

Flow Cell, Siliconized, with Exit and Entry Lines

If you have not read the **General Plumbing Instructions** for replacing plumbing parts on the KinExA® please do so now before continuing.

The following Parts and/or Tools are required to complete this installation:

- | | |
|---|--|
| [1] <i>Flow Cell, Siliconized, with Exit and Entry Lines</i> (392150) | [1] <i>1/4" Deep Socket</i> (015902) |
| [1] <i>Dielectric Grease</i> (231362) | [1] <i>15 in-oz Torque Wrench</i> (024140) |
| [1] <i>KinExA Alignment Tool</i> (021032) | |

- Replace the *Flow Cell* by opening the *Reflector Mount* and removing the old *Flow Cell* from the *Retaining Clip*. Once the *Flow Cell* is free, the *Clear Entry Line* can be removed from the base of the *4-Way Connector* and gently pulled down through the *O-Ring* (located on top of the *Optics Housing Frame*). Discard the *White Ferrule* but keep the *1/4"-28 Black Nut* to be reused.
- Remove the *Black Exit Line* from the *Union* on the side of the *Optics Housing Frame* and gently pull it through the *O-Ring* (located on the left side of the *Optics Housing Frame*). Keep the *10-32 Tan Nut* but discard the *Tan Ferrule*. The old *Flow Cell* should now be unattached and can be removed from the *Instrument*.

Note: The blue highlighting in the *Exit Line* has been added to the picture for clarification; the *Exit Line* you have been provided with is black.

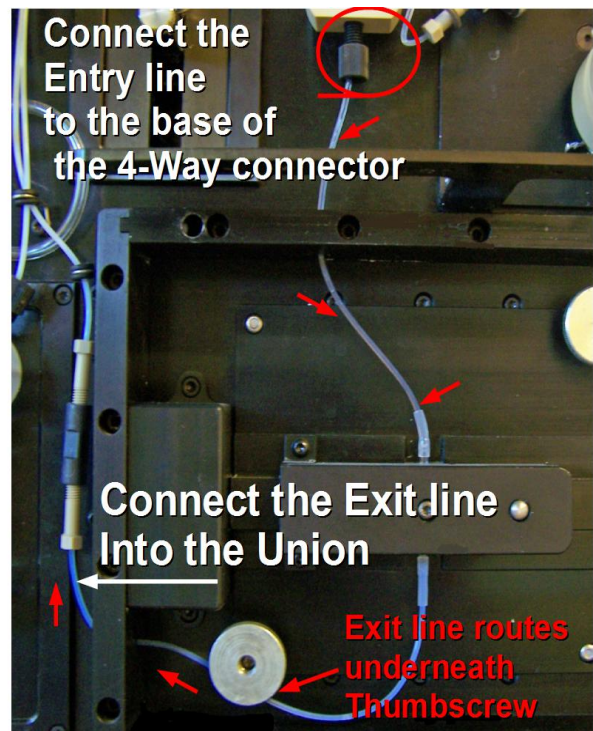
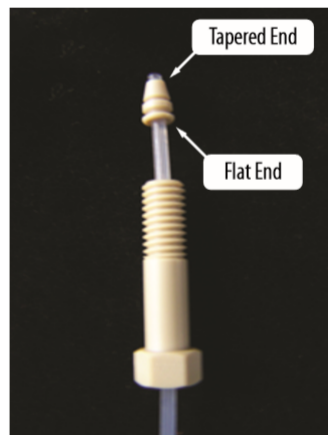
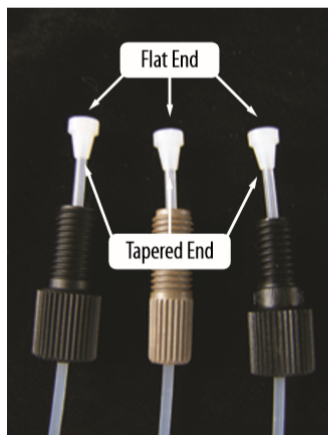


Figure 1: Proper Ferrule installation and routing diagram for the Replacement Flow Cell.

