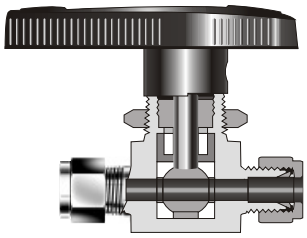
V82 Series Ball Valves

Pressure Rating up to 3000 psig

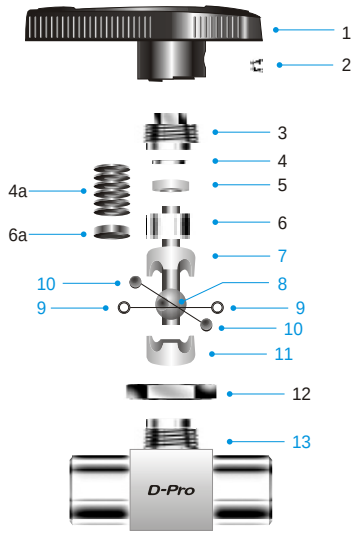
Catalog Number V82-2
June 2004

Features of V82 Series

- Sealing is achieved without system pressure
- Pressure up to 3000 psig (206 bar)
- Bi-directional flow
- Lowest dead space design



- Nylon Directional handle - indicates the flow through the valve.
- Panel mounting nut - is standard and permits valve to panel or actuator.
- Top-loaded packing - allows packing adjustment with the valve in-line.
- Capsule packing - fills voids in the valve body and prevents fluid entrapment.
  - allows lowest dead space.
- Support rings and discs - retains the capsule packing and prevent cold flow.
- Integral ball stem - machined from single piece bar stock.
  - eliminates the backlash during handle actuation.
- One-piece body reduces the number of potential leak points.



Materials of Construction

Component	Valve Body Materials	
	Stainless Steel	Brass
	Grade/ASTM Specification	
1. Handle	Nylon with brass insert	
2. Set Screw	17-4PH/A564	
3. Packing bolt ①	S316/A276 or A479	Brass B16
4. Upper Gland	S316/A276 or A479	
4a. Packing Spring (for -PA)	17-4PH/A693. numbers of spring differs from valve series	
5. Bushing	PTFE/D1710 type 1, Grade 1, Class B	
6. Lower gland	S316/A276 or A479	Brass B16
6a. Packing Gland (for -PA)	S316/A276 or A479	
7 & 11. Upper & Lower Packing	PTFE/D1710 type 1, PFA/D3307	
8. Ball stem	S316/A276 or A479	
9. Support rings	S316/B525 (fluorocarbon coating)	
10. Side discs		
12. Panel nut	S316/A276 or A479	Brass B16
13. Body	S316/A276 or A479	

① Molybdenum disulfide with hydrocarbon coating.

- Note: 1. Wetted parts and lubricants are listed in blue.
  2. Lubricant is Fluorinated-based. Lubricants are available for a specific application.

Operation & Packing Adjustment

- V82 valves are designed to control fluid in full open and closed position; using V82 valves to throttle the flow may reduce the valve life.
- Valves that have not been actuated for a period of time may have a higher initial actuation torque.
- Every valve working pressure is adjusted for factory test at 1000 psig (68.9 bar) @ 21C (70F). For use in higher pressure, the valve packing may be required for re-adjustment.
- Packing adjustment may be required during the valve in service.

Application

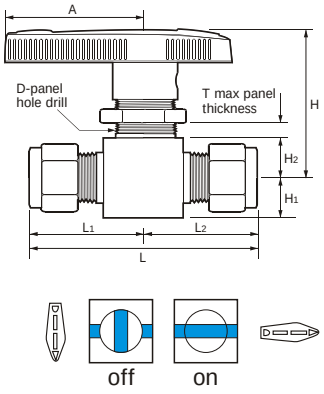
- Analytical market requiring a valve with lowest dead space to prevent fluid entrapment which can cause contamination.
- Control Sampling Systems, and Process Instrumentation market requiring a valve with compact size, high flow capacity and directional indication of flow.

