Mobile Crane Design

Design & Engineering Devision

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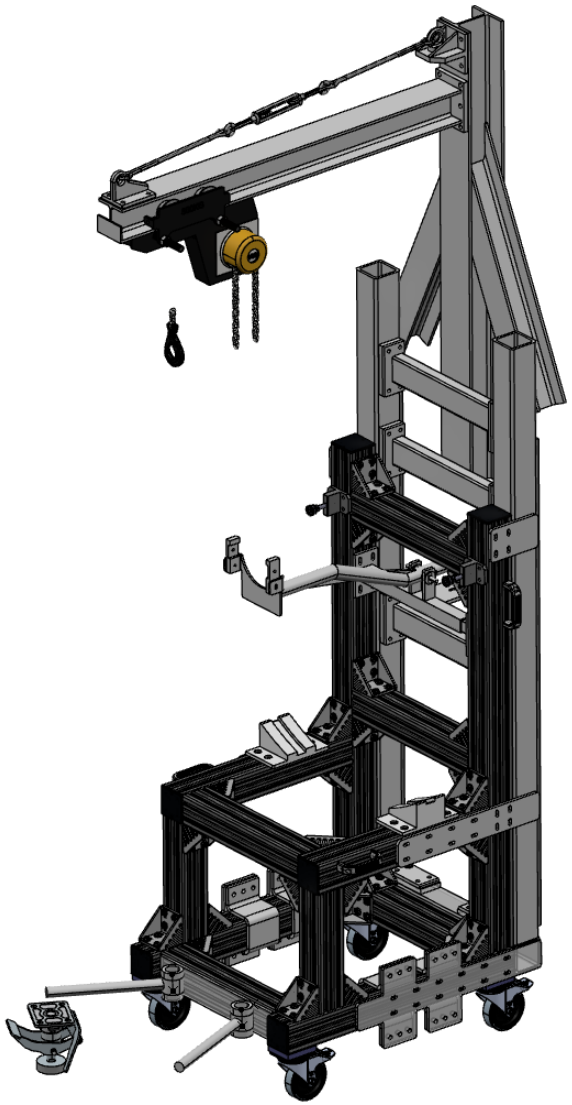
Mobile Crane Design

The scope of this design is to provide assistance for the maintenance operation of the Cryo Modules in the tunnel.

- The mobile crane is designed such a way that can be attached on the trolley which already used to open the cryo's module lid,
- Will be able to handle the weight of the lid plus it's own weight,
- Quite big flexibility → can be handled from one small team of approx. 3 people.



