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REVERSIBLE ENGINEERING OF THE PRODUCT "MOBILE PHONE HOLDER FOR CAR,, - CASE STUDY

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**Partnership for Promotion and Popularization of Electrical Mobility through
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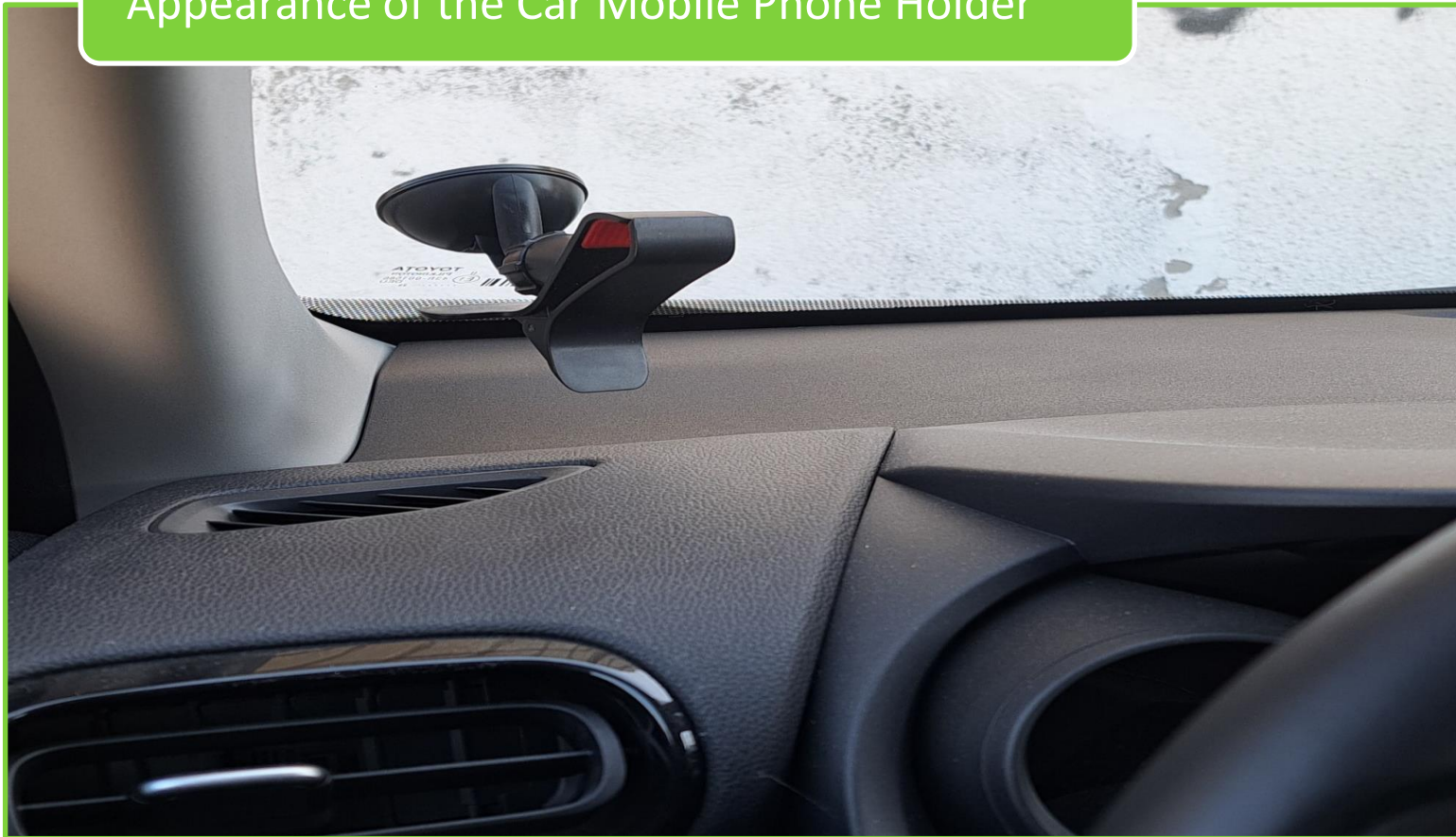
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CASE STUDY

Factory will produce „Mobile Phone Holder for Car“. It is necessary to take one mobile phone holder produced by a competing factory and use the method of reversible engineering to make technical documentation of the mobile phone holder.

