

# Diaphragm Sealed Control Valve

MK.98-01  
01-02

# Staitech

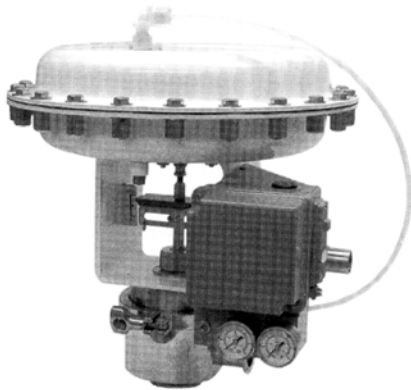


## Mark 98

### Diaphragm-Sealed Sanitary Control Valve

A modulating control valve that conforms to **ASME BPE 1997** standards for the biopharmaceutical industry.

- Self-draining and crevice-free to maintain sanitary conditions whether mounted horizontally or vertically.
- No guiding surfaces in the fluid — prevents particulate generation.
- No exposed threads — prevents accumulation of contaminants.
- Teflon® covered EPDM diaphragm with polyester reinforcement — in accordance with FDA and 3A guidelines.
- Clean-in-Place, Steam-in-Place capabilities.
- Shatter-proof yoke covers for further protection against external dirt trapping.
- Actuator features special wash-down epoxy coating.



Model		Body Material	O-Ring		Accessory		Action	
98TP	w/ Top Mounted Positioner		TV	Teflon Encapsulated Viton	00	None	0D	Direct Acting
98SP	w/ Side Mounted Positioner	6L	EP	EPDM	YC	Enclosed Yoke	0R	Reverse Acting

### Ordering Schematic



Size	
050	1/2" (DN15)
075	3/4" (DN20)
100	1" (DN25)
150	1-1/2" (DN40)
200	2" (DN50)

Body (Tri-Clamp) Finish	
A3	20ra Interior/63rms Exterior (Standard)
B2	20ra Interior/20ra Exterior
C8	8ra Interior/63rms Exterior
D8	20ra Interior/8ra Exterior
E8	8ra Interior/8ra Exterior
F8	8ra Interior/20ra Exterior

Trim (Cv/Kv)	
A1	2.5/2,15 LIN
A2	2.5/2,15 =%
B1	5.0/4,3 LIN
B2	5.0/4,3 =%
C1	15/12,9 LIN
C2	11/9,46 =%
D1	30/25,8 LIN
D2	25/21,5 =%
E1	45/38,7 LIN
E1	35/30,1 =%

Actuator	
R5	55M MK98 REV
D5	55M MK98 DIR
R3	35M MK98 REV
D3	35M MK98 DIR
R8	85M MK98 REV
D8	85M MK98 DIR

SMP (98SP ONLY)		
0A	SMP 3-15	REV/DIR
0B	SMP 3-9	REV/DIR
0C	SMP 9-15	REV/DIR
0D	SMP-I/P 4-20	REV/DIR
0E	SMP-I/P 4-12	REV/DIR
0F	SMP-I/P 12-20	REV/DIR

# Mark 98 Diaphragm-Sealed Sanitary Control Valve

## Specifications

**Sizes:** 1/2" (DN15), 3/4" (DN20), 1" (DN25), 1-1/2" (DN40), 2" (DN50)

**End Connections:**

- Quick disconnect sanitary fittings (*to match Tri-Clamp® fitting*)
- DIN sanitary
- Butt weld

**Actuator:**

- 55M multi-spring pneumatic with advanced wash-down epoxy paint; with standard top-mounted positioner or optional side-mounted positioner (Sizes 1/2"/DN15 - 1"/DN25).
- 85M multi-spring pneumatic with advanced wash-down epoxy paint; with standard top-mounted positioner or optional side-mounted positioner (Sizes 1-1/2"/DN40 - 2"/DN50).

