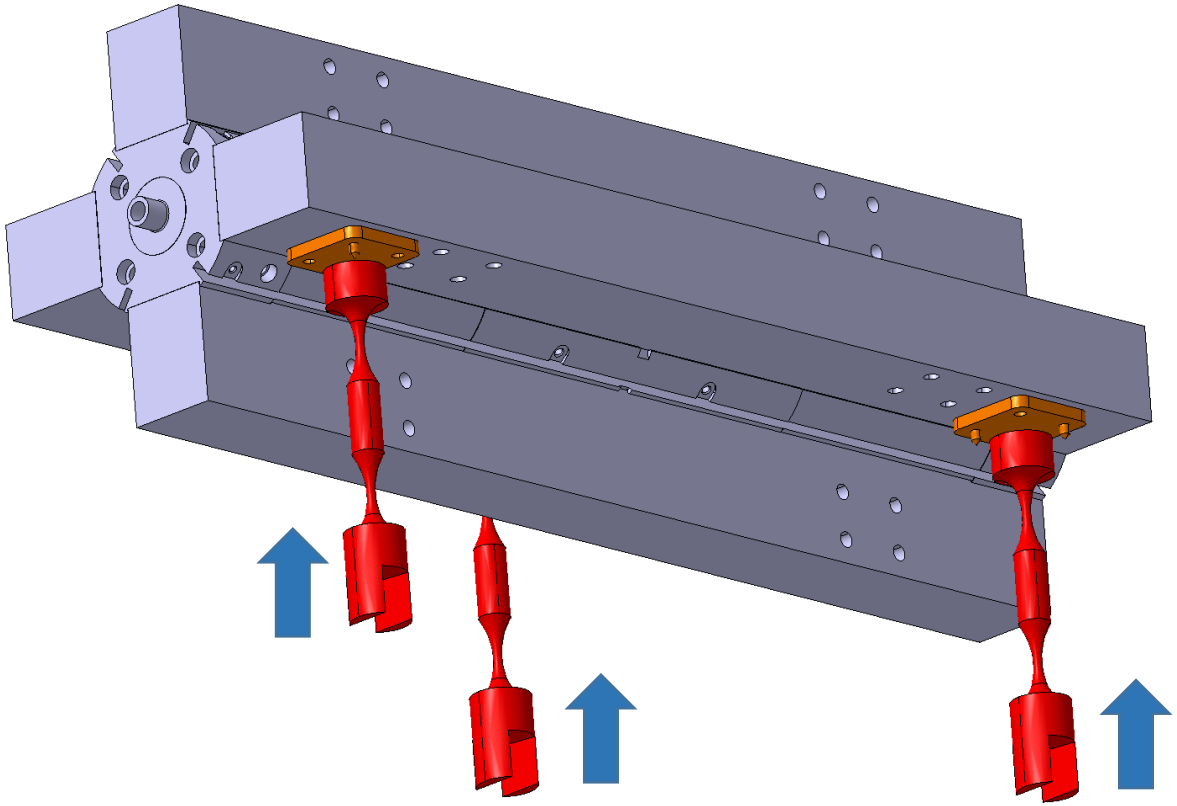
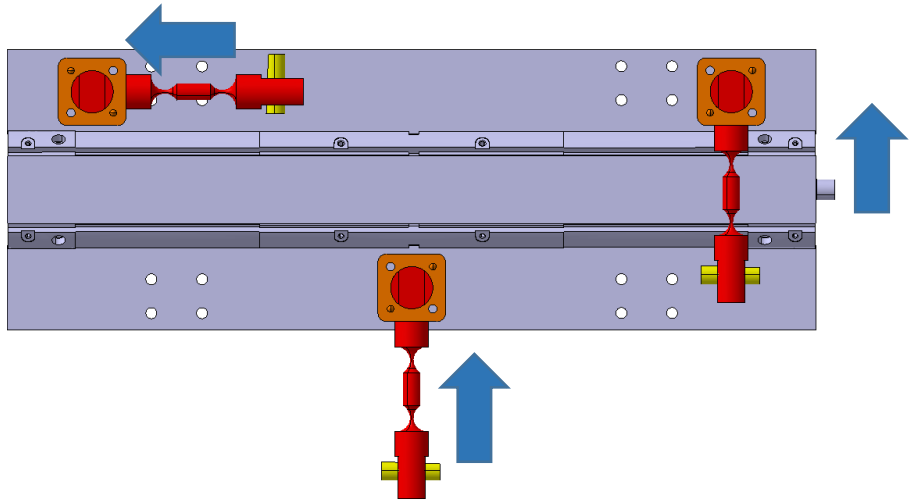
Adjustable support

