

# **BSC Overview - One Possible Method of assembly for the Advanced LIGO Controls Prototype ETM Quadruple Pendulum Suspension**

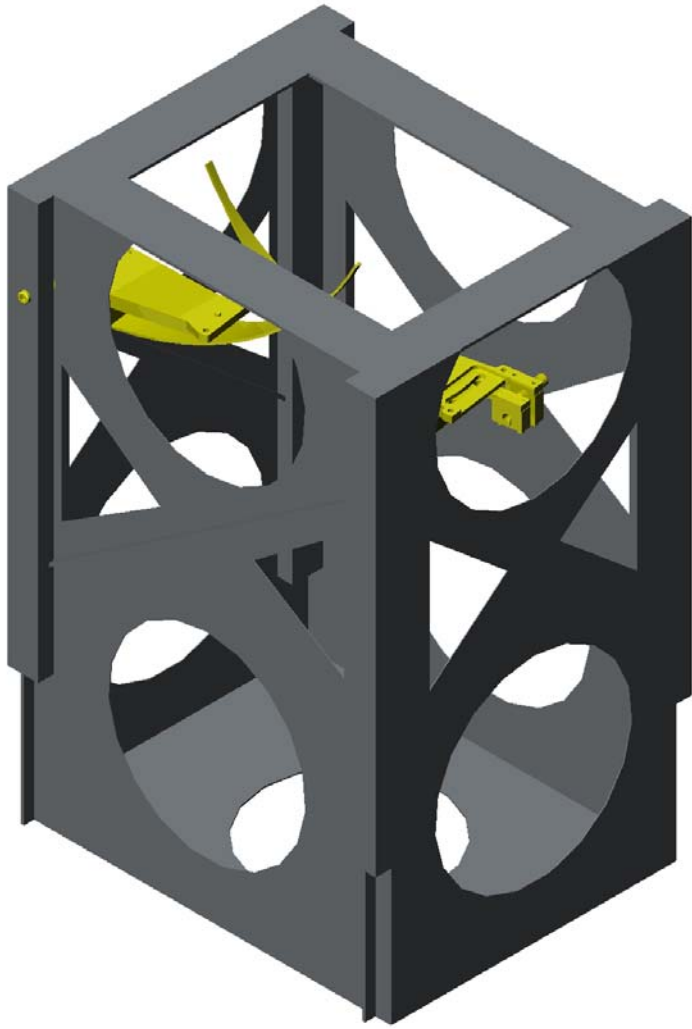
LSC Meeting, Hannover      August 19<sup>th</sup> 2003

CALUM I. TORRIE, California Institute of Technology and

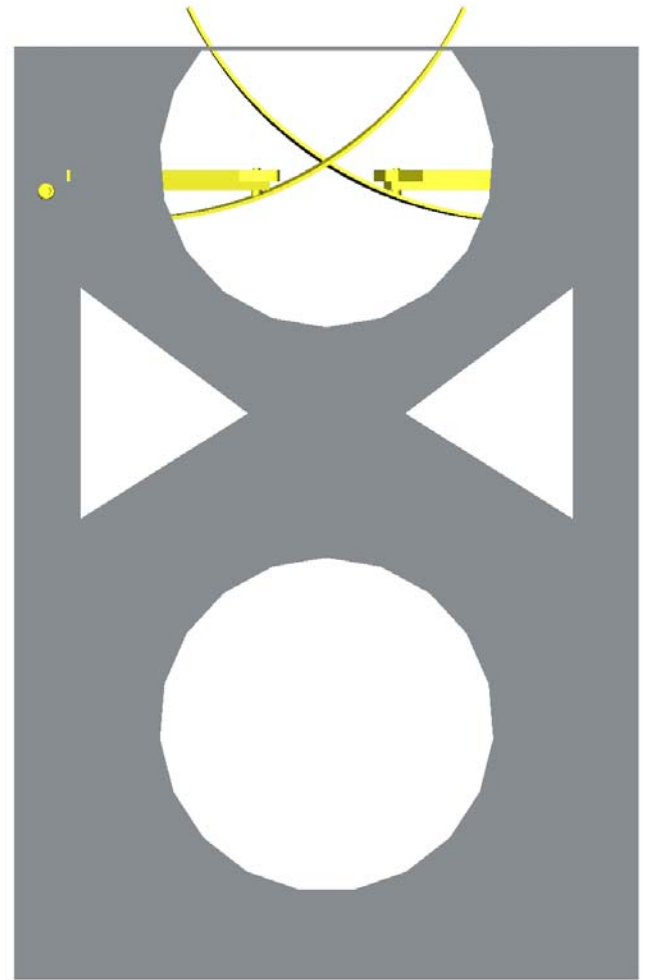
MICHAEL PERREUR-LLOYD, University of Glasgow