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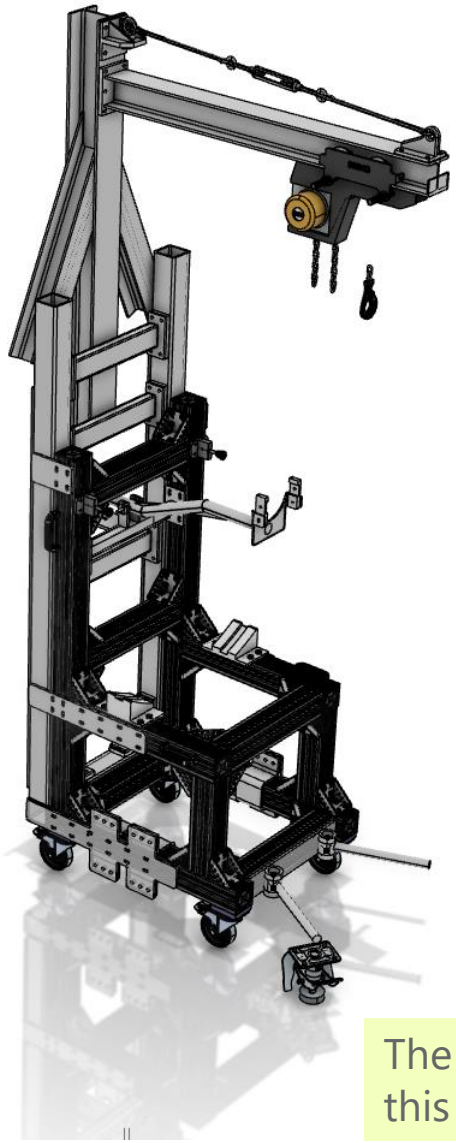
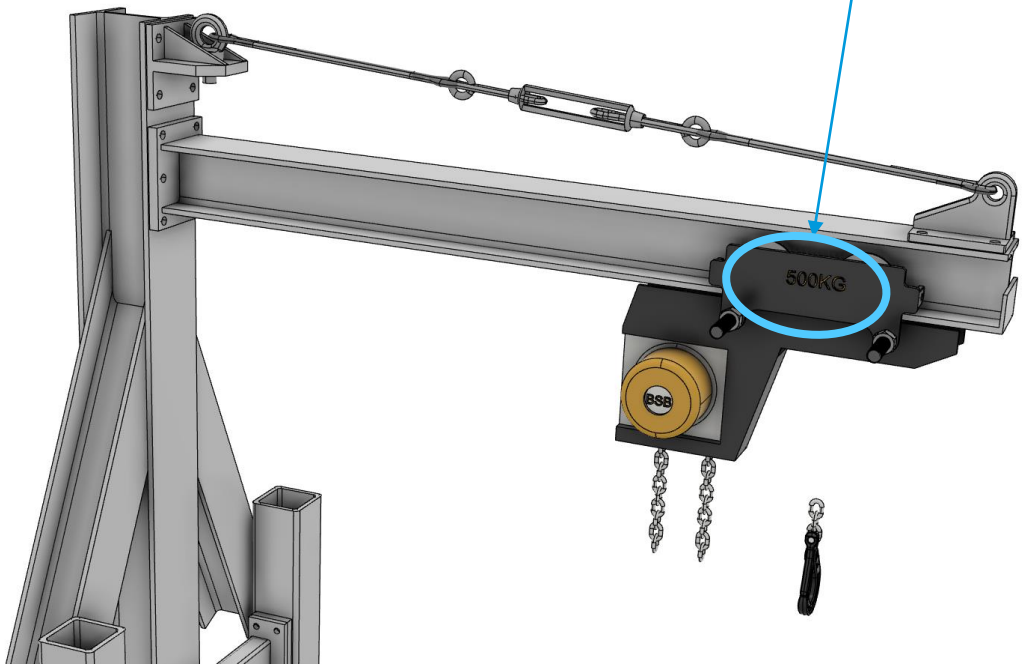


Consists of a crane of Max. lifting capacity of 500kg available in the market to the following link



The materials used for this design are Steel.

