

Design and Applications



DK-Lok VBV Series Bleed Valves are designed to vent the signal line pressure to atmosphere before an instrument is removed and to assist in calibration of control devices.

These are for use on instrumentation devices such as gauge root valves and multi-valve manifolds. Optional barbed vent tube enables containment of fluid vented. The VBV Series are also ideal in bleeding hydraulic systems.

Installation and Operation

Position the vent tube so that system fluid is not directed to personnel operating. Slowly open the valve. This valve has no stem seal packing; small amounts of fluid will go through the stem thread when they are opened. Therefore suitable measures should be taken to protect personnel operating.

Materials of Construction

Components	VALVE BODY MATERIALS	
	SS316 Stainless	Carbon Steel
	GRADE / ASTM and JIS SPECIFICATION	
Stem	SS316 / A 276	
Stem Tip	S630 / A564	
Body*	SS316 / A 276	S20C-S45C / G4051
Back Stop Screw	SS316 / A 276	
Vent Tube	SS316 / A 269	

* Carbon Steel bodies are white galvanized for corrosion resistance.

Technical Data

Material	Temperature Rating	Pressure Rating
SS316	-65°F to 850°F (-54°C to 454°C)	10,000 psi (689 bar) @ 100°F (38°C)
Carbon Steel	-20°F to 450°F (-29°C to 232°C)	

Ordering Number and Table of Dimensions

Basic Ordering No.	End Connection		Orifice in.(mm)	Cv	Dimensions in. (mm)				
	Inlet	Outlet			L	L1	D	h Hex	
VBV-M-2N-	1/8" Male NPT	O.D. 3/16" Tube Stub	0.125 (3.2)	0.25	1.34 (34.03)	0.94 (23.87)	0.75 (19.05)	5/8 (15.87)	
VBV-M-4N-	1/4" Male NPT				1.47 (37.33)	1.03 (26.16)	0.75 (19.05)	7/8 (22.22)	
VBV-M-6N-	3/8" Male NPT								
VBV-M-8N-	1/2" Male NPT								

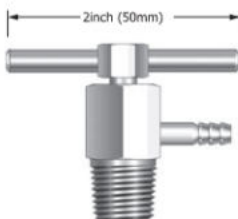
All dimensions shown are for reference only and are subject to change.

CNG Certifications

Certificates	ECE R110	ANSI / AGA NGV 3.1-1995 CGA NGV 12.3-M95	ISO 15500
Certificate No	110R-000197	2010-REPORT-030 (01)	2010-REPORT-030 (01)
Classification	Class 0	CNG-VBV	CNG-VBV
Temperature	-40°C to 120°C (-40°F to 250°F)	-40°C to 121°C (-40°F to 250°F)	-40°C to 121°C (-40°F to 250°F)
Working Pressure	200 bar @ 120°C	273 bar @ 121°C	273 bar @ 120°C

How to Order

To order, add the valve body material as a suffix to the basic ordering number. S: Stainless, C: Steel. Example: VBV-M-2N-S



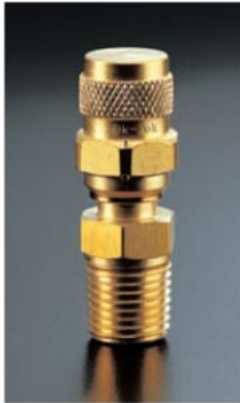
Options

Bar handle : Optional bar handle allows wrench-less actuation
 • Bar handle ordering number : BH
 Barbed Vent Tube : Optional barbed vent tube enables containment of fluid vented.
 • 3/16" OD barbed vent tube ordering number : HT
 To order, use the option ordering number as a suffix to the valve basic ordering number.
 Examples: VBV-M-2N-BH-S, VBV-M-2N-HT-S.

Factory Test

Every valve is tested with the nitrogen @ 68 bar (1,000 psi) for leakage at the seat to a maximum allowable leak rate of 0.1 scc/min.

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Design

DK-Lok VPV Series Purge Valves are designed for manually bleeding, venting, or draining system fluids. The cap is clamped to the valve body for safety in use. The 0.063 inch (1.6 mm) diameter vent hole is constructed on the cap.

