



ENGINEERING
TOMORROW



Internship Presentation – Additive Design & Manufacturing (2026)

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Additive Design and Manufacturing Intern
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Introduction



What is your role within Danfoss?

- Assist in design for manufacturing
- Assist and manage ADM lab flow

What goals did you have for your internship experience?

- Gain hands on experience with additive manufacturing systems
- Learn to apply engineering theory in a workplace setting
- Learn what working in a manufacturing setting looks like

What has your impact to Danfoss been during your tenure?

- Support engineering, prototyping, production manufacturing, and continuous improvement initiatives through additive manufacturing and design

Production

Key Metrics

Orders Completed

950+

Parts Manufactured

11,000+

cm³ Printed

1,580,000

Total Equipment

FDM

-9x Prusa XL's
-1x MK4

FDM Industrial

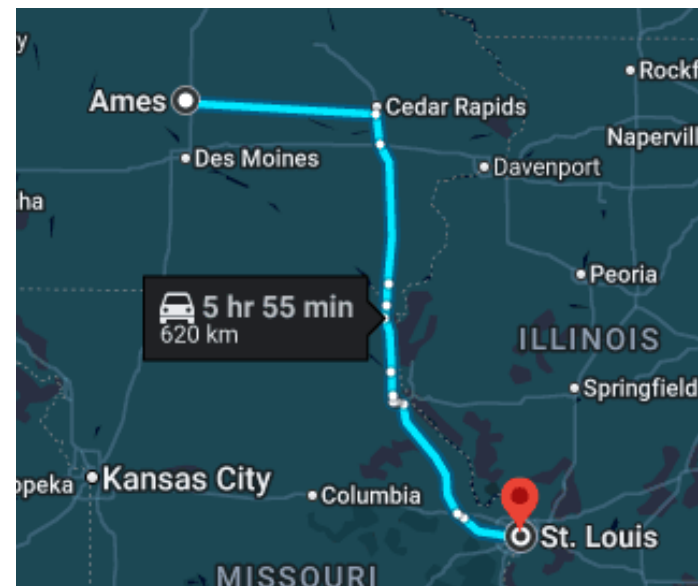
-1x MF X7
-1x MF Metal X

SLA

1x Form 4

SLS

1x Fuse 1



When cm³ printed is converted into filament, it is enough to go from Ames IA to St. Louis MO

