

## Swaging SilTite Ferrules

Fused silica tubing, including columns, can be connected using an internal nut and a soft metal SilTite ferrule. These fittings require much less tightening than a Swagelok fitting, only about 15 degrees past finger-tight.

Materials are available to make connections to 0.1- to 0.25-mm, 0.32-mm, and 0.53-mm columns and other capillary tubing.

- 1 Find the appropriate metal ferrule from those listed in [Table 1](#).

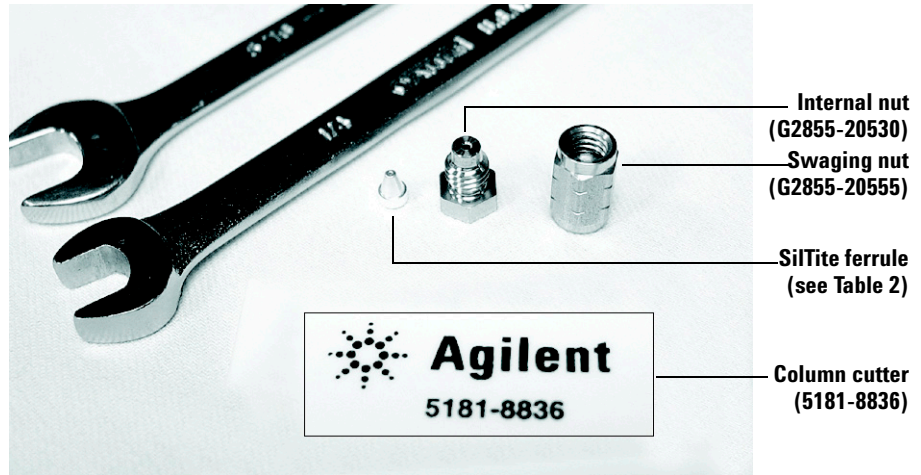
**Table 1** Available metal ferrule packages

Part number	Ferrule description
5188-5361	SilTite ferrules, 0.1- to 0.25-mm columns, pkg of 10
5188-5362	SilTite ferrules, 0.32-mm columns, pkg of 10
5188-5363	SilTite ferrules, 0.53-mm columns, pkg of 10



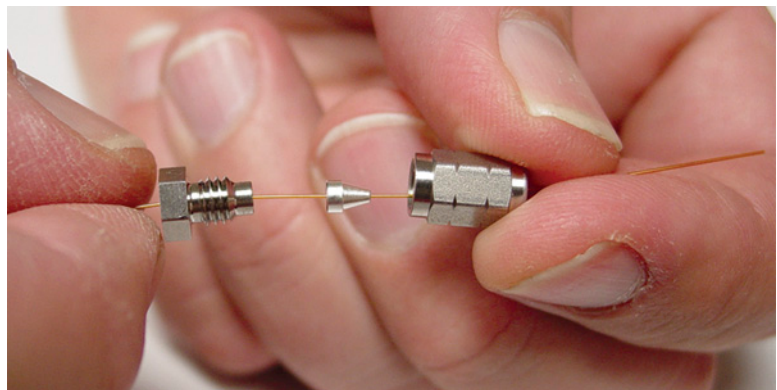
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You will also need two 1/4-inch open end wrenches, a swaging nut and a ceramic column cutter. See [Figure 1](#).



