

## **Supplementary file S2**

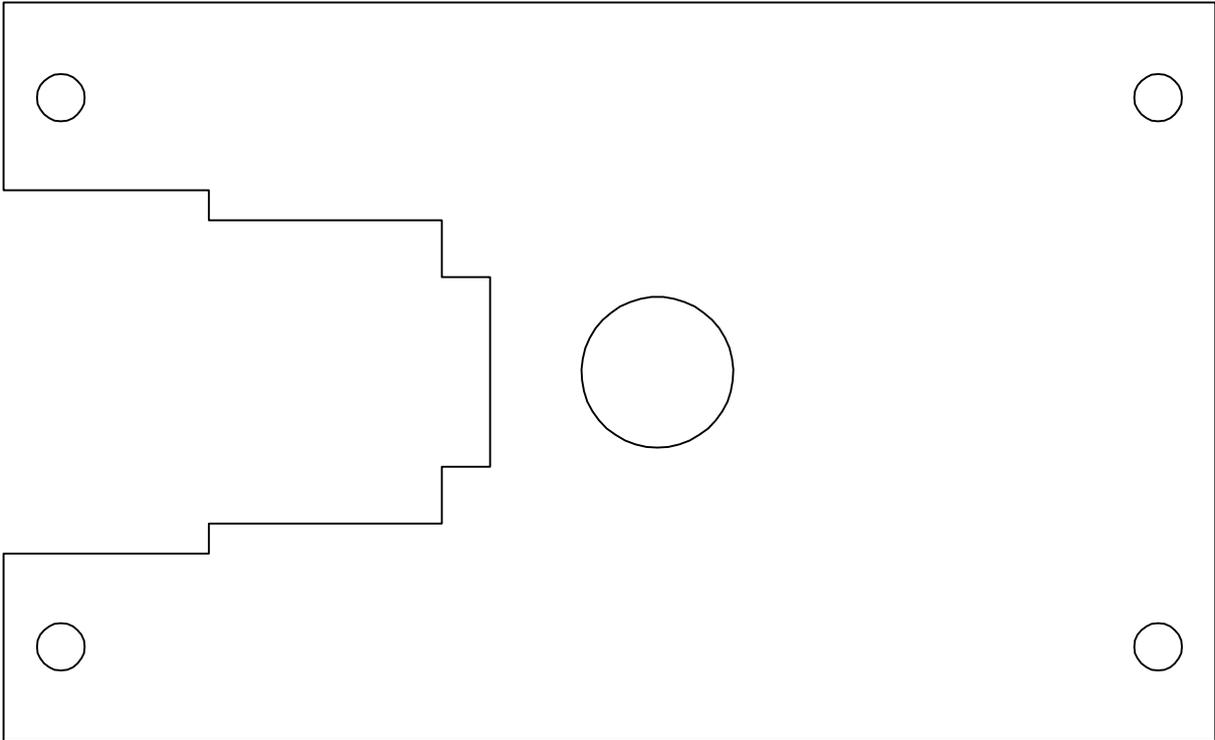
Contains technical drawings of needle carriers used in the measurements. The drawings are given as separate files in .dxf format that can be read with CAD software. Illustrations of the carriers are given also in this pdf document.

There are five different carriers:

