Model SCF Well Test / Drilling Choke

The Model SCF is a forged body, well test / 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 11/2” 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 are 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
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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 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
- Flanged inlet X flanged outlet standard. Flanged inlets available
- 29/16” X 31/16” outlet standard for use in Application Programme Interface (API) 20M service
- Other inlet and outlet sizes available

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### Model SCF Well Test / Drilling Choke

#### Standard configuration

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure ratings available</td>
<td>Application Programme Interface (API) 5,000, 10,000 psi</td>
</tr>
<tr>
<td>Inlet size range</td>
<td>3(\frac{1}{16})&quot;</td>
</tr>
<tr>
<td>Outlet size range</td>
<td>3(\frac{1}{16})&quot;</td>
</tr>
<tr>
<td>Trim sizes available</td>
<td>1(\frac{1}{16})&quot;, 2&quot;</td>
</tr>
<tr>
<td>Testing</td>
<td>Application Programme Interface (API) 6A, API 16C</td>
</tr>
<tr>
<td>Body material</td>
<td>Application Programme Interface (API) 75K, impact tested IAW NACE MR01-75</td>
</tr>
<tr>
<td>Throttling trim material</td>
<td>Tungsten carbide</td>
</tr>
<tr>
<td>Seat material</td>
<td>Tungsten carbide</td>
</tr>
<tr>
<td>Seat leakage</td>
<td>Drop tight</td>
</tr>
</tbody>
</table>

#### 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)

#### 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

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For more information on PowerChokes®, visit exprogroup.com/powerchokes.