

API 6A High Pressure Adjustable Positive Choke Valves (Needle & Cage Type)



Continuous fluid throttling under immense differential pressure results in rapid trim destruction and uncontrollable flow fluctuations. Engineered with heavy-duty tungsten carbide needle and cage trims that provide precise drawdown management and exceptional cavitation resistance. Ideal for critical flow regulation on high-pressure surface trees, continuous exploration testing, and line pressure depletion monitoring.

Key Features & Advantages

- **Solid Tungsten Carbide Trims:** Valve trims (needle, seat, or cage sleeve) crafted entirely from solid tungsten carbide components for extended service life under heavy-sand flowback conditions
- **Superior Cavitation Resistance:** Engineered flow paths minimize cavitation damage and reduce erosion from high-velocity fluid streams
- **Precise Flow Control:** High-resolution micrometric handwheels or fast-acting hydraulic stepping actuators provide micro-level flow coefficient calibration
- **Interchangeable Choke Beans:** Positive type valves feature interchangeable ceramic/tungsten choke beans for flexible flow rate management
- **Multiple Trim Configurations:** Adjustable Needle & Seat, Plunger Type, or Multi-hole Cage Design to suit various operational requirements

Technical Specifications

Specification	Details
Pressure Rating	2,000 Psi to 15,000 Psi / 20,000 Psi
Orifice Sizes	1" to 3" Max Orifice Clearance
Trim Types	Adjustable Needle & Seat, Plunger Type, or Multi-hole Cage Design
Beans Configuration	Interchangeable ceramic/tungsten choke beans for Positive Type
Material Class	AA, BB, CC, DD, EE, FF, HH-NL (NACE Compliant)
Actuation Options	Manual handwheel, hydraulic actuator, or electric actuator
Compliance	API Spec 6A certified

Application

- **Well Testing Operators:** Precise control of flowback volume and drawdown tracking during exploratory well cleanup
- **Water/Gas Injection:** Long-term throttling management for enhanced oil recovery (EOR) well patterns

- **Surface Tree Regulation:** Critical flow regulation on high-pressure surface Christmas trees
 - **Pressure Depletion Monitoring:** Line pressure depletion monitoring and controlled flow management
 - **Customization Available:** Fully bespoke trim sizing tailored to specific well fluid gas-to-oil ratios (GOR); customizable remote control instrument panels
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