Features

- Lower cost than welded stainless assemblies.
- Fewer connections and welds give unmatched leak integrity and purity.
- Superior purgeability and improved drydown characteristics.
- Helium leak tested to $1 \times 10^{-9}$ scc/sec
Evans Components provides an economical, reliable and more compact solution to purge gas delivery for high-purity welding and testing in semiconductor applications. The convenient to use Evans Purge Tool, and Purge Station, directly replaces costly multi-component arrays with an exclusive “Integrated Machined Manifold” design (see below). All components are integrated into a single compact, lightweight unit which eliminates assembly time, reduces potential hazing and discoloration of weld zones, and improves reliability. All Evans Purge Tools and Purge Stations are UHP cleaned and packaged in a clean room environment.

Features

- Lower cost than conventional stainless assemblies.
- Fewer mechanical connections and welds give unmatched leak integrity and purity.
- Superior purgeability and improved dry-down characteristics.
- Guaranteed dry-down to less than 10 ppb
- Compact/Lightweight
- Solid one-piece flow meter manifold design
- 100% helium leak tested, 1x10-9
- Each flowmeter rated to a maximum flow rate of 110 scfh/52 slpm
- Assembly is rated to 225 psig (15 bar)
- 10 Ra electro polished stainless fittings

Eliminate potential of O2 contamination (leakage) from NPT connections
### CAr Purge Tools

#### Part Number Matrix

**EXAMPLE:**  
DM - UHP - FM5 - G - V - X  
1 - 2 - 3 - 4 - 5 - 6

1. **Series Designator**  
   DM - DM Series

2. **Cleaning**  
   UHP - Class 100 Cleaning and Packaging

3. **Flowmeters**  
   FM5 - 5 Bank Flowmeter

4. **Gauge**  
   G - UHP Gauge  
   X - No Gauge

5. **Valve**  
   V - 1/2" Diaphragm Valve  
   X - No Valve

6. **Options**  
   R - UHP Regulator  
   F - 0.01µm Filter, SS Elemt (75 splm) At each Flowmeter Outlet Connection  
   X - No Options

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**HIGH PURITY PURGE TOOL (DM SERIES)**

**PART NUMBER:** DM-UHP-FM5-G-V-BKT-9IN

**CAr PURGE STATION**

**PART NUMBER:** DM-UHP-8VF5-2

**DM PURGE TOOL WITH SUPPORT BRACKET**

**PART NUMBER:** DM-UHP-FMS-G-V-BKT-9IN

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Evans Components Inc.  
7606 SW Bridgeport Road, Portland, OR 97224 USA  
Phone 971.249.1600 | Fax 971.249.1601  
www.evanscomponents.com
Evans DM Series

Purified N2 Purge Station

Evans purified N2 purge station is designed for mounting onto the column in the sub-fab for use in manifolding purified utility Nitrogen for purge gas, blow down and line qualification. Utilizing purified utility Nitrogen as a source saves in excess of 10X cost vs. Argon. Purge stations available with 5 or 10 POC’s. POU purifier/filters are offered in two sizes.

Features

- 80% fewer mechanical/weld connections
- Elimination of NPT connections
- Guaranteed dry down to less than 10 ppb moisture
- Helium leak tested to 1 X 10^-9 scc/sec
- Lower cost than conventional fabricated systems using multiple fittings
- Custom brackets for column mounting
- UHP cleaned flow meters provide visual indication of flow
- Reduced footprint
- Two purifier/filter options (250 slpm or 500 slpm)
- UHP check valves (inlet/outlet of purifier)
DM Purified N2 Gas Purge Panels

Purifier/Filter Specifications/Options
• Purification & removal capabilities:
  • H2O, O2, CO2, H2, less than 100 ppbV
  • Acids, Organics, Refractory compounds, less than 1 pptV
• Bases, less than 5 pptV
• Fully regenerable
• DG-UN2881 Class 4.2 classification
• Max operating pressure 250 psig (17.3 barg @ 40C)
• Integrated 0.003 micron metal filter
• 10 Ra electropolished

Part Number Designator (purifier)
• 60 - 60 slpm max flow/nominal flow of 9 slpm
  8.20" (208.3 mm) overall length
• 250 - 250 slpm max flow/nominal flow of 40 slpm
  18.20" (462.3 mm) overall length
• 500 - 500 slpm max flow/nominal flow of 80 slpm
  20" (508.0 mm) overall length
Weld/Test Purge Metering Manifolds

