



General Description

The **S range stepping actuator**, available for pneumatic (PN) and hydraulic (HY) control fluid, has a highly reliable design for remote control and automation of production chokes.

The Model S-90 actuator steps in 36° increments for opening and closing the choke valve. This is accomplished by a pawl - with a special cam and spring system - and a drive spool arrangement that directly drives the choke stem coupling.

The pawl is extended to contact and rotate the drive spool member.

This provides a constant loading force to produce the required torque output.

The pawl and piston are designed for positive spring return to ensure that each cycle stroke is consistent.

The pawl is always disengaged retracted to allow for reverse or manual operation at any time.

Manual operation is easily obtained by means of the hex shaft on top of the actuator where the HW can be coupled.

Any rotation of this shaft will directly drive the choke stem opened or closed.

The **S stepping actuator** is equipped standard with a 5 kΩ potentiometer and a 4-20mA transmitter for remote feedback of choke position; the position transmitter can be customized upon request with specific brands and accessories.

An optional limit switch module is available to directly sense the 4-20mA signal to control the open and close solenoids.

This module can be adjusted to any set-point within the choke stem travel.

If required, solenoid valves can be supplied and installed at the factory with specific bracket on the actuator side.

Typical Applications









HydroPneumatic stepping actuators for choke valves are typically the perfect solution in modulating duty for:

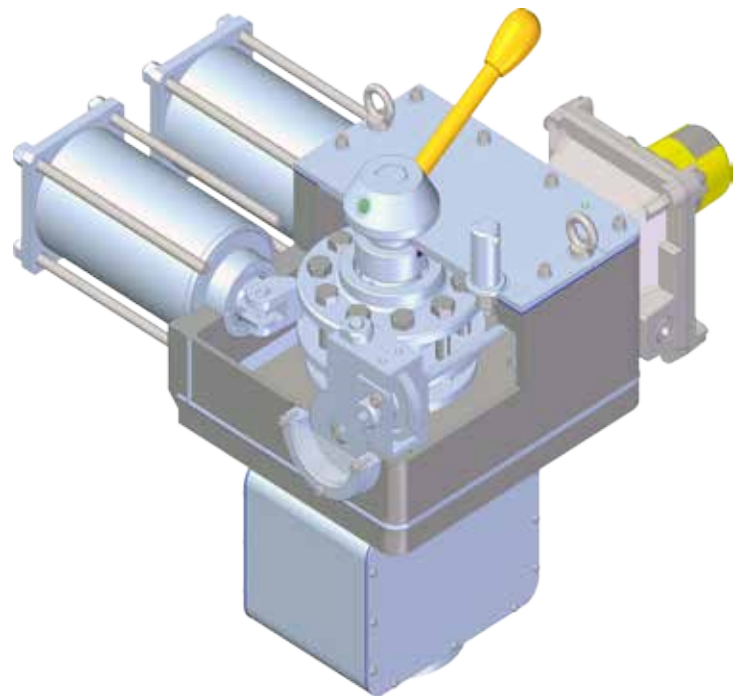
- Wellheads
- Drilling
- Water Injection
- Blowdown
- Production
- Heater Bypass

Features

- Fabricated steel housing
- Pneumatic supply at 80 psi to 120 psi maximum (5÷8,5 bar)
- Hydraulic supply at 1,500 psi to 3,000 psi maximum (100÷200 bar)
- Compact and robust design
- Side visual position indicator
- Manual override by means of a hex shaft to be coupled with a dedicated HW
- Wiring junction box for easy connection
- Available in different models