Appearance of the Car Mobile Phone Holder



Appearance of the Car Mobile Phone Holder

It is necessary to disassemble the "Car Mobile Phone Holder" to see what parts it consists of



Disassembling the product into parts





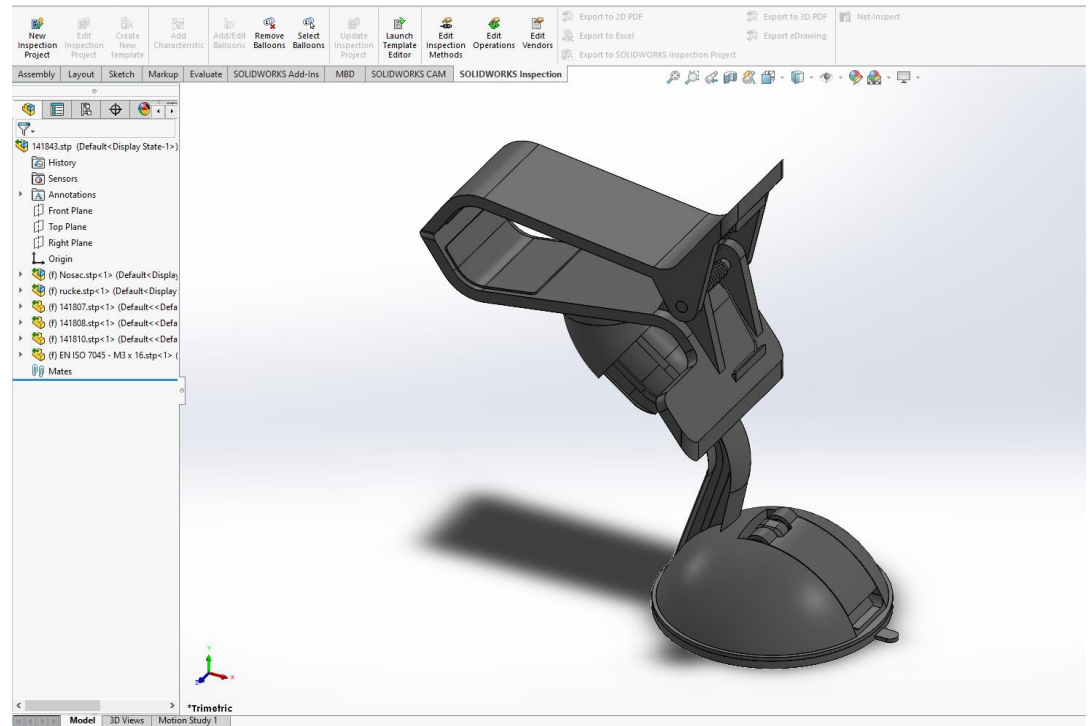
Product Parts Analysis

- Now it is necessary to measure each part to get the shape and dimensions of the part.
- Parts that have complex shape must be scanned with a 3D scanner to obtain their shape and dimensions.
- For each part should be determined the material.

3D modeliranje dijelova

It is necessary to make virtual three-dimensional models of all parts of the product using 3D modeling software

