

# VALVE ACTUATION



Valve actuation utilizes a mechanical power device, an actuator, to operate a valve. Actuation is often desired for process automation, precision timing, and remote operation not possible with manual valves alone. Actuators are most commonly either electric or pneumatic and can be equipped with a variety of functions and accessories for controlling valve operation.

*Output torque of the actuator must meet or exceed the operating torque requirements of the specific valve to be actuated. Actuator output specifications often list beginning and ending torque values. In such cases, the lowest output torque should be used in matching valve requirements. Operating torque specifications are listed for each Spears® Industrial Ball Valve and Butterfly Valve in the individual valve sections of this manual.*

Actuation of a valve requires both a mounting device for attaching the actuator to the valve, and a coupling device to interface actuator input/output with the valve stem. Mounting devices must form a rigid, secure attachment capable of supporting the actuator and sustaining the operational torque generated in valve opening and closing. Coupling devices vary in design according to actual actuator input/output requirements. These can be fabricated to meet both actuator specifications and Spears® valve stem output specifications (see Ball Valve Accessories and Butterfly Valves sections of this manual for valve stem specifications).

Spears® Mini Mount and Multi Mount Actuation Mounting Kits are specially designed to provide optimum mounting of actuators to Spears® Industrial Ball Valves (see Ball Valve Accessories section for additional details). Manufactured to ISO mounting patterns, these chemical and corrosion resistant kits are compatible with a wide variety of actuator brands. Spears® Industrial Butterfly Valves are designed with an integrally molded actuation mounting pad easily adaptable to custom actuation.

## **Fully Actuated Valve Packages**

Spears® offers both electric and pneumatic actuation packages for Industrial Ball Valves and Butterfly Valves. These fully actuated packages include valve, mounting, coupling and precision actuator factory assembled and ready for installation. Due to the wide variety of actuation requirements, options, and accessories, each package is custom tailored to customer needs and specifications. See publication AV-4, Actuated Thermoplastic Valves, for detailed information.