

Making life
better with
electricity.
Sustainably.

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The challenge

Develop aluminum screw to our new connector

Ensto's products and solutions play a key role in building reliable electricity distribution networks. Our new MV mechanical cable connector with screw design with patented stepless shearing is one example of our excellent accessories for underground cable networks.

The screw always breaks at the correct point during installation. There is no need of hammering or grinding the screw after break. This is important, because underground cable installations are often made under very challenging conditions. The electrical properties of the shapes are optimized by simulations – the effect of the electric field is minimized at each location and there are no sharp edges at all.

To know more about connectors, check here: ensto.com

Make it out of aluminum

We produce trusted and innovative products and solutions that have a long lifetime and a low environmental impact over their life cycle. That's why we would like you to develop a screw according to the concept of a new underground cable connector, but **in aluminum**. The screw is made of brass at the moment, but it contains lead. We think that aluminum is more cost-efficient than brass and can be machined faster.

Take into consideration:

- lead-free (environmental friendliness)
- cost savings
- the screw design already exists
- connector and screw sizes:
 - 240mm² and 300mm² > screw size M18
 - optionally 95mm² and 150mm² > screw size M12
- thesis on the topic available.



Challenges:

- installability
- passing tests according to standards (mechanical and electrical tests)
- Al-Al friction between the body and the screw
- machining and testing of prototypes
- patent reports
- duplication of the solution for both screw sizes.

During the project you get to do plenty of installations. Our fully equipped laboratory in Porvoo is available and you can ask our designers for comments on your work.

More information:

Timo Vikman
Product Development Manager
timo.vikman@ensto.com
tel 020 476 2301

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ensto.com

