DK-LOK Valves

V81 Series Ball Valve

No.V81-7
March 2015

Pressures rating of 68.9 bar (1000 psig) and 137 bar (2000 psig)

Valve with lever handle
Working pressure
- PTFE seats : 68.9 bar (1000 psig)
- TFM seats : 137 bar (2000 psig)

Valve with butterfly handle
Working pressure
- PTFE seats : 68.9 bar (1000 psig)
- TFM seats not applicable

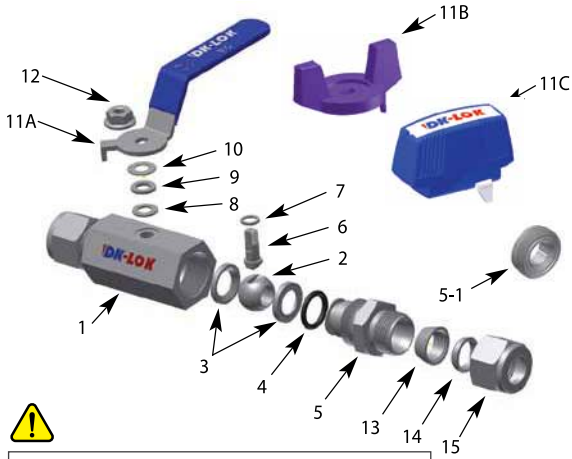
Valve with dielectric handle
Working pressure
- PTFE seats : 68.9 bar (1000 psig)
- TFM seats : 137 bar (2000 psig)

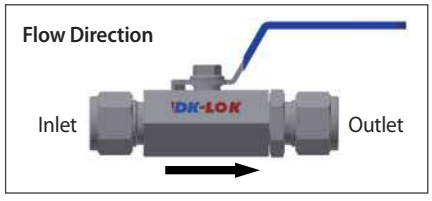
Design Features

- Compact barstock construction for high integrity
- Blow-out proof design with internally loaded stem
- Floating Ball design providing seat wear compensation
- Micro-finished ball ensures a leak-tight shut-off on pressure
- Standard lever handle, optional butterfly and dielectric handle.

Applications

V81 series ball valve offers a safe and reliable performance for a wide range of onshore and offshore applications: water, oil, gas, petrochemical and general duty applications.



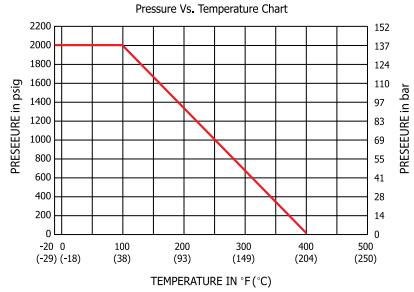


Materials of Construction

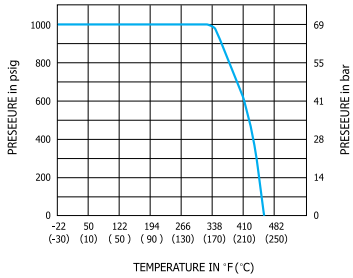
Component	Valve Body Materials	
	Stainless Steel	Brass
1. Body	ASTM A276 / A479 TYPE316	ASTM B16 or JIS H3250
2. Ball	ASTM A276 TYPE316	
3. Seat (2)	PTFE / D1710 for pressure 68.9 bar (1000 psig) TFM 1600 for pressure 137 bar (2000 psig)	
4. O-Ring	FKM	NBR
5. End Connector	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250
5-1. Insert		
6. Stem	ASTM A276/A479 TYPE316	
7. Lower Packing	PTFE / D1710	
8. Upper Packing	PTFE / D1710	
9. Gland	ASTM A276/A479 TYPE316	
10. Washer	Stainless Steel	
11A. Handle	Stainless Steel Lever handle with vinyle sleeve	
11B. Handle	ZINC / ASTM B240 Butterfly handle, Nickel-plated	
11C. Handle	Dielectric Handle with Nylon(Black, Red, Blue)	
12. Lock Nut	Stainless Steel	Stainless Steel
13. Front Ferrule	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250
14. Backing Ferrule	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250
15. Nut	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250

1. V81D, V81E Locking device lever handle Type : Body Material is ASTM A351 CF8M
4. O-Ring is applicable to end connector type.
5. End Connector is for DK-Lok end connection standard, male pipe thread available.
5-1. Insert is for female pipe thread end connection.
* TFM 1600 seat is usable only with body in stainless steel.
* Wetted parts are listed in Blue.

Pressure -Temperature Curves



TFM 1600 Seat Body Material: Stainless

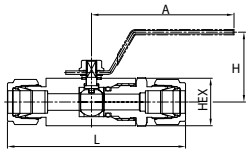


PTFE Seat Body Material: Stainless and Brass

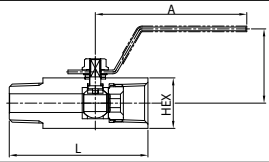
Factory Test

Every valve is factory tested with nitrogen gas @41 bar (600 psig) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
The packing is tested with nitrogen for no detectable leakage.