Jukka Väinölä

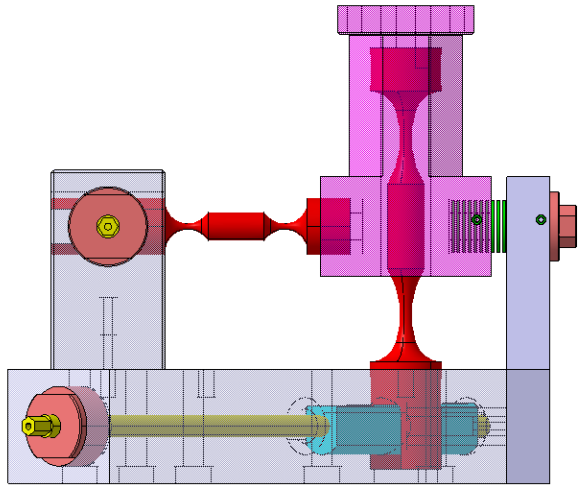
4/10/2017

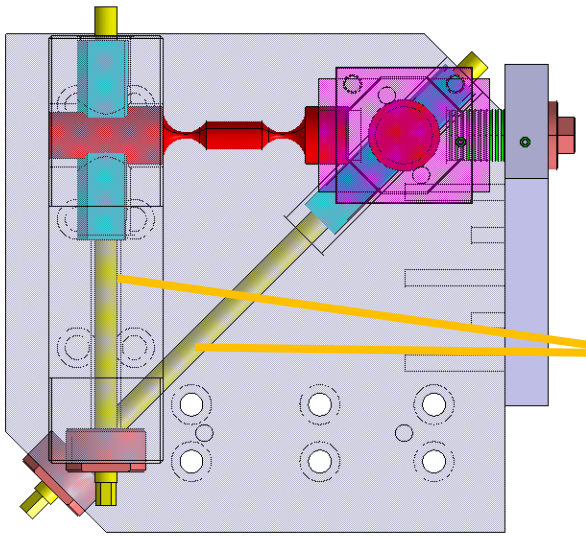
Support and adjustment with 3 flexible devices