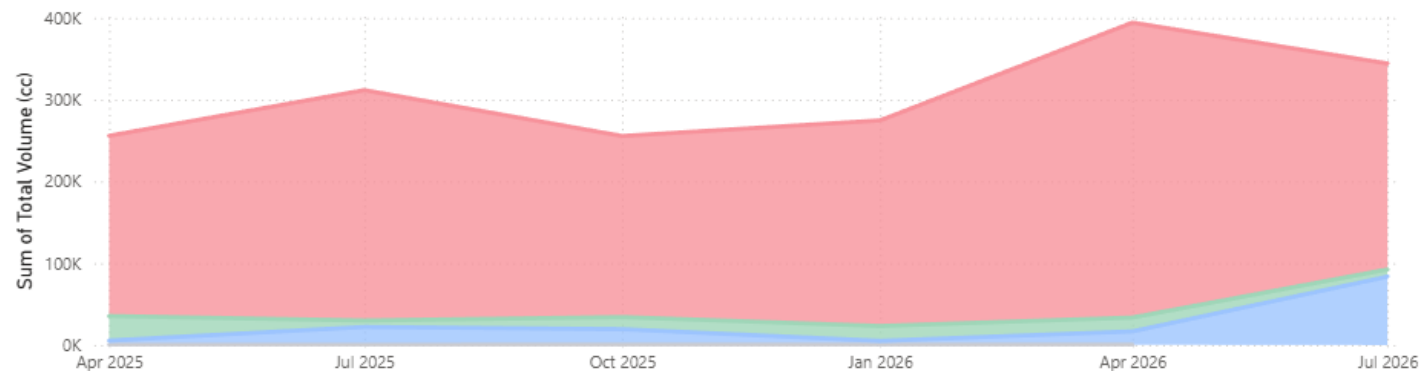
Misc. Metrics

Projects Completed

20+

Materials Utilized

25+



Danfoss

Growth of the Ames ADM Lab

When I Started

- 1 Prusa XL
- Several Prusa MK3s
- Longer turnaround times

Today

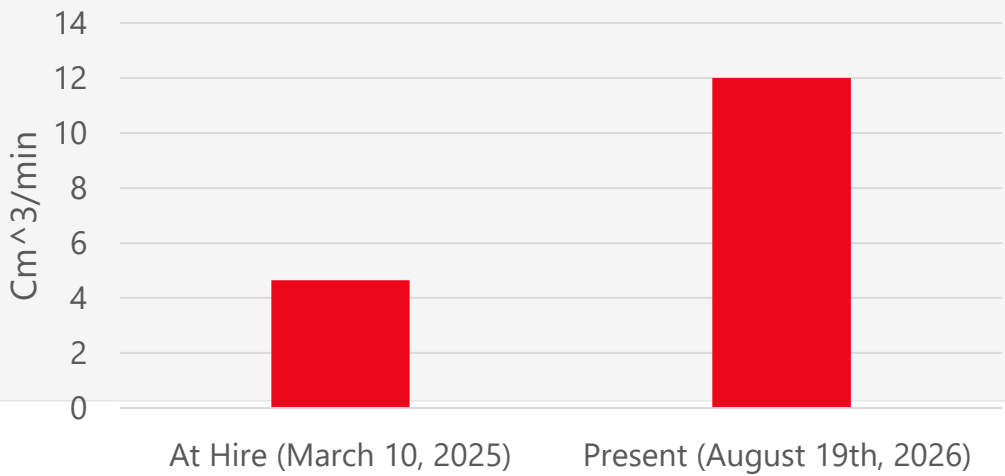
- 9 Prusa XLs
- Reduced lead times
- Increased manufacturing capacity

Contributions

- Production support
- Printer maintenance
- Process improvements
- Machine installations



FDM Volumetric Capacity At Hire vs Present



Project Spotlight

Mixing Ball Redesign

Challenge

A consumable component was being sourced from an external supplier for the Ames paint line.

Solution

- Designed in-house replacement
- Performed material and machine selection
- Conducted testing and validation to find viable options

Impact

- ✓ Brought production in-house
- ✓ Reduced supplier dependence
- ✓ Reduced failure rate

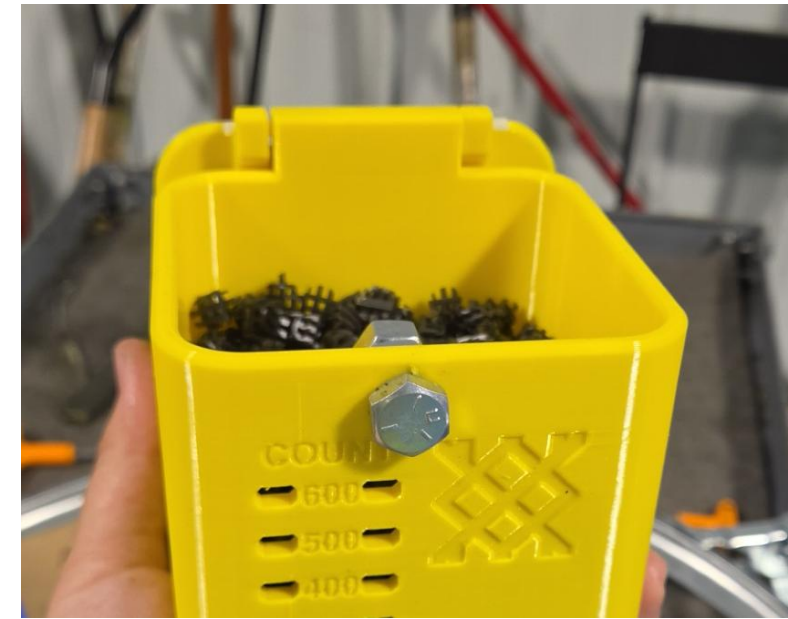
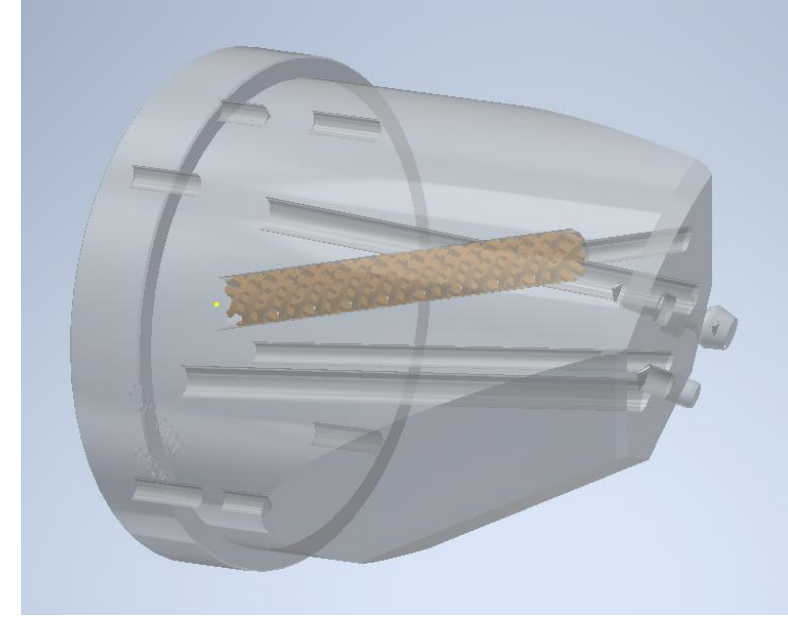
Supplier Cost