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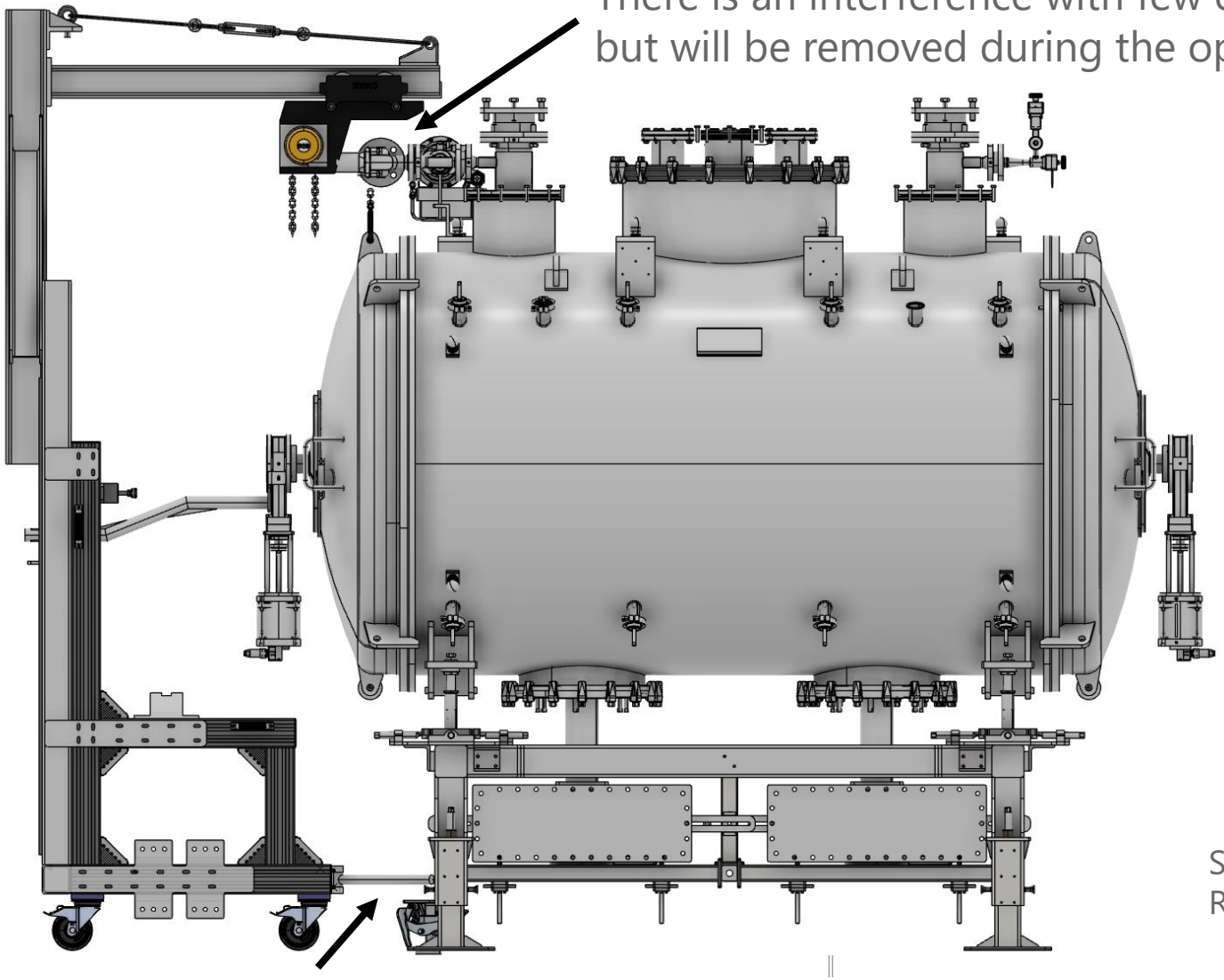
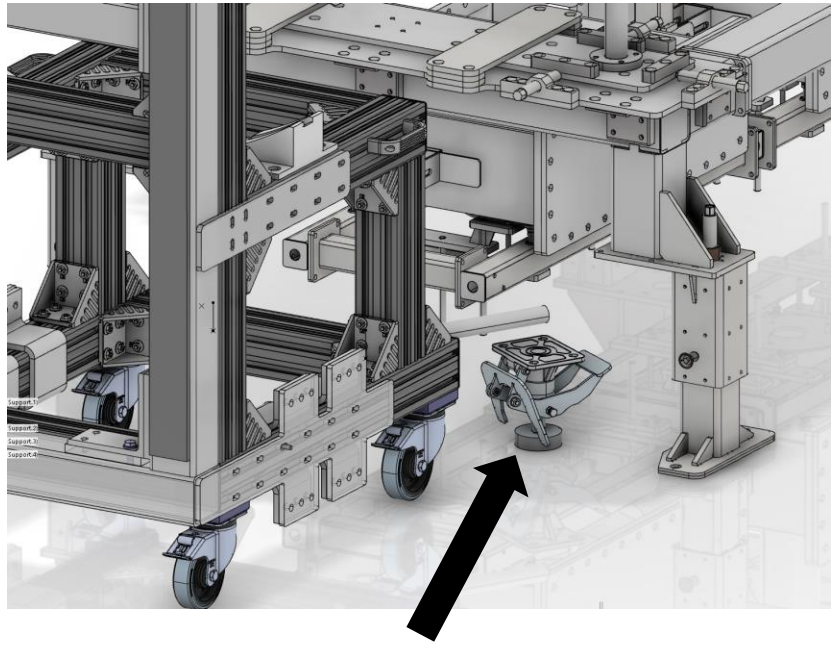
There is an interference with few equipment but will be removed during the operation.

