

# AR Assembly Demonstration

## M-227 High-Resolution Linear Actuator with DC Motor



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This document describes possible exemplary AR supported assembly instructions on the basis of the M-227 High-Resolution Linear Actuator with DC Motor.

Please refer to the attached customer CAD-model for dimensions. The interior of the customer model is obfuscated for intellectual property protection reasons; feel free to extrapolate the interior setup according to your mechanical engineering experience.

It is reasonable to only demonstrate the motor mounting for this context. This may result in between five and ten assembly steps.

It is a quite straight-forward setup with DC-motor and metal bellows coupling. Models for bellows couplings can for example be found here: [www.norelem.com](http://www.norelem.com). Please choose any generic matching model. The motor can be fixed to the tube with grub screws via an additional clamping ring to be fixed to the front end of the motor with screws, please “invent” any reasonable solution. Models for screws can be found on the website mentioned above, too.

When mounting the motor, the following specific assembly information can for example be taken into account for the AR assembly demonstration:

Mounting the clamping ring to the motor

- Check correct part numbers for screws and ring
- Secure screws with right amount of screw locking lacquer (maybe an example image can be introduced to indicate the right amount)

Mounting the metal bellows coupling

- Check correct metal bellows coupling part number

- Tighten the grub screw with torque x to ensure reliable clamping, use torque wrench no. 123456
- Check sufficient distance between clamping ring and metal bellows coupling, so that the motor shaft can rotate freely

#### Mounting the electrical connector

- Strip 3 mm insulation from the motor wires (just choose a number of 6)
- Tin wires
- Check connector part number
- Solder wires to D-SUB15 Connector (this is a quite interesting point, in order to avoid misconnected pins)
- Attach correct ID-sticker to connector

#### Mounting motor assembly to actuator

- Insert motor assembly into actuator sleeve
- Use grub screw to connect metal bellows coupling to actuator shaft through through hole
- Secure screws with right amount of screw locking lacquer (maybe an example image can be introduced to indicate the right amount)