Sequence Cartridge Valves

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<td>Air Controlled, Pilot Operated, Balanced Piston</td>
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<td>27</td>
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Sequence Valves

PILOT OPERATED, BALANCED PISTON

Performance Curves

- Maximum operating pressure = 350 bar
- Maximum leakage = RSDC: 32.8 cc/min./70 bar, RSFC: 49.2 cc/min./70 bar, RSHC: 65.5 cc/min./70 bar, RSJC: 81.9 cc/min./70 bar.
- Typical response time 10 ms
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 350 bar.
- Pilot flow continues to increase as the pressure at port 1 (inlet), relative to the pressure at port 3 (drain), rises above the valve setting.
- RSBC minimum setting is 5 bar for all spring ranges.

OPTION ORDERING INFORMATION

Model Codes printed in Red are Preferred Versions and most readily available

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**Performace Curves**

**EXTERNALLY DRAINED, BALANCED PISTON, MODULATING ELEMENT**

The -8 control option allows a pilot control valve to be incorporated directly into the end of the modulating element via the T-8A cavity. These pilot control cartridges are sold separately and include electro-proportional, solenoid, air pilot, and hydraulic pilot operation. See Pilot Control Cartridges on page 121.

- Maximum operating pressure = 350 bar
- Will accept maximum pressure at Port 2.
- Pressure at port 3 is directly additive at a 1:1 ratio to the valve setting and should not exceed 350 bar.
- Control pilot flow = RSDC-8: 0.11 to 0.16 L/min., RSFC-8: 0.16 to 0.25 L/min., RSJC-8: 0.25 to 0.33 L/min.
- Maximum leakage = RSDC-8: 32.8 cc/min./70 bar; RSFC-8: 49.2 cc/min./70 bar; RSJC-8: 65.5 cc/min./70 bar.
- With the -8 control option, the main stage valve should first be installed to the correct torque value.
- The T-8A pilot control valve should then be installed into the main stage valve to its required torque value.

**OPTION ORDERING INFORMATION**

Model Codes printed in Red are Preferred Versions and most readily available.

**Nominal Capacity**

- **D** 60 L/min.
- **F** 120 L/min.
- **H** 240 L/min.
- **J** 480 L/min.

**Control**

- **8** T-8A Cavity in
  - T-8A Cavity in
  - T-8A Cavity in
  - (Pilot valve to
  - be ordered separately)

**Minimum Control Pressure**

- **D** 1.7 bar
- **W** 7 bar

**Seal**

- **N** Buna-N
- **V** Viton

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**Sequence Valves**

**AIR CONTROLLED, PILOT OPERATED, BALANCED PISTON**

- Pilot ratio, air to hydraulic 1:20
- Maximum operating pressure = 140 bar
- Maximum air pressure should not exceed 10 bar.
- Typical response time 10 ms.
- Maximum leakage = RSFE: 49.2 cc/min./70 bar, RSHE: 65.5 cc/min./70 bar, RSJE: 81.9 cc/min./70 bar.

**Performance Curves**

- RSFE
- RSHE
- RSJE

**Option Ordering Information**

- Model Codes printed in Red are Preferred Versions and most readily available

<table>
<thead>
<tr>
<th>Nominal Capacity</th>
<th>Control</th>
<th>Adjustment Range</th>
<th>Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>F 120 L/min.</td>
<td>Available for RSFE only</td>
<td>B 3.5 - 105 bar</td>
<td>N Buna-N</td>
</tr>
<tr>
<td>H 240 L/min.</td>
<td>A 1/4&quot; NPTF Pilot Port at end of Cartridge*</td>
<td></td>
<td>V Viton</td>
</tr>
<tr>
<td>J 480 L/min.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Available for RSHE, RSJE only

- B SAE-4 Pilot Port at end of Cartridge*

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Sequence Valves

DIRECT ACTING WITHOUT REVERSE FLOW CHECK

Maximum operating pressure = 350 bar
- Maximum valve leakage at reseat = 0.7 cc/min
- Typical response time 2 ms
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 350 bar.
- Reseat exceeds 85% of cracking pressure.

Option Ordering Information
Model Codes printed in Red are Preferred Versions and most readily available

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Sequence Valves

DIRECT ACTING WITH REVERSE FLOW CHECK

- Maximum operating pressure = 350 bar
- Maximum valve leakage at reseat = 0.7 cc/min
- Free flow check cracking pressure = 2.8 bar
- Typical response time 2 ms
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 350 bar.
- Reseat exceeds 85% of cracking pressure.

OPTION ORDERING INFORMATION

Model Codes printed in Red are Preferred Versions and most readily available

<table>
<thead>
<tr>
<th>Nominal Capacity</th>
<th>Control**</th>
<th>Adjustment Range</th>
<th>Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>C 60 L/min.</td>
<td>L Standard Screw</td>
<td>A 35 - 210 bar</td>
<td>N Buna-N</td>
</tr>
<tr>
<td>E 120 L/min.</td>
<td>C Tamper Resistant</td>
<td>B 20 - 105 bar</td>
<td>V Viton</td>
</tr>
<tr>
<td>G 240 L/min.</td>
<td></td>
<td>C 140 - 420 bar</td>
<td></td>
</tr>
<tr>
<td>I 480 L/min.</td>
<td></td>
<td>D 14 - 55 bar</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>W 55 - 315 bar</td>
<td></td>
</tr>
</tbody>
</table>

Adjustment Range Options:
- A, B, and W are standard set at 70 bar
- C Option is standard set at 140 bar
- D Option is standard set at 25 bar
- Customer may specify pressure setting.

** See page 162 for information on Control Options

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Sequence Valves

PILOT OPERATED, KICK-DOWN

- Maximum operating pressure = 350 bar
- Maximum leakage = SQDB: 32.8 cc/min./70 bar, SQFB: 49.2 cc/min./70 bar, SQHB: 65.5 cc/min./70 bar, SQJB: 81.9 cc/min./70 bar
- Typical response time 25 ms
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 350 bar.
- To reset valve, flow through the cartridge must cease.

**OPTION ORDERING INFORMATION**  
Model Codes printed in Red are Preferred Versions and most readily available

### Cartridge Dimensions

<table>
<thead>
<tr>
<th>Capacity</th>
<th>Typical Cartridge Model Code</th>
<th>Cavity</th>
<th>a</th>
<th>b</th>
<th>c</th>
<th>L</th>
<th>C</th>
<th>K</th>
<th>Installation Torque (Nm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>60 L/min.</td>
<td>SQDB – LAN</td>
<td>T - 11A</td>
<td>34.9</td>
<td>22.2</td>
<td>64</td>
<td>66</td>
<td>70</td>
<td>4050</td>
<td></td>
</tr>
<tr>
<td>120 L/min.</td>
<td>SQFB – LAN</td>
<td>T - 2A</td>
<td>34.9</td>
<td>28.6</td>
<td>72</td>
<td>74</td>
<td>78</td>
<td>6070</td>
<td></td>
</tr>
<tr>
<td>240 L/min.</td>
<td>SQHB – LAN</td>
<td>T - 17A</td>
<td>46</td>
<td>31.8</td>
<td>84</td>
<td>86</td>
<td>90</td>
<td>200215</td>
<td></td>
</tr>
<tr>
<td>480 L/min.</td>
<td>SQJB – LAN</td>
<td>T - 19A</td>
<td>63.5</td>
<td>41.3</td>
<td>100</td>
<td>104</td>
<td>107</td>
<td>465500</td>
<td></td>
</tr>
</tbody>
</table>

### Performance Curves

#### Pressure Drop Sequenced Open

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