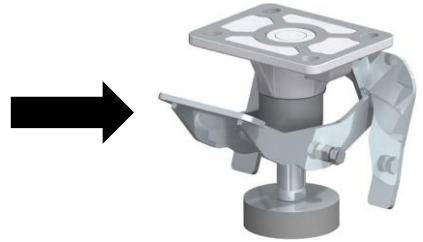


Feet will be added for stabilization purposes on both sides of the trolley



Implementation of stabilization feet

Stabilization element from Blickle
Ref. Number: 755838



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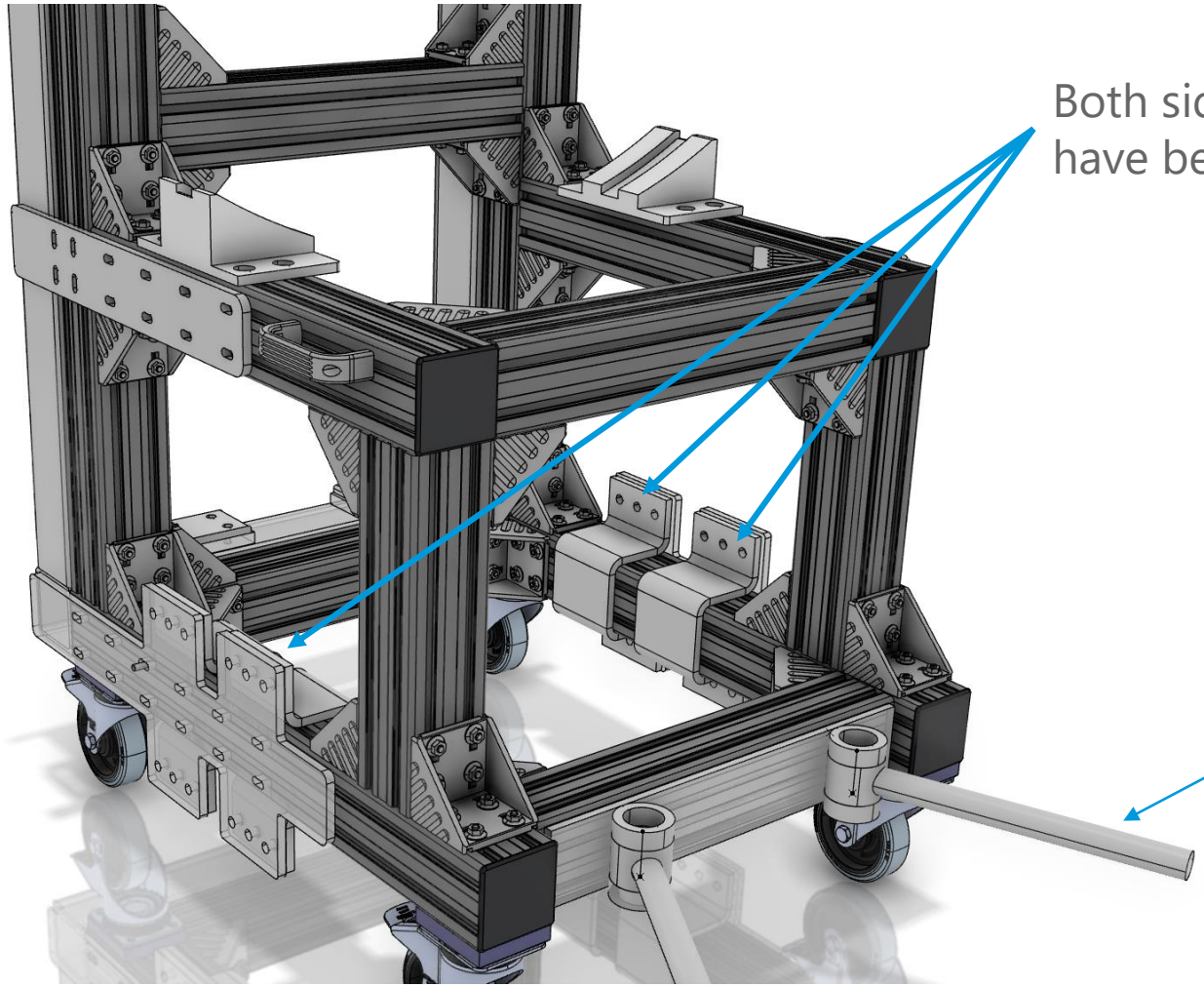

