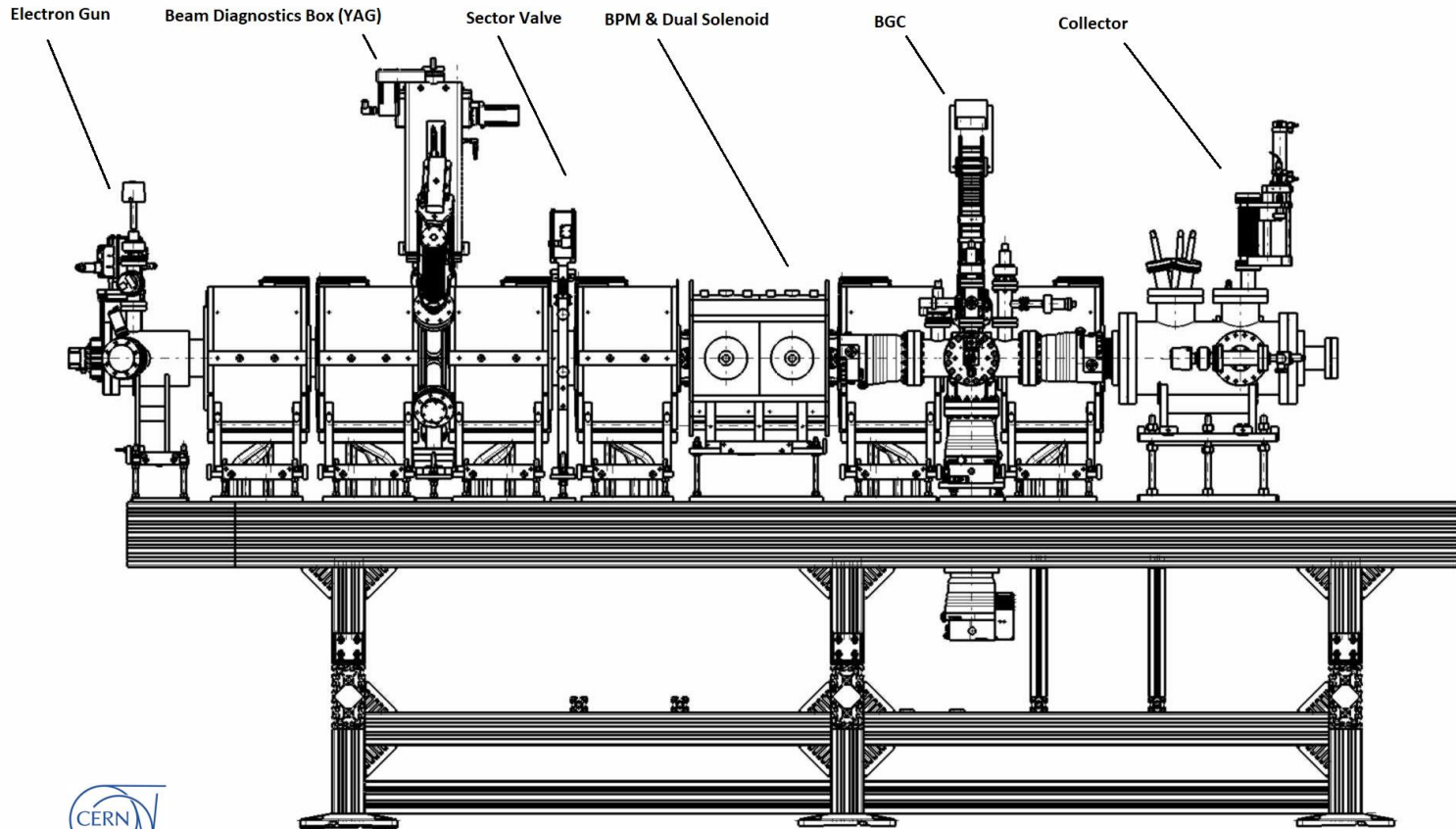
65x45x0.3mm.

Magnetically coupled & pneumatically actuated
'push/pull' mechanics.

Housed within DN100 'cross' (270x270mm).



EBTS – Phase 3; BGC installation.

