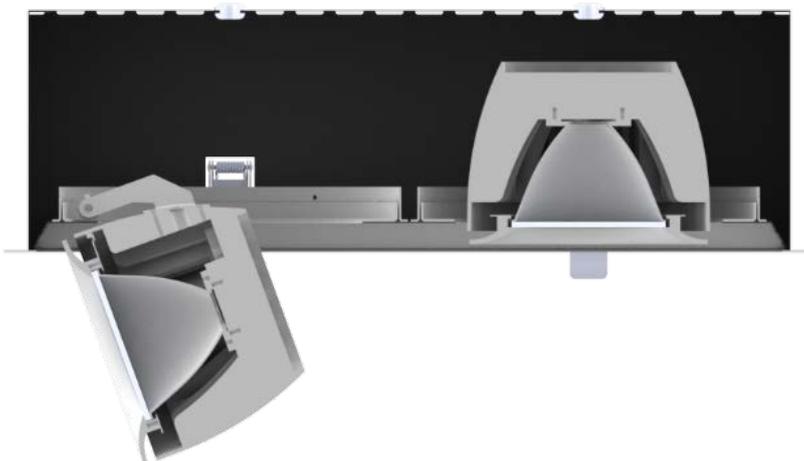
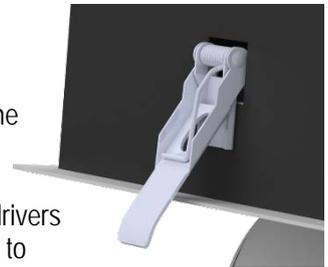


## Development process of the DS-AT

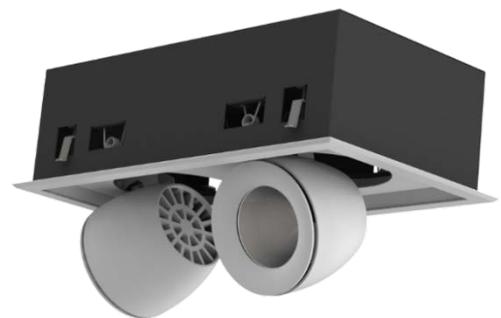
The idea of the DS-AT emerged when we decided we need to add a new downlight and a double downlight to our product range, to keep providing our clients with new and innovative products. Our R&D department started to design this double downlight. After finishing the design and technical drawings, we asked one of our foreign partners to produce the parts for a product sample. It all looked very promising, so we decided to add these products to our catalogue. When we received the samples we started our test phase. We soon discovered the design did not meet our high standard. Through slits in the armature, it was possible to look into the ceiling. Therefore our R&D department started to work on a solution for this problem. They placed a box around armature, making it impossible to watch into the ceiling. Again they ordered a prototype.



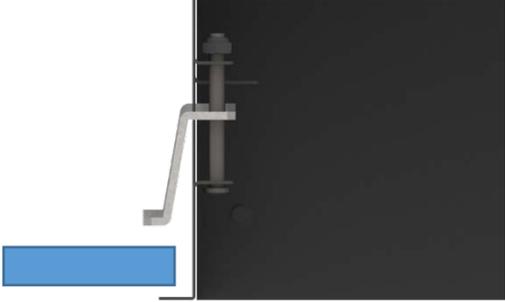
This prototype was also tested. It was a safe and solid solution. However, it still did not meet our quality standards. During testing we discovered that it was very hard to mount this product into a ceiling. The prototype was built with 4 wire springs on the outside of the box. Firstly, these wire springs were very rigid and secondly, every spring needed one hand to hold it back while installing. Installing the armature would require at least two persons. Once the box was installed in the ceiling, we discovered another problem. The drivers needed to be connected in a very limited space. The person installing the products need to move his hand into the spot opening and then connect the cables.



The design looked nice and could have been used for production. However, we decided that this is not something we want to offer our clients. This meant we needed to start from scratch. We needed to design a different type of installation system for this product. First of all, the box and front plate are separated now. You first need to place the box in the ceiling. We have replaced the four wire springs with four screw clamps.



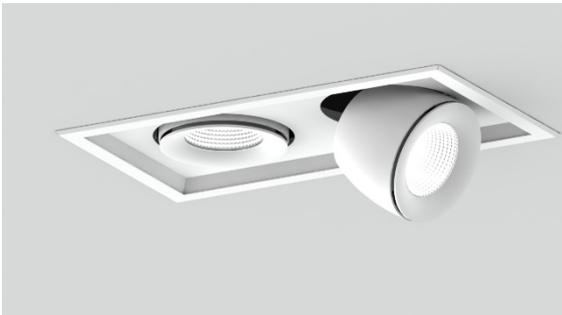
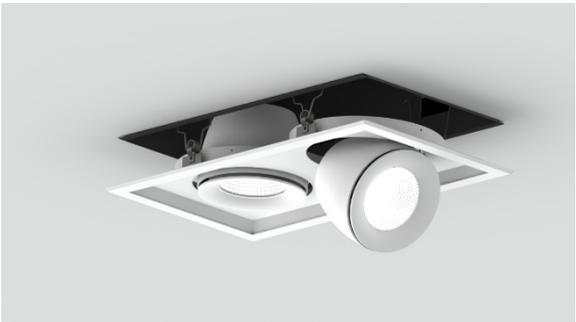
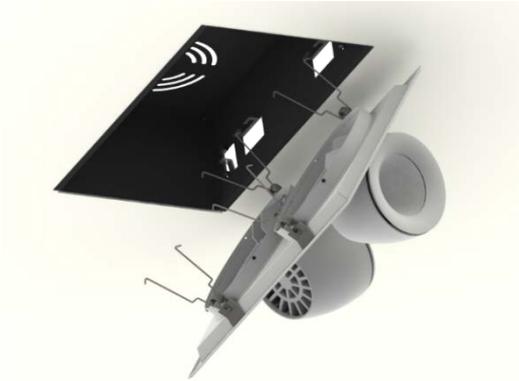
On the right side of this text block you will see the box. The main advantage of this installation system is that it requires only 1 person and it is easy to install. This box has the drivers placed inside, which makes it easier to place a driver and if needed, replace. The box is clamped into a ceiling by swiveling out the four clamping arms. It is possible to tighten the clamping arms by using a screwdriver.



The front plate is now built with 4 spring clips. It ensures that there are no visible screws or other technical mounting systems. Below this text block you will see visuals of the new installation system. They are flexible and easy to position.



When the front panel is hanging on the box, like you can see in the visual below, the person installing this product can easily install the electrics needed. This installation system offers enough space to install comfortably. When finished, you can snap in the remaining wire springs. You can see the thickness of the front plate, which is a couple of millimeters, because the plate is mounted on the surface of a ceiling.



## Development process of the DS-A

For the DS-A we went through the exact same process as written above. We went from a cylindrical box to a trapezoidal box.



## Further planning and future timeline

We now finished the design and ordered the tooling. This is a custom made installation system, which takes more time to produce. We expect the tooling to be delivered in March. We then start our testing phase again to judge whether or not the toolings are ready for production. If so, we start producing the first spots in April. Altogether, the spots should be ready for sale by June.

We count on your understanding for this matter. We chose to improve the product so it will meet our quality standards. Our sincere apologies for the inconvenience the delay of this product may have cost you.