

# PowerChokes®

## Standard Choke SCB All-Purpose Severe Service

The Model SCB is a forged body, all-purpose severe service choke, 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 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 shutoff

#### Standard Positive Choke (Except Model SCC)

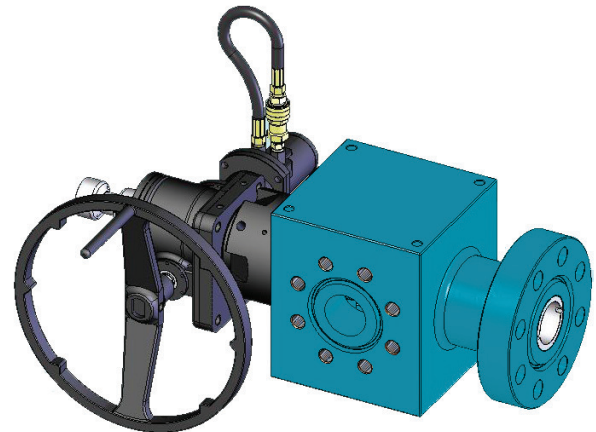
- Quick change bean – bonnet easily removable. Service tools available to remove bean and bean carrier quickly for inspection or replacement
- Numerous bean sizes – accepts 1" (64/64ths) maximum orifice H2-style or OCT-style bean, or a 3" solid tungsten carbide bean seat (192/64ths)

#### 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
- Studded inlet X flanged outlet standard. Flanged inlets available
- 31/16" inlet X 41/16" outlet standard for use in 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           | 1 <sup>13</sup> / <sub>16</sub> " to 7 <sup>1</sup> / <sub>16</sub> " |                                   |
| Outlet size range          | 4 <sup>1</sup> / <sub>16</sub> " to 7 <sup>1</sup> / <sub>16</sub> "  |                                   |
| Trim sizes available       | 1 <sup>1</sup> / <sub>2</sub> ", 2" or 3"                             |                                   |
| Testing                    | Application Programme Interface (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   |                                   |

### 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                         |
| 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](mailto:expro.powerchokes@exprogroup.com)

