INTEGRA® HIGH-TEMPERATURE 3/4" VALVE

For high-temperature, ultrapure chemical applications
Overview
The Entegris ¾" Integra® valve is designed for high-temperature, ultrapure chemical handling, yet has the same high-flow capabilities and small footprint as the original ¾" Integra valve. Key material selections and material isolation allow this valve to reach higher temperatures than competitive valves. The valve can be used for applications up to 180°C (356°F). This can be especially useful for photoresist stripping applications with high-temperature sulfuric and phosphoric acid. The Integra high-temperature ¾" valve has the ability to support systems in a cost-effective and reliable package. This valve is differentiated from other Integra valves by the yellow actuation indicator on top of the valve.

Applications
- High-temperature, ultrapure chemical handling
- Photoresist stripping applications with high-temperature sulfuric and phosphoric acid
- Chemical line sizes ¾" to 1"

Features and Benefits
- Capable of media temperatures up to 180°C (356°F) @ 206.9 kPa (30 psig)
- Long life cycle
- Small footprint
- Available in molded 2-way or machined sampling valve versions, normally open and normally closed actuators
- 2-way valves available with connection options: PrimeLock®, PrimeLock “SpaceSaver”, PureBond® and Super 300 Type Pillar®
- Sampling valves available with ¾" and 1" PureBond fusible pipe
- Pressure rating remains the same for both inlet and outlet ports
- Yellow actuation indicator on the top of the valve indicates high temperature
Specifications

<table>
<thead>
<tr>
<th>Materials:</th>
<th>Wetted parts</th>
<th>PFA or PTFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exterior parts</td>
<td>PVDF</td>
<td></td>
</tr>
</tbody>
</table>

| Pressure range: | 29” HG vacuum (980 mbar) |
|                | 551.6 kPa (80 psig) maximum rating at inlet or outlet port (see performance data)* |

| Temperature range: | 21°– 49°C (70°–120°F), ambient |
|                    | 21°– 180°C (70°– 356°F), fluid* |

| Pneumatic supply pressure: | Normally closed 448.2 kPa (65 psig) minimum to 551.6 kPa (80 psig) maximum |
|                            | Normally open 448.2 kPa (65 psig) minimum to 482.6 kPa (70 psig) maximum |

| Pneumatic supply port: | 1/8” FNPT |

*Actual valve performance varies with pressure and temperature. Refer to actual ratings in performance charts.

Performance Data

Temperature vs. Media Pressure

Acceptable operating range

*Media Pressure vs. Temperature Chart*

[Graph showing the relationship between temperature and media pressure, indicating the acceptable operating range.]
### Dimensions

#### Integra DH12 2-way Valve

<table>
<thead>
<tr>
<th>Port Connection</th>
<th>Flow Factor</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cv</td>
<td>A</td>
</tr>
<tr>
<td>3/4&quot; Super 300 Type Pillar*</td>
<td>6.1</td>
<td>133.4 mm (5.25&quot;)</td>
</tr>
<tr>
<td>3/4&quot; PrimeLock</td>
<td>6.1</td>
<td>150.4 mm (5.92&quot;)</td>
</tr>
<tr>
<td>3/4&quot; PureBond</td>
<td>7.4</td>
<td>118.6 mm (4.67&quot;)</td>
</tr>
<tr>
<td>3/4&quot; Tube Stub</td>
<td>6.1</td>
<td>128.8 mm (5.07&quot;)</td>
</tr>
<tr>
<td>1&quot; Super 300 Type Pillar*</td>
<td>8.8</td>
<td>146.1 mm (5.75&quot;)</td>
</tr>
<tr>
<td>1&quot; PrimeLock</td>
<td>8.8</td>
<td>159.0 mm (6.26&quot;)</td>
</tr>
<tr>
<td>1&quot; PureBond</td>
<td>9.8</td>
<td>118.6 mm (4.67&quot;)</td>
</tr>
<tr>
<td>1&quot; Tube Stub</td>
<td>8.8</td>
<td>145.8 mm (5.74&quot;)</td>
</tr>
</tbody>
</table>

*Pillar nuts, inserts and gauge rings are supplied separately.