Both sides (left/right) U-shape supports have been implemented.

Under design

Stabilization feet that extends the crane's length by 350mm.
We will have 4 in total, 2 in front and 2 to the back side.
All of them will be adjustable by 120 degrees on the XY plane

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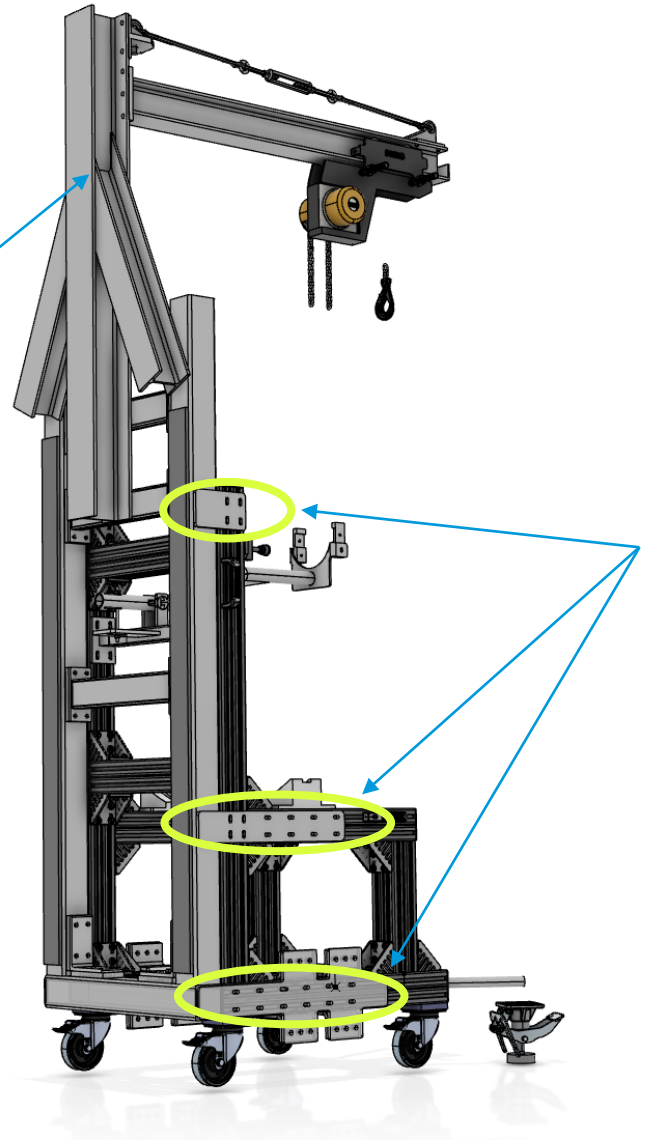
The only welded point will be between HEB 125 and HEB 100



The Crane frame should be able to be attached on the trolley only by screws. So can be detachable.