~\$10,000+



In House Cost

~\$150



Project(s) Spotlight

Dynamic Cutaways & Product Demonstration

Projects

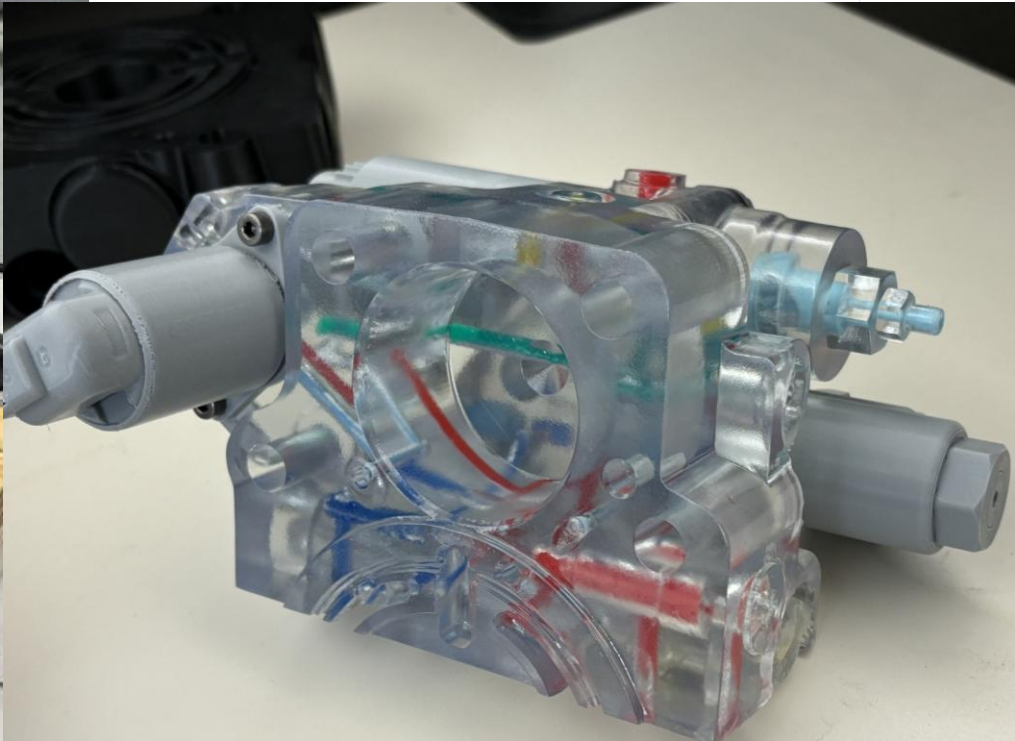
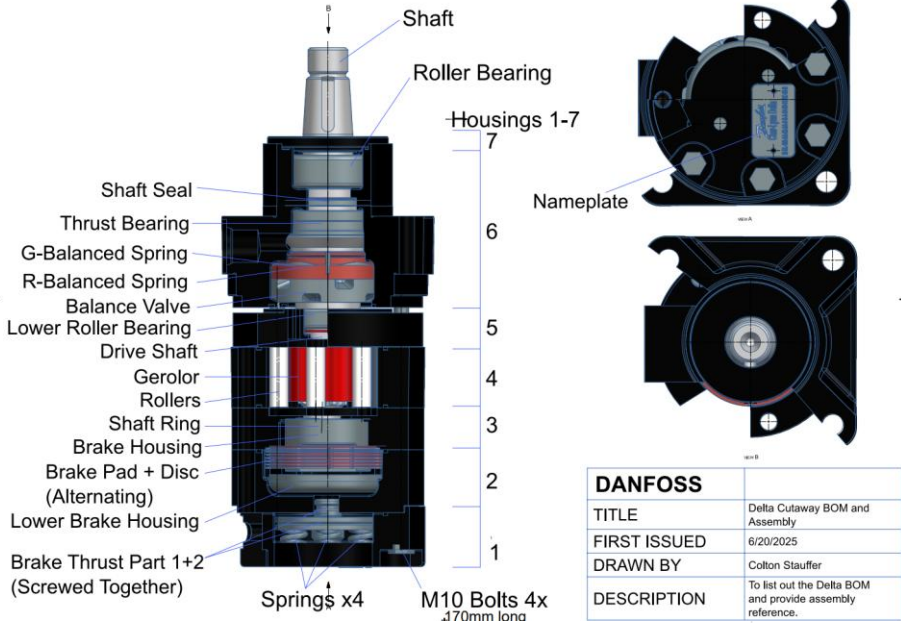
- Delta Cutaway
- GR3 Dynamic Cutaway
- MP1MV Display Model
- DDP Cutaway
- Ames Product Showcase

