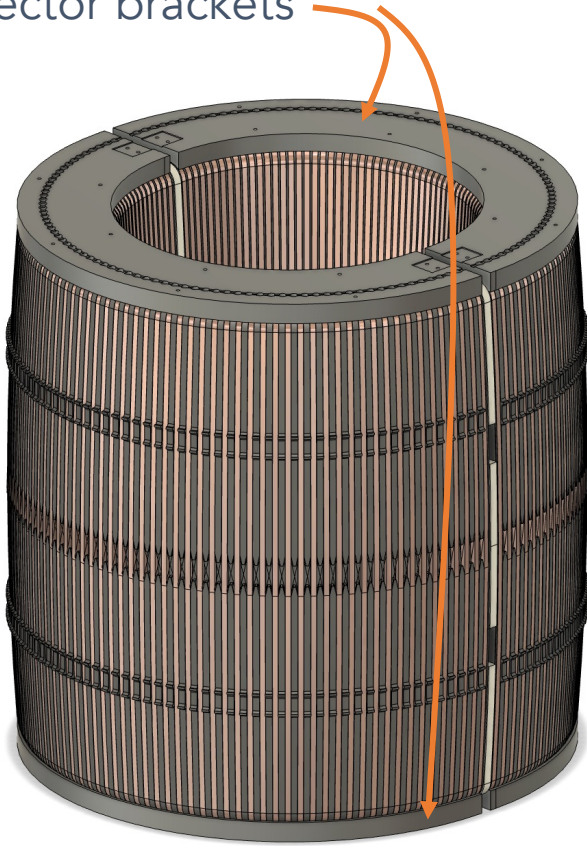


Connector Bracket and Faux Magnet Status

Nicholas Rapidis
August 2024

What are they?

Connector brackets



Attach to magnet, interface with: sheath plates, legs, lifting structure, inductor supports

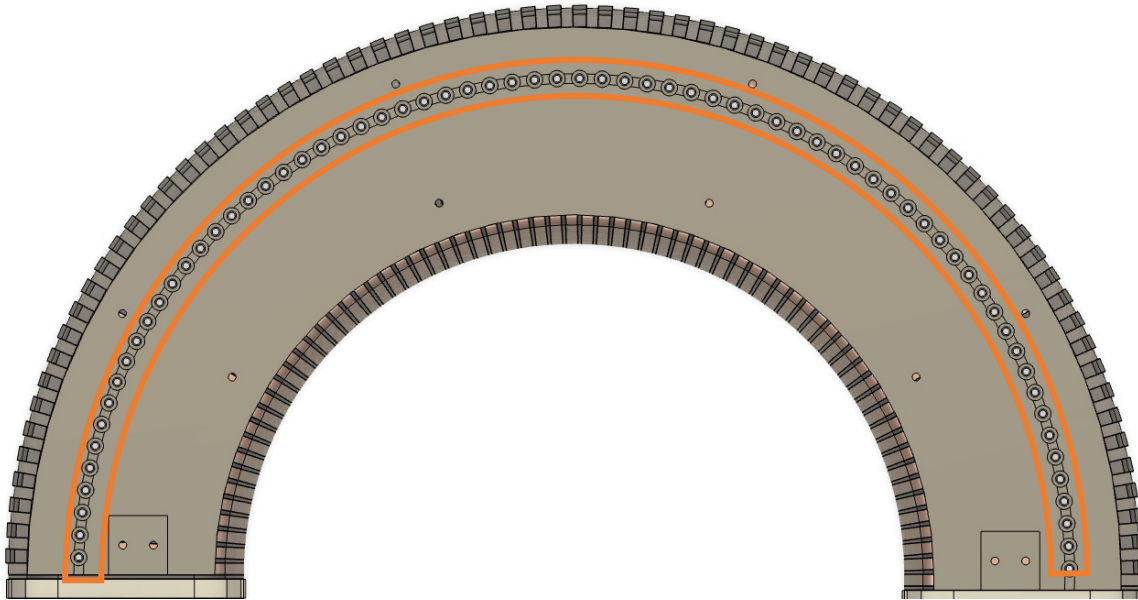
Faux Magnet



Used in place of real magnet for certain tests (e.g. calibration, thermal)

