

Flow Cell Replacement and Alignment

The KinExA® flow cell is a capillary tube with a 20 Micron screen. For information on choosing the right flow cell or to find out when to replace the flow cell see How to Guide 214 (HG214 Flow Cell Selection and Information). Proper flow cell alignment provides for optimal performance.

Flow Cell Replacement

- Route the clear entry line upwards through the O-ring (located on the top of the optics housing frame) and attach it to the bottom of the 4-way connector using a white ferrule (347016) with a 1/4-28 black nut (346001). (*Figure 1*)

Note: Refer to the end of the instructions if uncertain about how to correctly install a white ferrule and a tan ferrule.

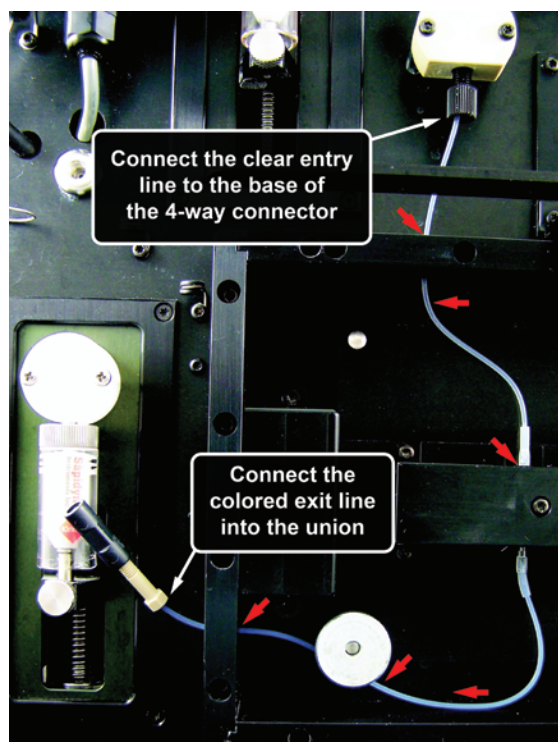


Figure 1. Installing a new flow cell into the instrument.

- Slide the colored exit line through the O-ring (located on the left side of the optics housing frame) and connect it into the bottom of the union using a 10-32 tan nut (346201) and a tan ferrule (347116). (*Figure 1*)
- Thoroughly clean the grooved lens, flow cell, and reflector mount with denatured alcohol and Kimwipes. Apply a thin layer of dielectric grease onto the grooved lens and the reflector before securing the flow cell with the retainer clip.

Flow Cell Alignment: 3000

- Using the KinExA alignment tool (021032), align the top of the filter, represented in green below, with the bottom of the alignment tool.
- Turn on the lamp. Ensure that the light from the lamp is aligned with the central notch in the alignment tool. If not, move the flow cell accordingly until the alignment is similar to that in *Figure 2*.

Note: Beads are not necessary for the alignment of the flow cell.

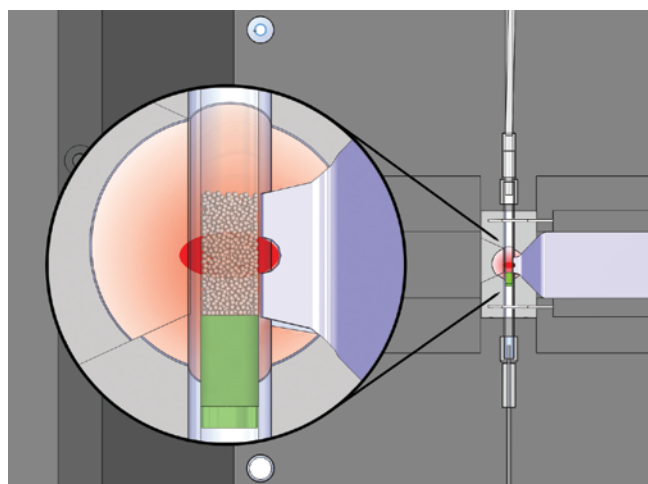


Figure 2. Proper alignment of the filter using the KinExA alignment tool and the lamp. (**Note:** The filter is not green, the color helps to see the alignment in the illustration.)

