

# VKD SERIES BALL VALVES

## Product Data Sheet



### < STANDARDS >



ASTM D1784    ASTM D4101  
ASTM D2464    ASTM F437  
ASTM D2466    ASTM F439  
ASTM D2467    ASTM F1498



ANSI B1.20.1



ISO 11922-1



Certified to  
NSF/ANSI 61 & 372

IPEX VKD Series Ball Valves offer a variety of advanced features such as the patented seat stop carrier, a high quality stem and ball support system, and a multifunctional locking handle. The new DUAL BLOCK® system locks the union nuts preventing back-off due to vibration or thermal cycling. Deep grooves, thick o-rings, and cushioned Teflon® seats contribute to strong seals at pressures up to 232 PSI while an integral mounting flange and support bracketing combine for simple adaptation for actuation and anchoring. VKD Series Ball Valves are part of our complete systems of pipe, valves, and fittings, engineered and manufactured to our strict quality, performance, and dimensional standards.

### VALVE AVAILABILITY

BODY MATERIAL	PVC, CPVC, PP
SIZE RANGE	1/2" through 4"
PRESSURE	up to 232 PSI, 150 PSI (PP)
SEATS	Teflon® (PTFE)
SEALS	EPDM or FPM
END CONNECTIONS	Socket (IPS), Threaded (FNPT) Socket (Metric)

**Note:** PVDF valves available on request

ipexna.com  
Toll Free: 800 463-9572



### Sample Specification

#### 1.1 Material

- The valve body, stem, ball and unions shall be made of PVC compound which shall meet or exceed the requirements of cell classification 12454 according to ASTM D1784.
- or The valve body, stem, ball and unions shall be made of Corzan® CPVC compound which shall meet or exceed the requirements of 23447 according to ASTM D1784.
- or The valve body, stem, ball and unions shall be made of stabilized PP homopolymer compound, also containing a RAL 7032 pigment, which shall meet or exceed the requirements of Type I Polypropylene according to ASTM D4101.

#### 1.2 Seats

- The ball seats shall be made of Teflon® (PTFE).

#### 1.3 Seals

- The o-ring seals shall be made of EPDM.
- or The o-ring seals shall be made of FPM.

### 2.0 Connections

#### 2.1 Socket style

- The IPS socket PVC end connectors shall conform to the dimensional standards ASTM D2466 and ASTM D2467.
- or The IPS socket CPVC end connectors shall conform to the dimensional standard ASTM F439.
- or The Metric socket PP end connectors shall conform to the dimensional standard ISO 11922-1.

#### 2.2 Threaded style

- The female NPT threaded PVC end connectors shall conform to the dimensional standards ASTM D2464, ASTM F1498, and ANSI B1.20.1.
- or The female NPT threaded CPVC end connectors shall conform to the dimensional standards ASTM F437, ASTM F1498, and ANSI B1.20.1.
- or The female NPT threaded PP end connectors shall conform to the dimensional standards ASTM F1498, and ANSI B1.20.1.

### 3.0 Design Features

- The valve shall be double blocking with union ends.
- All valves shall be full port.
- All valves shall allow for bi-directional flow.

- The valve body shall be single end entry with a threaded carrier (ball seat support).
- The threaded carrier shall be adjustable with the valve installed.
- The valve body shall have an expansion and contraction compensating groove on the molded end.
- The valve body, union nuts, and carrier shall have deep square style threads for increased strength.
- The ball and stem shall be machined smooth to minimize wear on valve seats and seals.
- All valve seats shall have o-ring backing cushions to compensate for wear and prevent seizure of the ball.
- The stem design shall feature double o-ring seals as well as a safety shear point above the o-rings.
- All valves shall have integrally molded mounting features for actuation.
- All valves shall have integrally molded support bracketing for anchoring.
- 2-1/2" to 4" valves handle shall incorporate a transparent PVC plug and tag holder for valve identification.

### 3.1 Pressure Tested

- All valves shall have been pressure tested in both the open and closed positions by the manufacturer.

