

# Metering Valves

High Resolution Control Valves and  
Standard Cartridge Valves

## Customer Value Proposition:

Porter metering valves are designed for extremely precise control in low flow gas and liquid applications. They are available as valve cartridges, integrally mounted in flowmeters and in-line valve assemblies with straight or angle patterned bodies. All in-line valve assemblies have 1/8" female NPT inlet and outlet ports.



## High Resolution Control Valves

The HR Series High Resolution Control Valves contain unique design features that make them the ultimate choice for precise low flow control.

- Spring loaded, non rising adjustment stem with 56-pitch thread provides smooth, non-reversing flow characteristics and 15-turn resolution.
- Non-rotating stainless steel valve pin with precision ground flat gives exact control.
- Valve pin o-ring guarantees positive shut-off without stem damage.
- Self-lubricating orifice liner assures long life
- Seven available needle tapers expand valve capacity



## Standard Cartridge Valves

Porter's Standard Cartridge Valves (SCV) are economical, multi-purpose valve assemblies. Available in 3 needle tapers, they are ideal for a wide spectrum of low flow applications.

# Specifications

## Capacities for High Resolution Control Valves

Needle Size (HRVC)		0	1	2	3	4	5	6
Max Flow	cc/min.- Helium	95	220	450	1250	3600	12500	50000
	cc/min.- Water	2	6	15	30	100	200	900

## Capacities for Standard Cartridge Valve

Needle Size (SCV)		1	2	3
Max Flow	cc/min.- Helium	25000	35000	55000
	cc/min.- Water	700	1000	1200

Note: Capacities are typically measured with water or helium at 10 psig supply pressure and atmospheric pressure downstream. Capacities vary for different fluids and operating conditions.

## Ratings: Maximum Operating

	Temperature °F	Pressure PSIG
Brass Model	160	250
Stainless Steel Model	250	250

Connections: 1/8" Female NPT (integral)

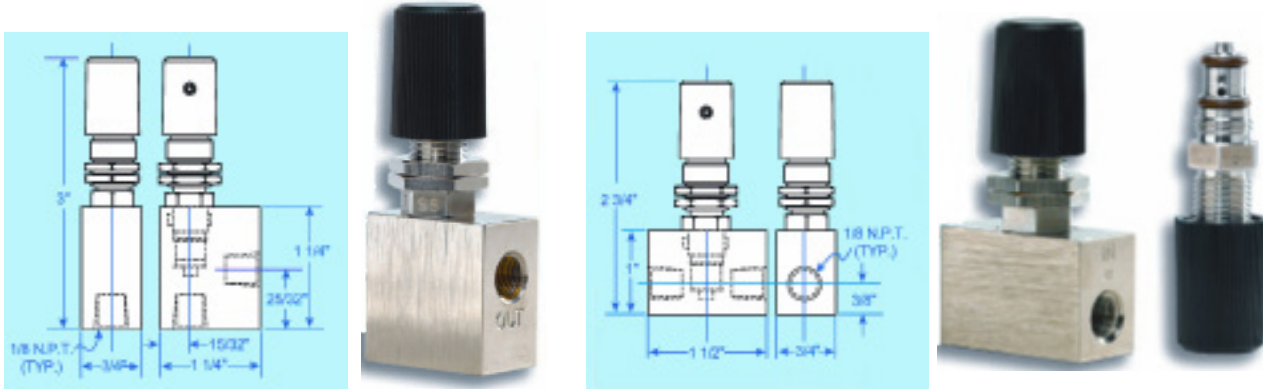
## Materials of Construction

Model	Body	Valve Pin	Valve Pin Holder	O-Rings	Orifice
HRCV Brass	Nickel Plated Brass	316 SS	Brass	Buna N	Brass w/ Fluorosint® liner
HRCV Stainless Steel	316 SS	316 SS	316 SS	Viton	316 SS w/ Fluorosint® liner
SCV Brass	Nickel Plated Brass	316 SS	316 SS	Buna N	Brass
SCV Stainless Steel	316 SS	316 SS	316 SS	Viton	316 SS