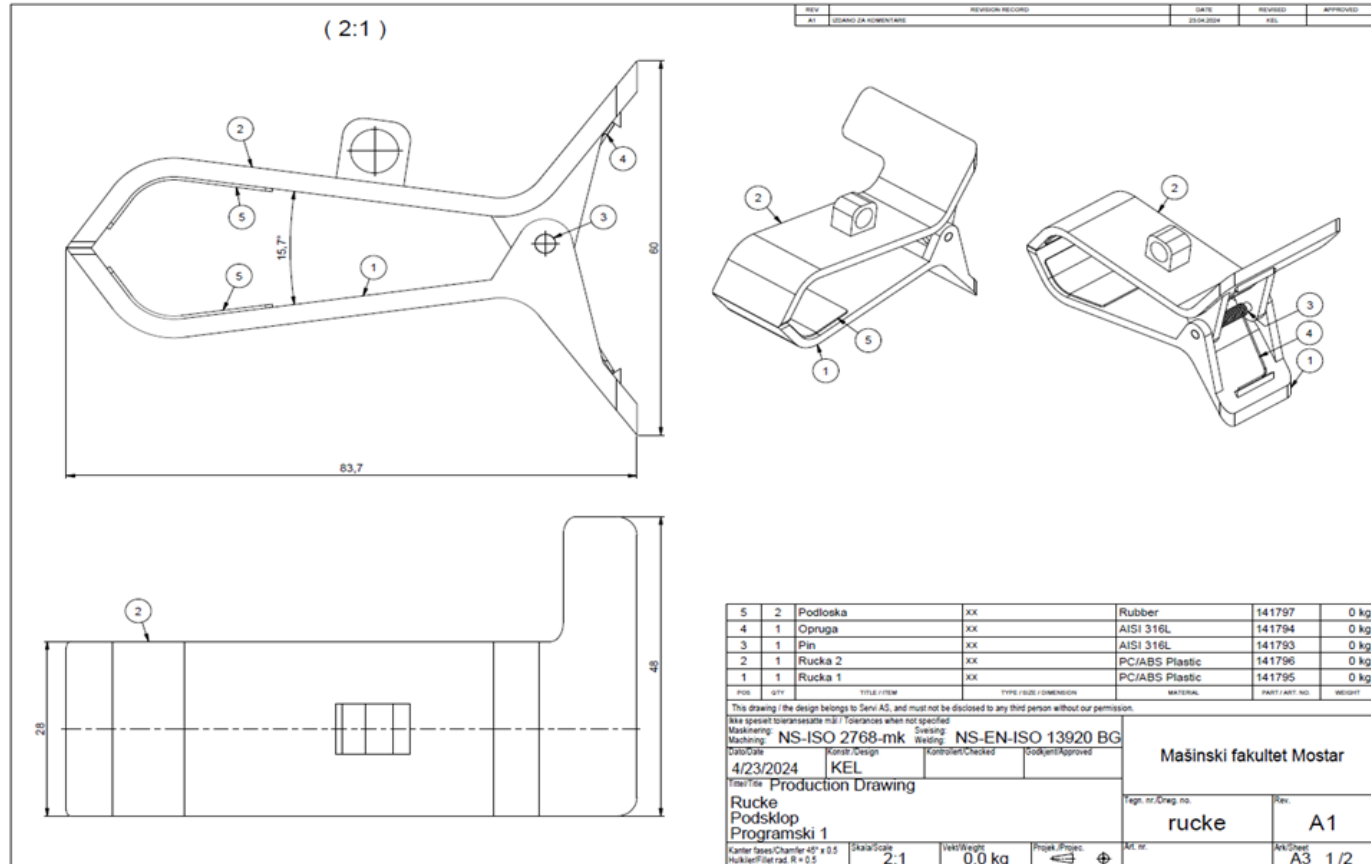
Then, the 3D models of the parts are assembled into the product and we get a 3D model of the whole product.



