



---

## **Electronic Butterfly Valve Guide Specifications**

**(For temperatures ranging from –30°F to 250°F)**

### **Butterfly Valves:**

2" through 12" are 200 PSI butterfly valves meeting MSS SP-67 and API-609 specifications. 14 "through 24" are 150 PSI butterfly valves meeting MSS SP-67 and API-609 specifications. Non-undercut valves 2" through 24" must be rated to 150 PSI dead-end service. Valves shall be drilled and tapped for isolation and removal of downstream piping. Flanges shall meet ANSI 125 and 150 standards. All valves shall be factory tested to 110% of specified pressure rating.

### **2"-12" Valves**

The top bushing must be heavy-duty corrosion resistant, located in the upper journal to absorb actuator side thrust. The valve must have an extended neck to allow adequate clearance for flanges and insulation. The stem must be a 2 piece stem design to provide high strength and positive disc control. Shaft ends must be standardized for operator interchangeability. The top plate must be an integral part of the body and standardized to allow direct mounting of actuators. The stem seal must be self-adjusting bidirectional, located in the upper journal and suitable for vacuum and pressure. Stem seal must prevent external contamination of the stem area. The disc must be rounded and polished with hub edge to provide full 360° concentric seating, minimum flow restriction, lower torques and longer seat life. All valves must have upper and lower inboard PTFE or polymer bearings to ensure long service life with low operating torques. The cast in top plate must permit direct mounting of all DEI actuators.

### **14"-36" Valves**

The seat must have molded-in O-rings and require no gaskets between the flange and the valve. The stem must be a one piece thru-shaft design for high strength and positive disc control. The primary stem seals must be formed by preloading the disc and seat. The stem diameter must be greater than the stem hole in the resilient seat to provide a secondary seal. The shaft must have an internal shaft seal to prevent dirt from entering the valve. The seal must adjust to pressure and shaft motion. The top bushing must be heavy duty corrosion resistant and absorb actuator side thrust. The disc edge must be hand polished for optimal performance and maximum seat life. The disc screws must be stainless steel and provide positive leak-proof connections while allowing quick and easy disassembly. The valve body must be one piece with an extended neck to allow clearance for flanges and insulation.

### **Actuators: NEMA 2 Type for Butterfly applications 2" through 6":**

**(See separate specifications on pages AC-1-2 for NEMA 4/4X Industrial Actuators for Butterfly applications 2"-24")**

The valve actuator shall be capable of providing the minimum torque required for proper valve close-off for the required application. Each actuator shall have current limiting or stall detection circuitry incorporated in its design to prevent damage to the actuator. A gear release or manual override crank shall be provided on the motor to allow for manual override. Applications that require fail-safe operation of the valve assembly shall use actuators with mechanical spring return or the addition of a centralized battery backup module at the control panel for ease of maintenance.

The stem adapter, which allows the actuator to attach to the valve stem, must pass through a high temperature support bushing in a mounting plate before the actuator is attached to the valve. This procedure prevents the weight of the actuator from side-loading the valve stem.

The actuator shall be modulating, floating (tri-state), or two position with spring return as called out in the control sequence of operation. All modulating valves shall have positive positioning and respond to a 0-10 VDC (2-10 VDC) or a 0-20 mA (4-20 mA) (with a dropping resistor) control signal. These modulating units will each have position feedback signal corresponding to the actual valve position which can be wired back to the control system. An optional feedback potentiometer or auxiliary switch shall be available, if required, for floating or two-position type actuators. The actuator shall be powered by a 24 VAC, 24 VDC or 120 VAC signal. Actuators shall be UL listed.

The manufacturer shall warranty the control valve assembly for a period of 2 years from the date of installation not to exceed 30 months from the original date of shipment.

Control Valves shall be provided by (DEI) Dodge Engineering and Controls, Chelmsford, MA USA.