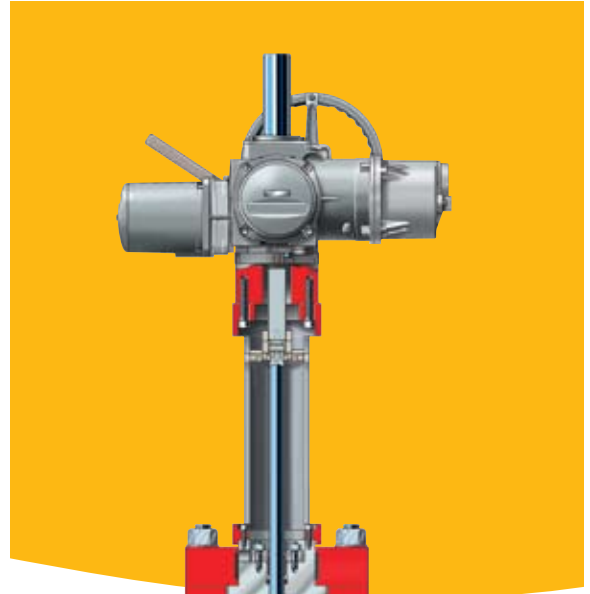


Hydraulic Decoking Systems

Decoking Control Valve

*Under its
Worthington®,
Pacific® and IDP®
heritage names,
Flowserve hydraulic
decoking systems
are installed in more
than 150 refineries
worldwide.*



Flowserve Decoking Control Valve

The proven Flowserve valve design provides years of trouble-free operation in decoking service. When maintenance is required, the valve can be completely refurbished at the plant site in less than a day.

The Flowserve decoking control valve controls the flow from the jet pump with a single valve providing three distinct functions:

- Recirculation (bypass) flow control for pump protection
- Pre-fill of decoking lines, hoses, manifolds, etc., at a predetermined reduced flow rate to prevent water hammer
- Full flow to the decoking tool nozzles. Very low pressure drop (high K_v [C_v]) in full flow for reduced energy consumption

Long Stroke, Single Stem Operation assures no unwanted overlap of functions.

Non-Clogging Design passes particles up to 3 mm (1/8 in).

Compact Design simplifies installation. Suitable for direct mounting on the jet pump.

Stainless Steel inlaid at all gasket surfaces, option for fully lined body.

Valve Stem Sealing by low friction elastomer rings. No adjustment... no packing required.

Proven, Replaceable, Durable Soft Seats assure zero leakage with water and coke fines – no lapping required during repairs.

Instant Return to any operating mode upon command.

Cost-Effective Solution

- Lower initial cost than alternative valve designs
- Lower lifetime maintenance cost than alternatives
- Design and maintenance simplicity with minimal moving parts
- No foundation required

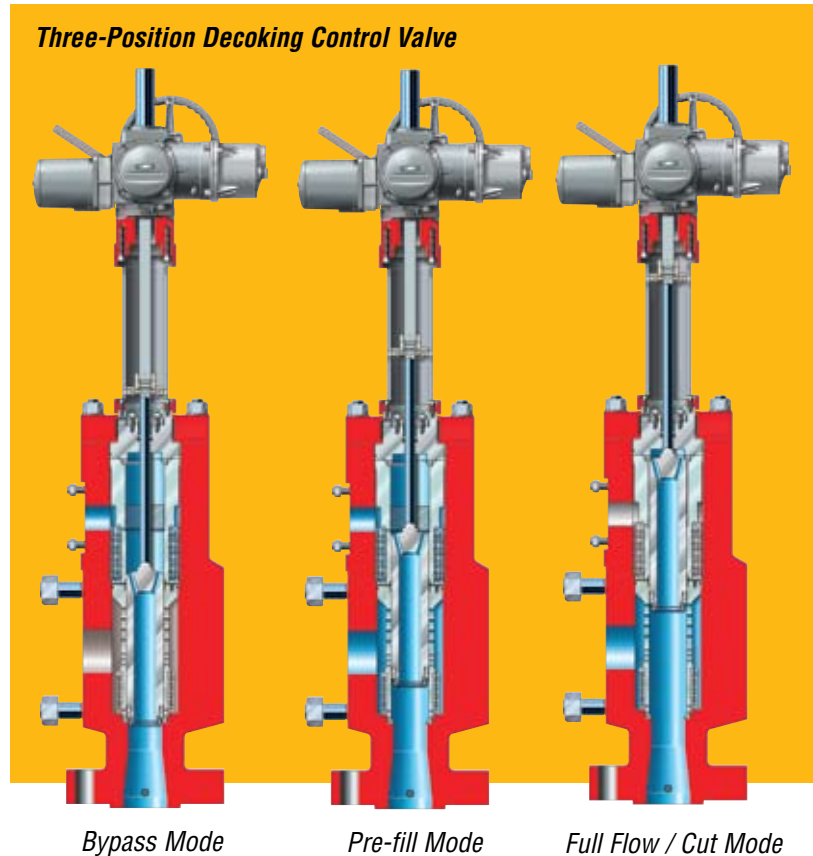
Actuation

Limiterque® motor operator is standard. Optional double-acting pneumatic actuator with positioner is available with 5.5 bar (80 psi) to 7 bar (100 psi) air supply requirement.

Decoking Valve Upgrade Options

Several upgrades are available to improve the reliability and operation of existing decoking valve installations. A Flowserve decoking expert can help specify appropriate enhancements for specific applications.

- 309 SS overlay of valve body at body seat areas
- 17-4 PH SS bonnet and piston sleeve material
- Backup ring to O-ring at valve body seat and piston sleeve
- PEEK piston seal material
- Piston sleeve seal ring spacers
- Seal ring material for higher allowable pressure
- One-piece 17-4 PH SS piston and piston rod
- A forged valve body in corrosion-resistant material
- Proximity sensors and limit switches to detect mode of operation



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