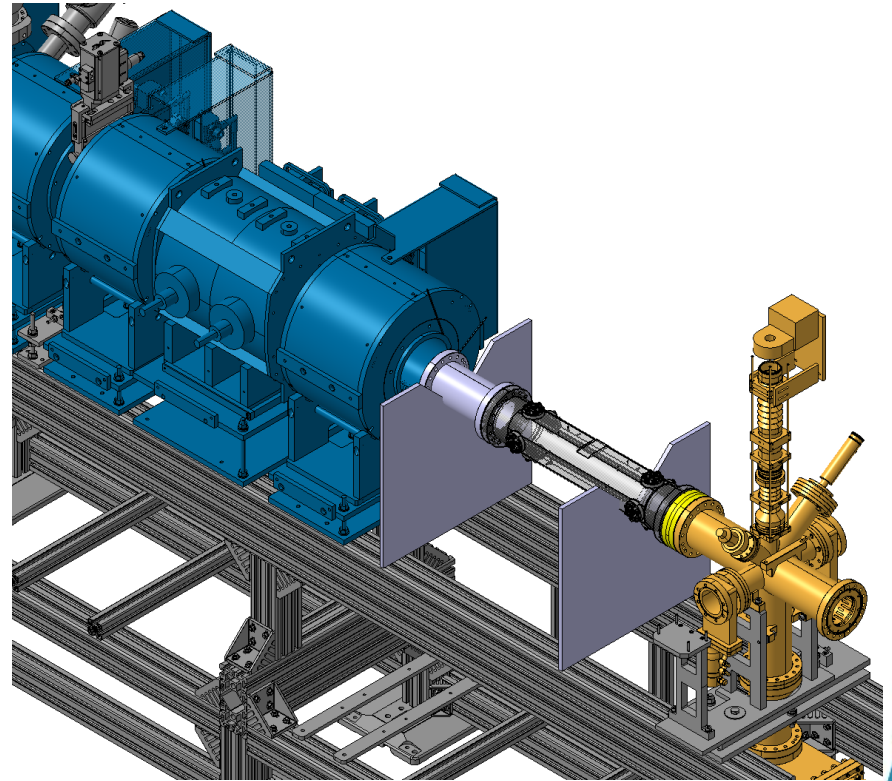


EBTS – Phase 3 installation procedure (1)

Step 1 – Remove Gas Injection, Dump Chamber and interaction Pump.

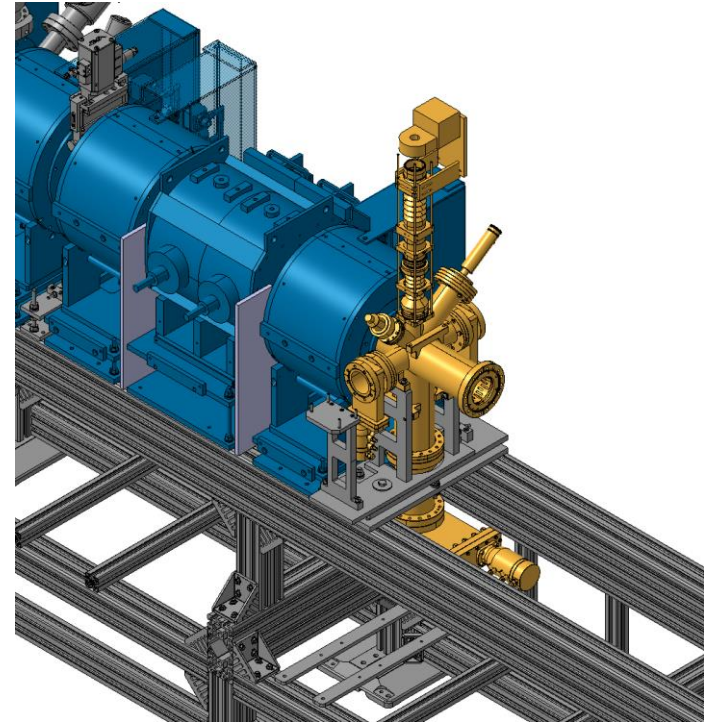
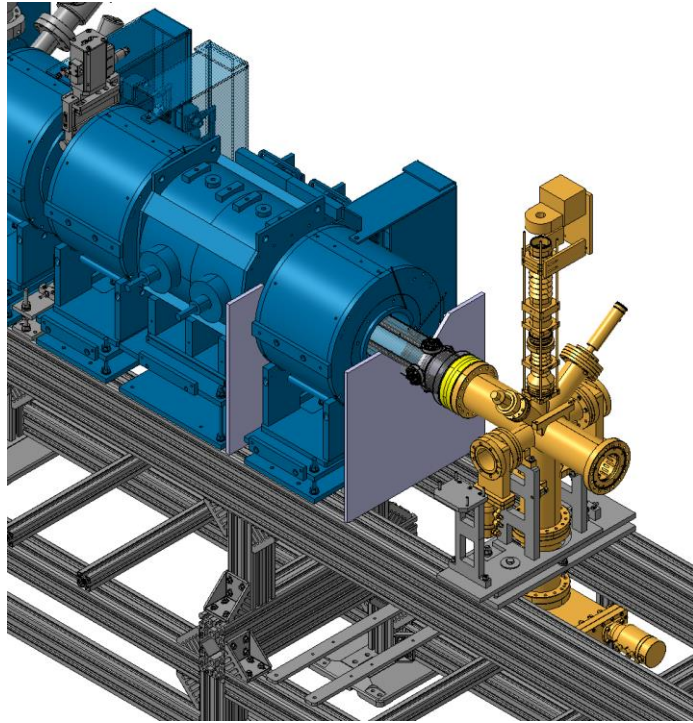
Step 2 – Mount BGC onto Support.

