# Cluster F2 test bench

# DFHX integration sequence

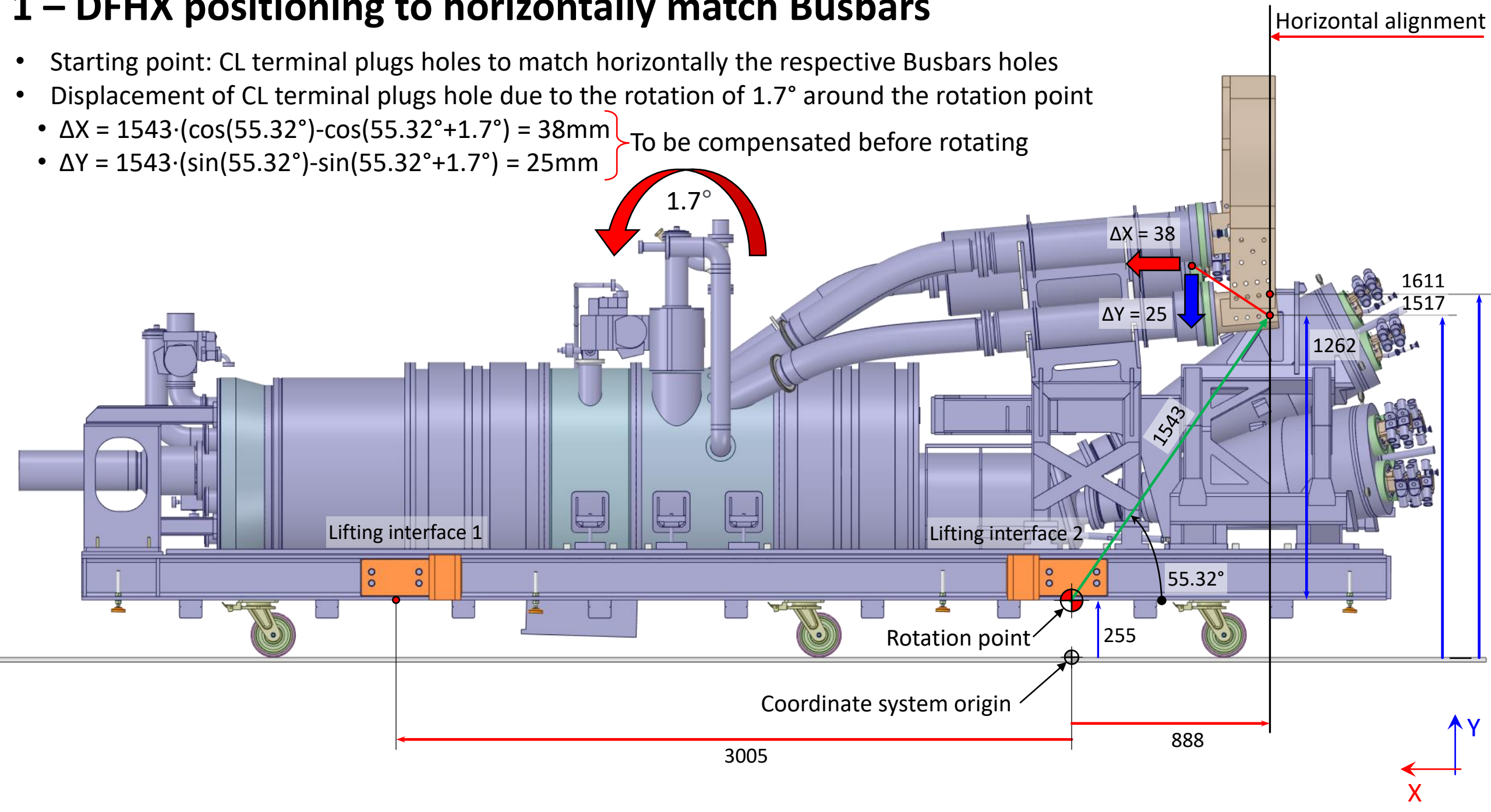
Franco Di Ciocchis for WP6a

16-May-2022; TE-MSC-CMI

# 1 – DFHX positioning to horizontally match Busbars

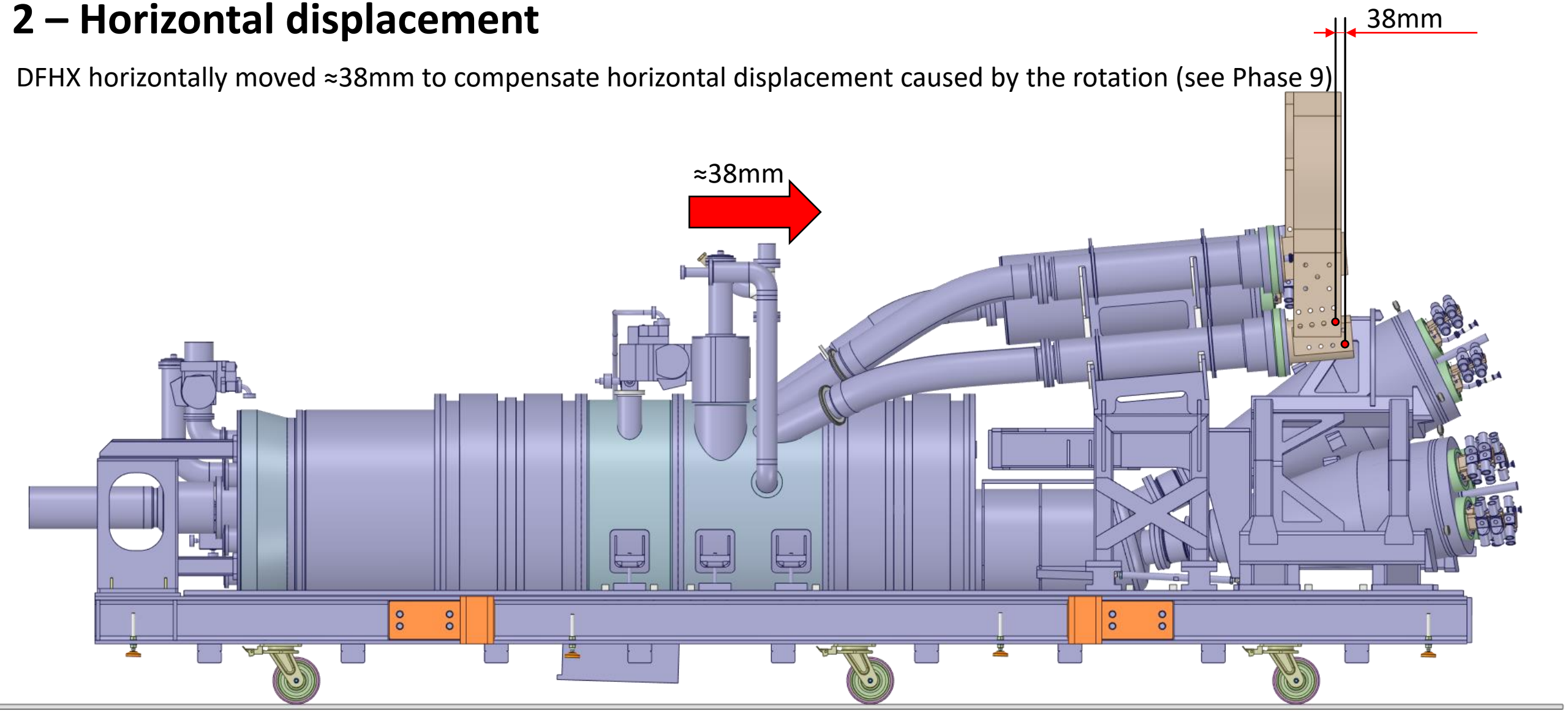
- Starting point: CL terminal plugs holes to match horizontally the respective Busbars holes
- Displacement of CL terminal plugs hole due to the rotation of 1.7° around the rotation point
  - ΔX = 1543·(cos(55.32°)-cos(55.32°+1.7°) = 38mm
  - ΔY = 1543·(sin(55.32°)-sin(55.32°+1.7°) = 25mm