Factory Test

- Every V82 series ball valve is factory tested with the nitrogen at 1000 psig (68.9 bar) for leakage to a maximum allowable leak rate of 0.1 sccm/min. at all of the seals.

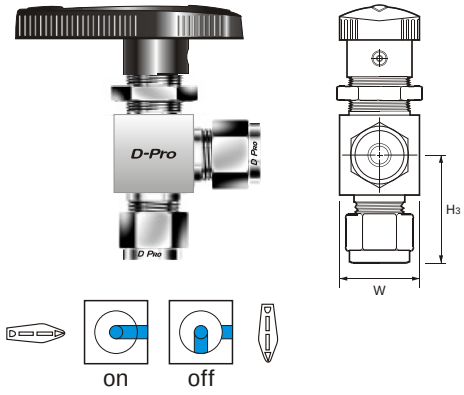
2-way On-off Valves

In-line pattern



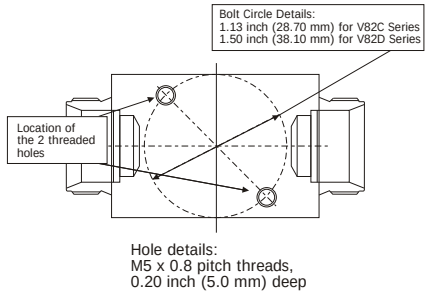
① T panel: 3.2 mm (1/8 inch) minimum panel thickness.

Angle pattern



Ordering designator: -A

Top mounting option



Ordering designator: -TM

Technical Data for valves with standard PTFE seat

Valve Series		Pressure Rating		Temp. Range
In-Line pattern	Angle pattern	psig	bar	PTFE seat
V82A	V82A-A, V82B-A	2500	172	10C to 65C (50F to 150F)
V82B	-	3000	206	
V82C, V82D	-	2500	172	
-	V82C-A, 82D-A	1500	103	

Technical Data for valves with optional PFA seat

Valve Series	Pressure Rating		Temp. Range
In-Line pattern	psig	bar	PFA seat
V82A, V82B	1000	68.9	-54C to 150C (-65F to 302F)