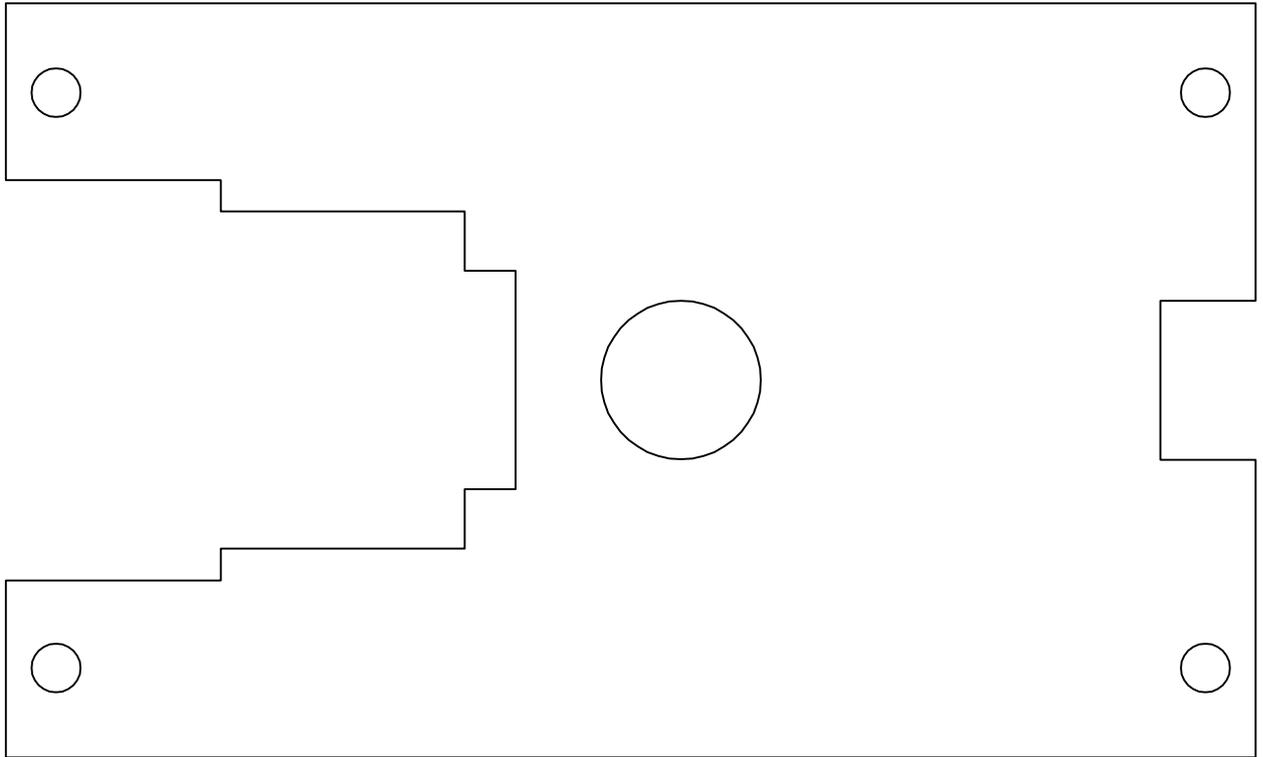
1. Carrier for ASD RTS-3ZC single sphere (type 1, side A)
2. Carrier for ASD RTS-3ZC single sphere (type 1, side B)
3. Carrier for ASD RTS-3ZC single sphere (type 2, side A)
4. Carrier for ASD RTS-3ZC single sphere (type 2, side B)
5. Carrier for OceanOptics SpectroClip-TR double sphere

In ASD RTS-3ZC, type 2 carrier is used in sphere port B, which is slightly different in geometry compared to the other ports (see the measurement protocols and illustrations of carrier configurations in the supplementary file 1 of the article). Type 1 carrier is used in all other ports. Each of the ASD RTS-3ZC carriers has sides A and B. The side B is slightly smaller in dimensions, to ensure that the carriers fit in the sphere structures smoothly. The carrier for SpectroClip-TR is similar on both sides.

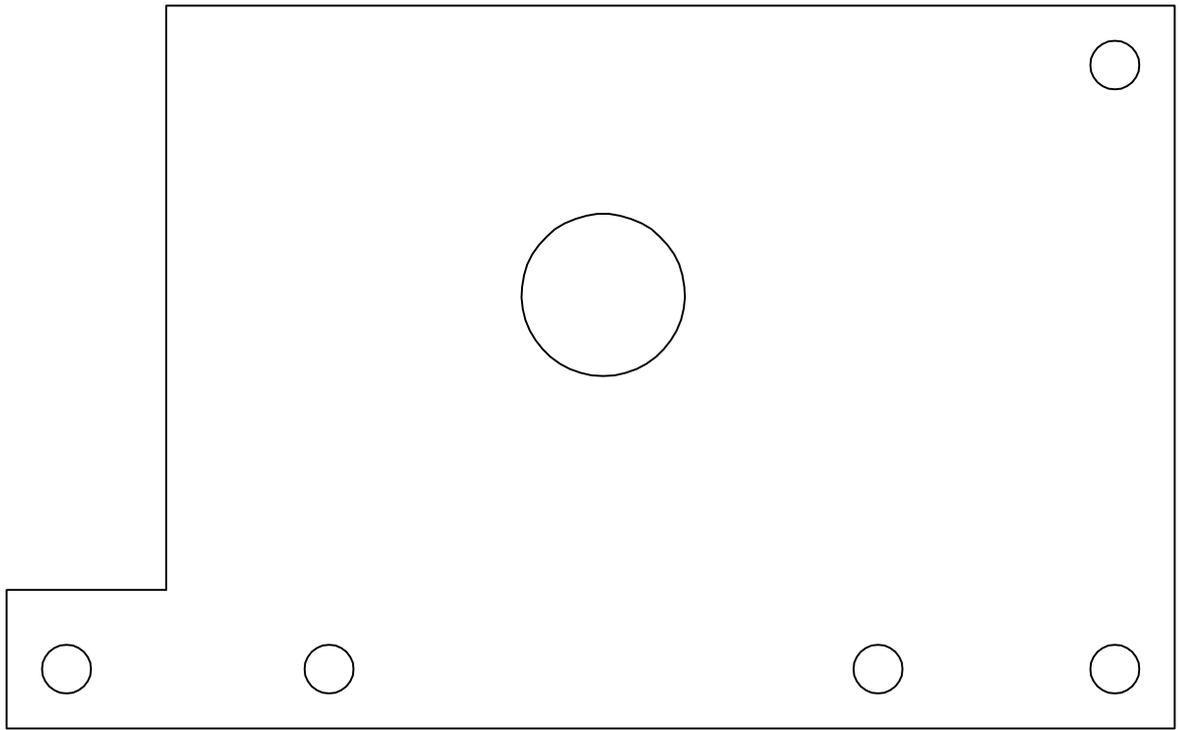
1. Carrier for ASD RTS-3ZC single sphere (type 1, side A)



