**ABZ Electric Features**

- Standard enclosure IP-67, NEMA 4, 4x
- Squirrel cage, totally enclosed motor
- Standardized and color-coded wiring
- Manual override hand/auto declutch lever, automatic reset when motor is energized
- Handwheel designed for safe, efficient operation
- Wormgear drive for longer life and a low maximum noise level of only 50dB
- Indicator is top mounted for continuous visual indication of valve position
- Standard 20 watt internal heater, minimizes condensation due to temperature and humidity changes
- Cam actuated, end of travel limit switches are easily adjusted to de-energize actuator for precise valve position
- Torque switch is cam actuated and factory set to provide over-torque protection, available in size ABZ-015 thru ABZ-250
- Mechanical limit stops designed to prevent over-travel of quarter turn applications
- Valve back drive is prevented by a rolled steel wormgear and aluminum bronze wormwheel

**Standard Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
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<tbody>
<tr>
<td>Enclosure</td>
<td>Watertight IP67, Nema 4, 4x</td>
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<tr>
<td>Ambient Temp.</td>
<td>From -20º to +158º Fahrenheit</td>
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<tr>
<td></td>
<td>300º Fahrenheit for 1 hour</td>
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<tr>
<td>Power Supply</td>
<td>120/220VAC 1-Phase</td>
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<tr>
<td></td>
<td>380/440VAC 3-Phase</td>
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<tr>
<td>Control Power</td>
<td>110/220VAC 1-Phase, 60/50Hz</td>
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<tr>
<td>Duty Cycle</td>
<td>See Performance Chart</td>
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<tr>
<td>Torque Switches</td>
<td>(2) Open/Close</td>
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<tr>
<td></td>
<td>(ABZ-015 thru ABZ-250)</td>
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<tr>
<td>Limit Switches</td>
<td>(2) Open/Close, 250 VAC 16A Rating</td>
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<tr>
<td>Stall Protection</td>
<td>Internal Thermal Protection</td>
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<tr>
<td></td>
<td>Open 300ºF/Close 207ºF</td>
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<tr>
<td>Travel Angle</td>
<td>90º ± 5º</td>
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<tr>
<td>Indicator</td>
<td>Continuous Position Indicator</td>
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<tr>
<td>Manual Override</td>
<td>Hand/Auto Declutching Mechanism</td>
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<tr>
<td>Self Locking</td>
<td>Provided by means of Worm Gearing</td>
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<td>Mechanical Stops</td>
<td>External Adjustable Screws</td>
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<tr>
<td>Space Heater</td>
<td>20Watt (24/120/220 VAC and 24 VDC)</td>
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<td>Anti-Condensation</td>
<td>Two 3/4” NPT.</td>
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<td>Lubrication</td>
<td>Grease Moly (EP) Type</td>
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<td>Materials</td>
<td>Steel, Aluminum Alloy, Aluminum Bronze</td>
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<tr>
<td>Surface Treatment</td>
<td>Anodizing</td>
</tr>
<tr>
<td>External Coating</td>
<td>Dry Powder, Epoxy-Polyester</td>
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</table>
## ABZ006-100

![ABZ006-100 Diagram](image)

**Drive Bushing**
- Base
- Conduit Entries

**ABZ150-250**

![ABZ150-250 Diagram](image)

**Drive Bushing**
- Base
- Conduit Entries

## Dimension Chart

<table>
<thead>
<tr>
<th>Model</th>
<th>006</th>
<th>009</th>
<th>015</th>
<th>019</th>
<th>020</th>
<th>030</th>
<th>050</th>
<th>060</th>
<th>080</th>
<th>100</th>
<th>150</th>
<th>200</th>
<th>250</th>
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<tbody>
<tr>
<td>A / ABZ FLANGE</td>
<td>3.25”</td>
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<tr>
<td>B / ABZ TAP</td>
<td>3/8”-16 (.47dp)</td>
<td>3/8”-16 (.47dp)</td>
<td>1/2”-13 (.87dp)</td>
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<td>M20-2.50 (.30dp)</td>
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</table>

*Bushings machined per customer request*  
*Dimensions shown are in inches unless indicated otherwise.*
**ABZ Electric Options**

- **EXP**.................... Explosion Proof Enclosure
  - Class I Div 1 Group C & D / Class II Div I Group E, F & G
  - Class III / Exd IIIB T4 IP67
- **WTE**.................. Water Tight Enclosure IP68 24 ft, 72 hrs
- **DCM**.................. 24 VDC Motor (ABZ-006 thru ABZ-028)
- **ACM**.................. 24 VAC Motor (ABZ-006 thru ABZ-028)
- **ALS**.................. Auxiliary Limit Switches 2-SPDT switches (6 aux switches max)
- **EXT**.................... Extended Travel Angle 120° to 360° (ABZ-006 thru ABZ-100)
- **LCU**.................. Local Control Unit
  - Local/remote selector switch
  - Open/stop/close selector switch
- **PIU**.................. 1K Ohm Feedback Potentiometer
- **CPT**.................. Current Position Feedback Transmitter
  - 4-20mA DC output
- **DCT**.................. VDC Position Feedback Transmitter
  - 1-5VDC, 0-5VDC, and 0-10VDC
- **PCU**.................. Proportional Control Unit 4-20mA, 1-5VDC or 0-10VDC input
- **IMS**.................. Integral Motor Starter includes reversing contactors and step down transformer
- **CLC**.................. Repeat Cycle Timer for cycle length control
- **ATS**.................. Auxiliary Torque Switches 2-SPDT switches (ABZ-015 thru ABZ-250)

Consult factory if two or more options are required.

---

### PERFORMANCE

<table>
<thead>
<tr>
<th>Model</th>
<th>Maximum Torque Output (~ inch pounds)</th>
<th>Cycle Time (60/50Hz)</th>
<th>Duty Cycle (%)</th>
<th>24 volt</th>
<th>1-Phase</th>
<th>220vac</th>
<th>380vac</th>
<th>440vac</th>
<th>Weight Lbs.</th>
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</thead>
<tbody>
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<td>ABZ-006</td>
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<td>0.12/0.33</td>
<td>0.14/0.37</td>
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<td>ABZ-009</td>
<td>781</td>
<td>14/17</td>
<td>50%</td>
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<td>1.07/2.10</td>
<td>0.49/0.87</td>
<td>0.14/0.37</td>
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