Support design





175x175 mm

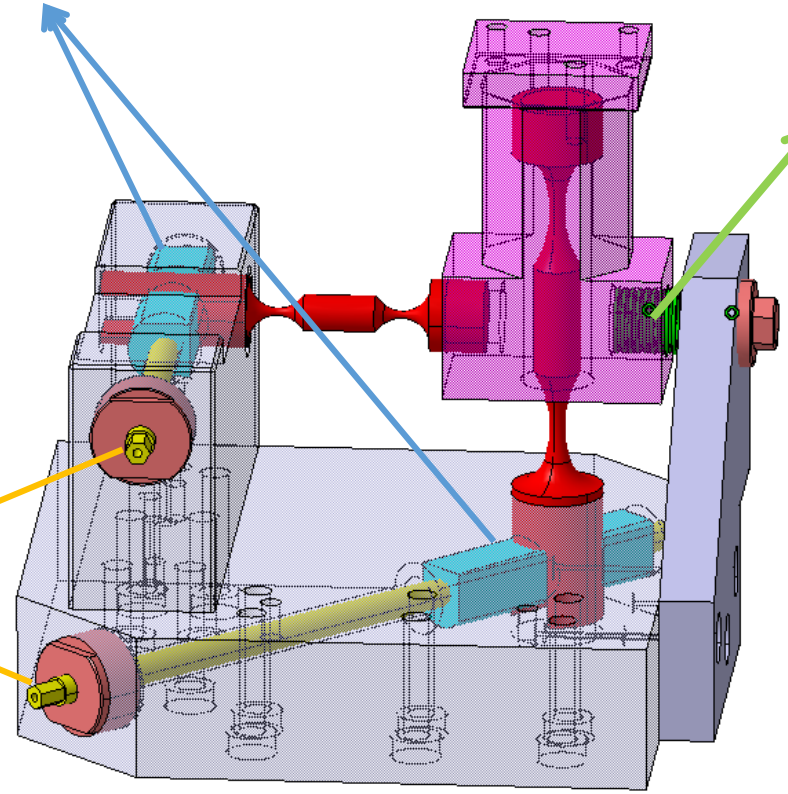
Wedge with inner trapezoidal thread

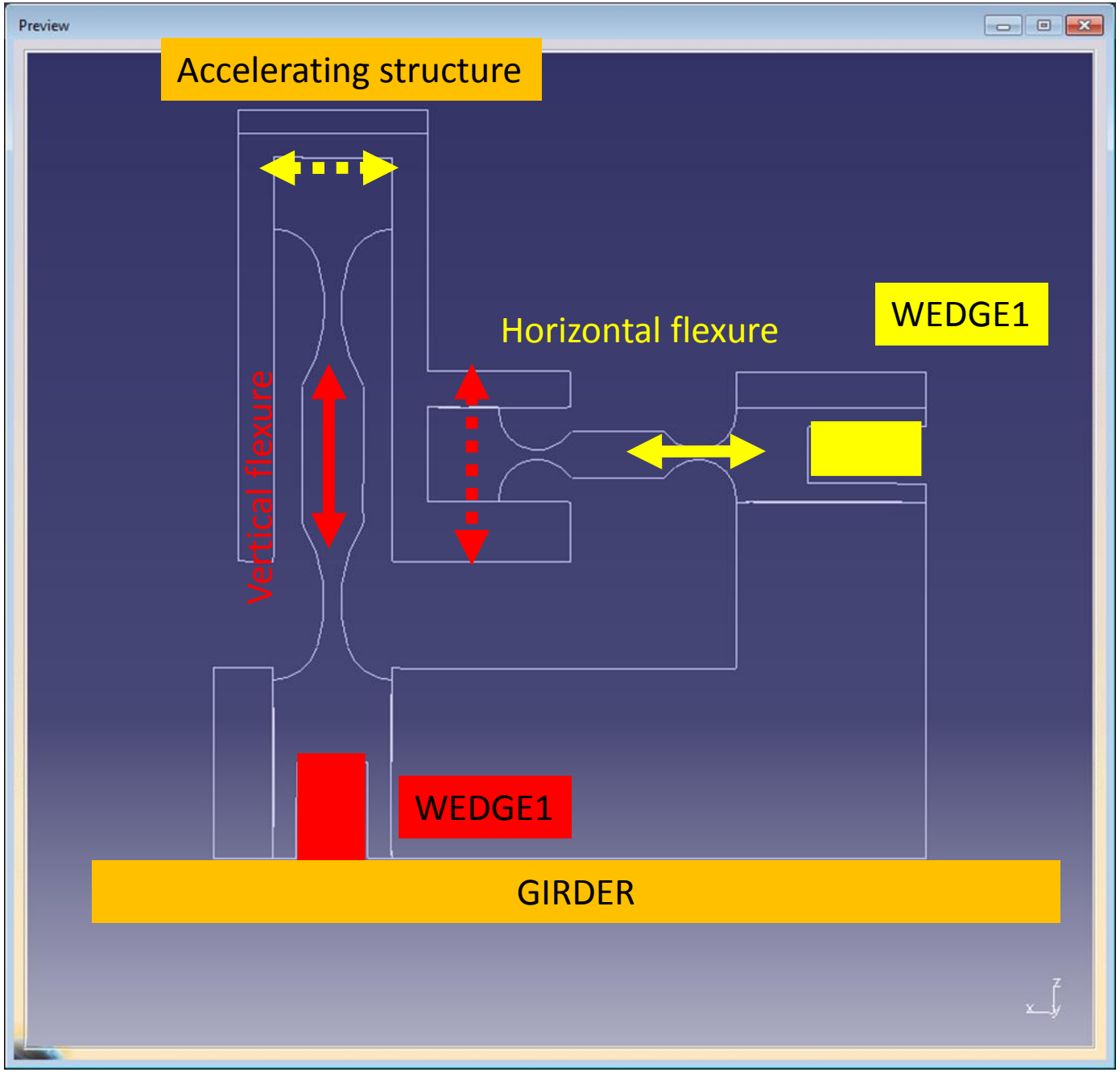
AS connection

Spring

Adjusement interface

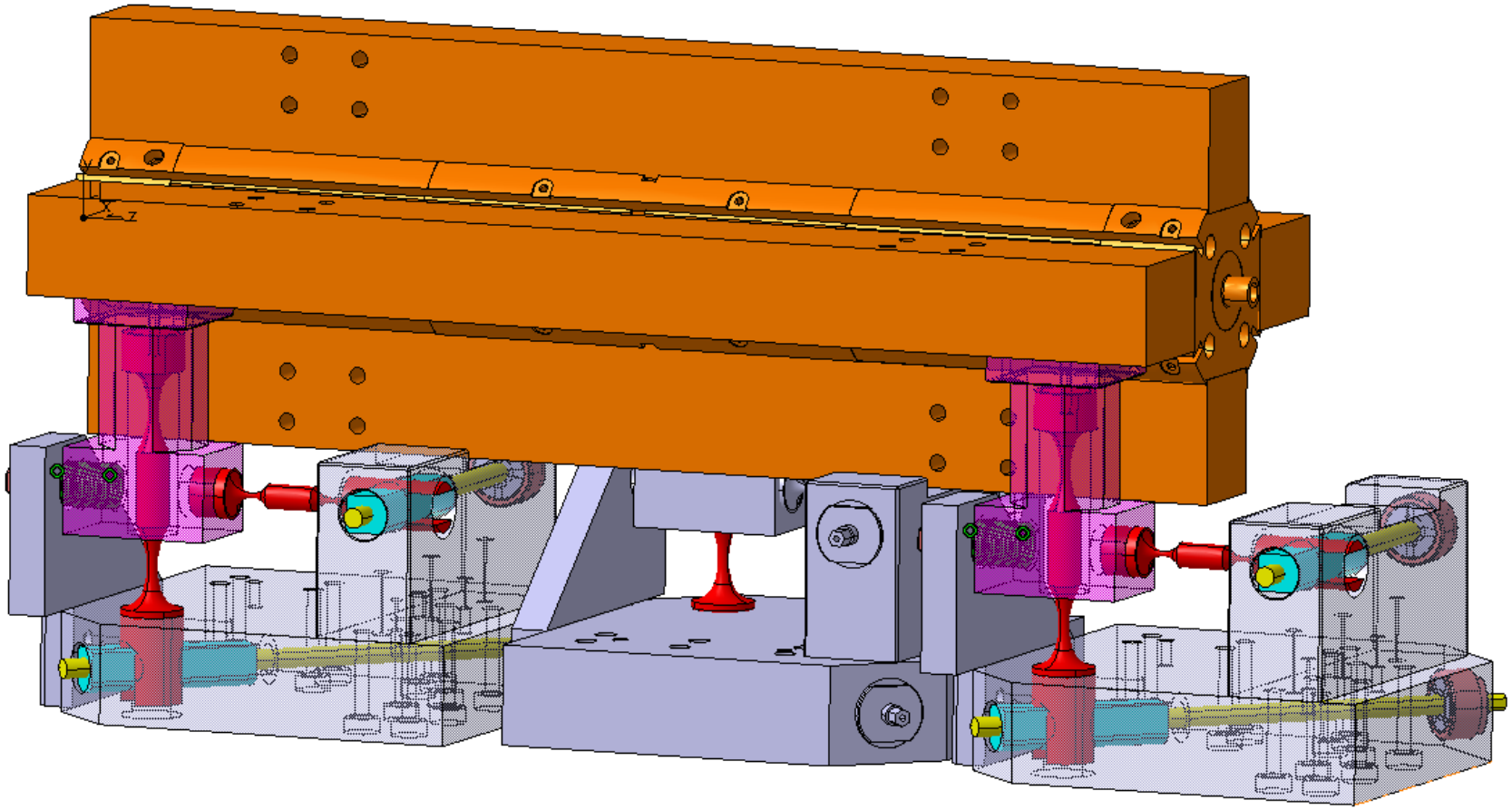
Trapezoidal Thread bar





Cross section

Support installation



