

## *H301-UP*

### Compatible with the following XY stages

- XY stage model and serial number must be specified in purchase order.

### Compatible with the following Okolab Controllers

- H301-T-BL-PLUS
- UNO-COMBINED-CONTROLLER
- H401-T-DUAL

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## 1. Components and dimensions

H301-UP includes the following components:

- Chamber base with embedded temperature sensor
- Chamber body, it owns 12 holes for the insertion of perfusion tubing up to 2.0 mm
- Objective adapter, the dimension and type of objective in use must be specified in the purchase order.
- Holder, the type of stage on which the chamber will fit must be specified in the purchase order.
- Heated Lid, it features a hinge system allowing to open and close the Lid surrounding the objective.
- Total chamber weight, 170g.

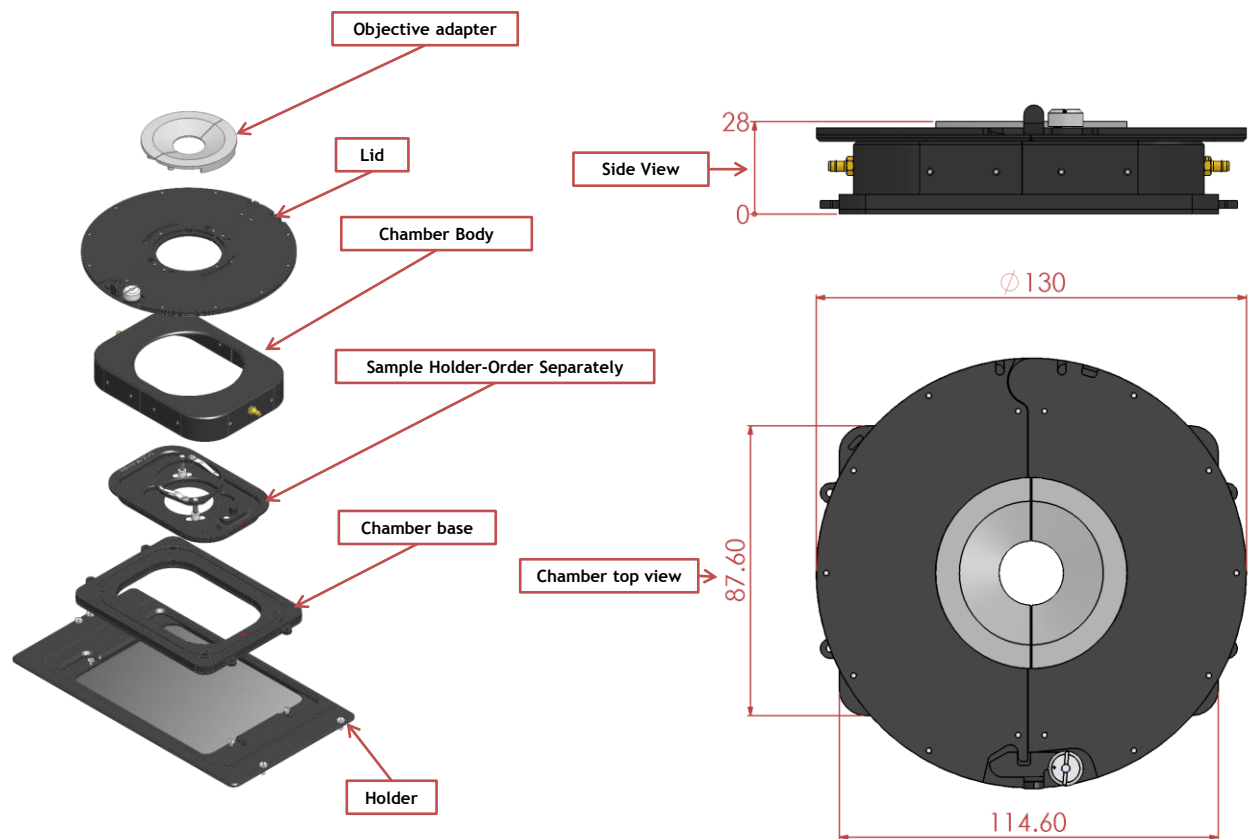


Figure 1. H301 UP Components and Dimensions.

