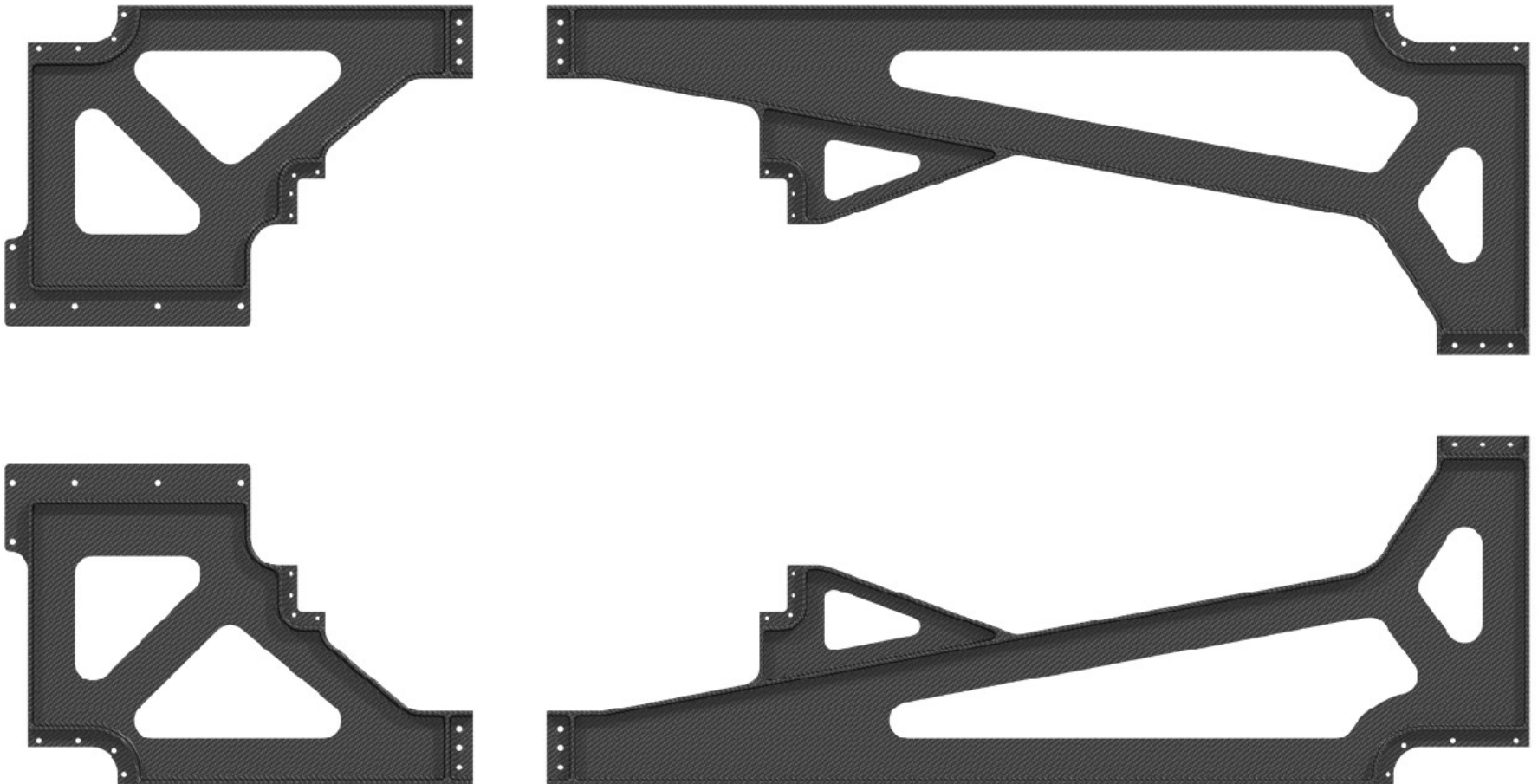


Update Central Space Frame(CSF)

