**BUTTERFLY VALVES**

Lug or Wafer, EPDM or PTFE, Electric or Pneumatic Actuators

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**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>VALVE</th>
<th>Service: Compatible liquids, gases, and steam.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body: 2-way, wafer or lug butterfly.</td>
<td></td>
</tr>
<tr>
<td>Line Sizes: 2 to 12&quot;.</td>
<td></td>
</tr>
<tr>
<td>End Connections: Lug and wafer pattern designed for flanges that are ANSI Class 125 (B16.1) and ANSI Class 150 (B16.5) dimension.</td>
<td></td>
</tr>
<tr>
<td>Pressure Limits: 225 psi (15.5 bar).</td>
<td></td>
</tr>
<tr>
<td>Wetted Materials: Body material: Ductile iron; Disc: 316 SS; Seat: EPDM or PTFE; O-ring: EPDM; Stem: 410 SS.</td>
<td></td>
</tr>
<tr>
<td>Temperature Limits: Disc: -50 to 250°F (-18 to 121°C); PTFE: 0 to 300°F (-18 to 149°C).</td>
<td></td>
</tr>
<tr>
<td>Bearings: Nylatron.</td>
<td></td>
</tr>
<tr>
<td>Operator: 2 to 6&quot; 10-position locking hand lever; 8 to 12&quot;: manual gear.</td>
<td></td>
</tr>
</tbody>
</table>

**ACTUATORS**

| Pneumatic “DA” and “SR” Series |
| Type: DA series is double acting and SR series is spring return (rack and pinion). |
| Normal Supply Pressure: DA: 40 to 115 psi (2.7 to 7.9 bar); SR: 70 to 115 psi (4.8 to 7.9 bar). |
| Maximum Supply Pressure: 120 psi (8.6 bar). |
| Air Connections: DA03 thru DA11: 1/4” FNPT; SR03 thru SR11: 1/4” FNPT. |
| Housing Material: Anodized aluminum body and epoxy coated aluminum end caps. |
| Temperature Limits: -40 to 176°F (-40 to 80°C). |
| Accessory Mounting: NAMUR standard. |

**Electric “TD” and “MD” Series**

| Power Requirements: 110 VAC, 220 VAC or 24 VAC. |
| Power Consumption: See instruction manual. |
| Cycle Time (per 90°): TD01 and MD01: 4 s; TD02 and MD02: 20 s; TD03 and MD03: 30 s; TD04 and MD04: 30 s; TD05 and MD05: 30 s; TD06 and MD06: 45 s; TD07 and MD07: 30 s. |
| Duty Rating: 85%. |
| Enclosure Rating: NEMA 4X (IP67). |
| Housing Material: Powder coated aluminum. |
| Temperature Limits: -22 to 140°F (-30 to 60°C). |
| Electrical Connection: 1/2” female NPT. |
| Modulating Input: 4-20 mA. |
| Standard Features: Manual override, position indicator, and TD models come with two limit switches. |

**WETTED MATERIALS**

- EPDM (Fluoroelastomer) |
- PTFE (Teflon) |
- Stainless Steel (SS) |
- Phenolic Backed Cartridge Seat Design |
- Anodized Aluminum Body |
- Epoxy Coated Aluminum End Caps |

**APPLICATIONS**

- Gas or liquid flow control |

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The Series WE20 Butterfly Valves are offered in lug or wafer body styles and is equipped with a PTFE or EPDM liner. The most critical aspect of the Series WE20 Butterfly Valves is the cartridge seat design, which alleviates installation problems associated with common “dove tail design” seats. Valve torques are lower and more consistent as the seat dynamics are not dependent on being coupled between two flanges. Precision machining of the disc and body allow the cartridge design to maintain a tighter disc to seat tolerance, providing a perfect low torque seal each and every time the valve is cycled. The seat to disc seal is independent of flange support and capable of full rated dead end service. Actuators are directly mounted creating a compact assembly for tight spaces. Limit switches are able to be mounted directly to the valves allowing for remote position indication. The Series WE20 can be configured with either an electric or pneumatic actuator. Electric actuators are available in weatherproof or explosion-proof, a variety of supply voltages and two-position or modulating control. Two-position actuators use the supply voltage to drive the valve open or closed, while the modulating actuator accepts a 4-20 mA input for valve positioning. Actuators feature thermal overload protection and permanently lubricated gear train. The pneumatic double acting actuator uses an air supply to drive the valve open and closed. The actuator has two supply ports, with one driving the valve open and the other driving the valve closed. Spring return pneumatic actuators use the air supply to open the valve, and internally loaded springs return the valve to the closed position. The pneumatic double acting actuator uses an air supply to drive the valve open and closed. The actuator has two supply ports with one driving the valve open and the other driving the valve closed. Spring return pneumatic actuators use the air supply to open the valve and internally loaded springs return the valve to the closed position. Actuators are constructed of anodized and epoxy coated aluminum for years of corrosion free service.
# BUTTERFLY VALVES