For the Advanced LIGO Suspension Team



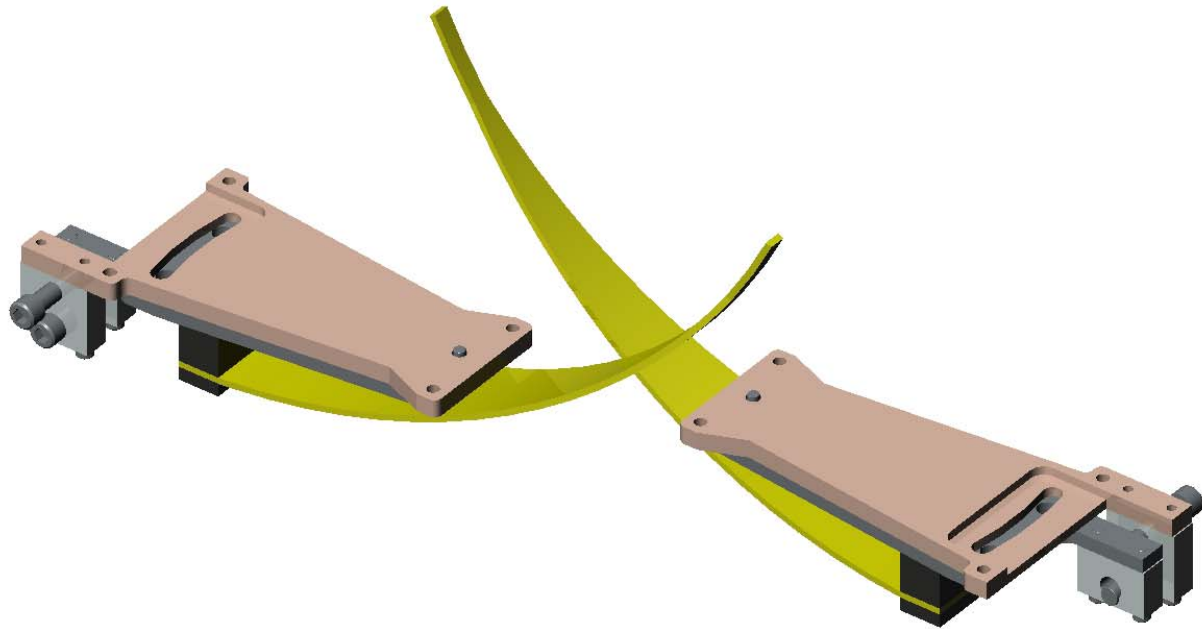


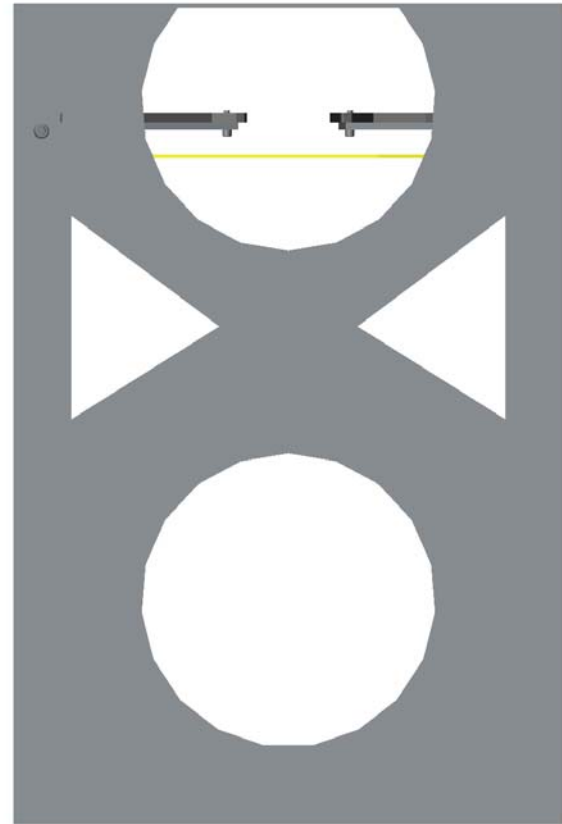
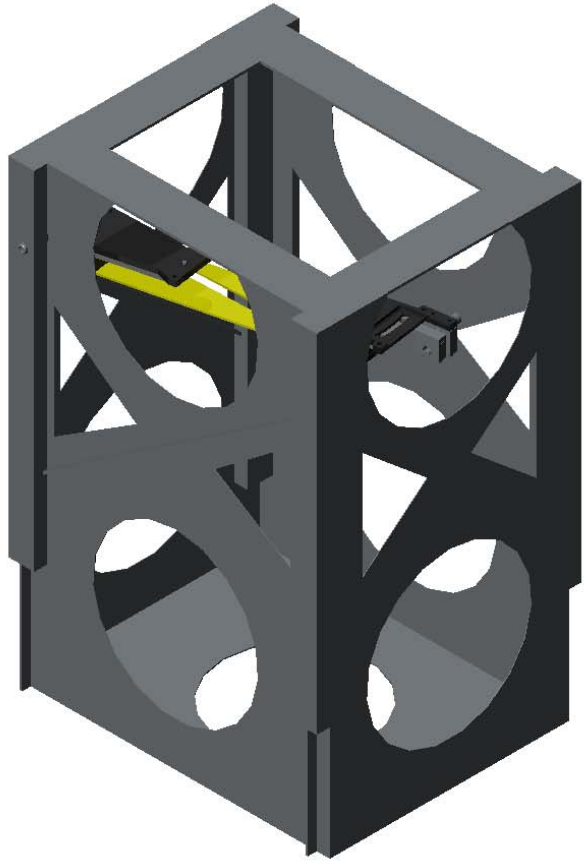
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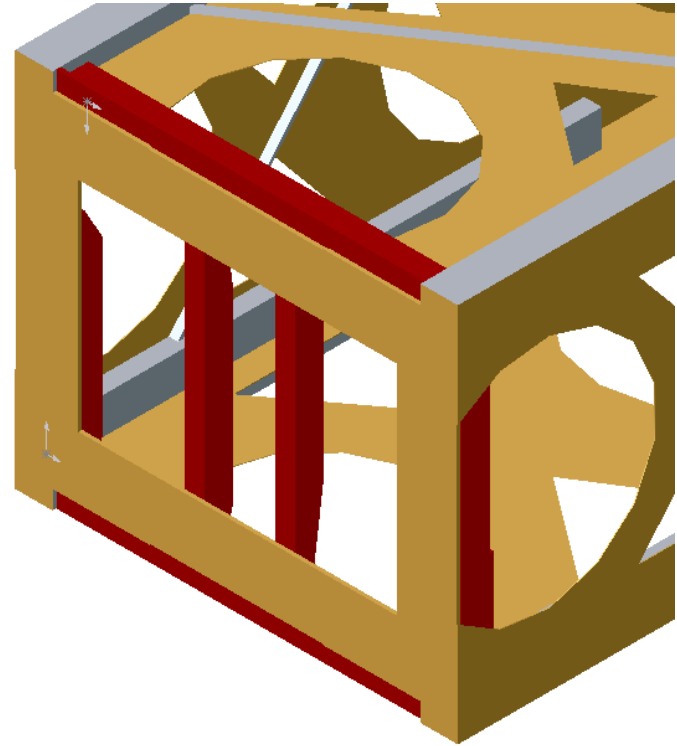
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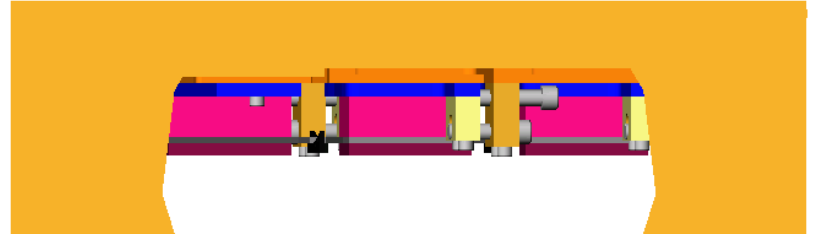
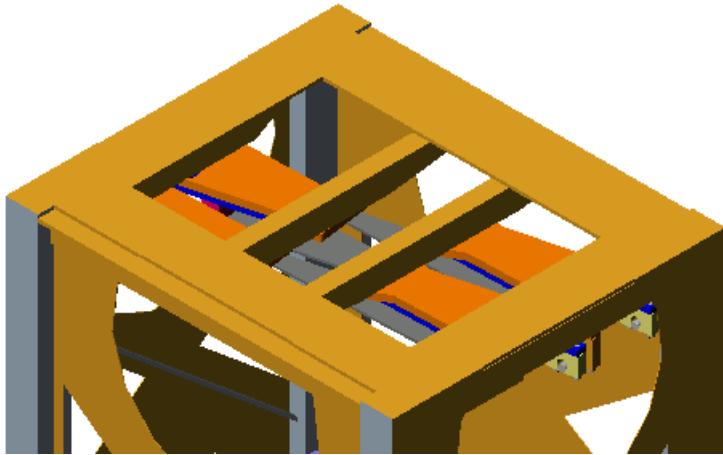




# ACTUAL INTERFACE WITH THE CANTILEVER BLADES



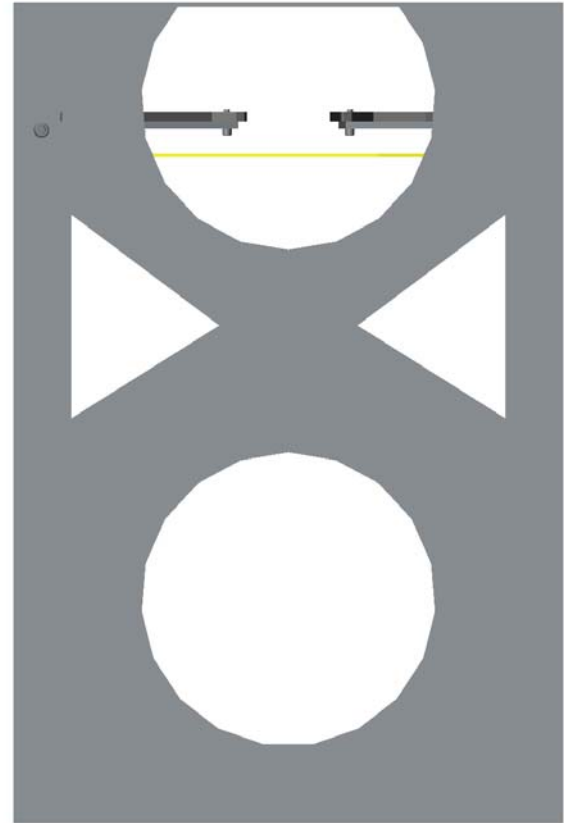
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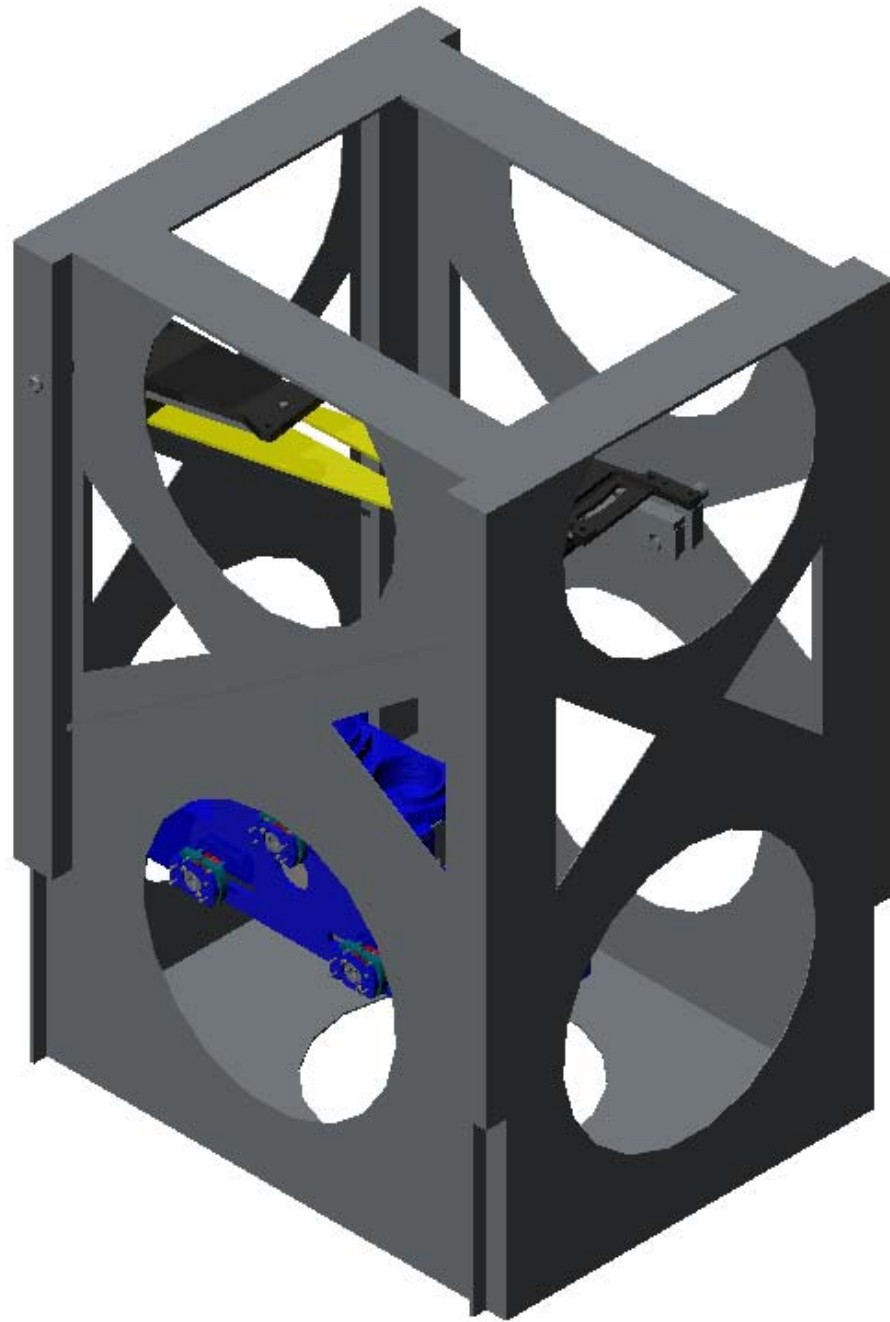