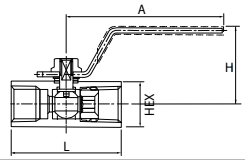
DK-Lok to DK-Lok
Lever Handle



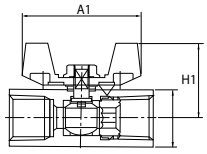
Male Pipe Thread to
Female Pipe Thread
Lever Handle



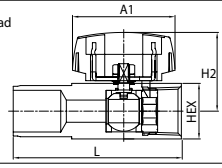
Female Pipe Thread to
Female Pipe Thread
Lever Handle



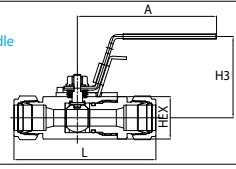
Female Pipe Thread to
Female Pipe Thread
Butterfly Handle



Weld End to Female Pipe Thread
Dielectric Handle



DK-Lok to DK-Lok
Locking device Lever Handle



Ordering Information and Table of Dimensions

Basic Ordering Number		End Connections Inlet / Outlet	Orifice mm (in.)	Cv	Dimensions, mm (in.)								
					L	H	HEX	A	A1	A2	H1	H2	H3
V81A-	D-6M-	6mm DK-Lok	5 (0.2)	1.25	79 (3.11)	27.6 (1.09)	17 (11/16)	59.5 (2.34)	30.5 (1.20)	41.8 (1.65)	23.5 (0.93)	33.8 (1.33)	35.6 (1.4)
	D-4T-	1/4 in. DK-Lok		1.25	79 (3.11)								
	F-4N-	1/4 in. Female NPT		1.35	41.9 (1.65)								
	MF-4N-	1/4 in. M/F NPT		1.35	52.4 (2.06)								
V81B-	D-10M-	10mm DK-Lok	7.5 (0.3)	2.6	91.7 (3.61)	36.5 (1.44)	20.64 (13/16)	81 (3.19)	42 (1.65)	44.5 (1.75)	30 (1.18)	38.3 (1.5)	39.5 (1.56)
	D-6T-	3/8 in. DK-Lok		2.5	91.3 (3.59)								
	F-6N-	3/8 in. Female NPT		2.6	47 (1.85)								
	MF-6N-	3/8 in. M/F NPT		2.6	53.5 (2.1)								
V81C-	D-12M-	12mm DK-Lok	9 (0.35)	9.25	99.2 (3.9)	39.7 (1.56)	27 (1-1/16)	81 (3.19)	46 (1.81)	46.5 (1.83)	35.7 (1.41)	43.5 (1.71)	44.7 (1.76)
	D-8T-	1/2 in. DK-Lok		9.25	101 (3.98)								
	F-8N-	1/2 in. Female NPT		9.25	56.15 (2.21)								
	MF-8N-	1/2 in. M/F-NPT		9.25	66.6 (2.62)								
	WF-15A8N-	1/2 in. Welding/F-NPT		9.25	95.0 (3.74)								
V81D-	D-16M-	16mm DK-Lok	12.5 (0.49)	10.6	107 (4.24)	44.85 (1.76)	32 (1-1/4)	102.5 (4.04)	49.5 (1.95)	56 (2.2)	38.1 (1.50)	47.2 (1.86)	-
	D-10T-	5/8 in. DK-Lok		10.6	108 (4.25)								
	F-12N-	3/4 in. Female NPT		12.65	63 (2.48)								
	D-12T-	3/4 in. DK-Lok		12.65	107 (4.22)								
	MF-12N-	3/4 in. M/F-NPT		12.65	75.9 (2.99)								
	WF-20A12N-	3/4 in. Welding/F-NPT		12.65	100 (3.93)								
V81E-	D-16T-	1 in. DK-Lok	16 (0.63)	17.35	133 (5.23)	49.75 (1.95)	38 (1-1/2)	102.5 (4.04)	68 (2.68)	70.1 (2.76)	45 (1.77)	53.7 (2.11)	-
	F-16N-	1 in. Female NPT		17.35	78.1 (3.07)								
	WF-25A16N-	1 in. Welding/F-NPT		17.35	115 (4.53)								
V81F-	F-20N-	1 1/4 in. Female NPT	21 (0.83)	-	89 (3.50)	65 (2.56)	50 (2)	141 (5.55)					
V81G-	F-24N-	1 1/2 in. Female NPT	24 (0.94)	-	95 (3.74)	68 (2.68)	55 (2-3/16)	148 (5.83)					
V81H-	F-32N-	2 in. Female NPT	32 (1.26)	-	110 (4.33)	80 (3.15)	69.8 (2-3/4)	154 (6.06)	-	-	-	-	-

Dimensions shown are for reference only, subject to change. Dimensions with DK-Lok nuts are in finger-tight position

How to Order

Select valve ordering number, applicable option(s) from designator tables listed below.

Examples

V81A-D-6M- VT- | **TF-** | **BF-** | **BK** | **S**

O-ring	Seat Material	Handle	Handle Color	Body material
Nil : FKM O-ring is standard for SS316 body. **Nil** : NBR O-ring is standard for Brass body. **VT** : FKM O-ring for Brass body **BN** : NBR O-ring for Stainless Steel **NOTE** : O-ring is required for DK-Lok end connection.	**Nil** : Standard PTFE seats for 68.9 bar (1000 psig) working pressure. **TF** : Optional TFM1600 for 137 bar (2000 psig) working pressure. **NOTE** : TFM1600 seat is not applicable to Brass valve.	**Nil** : Standard lever handle **BF** : Optional butterfly handle **DH** : Dielectric handle **LD** : Locking device lever handle **NOTE** : BF option is not applicable to the valve with TF seat	**BK** : Black **BL** : Blue **RD** : Red	**S** : SS316 **B** : Brass **M** : Monel **L20** : Alloy 20 **HC** : Hastelloy C276

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-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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