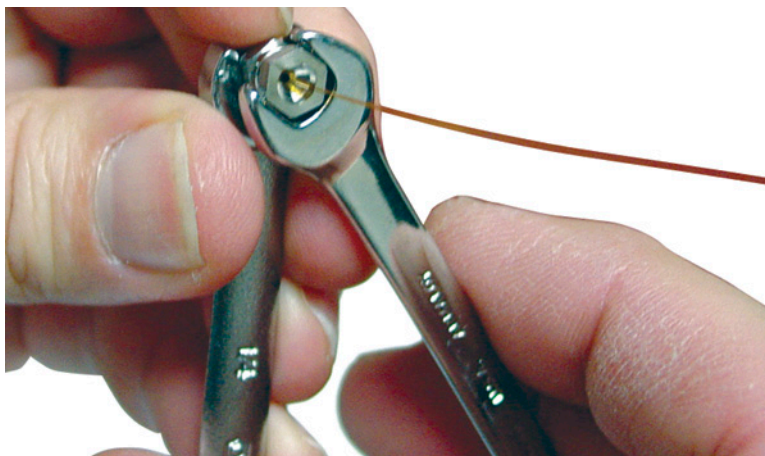
**Figure 1** Parts and tools

- 2 Pass the tubing end through the internal nut and the SilTite ferrule leaving approximately 1 cm of tubing protruding beyond the ferrule. Thread the swaging nut onto the internal nut with the tubing protruding ([Figure 2](#)).



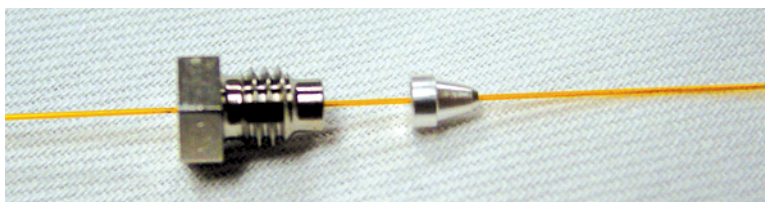
**Figure 2** Thread the internal nut and ferrule

- 3 Tighten the two nuts together a little at a time, occasionally checking to see if the ferrule is gripping the tubing (Figure 3). When the ferrule just starts to grip, notice the position of the nut and then tighten the nut by turning 60 degrees (one flat).



**Figure 3** Tightening the swaging nut

- 4 Remove the swaging nut (Figure 4).



**Figure 4** Removed swaging nut

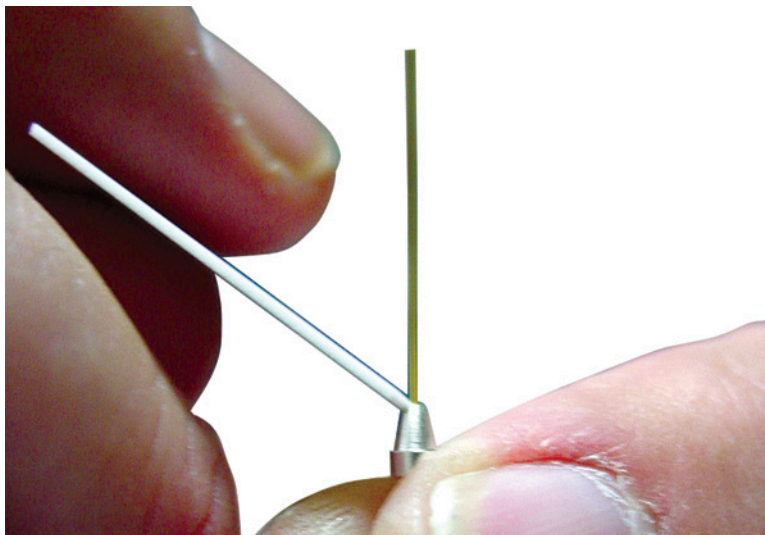
- 5 Using a column cutter, trim the tubing at the small end of the ferrule leaving approximately 0.3 mm of tubing extending (Figure 5).

Check the end of the column with a magnifier. The end of the tubing need not be perfectly square, but should not have cracks that extend under the ferrule.

### NOTE

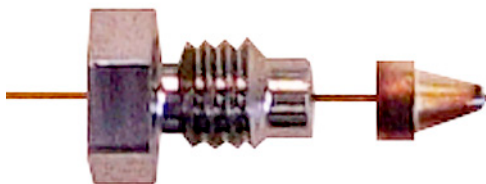
It is important that the column end does not extend beyond 0.5 mm from the end of the ferrule.

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**Figure 5** Ceramic column cutter and ferrule

[Figure 6](#) shows a completed fitting (internal nut and SiLTite ferrule).



**Figure 6** Tubing end with internal nut and swaged SiLTite ferrule





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