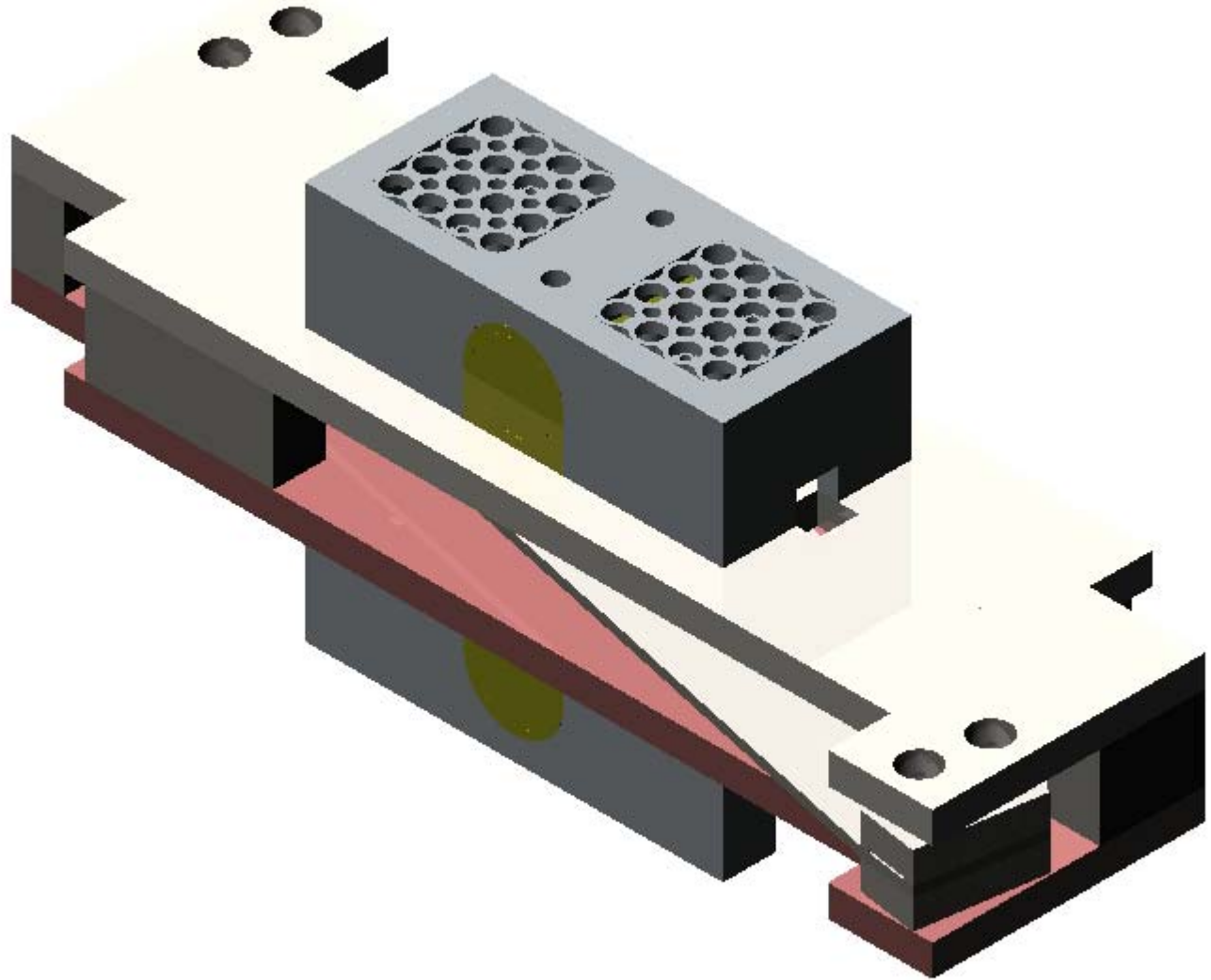
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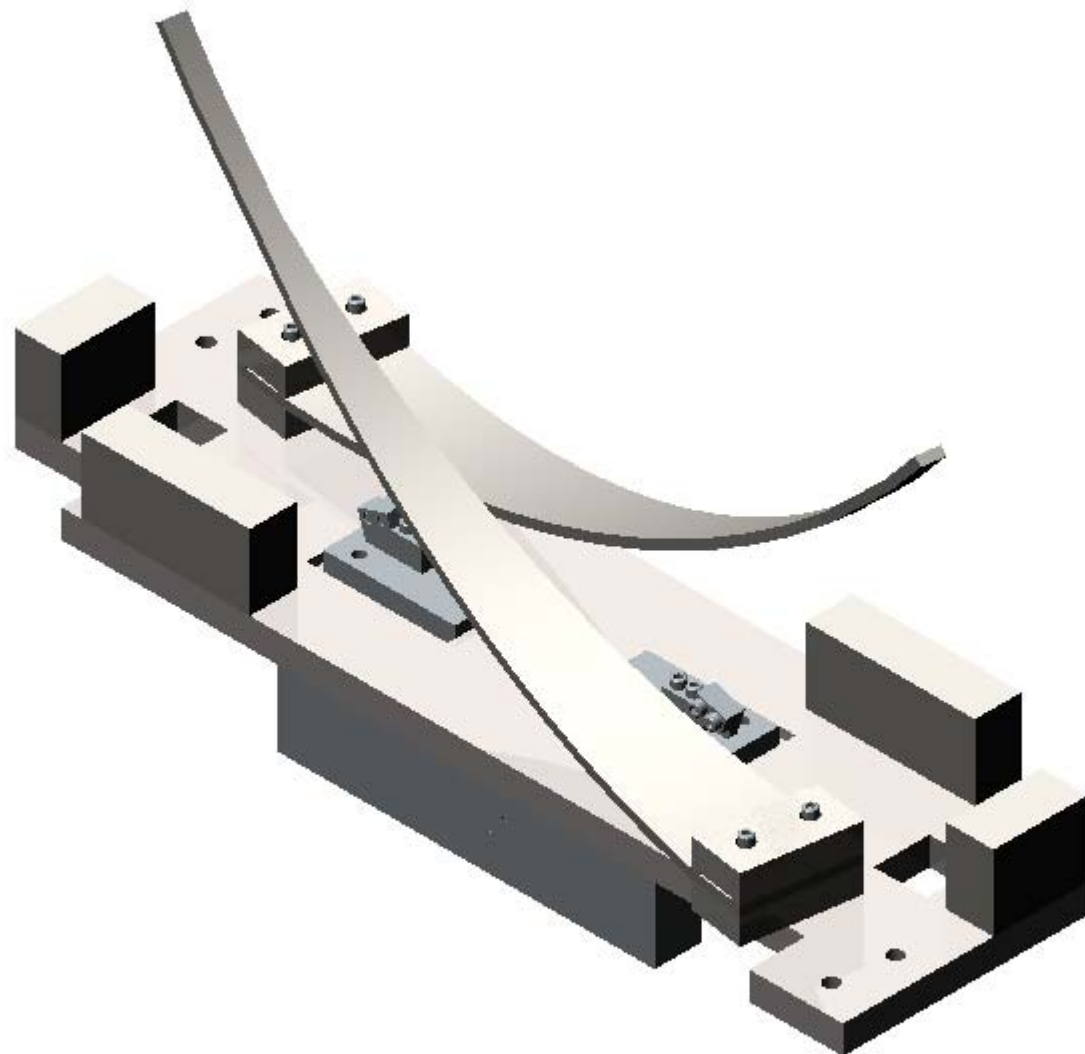