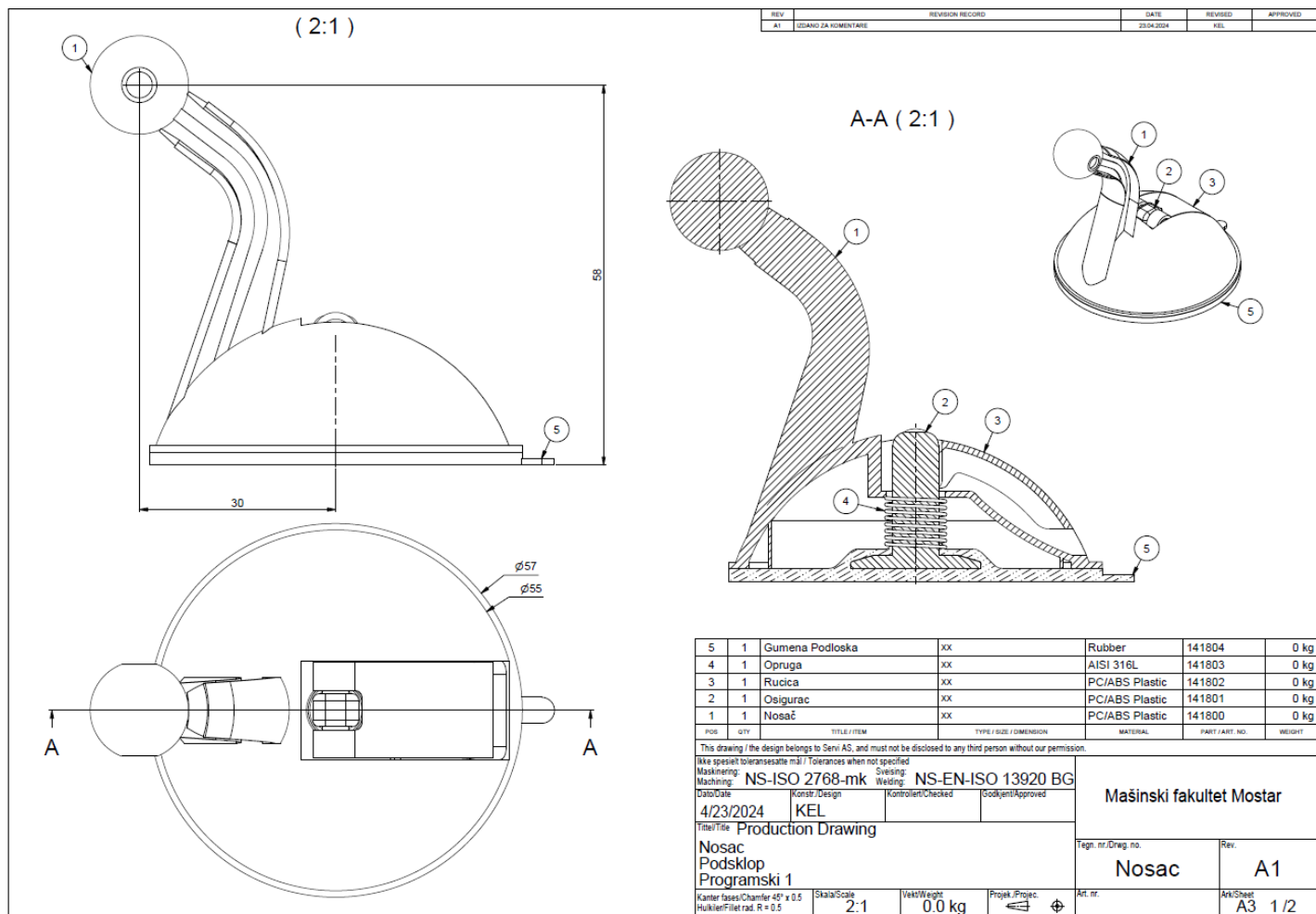
Preparation of technical documentation of the product

- We make a technical drawing using a 3D model of each individual part.
- It is necessary to make technical drawings of all non-standard parts.
- Standard parts are easy to get (bolts, nuts, belt, pulley, wedge, etc.). They are purchased ready-made and most often do not need to be produced. (Make or buy decision).
- The drawings of the parts must indicate all the projections that are required, dimensions, cross-sections, details and other information that uniquely defines the part.