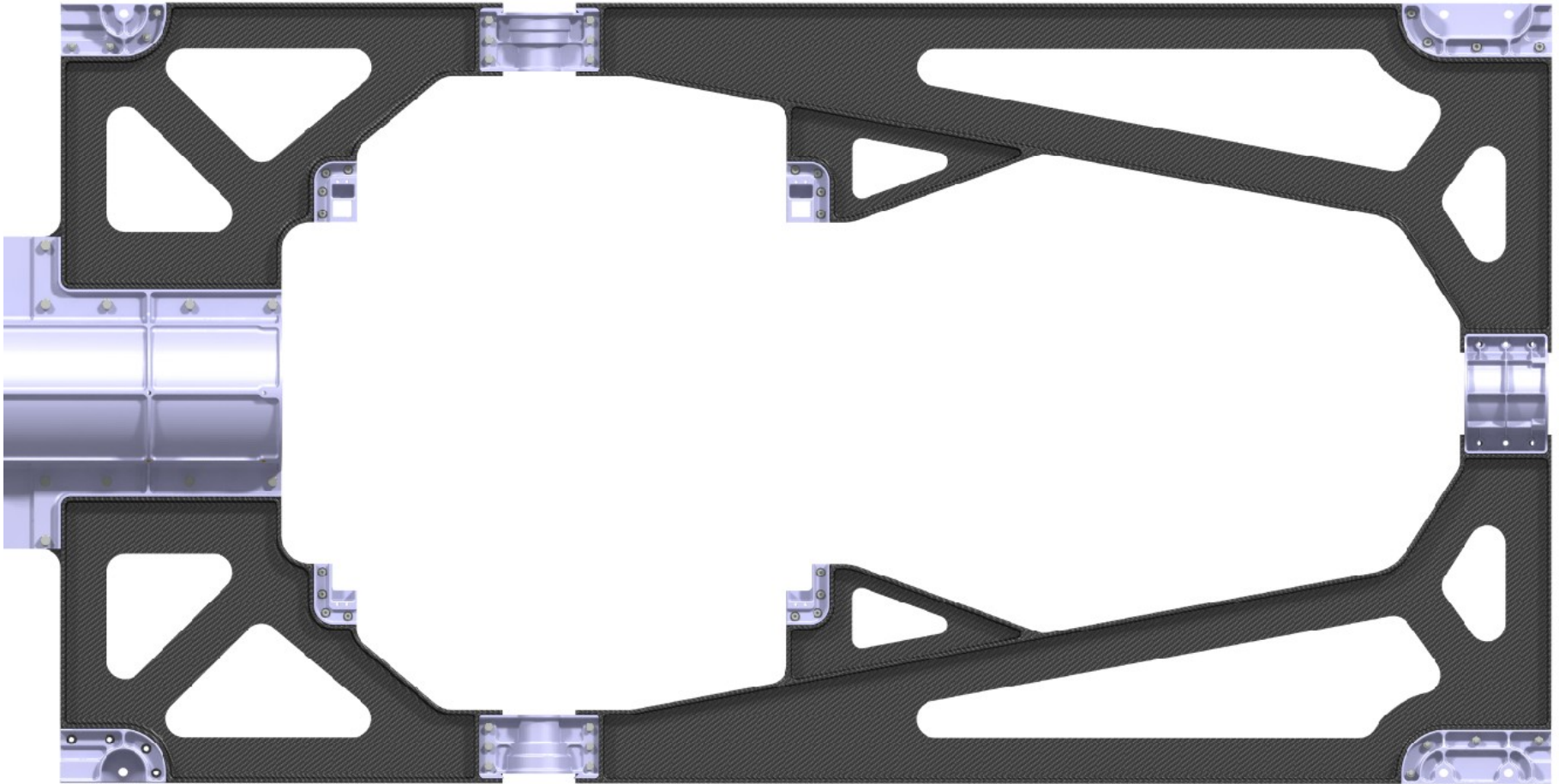
Update Central Space Frame(CSF)

The mainframe will be made out of four carbon composite parts, two of which are identical.



Update Central Space Frame(CSF)

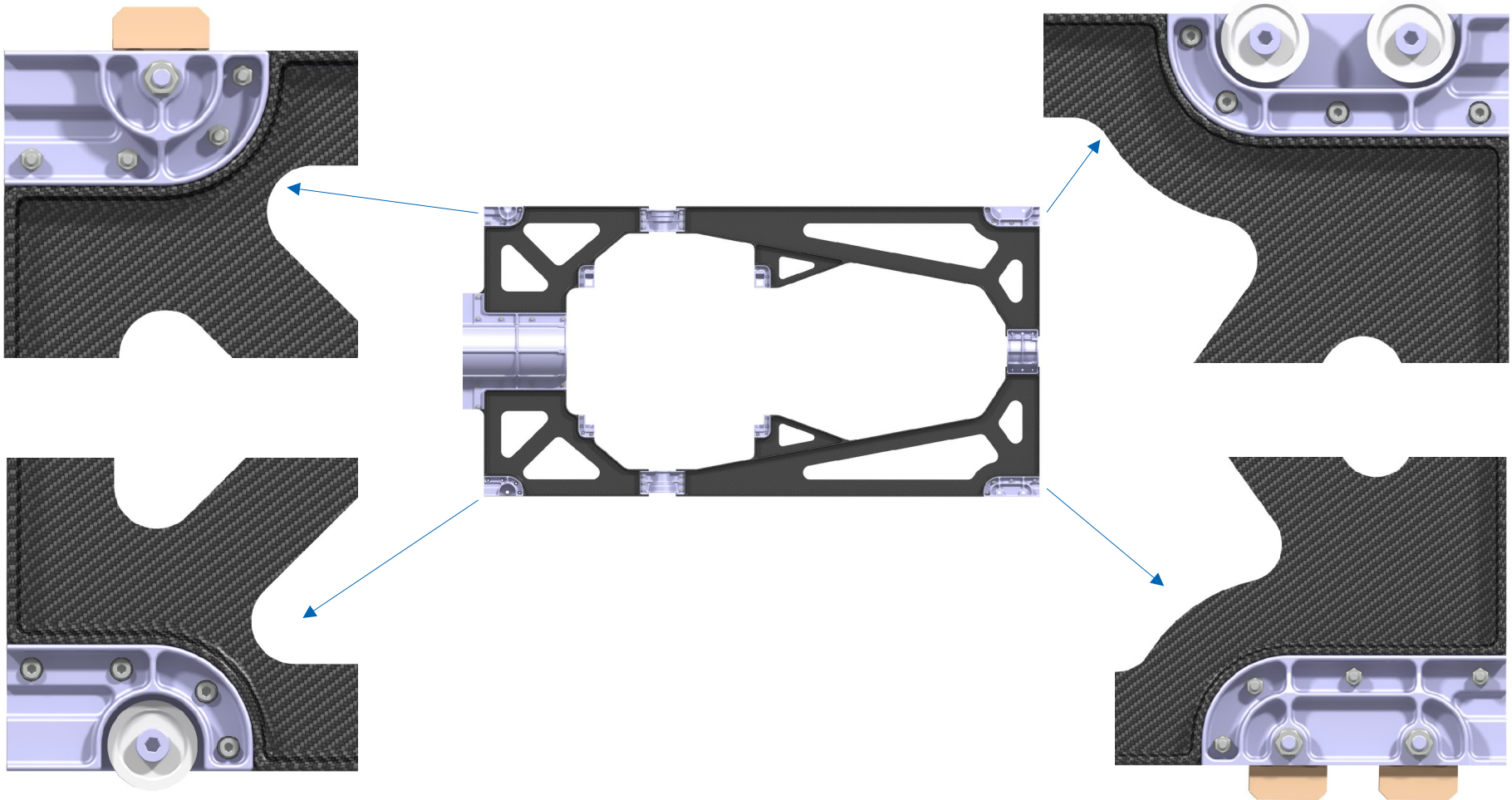
Various brackets and fixings made of aluminum are connected to the mainframe.