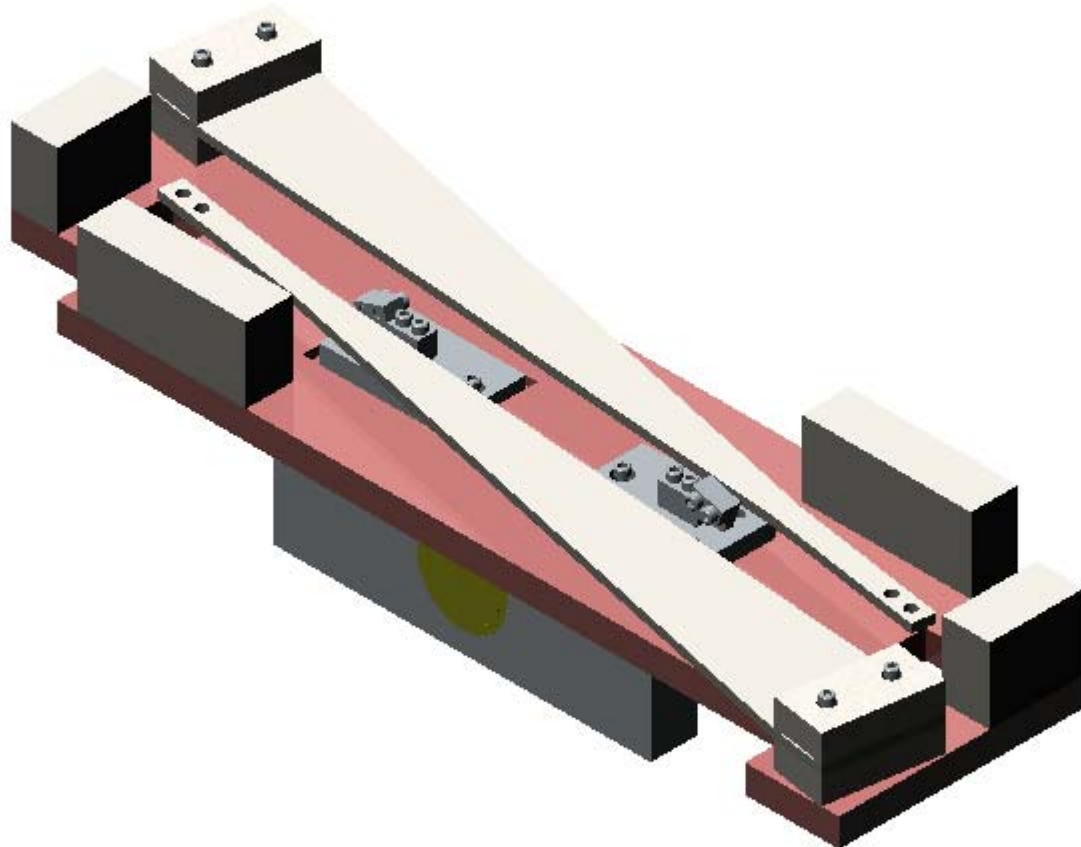


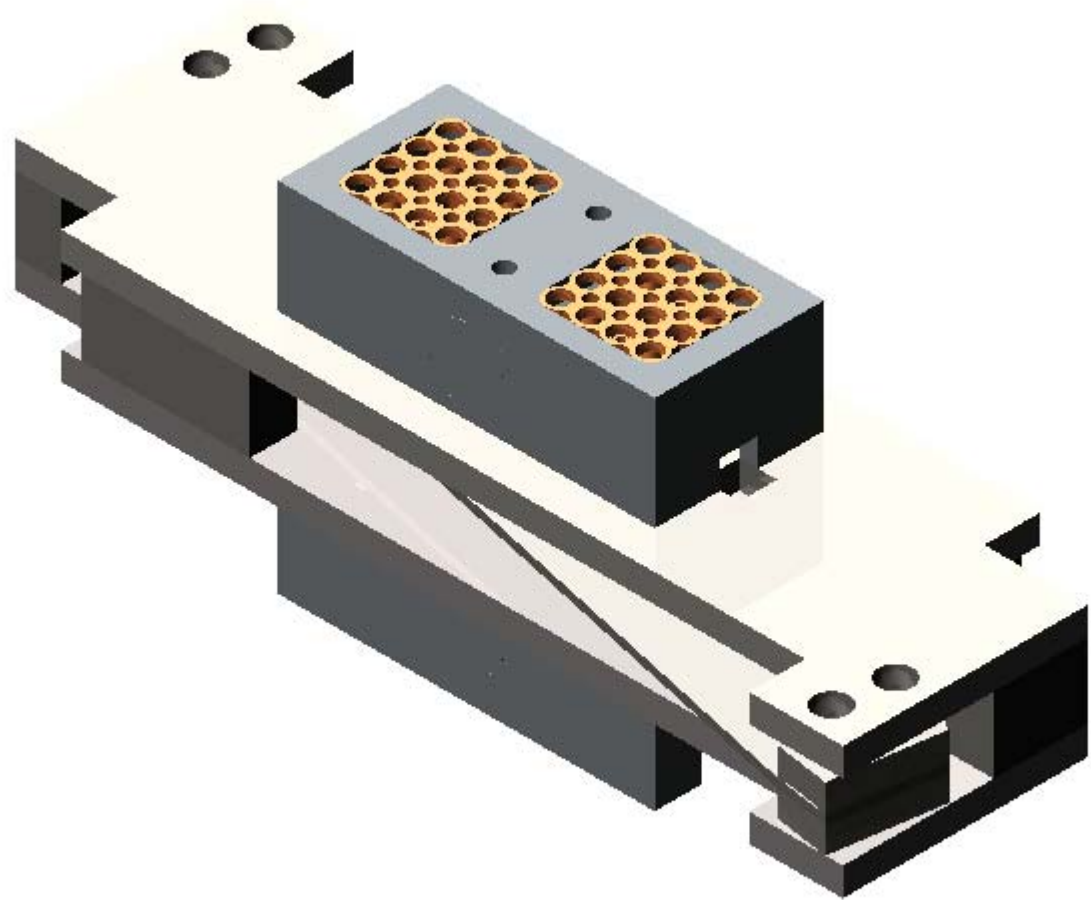


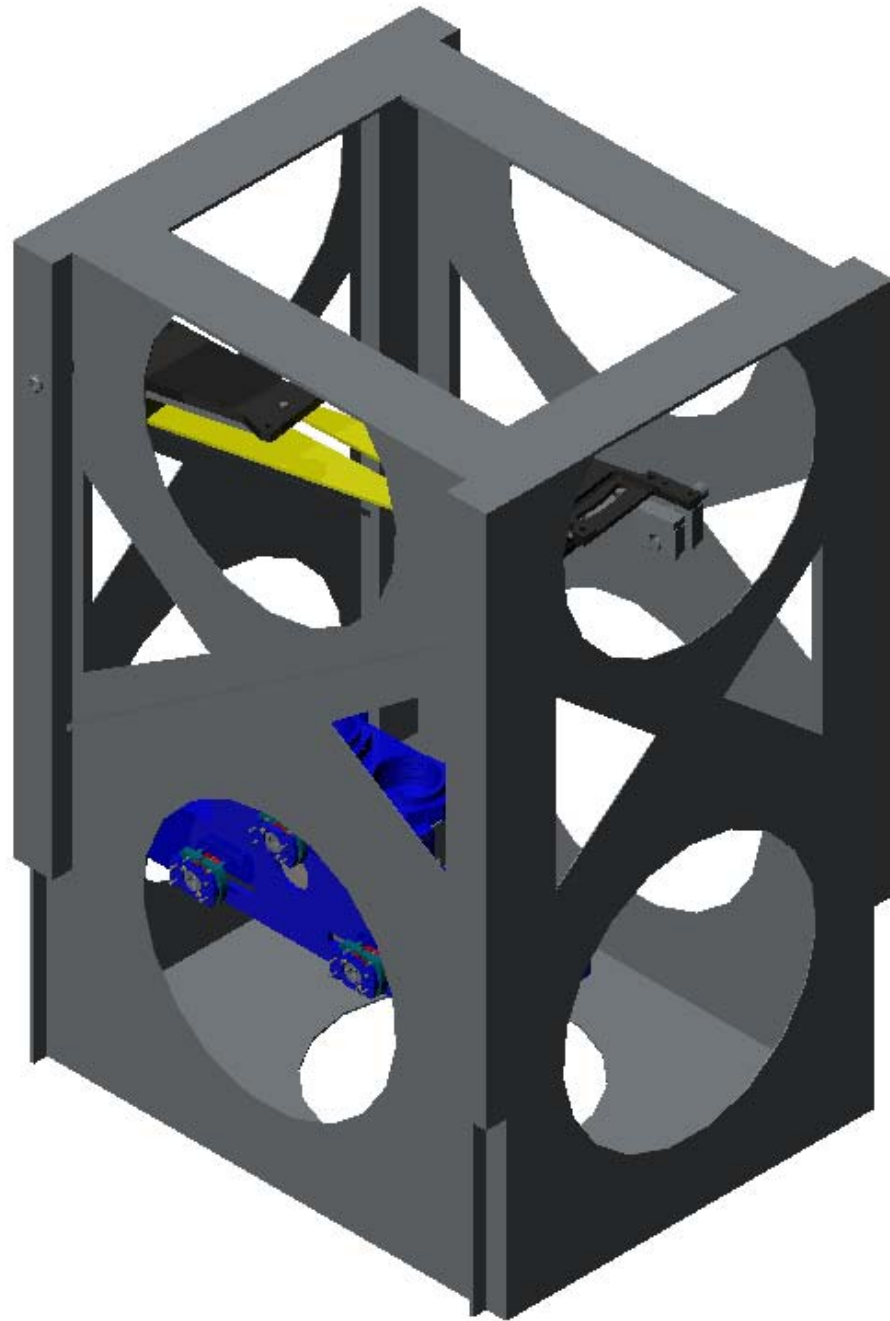


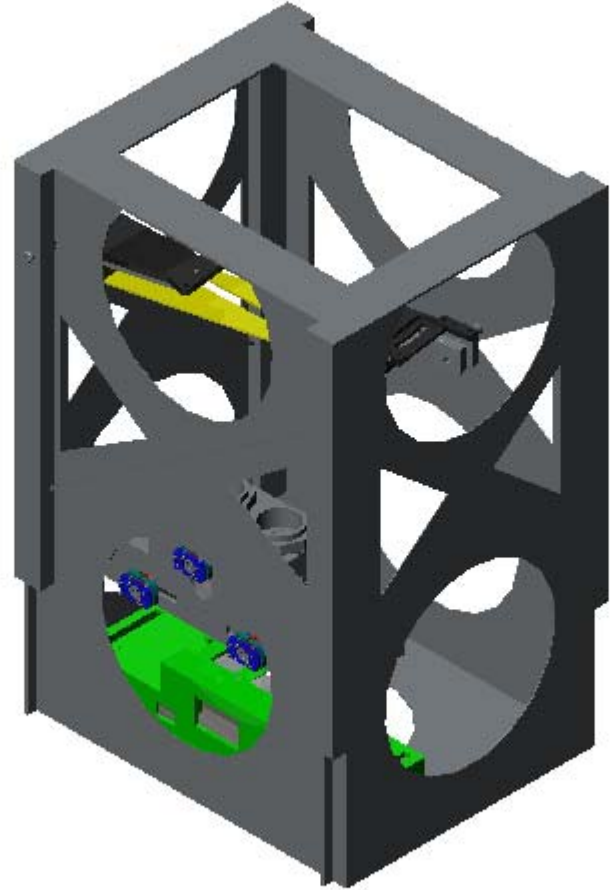
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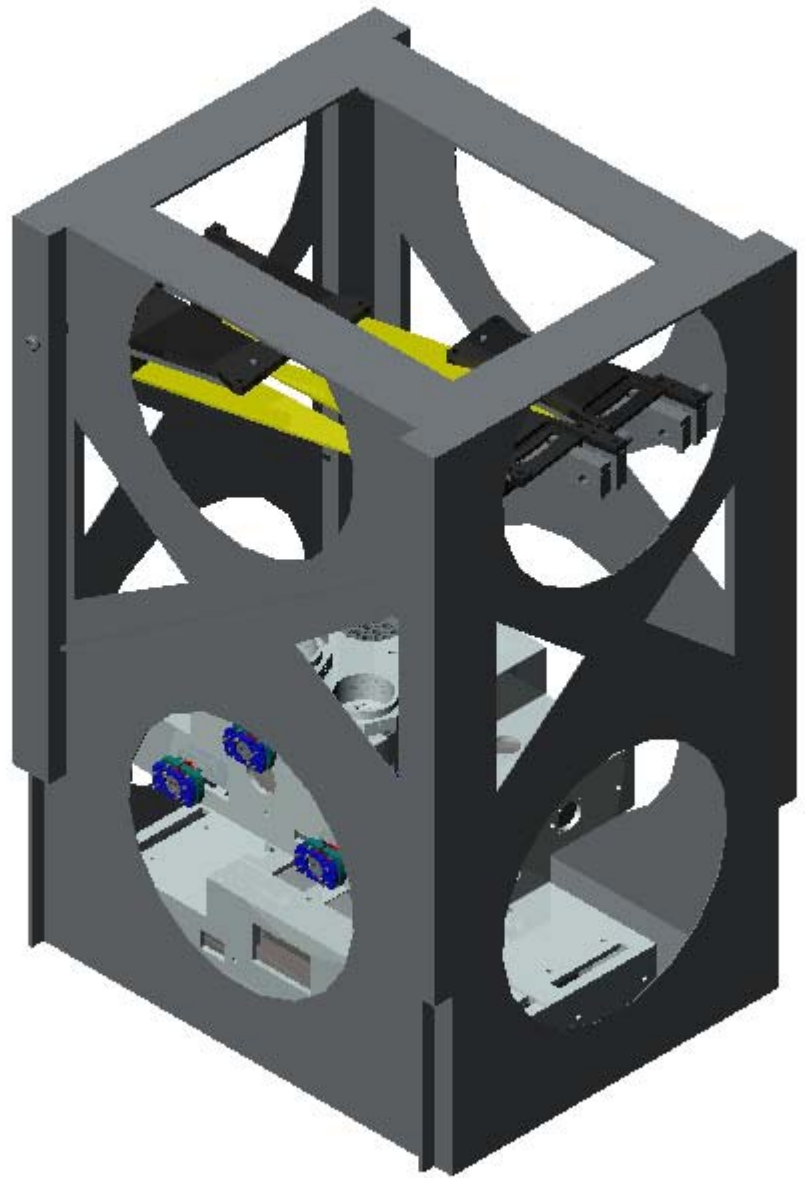


