



Edward™ MSIV/MFIV Valves and Actuator Systems

The World's Leading Design



Experience In Motion



Valves and actuators designed to meet the latest, most demanding requirements

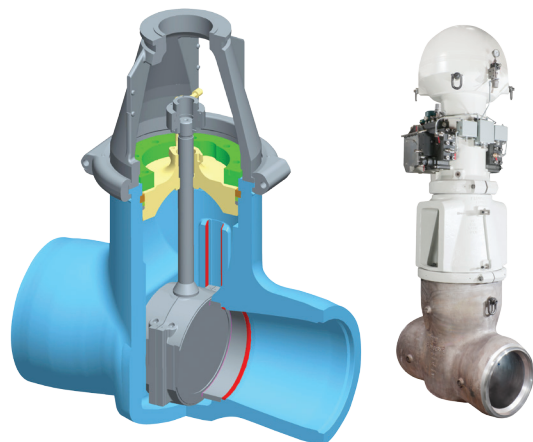
Since the beginning of commercial nuclear power, Flowserve has manufactured valves for critical, safety-related applications. Today, third generation reactor designs are demanding new technology. With over 525 MSIV/FWIV valves installed, Flowserve Edward valves incorporate the latest advances:

- Proven, reliable closure times of five seconds or less when required under all specified, potential plant operating and environment conditions
- Integrated valve and actuator design by the same on-staff design team
- Simplified modular design
- Lower maintenance costs
- 12-year maintenance cycle
- Improved reliability
- Lightweight/dimensionally compact design
- Fire-safe, non-toxic hydraulic fluid
- 100% self-contained — no auxiliary equipment required (e.g., air tanks, accumulators, reservoirs)
- Valves and actuators can be 100% functionally verified during plant outages, prior to plant start-up
- No power-robbing penetrations to main steam system
- Ability to perform safety-related function, regardless of main steam system conditions or loss of electrical power
- Environmental and functional qualifications per the latest IEEE and ASME QME-1 requirements
- Electromagnetic Compliance (EMC) Certified to meet requirements of U.S. NRC Regulatory Guide 1.180

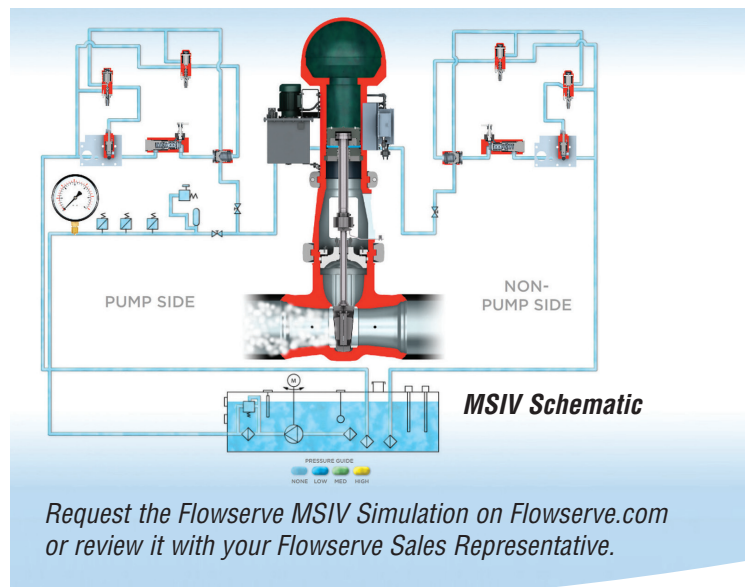
Designed for IEEE and ASME applications

In 1970, Anchor/Darling Valve and Edward Valve were among the first companies to receive ASME Section III, “N” stamp certifications and ship “N” stamped equipment to commercial nuclear power plants. Both companies continually maintained their ASME Section III “N” Stamp certification until they became part of Flowserve. At that time, the ASME Section III “N” Stamp certification was transferred to Flowserve. Additional qualifications include:

- Actuator environmentally qualified per IEEE 323, 344 and 382
- Valve assembly functionally qualified per ASME B16.41 and QME-1



Flowserve Edward™ Equiwedge gate valve. Red areas are hardened surfaces.



A leader in on-site mechanical services

As one of the few global companies to design, manufacture and supply both the valve and actuator for nuclear power plant applications, Flowserve recognizes that responsibilities to the customer do not end when the equipment is shipped.

On-site mechanical services from highly experienced, factory-trained Flowserve Field Service Technicians include:

- Supervisory or turnkey services
- ASME “NR” quality assurance program
- Technical and service personnel available 24 hours a day, seven days a week
- Troubleshooting
- Solution development
- Outstanding customer support during all phases of the order placement, manufacturing, installation and operation
- Maintenance services

Factory repair services are also available. The repaired valve or actuator is returned with a full factory warranty.

As the designer and manufacturer of both the valve and actuator, Flowserve can assure availability of replacement parts throughout the life of the power plant.

Flowserve-certified classroom and hands-on training

Operational and maintenance training by Flowserve technical, engineering and service personnel is available to the end user either on-site or at a Flowserve facility. Operational and maintenance technology is covered in the classroom with hands-on training provided in the lab or shop, utilizing full-scale, production-quality valves and actuators.



On-site mechanical service and maintenance includes 24/7/365 availability.



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