Ordering Information and Table of Dimensions

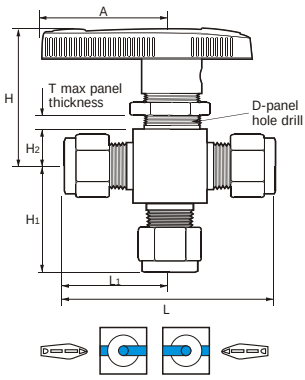
Basic Ordering Number		End Connections Inlet	Outlet	Orifice mm	Orifice inch	Cv Inline	Cv Angle	Dimensions mm (inches) L	L1	L2	H3	H2	H1	A	T①	D	H	W
V82A-	D-1T-	1/16" Dk-Lok		1.3	0.052	0.1	-	42.7(1.68)	21.3(0.84)	21.3(0.84)	-	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D-2T-	1/8" Dk-Lok		2.4	0.093	0.2	0.15	51.1(2.01)	25.7(1.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D-3M-	3mm Dk-Lok		2.4	0.093	0.2	0.15	51.1(2.01)	25.7(1.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D-4T-	1/4" Dk-Lok		3.2	0.125	0.6	0.35	56.1(2.21)	27.9(1.10)	27.9(1.10)	27.2(1.07)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
	D-6M-	6mm Dk-Lok		3.2	0.125	0.6	0.35	56.1(2.21)	27.9(1.10)	27.9(1.10)	27.2(1.07)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19.32)	34.5(1.36)	14.7(0.58)
	F-2N-	1/8" Female NPT		3.2	0.125	0.5	0.3	41.1(1.62)	20.6(0.81)	20.6(0.81)	20.6(0.81)	8.6(0.34)	7.1(0.28)	28.4(1.12)	6.4(1/4)	15.1(19/32)	34.5(1.36)	14.7(0.58)
V82B-	D-4T-	1/4" DK-Lok		4.8	0.187	2.4	0.9	2.36(59.9)	30.0(1.18)	30.0(1.18)	29.7(1.17)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D-6T-	3/8" Dk-Lok		4.8	0.187	1.5	0.9	65.5(2.58)	32.8(1.29)	32.8(1.29)	32.8(1.29)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D-6M-	6mm Dk-Lok		4.8	0.187	2.4	0.9	60.7(2.39)	30.5(1.20)	30.5(1.20)	29.7(1.17)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D-8M-	8mm Dk-Lok		4.8	0.187	1.5	0.9	62.5(2.46)	31.2(1.23)	31.2(1.23)	30.5(1.20)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F-2N-	1/8" Female NPT		4.8	0.187	1.2	0.7	50.8(2.00)	25.4(1.00)	25.4(1.00)	25.4(1.00)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F-4N-	1/4" Female NPT		4.8	0.187	0.9	0.75	52.3(2.06)	26.2(1.03)	26.2(1.03)	26.2(1.03)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	M-4N-	1/4" Male NPT		4.8	0.187	1.2	0.75	50.8(2.00)	25.4(1.00)	25.4(1.00)	26.2(1.03)	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F-4R-	1/4" ISO Female Tapered		4.8	0.187	0.9	-	52.3(2.06)	26.2(1.03)	26.2(1.03)	-	11.2(0.44)	9.7(0.38)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
V82C-	D-6T-	3/8" Dk-Lok		7.1	0.281	6.0	2.0	77.5(3.05)	38.6(1.52)	38.6(1.52)	36.3(1.43)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	D-10M-	10mm Dk-Lok		7.1	0.281	6.0	2.0	78.0(3.07)	38.9(1.53)	38.9(1.53)	36.9(1.43)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	F-4N-	1/4" Female NPT		7.1	0.281	3.0	1.7	63.5(2.50)	31.8(1.25)	31.8(1.25)	31.8(1.25)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	F-6N-	3/8" Female NPT		7.1	0.281	2.6	1.5	63.5(2.50)	31.8(1.25)	31.8(1.25)	31.8(1.25)	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
	F-6R-	3/8" ISO Female Tapered		7.1	0.281	2.6	-	63.5(2.50)	31.8(1.25)	31.8(1.25)	-	14.2(0.56)	14.2(0.56)	50.8(2.00)	9.5(3/8)	28.6(1-1/8)	52.6(2.07)	28.4(1.12)
V82D-	D-8T-	1/2" Dk-Lok		10.3	0.406	12.0	4.6	99.6(3.92)	49.8(1.96)	49.8(1.96)	44.2(1.74)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	D-12T-	3/4" DK-Lok		10.3	0.406	6.4	3.8	99.6(3.92)	49.8(1.96)	49.8(1.96)	44.2(1.74)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	D-12M-	12mm Dk-Lok		9.5	0.375	12.0	4.6	99.6(3.92)	49.8(1.96)	49.8(1.96)	44.2(1.74)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	F-8N-	1/2" Female NPT		10.3	0.406	6.3	3.5	79.2(3.12)	39.6(1.56)	39.6(1.56)	39.6(1.56)	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	F-8R-	1/2" ISO Female Tapered		10.3	0.406	6.3	-	79.2(3.12)	39.6(1.56)	39.6(1.56)	-	17.5(0.69)	17.5(0.69)	76.2(3.00)	9.5(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)

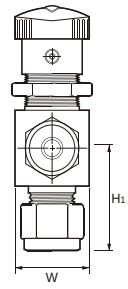
All dimensions shown are for reference only and are subject to change. Dimensions with Dk-Lok nuts are in finger-tight position.
Patterns: To order angle pattern, use -A as a suffix to the basic ordering number. Example: V82B-D-4T-A-S
Top mounting: To order Top mounting option, use -TM as a suffix to the basic ordering number. Example: V82C-D-6T-TM-S