## 2. Sample Holders

### 2.1 Available Sample Holders

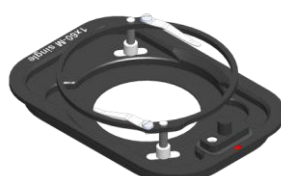
The following sample holders are available.

**NOTE:** Please contact [info@oko-lab.com](mailto:info@oko-lab.com) if you cannot find the sample holder you are looking for. We are constantly adding new inserts to the list.

|                  |   |
|------------------|---|
| UP-1x35-M        | #1 35mm Petri-dish                            |
| UP-14xGS-M       | #1 1x3in. chamber slide                       |
| UP-1xLABTEK-M    | #1 Lab-Tek 1in.x2in. chambered cover glass    |
| UP-1xLABTEK-II-M | #1 Lab-Tek II 1in.x2in. chambered cover glass |
| UP-1x60-M        | #1 60mm Petri-dish                            |



UP-1x35-M  
For #1 35mm Petri-dish holder



UP-1x60-M  
For #1 60mm Petri-dish holder



UP-1xGS-M  
For #1 1"x3" chamber slide holders



UP-1xLABTEK-M  
For #1 1"x2" Labtek  
chambered cover glass holder



UP-1xLABTEK-II-M  
For #1 1"x3" chamber slide and  
#2 35mm petri dishes

Figure 2. Available sample holders.

### 3. Insertion of the Sample Feedback Temperature Sensor

Insert the Sample Feedback Temperature Sensor through the dedicated opening located in the H301-UP main body (see Figure 3, Frontal and 3D views).

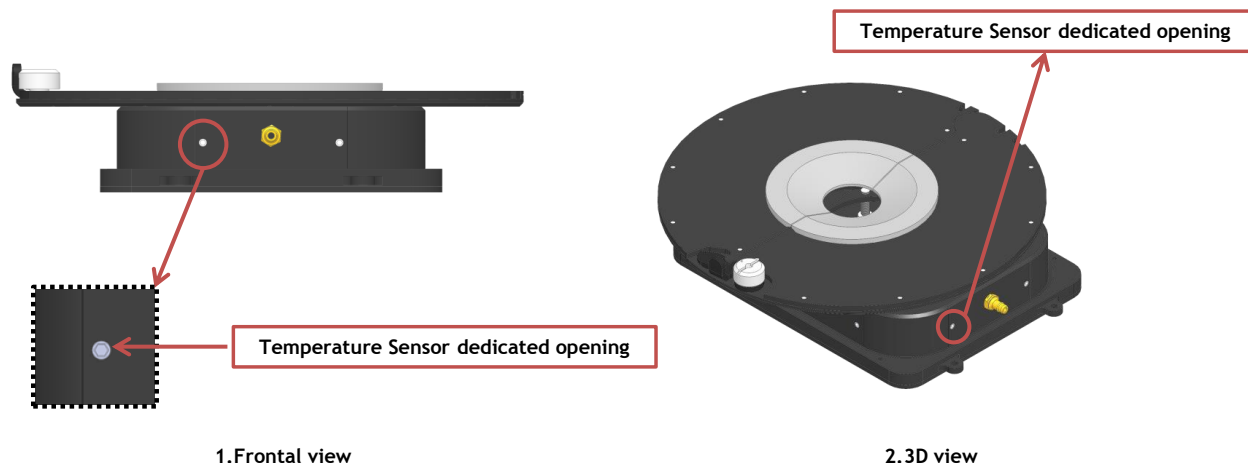


Figure 3. Insertion of the temperature sensor inside the chamber.

### 4. Insertion of Sample Holder into Chamber

Sample holders fit into the chamber base and are held in place by magnets embedded within both on the chamber and on the holder. To introduce a sample holder with the proper orientation, match the red dot on the holder to the one on the chamber base, as illustrated in Figure 4.

