

# Kick-off meeting

## Motivation & first steps

November 23, 2017 | Michael Klein & Klaus Bussmann

# Content

- Motivation for the linear motor IN-Kind project
- The design of the Motor Test Bench

# Motivation for the Linear motor project

- ESS would like to investigate the linear motor technology to find out if this technology can be added to the standards of the ESS
- Can be important for future instrument deployment
- Linear motors that generate linear movements are currently used mainly in positioning and handling systems.
- Feed forces are generated in many applications by an electric motor and a gearing mechanism => indirectly translative movement
- Linear motors offer the possibility to generate a direct translative movement without a gearing mechanism.
- A few development projects from the ESS will be completed at partner facilities.
- This project will provide an excellent opportunity for the in-kind partner to participate in the definition of ESS standards
- Furthermore it will provide the opportunity to develop knowledge and experience at both facilities about the performance of a range of linear motors and encoders in ESS specific environments.

# Construction of the test bench



- Mainly supported by Herbert Feilbach

Grips top & side

Drawer examples

# Construction of the test bench



- Mainly supported by Herbert Feilbach

Cable holder

Swing doors

Rittal profile rail for slots

Cable bushing

# Construction of the test bench



- Mainly supported by Herbert Feilbach
- Total weight according to Inventor: ~ **100 kg** (without Racks)
- Total weight of the hood according to Inventor: ~ **20 kg**
- Emergency Stop Push Button?

Cable bushing with strip  
(30mmx100mm)

**END**