Operation and Installation Instruction

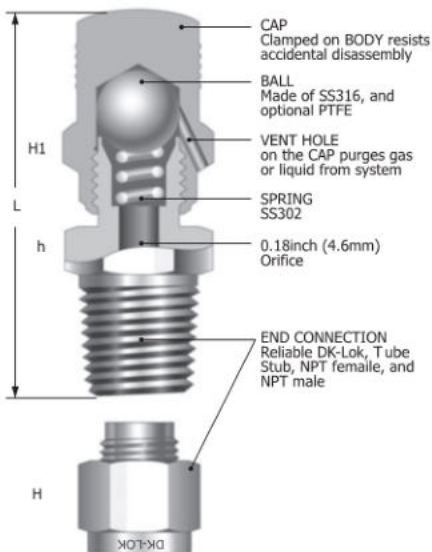
DK-Lok VPV series purge valve requires a quarter turn of cap with a wrench from finger-tight for a leak-tight seal on the first make-up. To ensure seal to the rated pressure, snug with a wrench. Always open the valve slowly. These valves have no seal on cap. Therefore media may flow through the cap thread when the valves are opened. Operating personnel should take suitable measures to be protected from system fluids.

MATERIALS OF CONSTRUCTION

Valve Material	Pressure Rating @ 100°F (38°C)		Temperature Range	
	psig	bar	°F	°C
SS316	4000	275	-65 ~ 600	-54 ~ 315
Brass	3000	206	-65 ~ 400	-54 ~ 204

Materials of Construction

Components	VALVE BODY MATERIALS	
	SS316	Brass
	Grade / ASTM Specification	
Cap	SS316/A479 or A276	Brass/B16
Body		
Ball	SS316/A276	
Spring	SS302/A313	



Ordering Information and Table of Dimensions

Basic Ordering Number	End Connection	L - closed		h	H	H1	
		inch	mm	Hex	Hex	Hex	
VPV-	F-2N-	1/8" Female NPT	1.50	38.1	9/16	-	5/8
	F-4N-	1/4" Female NPT	1.69	42.9	3/4	-	
	F-6N-	3/8" Female NPT	1.75	44.5	7/8	-	
	F-8N-	1/2" Female NPT	1.92	48.8	1-1/16	-	
	M-2N	1/8" Male NPT	1.56	39.6	1/2	-	
	M-4N	1/4" Male NPT	1.75	44.5	9/16	-	
	M-6N	3/8" Male NPT	1.78	45.2	11/16	-	
	M-8N	1/2" Male NPT	2.03	51.6	7/8	-	
	D-2T-	1/8" DK-Lok	1.78	45.2	1/2	7/16	
	D-4T-	1/4" DK-Lok	1.88	47.8	1/2	9/16	
	D-6T-	3/8" DK-Lok	1.97	50.0	5/8	11/16	
	D-8T-	1/2" DK-Lok	2.13	54.1	13/16	7/8	
	D-6M-	6mm DK-Lok	1.88	47.8	14mm	9/16	
	D-8M-	8mm DK-Lok	1.94	49.3	15mm	5/8	
	T-4T-	6mm Tube Stub	1.81	46.0	1/2	-	
	T-6T-	3/8" Tube Stub	1.88	47.8	1/2	-	
	T-8T-	1/2" Tube Stub	2.09	53.1	9/16	-	

* Several types of pipe thread can be applicable such as Male/Female NPT (N) thread, PT(R) and PF(G), etc.

Options and How to order

Optional PTFE ball is available. Valve with Teflon ball does not require wrench but only finger-tight for leak-tight shut-off.

- Removable cap for PTFE ball replacement
- Pressure rating : 200 psig @ 100 °F (13.7 bar @ 37 °C)
- Maximum Temperature : 350 °F (176 °C)

To order, add the valve body material as a suffix to the basic ordering number. S: Stainless, B: Brass. Example: VPV-M-2N-S

To order PTFE ball valve, add PE to the basic ordering number. Example: VPV-M-4N-PE-B

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Factory Test

Every valve is tested with the nitrogen @ 68 bar (1,000 psi) for leakage at the seat to a maximum allowable leak rate of 0.1 scc/min.

The valve with PTFE ball is tested at 0.69 bar (10 psi) for leakage at the seat to a maximum allowance leak rate of 0.1 scc/min.