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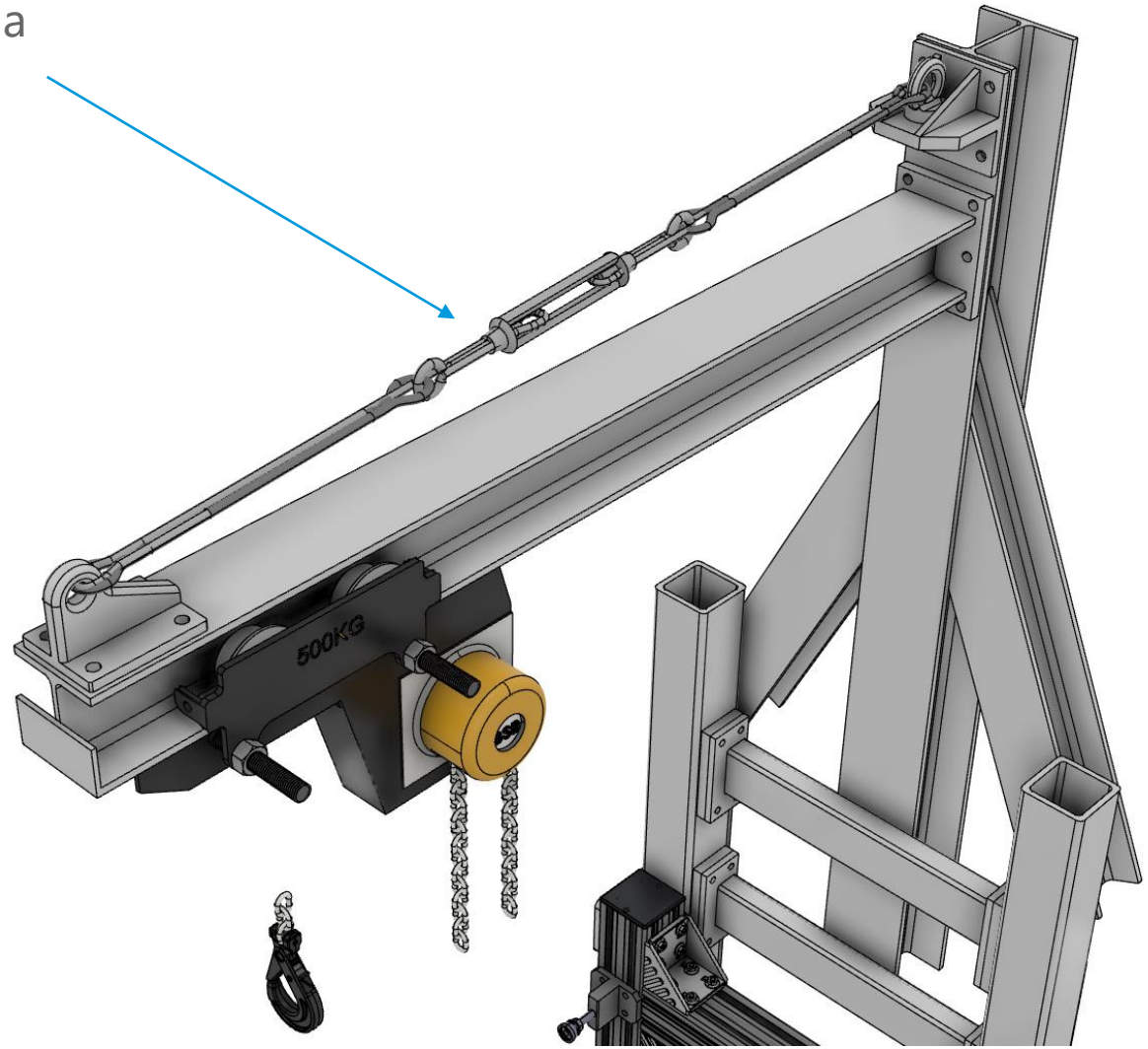
Metal rope wire to be used as a support. It will exist an length adjustment element.



A structural analysis will be performed in order to insure that the mobile crane can handle the weight of the lid. Already in contact with the corresponding Dept.

Thanks for your attention!

Questions?