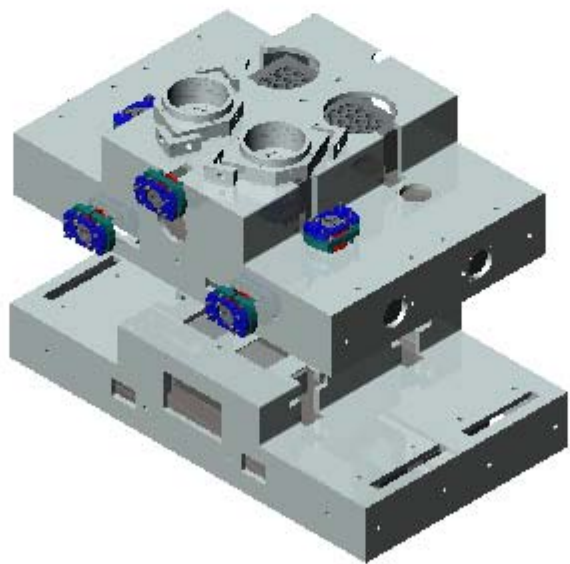
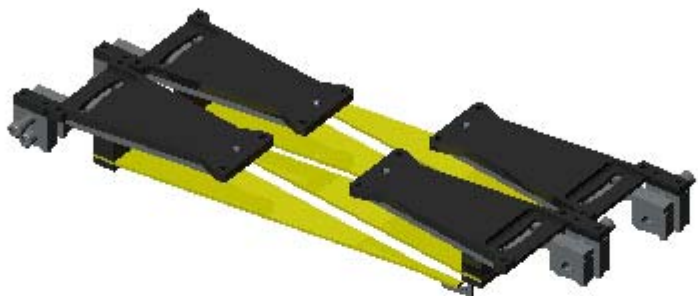


