

Getting Started

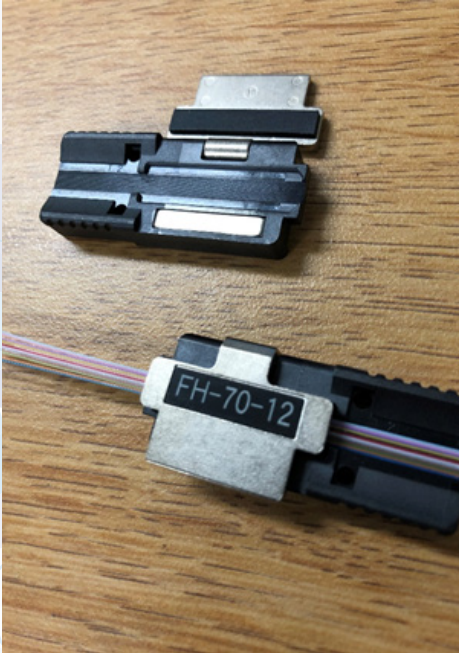


Figure 1: Grooved Fiber Holders

Splicing a FiberExpress Flexible Ribbon Cable uses techniques similar to splicing ribbon or loose-tube fiber cables. Proper maintenance and tool preparation will make the splicing process easy and avoid potential rework. Flexible Ribbon Cables can be prepared using industry-standard equipment suitable for standard ribbon fiber and have been tested with equipment from various major suppliers.

Upon accessing the end of a cable and separating a single ribbon, the cable should be aligned in the holders. Note the color arrangement for the second end and set to an exposed length based on the equipment used. Fiber holders may be flat or contain grooves/channels to arrange the fibers in. Both variations are shown below in Figure 1.

Thermal Strippers

The two thermal jacket stripper/remover tools shown (Figures 2 and 3) have markings that indicate recommended exposed lengths according to which cleaver is used. For best results, temperature settings should be adjusted based on operating conditions. The equipment should be brushed out or cleaned before or after each cycle to remove stripped material and debris. Skipping this step may cause poor stripping results or cracked fiber.

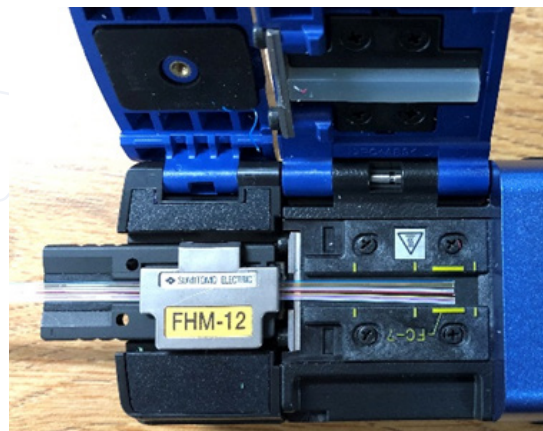
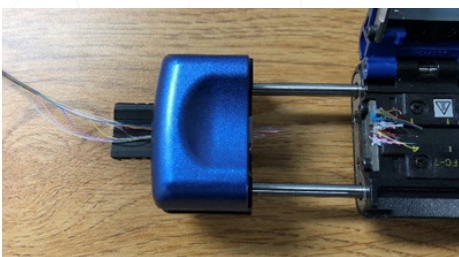


Figure 2: Thermal Stripper 1



Figure 3: Thermal Stripper 2



After closing the cover and waiting for the appropriate amount of heating time, the fiber coating can be removed. Proper pressure to the heated side removes the coating material. If you apply too little pressure, the coating material may not be removed. If you apply too much pressure, you may crack the fiber or cause bunching in the holder (as shown below in Figure 4).