To be compensated before rotating

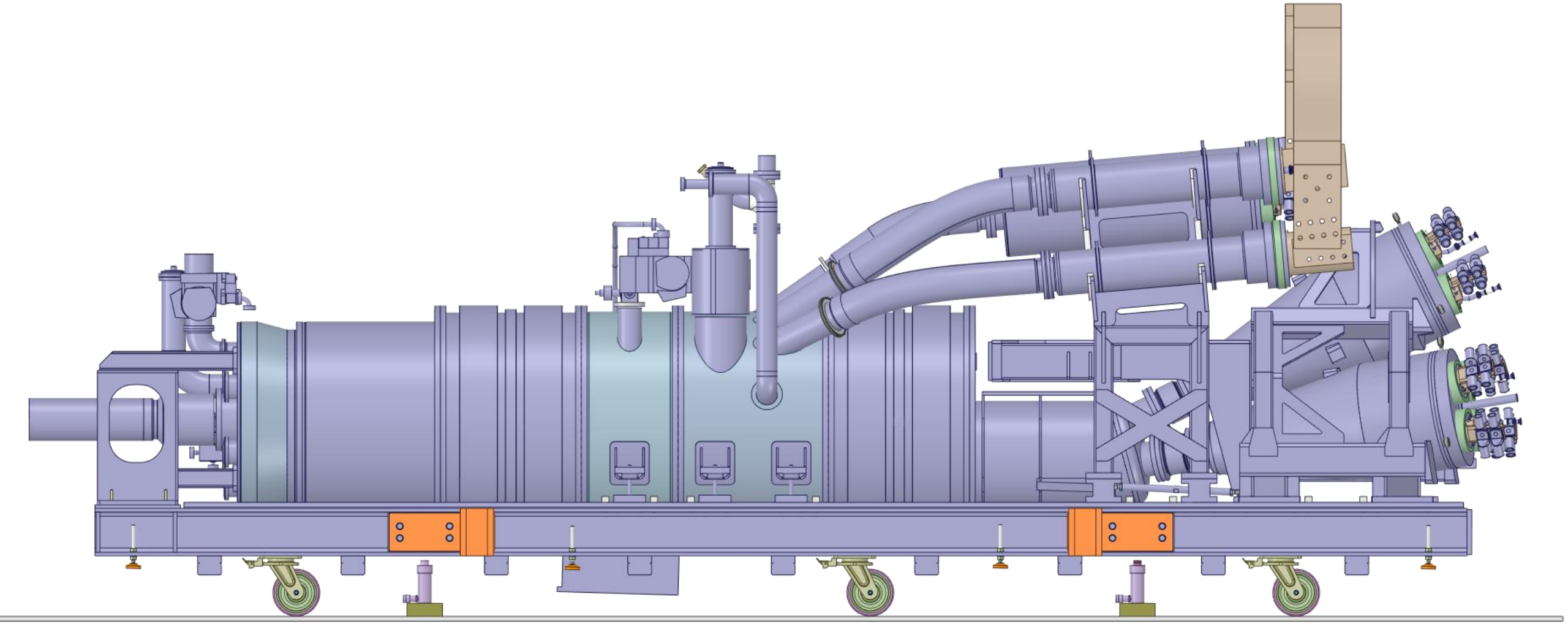


# 2 – Horizontal displacement

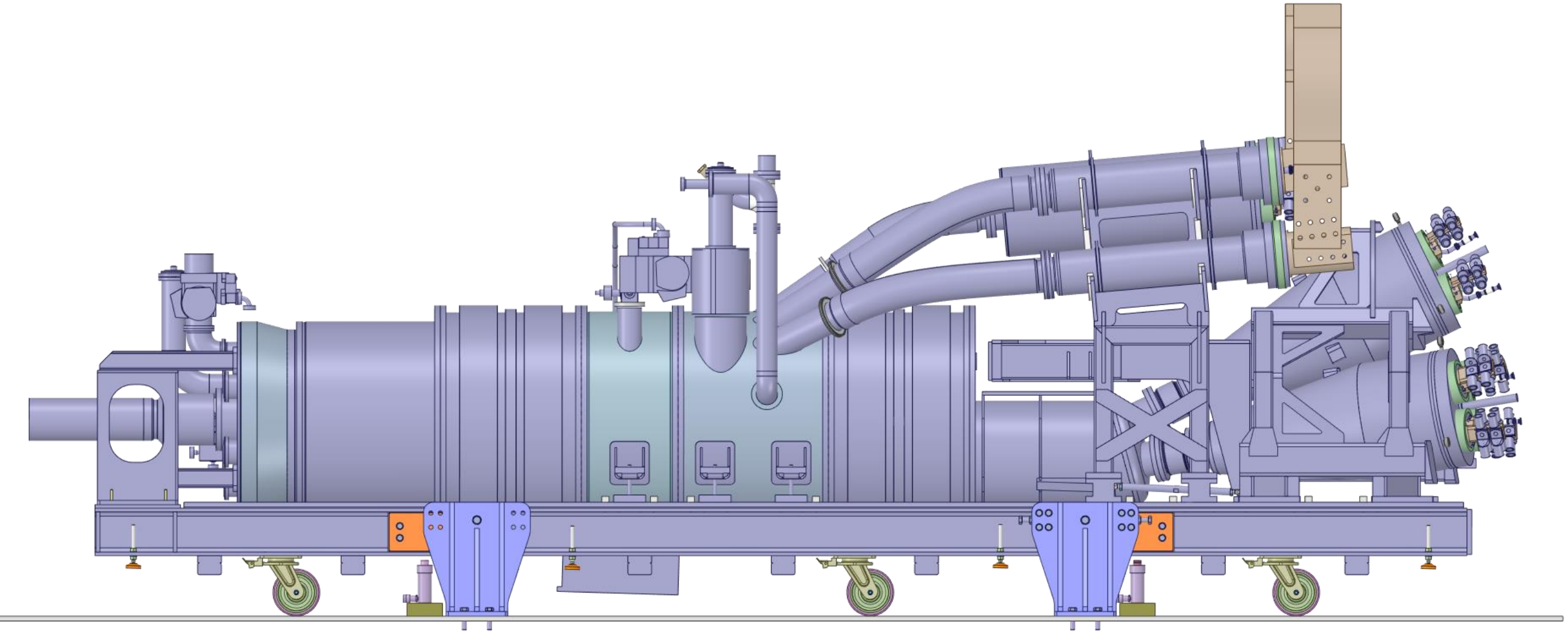
DFHX horizontally moved ≈38mm to compensate horizontal displacement caused by the rotation (see Phase 9)



