The EBVA/TEBVA features a rugged weatherproof and anti-corrosive polypro housing. A visual indicator shows whether the actuator is operating correctly, or had tripped out either by its electronic torque limiter, or has been left in ‘manual’ mode. Site operators are no longer left with the ‘valve or actuator’ question when an actuator does not respond to a signal.

The EBVA/TEBVA is quick and easy to install, with a double-D drive, allowing fast mounting to True-Blue valves. There is no need to remove the cover to connect the EBVA/TEBVA electrically, saving installation time. Using the external DIN plugs and external wiring diagrams supplied with the actuator, installation can be pre-wired.

Protection against valve jams is provided by an electronic torque limiter, which auto-relaxes the gearbox when activated, allowing the manual override to be selected to assist in clearing the jam. The effect of condensation is eliminated by an internal thermostatic anti-condensation heater that does not require a separate independent power supply.

Standard function for the EBVA/TEBVA is power open (TEBVA left), power close (TEBVA right), stays put on power failure.

New to the EBVA are factory installed Fail-safe and modulating options. The modulating digital positioner offers auto-calibrating and self-resetting functions.

**NOTE:** For TEBVA flow characteristics see catalog TMBV.
## EBVA STATUS LIGHT FUNCTIONS

<table>
<thead>
<tr>
<th>LED Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONSTANTLY LIT LED</strong></td>
<td>If the actuator is operating correctly, with no faults, the LED shows a constantly lit light.</td>
</tr>
<tr>
<td><strong>THE LED FLASHES WITH 2 BLINKS</strong></td>
<td>If the actuator has been left in ‘manual’ mode, the actuator’s motor runs but doesn’t drive the output shaft. After a pre-set time, the actuator knows that as the torque limiter has not activated, and that the motor is running, it must be in manual mode.</td>
</tr>
<tr>
<td><strong>THE LED FLASHES ON/OFF</strong></td>
<td>When the actuator senses impending valve jam, the electronic torque limiter is activated and on activation, repeatedly flashes the LED on and off.</td>
</tr>
</tbody>
</table>

## EBVA OPTIONAL FEATURES

**MODULATING ACTUATOR**  
(Option 3, 4, 5 & 6)  
Provided via factory installed, self-calibrating digital positioner with 4-20mA or 0-10V.

**FAIL-SAFE ACTUATOR**  
(Option 2, 4, or 6)  
Fail-safe achieved with the use of an industrial re-chargeable battery which is supplied with the actuator. Specify fail closed or fail open.

## APPROXIMATE FLOW RATES AT 1.0 PSI (0.07 Bar) PRESSURE DROP

<table>
<thead>
<tr>
<th>Valve Sizes</th>
<th>1/2”</th>
<th>3/4”</th>
<th>1”</th>
<th>1 1/4”</th>
<th>1 1/2”</th>
<th>2”</th>
<th>2” Full-Port</th>
<th>2 1/2”</th>
<th>3”</th>
<th>4”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cv Factor</td>
<td>10</td>
<td>20</td>
<td>40</td>
<td>80</td>
<td>100</td>
<td>120</td>
<td>150</td>
<td>340</td>
<td>485</td>
<td>768</td>
</tr>
</tbody>
</table>
Valve & Actuator Assembly – Model Numbers & Dimensions

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Actuator* with Valve Model No.</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>TEBA</th>
<th>IN. MM</th>
<th>MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/8&quot;</td>
<td>EBVA-037</td>
<td>3/16</td>
<td>9/32</td>
<td>3/16</td>
<td>7/32</td>
<td>180</td>
<td>1 3/4</td>
<td>45</td>
<td>3 5/8</td>
<td>94</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>EBVA-050</td>
<td>3/16</td>
<td>9/32</td>
<td>3/16</td>
<td>7/32</td>
<td>180</td>
<td>1 3/4</td>
<td>45</td>
<td>3 5/8</td>
<td>94</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>EBVA-075</td>
<td>7/16</td>
<td>33/32</td>
<td>11/16</td>
<td>9/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>1&quot;</td>
<td>EBVA-100</td>
<td>7/16</td>
<td>33/32</td>
<td>11/16</td>
<td>9/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>11/2&quot;</td>
<td>EBVA-125</td>
<td>11/16</td>
<td>3/8</td>
<td>11/16</td>
<td>9/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>11/2&quot;</td>
<td>EBVA-150</td>
<td>11/16</td>
<td>3/8</td>
<td>11/16</td>
<td>9/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>2&quot;</td>
<td>EBVA-200</td>
<td>11/16</td>
<td>3/8</td>
<td>11/16</td>
<td>9/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>21/2&quot;</td>
<td>EBVA-250</td>
<td>9/16</td>
<td>3/4</td>
<td>13/16</td>
<td>11/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>3&quot;</td>
<td>EBVA-300</td>
<td>10/16</td>
<td>5/8</td>
<td>15/16</td>
<td>11/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
<tr>
<td>4&quot;</td>
<td>EBVA-400</td>
<td>11/16</td>
<td>3/8</td>
<td>11/16</td>
<td>9/16</td>
<td>118</td>
<td>2 1/2</td>
<td>57</td>
<td>4 1/8</td>
<td>105</td>
<td>5/16</td>
<td>16</td>
<td>5/16</td>
<td>100</td>
<td>1 1/2</td>
</tr>
</tbody>
</table>