Note: For guidance on the orientation of the Ferrules, see **Figure 1** above.

- Thoroughly clean the *Grooved Lens*, the new *Flow Cell*, and the *Reflector Mount* with *Denatured Alcohol* and *Kimwipes*.
- With the new *Flow Cell*, 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 *1/16" White Ferrule* (included with the new *Flow Cell*) and the *1/4"-28 Black Nut* which was used on the previous *Flow Cell*.

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- Slide the *Black 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 the *10-32 Tan Nut* from the previous *Flow Cell* and a *1/16" Tan Ferrule* (included with the new *Flow Cell*). Torque the *10-32 Nut* to 15 in-oz using the *1/4" Deep Socket* (015902) and the *15 in-oz Torque Wrench* (024140). **Note: Make certain to route the *Black Exit Line* underneath the *Thumbscrew* as shown in *Figure 1* to avoid putting pressure on the *Flow Cell*.**
- Apply a thin layer of *Dielectric Grease* (231362) onto the *Flow Cell* before securing with the *Retainer Clip* and attaching the *Reflector Mount*.

Alignment: 3000/3100

- Use the *KinExA alignment tool* (021032) to 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*.

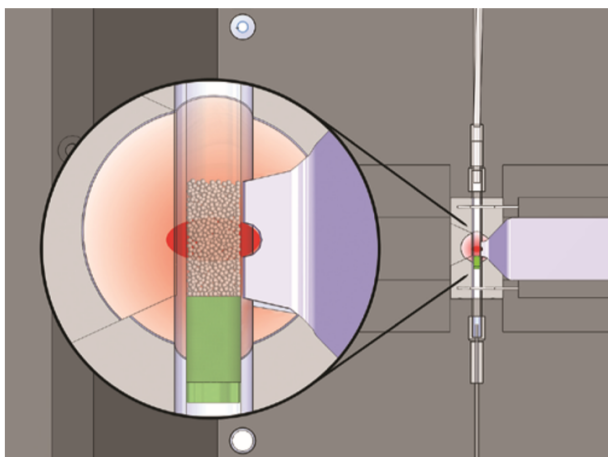


Figure 2. Proper alignment of the filter using the KinExA alignment tool and the lamp. (Note: The filter is not green, the color helps to see the alignment in the illustration.)

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).

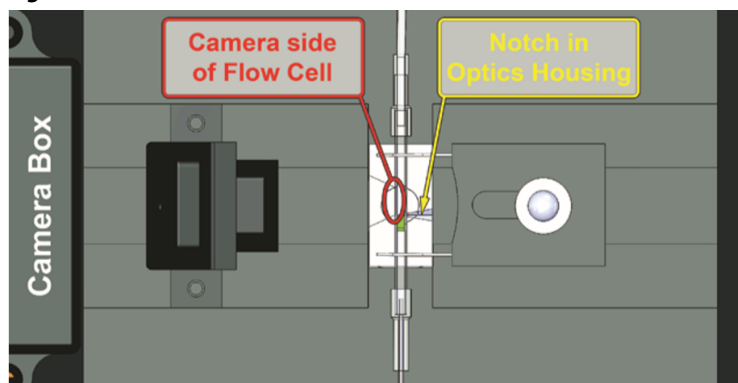


Figure 3: Proper alignment of the filter with the notch in the Optics Housing. Grease left on the camera side of the flow cell (red circle) can cause image to be blurry or cloudy. (Note: The filter is not green, the color helps to see the alignment in the illustration.)

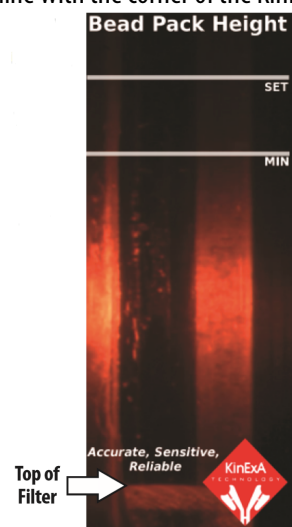


Figure 4: Camera image of a properly aligned Flow Cell.