PowerChokes®

Model SCD 20,000 PSI Choke

The Model SCD is a forged body, 20,000 PSI choke for severe service, available as an Adjustable or a Positive model.

Features:

Adjustable Choke
- Worm gear drive actuator – eliminates backlash and provides precise control; self-locking to prevent movement even if hydraulic pressure is lost
- Quick change actuator – no need to disconnect hoses for removal. Trim can be changed in 15 minutes or less without removing the choke from the line or breaking into the manifold
- Accommodates 1½” or 2” trim size
- Manual override capability - provided on all worm gear-operated hydraulic chokes in case of power loss
- Other types of actuator available – in addition to the exclusive modified worm gear actuator, our chokes available with hydraulic piston, electric or manual actuators
- Reversible gate and seat assembly – provides a minimum of two uses per piece, saving parts, reducing operating costs and maximising efficiency. Can be reversed in the field
- Solid tungsten carbide gate and seat – proven design provides maximum erosion resistance. Gate and seat are precision-ground to provide drop tight shut off

Positive Choke (except Model SCC)
- Quick change bean – bonnet easily removable. Service tools available to remove bean and bean carrier quickly for inspection or replacement
- Numerous bean sizes – accepts 1” (64/64ths) maximum orifice H2-style or OCT-style bean, or a 2” solid tungsten carbide bean seat (128/64)

All Chokes
- Pressure balanced trim – reduces operating forces, whether the choke is operated manually or automatically. Large balance ports provide protection against clogging
- Downstream wear sleeve and retainer ring – extended-length solid tungsten carbide seat provides wear protection downstream and a smooth transition for fluid into the downstream piping
- Large buffer cavity – slows velocity and distributes impact of solids, maximising trim life

Actuator Manipulator Option
- Allows one-man, in-line servicing of chokes
- No lifting device required
- 15-minute service time

Control Consoles
- Offer operation for one, two or more chokes and / or hydraulic control valves
- Speed adjusts to allow fast or slow choke movement
- One or two hydraulic pumps plus manual backup hydraulic pump
- Bourdon tube hydraulic pressure gauges or digital pressures gauges available
- Digital position indicator gauge standard
- Accumulators available for power backup or to smooth choke operation

Both Adjustable and Positive Chokes supplied with:
- Bleeder port to bleed pressure from choke body prior to choke bonnet removal for inspection or maintenance
- Studded inlet X flanged outlet standard. Flanged inlets available
- 2½” X 3½” outlet standard for use in API 20M service
- Other inlet and outlet sizes available

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**Technical specifications**

- **Standard configuration**: Reversible, balanced, erosion-resistant trim
- **Pressure rating available**: API 20,000 psi
- **Inlet sizes**: 1 7/16", 2 9/16"
- **Outlet size**: 3/16"
- **Trim sizes available**: 1 1/2", 2"
- **Testing**: API 6A, API 16C
- **Body material**: API 75K, Impact Tested IAW NACE MR0175 / ISO 15156
- **Throttling trim material**: Tungsten Carbide
- **Seat material**: Tungsten Carbide
- **Seat leakage**: Drop Tight
- **API temperature ranges**
  - Standard: -20°F to +250°F (-29°C to +121°C)
  - Optional: -75°F to +350°F (-60°C to +177°C)
- **API 6A PSL**: 1 - 3, 3G
- **API 6A PR**: 1 - 2
- **Standard X & Y**: 6.470" x 13"

*(Custom sizes available, see SCT model for compact studded inlet)*

**API spools and adapters provided as required.**

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**General design specifications**

- **Maximum open for controllability**: 85%
- **Minimum open for controllability**: 2%
- **Maximum exit velocity**: 1.0 Mach
- **Downstream velocity (Gas)**: 0.3 Mach
- **Max. downstream velocity (Liquid)**: 100 - 200 ft/sec
- **Hydraulic operating pressure**: 1,800 - 2,000 psig
- **Shut Off**: Drop Tight (Exceeds ANSI Class V)
- **Throttling pressure drop**: Full-Rated Pressure

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