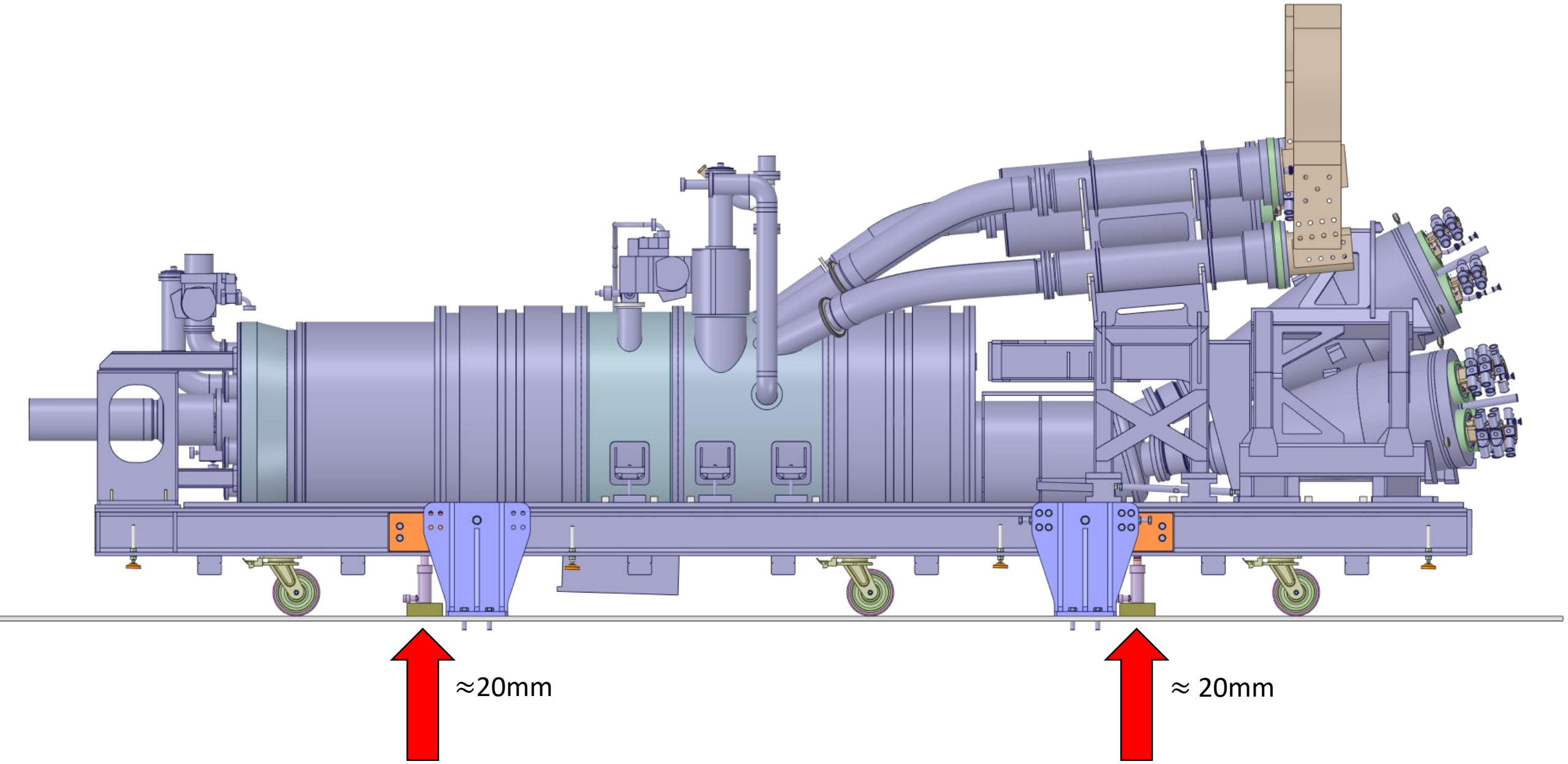
# 3 – Jacking system installation



# 4 – Fixation system installation

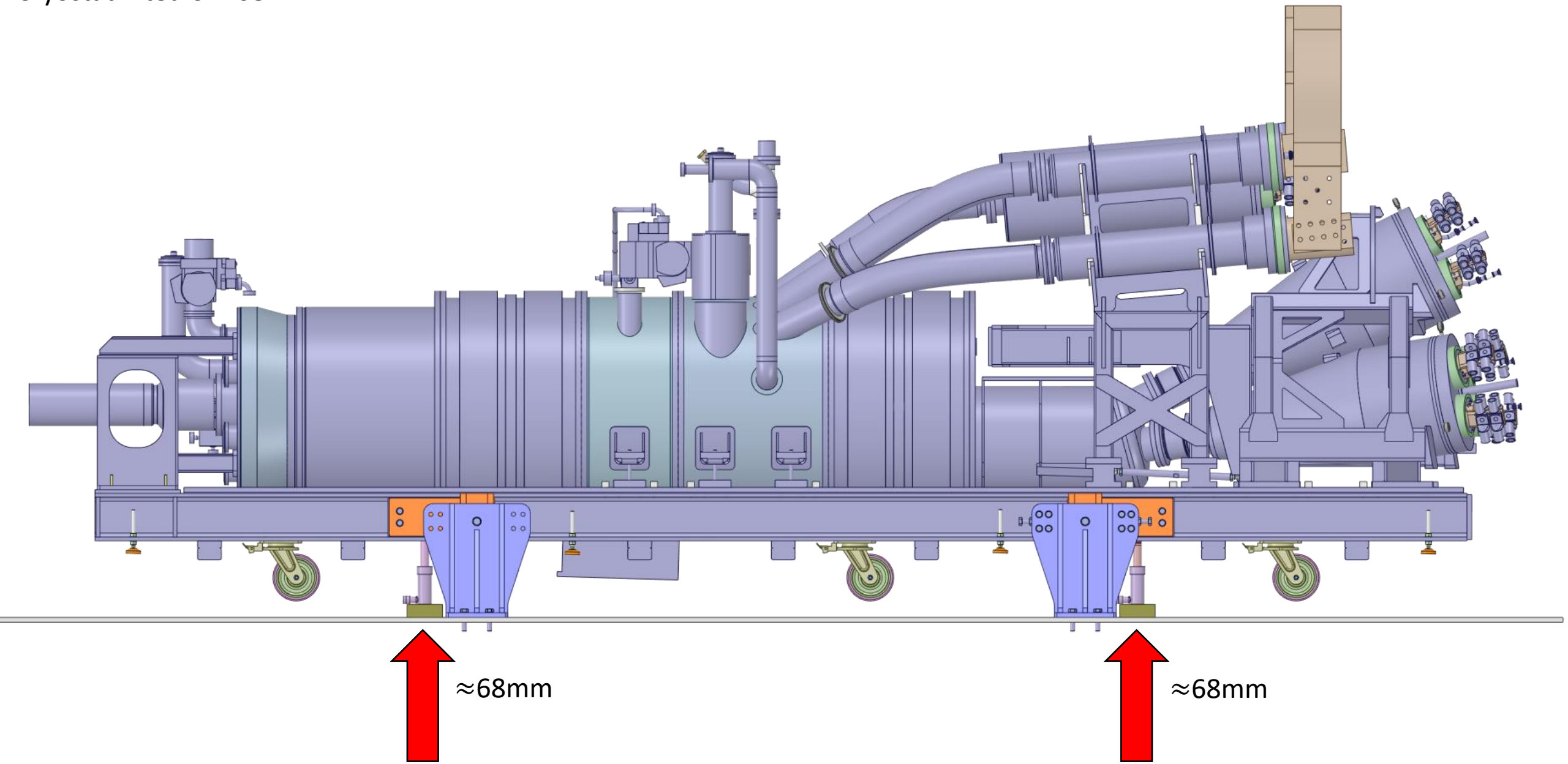