Contributions

- CAD modifications
- DFAM implementation
- Printing and assembly

Impact

- Improved product visualization
- Supported customer demonstrations
- Enabled technical discussions
- Assisted sales and marketing efforts



Project Spotlight

Equipment Shield

Objective

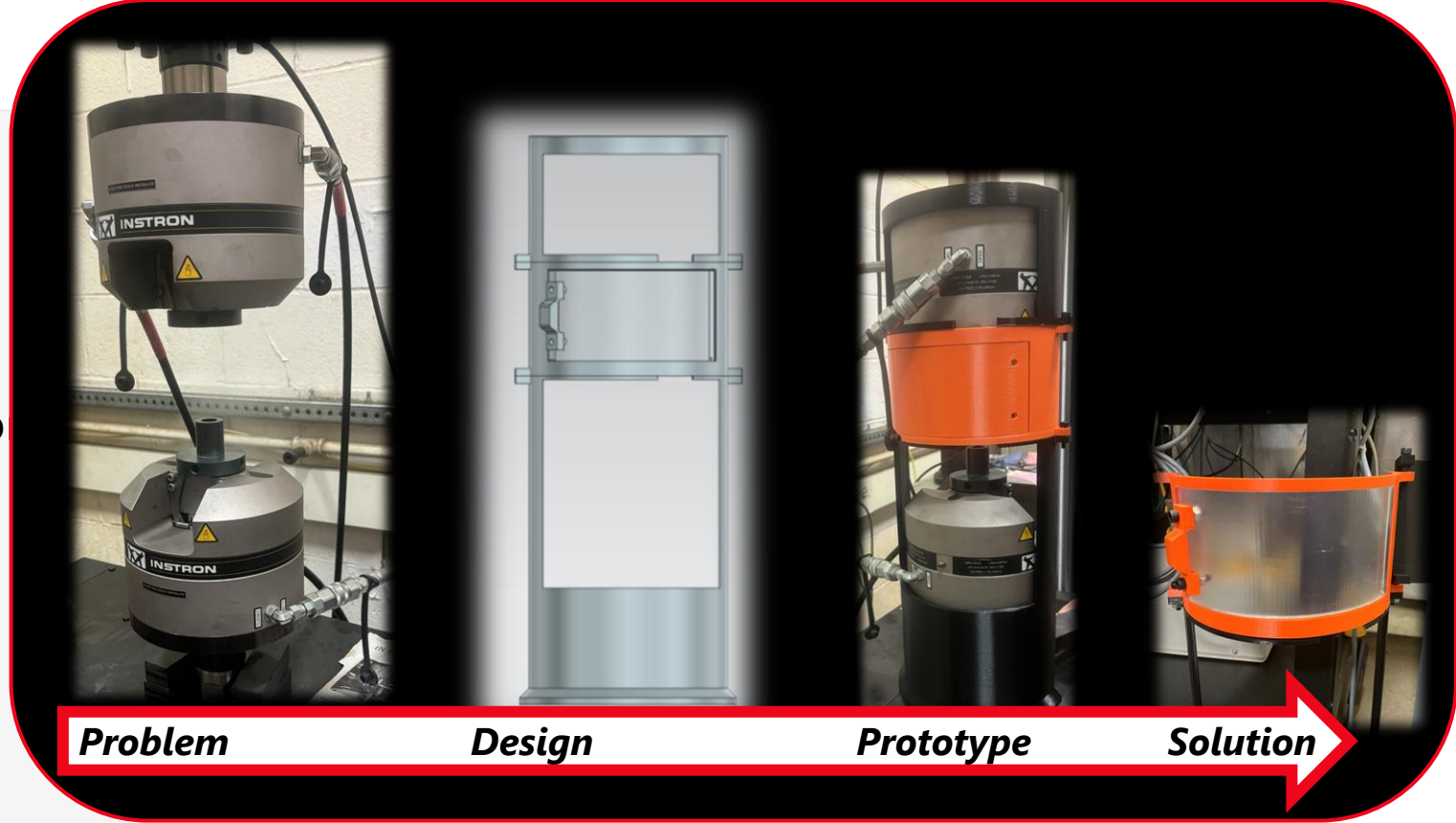
Develop a safer method for equipment operation