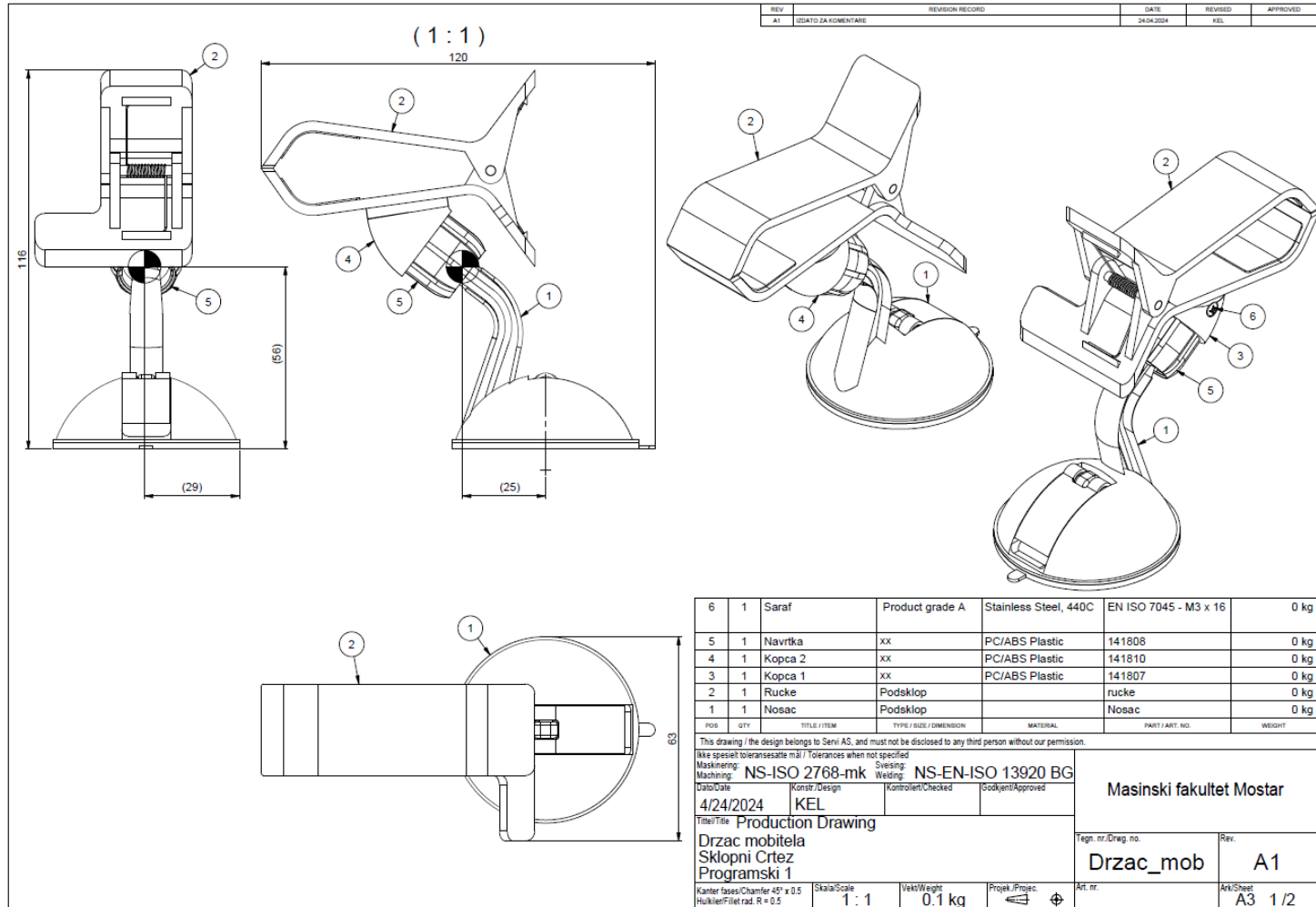
Part and assembly drawings



Drawings and assembly drawings



The drawing of whole product



Technological processes for the parts making



When we have the drawings of all the non-standard parts, we go to the design of the technological processes of making the parts. Most of the parts are made of plastic, so the manufacture will be done by the plastic injection molding process.



It is necessary to construct tools for plastic injection molding, molds and calculate all manufacturing regimes.



The **organization of the parts' production** and assembly of finished products must be carried out, if the factory is going to produce many these products.