Update Central Space Frame(CSF)

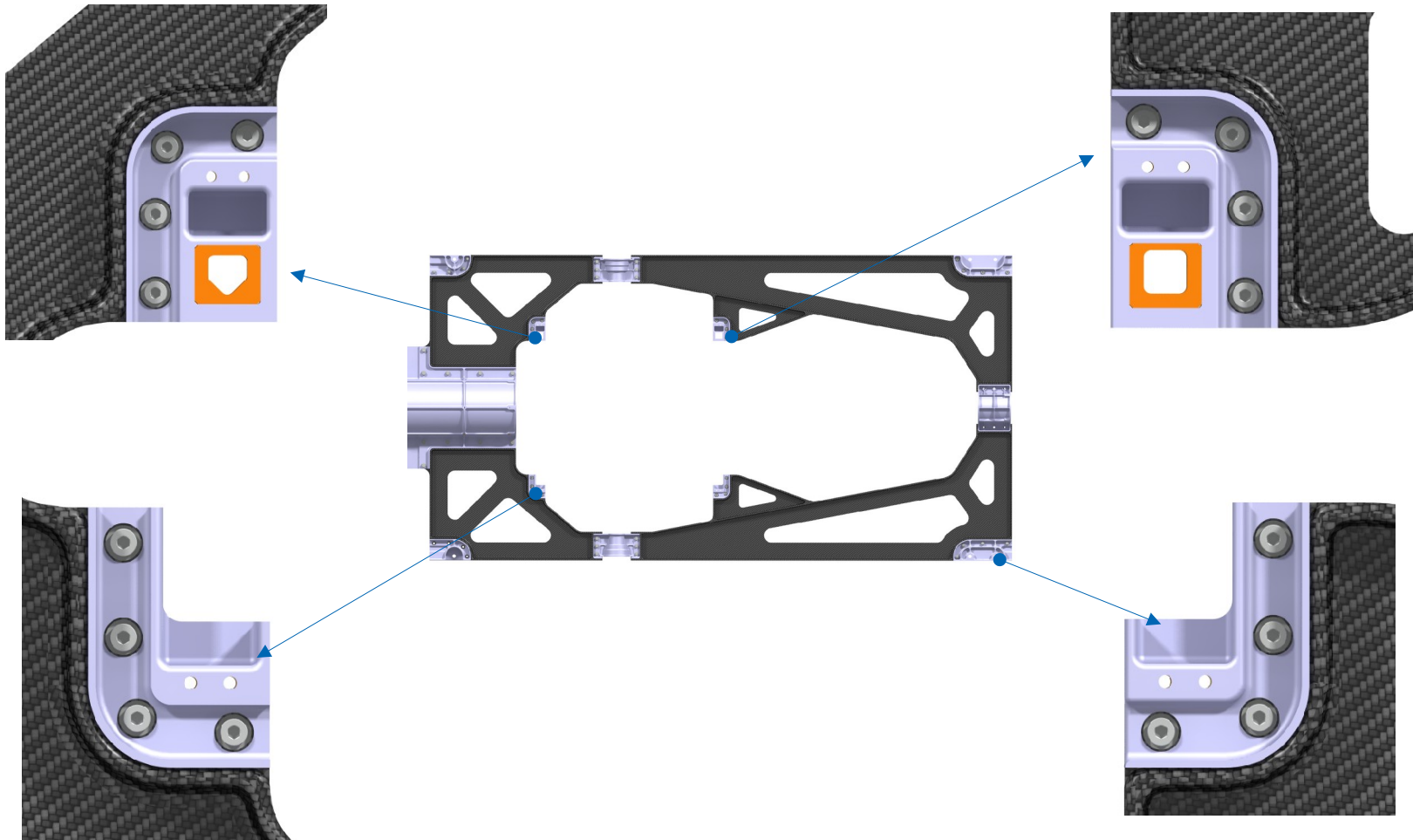
Ceramic rollers and horizontal guides made of peek are attached for moving the frame.

The aluminum parts also serve as a holder for the STT.



