

PowerChokes®

Model SCT Severe Service Drilling Choke

The Model SCT is a forged body high pressure drilling choke for severe service, available as an adjustable or a positive model.

Features

Adjustable Choke

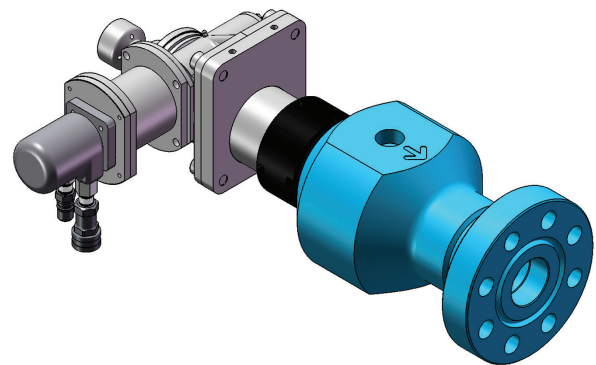
- Worm gear drive actuator – eliminates backlash and provides precise control; self-locking to prevent movement even if hydraulic pressure is lost
- Quick change actuator – no need to disconnect hoses for removal. Trim can be changed in 15 minutes or less without removing the choke from the line or breaking 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 (128/64ths)

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 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 Application Programme Interface (API) 5M, 10M or 15M service
- Other inlet and outlet sizes available

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Standard configuration

(Reversible, balanced, erosion-resistant trim)

Pressure ratings available	Application Programme Interface (API) 5,000, 10,000, 15,000 psi	
Inlet size range	2 ¹ / ₁₆ " to 3 ¹ / ₁₆ "	
Outlet size range	2 ¹ / ₁₆ " to 3 ¹ / ₁₆ "	
Trim sizes available	1 ¹ / ₂ ", or 2"	
Testing	Application Programme Interface (API) 6A, API 16C	
Body material	Application Programme Interface (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	3.5" x 11.75"	

General design specifications

Open for controllability (maximum)	85%
Open for controllability (minimum)	2%
Exit velocity (maximum)	1.0 Mach
Downstream velocity (gas) (maximum)	0.3 Mach
Downstream velocity (liquid) (maximum)	100 - 200 ft/sec
Hydraulic operating pressure	1,800 psi - 2,000 psi
Seat leakage	Drop tight (Exceeds ANSI class V)
Throttling pressure drop	Full rated pressure

Note: Other sizes, configurations and pressure ratings are available to meet most applications, for more information contact your local Expro representative or email expro.powerchokes@exprogroup.com