3-way switching Valves

Technical Data for valves with standard PTFE seat

Valve Series	Pressure Rating		Temp. Range
	psig	bar	PTFE seat
V82A-3B, V82B-3B	2500	172	¡10¡É to 65¡É (50¢µ to 150¢µ)
V82C-3B, V82D-3B	1500	103	





¨ç T panel: 3.2 mm (1/8 inch) minimum panel thickness.

Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections	Orifice		Cv	Dimensions mm (inches)								
			mm	inch		L	L1	H1	H2	A	T¨ç	D	H	W
V82A-3B-	D-1T-	1/16" Dk-Lok	1.3	0.052	0.08	42.7(1.68)	21.3(0.84)	20.6(0.81)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D-2T-	1/8" Dk-Lok	2.4	0.093	0.15	51.1(2.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D-4T-	1/4" Dk-Lok	3.2	0.125	0.35	56.1(2.21)	27.9(1.10)	27.2(1.07)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D-3M-	3mm Dk-Lok	2.4	0.093	0.15	51.1(2.01)	25.7(1.01)	24.6(0.97)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	D-6M-	6mm Dk-Lok	3.2	0.125	0.35	56.1(2.21)	27.9(1.10)	27.2(1.07)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
	F-2N-	1/8" Female NPT	3.2	0.125	0.3	41.4(1.63)	20.6(0.81)	20.6(0.81)	8.6(0.34)	28.7(1.13)	6.4(1/4)	15.0(19/32)	34.5(1.36)	14.7(0.58)
V82B-3B-	D-4T-	1/4" Dk-Lok	4.8	0.187	0.90	60.7(2.39)	30.5(1.20)	29.7(1.17)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D-6M-	6mm Dk-Lok	4.8	0.187	0.90	60.7(2.39)	30.5(1.20)	29.7(1.17)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	D-8M-	8mm Dk-Lok	4.8	0.187	0.80	62.5(2.46)	31.2(1.23)	30.5(1.20)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F-4N-	1/4" Female NPT	4.8	0.187	0.75	52.3(2.06)	26.2(1.03)	26.2(1.03)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
	F-4R-	1/4" ISO Female tapered	4.8	0.187	0.75	52.3(2.06)	26.2(1.03)	26.2(1.03)	11.2(0.44)	38.9(1.53)	4.8(3/16)	19.8(25/32)	39.6(1.56)	19.8(0.78)
V82C-3B-	D-6T-	3/8" Dk-Lok	7.1	0.281	2.0	73.4(2.89)	36.8(1.45)	36.3(1.43)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	D-10M-	10mm Dk-Lok	7.1	0.281	2.0	73.4(2.89)	36.8(1.45)	36.3(1.43)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	F-4N-	1/4" Female NPT	7.1	0.281	1.7	63.5(2.50)	31.8(1.25)	31.8(1.25)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	F-6N-	3/8" Female NPT	7.1	0.281	1.5	63.5(2.50)	31.8(1.25)	31.8(1.25)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
	F-6R-	3/8" ISO Female tapered	7.1	0.281	1.5	63.5(2.50)	31.8(1.25)	31.8(1.25)	14.2(0.56)	50.8(2.00)	9.7(3/8)	28.7(1-1/8)	52.6(2.07)	28.4(1.12)
V82D-3B-	D-8T-	1/2" Dk-Lok	10.3	0.406	4.6	88.4(3.48)	44.2(1.74)	44.2(1.74)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	D-12T-	3/4" Dk-Lok	10.3	0.406	3.8	88.4(3.48)	44.2(1.74)	44.2(1.74)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	D-12M-	12mm Dk-Lok	9.5	0.375	4.6	88.4(3.48)	44.2(1.74)	44.2(1.74)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	F-8N-	1/2" Female NPT	10.3	0.406	3.5	79.5(3.13)	39.6(1.56)	39.6(1.56)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)
	F-8R-	1/2" ISO Female tapered	10.3	0.406	3.5	79.5(3.13)	39.6(1.56)	39.6(1.56)	17.5(0.69)	76.2(3.00)	9.7(3/8)	38.1(1-1/2)	61.7(2.43)	38.1(1.50)

