Project Engineering and Design
for ePIC pfRICH cylindrical vessel outer shell

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Center for Frontiers in Nuclear Science

pfRICH meeting

End-rings

End-ring	Inside (mm)	Outside (mm)
3	1260.392 (RMS = 0.148)	1299.060 (RMS = 0.420)
4	1260.380 (RMS = 0.160)	1299.167 (RMS = 0.527)

► The dimensions of the end-rings will determine the foam dimensions, not the other way around.

Next steps

1. **Install End-ring 4.**
2. Verify circularity with camera (record video).
3. Align shaft for optimal milling conditions.
4. **Mill to the nominal diameter**: D_{inside}^{ED} - (0.5 mm) - glue.
   - ▶ Removed approximately 1.1 cm (rad.) of left foam.
5. Check circularity halfway through milling (record video 1).
6. Slide End-ring 4 along the "z" direction.
   - ▶ Since the decision was made to install the end-rings after the foam, the current setup requires both end-rings to be passed from the same side (engineering constraints).
7. Apply thin primer layer on foam for improving adhesion.

→ Milling still ongoing

Comments

▶ **End-ring 4** exhibits very good circularity, $\sigma \sim 0.2$ mm.
  $\rightarrow$ record video

▶ **Foam milling** also exhibits very good circularity, with $\sigma^{\text{foam}} \lesssim \sigma^{\text{ED}}$.
  $\rightarrow$ record video 1
  $\rightarrow$ **New video** coming halfway through milling. Check **"z"** and **"ϕ"** uniformity.