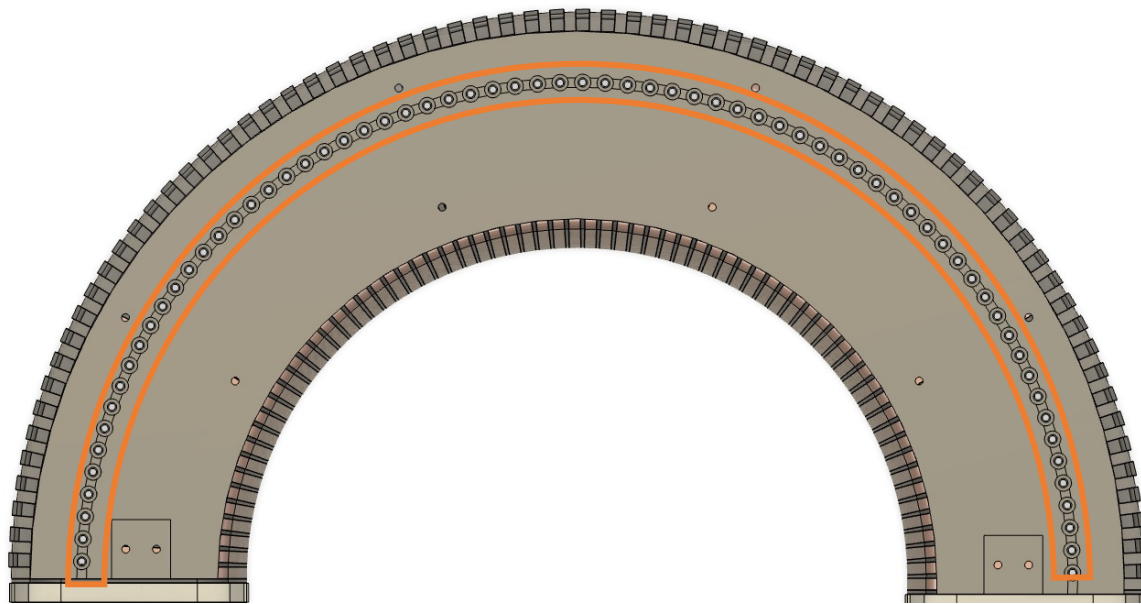
Connector bracket open questions

Magnet CADs have assumed perfectly spaced magnet wedges (no misalignments due to gluing) → hole position would be predictable. How much hole position variation will we have?



Connector bracket open questions

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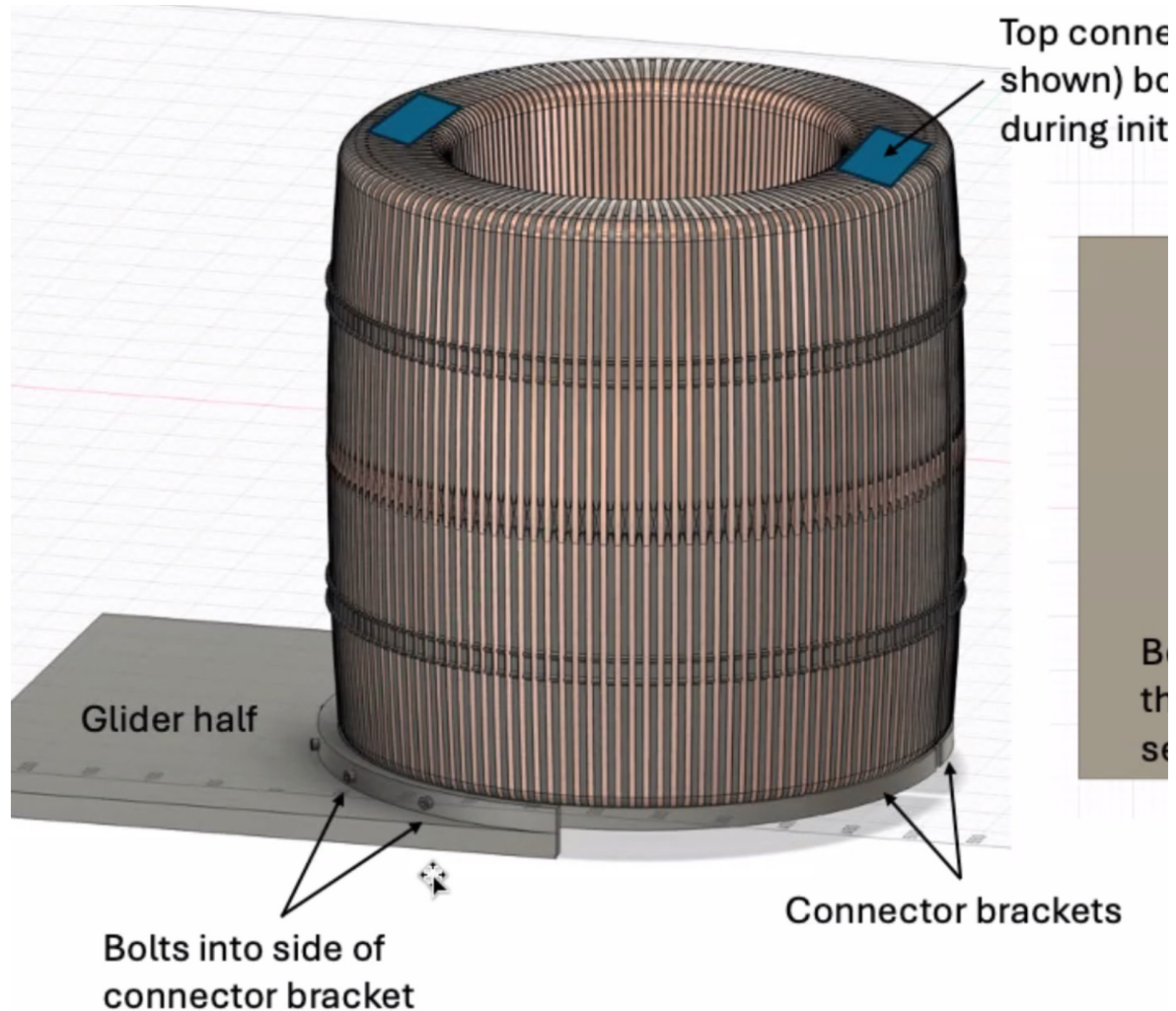