# 5 –Jack system brought to contact with the frame

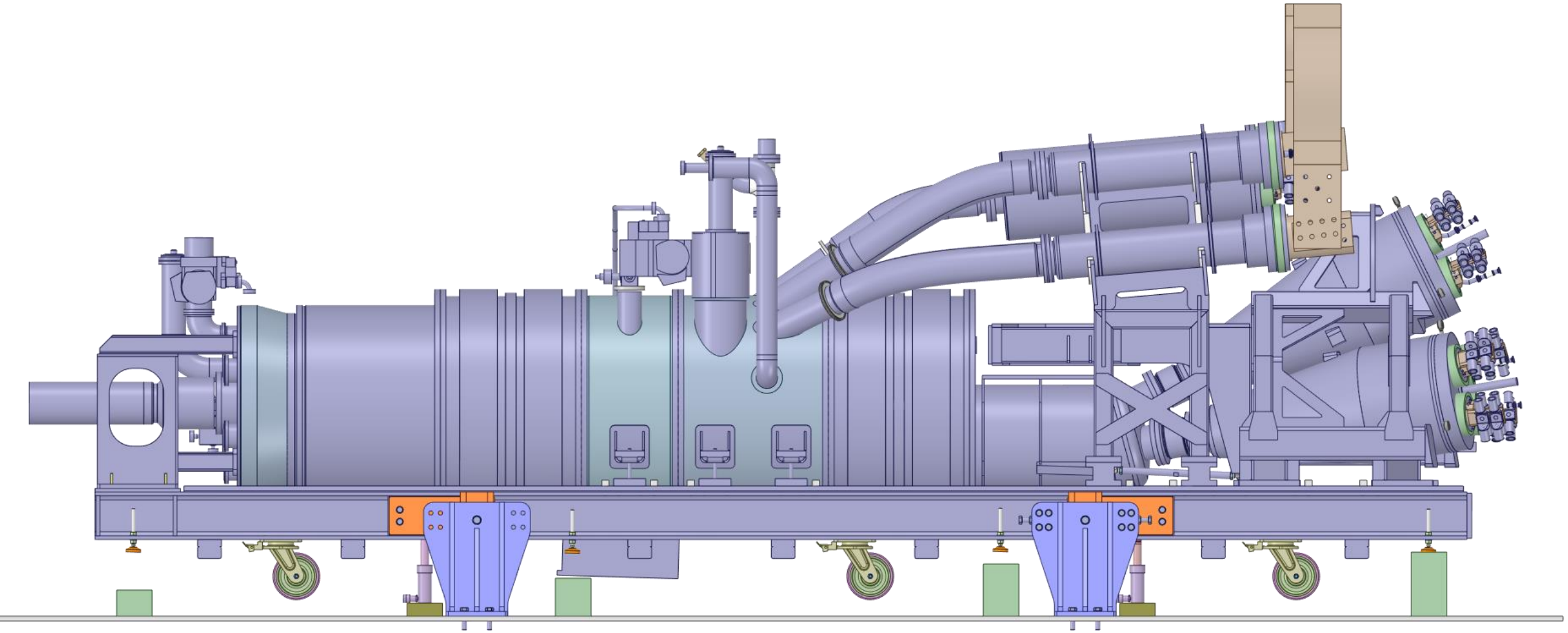