Lug or Wafer, EPDM or PTFE, Electric or Pneumatic Actuators

## MODEL CHART

<table>
<thead>
<tr>
<th>Size</th>
<th>Cv (gal/min)</th>
<th>Series WE20</th>
<th>Popular Hand Operated Model</th>
<th>Popular Double Acting Pneumatic Model</th>
<th>Popular Spring Return Pneumatic Model</th>
<th>NEMA 4X Two-Position Electric (110 VAC) Model</th>
<th>NEMA 4X Modulating Electric (110 VAC) Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>2”</td>
<td>135</td>
<td>WE20-AHD00-WE</td>
<td>WE20-ADA03-WE</td>
<td>WE20-ASR04-WE</td>
<td>WE20-ATD02-WE-A</td>
<td>WE20-AMD02-WE-A</td>
<td></td>
</tr>
<tr>
<td>2-1/2”</td>
<td>220</td>
<td>WE20-ADA03-WE</td>
<td>WE20-BSR04-WE</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3”</td>
<td>302</td>
<td>WE20-BDA04-WE</td>
<td>WE20-BSR04-WE</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4”</td>
<td>600</td>
<td>WE20-DHA05-WE</td>
<td>WE20-ESR08-WE</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5”</td>
<td>1022</td>
<td>WE20-EHA07-WE</td>
<td>WE20-ETF04-WE-A</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6”</td>
<td>1579</td>
<td>WE20-FHA06-WE</td>
<td>WE20-ETF04-WE-A</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8”</td>
<td>3136</td>
<td>WE20-GHA08-WE</td>
<td>WE20-ETF04-WE-A</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
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<td></td>
</tr>
<tr>
<td>10”</td>
<td>5340</td>
<td>WE20-HDA09-WE</td>
<td>WE20-ETF04-WE-A</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
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<td></td>
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<tr>
<td>12”</td>
<td>8250</td>
<td>WE20-HDA11-WE</td>
<td>WE20-ETF04-WE-A</td>
<td>WE20-CTD02-WE-A</td>
<td>WE20-CMD02-WE-A</td>
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</tbody>
</table>

## MODEL CHART - HAND OPERATED AND PNEUMATIC ACTUATOR

<table>
<thead>
<tr>
<th>Example WE20-BSR04-WE-A</th>
<th>Series WE20</th>
<th>Butterfly valve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size and Actuator</td>
<td>--------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>AHD00</td>
<td>2” hand operated</td>
<td></td>
</tr>
<tr>
<td>BHD00</td>
<td>2-1/2” hand operated</td>
<td></td>
</tr>
<tr>
<td>CHD00</td>
<td>3” hand operated</td>
<td></td>
</tr>
<tr>
<td>DHD00</td>
<td>4” hand operated</td>
<td></td>
</tr>
<tr>
<td>EHD00</td>
<td>5” hand operated</td>
<td></td>
</tr>
<tr>
<td>FHD00</td>
<td>6” hand operated</td>
<td></td>
</tr>
<tr>
<td>GH00</td>
<td>8” hand operated</td>
<td></td>
</tr>
<tr>
<td>HHD00</td>
<td>10” hand operated</td>
<td></td>
</tr>
<tr>
<td>IH00</td>
<td>12” hand operated</td>
<td></td>
</tr>
<tr>
<td>ADA03</td>
<td>2” double acting</td>
<td></td>
</tr>
<tr>
<td>BDA03</td>
<td>2-1/2” double acting</td>
<td></td>
</tr>
<tr>
<td>CDA04</td>
<td>3” double acting</td>
<td></td>
</tr>
<tr>
<td>DDA05</td>
<td>4” double acting</td>
<td></td>
</tr>
<tr>
<td>EDA06</td>
<td>5” double acting</td>
<td></td>
</tr>
<tr>
<td>FDA07</td>
<td>6” double acting</td>
<td></td>
</tr>
<tr>
<td>GDA08</td>
<td>8” double acting</td>
<td></td>
</tr>
<tr>
<td>HDA09</td>
<td>10” double acting</td>
<td></td>
</tr>
<tr>
<td>IDA11</td>
<td>12” double acting</td>
<td></td>
</tr>
<tr>
<td>ASR04</td>
<td>2” spring return</td>
<td></td>
</tr>
<tr>
<td>BSR04</td>
<td>2-1/2” spring return</td>
<td></td>
</tr>
<tr>
<td>CSR06</td>
<td>3” spring return</td>
<td></td>
</tr>
<tr>
<td>DSR07</td>
<td>4” spring return</td>
<td></td>
</tr>
<tr>
<td>ESR08</td>
<td>5” spring return</td>
<td></td>
</tr>
<tr>
<td>FSR09</td>
<td>6” spring return</td>
<td></td>
</tr>
<tr>
<td>GSR10</td>
<td>8” spring return</td>
<td></td>
</tr>
<tr>
<td>HSR11</td>
<td>10” spring return</td>
<td></td>
</tr>
<tr>
<td>ISR11</td>
<td>12” spring return</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Body Type /Liner</th>
<th>WE</th>
<th>WP</th>
<th>LE</th>
<th>WP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solenoid Voltage</td>
<td>N</td>
<td>A</td>
<td>N</td>
<td>A</td>
</tr>
<tr>
<td>Positioner and Switches</td>
<td>00</td>
<td>None</td>
<td>01</td>
<td>42AD0 exp limit switch</td>
</tr>
<tr>
<td></td>
<td>02</td>
<td>45VD0 exp position transmitter</td>
<td>03</td>
<td>42AD0-B ATEX limit switch</td>
</tr>
<tr>
<td></td>
<td>04</td>
<td>42AD0-IE IECX limit switch</td>
<td>06</td>
<td>QV-210101 poly limit switch</td>
</tr>
<tr>
<td></td>
<td>07</td>
<td>VPS and P1 prox switch</td>
<td>08</td>
<td>265ER-D5 positioner</td>
</tr>
<tr>
<td></td>
<td>09</td>
<td>285ER-D5 smart positioner</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## ACCESSORIES

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VB-01</td>
<td>Volume booster</td>
</tr>
</tbody>
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