

# V81 Series Ball Valve

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

Catalog No. V81-6 Julv. 2012



Valve with lever 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.



Valve with butterfly handle

Working pressure

11R

- 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)

# **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

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Commonset	Valve Body Materials					
Component	Stainless Steel	Brass				
1. Body	ASTM A276 / A479 TYPE316	ASTM B16 or JIS H3250				
2. Ball	ASTM A27	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	ACTM A276/A470 TVDE216	ACTM P16 or IIC H22E0				
5-1. Insert	ASTIN A270/A479 TIFES10	ASTM DTO OL 112 H3520				
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					
15. Nut	ASTM A276/A479 TYPE316	ASTM B16 or JIS H3250				
1. V81D, V81E Locking dev	ice lever handle Type : Body Material	is ASTM A351 CF8M				

4. O-Ring is applicable to DK-LOK end connection 5. End Connector is for DK-LOK end connection 5-1. Insert is for Pipe Thread end connection

TFM 1600 seat is usable only with body in stainless steel.

\* Wetted parts are listed in Blue



# **IDK-LOK**<sup>®</sup> Ball Valves

# V81 Series



# Ordering Information and Table of Dimensions

Basi	c Ordering	End Connection	Orifice	<u>Cy</u>	Dimensions, mm (in.)							
Number Inlet / Outlet mm (in.)		L	Н	HEX	Α	<b>A</b> 1	<b>A</b> 2	H1	H2			
V81A-	D-6M	6mm DK-LOK	5 (0.2)	1.25	79 ( <mark>3.11</mark> )	27.56 (1.08)	17 (11/16)	59.5 (2.34)	30.5 (1.20)	41.8 (1.65)	23.5 (0.93)	33.8 (1.33)
	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 ( <mark>2.06</mark> )							
V81B-	D-10M	10mm DK-LOK	7.5 (0.3)	2.6	91.7 (3.61)		20.64 (13/16)	81 (3.19)	42 (1.65)	44.5 (1.75)	30 (1.18)	38.3 (1.5)
	D-6T	3/8 in. DK-LOK		2.5	91.3 (3.59)	36.47 (1.32)						
	F-6N	3/8 in. Female NPT		2.6	47 (1.85)							
	MF-6N	3/8 in. M/F NPT		2.6	53.5 ( <mark>2.1</mark> )							
	D-12M	12mm DK-LOK	9 (0.35)	9.25	99.2 ( <mark>3.9</mark> )				46 (1.81)	46.5 (1.83)	35.7 (1.41)	43.5 (1.71)
	D-8T	1/2 in. DK-LOK		9.25	101 (3.98)	39.7 (1.56)	27 (1-1/16)	81 (3.19)				
V81C-	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 ( <mark>2.62</mark> )							
	WF-15A8N	1/2 in. Welding/F-NPT		9.25	95.0 ( <mark>3.74</mark> )							
	D-16M	16mm DK-LOK		10.6	107 (4.24)							
	D-10T	5/8 in. DK-LOK	12.5 (0.49)	10.6	108 (4.25)		32 102. (1-1/4) (4.04	102.5	49.5 (1.95)	56 (2.2)	38.1 (1.50)	47.2 (1.86)
V81D-	F-12N	3/4 in. Female NPT		12.65	63 ( <mark>2.48</mark> )	44.85						
	D-12T	3/4 in. DK-LOK		12.65	107 (4.22)	(1.76)		( <mark>4.04</mark> )				
	MF-12N	3/4 in. M/F-NPT		12.65	75.9 ( <mark>2.99</mark> )							
	WF-20A12N	3/4 in. Welding/F-NPT		12.65	100 ( <mark>3.93</mark> )							
V81E-	D-16T	1 in. DK-LOK	16 (0.63)	17.35	133 (5.23)	40.75	75 38 95) (1-1/2)	102 F	60	70.1	45 (1.77)	53.7 (2.11)
	F-16N	1 in. Female NPT		17.35	78.1 (3.07)	49.75		(4.04)	(2.68)	(2.76)		
	WF-25A16N	1 in. Welding/F-NPT		17.35	115 ( <mark>4.53</mark> )	(1.55)						

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

# 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.

# 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
<ul> <li>Nil: FKM O-ring is standard for SS316 body.</li> <li>Nil: NBR O-ring is standard for Brass body.</li> <li>VT: FKM O-ring for Brass body</li> <li>BN: NBR O-ring for Stainless Steel</li> </ul>	<ul> <li>Nil: Standard PTFE seats for 68.9 bar (1000 psig) working pressure.</li> <li>TF: Optional TFM1600 for 137 bar (2000 psig) working pressure.</li> </ul>	<ul> <li>Nil: Standard lever handle</li> <li>BF: Optional butterfly handle</li> <li>DH: Dielectric handle</li> <li>LD: Locking device lever handle</li> </ul>	<ul><li>BK: Black</li><li>BL: Blue</li><li>RD: Red</li></ul>	<ul> <li>S: S316</li> <li>B: Brass</li> <li>M: Monel</li> <li>L20:Alloy 20</li> <li>HC:Hastelloy C276</li> </ul>
NOTE:	NOTE:	NOTE:		
O-ring is required for DK-LOK end connection.	TFM1600 seat is not applicable to Brass valve.	BF option is not applicable to the valve with TF seats.		

### 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 responsibility of the system designer and the user. Dk Tech accepts no liability for any improper selection, installation, operation or maintenance.



# **DK** Tech Corporation

Mailing Address 1465, Seobu-ro, Juchon-Myeon, Gimhae-si, South Korea 621-841 DK TECH contact information Tel. (82) 55-338-0114 Fax (82) 55-338-6745 E-mail: sales@dklok.com

For International customers Tel. (82) 55-338-0031/2 Fax (82) 55-338-6746 E-mail: dklok@dklok.com