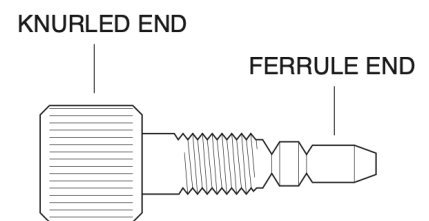


CHEMINERT® ONE-PIECE 1/32" NANOVOLUME FITTINGS

Technical Note 507

GENERAL DESCRIPTION

One-piece fittings (nut and ferrule combined) and two-piece fittings (separate nut and ferrule) each provide unique advantages. One-piece fittings are easier to handle and make up, since you don't have to manipulate and keep up with tiny ferrules, but the separate ferrule of a two-piece design helps prevent tubing "wrap up" because it doesn't have to spin as the nut turns. The one-piece Cheminert nanovolume 1/32" fitting offers the benefits of both types of fittings, incorporating a new grooved ferrule (patent pending) which is designed to break away from the nut as the ferrule starts to grip the tubing.



INSTRUCTIONS FOR INITIAL MAKEUP

NOTE: If you are using tubing with OD smaller than 1/32", such as fused silica or capillary tubing, refer to Technical Note 508 (pending) for instructions.

1. Slide the fitting over the tubing, knurled end first.
2. Insert the tubing and fitting combination into the fitting detail, screwing the nut in two or three turns by hand.
3. Finger-tighten the fitting until you feel it begin to grip the tubing. Determine when the ferrule begins to grip the tubing by gently pushing the tubing in and out while tightening in small increments.
4. After first contact is made, push the tubing all the way forward into the detail so that it seats firmly.
5. Finger-tighten the fitting only one full turn past the point of first contact. The fitting will hold the maximum amount of pressure at one full turn. Any more is needless overtightening that may damage the ferrule, nut, tubing, and fitting detail.

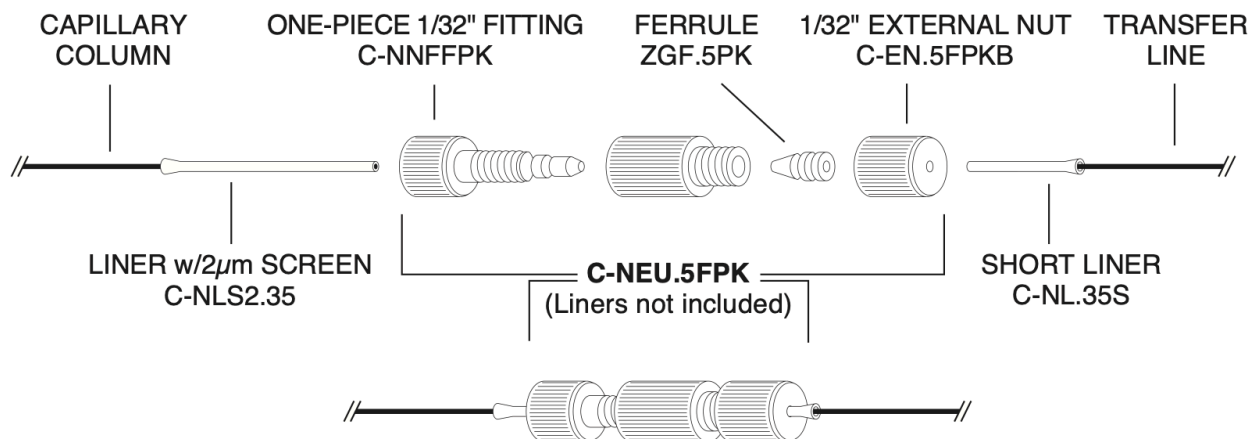
NOTE: If the ferrule fails to break away from the knurled nut, the tubing may wrap as the fitting is tightened. If this occurs, the ferrule can be manually separated by gripping it in one hand while turning the knurled end with the other.

INSTRUCTIONS FOR REPEAT MAKEUP

If the fitting is already made up on the tubing, follow steps 2 through 4 above. In step 5, finger-tighten the fitting only 1/4 to 1/2 turn instead of a full turn.

TYPICAL APPLICATION

The diagram below is an example of an application for nanovolume fittings which uses both external and internal fittings.



As the diagram illustrates, liners allow standard nanovolume fittings to hold capillary tubing. The short liner (product number C-NL.35S) is used with the external fitting, while the long liner (product number C-NLS2.35) is used with the internal fitting. The liners are designed for tubing with an outer diameter of 340-360 μ m (~0.35 mm). Call us about the availability of liners for other sizes of tubing.