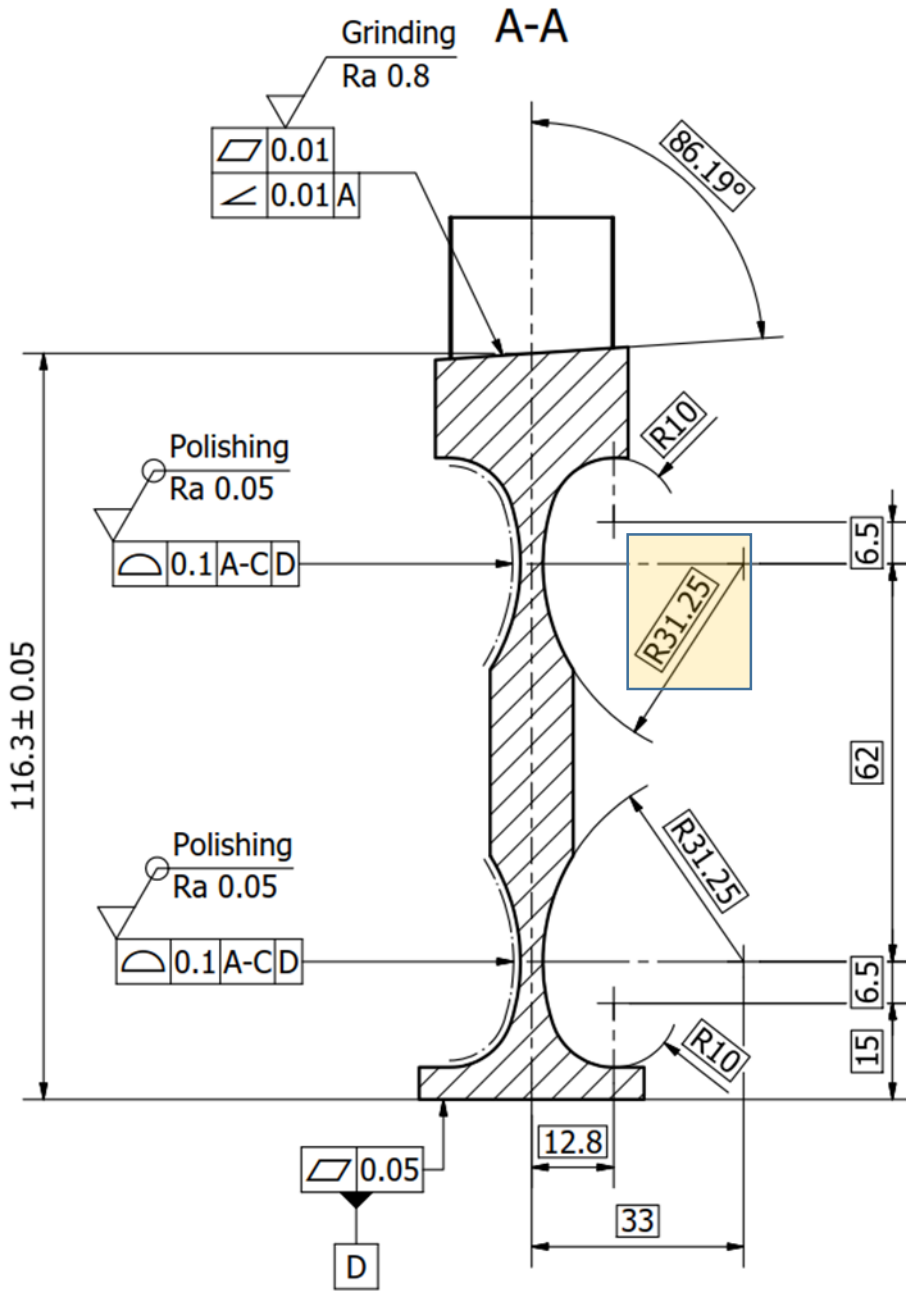
Vertical flexure

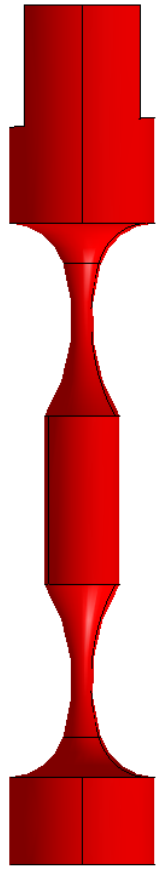
- Initial geometrical design from DBQ support

- Material 30CrNiMo8 (EN 10083-3-2006)
  - or 34CrNiMo6
- Tensille strengt Rm 1100 Mpa
- Yield strenght Re 900 Mpa

Original geometry
0.5 thinner (R=31.5)
1 thinner (R=31.75)
0.5 thicker (R=31)

Parasitic motion
= 0.6 x^2/L (0.005/1 mm, 0,02/2mm)





Horizontal flexure

- Initial geometrical design from DBQ support

- Material 30CrNiMo8 (EN 10083-3-2006)
  - or 34CrNiMo6
- Tensille strengt Rm 1100 Mpa
- Yield strenght Re 900 Mpa