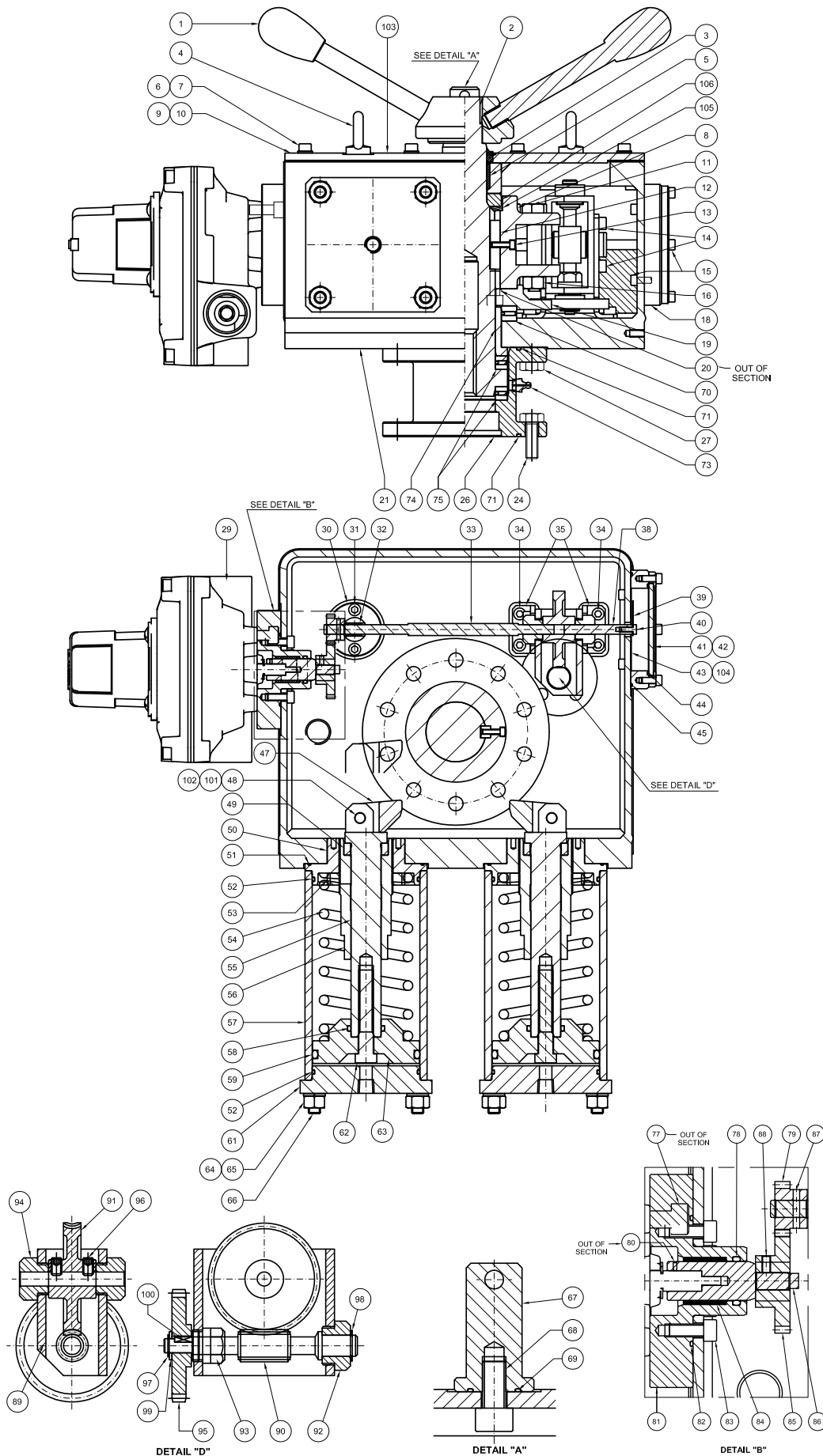
Benefits

-  Intrinsically safe
-  Reliable
-  Easy to be installed and operated
-  Customizable on board accessories with different features and from various brands
-  Available for installation on valve with external setting packing gland
-  Fail-safe last position
-  Water tight housing with corrosion resistant coating
-  Field-tested both onshore and offshore





Main components & details



Main Component Items

Number	Item	Q.ty
1	HandWheel	1
2	Drive Shaft	1
3	Wiper Ring	1
4	Lifting Eyebolt	4
5	Upper Stem Bearing	1
8	Drive Wheel	1
9	Actuator Cover Gasket	1
10	Actuator Cover	1
11	Drive Pin	10
12	Key	1
18	Ind. Flange Housing Side	1
19	Driving Gear	1
21	Actuator Housing	1
26	Valve Adapter	1
29	Position Transmitter	1
33	Transmitter Extension Bar	1
38	Indicator Extension Bar	1
39	Indicator Pointer	1
42	Indicator Flange	1
47	Cam	2
48	Pin for Cam	2
50	Base Plate	2
54	Spring	2
55	Actuator Stem	2
56	Stroke Limiter	2
57	Pneumatic Cylinder	2
61	Cylinder Head	2
63	Pneumatic Piston	2
66	Stud Bolt	8
67	HandWheel Bracket	1
73	Grease Fitting	1
75	Thrust Bearing	2
79	Gear	1
81	Pos. Transmitter Flange	1
85	Gear	1
86	Pos. Transmitter Coupling	1
87	Pin	1
88	Dowel	2
89	Reducer Housing	1
90	Worm Screw	1
91	Worm Wheel	1
95	Gear	1
96	Dowel	2
97 - 98	Spring Retaining Ring	2
100	Key	1
101 - 102	Spring	6
103	Data Plate	1
104	Indicator Plate	1
105	Spring	2
106	Spacer	1