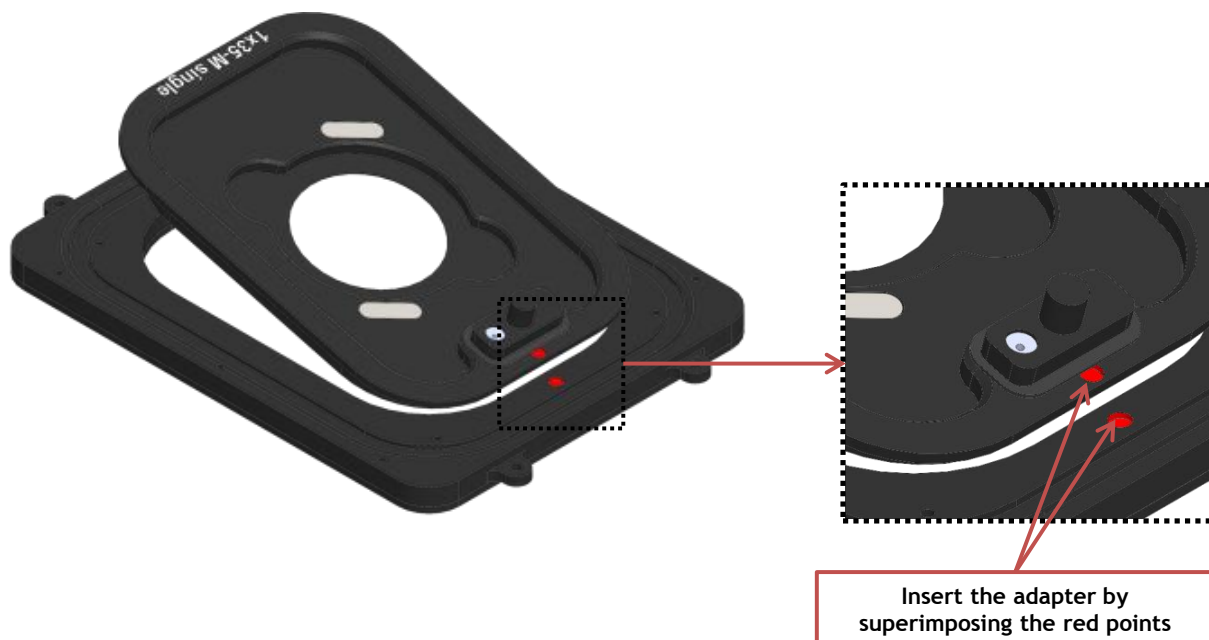


Figure 4. Introduction of the Specimen Holder inside the Chamber Base.

If you want to change the sample holder follow the steps shown in the images of Figure 5 and listed below:

1. Open the lock spring, as shown in Figure 5 Image 2
2. Open the chamber lid as shown in Figure 5 Image 3

3. Remove the chamber lid by lifting it from the workspace, as shown in Figure 5 Image 4
4. Remove the chamber by lifting it from workspace, as shown in Figure 5 Images 5 and 6
5. Lift and replace the sample holder, as shown in Figure 5 Image 8