# 6 – Cryostat lifted up

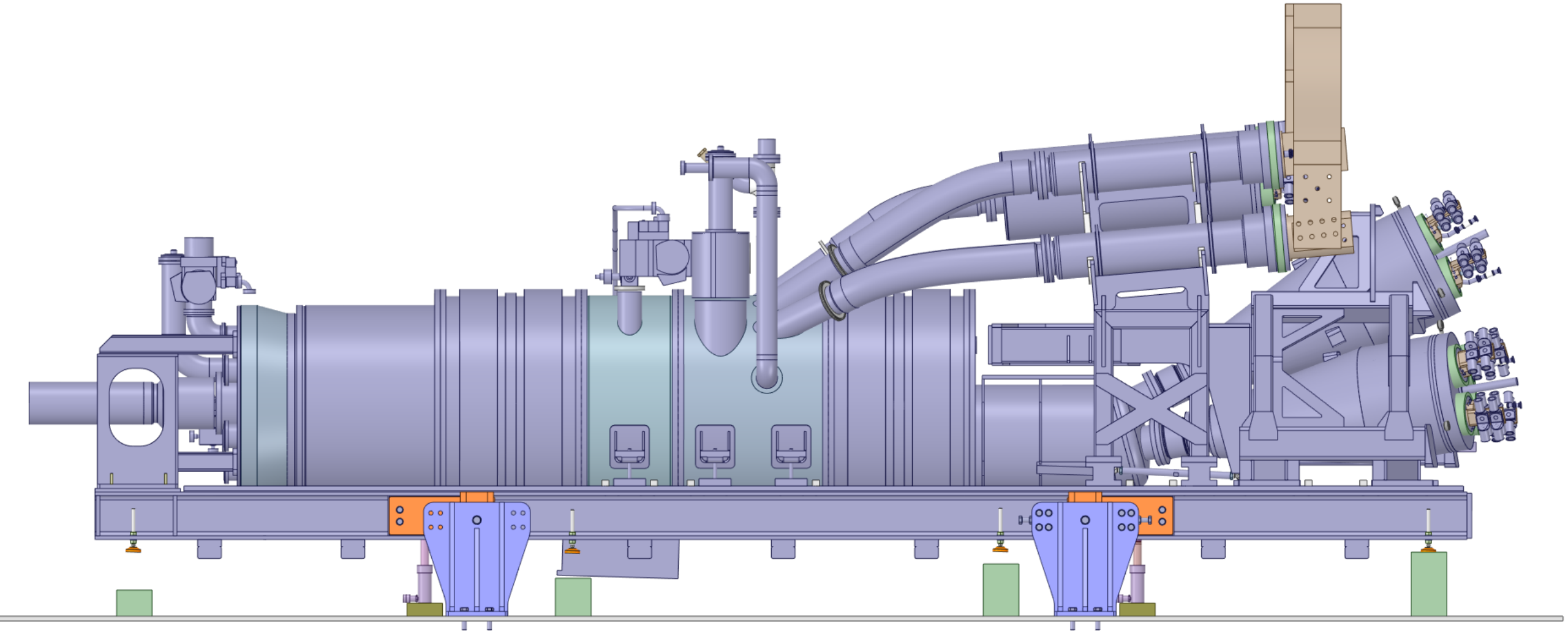
Cryostat lifted of ≈68mm



# 7 – Feet spacers installation



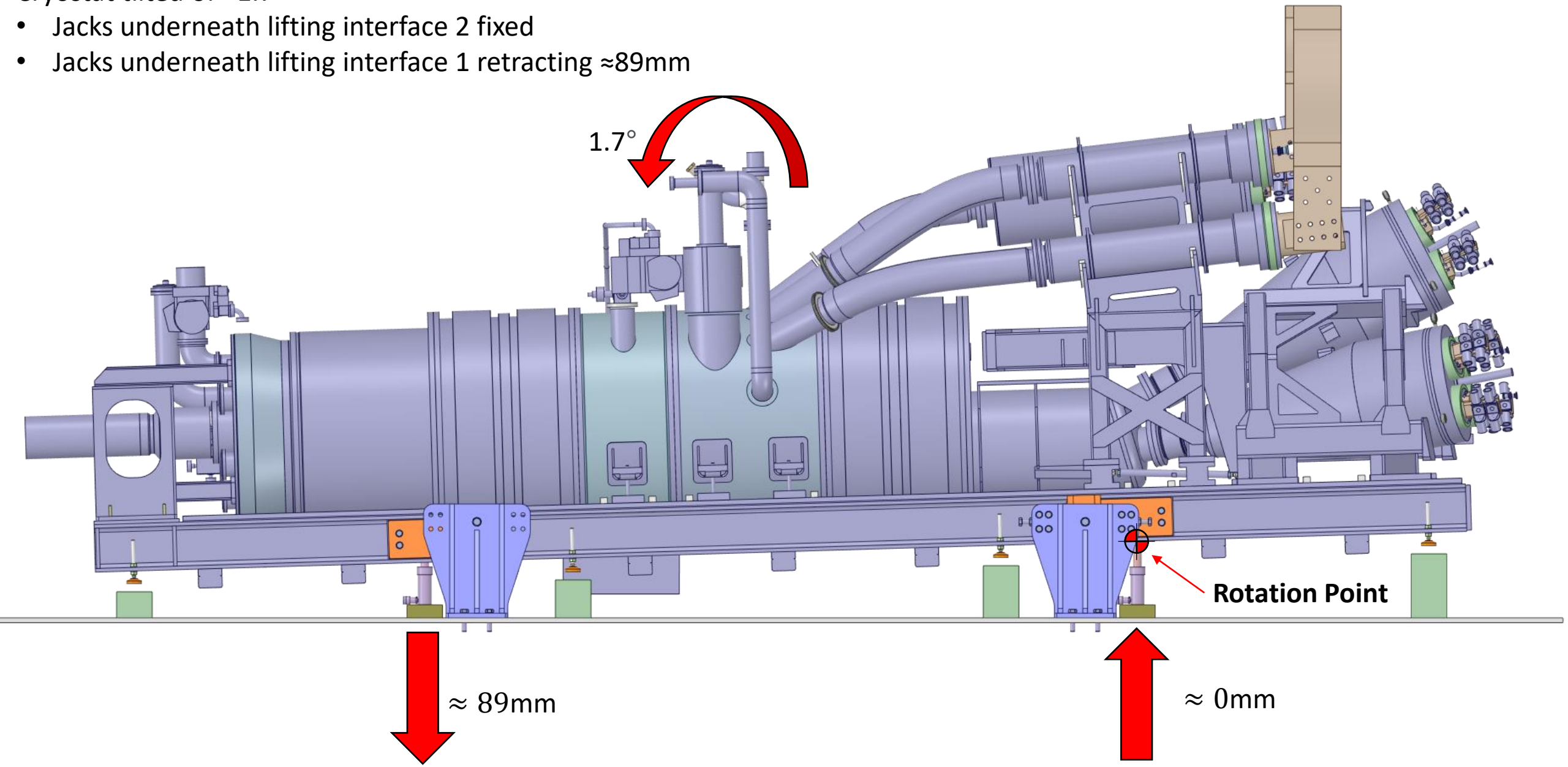
