**FIGURE 780**  
**DIVERTER VALVE**  

**SIZES ¼" to 1½"**  
**PRESSURES to 400 PSIG at 400°F**

- Engineered for maximum safety and reliability  
- Full flow manifold ends  
- Cleaned and packaged for use in O₂ service in compliance with the CGA specification G-4.1  
- 180 degree operation  
- Handle indicates flow direction  
- Low maintenance  
- Blow out proof stem  
- V-ring stem packing  
- All stainless externals

**MODELS**  
- 780 - Bronze Diverter Valve

**APPLICATIONS DATA**
- Dual safety relief systems  
- Stationary cryogenic tanks  
- Manifolding  
- Distribution systems  
- Process systems  
- Liquid and Gaseous Cryogenic Applications

**APPLICABLE CODES**
- ANSI B31.1  
- API 527  
- ANSI B16.18  
- ASME Sec. VIII  
- CRN: 0C0945.9087YTN

**CODE SELECTION CHART**

<table>
<thead>
<tr>
<th>Model</th>
<th>Valve Size</th>
<th>Orifice</th>
<th>Top Port</th>
<th>Bottom Port</th>
<th>Side Port</th>
<th>Mat'l</th>
</tr>
</thead>
<tbody>
<tr>
<td>780</td>
<td>Diverter</td>
<td>G</td>
<td>E</td>
<td>D</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td></td>
<td>Valve</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Model**  
- Position 1, 2 & 3  
- 780 = Diverter Valve

**Valve Size**  
- Position 4  
- D = ¼  
- E = ⅛  
- G = 1⅛

**Orifice**  
- Position 5  
- F = Full

**Bottom Port**  
- Position 7  
- A = ¼  
- B = ⅛  
- C = ⅛  
- D = ¼  
- E = ⅛  
- F = 1¼  
- G = 1⅛

**Side Port**  
- Position 8  
- A = ¼  
- B = ⅛  
- C = ⅛  
- D = ⅛  
- E = ⅛  
- F = 1¼

**Material**  
- Position 9  
- B = Bronze w/316 Stem
FIGURE 780
DIVERTER VALVE

SPECIFICATION

The valve shall be utilized for applications that require full flow manifolds. The valve shall have 180 degrees of operation. The handle shall indicate the direction of flow. The stem shall be blow out proof and contain V-ring packing material. The valve shall be cleaned to CGA G-4.1.

MATERIALS OF CONSTRUCTION

Body.............................................................. Bronze B61
End Plate ...................................................... Bronze B61
Ball ................................................................. Bronze
Stem ............................................................... 316SS
Seats ............................................................. MTFE
Body Seals ....................................................... TFE
Stem Seals ...................................................... CTFE
Stem Bearing .................................................. TFE
Bellville Wsh ................................................ 17-7 SS
External Hdwe ................................................. 300 Series SS
Inlet Pipe .................................................. 304SS ASTM A312 Schedule 10
Bolts ............................................................. 304SS A193

High Flow Diverter Valve CV Values*

<table>
<thead>
<tr>
<th>Sizes (inches)</th>
<th>Safety Relief Valve Outlet</th>
<th>Rupture Disc Outlet</th>
<th>Torque</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>CV@ mid position (90°)</td>
<td>CV@ full open (180°)</td>
<td>Max. Value</td>
</tr>
<tr>
<td>½F</td>
<td>9.2</td>
<td>8.2</td>
<td>10.7 8.1</td>
</tr>
<tr>
<td>1F</td>
<td>25.3</td>
<td>18.3</td>
<td>16.4 14.0</td>
</tr>
<tr>
<td>1½F</td>
<td>40.0</td>
<td>30.4</td>
<td>23.8 22.2</td>
</tr>
</tbody>
</table>

* Flows may vary slightly due to outlet connection sizes.

HIGH FLOW DIVERTER VALVE Cv GRAPH

Dimensions for reference only

Diverter Valve Configuration Chart

780DFxxxxB
3/4" Diverter Valve
Largest Configuration Possible = 780DFDCDB
Top = 3/4" NPT Max
Bottom = 1/2" NPT Max
Side = 3/4" NPT Max

780EFxxxxB
1" Diverter Valve
Largest Configuration Possible = 780EFFEEB
Top = 11/4" NPT Max
Bottom = 1" NPT Max
Side = 1" NPT Max

780GFxxxxB
1½" Diverter Valve
Largest Configuration Possible = 780GFGFFB
Top = 1½" NPT Max
Bottom = 1¼" NPT Max
Side = 1½" NPT Max