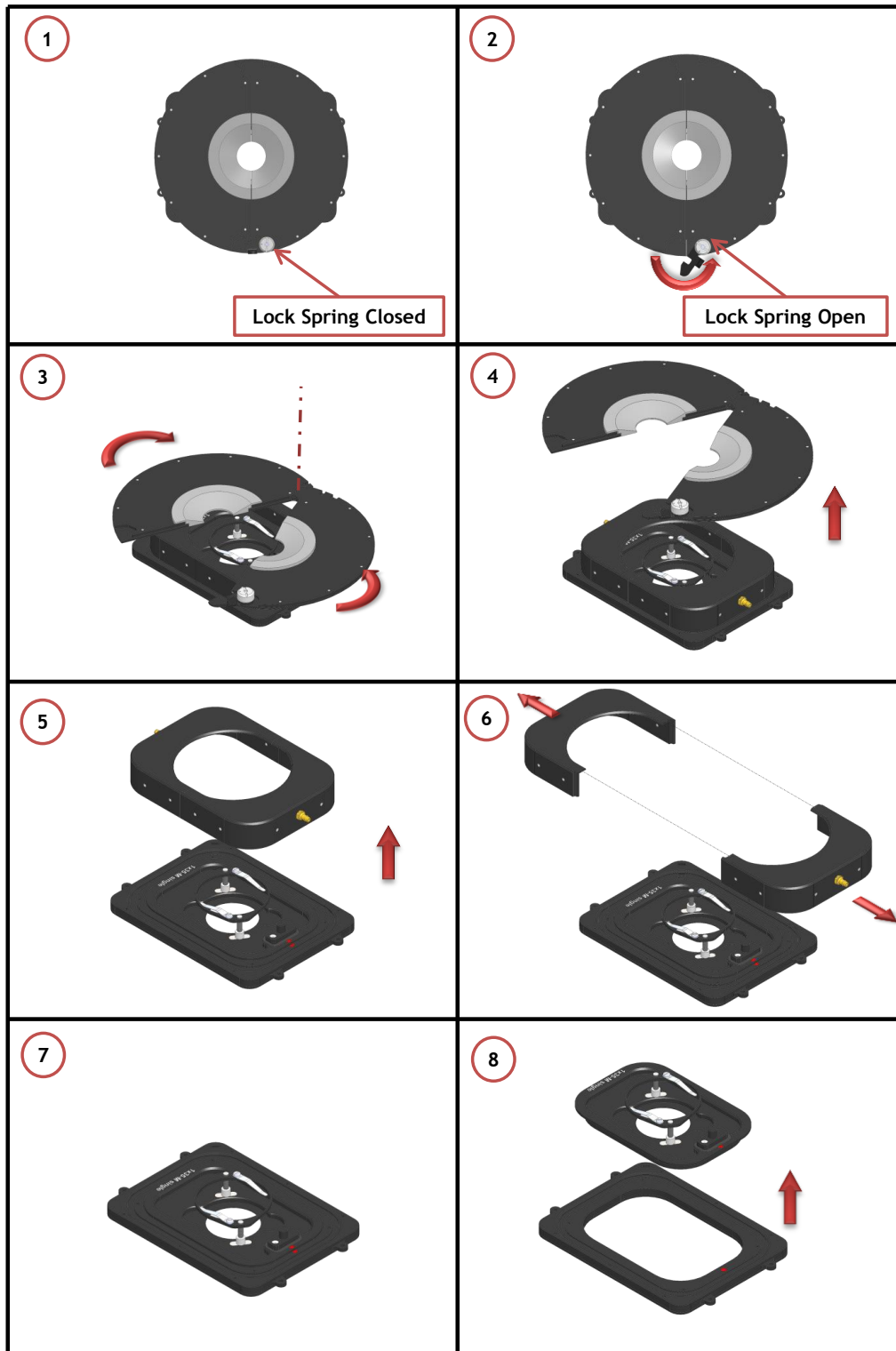


Figure 5. Introduction of the Specimen Holder inside the Chamber Base.

## 5. Magnetic Locks

Magnetic locks prevent movement of 35 and 60 mm dishes inside the sample holder.

Figure 6 illustrates the available magnetic locks for 35 and 60 mm dishes. Threaded magnetic posts allow adjusting holder's height.