# 8 – Wheels removal



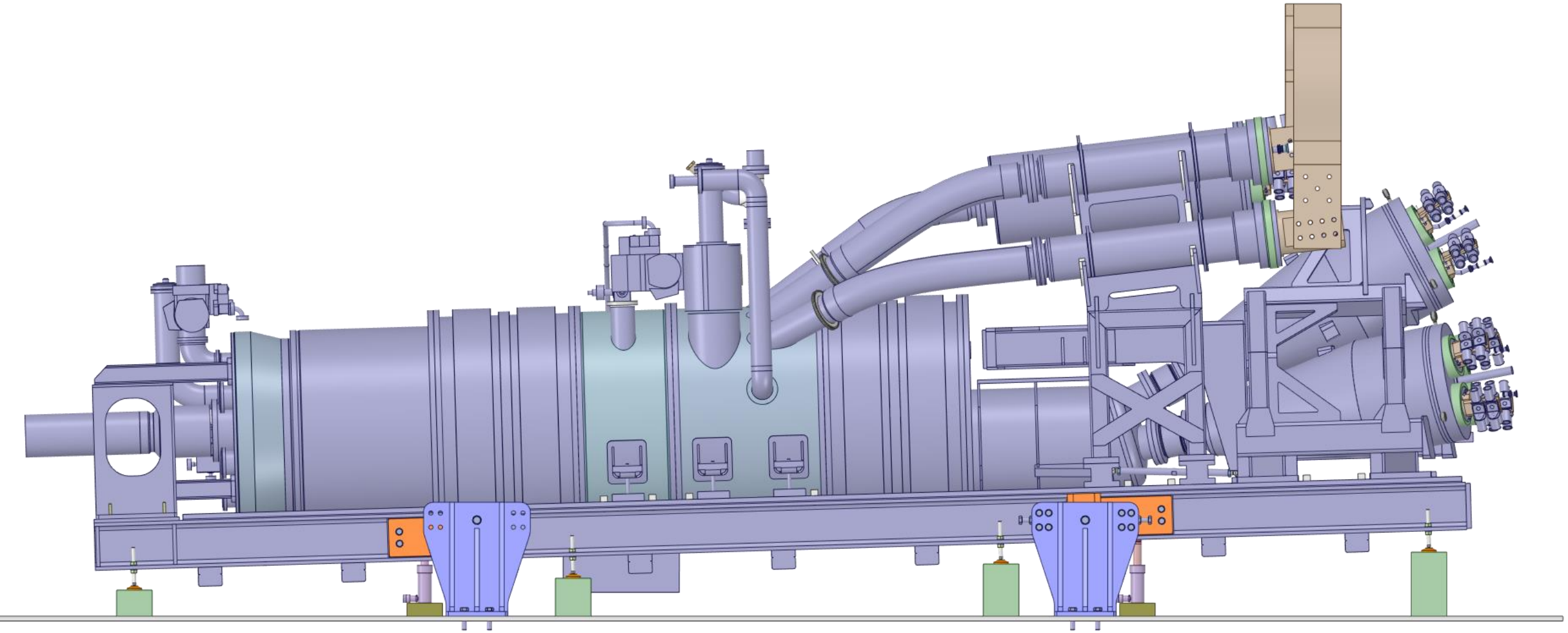
# 9 – Cryostat tilted

Cryostat tilted of ≈1.7°