**Materials of Construction:**

- Body & Trim: 316L Stainless Steel (*ASTM A479*)
- Seat: integral 316L SST seat
- Actuator & Yoke: epoxy-coated steel with shatter-proof covers on yoke (w/ top mounted positioner).
- Diaphragm: Teflon-covered EPDM with polyester reinforcement; in accordance with 3A and FDA guidelines.

**Shutoff:** ANSI Class VI

**Stroke Length:**

- 1/2" for 1/2" (DN15) to 1" (DN25)
- 1" for 1-1/2" (DN40) to 2" (DN50)

**Standard Ranges:**

- 3-15 (direct or reverse); 6-30 (reverse)

**Flow Characteristic:** linear or equal percentage

**Body Pressure/Temperature Rating:**

- Continuous: 150 psig (10,3 bar) @ 307°F (153°C)
- Maximum Continuous Steam: 30 psig (2,1 bar)
- Maximum Intermittent Steam: 60 psig (4,1 bar)

**Maximum Pressure Drop:** 150 psig (10,3 bar) continuous, 275 psig (20,0 bar) intermittent (1/2"/DN15 - 1"/DN25 only)

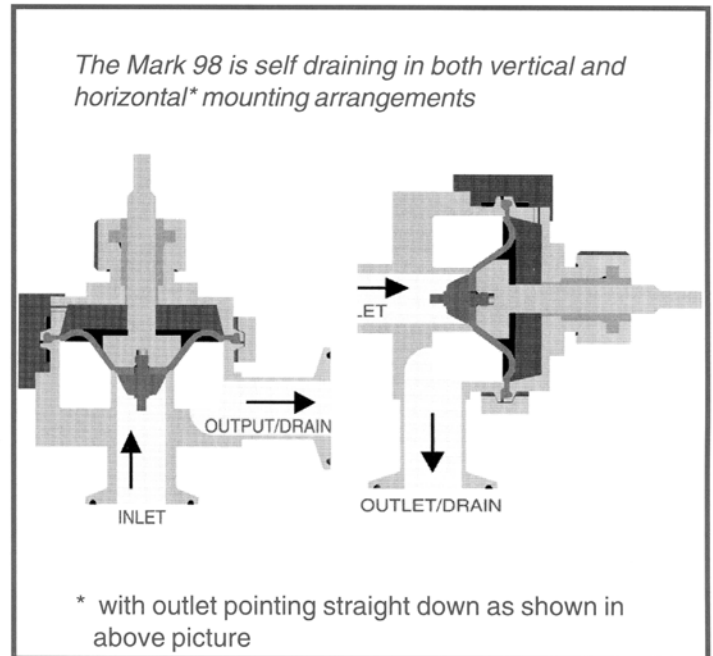
## Available Finishes

**Body**

- *Standard:* 20 ra mechanical finish and electropolish on inside wetted surfaces; machine finish and electropolish on exterior
- *Optional:* 20 ra mechanical finish on external surfaces; 8 ra finish on internal or external surfaces

**Stem**

- *Standard:* 20 ra mechanical finish and electropolish
- *Optional:* 8 ra finish



**Applications:**

Water for Injection (WFI), Ultra Pure Water, De-Ionized Water, De-Mineralized Water, Aqueous Solution. Suitable for Sterilization by Steam In Place (SIP) or Clean In Place (CIP)

**Cv Ratings:**

Valve Size (DN)	Linear psig (bar)	Equal Percentage psig (bar)
1/2" (DN15)	2.5 (0,17)	2.5 (0,17)
3/4" (DN20)	2.5 (0,17), 5 (0,34)	2.5 (0,17), 5 (0,34)
1" (DN25)	2.5 (0,17), 5 (0,34), 15 (1,03)	2.5 (0,17), 5 (0,34), 11 (0,76)
1-1/2" (DN40)	30 (25,8)	25 (21,5)
2" (DN50)	45 (38,7)	35 (30,1)