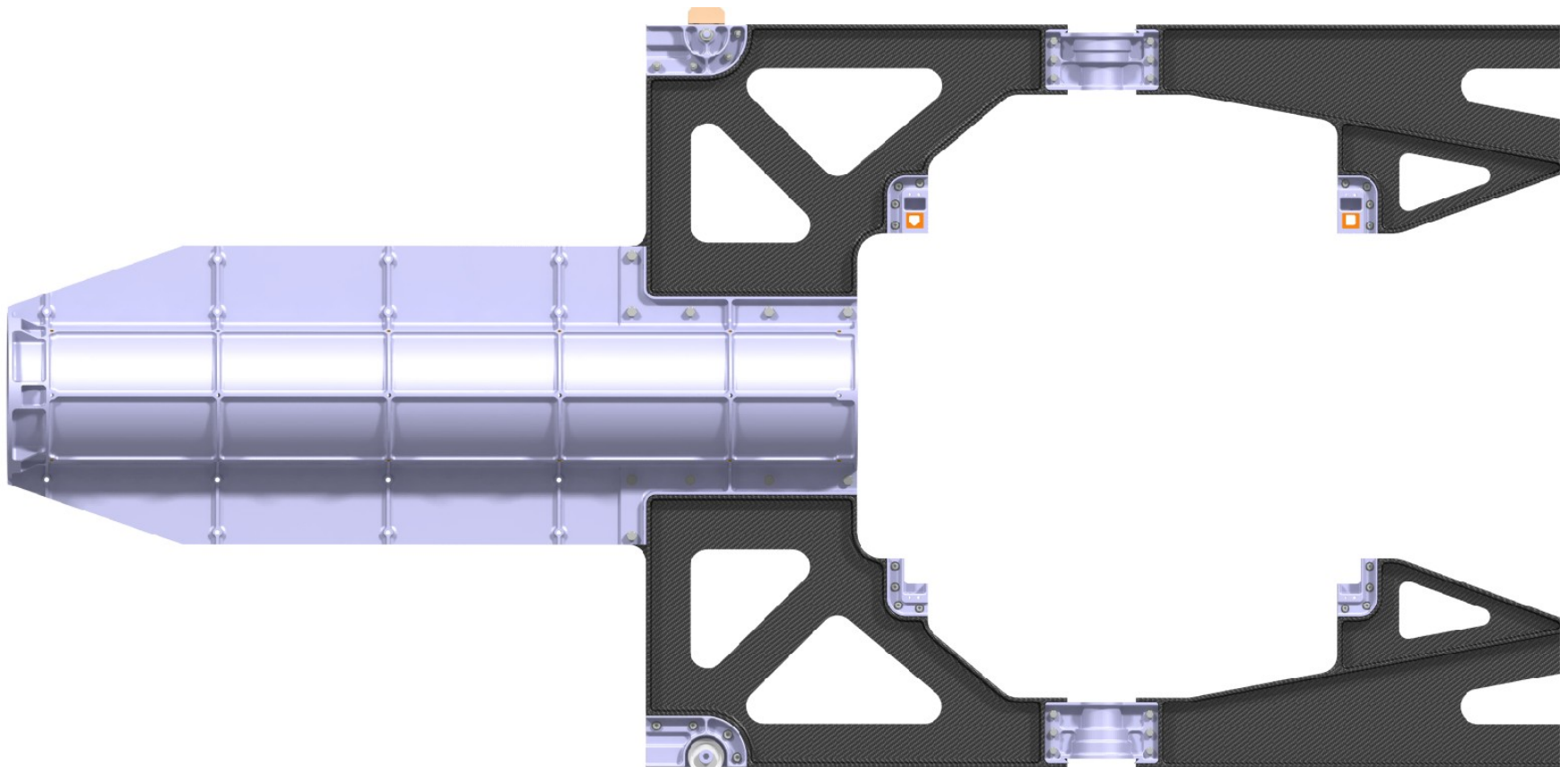
Update Central Space Frame(CSF)

The smaller inner aluminum parts are used to mount the MVD.



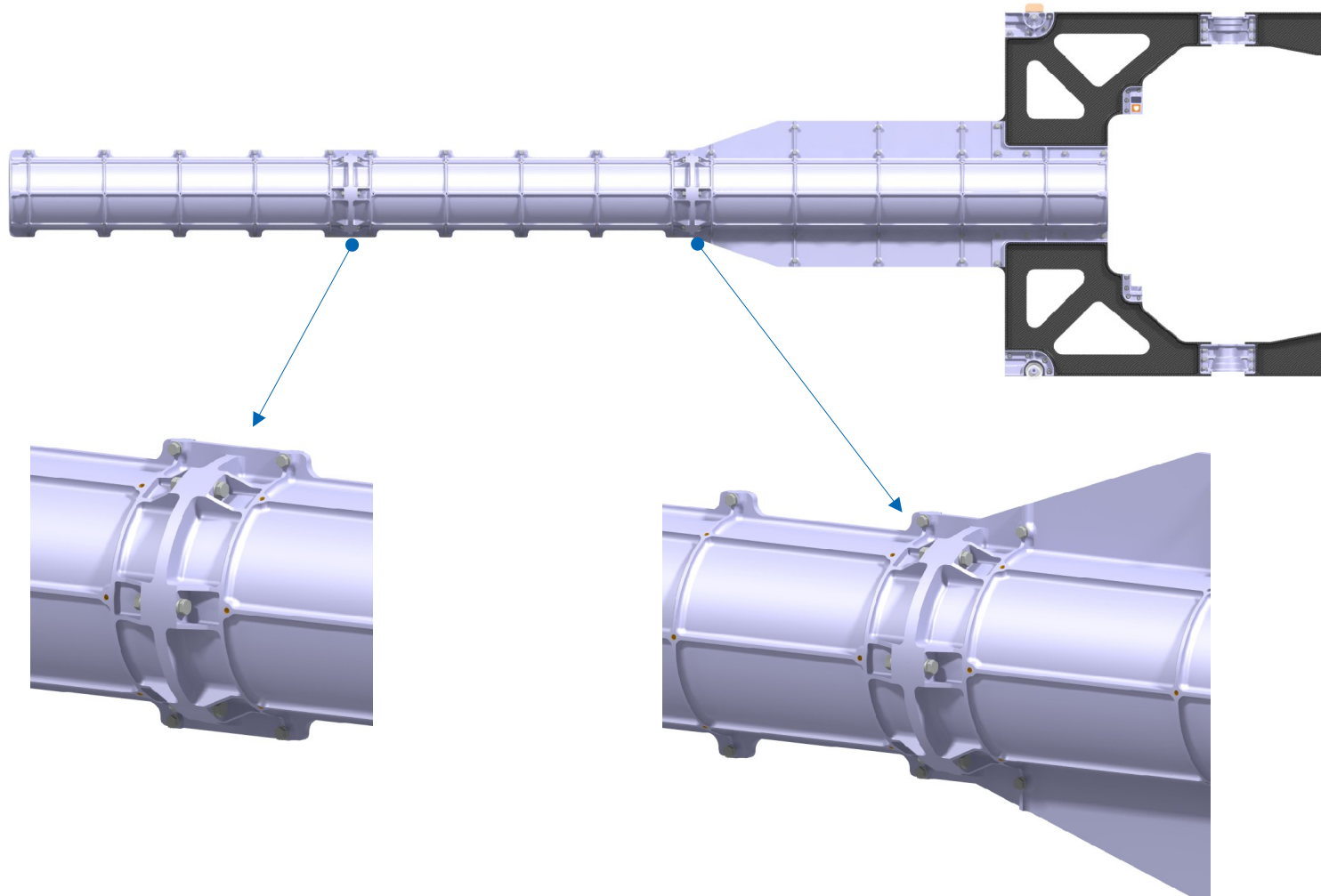
Update Central Space Frame(CSF)