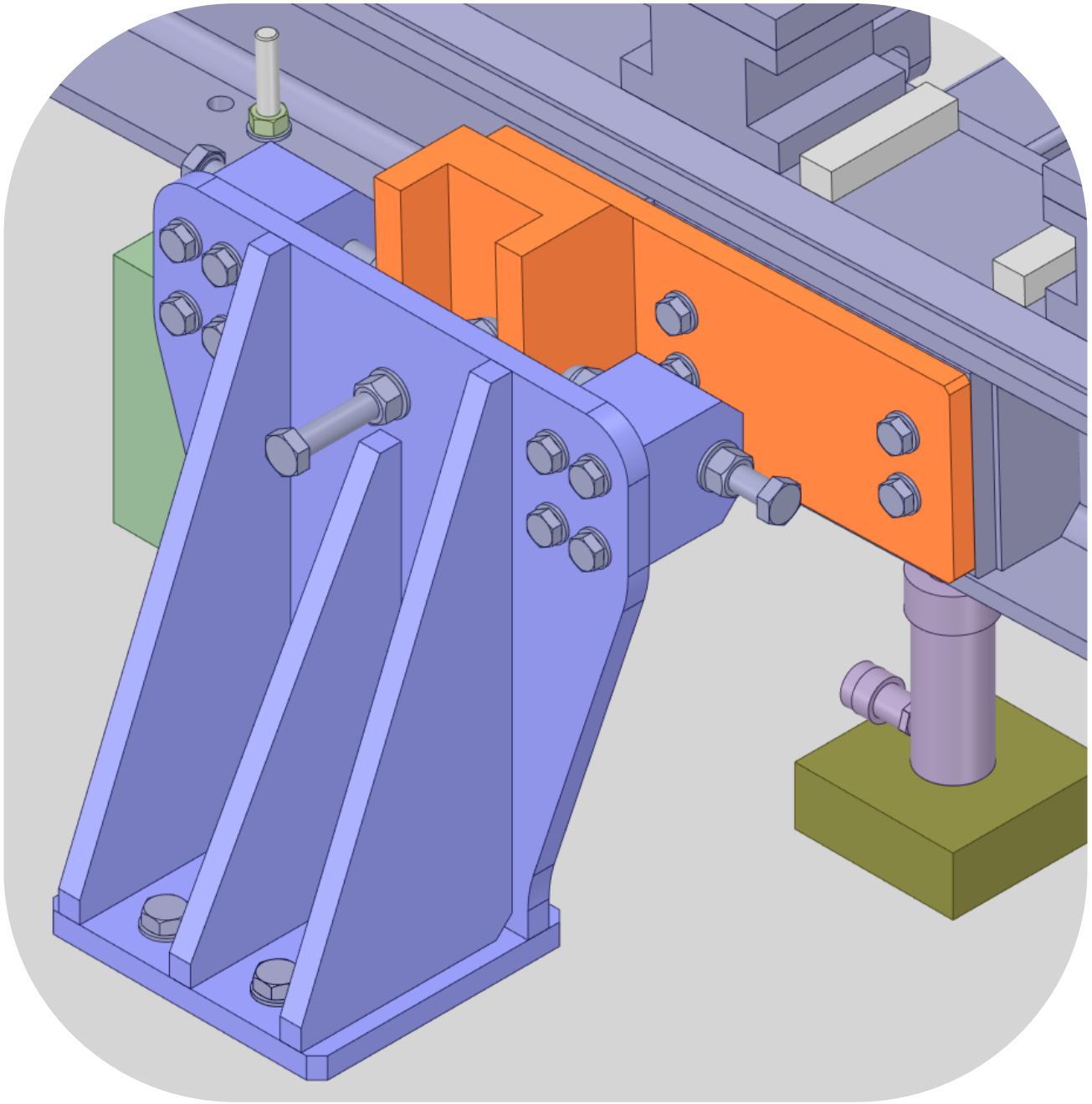
- Jacks underneath lifting interface 2 fixed
- Jacks underneath lifting interface 1 retracting ≈89mm