### 3.2 Pressure Rating

- All PVC and CPVC valves shall be rated at 232 PSI at 73°F.
- All PP valves shall be rated at 150 PSI at 73°F.

### 3.3 Markings

- All valves shall be marked to indicate size, material designation, and manufacturers name or trade mark.

### 3.4 Color Coding

- All PVC valves shall be color-coded dark gray.
- or All CPVC valves shall be color-coded light gray.
- or All PP valves shall be color-coded beige gray.

### 4.0 NSF Listings

- All PVC and CPVC valves shall be listed with NSF to Standard 61 for potable water.
- All PVC and CPVC valves shall be listed with NSF to Standard 372 for lead content requirements.

- All valves shall be Xirtec® PVC, Xirtec® CPVC or PP by IPEX or approved equal.

# VKD SERIES BALL VALVES

## Product Data Sheet

### Valve Selection

Size (inches)	Body Material	Seal Material	IPEX Part Number		Pressure Rating	
			IPS Socket	FNPT Threaded		
3/8	PVC	EPDM	253067		232 psi for PVC and CPVC socket or threaded	
		FPM	253068			
	CPVC	EPDM	253069			
FPM		253070				
PP	EPDM	-	-			
	FPM	-	-			
1/2	PVC	EPDM	053461		232 psi for PVC and CPVC socket or threaded	
		FPM	053467			
	CPVC	EPDM	053473			
		FPM	253008			
PP	EPDM	053513*	053519*			
	FPM	053525*	253002*			
3/4	PVC	EPDM	053462			232 psi for PVC and CPVC socket or threaded
		FPM	053468			
	CPVC	EPDM	053474			
		FPM	253009			
PP	EPDM	053614*	053520*			
	FPM	053526*	253003*			
1	PVC	EPDM	053463		232 psi for PVC and CPVC socket or threaded	
		FPM	053469			
	CPVC	EPDM	053475			
		FPM	253010			
PP	EPDM	053515*	053521*			
	FPM	053527*	253004*			
1-1/4	PVC	EPDM	053464			232 psi for PVC and CPVC socket or threaded
		FPM	053470			
	CPVC	EPDM	253476			
		FPM	253011			
PP	EPDM	053516*	053522*			
	FPM	053528*	253005*			
1-1/2	PVC	EPDM	053465		232 psi for PVC and CPVC socket or threaded	
		FPM	053471			
	CPVC	EPDM	053477			
		FPM	253012			
PP	EPDM	053517*	053523*			
	FPM	053529*	253006*			
2	PVC	EPDM	053466			150 psi for PP socket or threaded
		FPM	053472			
	CPVC	EPDM	053478			
		FPM	253013			
PP	EPDM	053518*	053524*			
	FPM	053530*	253007*			
2-1/2	PVC	EPDM	053539		150 psi for PP socket or threaded	
		FPM	053542			
	CPVC	EPDM	053545			
		FPM	053548			
PP	EPDM	053540				
	FPM	053543				
3	PVC	EPDM	053540			150 psi for PP socket or threaded
		FPM	053543			
	CPVC	EPDM	053546			
		FPM	053549			
PP	EPDM	053541				
	FPM	053544				
4	PVC	EPDM	053541		150 psi for PP socket or threaded	
		FPM	053544			
	CPVC	EPDM	053547			
		FPM	053550			
PP	EPDM	053541				
	FPM	053544				

#### Body Material:

- PVC
  CPVC  
 PP
  PVDF

#### Size (inches):

- 1/2
  2  
 3/4
  2-1/2  
 1
  3  
 1-1/4
  4  
 1-1/2

#### Seals:

- EPDM  
 FPM

#### End Connections:

- Socket (IPS)  
 Threaded (FNPT)  
 Flanged (ANSI 150)  
 Socket (Metric)

#### IPEX Part Number:

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\* Socket (Metric)

Flanged valves available on request

2-1/2" - 4" threaded valves available on request

# VKD SERIES BALL VALVES

## Product Data Sheet

### Valve Selection – Vented

Vented ball valves are used with volatile liquids such as Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>) and sodium hypochlorite (NaClO) to relieve a potentially dangerous pressure build-up in the ball cavity, when the valve is closed.