The GBT's of the MVD can be attached to the two identical connectors on the upstream side



Update Central Space Frame(CSF)

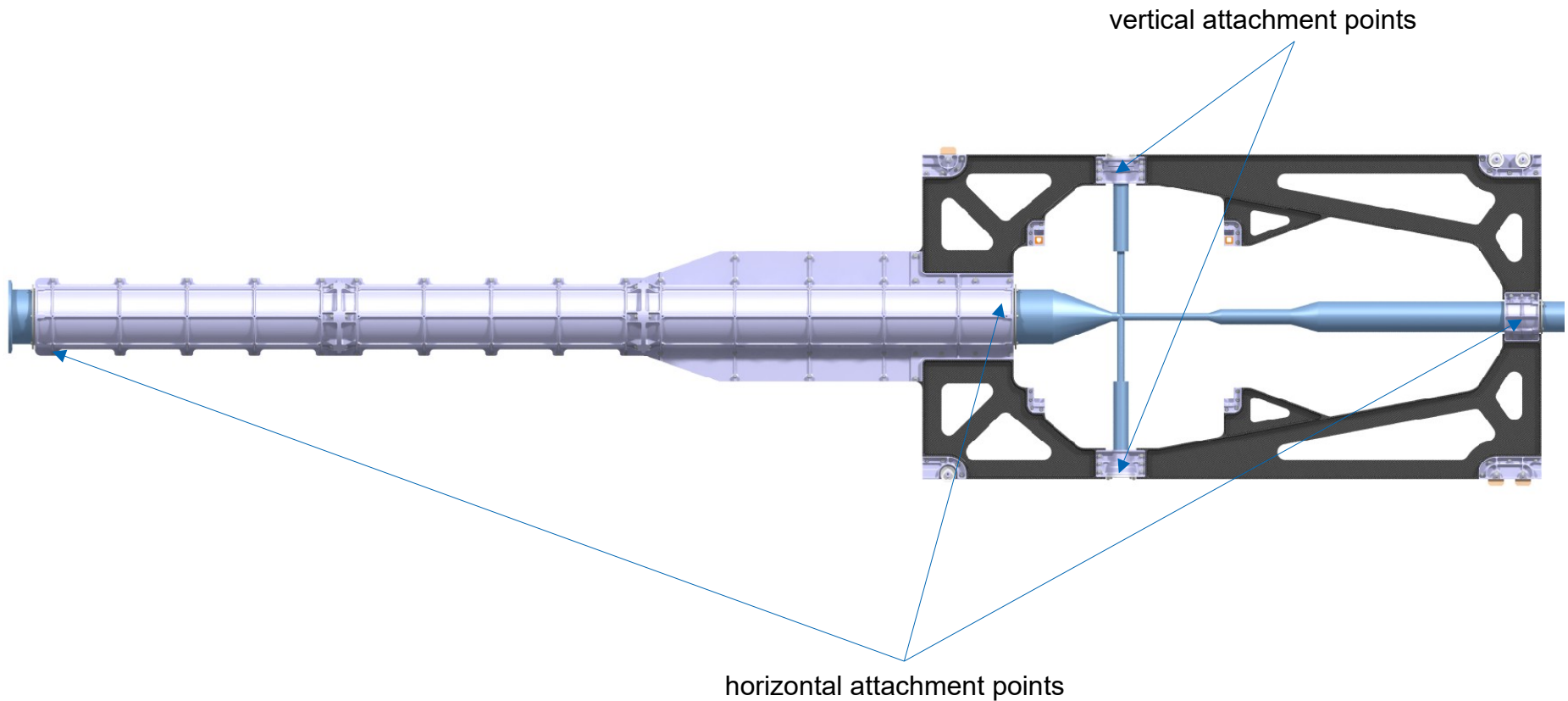
Additional brackets are screwed to the connectors to attach the other MVD electronics.



