# VG1000 In-store Selection Chart

## High Performance as Easy at 1-2-3

## Valve Characteristics

<table>
<thead>
<tr>
<th>Valve Information</th>
<th>Flow Rate in GPM (Gallons Per Minute)</th>
<th>Pressure Drop (PSI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>40</td>
<td>5.0</td>
<td>5.0</td>
</tr>
<tr>
<td>46.8</td>
<td>66.2</td>
<td>66.2</td>
</tr>
<tr>
<td>50</td>
<td>7.4</td>
<td>7.4</td>
</tr>
</tbody>
</table>

## Actuator Specifications

### Actuator Code

<table>
<thead>
<tr>
<th>Actuator Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA9300-AGA-2Z</td>
<td>100 to 240V Floating Point</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>0 (4) to 20 mA</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>M9300-2</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>and Floating Point</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>0 (2) to 10 VDC</td>
</tr>
</tbody>
</table>

## Actuator + Valve Combinations Matrix

### Valve Code

<table>
<thead>
<tr>
<th>Valve Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VG1241 CL</td>
<td>...</td>
</tr>
<tr>
<td>VG1245 DP</td>
<td>...</td>
</tr>
<tr>
<td>VG1245 CP</td>
<td>...</td>
</tr>
<tr>
<td>VG1245 AG</td>
<td>...</td>
</tr>
<tr>
<td>VG1841 CL</td>
<td>...</td>
</tr>
<tr>
<td>VG1841 FT</td>
<td>...</td>
</tr>
<tr>
<td>VG1841 AN</td>
<td>...</td>
</tr>
<tr>
<td>VG1841 ER</td>
<td>...</td>
</tr>
<tr>
<td>VG1845 AF</td>
<td>...</td>
</tr>
<tr>
<td>VG1845 FS</td>
<td>...</td>
</tr>
<tr>
<td>VG1841 BN</td>
<td>...</td>
</tr>
</tbody>
</table>

### Actuator Code

<table>
<thead>
<tr>
<th>Actuator Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VA9300-AGA-2Z</td>
<td>100 to 240V Floating Point</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>0 (4) to 20 mA</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>M9300-2</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>and Floating Point</td>
</tr>
<tr>
<td>VA9300-AGA-2Z</td>
<td>0 (2) to 10 VDC</td>
</tr>
</tbody>
</table>

## How to Use This Chart

1. **Select the Valve Flow Characteristics:**
   - Pressure drop
   - Flow rate
   - Continue by selecting:
     - Valve size
     - Cv
     - 2-way or 3-way
   - Determine valve code

2. **Specify Actuator:**
   - Select actuator type
   - Select control input
   - Select actuator options
   - Check the Valve + Actuator Combinations Matrix to determine availability
   - Go to Option Code for switch kit, weather shield or thermal barrier
   - Go to Actuator Code to get the right actuator for your project

3. **Order your VG1000 Components:**
   - Valve Code
   - Option Code
   - Actuator Code
   - VG1000 Components

---

*Flow in gallons (gpm), the first Cv is for part #1, the second Cv is the first Cv (gallons-per-minute). The second Cv listed is for part #2 (gallons-per-minute).*
**VG1000 IN-STORE ASSEMBLY**

**SELECT VALVE AND ACTUATOR**

---

### NON-SPRING RETURN

Position stem Port A open

- 2 Way
- 3 Way

---

### SPRING RETURN

Position stem

- Spring open
- Spring close

---

#### VA9104 and VA9300

- Assemble Thermal Barrier M9000-561 if needed.
- Align stem mark with valve.

---

#### VA9203 and VA9208

- Assemble Thermal Barrier M9000-561 if needed.
- Align stem mark with valve.

---

**Adjust position of the handle on the actuator**

- Release gear

---

**Choose side of actuator**

- Spring open: A on top
- Spring close: B on top

---

**Mount actuator to valve**

- Tighten here

---

**For proportional control only: Set action type**

- Set jumper here

---

**Tools:** T-20 Torx® driver

---

1. **VG1000 IN-STORE ASSEMBLY**
2. **SELECT VALVE AND ACTUATOR**
3. **NON-SPRING RETURN**
   - Position stem Port A open
   - 2 Way
   - 3 Way
4. **SPRING RETURN**
   - Position stem
   - Spring open
   - Spring close
   - 2 Way
   - 3 Way
5. **VA9104 and VA9300**
   - Assemble Thermal Barrier M9000-561 if needed.
   - Align stem mark with valve.
6. **VA9203 and VA9208**
   - Assemble Thermal Barrier M9000-561 if needed.
   - Align stem mark with valve.
7. **Adjust position of the handle on the actuator**
   - Release gear
8. **Choose side of actuator**
   - Spring open: A on top
   - Spring close: B on top
9. **Mount actuator to valve**
   - Tighten here
10. **For proportional control only: Set action type**
    - Set jumper here
11. **Tools:** T-20 Torx® driver

---

JOHNSON CONTROLS is a registered mark. Unauthorized use is strictly prohibited. All other marks are property of their respective owners.

Torx® drive system is a registered trademark of Acument Intellectual Properties, LLC.

© 2017 Johnson Controls · P.O. Box 423, Milwaukee, WI 53201 · Printed in the USA · MISC-781 Rev. 6/17

www.johnsoncontrols.com