Figure 4: Bunched Fiber Due to Improper Pressure

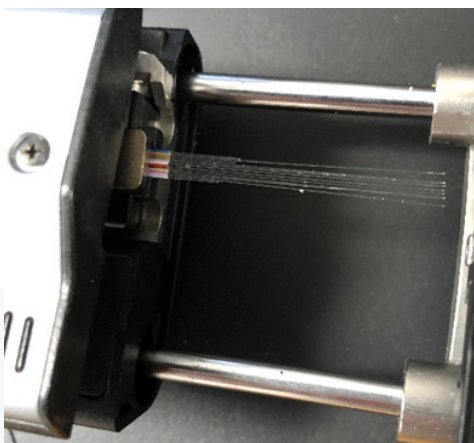


Figure 5: Cracked Fiber Due to Improper Pressure

Proper Care

The fiber should then be wiped with isopropyl alcohol using a lint-free, non-abrasive material, such as a Kimwipe. This will remove remaining loose material and clean the fiber for proper cleaving and splicing.

Before cleaving, it may be necessary to brush the fibers if they are crossed. Again, using a non-abrasive tool, gently separate the fibers so they lay flat in the cleaver.

Cleaving

Before placing the holder in the cleaver, inspect the contact pads and remove any loose material. Otherwise, the fiber may crack upon closing or shift during cleaving, resulting in poor end-faces.



Figure 6: Cleaning with Alcohol



Figure 7: Crossed Fibers



Figure 8: Properly Straightened Fibers



Figure 9: Clean Contact Pads in Cleaver

Ensure that the fiber holder is properly situated in the cleaver. Pads will hold the fibers in place during cleaving, but holder misalignment may cause irregularities in the gap between fibers when splicing.



Figure 10: Fiber in Cleaver 1

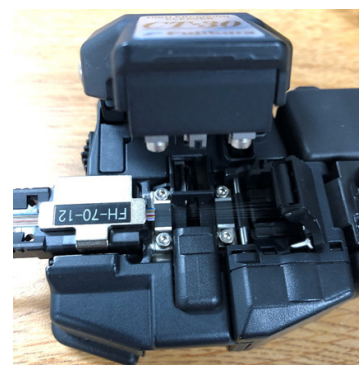


Figure 11: Fiber in Cleaver 2

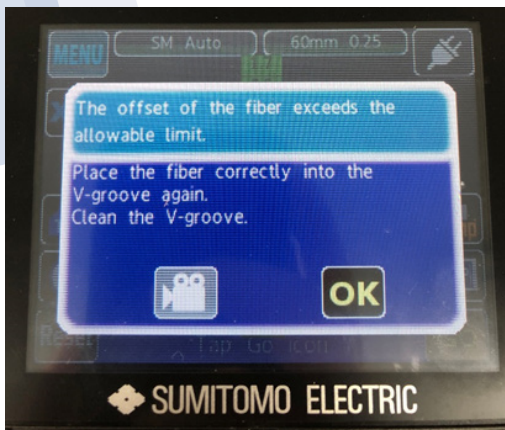


Figure 12: Possible Splicer Errors

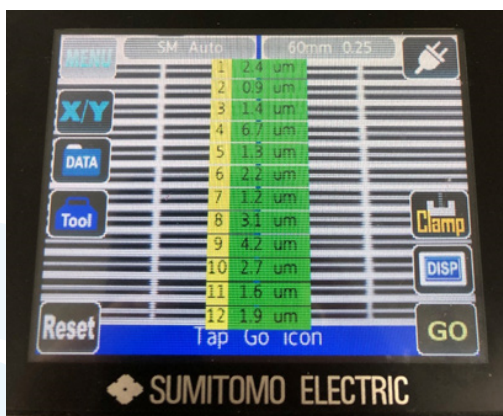


Figure 13: Sample Pre-Splice Alignment Screen



Figure 14: Sample Post-Splice Estimation Loss Screen

After Cleaving

After cleaving, the holder should be placed in the splicer. Ensure that the fiber grooves/channels are cleaned to prevent fiber misalignment or other issues. Setting the holder in place may not set all the fibers in place. Reinserting the holder may resolve the issue, but a brush or similar tool may be used to move each fiber into its proper channel.

Once both ends are in place, the splicing can be completed by the machine. If a problem arises, follow the manufacturer's instructions and troubleshooting guidelines. Fibers may need to be removed and set back in place to correct offset issues. If chips or cracked end-faces are observed, the blade may need adjustment. The fiber also needs to be re-prepped and cleaved. Follow the manufacturer's troubleshooting guide if these issues occur.