All dimensions shown are for reference only and are subject to change. Dimensions with Dk-Lok nuts are in finger-tight position.

Flow Data

2-way

Cv	Water US GPM (L/min.) @21¡É (70¢µ) Pressure Drop to Atmosphere (¡âp) psi (bar)			Air SCFM (NL/min.) @21¡É (70¢µ)		
	10 (0.7)	50 (3.5)	100 (7.0)	10 (0.7)	50 (3.5)	100 (7.0)
0.10	0.3 (1.1)	0.7 (2.6)	1.0 (3.8)	1.1 (31)	3.0 (85)	5.3 (150)
0.20	0.6 (2.3)	1.4 (5.3)	2.0 (7.6)	2.3 (76)	6.0 (215)	11.0 (396)
0.50	1.6 (5.7)	3.5 (13.2)	5.0 (18.9)	5.6 (195)	15.0 (538)	27.0 (963)
0.60	1.9 (7.2)	4.2 (15.9)	6.0 (22.7)	6.8 (235)	18.0 (651)	32.0 (1161)
0.90	2.8 (10.6)	6.4 (23.8)	9.0 (34.0)	10.0 (340)	27.0 (963)	48.0 (1720)
1.2	3.8 (14.0)	8.5 (31.8)	12.0 (45.4)	14.0 (481)	36.0 (1303)	64.0 (2294)
1.5	4.7 (17.8)	11.0 (41.6)	15.0 (56.8)	17.0 (595)	45.0 (1614)	80.0 (2832)
2.4	7.6 (28.4)	17.0 (64.3)	24.0 (90.8)	27.0 (935)	72.0 (2606)	120.0 (4531)
2.6	8.2 (31.0)	18.0 (68.1)	26.0 (98.4)	29.0 (1020)	78.0 (2804)	140.0 (5098)
3.0	9.5 (35.6)	21.2 (79.5)	30.0 (113.6)	34.0 (1189)	90.0 (3115)	160.0 (5664)
6.0	19.0 (71.9)	42.0 (159.0)	60.0 (227.1)	68.0 (2351)	180.0 (6514)	320.0 (11611)
6.3	19.9 (75.5)	44.5 (170.3)	63.0 (237.0)	71.0 (2464)	190.0 (6797)	340.0 (12178)
6.4	20.2 (75.7)	45.3 (170.3)	64.0 (242.2)	72.0 (2520)	190.0 (6797)	340.0 (12178)
12.0	37.9 (143.8)	84.9 (321.7)	120.0 (454.2)	130.0 (4814)	360.0 (13027)	640.0 (22939)