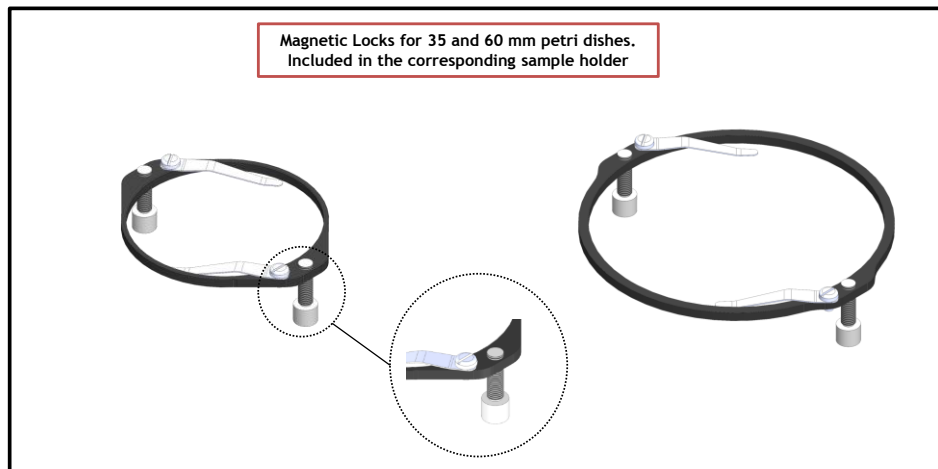


Figure 6. Magnetic locks for 35 and 60 mm dish

**NOTE:** Magnetic locks are included with sample holder.

Spacing rings with variable diameter are also included in according to the needs of the user. Figure 7 shows how to position the ring inside the sample holder. Ring selection guide diagrams: rings for 35 and 60 mm dishes -Figure 8 and Figure 9, respectively.

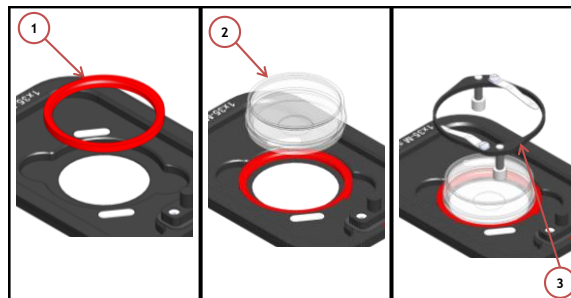


Figure 7. 1) Insertion of the ring, 2) insertion of the 35 mm dish, 3) insertion of the magnetic lock.

**NOTE:** Spacing rings are included with sample holder.

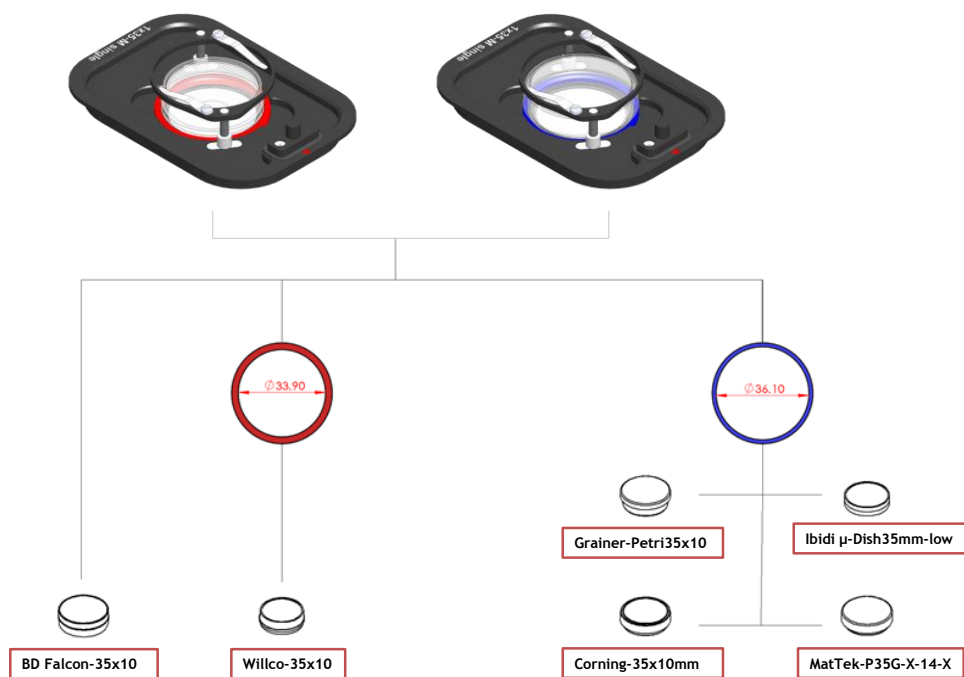


Figure 8. Ring selection scheme for 35 mm dish.

