



## **Procedure Title**    *Cavity Installation into Test Stand Procedure*

### **Procedure ID #**    *CP-CAV-INST-TSTD*

Procedure Description - This procedure describes the steps necessary to install a caged and assembled C100 cavity into a test stand (dewar insert).

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Version	1.0		
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References	<u>List and Hyperlink</u> all documents related to this procedure.		
<a href="#">Ionized nitrogen parts cleaning procedure.</a>			

NOTE: This procedure must be performed in the main clean room.

The following must be completed before initiating this procedure:

- The cavity must be properly installed in its respective processing cage.
- The cavity must be fully assembled with pump out port properly blanked off.
- The cavity/ cage must be properly attached to the appropriate cavity manipulation cart (Back-Tec cart)
- An appropriate test stand must be loaded into one of the holes in the vertical attachment area of the clean room. Orient the stand so that the vertical vacuum tube that connects to the cavity is closest to the laminar flow filters or north wall.
- The test stand must be at atmospheric pressure (1000 mbar), and the cavity isolation valve above the top plate is closed.

### **1. Prepare to install cavity to test stand**

Transport the cavity/manipulation cart to the vertical attachment room. The caged cavity will hang from four pins attached to the four post adapter on the test stand. Remove the cavity attachment pins from the four post adapter. Make sure cables and vacuum hoses are cleared from the area that the cavity will be hanging in.

### **2. Install cavity to test stand**

Align the cart with the test stand and raise the cavity until the cage almost engages the four post adapter on the test stand. If necessary adjust the tilt of the cage with the hand wheel at the base of the manipulation attachment to better align the cage with the test stand adapter. **Slowly** raise the cavity so that the cage engages the four post adapter and the attachment pins can be slid into place. Secure attachment pins.

### **3. Prepare cavity and test stand for connection**

Place an empty stainless tray on the lower shelf of an empty cart. Remove the fasteners and blank from the right angle valve and place it in the stainless tray. Remove all but two opposite fasteners from the blank on the end of the test stand bellows and place them in the stainless tray as well. The two remaining fasteners must remain tight. Clean inside the right angle valve as per the [ionized nitrogen parts cleaning procedure](#). Remove the blank from the end of the test stand bellows and place it in the stainless tray. Push the cart with the stainless tray away from the cavity.

### **4. Prepare hardware and gasket for connection to test stand**

Clean the handles and upper shelf of a clean room cart with an isopropyl soaked wiper. Clean the cart with ionized nitrogen. Place three clean wipers on the top shelf of the cart. Clean the required tools and place them on one of the wipers. Clean the 2.75" conflat hardware as per the [ionized nitrogen parts cleaning procedure](#) and place on one of the wipers on the cart. Clean the 2.75" copper conflat gasket as per the [ionized nitrogen parts cleaning procedure](#) and place it on the remaining wiper. Transport the cart to the vertical attachment room and position it within arm's reach of the cavity to facilitate bellows connection.

### **5. Connect cavity to test stand**

Clean/replace outer gloves. Assemble test stand bellows and cleaned gasket to the right angle valve on the cavity. **NOTE:** *Reduce particulates/contamination by attaching flanges with one motion while minimizing flange rotation/movement once together. Never position your body or clothing over an opening. Replace and clean new gloves if they are damaged prior to, or during an operation.* Install and evenly tighten the cleaned fasteners. Open the right angle valve. The cavity is now ready for evacuation.