Installation of the High Speed Switching Accessory

The High Speed Switching Accessory (HSSA) is designed for use with our standard air actuators, providing increased air or helium* flow for the fast actuation required in partial loop injections or microbore chromatography. Typically the application involves our Digital Valve Interface (DVI), which converts low power logic level signals or contact closures into pneumatic pulses for the operation of the actuator. (See Technical Note 411, Implementation of the Digital Valve Interface, for instructions specific to it.)

<table>
<thead>
<tr>
<th>Air pressure to actuator</th>
<th>Valve transit time Standard</th>
<th>Valve transit time HSSA</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 psi</td>
<td>299 ms</td>
<td>39 ms</td>
</tr>
<tr>
<td>60 psi</td>
<td>264 ms</td>
<td>28 ms</td>
</tr>
<tr>
<td>100 psi*</td>
<td>180 ms</td>
<td>20 ms</td>
</tr>
</tbody>
</table>

Table 1: Transit times for a C6W valve

CAUTION:
Make certain the actuator and valve are properly aligned before proceeding.

1. Remove any existing air line fittings from the actuator.

2. Orient the HSSA as shown in Figure 1 on the next page. Use a 5/16” open end wrench at the points indicated to tighten the HSSA’s fittings into the actuator air inlets.

3. The air in the 1/8” lines from the DVI switches the pilot valves, allowing the high-volume flow from the 1/4” line to switch the actuator. Connect the 1/8” lines from the DVI or other device to the HSSA pilot valves, as shown in Figure 1.

4. Use 1/4” tubing (not supplied) to connect the HSSA tee fitting to a source of compressed helium or air (40 – 100 psi).

5. Connect the DVI to the same source.

*The fastest switching times are obtained with helium. Typical valve transit time with 100 psi helium is 8 ms.
Figure 1: High Speed Switching Accessory connections

- **Two Position Air Actuator**
- **PILOT VALVES**
- **Digital Valve Interface (DVI)**

**Connections:**
- **AIR IN (100 psi max)**
- **1/8" LINE FOR INJECT POSITION**
- **1/8" LINE FOR LOAD POSITION**

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