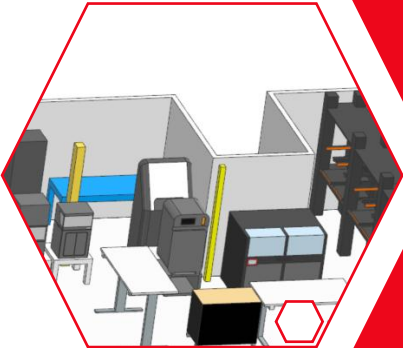
Contributions

- DFAM design
- Material selection
- Safety considerations
- Functional testing

Impact

Enhanced equipment safety while demonstrating additive manufacturing's ability to solve facility challenges.





DDP Painting



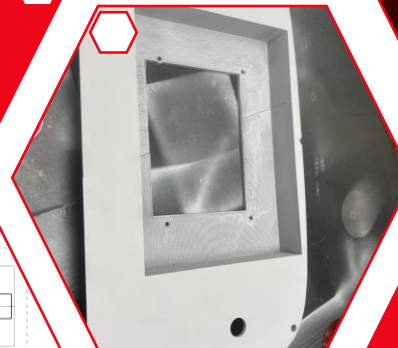
ADC Sweeper
Dashboard

Bullet
Continuous
Improvements

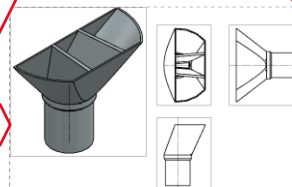
Titanium
Orifice Design



Hot Air
Exhaust
System



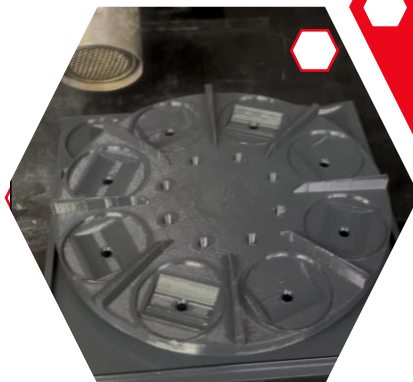
ADM Lab
Scale Model



PCTG Hose
mount
Production



Puck Sample
Drying
Carousel



Ames Lab
Video Tour



Danfoss

Development & Integration

What key ideas or insights has this internship experience revealed?

- Revealed the business impact additive manufacturing can have
- Showcased how engineering decisions tie into sales, manufacturing, and development

What impact has Danfoss had on you?

- Danfoss has had an incredible impact in shaping my professional growth with hands-on experience in a manufacturing environments
- Developed my technical and soft skills, with a strong focus on additive manufacturing

How will this experience shape your future career development?

- This Experience has motivated my progress towards a B.S. in Mechanical Engineering

Advice for future ADM interns:

- Collaborate with other interns
- Ask for feedback and projects from the additive engineers
- Take advantage of an experienced technician being present in the lab

What's Next?

- Continue working part time for two more semesters
- Look for full time work after May 2027, or start a masters program

Contact Information

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Q&A