



# Status Forward Endcap EMC

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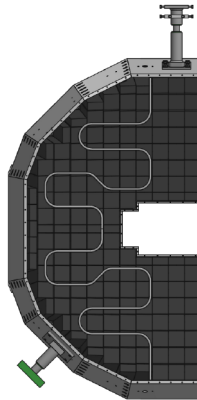
# Submodule Manufacturing

- Latest numbers:
  - ▶ 242 of 268 submodules built so far (90%)



# Forward Endcap Cooling

- Side and front cooling finished and installed

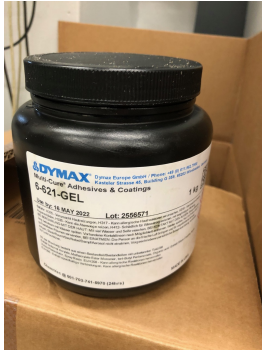


# Forward Endcap Cooling



- Polyamid hose, thermally shaped (sand filled, aluminum form of one quarter)
- Fine tuning of shape by lead blocks prior to glueing (alignment along lines drawn)

# Forward Endcap Cooling



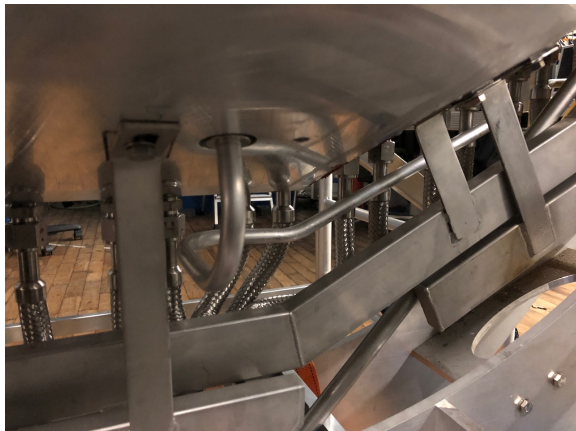
- UV ray (thermal) curing, radiation hard, high- $\lambda$  adhesive (Dymax 6-621-GEL): 650 Euros
- Gel coat nail lamp for fast curing (minutes): 20 Euros

# Forward Endcap Cooling



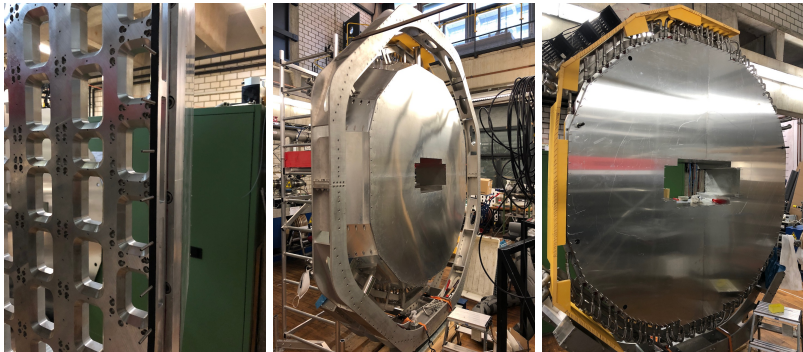
- Connection of front cooling to supply/return lines inside cold volume (T-distributor) via flex pipes
- Connection done when front lid not fully installed

## Forward Endcap Cooling



- Supply lines (feeding, return) still in preparation
- Some more cooling issues to be presented by Sebastian

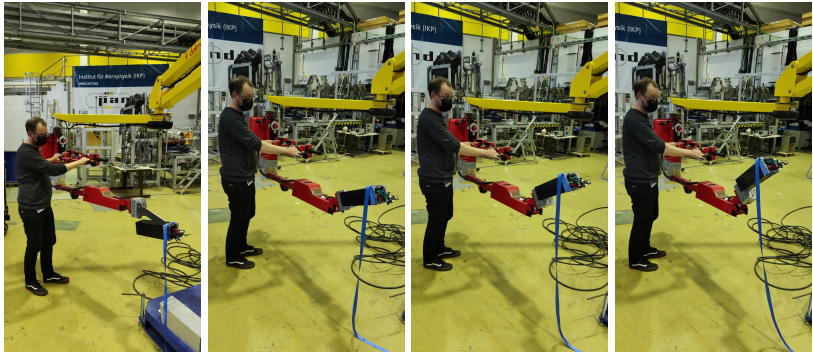
# Forward Endcap Cooling



- Front and back lid finished
- Rubber seals installed



# Manipulator Arm Tests, FZ Jülich



- Pneumatic, fully balanced mounting tool (CMS, CERN)
- Testing suspension and movement of submodules

# Manipulator Arm Tests, FZ Jülich



# Current Time Schedule for Finishing FWEC EMC

- Submodule production finished within 3 months from now
- Transport to Jülich:
  - ▶ Endcap plus frame
  - ▶ HV crates
  - ▶ Submodule test stand
  - ▶ Chiller etc.
  - ▶ (Summer 2022)
- Submodule mounting: x months(?)
- SADC crates:
  - ▶ Cooling tests finished
  - ▶ Mounting in Jülich until September 2022
- Ready for COSY beam: March 2023