Step 3 – Assemble DN100 Beam-pipes and BPM onto BGC.



EBTS – Phase 3 installation procedure (2)

Step 4 – Slide BGC/BPM assembly through each Solenoid.

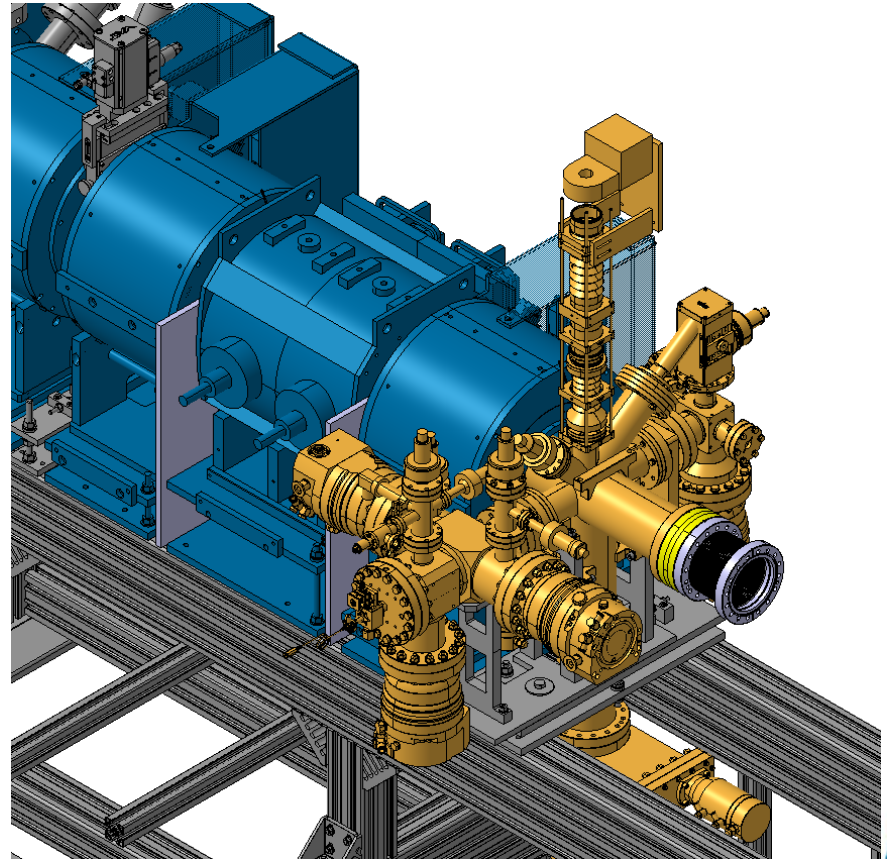


EBTS – Phase 3 installation procedure (3)

Step 5 – Mount BGC assembly to Sector Valve, using silver coated studs.

Step 6 – Re-mount Gas Injection, Dump chamber and Interaction Pump.

Step 7 – Mount DN100 Spacer and Bellow.