Evans CA Series

Purge Metering Manifold

Evans Components provides an economical, reliable and more compact solution for construction purge gas metering used in high-purity welding and testing. The Evans Metering Manifold replaces costly multi-component assemblies with an all welded "Integrated Manifold" design. All components are integrated into a single compact, lightweight unit which eliminates assembly time, reduces number of mechanical connections/welds, and cost. Elimination of the number of mechanical connections reduces risk of potential hazing and discoloration of weld zones, and improves reliability. All Evans Metering Manifolds are UHP cleaned, packaged in a clean room and 100% helium leak tested.

Features

- Lower cost than conventional assemblies.
- Fewer mechanical connections and welds provide unmatched leak integrity.
- Improved dry-down characteristics.
- 10 Ra Electropolished manifold
- Compact design provides room for up to 8-metering valves with 16” OAL, thus fitting on standard sub-fab columns
- Welded metering valves eliminate potential of removal/leakage
- Helium leak tested to 1 x 10^-9 scc/sec

Part Number Matrix

EXAMPLE: CA - 4M - 8V - 4HV - X

1. Series Designator
   CA - CA Series

2. Valves
   4M - 4 Metering valves
   4MC - 4 Valves/ VCR caps
   8M - 8 Metering valves
   8MC - 8 Valves/ VCR caps

3. Manifold
   8V - 1/2” Manifold with MVCR x FVCR connections
   8VC - 1/2” Manifold with VCR cap/plug

4. Inlet
   4HV - 1/4” High flow MVCR inlet branch connections
   8HV - 1/2” MVCR inlet branch connection
   X - No branch connection

5. Options
   R - UHP Regulator
   G - UHP 0-160 PSIG Pressure Gauge
   BKT - Panel Mounted
   08DV - 1/2” diaphragm valve (inlet)
   X - No Options
CA Series Purge Metering Manifolds

Important Specifications for Metering Valve

- Max working pressure: 1000 psig (68.9 bar)
- Working temperature: -10F to 400F (-23C to 204C)
- Flow coefficient (Cv): 0.03
- Orifice size: 0.056 in (1.42 mm)
- Stem taper: 3
- Turns to open: 8 to 10
- Handle type: Vernier
- Bubble tight shutoff not available

Dimensions / Materials of Construction

<table>
<thead>
<tr>
<th>Item</th>
<th>Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>316SS/A182</td>
</tr>
<tr>
<td>2</td>
<td>Stem</td>
<td>316SS/A479</td>
</tr>
<tr>
<td>3</td>
<td>Body Seal</td>
<td>FKM</td>
</tr>
<tr>
<td>4</td>
<td>O-ring</td>
<td>FKM</td>
</tr>
<tr>
<td>5</td>
<td>Body Extension</td>
<td>316SS/A479</td>
</tr>
<tr>
<td>6</td>
<td>Stem Guide Ring</td>
<td>Glass-filled PTFE</td>
</tr>
<tr>
<td>7</td>
<td>Bonnet Sleeve</td>
<td>316SS/A182</td>
</tr>
<tr>
<td>8</td>
<td>Panel Mount Nut</td>
<td>316SS/B783</td>
</tr>
<tr>
<td>9</td>
<td>Bonnet</td>
<td>316SS/A479</td>
</tr>
<tr>
<td>10</td>
<td>Lock Screw</td>
<td>Stainless Steel</td>
</tr>
<tr>
<td>11</td>
<td>Handle</td>
<td>304SS/A276</td>
</tr>
<tr>
<td>12</td>
<td>Handle Screw</td>
<td>Stainless Steel</td>
</tr>
</tbody>
</table>

Stainless tag for optional customer marking

Flow Coefficient at Turns Open

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DM Series Purge Tools

Learn more about related Evans Products

ECOPURGE
THE UNIQUER PURGE TOOL FOR INJECTIONS OF GENERAL TO ULTRA HIGH-PURITY TUBING

Evans Ball Valves
High Purity 304/316 Stainless

Evans Dogbone
Coaxial Connections

Features
• Evans "Single" eliminate expensive welds, fixtures and allow for inspection of inter process tube after installation.
• Standard sizes or custom lengths can be supplied to any length.

NOTE: Product availability and specifications contained herein are subject to change without notice. Consult local distributor or factory for potential revisions.

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