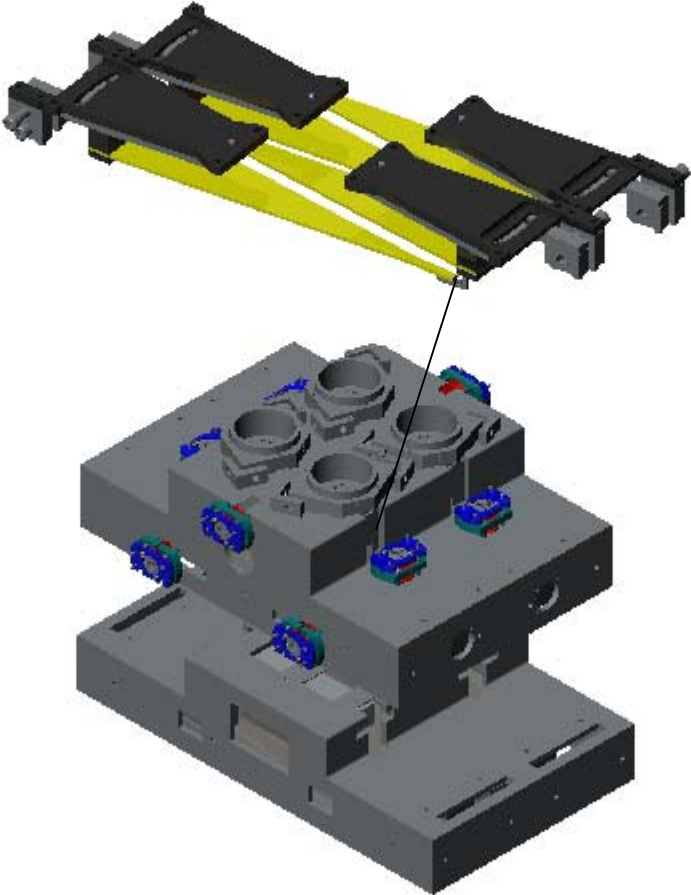


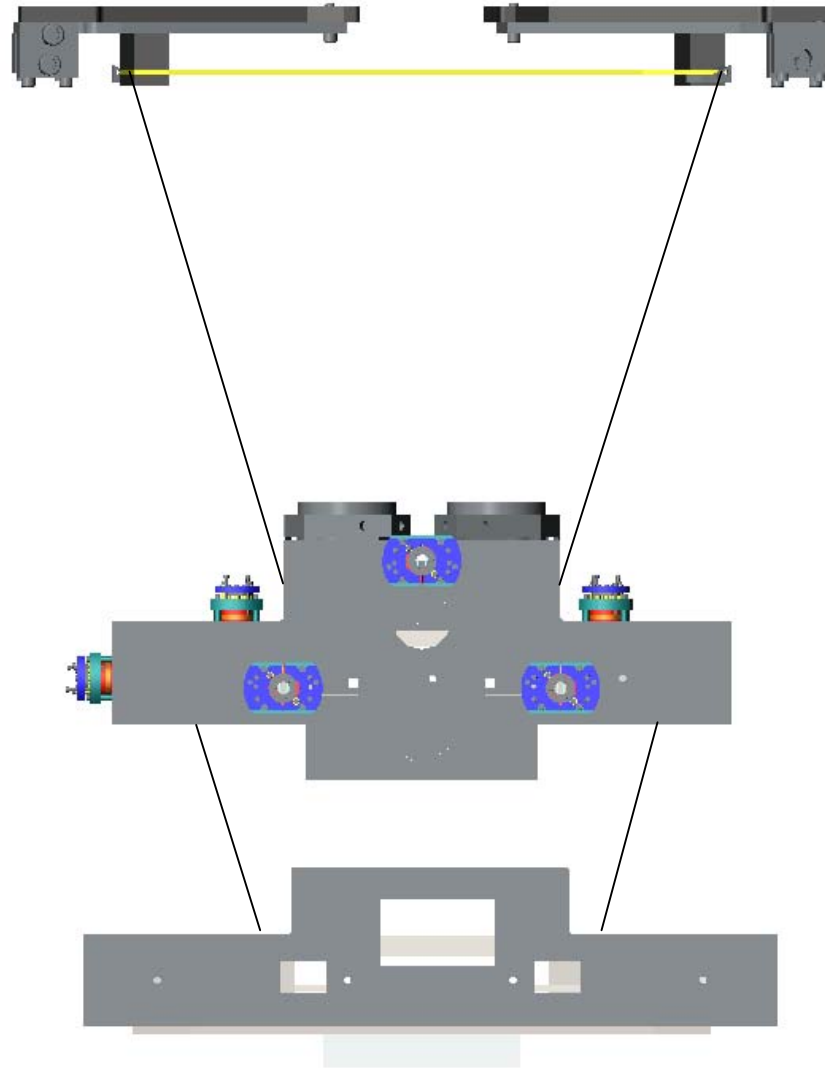


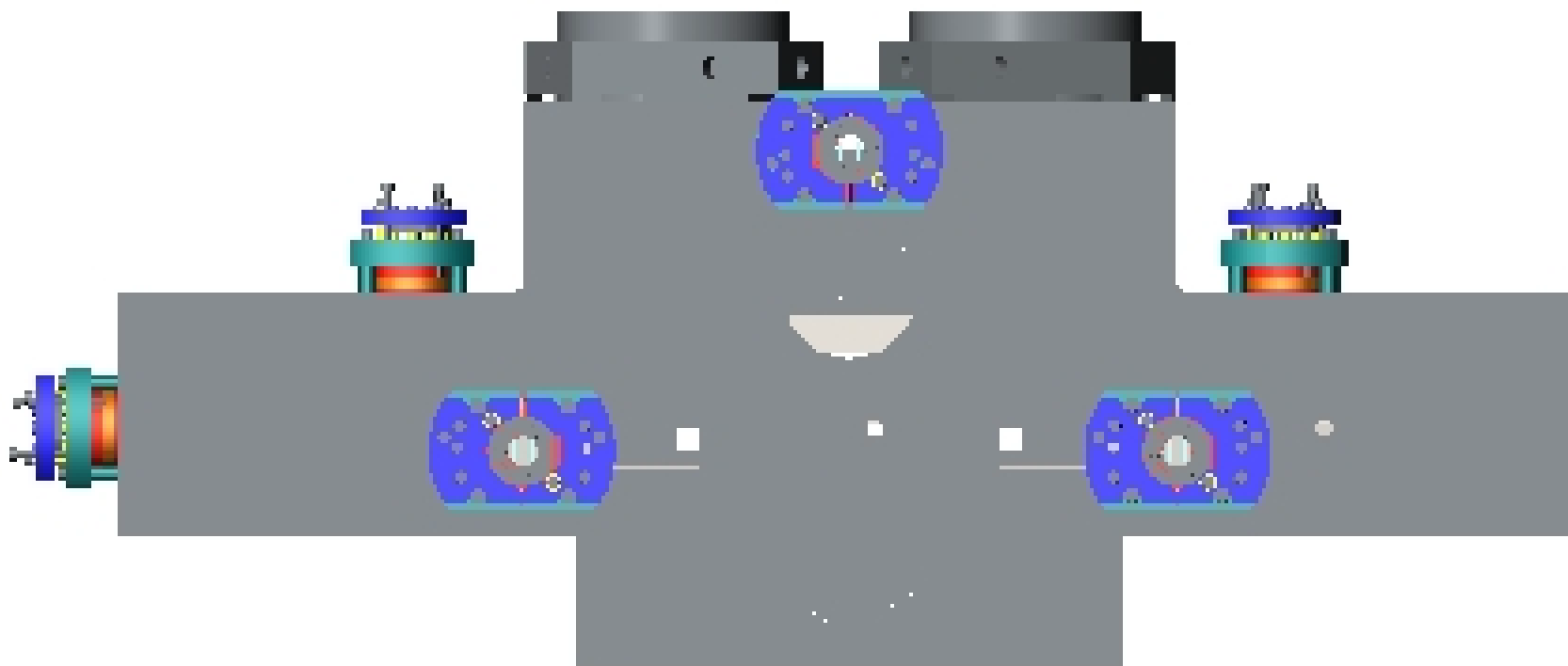


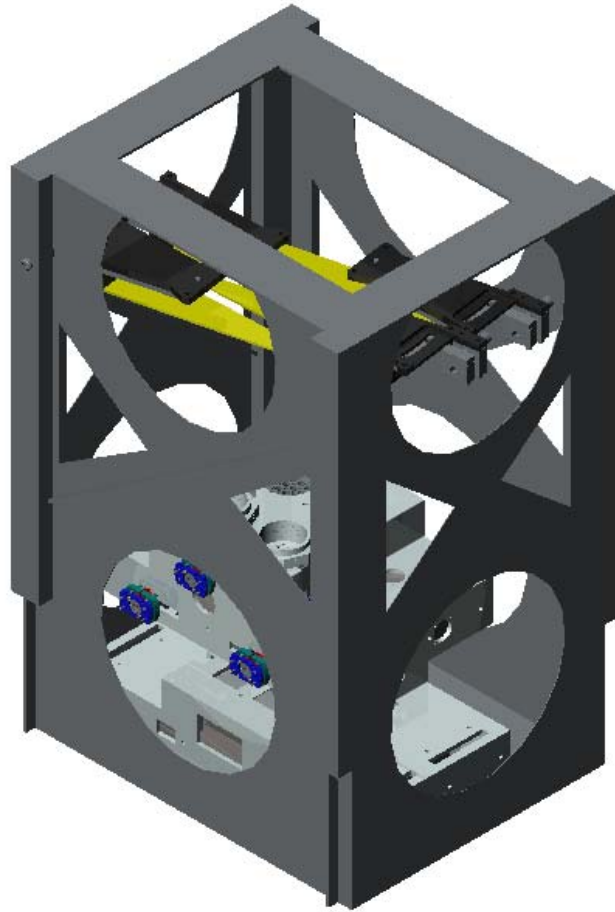


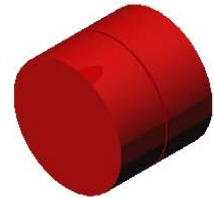
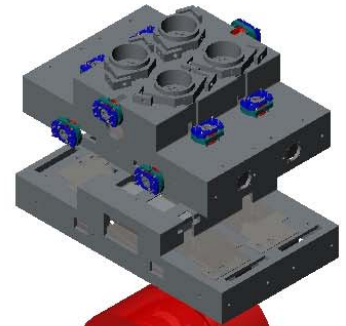
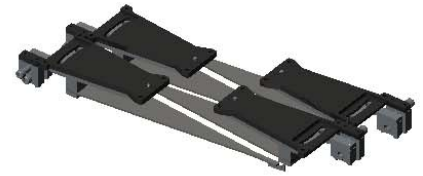
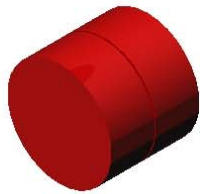
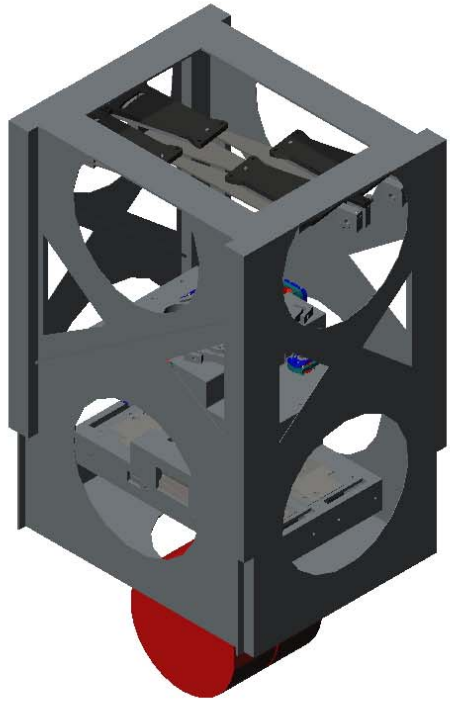