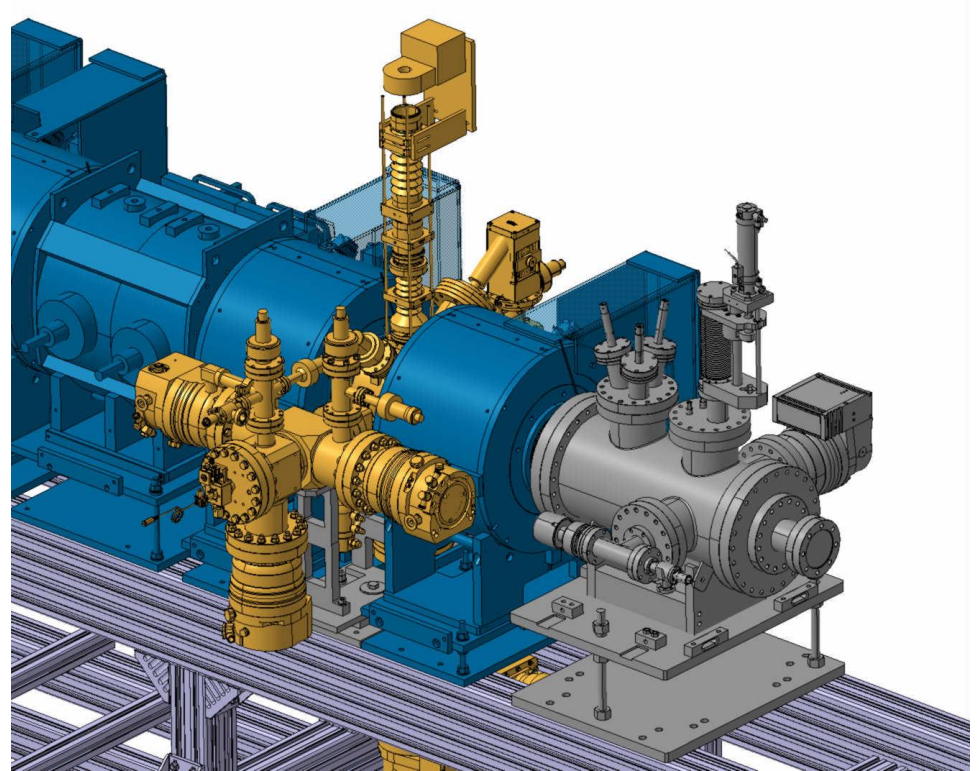


EBTS – Phase 3

Step 8 – Align Solenoids to Vacuum assembly, using existing positions for reference.

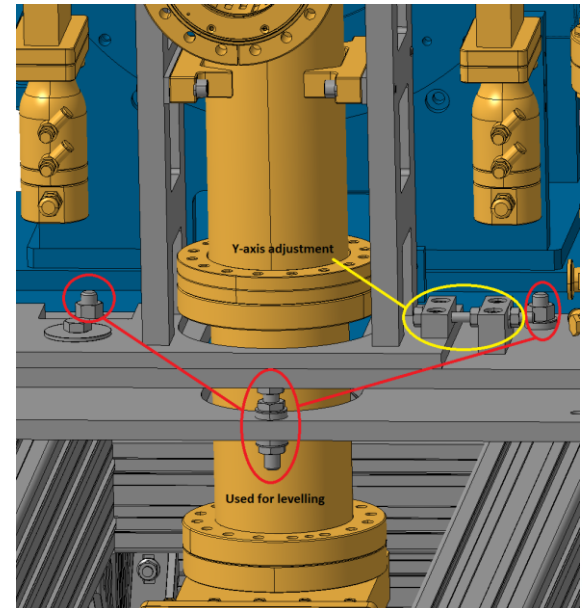
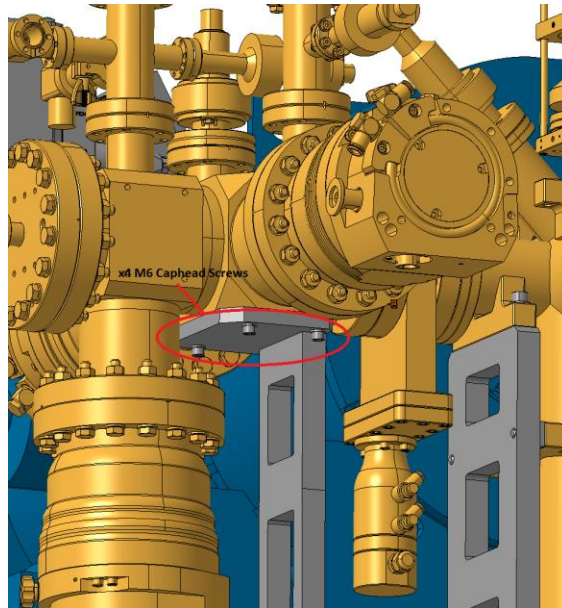
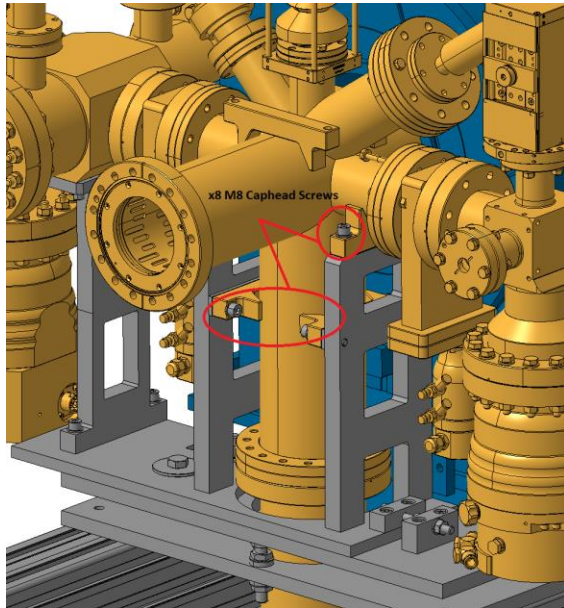
Step 9 - Slide final Solenoid over the BGC/DN100 pieces.

Step 10 – Mount Collector to EBTS and connect to DN100 Bellow.



EBTS – Phase 3

BGC Support





Thank you for your attention.

