

# S-100-X Assembly Instructions

High Voltage Ion Pump Connector – Varian-Style Starcell™  
012208

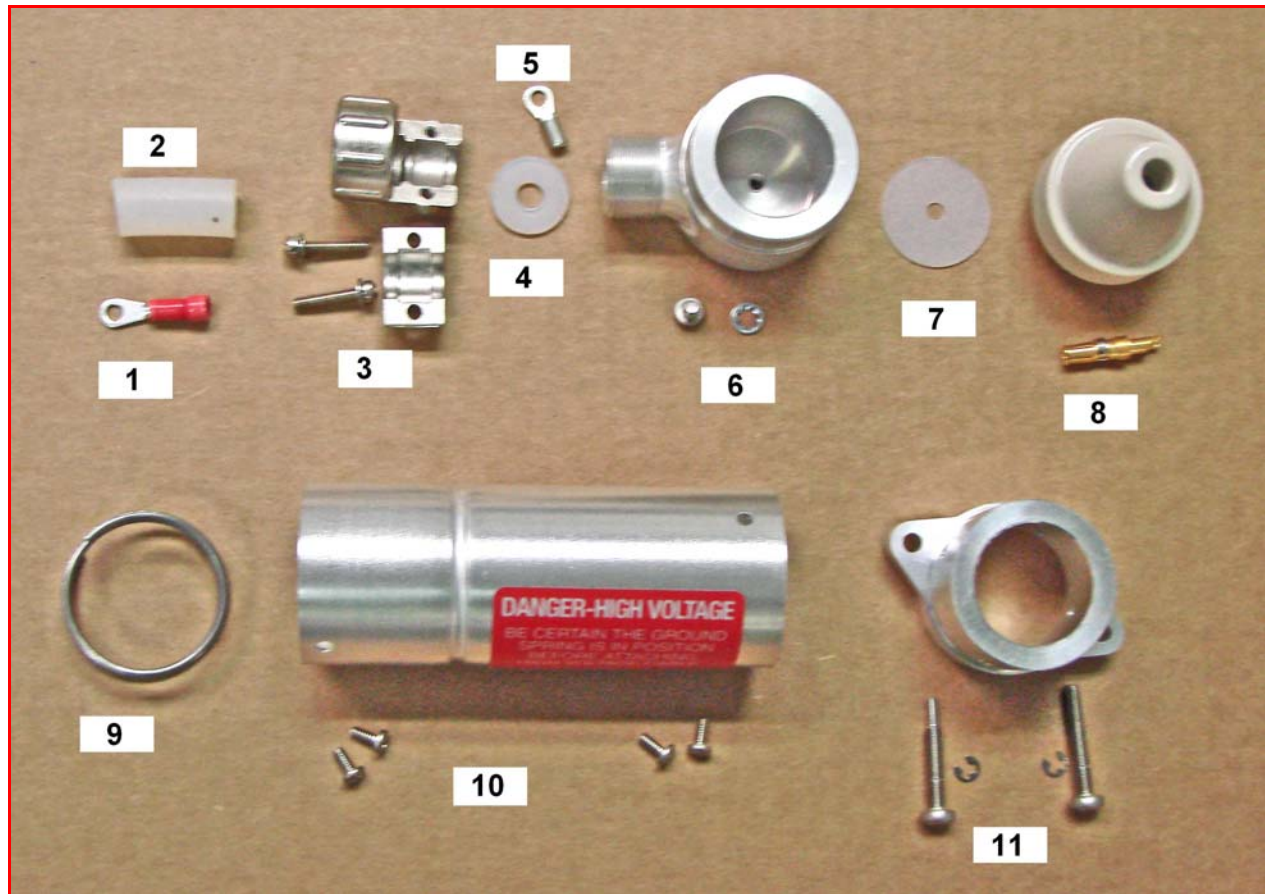


Figure 1 – Connector Parts

## Parts List: - see Figure 1

- |   |  |
|---|--|
| 1. #6 Insulated Ring Clip (Aux. Gnd)    | 7. Tefzel Washer – 1.0” OD                 |
| 2. Strain Relief Boot – White Silicone  | 8. Ceramic Insulator & Center Connector    |
| 3. Strain Relief Clamp, with 2 screws   | 9. Spring                                  |
| 4. Tefzel Washer – 11/16” OD            | 10. Body Shell Tube with 4 Screws          |
| 5. #4 Ring Clip (Coax Gnd)              | 11. Front Cap, with 2 Screws and 2 E-Rings |
| 6. End Cap, Aluminum, with Lug and Stud |  |

**NOTE:** These instructions describe the assembly process utilizing the Duniway Stockroom special Ion Pump High Voltage Cable. This coaxial cable utilizes Tefzel® insulation and incorporates a separate Auxiliary Ground Sense wire. This cable is rated to 15 KVDC, is radiation resistant and bakeable to 200 degrees Centigrade. Other HV coax cables can be used; differences in assembly instructions are included below.

## Assembly Instructions

1. Loosely install the Strain Relief Clamp (3), Strain Relief boot White Silicone (2), Tefzel Washer 11/16”OD (4) and Aluminum End Cap (3) onto the high voltage cable. Leave several inches of cable, including green Auxiliary Ground Wire, free for working space. (See Fig. 2.)



**Figure 2 – Initial Assembly and Cable Preparation**



**Figure 3: Center Connector Socket Installed in the Ceramic Insulator**

2. Strip off 1.25 inches of the black external insulation from the high voltage cable, being careful not to damage the grounding braid. . (See Figure 2.)
3. Using a ‘pick tool’, carefully pull the grounding braid apart at the base of the insulation and pull the inner insulated wire through, leaving the grounding braid intact. (See Figure 2.)
4. Cut the grounding braid to 1 inch long and crimp the #4 Ring Clip (5) onto the end of the grounding braid. . (See Figure 2.)
5. For RG-59U Coax Cable, strip off ½ inch of the insulation from the inner wire and fold the exposed conductor back on itself. . (See Figure 2.) For other coax cables, strip off ¼ inch of insulation from the inner wire, do not fold the exposed conductor.
6. Strip 1/2 inch of green insulation from the Auxiliary Ground Sense Wire and crimp the #6 Insulated Ring Clip (1) onto the stripped wire.
7. Slip the Tefzel Washer 1.0” OD (7) over the insulation on the central wire. (See Figure 2.)
8. Install the Center Socket Connector (6) into the Ceramic Insulator (5). (See Figure 3)
9. Attach the Ground-Braid Lug (5) into the Aluminum End Cap (6) with the Stud.
10. Solder the Center Socket onto the folded center conductor wire.
11. Thread the Spring (9) onto the insulated wire between the Tefzel Washer 1.0” OD (7) and the Ceramic Insulator (8).
- 12 Carefully move the Ceramic Insulator (8)/Cable assembly into place in the End Cap (6) by pulling on the cable and pushing on the End Cap.



**Figure 4: Ceramic Insulator End Cap Assembly**



**Figure 5: Fully Assembled S-100-X Connector**

- 13 Install the Body Shell Tube (10) over the Aluminum End Cap (6) and secure with two of the screws.
- 14 Secure the two long mounting screws into the Front Cap (11) and secure them with the two E-rings.
- 15 Install the assembled Front Cap (11) to the assembled Body Shell Tube (10) with the two remaining screws.
- 16 Tighten the two screws in the Strain Relief Clamp (3). (See Figure 5)



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