Can we complete the design of the bracket that will fit on both magnet halves?

Jessica's visit implies possibly yes, with "loose" design

What about the vacuum impregnation layer? How much will that change things? Is it a uniform layer? Will the two halves w/ connector bracket look similar enough for leg attachment, etc? Will they be flat?

Connector bracket open questions



Are we set on using *gliders* for assembly?

Gliders require thicker bottom connector brackets. Are we ok with losing some sensitivity for those?

Can we fit legs + rod attachment nuts with a thicker bracket?

Connector bracket timeline

Xometry still has not sent quote for AI 1100...

BUT with AI 7075

North America ⓘ <input type="checkbox"/> USA only		Overseas ⓘ			
<input type="radio"/>	Tuesday, Aug 13 4 production days (USA or Mexico)	\$5,418.44 Fastest	<input type="radio"/>	Monday, Aug 19 5 production days	\$1,585.64 Fastest
<input type="radio"/>	Thursday, Aug 15 6 production days (USA or Mexico)	\$5,022.52 Standard	<input type="radio"/>	Thursday, Aug 22 8 production days	\$1,250.60 Standard
<input checked="" type="radio"/>	Tuesday, Aug 20 9 production days (USA or Mexico)	\$4,666.04 Cost-effective	<input type="radio"/>	Wednesday, Aug 28 12 production days	\$1,076.36 Cost-effective

Faux Magnet

Prereq for ordering: Bracket design must be completed so that faux bracket has same footprint

Questions:

What do we want calibration wire attachments to look like in this?



Faux Magnet

Wedges

Expedite Made in USA 🚚 5 business days	\$245.80 ea. \$1,966.40
Standard Made in USA 🚚 8 business days	\$136.34 ea. \$1,090.72
Economy Made in USA 🚚 13 business days	\$109.52 ea. \$876.16
Economy Made Internationally 🚚 11 business days	\$64.51 ea. \$516.08

Brackets

Expedite Made in USA 🚚 5 business days	\$397.41 ea. \$1,589.64
Standard Made in USA 🚚 8 business days	\$221.09 ea. \$884.36
Economy Made in USA 🚚 13 business days	\$177.88 ea. \$711.52
Economy Made Internationally 🚚 11 business days	\$109.97 ea. \$439.88

Note: this is AI 6061

Faux Magnet Timeline

Once bracket design is finalized and approved:

Economy | Made in USA

\$109.52 ea.

 13 business days

\$876.16

Economy | Made Internationally

\$64.51 ea.

 11 business days

\$516.08

Finalization of faux magnet: <1 week

Manufacturing + delivery: <3 weeks

Total: 1 month max, realistically ~2-3 weeks