

Installation of Flat fiber adapter on Ti & TE2000 Single Level TIRF illuminators

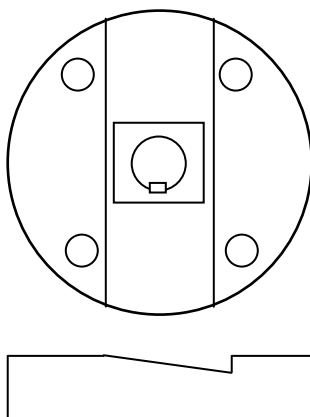
The single level laser TIRF illuminator will function with either an “angled” fiber or a “flat” fiber. The flat fiber is recommended because it produces a more uniform and brighter field of view for TIRF. If you are going to use the same laser launch with a single fiber that is moved between a C1/A1 Confocal and TIRF illuminator you must use the angled fiber for the C1/A1 to function properly. If you are using a launch that has a dual fiber output you can use a flat fiber for TIRF and an angled fiber for the A1 or C1 confocal.

New TIRF illuminators come from the factory with an angled fiber adapter plate as standard. If you plan on using a flat end fiber you will need to either specify the flat fiber adapter MEE59020 and flat end fiber (97207) separately or simply remove the angled fiber adapter plate and flip it over and then reinstall. If you purchase a complete TIRF system with laser launch the flat fiber adapter “should be installed” but sometimes it is not and if your customer provides their own launch, the adapter plate will need to be properly mounted. Following are instructions on how to exchange the adapter plates or flip the existing plate.

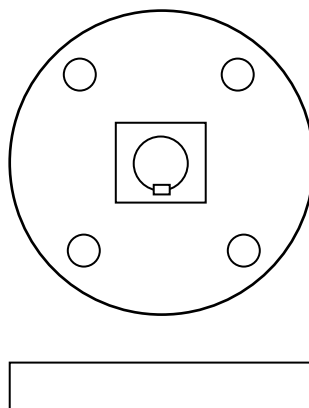
Tools Required: Allen wrenches, alcohol, possibly a small pair of pliers and a high quality fine tip Phillips screwdriver with a large handle. A jeweler’s screw driver will not work and if it is not the exact fit you will strip the heads of the small Phillips screws.

How do you identify flat or angled plate adapter. The sketch below shows the angled and flat adapter front and side views. Notch is down. Deep part of bevel to right side as shown for angled.

Angled adapter Plate



Flat fiber adapter



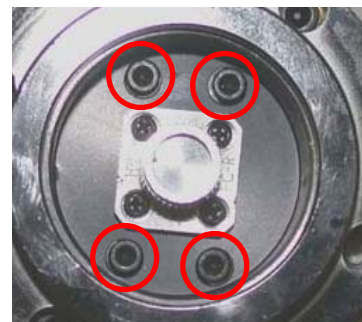
Or angled adapter flipped over



1. Remove the fiber cover plate. There are two setscrews.



2. Remove four **allen** cap screws that secure the FC connector plate. Try putting a few drops of alcohol on these screws as they probably have lock-tite on them. Make note of the orientation of the black plate and FC connector notch. See photos and earlier diagram.

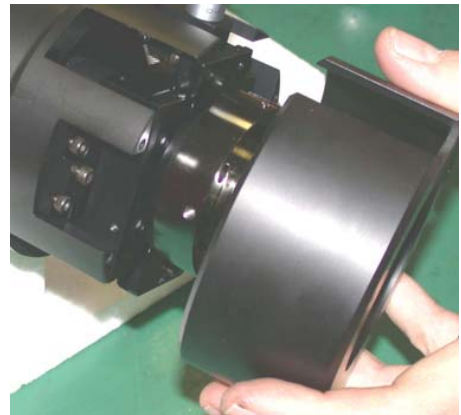
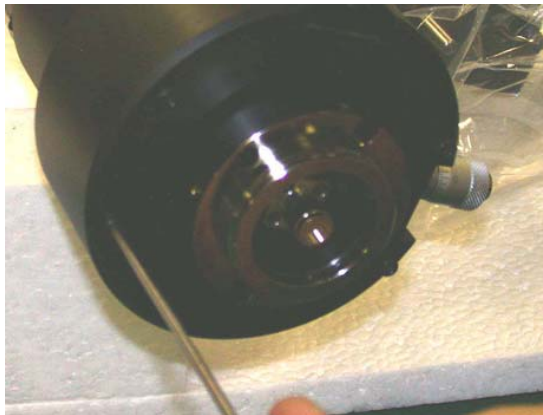


3. **Gently** grasp the plastic FC connector with your fingers and gently slide it out. **Note the orientation of the notch for the fiber and make sure to replace the connector with the same orientation.** Be careful not to tilt the plate while you are removing it to avoid binding. This plate has a close tolerance and may require some "wiggling" to remove it. Proceed to step 6 if successful.

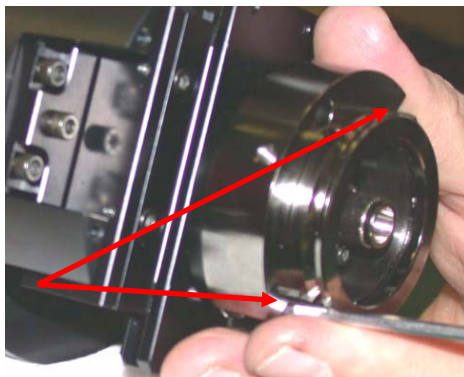
3A. If it is too tight to remove with you fingers you can try use a pair of pliers and **GENTLY** remove the plate assembly. **Do not force it and be extremely careful not to damage the threads with the pliers. If you are able to remove the plate proceed to step 6.** If you cannot remove it, proceed to steps 4 & 5 or return to the NY service center **which is normally recommended.**



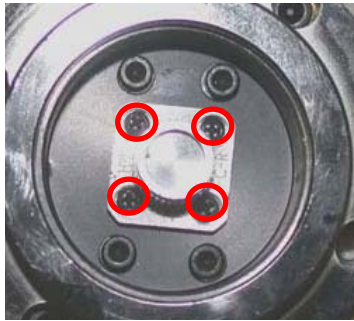
4. If you could not remove the plate as shown in step 3 you will need to remove the assembly that holds the fiber adapter plate. First remove four allen screws that hold the large circular cover plate.



5. Then remove the central circular assembly by removing two allen screws. Make sure you select the correct two screws. At this point you should be able to push the plate out from the rear. Again be careful not to force the plate and cause it to bind in the sleeve. If you need to tap it out use a blunt tool, such as a nut driver, and tap on opposite sides of the plate.



6. Once you have removed the plate with the FC connector remove the four Phillips screws that hold the connector to the plate. These screws are glued into place so use a few drops of alcohol on each screw to soften the cement. **Make sure you have a pointed Phillips screwdriver that properly fits the screws. Put pressure on the screws when you remove them or you will strip the head of the screws.** The FC connector is actually two pieces so maintain the orientation and keep them together. Marking the plates with a pen or magic marker may also help.



7. Then mount the FC connector to the straight fiber adapter plate MEE59020 or simply flip over the angled adapter and use the flat side out. Finally reassemble the parts. Make sure the fiber connector notch is in the original orientation.