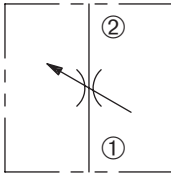


# S-210, S-310 and S-410

Adjustable, High Pressure,  
Needle Valve  
5000 psi (345 bar)

## SERIES S



### DESCRIPTION

A cartridge valve designed as a shut-off. The optional SM needle provides fine metering characteristics.

### OPERATION

The S-210, S-310, and S-410 series of valves will allow flow in either direction.

### FEATURES and BENEFITS

- High pressure range.
- High flow capabilities.
- Fine metering option.
- Positive shut-off.

### SPECIFICATIONS

**\*Operating Pressure:** 5000 PSI (345 Bar)

**Flow:** See FLOW CHARACTERISTICS chart.

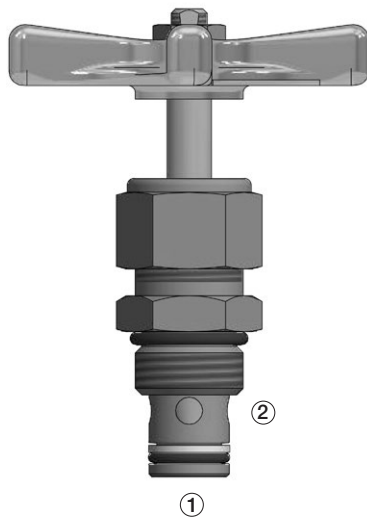
**Temperature:** -30°F to +250°F (-34°C to +121°C)

**Recommended Filtration:** ISO 20/18/14

**Fluids:** Mineral-based fluids. For other fluid compatibility, consult factory.

**Cavities /Cavity Tools:** S\*10, see page 11.22.1

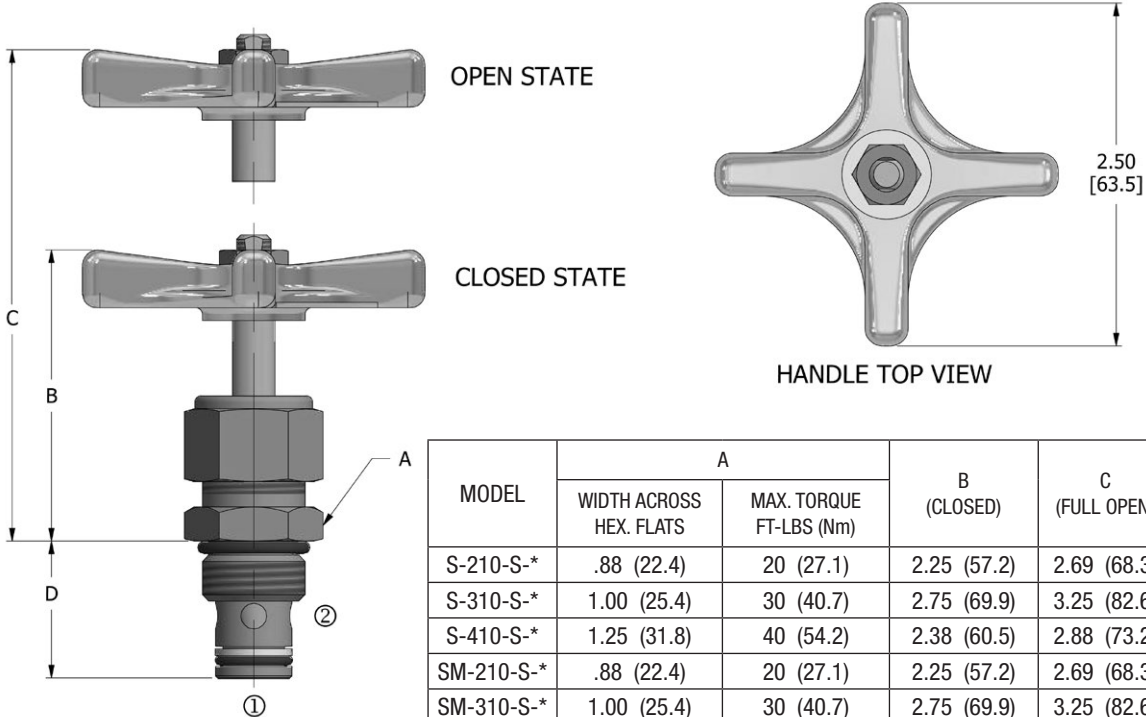
*\*Installed in body of adequate size and strength.*



### FLOW CHARACTERISTICS

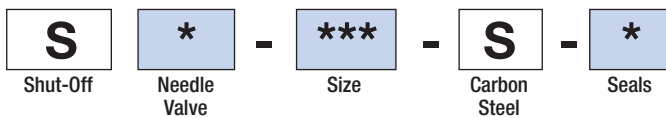
MODEL	FLOW MAX. RECOMMENDED GPM (L/min.)		CV FLOW FACTOR (FULL OPEN)
S-210-S*	13.5	(51.1)	.85
S-310-S*	25.0	(94.6)	1.67
S-410-S*	40.0	(151.4)	1.89
SM-210-S*	13.5	(51.1)	.85
SM-310-S*	25.0	(94.6)	1.67
SM-410-S*	40.0	(151.4)	1.89

## DIMENSIONS Inches [Millimeters]



MODEL	A		B (CLOSED)	C (FULL OPEN)	D
	WIDTH ACROSS HEX. FLATS	MAX. TORQUE FT-LBS (Nm)			
S-210-S-*	.88 (22.4)	20 (27.1)	2.25 (57.2)	2.69 (68.3)	1.00 (25.4)
S-310-S-*	1.00 (25.4)	30 (40.7)	2.75 (69.9)	3.25 (82.6)	1.19 (30.2)
S-410-S-*	1.25 (31.8)	40 (54.2)	2.38 (60.5)	2.88 (73.2)	1.56 (39.6)
SM-210-S-*	.88 (22.4)	20 (27.1)	2.25 (57.2)	2.69 (68.3)	1.00 (25.4)
SM-310-S-*	1.00 (25.4)	30 (40.7)	2.75 (69.9)	3.25 (82.6)	1.19 (30.2)
SM-410-S-*	1.25 (31.8)	40 (54.2)	2.38 (60.5)	2.88 (73.2)	1.56 (39.6)

## HOW TO ORDER



Needle Valve	
omit	Standard metering
<b>M</b>	Fine metering

Size		Flow - Maximum
<b>210</b>	1/4"	7.0 gpm (26.5 lpm)
<b>310</b>	3/8"	13.5 gpm (51.1 lpm)
<b>410</b>	1/2"	22.5 gpm (85.2 lpm)

Seals	
<b>3</b>	Viton

All variations may not be configurable. Minimum order quantities may be required on other models. Contact Deltrol Fluid Products for complete details.