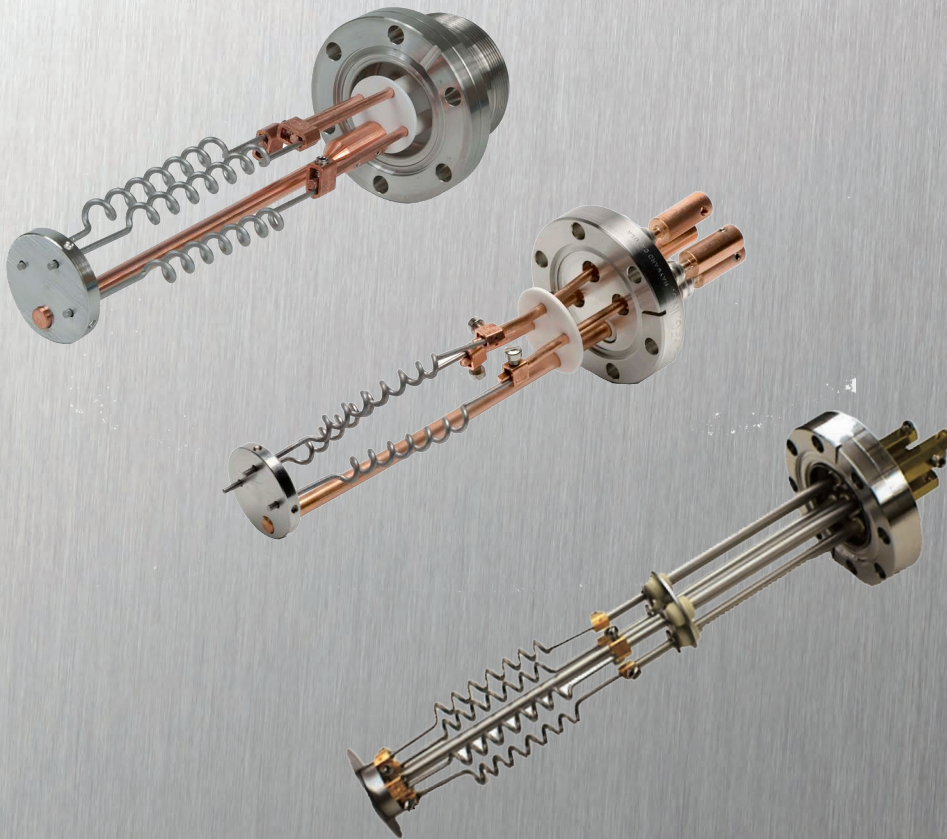




TITANIUM SUBLIMATION PUMPING (TSP) FILAMENT KIT

Installation Instructions
PN 900021, Rev. E



FILAMENT REPLACEMENT KIT PARTS

Gamma Vacuum offers a replacement filament kit (PN 360028). This kit is required to perform filament maintenance of the TSP. The kit consists of:

- 12 spiral titanium/molybdenum alloy filaments
- 12 sets of lugs/set screws for older style TSP
- 12 sets of lugs/set screws for newer style TSP
- Four 2" and three 3 3/8" silver plated gaskets (for use with either a 3 or 4 filament TSP respectively)
- Three hex wrenches: 3/32" & 5/64" & 1.5mm.
- One wire brush



FILAMENT REPLACEMENT KIT PROCEDURE

1. Turn off the power to the TSP.
2. Vent the system using dry nitrogen if possible.
3. Remove the TSP from the vacuum system.
4. Remove the existing filaments by unscrewing the attached screws and/or set screws.
5. Clean electrical contacts of the filament holder using a wire brush suitable for vacuum use (e.g. clean stainless steel). If the wire brush does not clean them, sand blasting may be necessary.

Caution: Premature filament failure may result if the contacts are not sufficiently cleaned.

6. Rotate the filament so that it is as far as possible from the center (current return) post.

Caution: Bending the filaments away from the center post after they have been tightened may cause early failure.

7. Secure the filaments with the new copper lug. Use the special wrench provided (or use a pliers) to hold the lug while it is being tightened to prevent the filament holder from bending and putting a pre-stress on the cold filament.
8. Reinstall the TSP per the Installation Procedure section of the TSP Users Manual (PN 900016).
9. Follow the Degassing Filament Procedure in the TSP Users Manual (PN 900016). Then, the filaments are ready for normal operation.



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