
Assembly procedure

Assembly of in-vacuum assembly to out-of-vacuum assembly (linear guide to flange and rod)

Project/ Project number ESS Wire scanner series / 503027		Phase Series production
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Revision history log

Revision	Edited by	Date	Description of changes
1	MNP	04-10-2018	Release

1 Introduction

This document describes the Assembly of the in-vacuum assembly (flange, bellow, wire etc.) to the out-of-vacuum assembly (linear unit, motor, resolver etc.) of the Wire scanner for ESS. The focus of the assembly is to secure that the rod runs smoothly.

2 Preparations

The in-vacuum assembly (7103034712) shall have been assembled in clean room and inserted in the transportation canister. The out-of-vacuum assembly (7103034352) shall have been assembled.

3 Assembly procedure

Place the in-vacuum assembly on a suitable table and remove the locking ring. Be careful not to move the assembly around too much afterwards since nothing is holding the bellow and rod in correct position now.

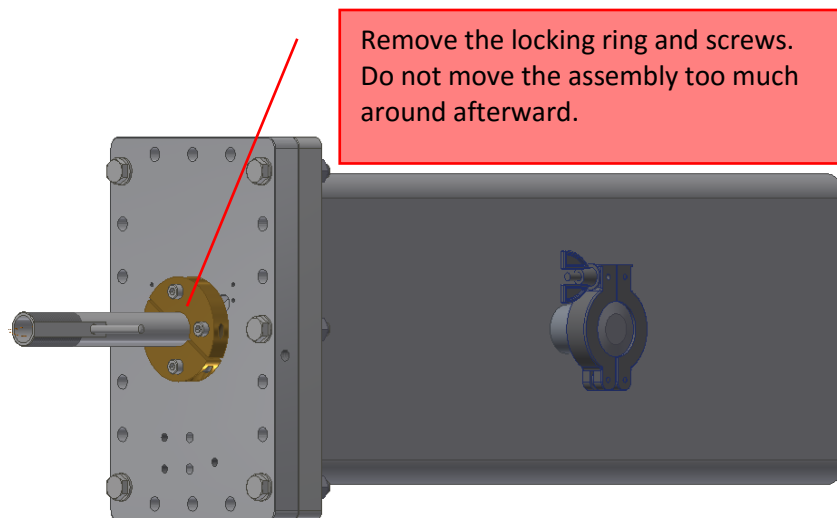


Figure 1: Preparation of in-vacuum assembly

Install the linear bushing in the flange and around the rod.
Install a lock nut and washer on the rod.

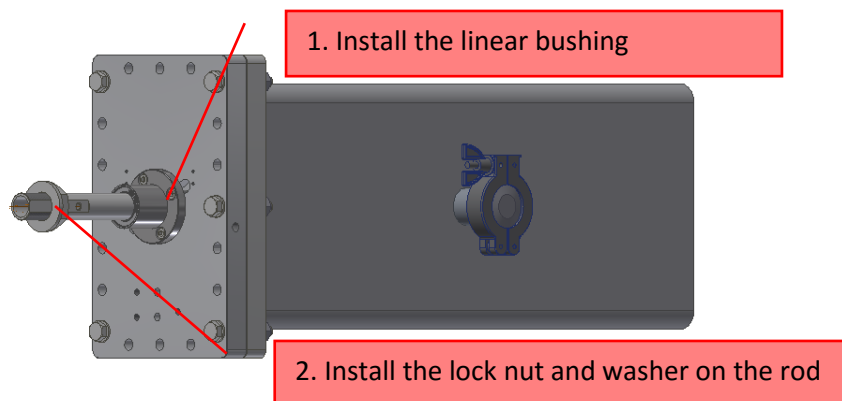


Figure 2: Install linear bushing, lock nut and washer

Install the out-of-vacuum assembly on the flange with the screws and the pins. Install the second lock nut and washer on the rod but do not lock the nut yet. Move the roller block of the linear unit to a position as close to the rectangular flange as possible. Gently rotate the assembly to vertical standing on the transport canister.

