



Flow Control Valve 316 Stainless Steel

Bulletin FCV-316
September 2009

Flow Control Valve

Versa Products' Flow Control Valve (FCV) is a 316 stainless steel, NACE compliant simple device combining a check and needle valve to accomplish speed control in pneumatic actuators and cylinders.

The FCV allows unrestricted *full flow* one direction and adjustable flow in the reverse. This combination provides effective speed control making it ideally suited for safety valves or fast close applications. Arrange two in a circuit and effectively adjust speed in both directions.

Versa utilizes an *investment cast* 316 design to maximize flow and controllability while reducing overall weight. Standard sealing is fluorocarbon for durability, environmental issues and media compatibility. For low temperature applications an optional low temperature Buna seal is recommended.

The Bleed Needle

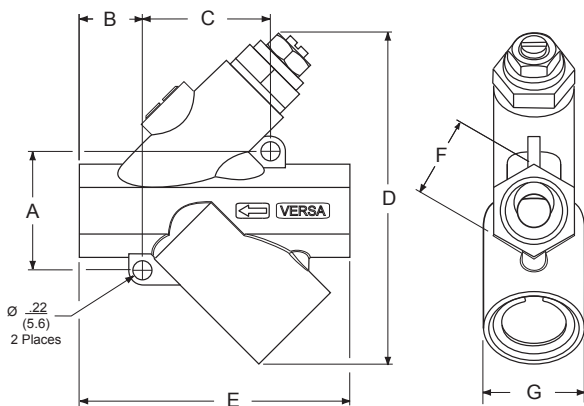
Adjustment is made through Versa's needle designs from our proven "Bleed Control" family of products. Versa's needles are designed for full adjustably throughout the control range. The large surface area of the needle combined with the unique internal design provides an *exceptional linear flow curve*, each % of needle turn provides an equivalent % of flow change. *No dead zones*. A needle locknut is offered as standard for *tamper proof* adjustments.

The Versa Shuttle

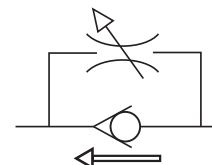
The key to Versa's full flow is the internal design and the Versa "shuttle." This combination provides a larger surface area and yields much higher flows, than controls utilizing ball checks. When the flow is reversed, placing pressure on the "shuttle" it rapidly opens to a high flow orifice that instantly empties the volume in the line. *Finally a full flow, flow control valve!*

Mounting

The FCV may be mounted in line with piping or by utilizing the *mounting holes* provided and in any orientation.



Flow Schematic



Arrow signifies controlled flow direction

Size	Part Number	Cv	Cv
		(un-controlled direction)	(controlled direction)
1/4"	FCV-3-316	2.0	0* TO 2.0
1/2"	FCV-5-316	5.0	0* TO 5.0

* Not bubble tight at shut off for safety reasons

Valve	A	B	C	D	E	F	G
1/4"	1.31 (33.3)	0.609 (15.5)	1.359 (34.5)	3.23 (81.9)	2.50 (63.5)	0.87 (22.1)	1.0 (25.4)
1/2"	1.47 (37.4)	.78 (19.9)	1.59 (40.3)	4.10 (104.1)	3.35 (85.2)	1.0 (25.4)	1.25 (31.8)

Pressure Max: 400 psi. (27.6 BAR)

Temperature:

-5° F to 200° F (-20° C to 93° C)

-55° F to 200° F (-48° C to 93° C) w/ option -44

Media: Air, gas

Port Size:

Inlet: 1/4 or 1/2 npt

Outlet: 1/4 or 1/2 npt

Weight:

1/4"

0.75 lbs. (0.34 kg.)

1/2"

1.15 lbs. (0.52 kg.)

Materials:

Body:

316L stainless steel

Seals:

Fluorocarbon (standard)

Nitrile (suffix: -44)

Spring:

Inconel

NACE compliant materials