

# PowerChokes®

## Model SCS Workover / Snubbing Choke

The Model SCS is a forged body workover / snubbing choke for severe service, available as an adjustable or a positive model.

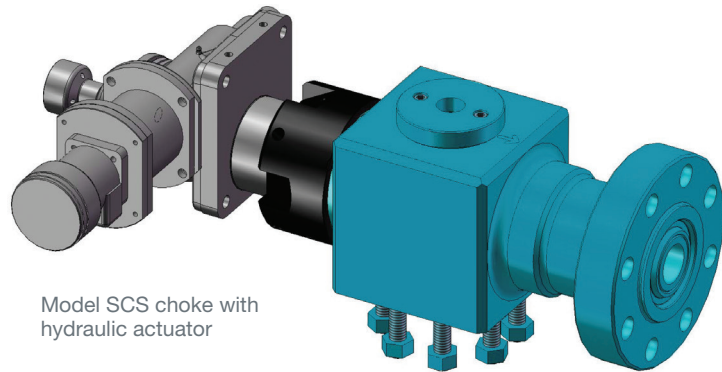
### Features

#### 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 1 1/2", 2" or 3" 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 (128/64ths)



Model SCS choke with hydraulic actuator

#### 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
- 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

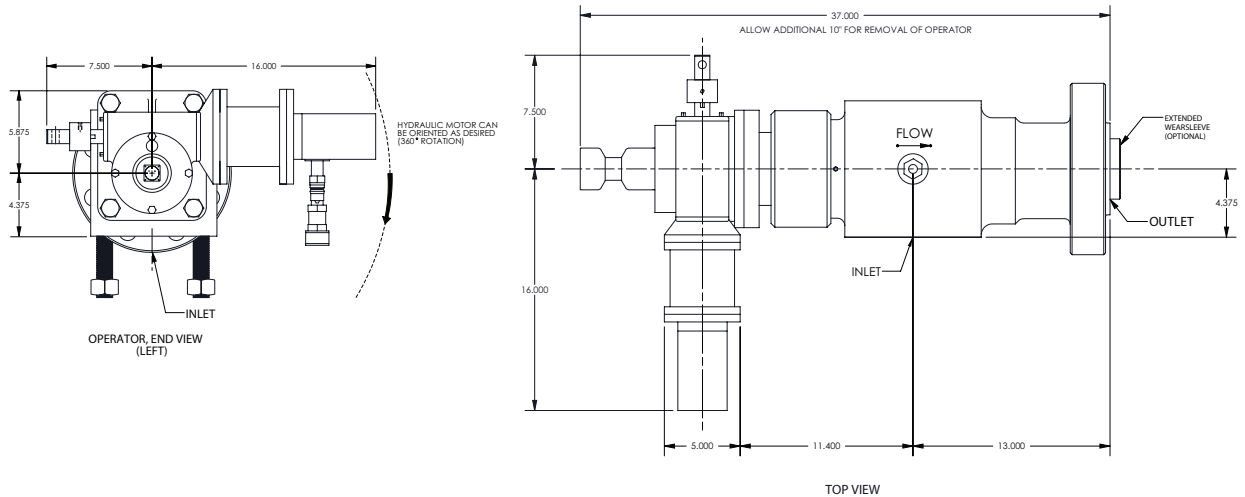
- Offer operation for one, two or more chokes and / or hydraulic control valves
- Speed adjusts to allow fast or slow choke movement
- One or two hydraulic pumps plus manual back up hydraulic pump
- Bourdon tube hydraulic pressure gauges or digital pressures gauges available
- Digital position indicator 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
- 2 1/16" inlet X 3 1/16" outlet standard for use in API 5M, 10M or 15M service
- Other inlet and outlet sizes available

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Technical specifications	
Standard configuration	Reversible, balanced, erosion-resistant trim
Pressure ratings available	API 5,000; 10,000; 15,000 psi
Inlet size ranges	2 <sup>1</sup> / <sub>16</sub> "
Outlet size	3 <sup>1</sup> / <sub>16</sub> "
Trim sizes available	1 <sup>1</sup> / <sub>2</sub> ", 2"
Testing	API 6A, API 16C
Body material	API 75K, impact tested IAW NACE MR01-75
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	4.375" x 13"

(Custom sizes available, see SCT model for compact studded inlet)  
API spools and adapters provided as required.

General design specifications	
Maximum open for controllability	85%
Minimum open for controllability	2%
Maximum exit velocity	1.0 Mach
Max. 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