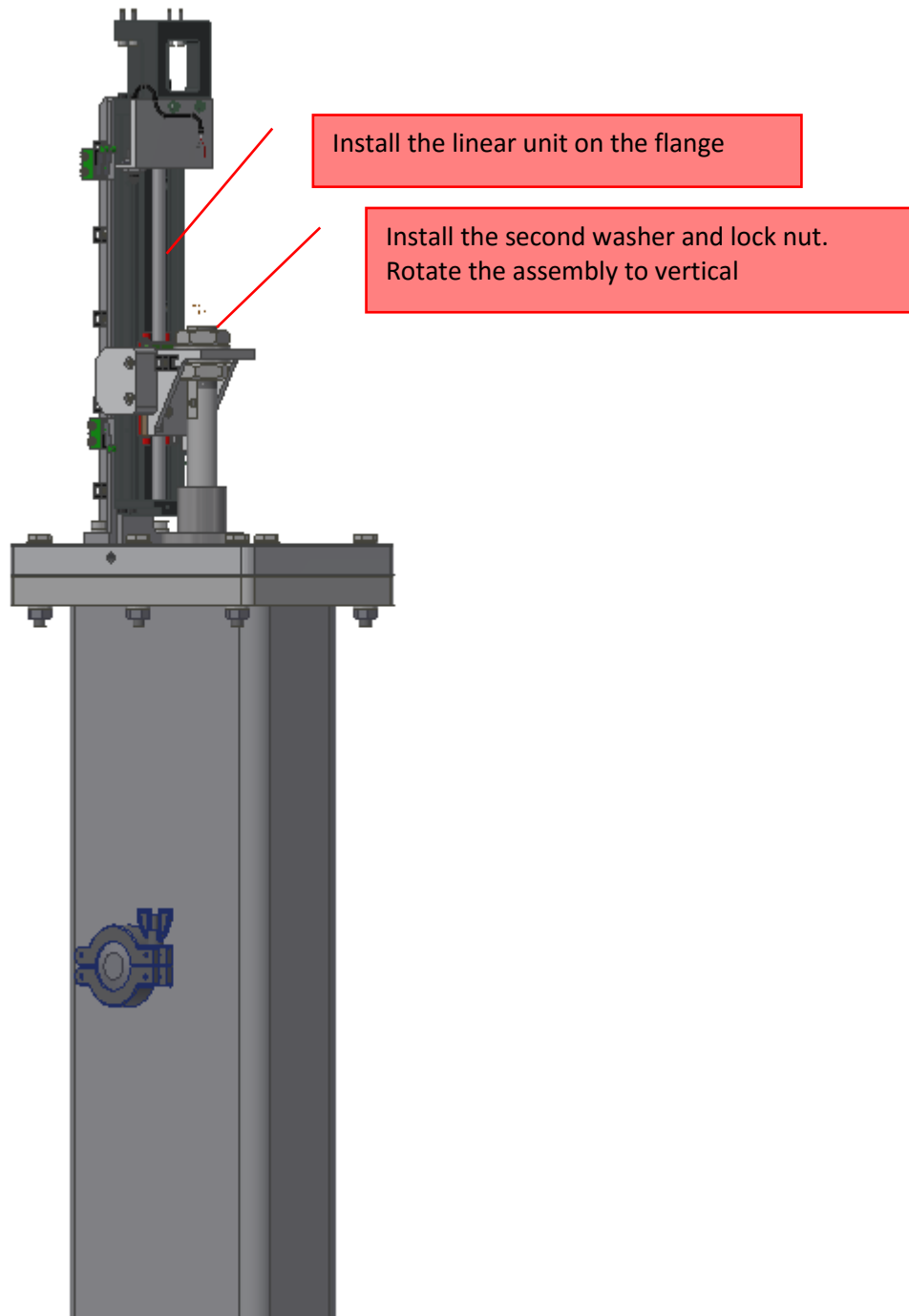


Figure 3: Install the linear unit

Run the linear unit from bottom to top position and back (still without locking the lock nuts). Position the rod with the pin in the same distance from the flange as measured when

assembling the in-vacuum assembly. Lock the lock nuts. Run the linear unit from bottom to top position and back to check that it runs smoothly. The assembly can now gently be placed in horizontal position if preferred.
Install the motor assembly.

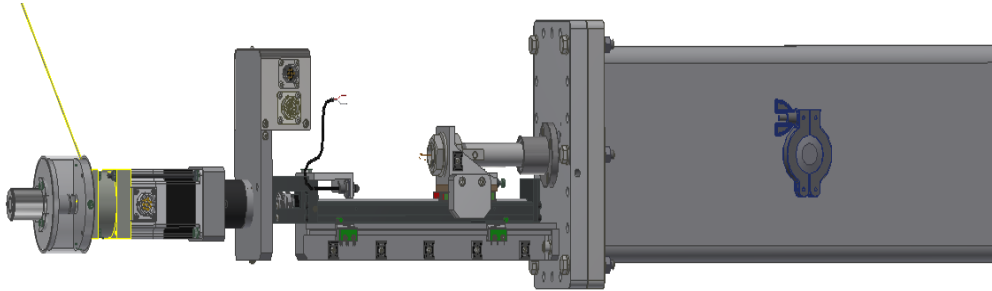


Figure 4: Install the motor assembly

Install the remaining parts of the wire scanner and perform required tests.

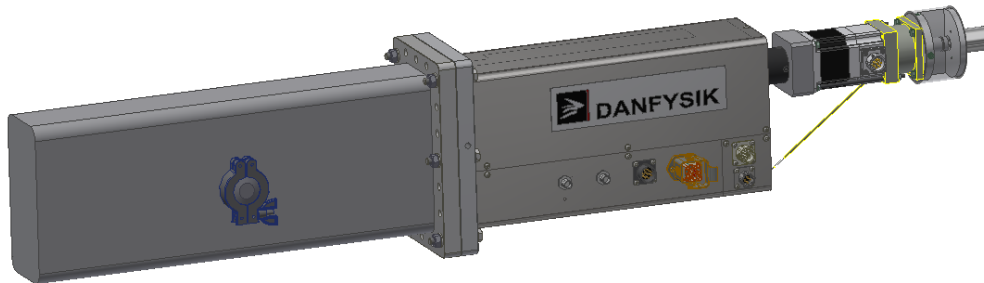


Figure 5: Wire scanner assembly finished