Designing a new dispenser for centrefeed microfibre cleaning towel rolls

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Vileda Professional, a company designing, producing and selling cleaning supplies to professionals were in need of a new dispenser design for their SafePlus Maxi microfibre towel rolls. The old dispenser was made for a different kind of roll and did not look like the current style of the Vileda Professional products, and Vileda wanted a dispenser with smart functions, to set it apart from the rest of the dispensers on the market.

To design a great concept the first step is to do research and analysis on what the product has to achieve, who will be affected by the product and other restraints and possibilities. To do this multiple different aspects were looked into. These included a style analysis, analysing the market offerings and stakeholders. Also some of the stakeholders were interviewed whereafter scenarios were written. To finish up this phase research was done into how to design a hygienic product and if any legislation or guidelines applied to towel dispensers. All of this was compiled into a list of requirements which could then be used to design a concept to present to Vileda.

Figure 1: Safeplus Duo Concept

The design process started by making sketches to ideate on the look of the final product. Further continuing on this, ideation was done on the functions of the dispenser, and how these functions could be implemented. After this, the material and production processes that should be used for the dispenser were confirmed. The smart features were worked out further, however while doing this it became clear that with Vileda's business model for this type of dispenser it does not make sense to develop a complex smart dispenser, as the dispensers are being given away for free with a contract to buy the Vileda towels. This is why it was decided that a more simple and cheaper approach to the dispenser was a better option. The new dispenser should still stand out from the rest of the dispensers on the market, even if it is not using any electronics.

Figure 2: Two dispensers next to each other, the left one having two rolls, the second one missing the extra roll which is being signalled with the rectangular red panel being visible

The main defining feature is that the new dispenser concept has place for two rolls of towels. This makes sure that when the roll of towel runs out, the other roll can be used instead. The housing of the dispenser is made out of transparent polypropylene. This way it is easy to see the product inside the dispenser, and if there is space inside the dispenser and that it should be refilled. This is made even more clear because there is a contrasting colour behind the towel rolls which becomes visible when the space for the roll is empty.

The dispenser can be mounted in two ways, with the opening up or with the opening down. This ensure maximum flexibility for this dispenser to fit into any space it has to be used in. The dispenser also uses a few parts from another Vileda dispenser, to save on production and development costs. The whole product is designed to be injection moulded, with the parts having draft angles and easy to manufacture features.

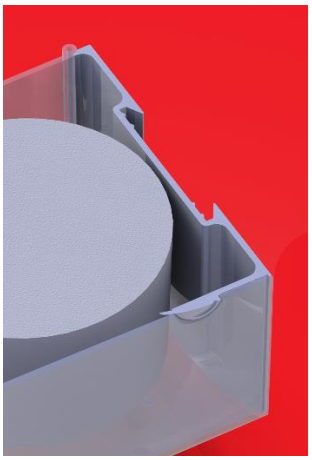

Figure 3: Cross section of the dispenser; top left the hinge can be seen, in the middle the mounting system, bottom left the small locating step and the latch

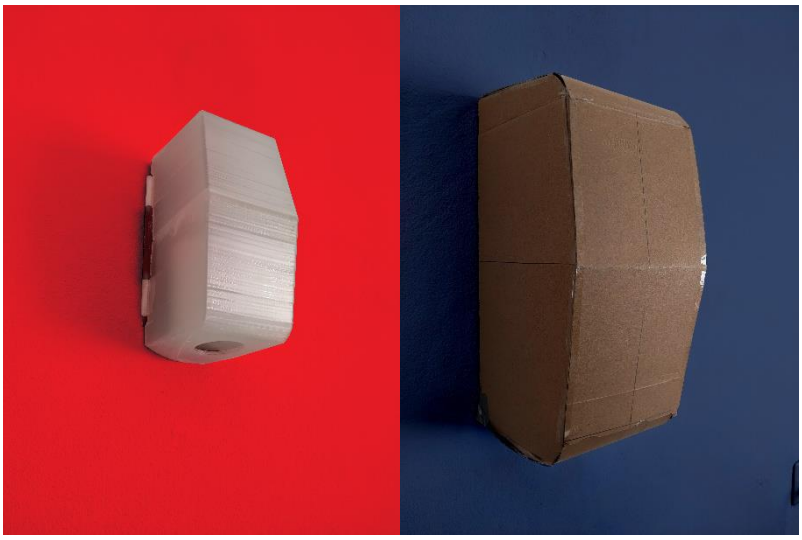

Figure 4: The two prototypes, left the 3D printed scale model, right the cardboard model.

To finetune the concept's shape, dimensions and features two prototypes were made. One being a 3D printed scale model, which helped in changing some of the features of the concept, for example making it close better and redesigning the shape to be more slim and elegant. After this a cardboard model showed of the dimensions in true size, and showed that the dimensions could be made even tighter, after test fitting the rolls. The end product is a lot less bulky looking and will work better.

The final concept is now ready to be developed further for production by Vileda Professional, based on the findings and ideas in this project.