Update Central Space Frame(CSF)

A total of 5 points are provided for attaching the target pipe.

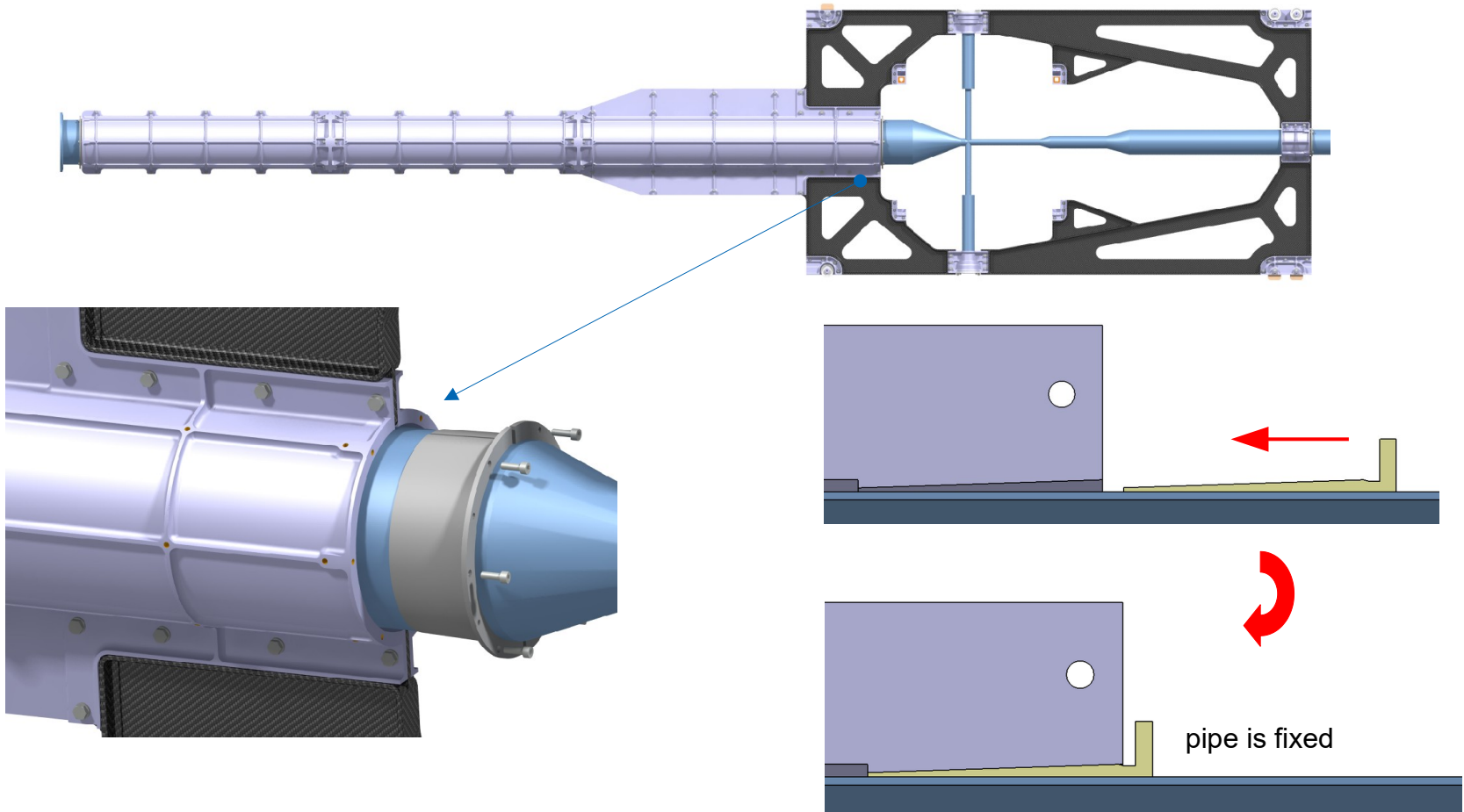
Three of them of the horizontal part and two on the vertical parts at the bayonet lock system.



Update Central Space Frame(CSF)

The attachment of the horizontal sections works via wedge shaped parts made out of peek.