Size (inches)	Body Material	Seal Material	IPEX Part Number		Pressure Rating
			IPS Socket	FNPT Threaded	
3/8	PVC	FPM	353028		232 psi for socket or threaded
	CPVC		353000		
1/2	PVC		353083		
	CPVC		353021		
3/4	PVC		353084		
	CPVC		353022		
1	PVC		353085		
	PP		353023		
1-1/4	PVC		053503		
	CPVC		353024		
1-1/2	PVC		053504		
	CPVC		353025		
2	PVC		053505		
	CPVC		353026		
2-1/2	PVC		053506	–	
	CPVC		353027	–	
3	PVC	353086	–		
	CPVC	353029	–		
4	PVC	053562	–		
	CPVC	353030	–		

Flanged valves available on request  
 2-1/2" – 4" threaded valves available on request

#### Body Material:

- PVC  CPVC

#### Size (inches):

- 1/2  2  
 3/4  2-1/2  
 1  3  
 1-1/4  4  
 1-1/2

#### Seals:

- FPM

#### End Connections:

- Socket (IPS)  
 Threaded (FNPT)  
 Flanged (ANSI 150)

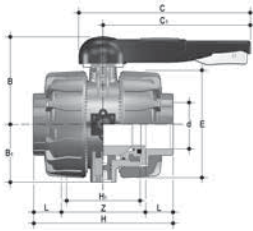
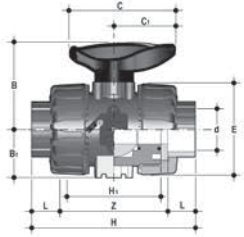
#### IPEX Part Number:

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# VKD SERIES BALL VALVES

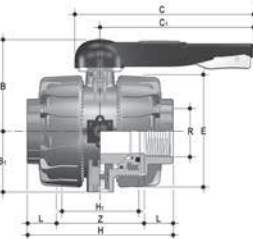
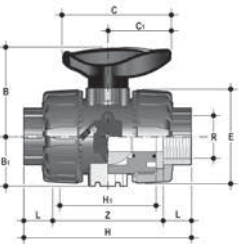
## Product Data Sheet

### Dimensions



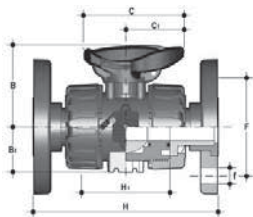
#### IPS Socket Connections – Dimension (inches)

Size	d	H	L	Z	H <sub>1</sub>	E	B <sub>1</sub>	B	C <sub>1</sub>	C
3/8	0.68	4.61	0.77	3.07	2.56	2.13	1.14	2.13	1.57	2.64
1/2	0.84	4.61	0.89	2.83	2.56	2.13	1.14	2.13	1.57	2.64
3/4	1.05	5.08	1.00	3.07	2.76	2.56	1.36	2.56	1.93	3.35
1	1.32	5.59	1.13	3.33	3.07	2.87	1.54	2.74	1.93	3.35
1-1/4	1.66	6.38	1.26	3.86	3.46	3.39	1.81	3.25	2.52	4.25
1-1/2	1.90	6.77	1.38	4.02	3.66	3.86	2.05	3.50	2.52	4.25
2	2.38	7.83	1.50	4.83	4.37	4.80	2.44	4.25	2.99	5.28
2-1/2	2.88	9.25	1.75	5.75	5.24	6.46	3.43	6.46	6.89	8.86
3	3.50	10.63	1.89	6.85	5.87	7.99	4.13	6.97	10.71	12.87
4	4.50	12.13	2.26	7.60	6.57	9.37	5.08	7.68	12.99	15.16