Flow Cell Alignment: 3200

- Align the top of the filter, represented in green below, with the notch in the optics housing as shown in **Figure 3**.
- Look at the camera image and fine tune the alignment so that the top of the filter is in line with the corner of the KinExA Technology logo. (**Figure 4**)

- If the camera image appears blurry or cloudy, wipe off the flow cell with a Kimwipe to remove any extra dielectric grease on the camera side of the flow cell. (Red circled area in **Figure 3**)

Note: The white ferrule slides onto the tubing with the tapered end toward the nut and the flared end toward the valve port. The tan ferrule slides onto the tubing with the tapered end toward the end of the tubing and the flat end toward the nut. When installing and tightening these fittings, be sure to push the tubing all of the way into the valve ports. (**Figures 5 and 6**)

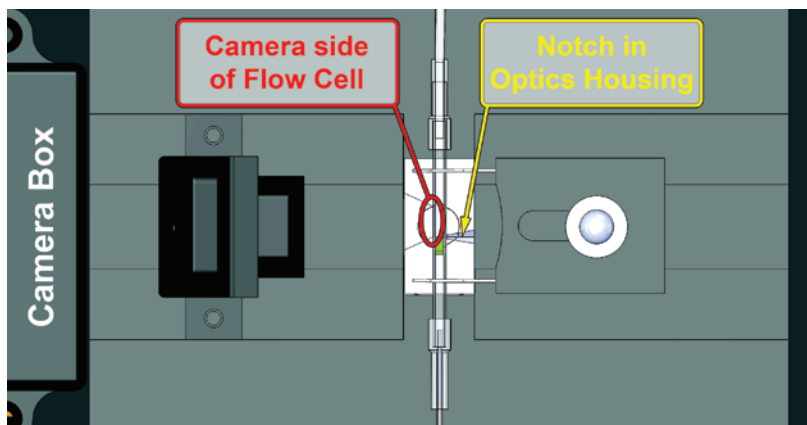


Figure 3. Proper alignment of the filter with the notch in the optics housing. Grease left on the camera side of the flow cell (red circle) can cause image to be blurry or cloudy. (**Note:** The filter is not green, the color helps to see the alignment in the illustration.)

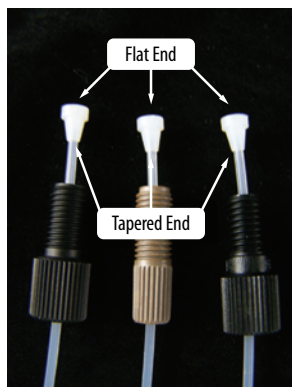


Figure 5. White ferrule with tapered end facing the nut.

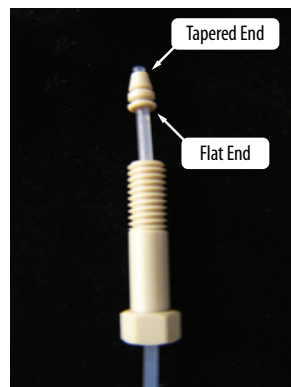


Figure 6. Tan ferrule with tapered end facing away from the nut.

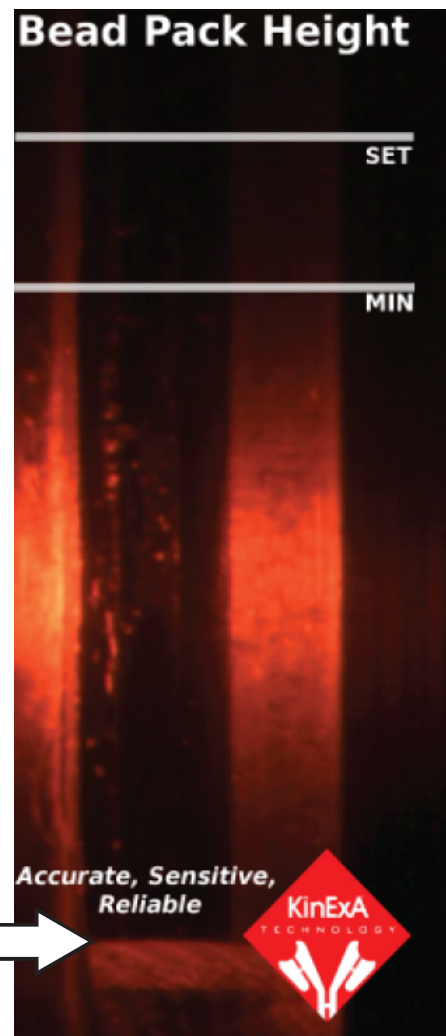


Figure 4. Camera image of a properly aligned flow cell.