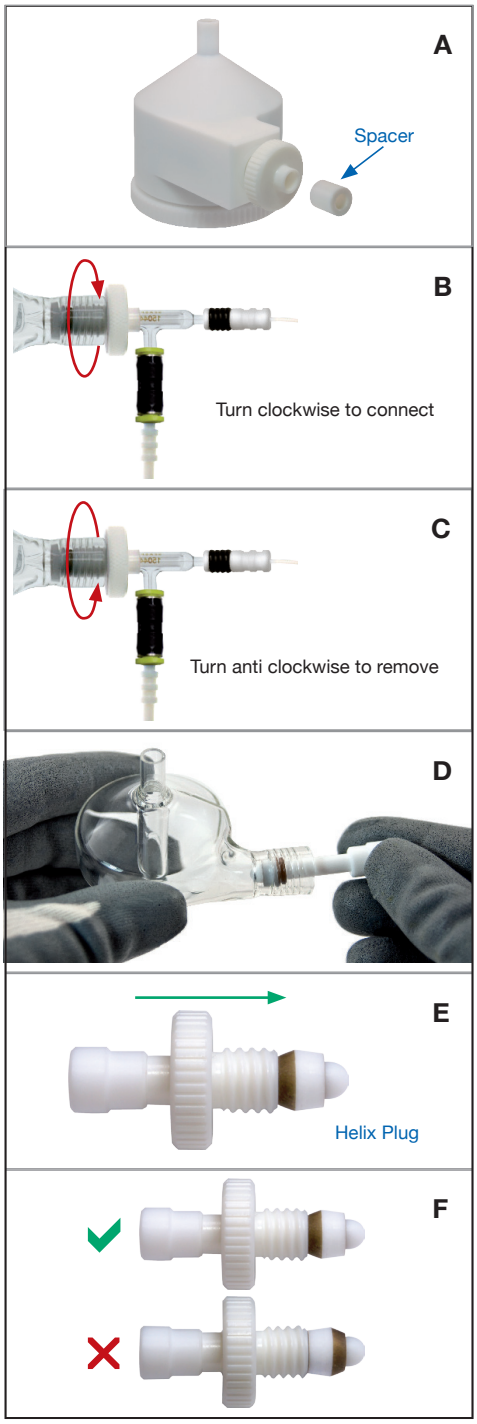
# Using Your New Helix Fitting




## Inserting & Removing the Nebulizer

1. Before inserting the nebulizer, gently turn the knurled plastic knob of the Helix fitting clockwise until it's loosely pressed up against the Teflon seal.
2. The nebulizer spacer (Diagram A) should only be used with the VeeSpray nebulizer or the older style OpalMist and PolyCon nebulizers which have the argon side arm at right angles to the nebulizer body. For other nebulizers, the length of the nebulizer is optimal for use with the Helix spray chamber interface and the nebulizer spacer should not be used.
3. Insert the nebulizer to the end of its travel in the Helix fitting.
4. Tighten the nebulizer in place and seal the spray chamber by turning the knurled knob of the Helix further clockwise (approx. 1/4 to 3/4 turn) by hand (Diagram B) until it is snug. DO NOT OVERTIGHTEN.
5. To remove the nebulizer, first loosen the fitting of the Helix by turning the knurled knob counter-clockwise 1/2 turn (Diagram C), then slide the nebulizer straight out.

## Removing the Helix Fitting

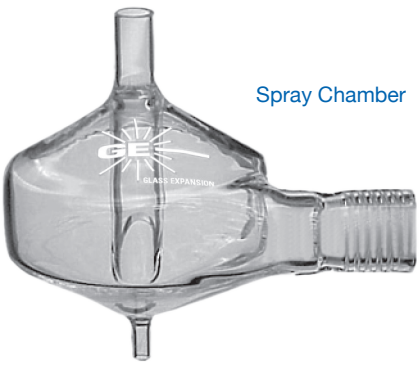
1. Unscrew the Helix Locking Screw and remove it from the spray chamber.
2. The Helix Seal may remain in the spray chamber. Insert the Helix Plug into the Helix Seal and move the Helix Plug sideways to dislodge and remove the Helix Seal (Diagram D).