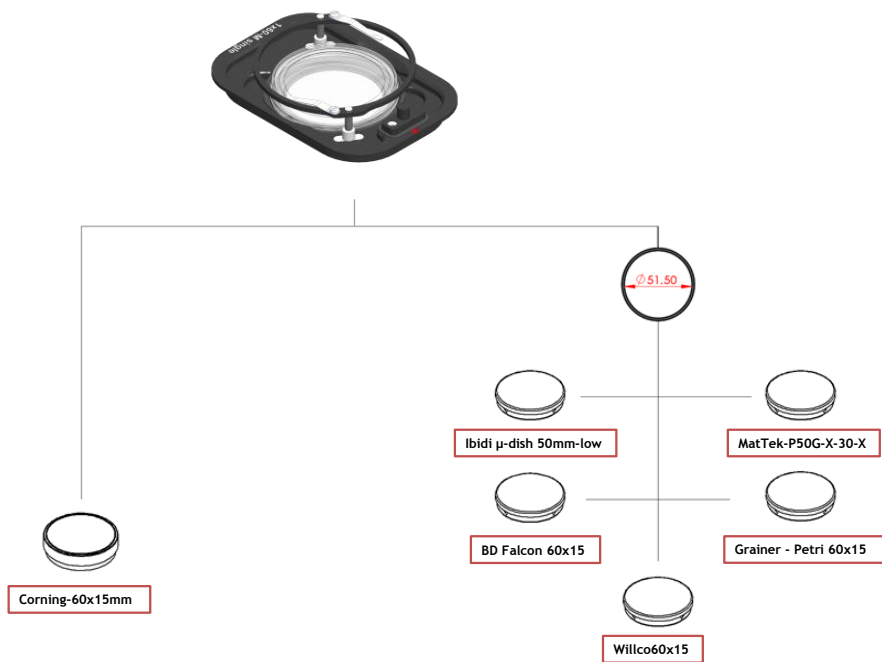


Figure 9. Ring selection scheme for 60 mm dish.



## 6. Working with 1x3'' and 1x2'' chamber slides - magnetic locks

Magnetic locks prevent movement of 1''x 3'' and 1''x 2'' chamber slides inside of the sample holder.

**NOTE:** Magnetic locks are included with sample holder.

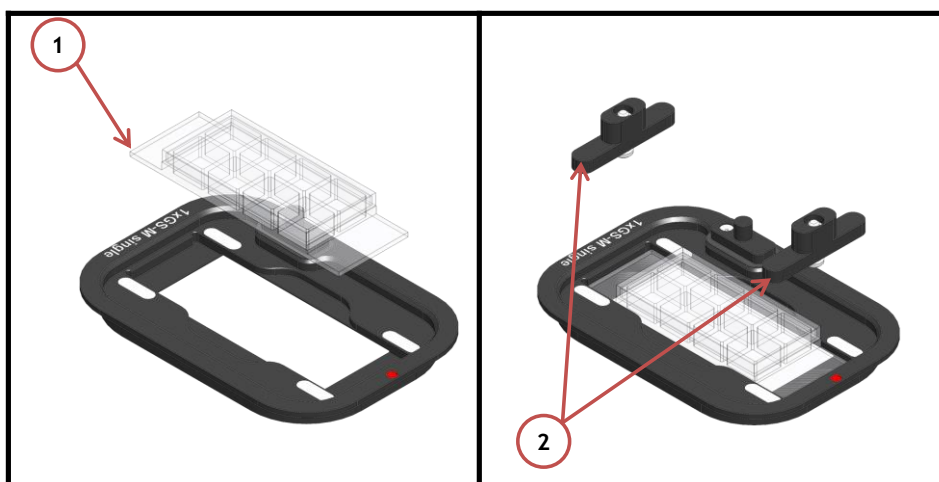


Figure 10. Magnetic lock for 1'' x 3'' chamber slide.