2-way angle pattern and 3-way

Cv	Water US GPM (L/min.) @21¡É (70¢µ) Pressure Drop to Atmosphere (¡âp) psi (bar)			Air SCFM (NL/min.) @21¡É (70¢µ)		
	10 (0.7)	50 (3.5)	100 (7.0)	10 (0.7)	50 (3.5)	100 (7.0)
0.08	0.3 (1.1)	0.6 (2.3)	0.8 (3.0)	0.9 (26)	2.4 (68)	4.3 (122)
0.15	0.4 (1.5)	1.0 (3.8)	1.5 (5.7)	1.7 (57)	4.5 (161)	8.0 (286)
0.30	0.9 (3.4)	2.1 (7.9)	3.0 (11.4)	3.4 (116)	9.0 (312)	16.0 (566)
0.35	1.1 (4.2)	2.4 (9.1)	3.5 (13.2)	4.0 (136)	10.0 (368)	19.0 (680)
0.75	2.3 (8,7)	5.3 (20.1)	7.5 (28.4)	8.5 (283)	22.0 (821)	40.0 (1444)
0.80	2.5 (9.5)	5.6 (21.2)	8.0 (30.3)	9.0 (312)	24.0 (878)	42.0 (1529)
0.90	2.8 (10.6)	6.3 (23.8)	9.0 (34.1)	10.0 (340)	27.0 (963)	48.0 (1728)
1.5	4.7 (17.8)	11.0 (41.6)	15.0 (56.8)	17.0 (595)	45.0 (1614)	80.0 (2832)
1.7	5.3 (20.1)	12.0 (45.4)	17.0 (64.3)	19.0 (680)	51.0 (1841)	90.0 (3115)
2.0	6.3 (23.8)	14.0 (53.0)	20.0 (75.7)	22.0 (793)	60.0 (2181)	100.0 (3965)
3.5	11.0 (41.6)	25.0 (94.6)	35.0 (132.5)	39.0 (1359)	100.0 (3682)	180.0 (6797)
3.8	12.0 (45.4)	27.0 (102.2)	38.0 (143.8)	43.0 (1501)	110.0 (3965)	200.0 (7363)
4.6	15.0 (56.8)	33.0 (124.9)	46.0 (174.1)	52.0 (1812)	140.0 (5098)	240.0 (8779)

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Optional Features

Vent Hole Option

Downstream vent hole is often used with instruments or gauges. When the valve is in the on position, pressure is applied to the gauge or instrument. When the valve is turned off, the instrument or gauge is vented to atmosphere through a hole in the side of the valve body and the upstream port is closed to fluid flow. The maximum working pressure of the valve with the Vented hole Option is limited to 500 psig (34 bar).

Optional Colored Nylon Handles

To help clients color code a system, optional colored nylon handles are available with the following designators. RD- red, BL-blue, GR-green, YW- yellow, OR- orange

To order handle for field assembly

Select applicable handle from the kit ordering number below and add handle color designator to the kit ordering number. Handle kit is supplied with handle and set screw.

Valve Series	Nylon Flow Directional Handle Basic Ordering Number	Nylon Handle Color Designator		Examples:
V82A, V82A-A, V82A-3B	82A-NY-HD	Nil: Black color	GR: green	82A-NY-HD-RD for red colored nylon handle for V82A, V82A-A, V82A-3B series
V82B, V82B-A, V82B-3B	82B-NY-HD	RD: red	YW: yellow	82B-NY-HD for black colored nylon handle for V82B, V82B-A, V82B-3B series
V82C, V82C-A,V82C-3B	82C-NY-HD	BL: blue	OR: orange	
V82D, V82D-A, V82D-3B	82D-NY-HD			

Actuators

Pneumatic Air Actuator and Mounting Bracket are available. For details, please contact the authorized Dk-Lok® distributor in your region.

How to Order

Select applicable valve pattern, options and body material from designators listed below.

V82C-D-6T -VH -TM -S

V82B-D-4T -A -PA -RD -S

2-way angle pattern	Seat Material	Vent Hole	Top Mounting	Colored Nylon Handle	Body Material
· Nil: no angle pattern · A: 2-way angle pattern	· Nil: PTFE · PA: PFA Note: PFA seat option is only applicable for in-line pattern V82A & V82B series.	· Nil: no Vent Hole · VH: Vent Hole	· Nil: no top mounting · TM: top mounting holes Note: Top mounting option is only applicable for in-line pattern V82C & V82D series.	· Nil: Standard Black color · RD: red · BL: blue · GR: green · YW: yellow · OR: orange	· S: S316 · B: Brass

We reserve the right to change specifications stated in this catalog for our continuing program of improvement.

Safe Valve Selection

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibillty of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.

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