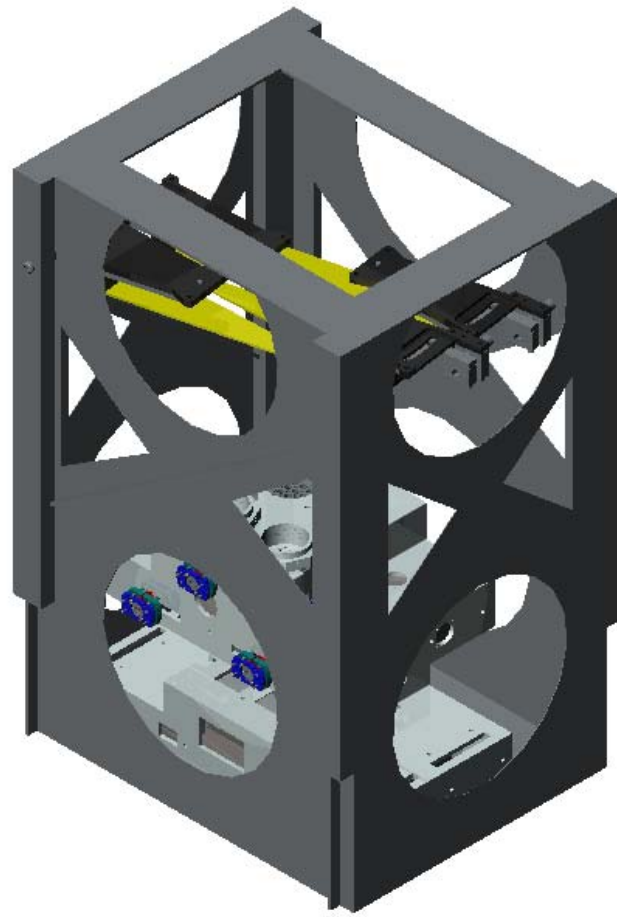




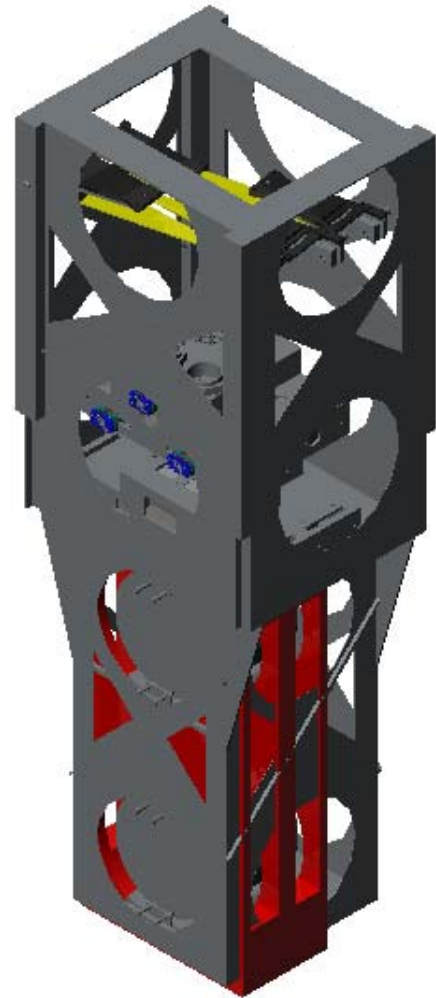




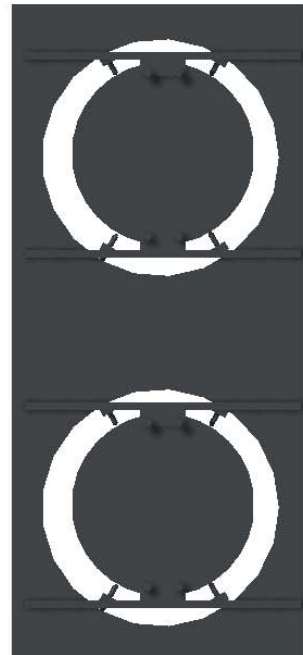
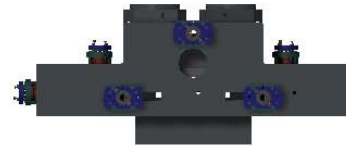
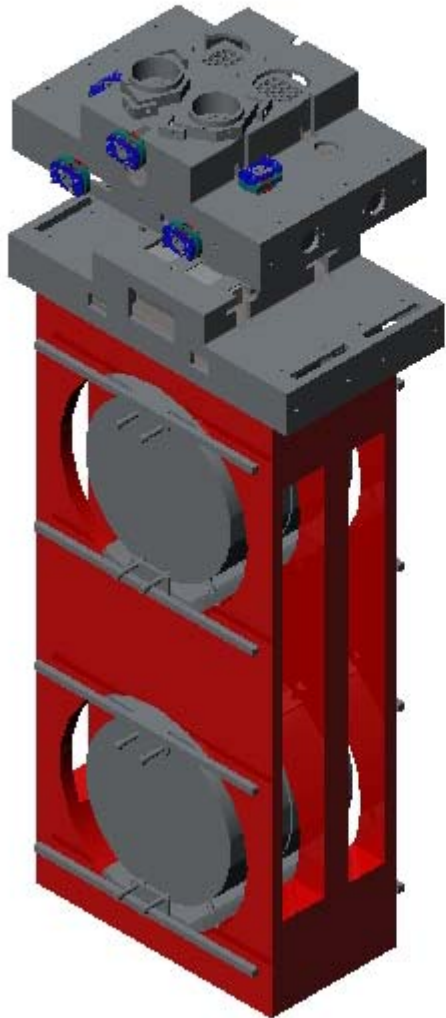
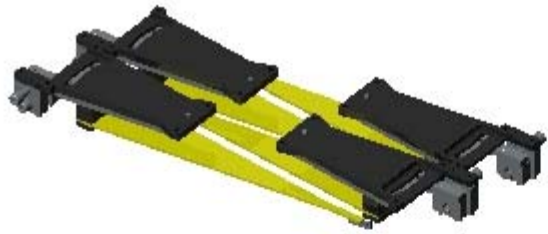


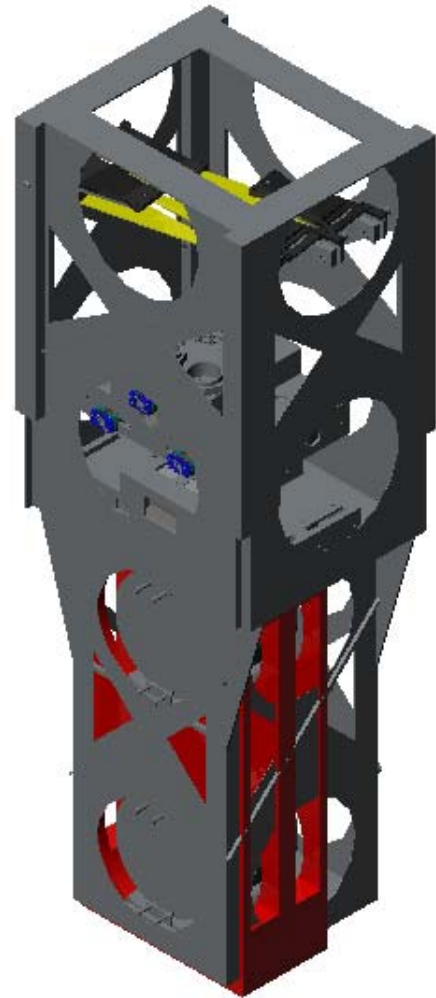




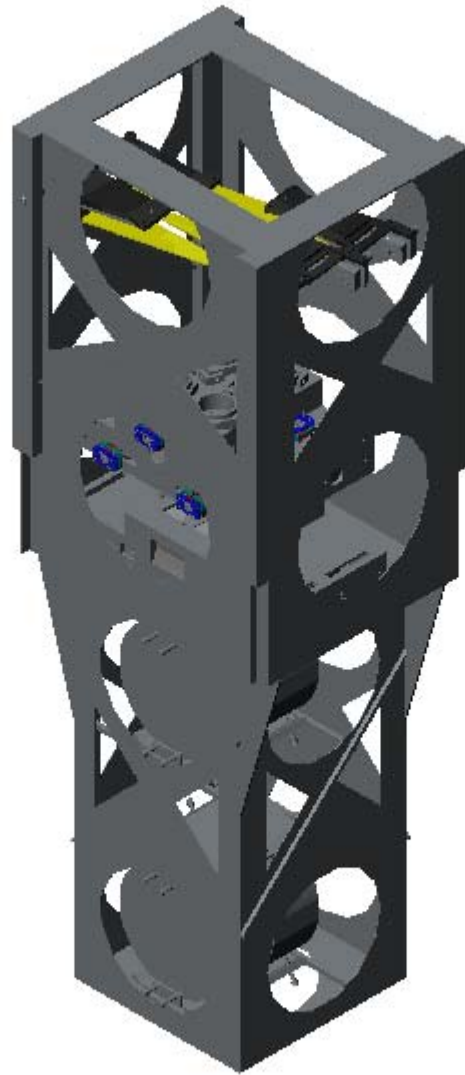


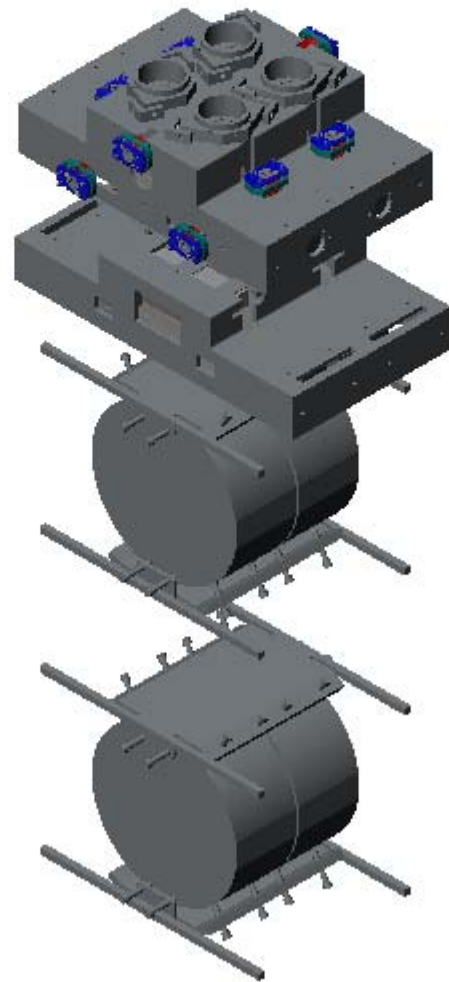
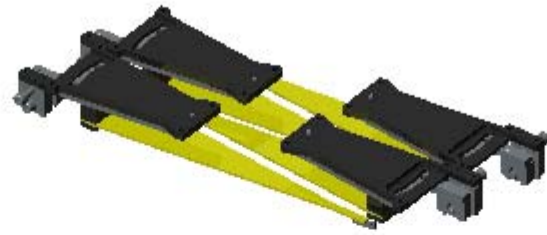
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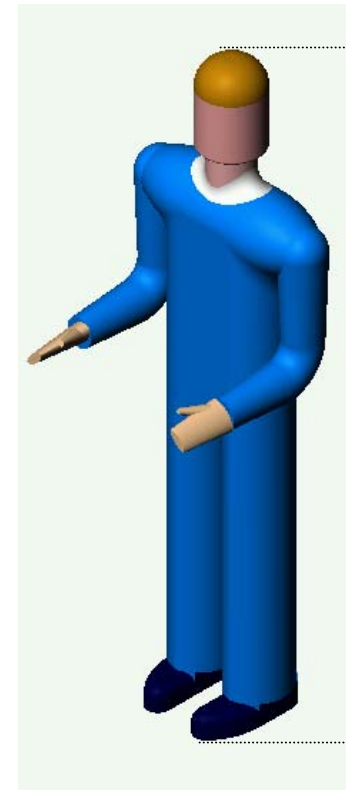
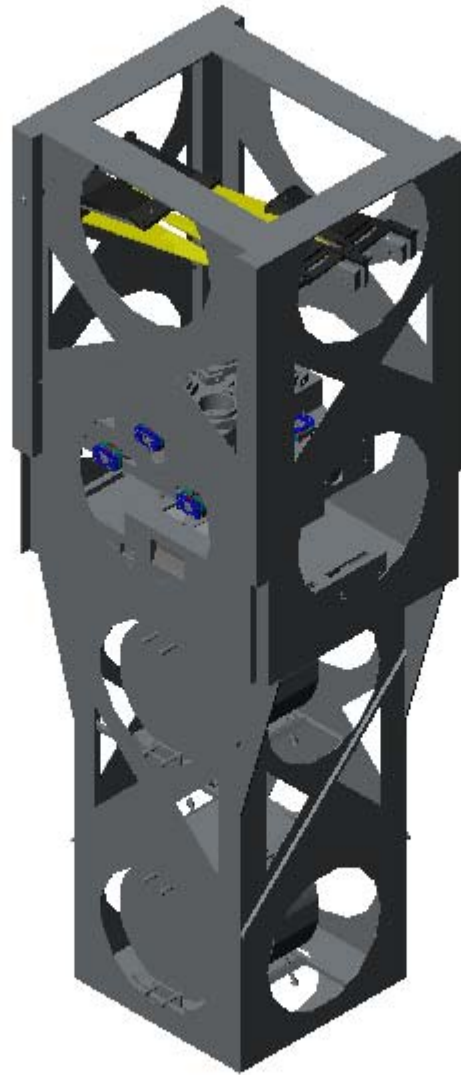