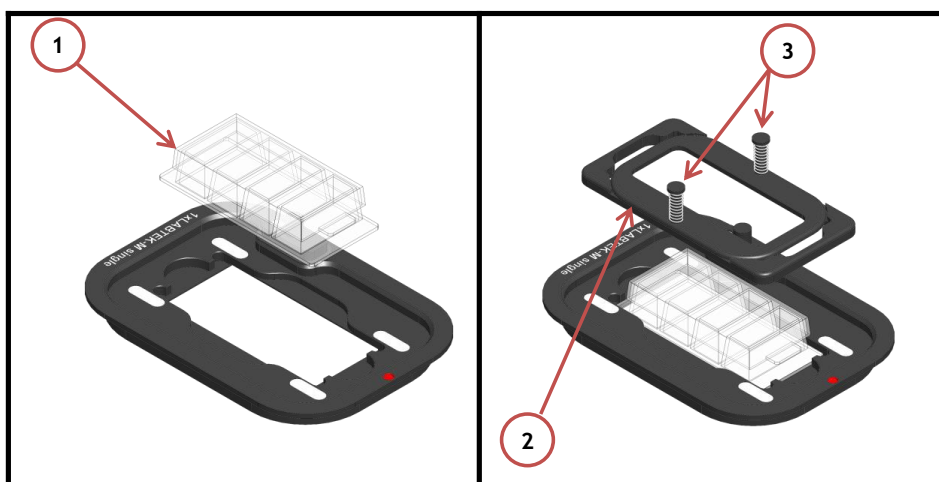


Figure 11. Magnetic lock for 1'' x 2'' chamber slide. To lock the slide, push simultaneously the buttons indicated with (3).

## 7. Connection of the Gas Supply

A single silicon tubing carries output gas from the Okolab Gas Controller to the H301-UP. Silicon tubing connects to a gas input - brass opening - located on a corner of the H301-UP. See Figure 12. Connect by gently pushing silicon tubing onto brass opening.

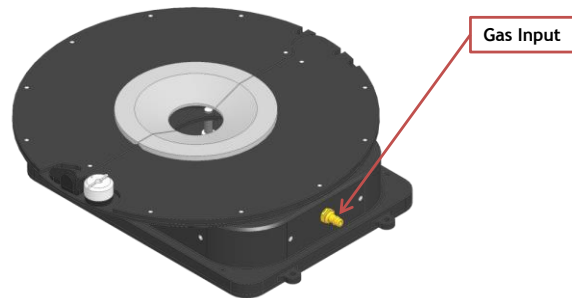


Figure 12. Connection with gas supply.

## 8. Working with Perfusion

The H301-UP features 12 perfusion holes on the sides for the insertion of perfusion tubing up to 2.0 mm in outer diameter. Small screws plug the perfusion holes when not in use. (Grub screws M3x6). Remove small screws as necessary before introducing perfusion tubing.

Figure 13 shows the location of perfusion holes.