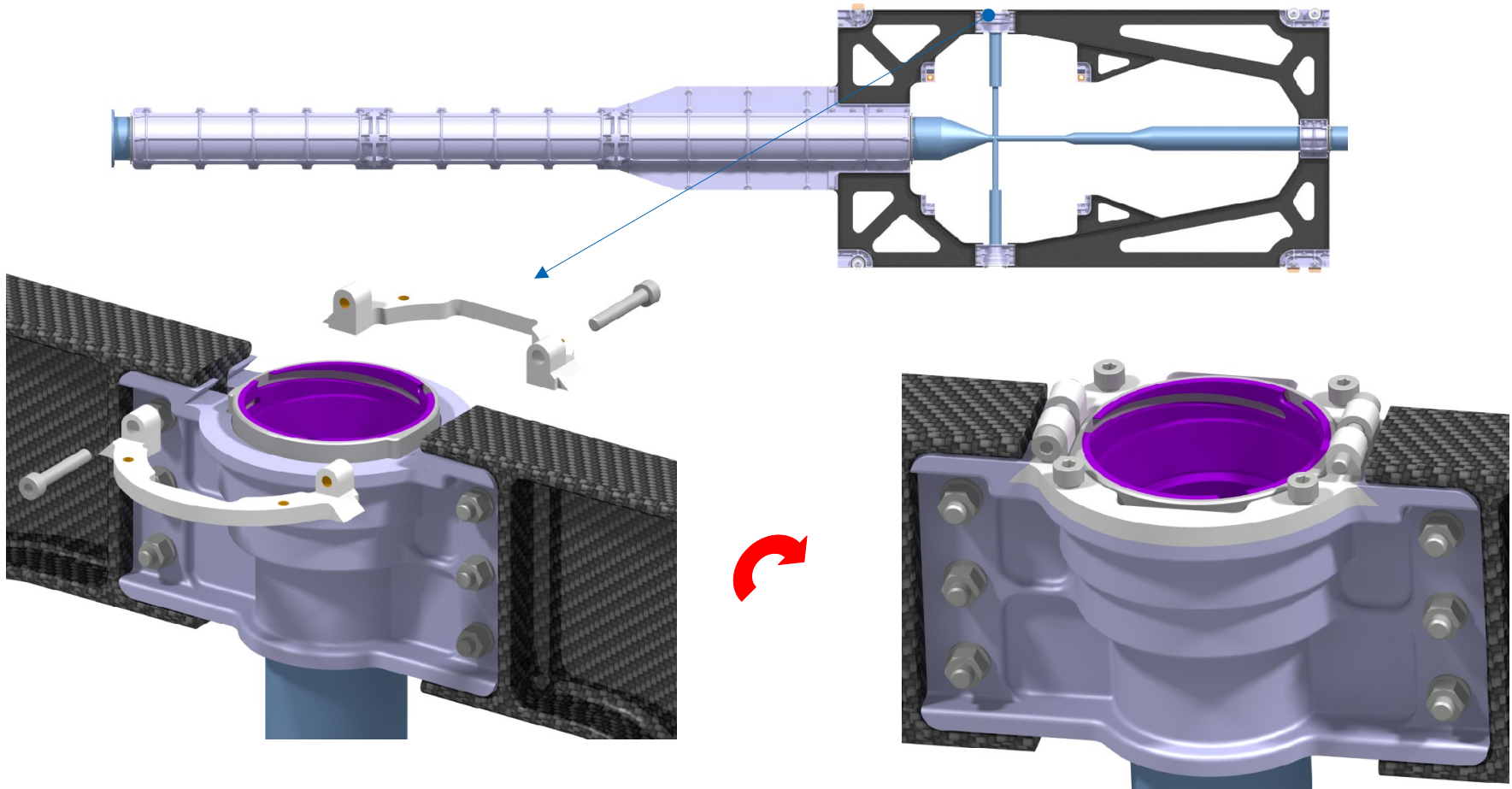
By moving this shell against the inner cone of the connector, the pipe will be jammed over a certain surface and is fixed.



Update Central Space Frame(CSF)

The attachment of the vertical sections works via shells made out of peek, which will be fixed to the aluminum connector and the bayonet lock system.

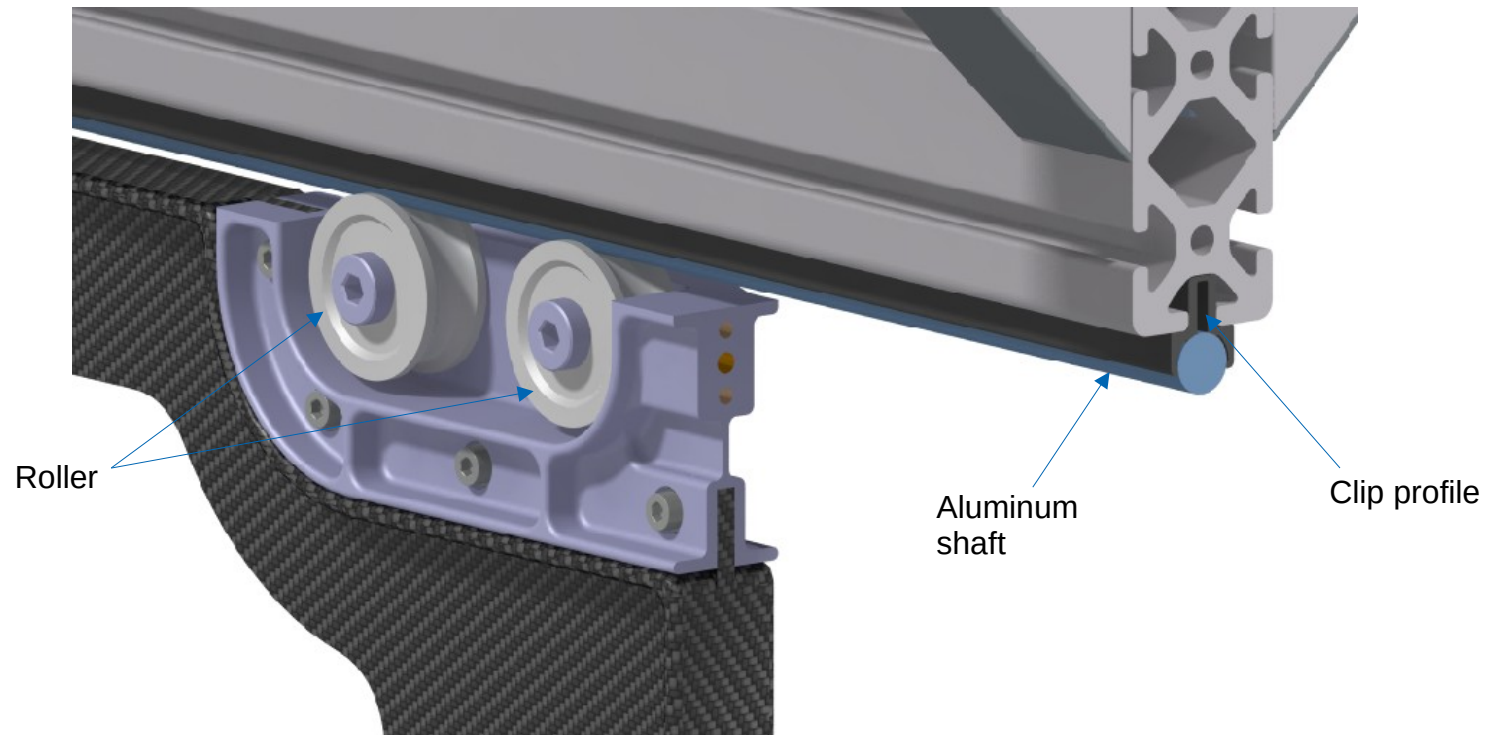
The shells are clamped to the aluminum holder using a dovetail guide and screws.