## High Resolution Control Valves

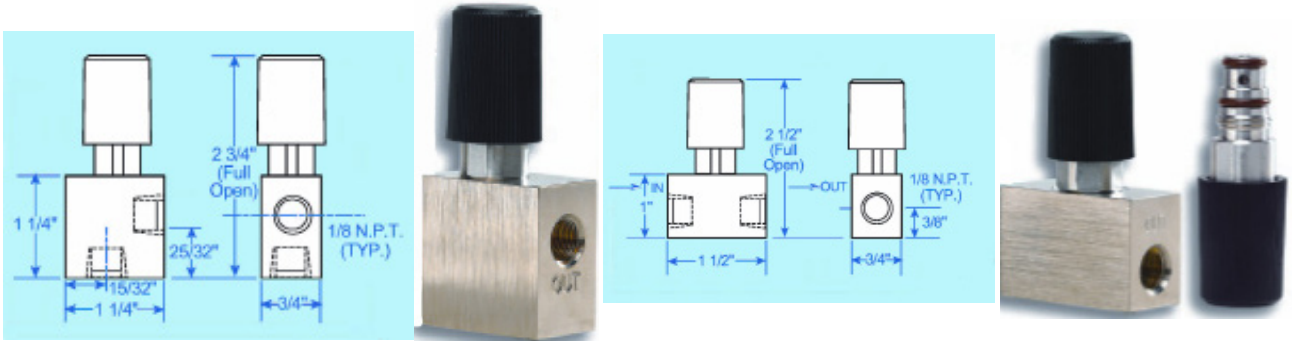
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# Torque Guard

Porter standard cartridge valves are available with the exclusive torque guard stop mechanism. Torque guard eliminates stem damage caused by over tightening of the valve at shut-off. The torque guard system consists of a specifically designed knob with a stop pin pressed into an aluminum knob insert and a mechanical detail on the packing nut that engages the stop pin and prevents clockwise rotation beyond a predetermined point. During final test, the knob is adjusted so that the stop pin and packing nut engage precisely at shut-off. This combination eliminates the possibility of over tightening and the resultant stem damage.

## Ordering Information

<p><b>Ordering Information</b> <b>Model Number and Description</b></p> <p><b>Control Valve</b> Example:</p> <div style="text-align: center; border: 1px solid white; padding: 5px; display: inline-block;"> <span style="border: 1px solid white; padding: 2px;">HRCV</span> <span style="border: 1px solid white; padding: 2px;">B</span> <span style="border: 1px solid white; padding: 2px;">1</span> <span style="border: 1px solid white; padding: 2px;">S</span> </div> <p><b>Basic Model</b> HRCV (High Resolution) SCV (Standard Cartridge)</p> <p><b>Body Material</b> B - Brass S - Stainless Steel</p> <p><b>Needle Size</b> 0 thru 6 (HRCV only) 1 thru 3 (SCV only) 1 - TG (Torque Guard Taper 1) 1 - TG (Torque Guard Taper 2)</p> <p><b>Connection Configuration</b> A - Angle S - Straight</p>	<p><b>Valve Cartridge Only</b> Example:</p> <div style="text-align: center; border: 1px solid white; padding: 5px; display: inline-block;"> <span style="border: 1px solid white; padding: 2px;">SC</span> <span style="border: 1px solid white; padding: 2px;">3</span> <span style="border: 1px solid white; padding: 2px;">B</span> </div> <p><b>Valve Configuration</b> HR (High Resolution) SC (Standard Cartridge)</p> <p><b>Needle Size</b> 0 thru 6 (HR only) 1 thru 3 (SC only) 1 - TG (Torque Guard Taper 1) 1 - TG (Torque Guard Taper 2)</p> <p><b>Material</b> A - Aluminum B - Brass S - Stainless Steel</p>	<p><b>To order, specify:</b></p> <ul style="list-style-type: none"> <li>Model Number</li> <li>Fluid</li> <li>Flow Rate</li> <li>Operating Pressure (inlet and outlet)</li> <li>Operating Temperature</li> <li>Materials of Construction</li> </ul>
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**WARNING**

FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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