



# **Mechanics and Machines, HW CAD ASM 2**

Complex Assembly

# Short Task Description



## Description:

1. Make CAD models of needed files
2. Make the assembly, using right naming conventions.
3. Produce a video with disassembling the unit.
4. Generate **Bill of Materials (BOM)**.

## Artifacts:

- Zip archive with NX detail files (.prt)
- BOM in pdf format (.pdf)

# Extended Task Description

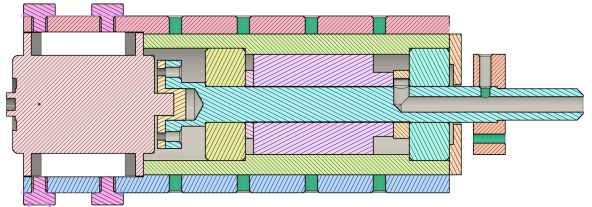
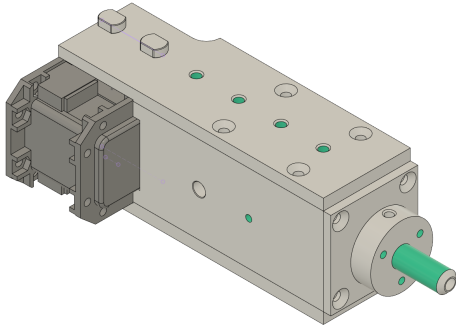


**Assembly designation:** MAM2023.01

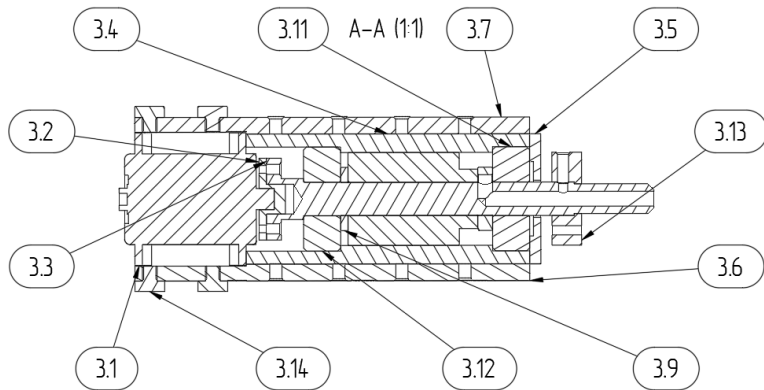
**Zip archive, which contains all needed data:** [link](#)

1. Make an assembly using naming conventions. It is based on the blueprint. You should be aware:
  - To rename details with wrong names;
  - Some of them you did on previous HW;
  - Some of them have only drawings, others — (.step) file;
  - You should have at least one subassembly;
  - You should use «Top-Down» approach (at least one detail should contains «Wave» technology).
2. Add correct material for each detail.
3. Add screws, nuts and bearings, using [Common Parts Library](#). *Tip:* you should use these types of screws: *DIN 912* and *DIN 7991*
4. Make a video of disassembling, using *Assemblies* → *Sequence* application. It should look like a real disassembling.
5. Generate BOM + calculate the general amount of common parts (CP) for overall assembly.

## General view + Section View



# Assembly drawing



Item	Qty	Part Number
3	1	Cad_model
3.1	1	MX-28T_R v1
3.2	1	Disk
3.3	1	Shaft
3.4	1	Shaft box
3.5	1	Shaft cap
3.6	1	Plate down
3.7	1	Plate
3.8	1	Current collector
3.9	1	Spacer
3.10	1	Spacer with a hole
3.11	1	Bearing
3.12	1	Bearing (1)
3.13	1	Disk lapka
3.14	4	Pipka

# Deserve "A" grade!

– Oleg Bulichev

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📍 @Lupasic

🏢 Room 105 (Underground robotics lab)