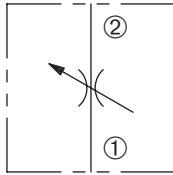


S-210, S-310 and S-410

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)

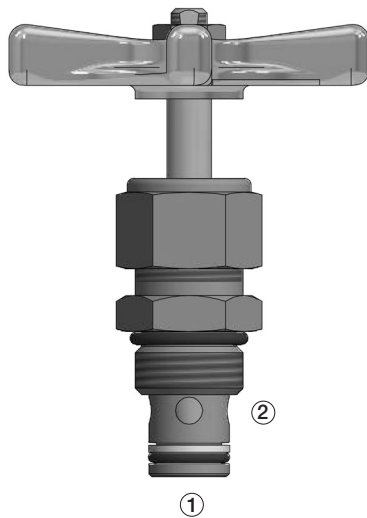
Flow: See FLOW CHARACTERISTICS chart.

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.

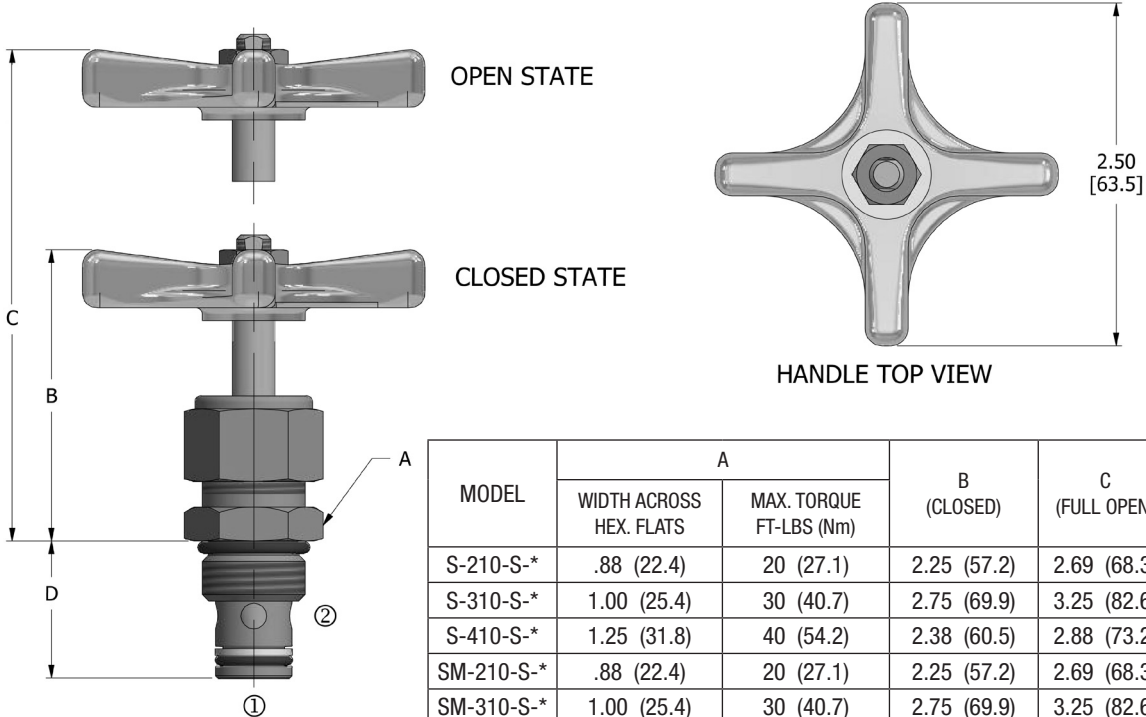
Cavities /Cavity Tools: S210; S310; S410, see page 11.22.1



FLOW CHARACTERISTICS

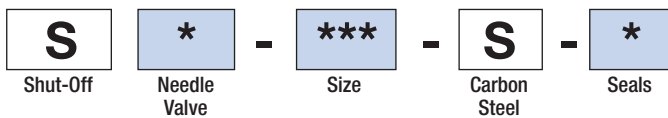
MODEL	FLOW MAX. RECOMENDED GPM (L/min.)	CV FLOW FACTOR (FULL OPEN)
S-210-S-*	13.5 (51.1)	.85
S-310-S-*	25.0 (94.6)	1.67
S-410-S-*	40.0 (151.4)	1.89
SM-210-S-*	13.5 (51.1)	.85
SM-310-S-*	25.0 (94.6)	1.67
SM-410-S-*	40.0 (151.4)	1.89

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
M	Fine metering

Size		Flow - Maximum	Cavity
210	1/4"	7.0 gpm (26.5 lpm)	S210
310	3/8"	13.5 gpm (51.1 lpm)	S310
410	1/2"	22.5 gpm (85.2 lpm)	S410

Seals	
3	Viton

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

SOLENOID
CHECK
MOTION CONTROL
FLOW CONTROL
RELIEF
PRESSURE CONTROL
SEQUENCE
SHUTTLE
DIRECTIONAL VALVES
HAND PUMPS
TECHNICAL DATA