

Using soft graphite ferrules in SRI GCs

Soft graphite ferrules come in many sizes depending on who you purchase them from. All the ferrules in the photo are 1/8 inch graphite ferrules but you can see they vary in length and profile

This photo shows two brands of fittings. The threads on the Valco fitting on the left are machined right up to the end of the fitting where the Swagelok fitting on the right has a 2mm space at the end where there are no threads.

1/8 inch nuts also vary in size and depth and importantly in how close to the end the threads are machined.

This variability can make it frustrating to use soft graphite ferrules because in some cases the ferrule is too small and you run out of thread before the nut can squish the ferrule tight enough to seal around the tube, and in other cases the ferrule is so big you can't catch the thread because the ferrule prevents the threads from engaging..

Its better for the ferrule to be too big rather than too small because you can usually **pre-squish** a large ferrule if you have a Valco fitting where the threads go right to the end of the fitting.

SRI likes to use the larger graphite ferrules because they seal better.

Many SRI GCs have Valco fittings at the in and out of the gas sample valve on the front of the valve oven which can be used to **pre-squish** a ferrule if you can't catch the thread. Once the ferrule is pre-squished it will connect easily to Swagelok of other brand fittings which have the threads recessed from the end.



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