

INSTRUCTIONS FOR HANDLING AND INSTALLATION OF MOTT HIGH PURITY GASSHIELD® DIFFUSERS



Mott porous metal diffusers for high purity applications are typically used in load locks, transfer modules and process chambers. When handling and installing these types of diffusers, operators should be diligent in following the recommended procedures below.

1. Remove outer bag prior to entry into a cleanroom environment.
2. Use cleanroom gloves when handling the diffusers.
3. Prepare the connection fitting in place on the gas line. Any other components, such as gaskets or O-rings should be cleaned with IPA or blown with purified clean dry air.
4. Remove inner bag in a Class 100 or better cleanroom only.
 - Avoid touching the porous metal surface with hands or other foreign objects. (Handle diffusers by the solid frame or fitting hardware when installing)
 - Install the O-ring (supplied) onto the O-ring groove and seat the diffuser on the mating connections, or secure the bulkhead clamps.
 - Install gas inlet connection ¼" or ½" VCR fitting onto diffuser. Tighten the nut by hand, then 1/8 turn past hand-tight by wrench (VCR-compatible wrench).
5. When possible always install the diffuser plate with the welded side toward the chamber.
6. Wet clean the chambers to remove excessive particles inside the load locks.
7. Verify leak tightness of connections and chambers for sealing integrity.
8. Cycle purge the load lock a minimum of 10 times to remove any particles generated during installation. Do not exceed maximum operating pressure.
9. Adjust the inlet pressure regulator based on the desired chamber volume and desired vent time. Consult Mott for specific application advice.
10. Installation is complete.
11. Prepare for the initial particle test verification with the normal process run.