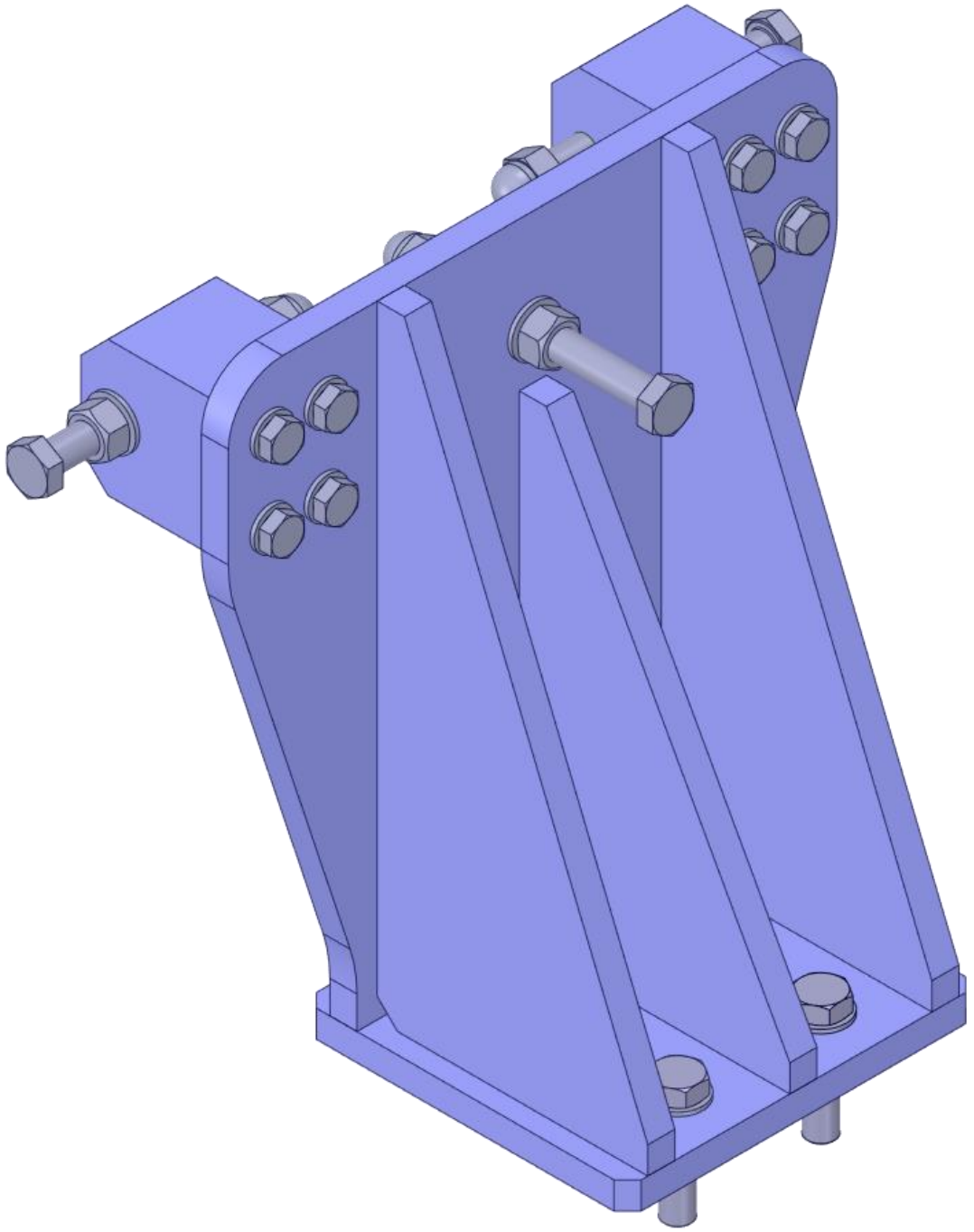


# 10 – Feet adjustments



# Fixation system





# Equipment

- Hydraulic cylinder → Enerpac RC55, 4.9-ton Capacity, 5.00’’ Stroke + Tilt saddle to absorb the inclination
- Wheel → Blickle LS-GB 202K-RI4, Ø = 200mm, Height = 255, Capacity (static) = 4-ton
- Feet → Norelem Leveling feet steel 27792-010016X150, Capacity (static) = 3.5-ton

**Enerpac RC55 + Tilt Saddle**


**Blickle LS-GB 202K-RI4**

**Norelem Leveling feet steel 27792-010016X150**