## Installing a New Helix Fitting

1. Insert your Helix Plug through the Helix Locking Screw, followed up with the Helix Seal (Diagram E). Ensure that the Helix Seal butts up against the Helix Locking Screw as shown in Diagram F. **IMPORTANT:** The white section of the Helix Seal must face into the spray chamber (Diagram F).
2. Insert the Helix Plug and Helix assembly into the spray chamber side arm.
3. Slowly screw the Helix Locking Screw into the spray chamber side arm in a clockwise direction until you feel resistance.
4. Once you have reached this point of resistance, remove your Helix Plug from the Helix assembly.
5. Insert your nebulizer into the Helix assembly, and ensure that your nebulizer gas input arm butts up against the Helix Locking Screw.
6. Turn the Helix Locking Screw another 1/4 turn (approximately) to firmly lock the nebulizer into place.
7. Check that the nebulizer is secure by slightly pulling on the nebulizer.

**WARNING:** Do not tighten the Helix Locking Screw against the Helix seal without the nebulizer in place. This may distort the Helix Seal and prevent it from sealing correctly.

**WARNING:** The Helix Fitting is suitable for glass concentric, DuraMist, OpalMist, PolyCon, VeeSpray and GemCone nebulizers only. Please contact your supplier if you would like to use it with a different nebulizer.



Spray Chamber

Helix Seal

To re-order
P/N 70-100-0237
(pack of 4)

Helix Locking Screw

To re-order
P/N 70-100-0152
(1 unit)

Nebulizer

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## Care and Maintenance of Glass Spray Chambers

HF (hydrofluoric acid) should not be used with glass or quartz. Using any amount of HF will damage the product. Our spray "chambers are supplied clean and ready to use. Avoid touching any internal surfaces of the spray chamber as this may damage its wetting properties.

Glass should be treated with the care that is due to a brittle material. It can fracture and produce sharp, cutting edges, so handle all glass objects with deliberate movements and don't apply large mechanical forces to them, especially when connecting drain and aerosol tubes or nebulizers.

Don't use metal or ceramic brushes or scraping tools.

It is good practice to always start and finish use of a spray chamber by nebulizing a mildly-acidic blank solution for several minutes. This ensures that the sample deposits or crystals don't form inside a spray chamber when the solvent inside the chamber dries out. Don't wash glass spray chambers in an ultrasonic bath.

If you notice a degradation in performance (such as poorer precision or detection limits), then clean the spray chamber with Fluka 'RBS-25'. In the first instance, aspirating a 2.5% Fluka solution for 15 minutes will probably be sufficient to recover the performance. However, if this is not effective, the spray chamber should be soaked overnight in a 25% Fluka solution.

## Care and Maintenance of Inert Spray Chambers

The PTFE and PFA spray chambers have an internal surface that is specially treated to ensure that it wets evenly and provides consistent drainage. The treatment turns the surface a characteristic brown colour. It should be noted that the treatment actually changes the molecular structure of the PTFE and PFA. It is not a coating and it does not introduce any potential contaminants.

While the surface treatment is long lasting, it may degrade after prolonged use. The lifetime of the treated surface depends on the type of samples used and could range from several months to several years. To ensure that you get the best performance from your PTFE and PFA spray chambers, we recommend the following:

- Do not use $H_2O_2$ for cleaning the spray chambers as this will accelerate the degradation of the surface.
- Do not make physical contact with the chamber interior surface with any instrument, including your hands or a brush.
- Do not be concerned if the brown colour fades over time. This is normal and does not necessarily lead to a degradation in performance.
- If you notice a degradation in performance (such as poorer precision or detection limits), then clean the spray chamber with Fluka 'RBS-25'. In the first instance, aspirating a 2.5% Fluka solution for 15 minutes will probably be sufficient to recover the performance. However, if this is not effective, the spray chamber should be soaked overnight in a 25% Fluka solution.
- Eventually the surface may degrade to the point where it does not recover after soaking in Fluka. At this point the spray chamber needs to be returned to your supplier where the surface can be re-treated for a nominal cost.

**IMPORTANT NOTE:** The internal surface of this spray chamber has been specially treated to ensure proper drainage. It is clean, free of contaminants and completely inert. Touching, scratching or damaging the surface in anyway may result in poor performance.

GLASS EXPANSION
Quality By Design

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