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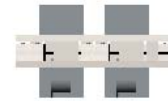
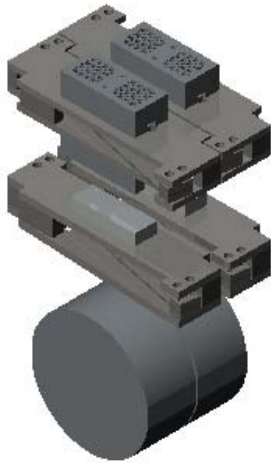
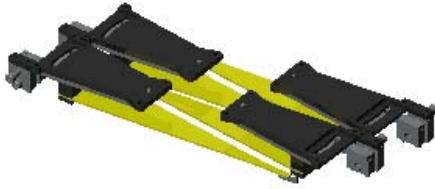


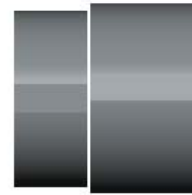
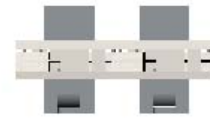
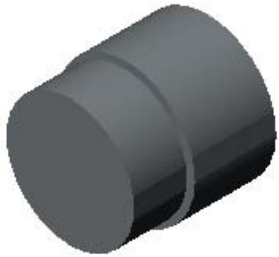
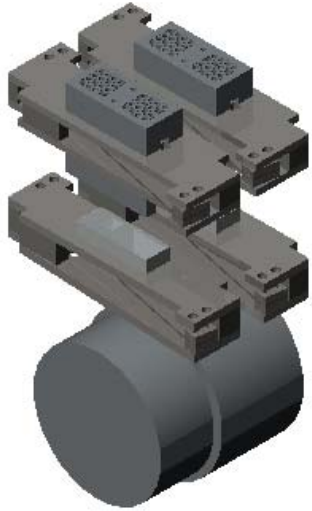
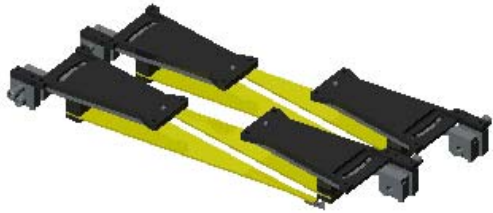


2.1 m  
[6.9 ft]



1.83 m  
[6 ft]



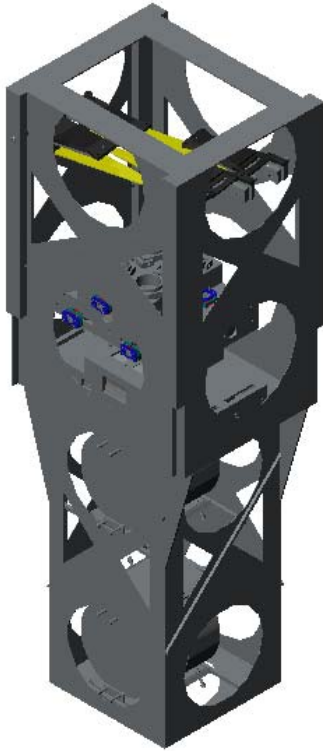


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# ETM: MASS & CG



- **FOOTPRINT**

**550 mm x 710 mm x 2105 mm**

- **MASS**

Suspension = 248 kg

Non-Suspended = 60 kg

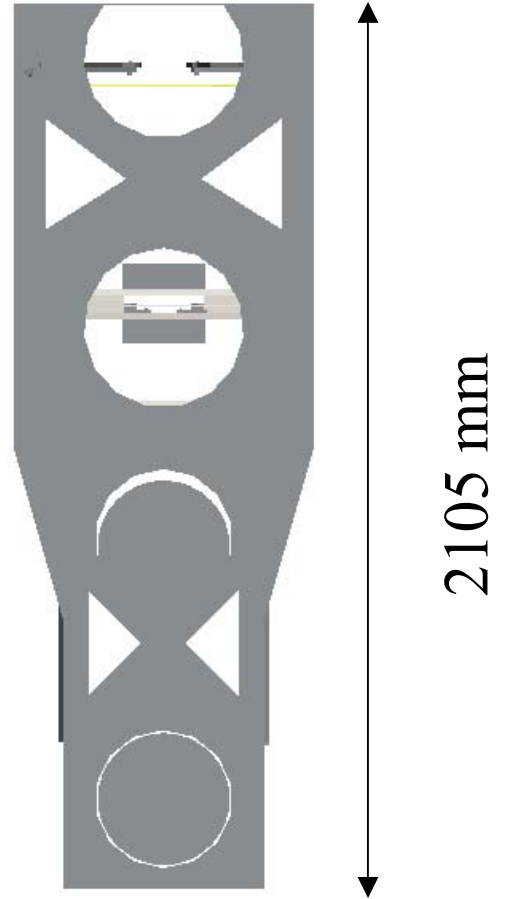
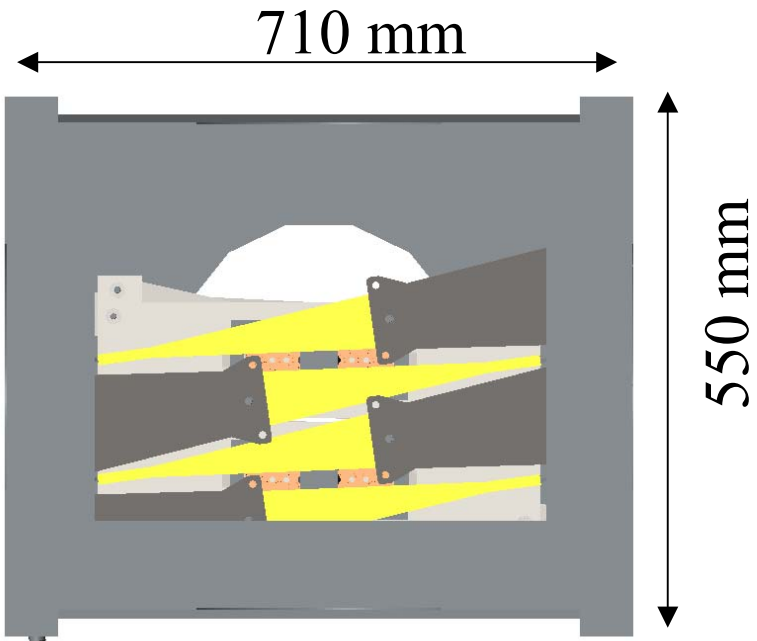
Structure = 66 kg

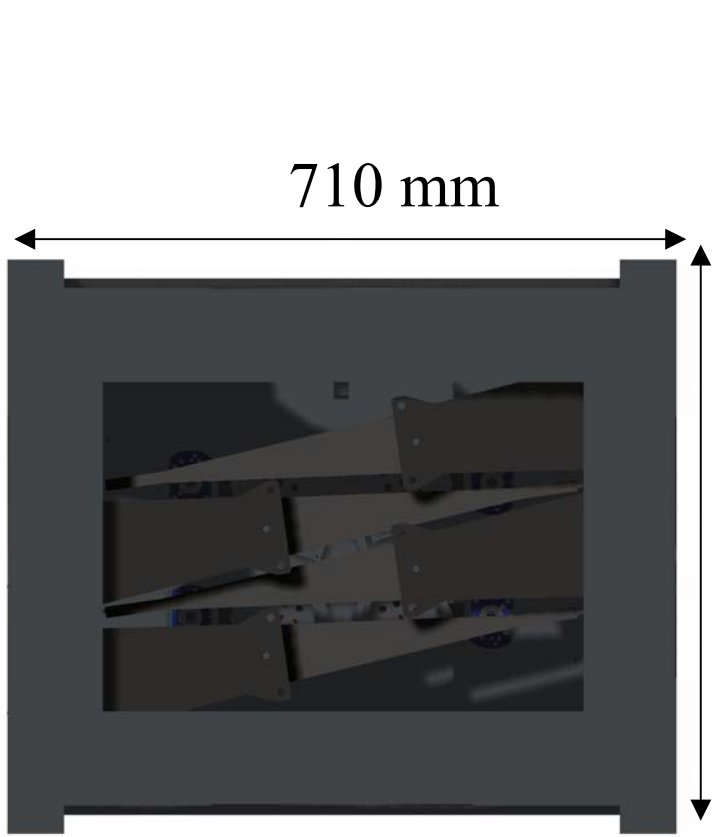
TOTAL = 384 kg

TOTAL + 25% = **480 kg**

- **CG**

The Centre of Gravity is **550 mm** from the bottom of the structure.



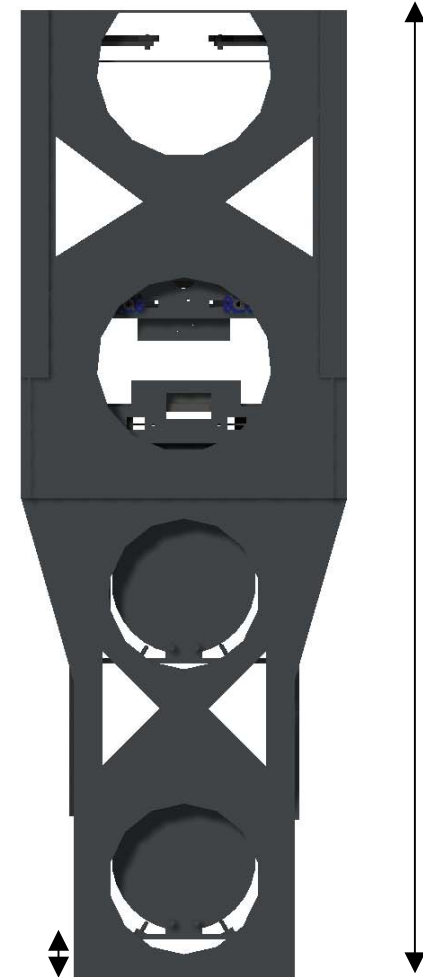


710 mm

550 mm

106 mm

106 mm



2105 mm