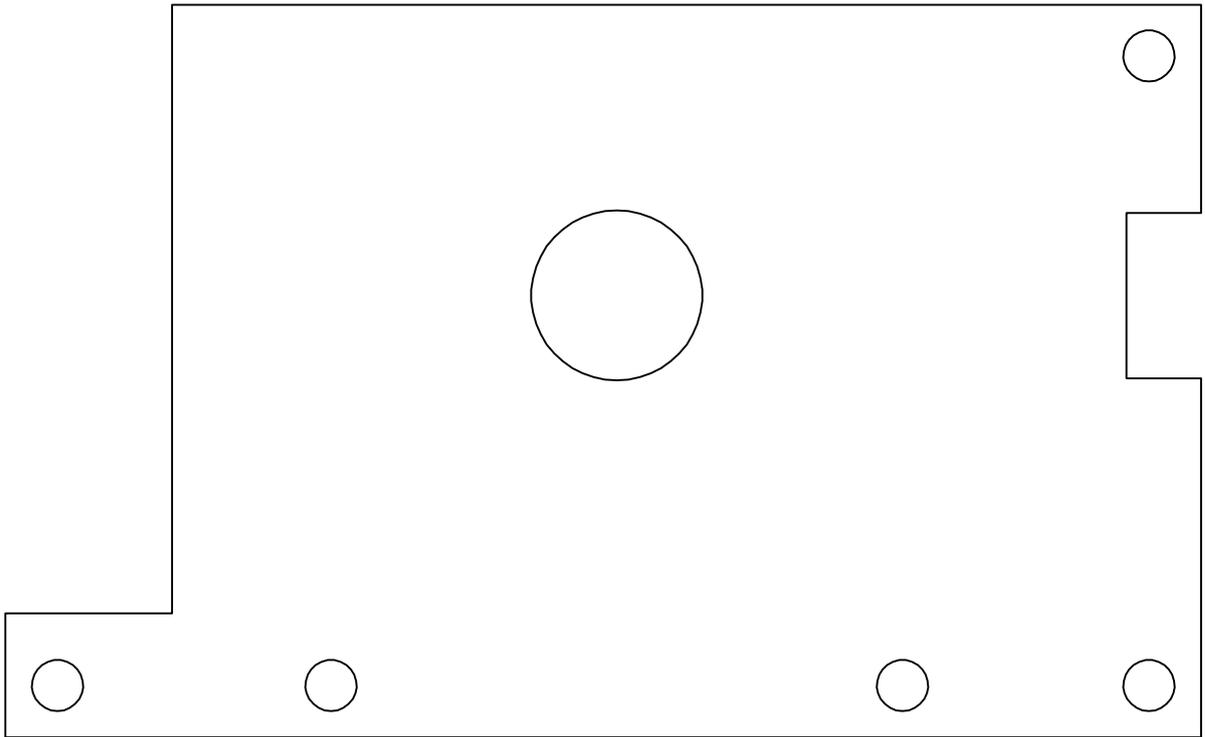
2. Carrier for ASD RTS-3ZC single sphere (type 1, side B)



3. Carrier for ASD RTS-3ZC single sphere (type 2, side A)



4. Carrier for ASD RTS-3ZC single sphere (type 2, side B)



5. Carrier for OceanOptics SpectroClip-TR double sphere