Update Central Space Frame(CSF)

The moving works via ceramic roller which rolls over hard anodized aluminum shaft which will be attached to a clip profile, for example available by the company item.

The clip profile is jammed into a 8 mm groove, which will be integrated in the Barrel DIRC beams in the final design.

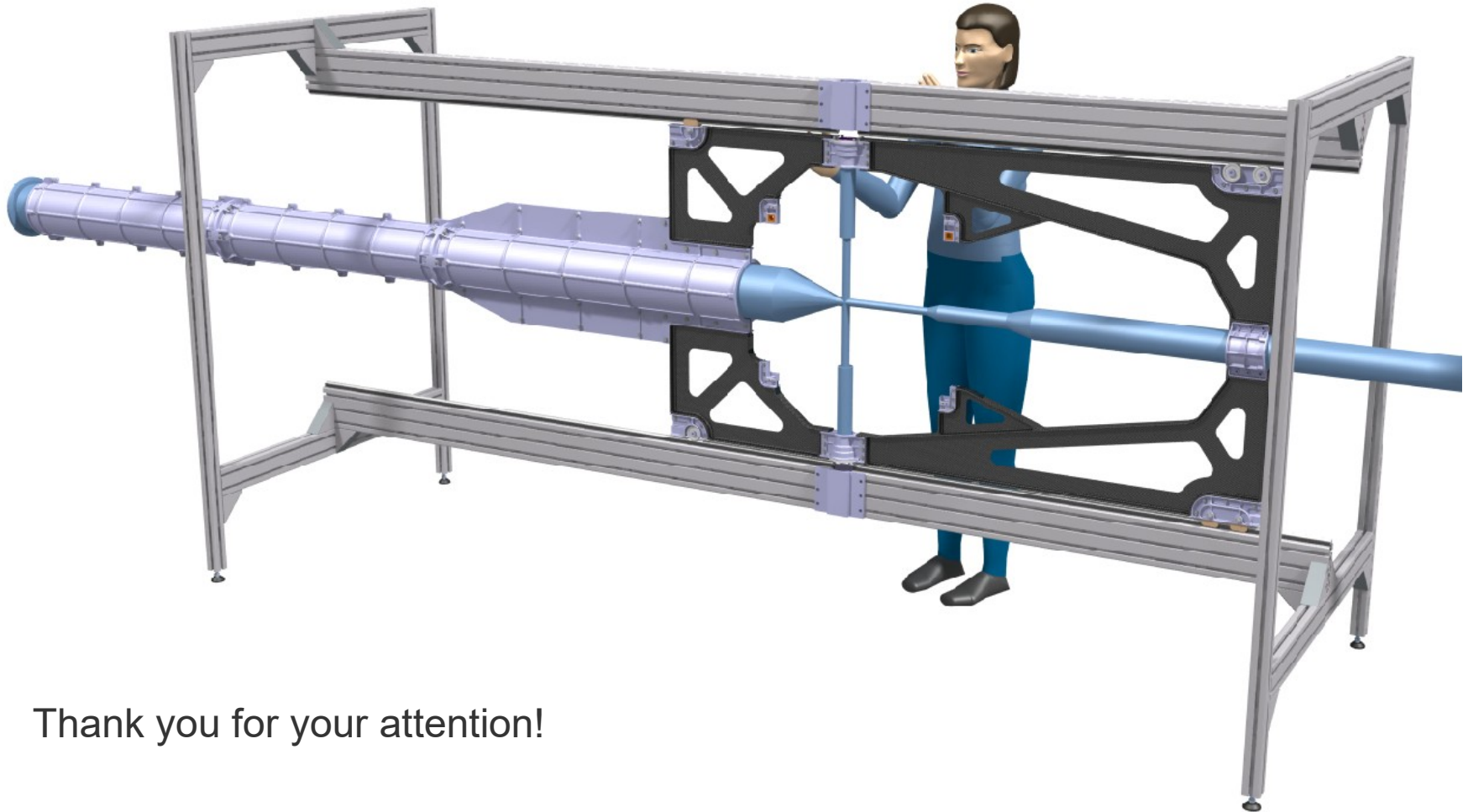


Conclusions:

- Regarding to the fact that we have now only two different parts of carbon composite, manufacturing should be much cheaper
- With all connection points can be separated from the carbon composite, we are more flexible for changes
- The heavy electronic needed for the MVD can be taken by the aluminum structures in the upstream direction
- Due to the fact that we will use ceramic roller with ball-bearing we expect very low friction while the moving

Update Central Space Frame(CSF)

After clarify final details, a first prototype is planned for 2021



Thank you for your attention!