To complete the Model Numbers refer to the ordering chart below.

Voltage must be specified with model number.

Ordering Information

Order by part number and specify exact chemicals, temperatures and pressures. To arrive at the proper part number, please consult diagram below.

The letters and numbers used in this part number are for example only!

EBVA

1. VALVE TYPE
   - SIZE/VOLTAGE
     1 - 2-Way, 3/8"-2", 85-240 Volts, A/C or D/C
     2 - 2-Way, 3/8"-2", 12-24 Volts, A/C or D/C
     3 - 2-Way, 21/2"-4", 85-240 Volts, A/C or D/C
     4 - 2-Way, 21/2"-4", 12-24 Volts, A/C or D/C
   - OPTIONS
     1 - Standard Actuator
     2 - Actuator, Fail-Safe
     3 - Actuator, 4-20 mA
     4 - Actuator, 4-20 mA Fail-Safe
     5 - Actuator, 0-10 VDC Fail-Safe
   - 050
     1 - VALVE SIZE
       037 - 3/8"
       050 - 1/2"
       075 - 3/4"
       100 - 1/16"
       125 - 1/8"
       150 - 1/4"
       200 - 2"
       201 - 2" Full Port
       250 - 21/2"
       300 - 3"
       400 - 4"
       20 - 20mm
       25 - 25mm
       32 - 32mm
       40 - 40mm
       50 - 50mm
       63 - 63mm
       90 - 90mm
       110 - 110mm

2. BALL OPTIONS
   - 3-Hole Ball
   - Characterized

3. OPTIONS
   - TEBA
   - Only

4. CONNECTIONS
   - S Socket
   - T Thread
   - F Flanges

5. SPECIAL DESIGNATION
   - When "X" appears in this spot it designates BSP threads

EBVA-0614-C-3
## AC (1ph) or DC SUPPLY – WIRING FOR MODULATING ACTUATORS

### Function: MODULATING VERSION
- **Power open, power close** – Actuator movement controlled by input signal (4-20mA or 0-10VDC)
- **Standard Operation:**
  - 4mA or 0V = Actuator Closed, 20mA or 10V = Actuator Open (can be reversed)
  - **Standard Operation:**
    - Actuator close on loss of control signal, stays put if loss on main power.
  - Output signal provided as standard (in same format as supply signal)

### NOTE:
- Wiring showing same supply as motor is only a suggestion, Read “Installation, Operation and Maintenance Instructions” before connecting.

Actuator power supply must be on a dedicated circuit and must be grounded.

## AC (1ph) or DC SUPPLY – WIRING ON/OFF OR FAIL SAFE ACTUATORS

### Function: ON/OFF VERSION
- **Power open, power close**
- **Stays on in power failure**

### Function: FAIL-SAFE VERSION
- **Power open, power close** – Trickle charges battery in either open or closed position
- **Actuator sent by battery power to preset fail safe position on power failure**
- **Actuator returns to pre-failure position on power resumption**
- Fail-safe can be either NC (normally-closed) or NO (normally-open)

### NOTE:
- Wiring showing same supply as motor is only a suggestion, Read “Installation, Operation and Maintenance Instructions” before connecting.

Volt free switches are set approximately 5° ahead of the final motor stop position. Do not use the signal from the volt free switches to cut the power to the motor, otherwise the actuator will not reach the full open or full closed position. The actuator is designed to have continuously energized power.

Actuator power supply must be on a dedicated circuit and must be grounded.