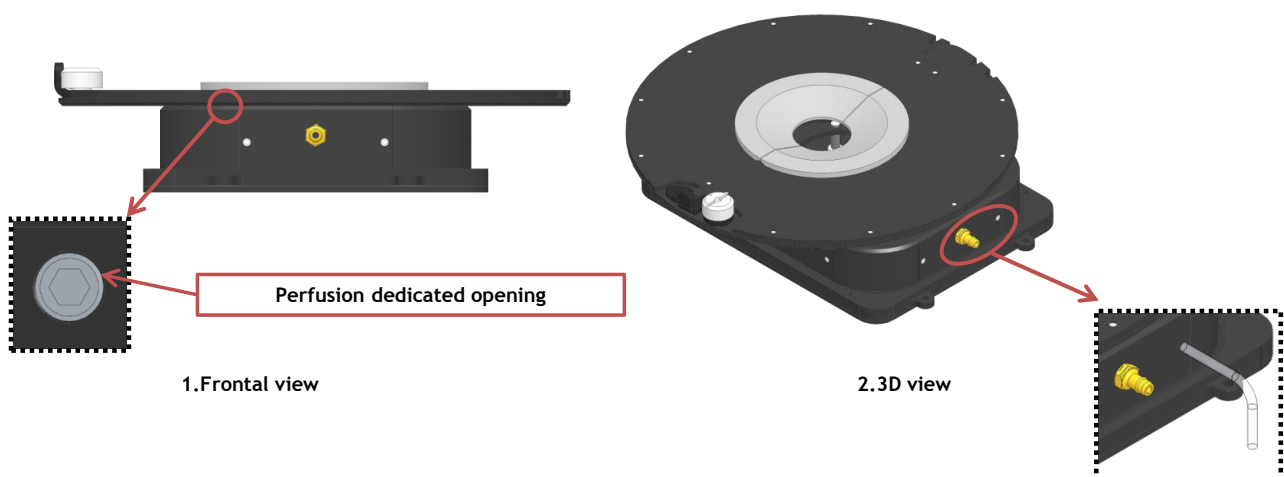


Figure 13. Perfusion

## 9. Connection of the Chamber with stage

H301-UP fits on the stage. To fix the chamber on the stage, follow the steps shown in Figure 14

1. Place the holder on the stage and fix it by the four pan head screws M2.5x6. The place of the pan screws is indicated by letter A. (See Figure 14 Image 1).
2. Place the chamber on the stage and fix it by the four pan head screws M2x4. The place pan screw is indicated by letter B. (See Figure 14 Image 2).

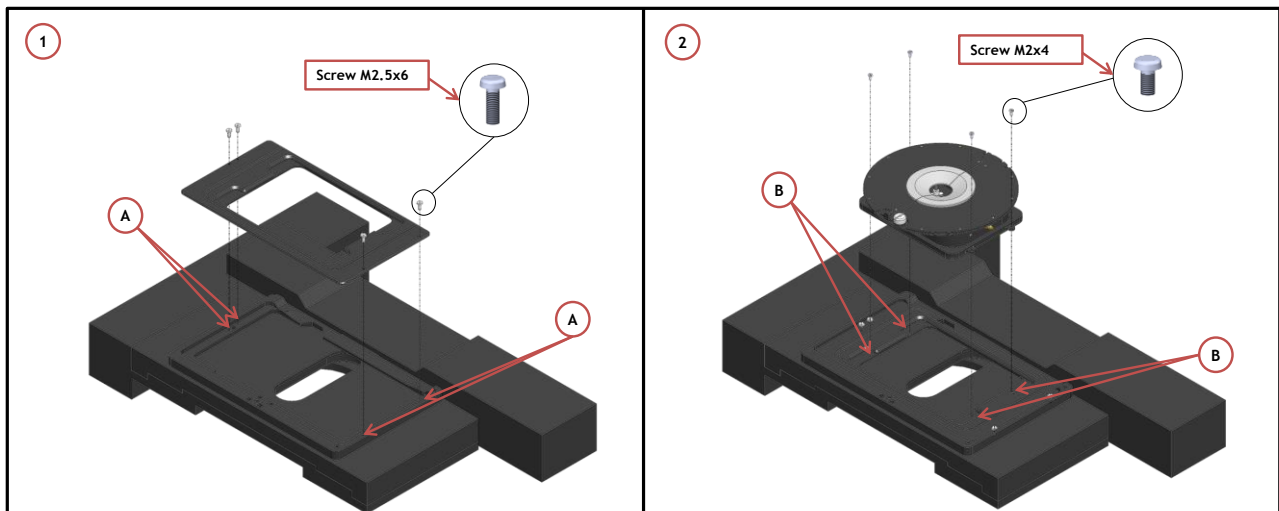


Figure 14. How to fix the H301-UP on the stage