#### Integra DH12 Sampling Valve

<table>
<thead>
<tr>
<th>Port Connection</th>
<th>Flow Factor</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cv</td>
<td>A</td>
</tr>
<tr>
<td>3/4&quot; PureBond</td>
<td>7.4</td>
<td>118.6 mm (4.67&quot;)</td>
</tr>
<tr>
<td>3/4&quot; Tube Stub</td>
<td>6.1</td>
<td>139.5 mm (5.49&quot;)</td>
</tr>
<tr>
<td>1&quot; PureBond</td>
<td>9.8</td>
<td>118.6 mm (4.67&quot;)</td>
</tr>
<tr>
<td>1&quot; Tube Stub</td>
<td>8.8</td>
<td>158.8 mm (6.25&quot;)</td>
</tr>
</tbody>
</table>

B: 87.1 mm (3.43")
C: 69.6 mm (2.74")
D: 81.5 mm (3.21")

**Side View**

A: 47.0 mm (1.85")
B: 34.0 mm (1.34")
C: 4 x 6.9 mm (0.27")

**Top View**

A: 40.6 mm (1.605")
B: 25.9 mm (1.025")
C: 40.6 mm (1.605")
D: 25.9 mm (1.025")

Sensing Option
Dimensional Information

Remote Position Indication Option:
Electronic valve position sensing for monitoring valve open and close positions.

NOTE: To enable the remote position indication option you must special order the Espy® sensor (-ES) on the valve. In addition, order the Espy® Position Indication Mounting Adapter (ES-IN-01), which is sold separately.

DH12 with Espy Sensor
Entegris Espy part number ES-IN-01
Integra High-temperature 3⁄4" Valves, 2-way

Part Number

DH12 - -

Special Order

N = Pillar nuts, inserts and gauge rings included*
ES = Esy sensor
= NA

Port Connection

12PS3 = Port 1 (inlet), Port 2 (outlet) 3⁄4" Super 300 Type Pillar*
12PS312P = Port 1 (inlet) 3⁄4" Super 300 Type Pillar, Port 2 (outlet) 3⁄4" PureBond
12K = Port 1 (inlet), Port 2 (outlet) 3⁄4" PrimeLock
12KV = Port 1 (inlet) 3⁄4" PrimeLock, Port 2 (outlet) 3⁄4" PrimeLock "SpaceSaver"*
12KP = Port 1 (inlet) 3⁄4" PrimeLock, Port 2 (outlet) 3⁄4" PureBond
12VK = Port 1 (inlet) 3⁄4" PrimeLock "SpaceSaver", Port 2 (outlet) 3⁄4" PrimeLock
12W = Port 1 (inlet) 3⁄4" PrimeLock "SpaceSaver", Port 2 (outlet) 3⁄4" PrimeLock "SpaceSaver"
12PK = Port 1 (inlet) 3⁄4" PureBond, Port 2 (outlet) 3⁄4" Super 300 Type Pillar
12F = Port 1 (inlet) 3⁄4" PureBond, Port 2 (outlet) 3⁄4" PrimeLock
12SFS = Port 1 (inlet), Port 2 (outlet) 3⁄4" Tube stub
16PS3 = Port 1 (inlet), Port 2 (outlet) 1" Super 300 Type Pillar
16PS316P = Port 1 (inlet) 1" Super 300 Type Pillar, Port 2 (outlet) 1" PureBond
16K = Port 1 (inlet), Port 2 (outlet) 1" PrimeLock
16KV = Port 1 (inlet) 1" PrimeLock, Port 2 (outlet) 1" PrimeLock "SpaceSaver"
16KP = Port 1 (inlet) 1" PrimeLock, Port 2 (outlet) 1" PureBond
16VK = Port 1 (inlet) 1" PrimeLock "SpaceSaver", Port 2 (outlet) 1" PrimeLock
16W = Port 1 (inlet) 1" PrimeLock "SpaceSaver", Port 2 (outlet) 1" PrimeLock "SpaceSaver"
16PK = Port 1 (inlet) 1" PureBond, Port 2 (outlet) 1" PrimeLock
16P = Port 1 (inlet) 1" PureBond, Port 2 (outlet) 1" PureBond
16SFS = Port 1 (inlet), Port 2 (outlet) 1" Tube stub

Description

2C = 2-way, normally closed
2U = 2-way, normally open

*Pillar nuts, inserts and gauge rings are supplied separately.

Integra High-temperature 3⁄4" Valves, sampling

Part Number

DH12 - -

Port Connection

12P12P-A = 3⁄4" PureBond
1212-TSA = 3⁄4" Tube stub
16P16P-A = 1" PureBond
1616-TSA =1" Tube stub

Description

SC = 2-way, normally closed
SU = 2-way, normally open

Note: Not all configurations are permitted. Consult Entegris if multiple special order features are required. Contact factory if "SpaceSaver" port connections are to be used in media containing a fluorinated surfactant.
For More Information

Please call your Regional Customer Service Center today to learn what Entegris can do for you. Visit www.entegris.com and select the Customer Service link for the center nearest you.

Terms and Conditions of Sale

All purchases are subject to Entegris' Terms and Conditions of Sale. To view and print this information, visit www.entegris.com and select the Legal Notices link from the footer.