#### Female NPT Threaded Connections – Dimension (inches)

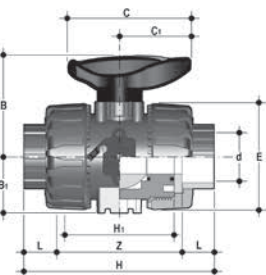
Size	R	H	L	Z	H <sub>1</sub>	E	B <sub>1</sub>	B	C <sub>1</sub>	C
3/8	3/8-UPT	4.06	0.54	2.98	2.56	2.13	1.14	2.13	1.57	2.69
1/2	1/2-NPT	4.37	0.70	2.97	2.56	2.13	1.14	2.13	1.57	2.64
3/4	3/4-NPT	4.61	0.71	3.19	2.76	2.56	1.36	2.56	1.93	3.35
1	1-NPT	5.31	0.89	3.54	3.07	2.87	1.54	2.74	1.93	3.35
1-1/4	1-1/4-NPT	6.02	0.99	4.05	3.46	3.39	1.81	3.25	2.52	4.25
1-1/2	1-1/2-NPT	6.14	0.97	4.20	3.66	3.86	2.05	3.50	2.52	4.25
2	2-NPT	7.32	1.17	4.99	4.37	4.80	2.44	4.25	2.99	5.28
2-1/2	2-1/2-NPT	9.25	1.31	6.64	5.24	6.46	3.43	6.46	6.89	8.86
3	3-NPT	10.63	1.40	7.83	5.87	7.99	4.13	6.97	10.71	12.87
4	4-NPT	12.13	1.48	9.17	6.57	9.37	5.08	7.68	12.99	15.16



#### VKD Flanged Connections – Dimension (inches)

Size	H	H <sub>1</sub>	B	B <sub>1</sub>	C	C <sub>1</sub>	F	f	U
1/2"	5.63	2.56	2.13	1.14	2.64	1.58	2.37	0.63	0.16
3/4"	6.77	2.76	2.56	1.36	3.35	1.93	2.75	0.63	0.16
1"	7.36	3.07	2.74	1.54	3.35	1.93	3.13	0.63	0.16
1 1/4"	7.48	3.47	3.25	1.81	4.25	2.52	3.5	0.63	0.16
1 1/2"	8.35	3.66	3.5	2.05	4.25	2.52	3.87	0.63	0.16
2"	9.21	4.37	4.25	2.44	5.28	2.99	4.75	0.75	0.16

**Note:** Dimensions based on VKD ANSI 150 Flanging Kit

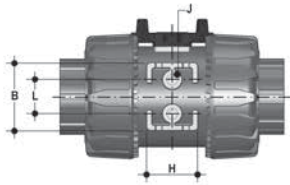


#### Metric Socket Connections – Dimension (inches)

Size	d	H	L	Z	H <sub>1</sub>	E	B <sub>1</sub>	B	C <sub>1</sub>	C
20mm	0.79	4.02	0.57	2.87	2.56	2.13	1.14	2.13	1.57	2.64
25mm	0.98	4.49	0.63	3.23	2.76	2.56	1.36	2.56	1.93	3.35
32mm	1.26	4.96	0.71	3.54	3.07	2.87	1.54	2.74	1.93	3.35
40mm	1.57	5.55	0.81	3.94	3.35	3.39	1.81	3.25	2.52	4.25
50mm	1.97	6.46	0.93	4.61	3.66	3.86	2.05	3.50	2.52	4.25
63mm	2.48	7.83	1.08	5.67	4.37	4.80	2.44	4.25	2.99	5.28

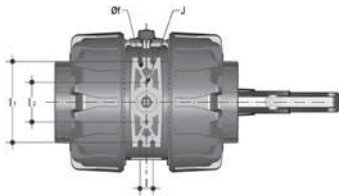
# VKD SERIES BALL VALVES

## Product Data Sheet



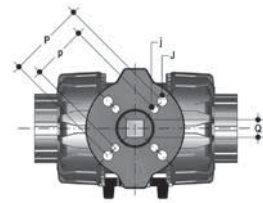
Support Bracket – Dimension (inches)

Size	J	B	L	H
1/2	M4	1.24	0.79	1.06
3/4	M4	1.57	0.79	1.18
1	M4	1.57	0.79	1.18
1-1/4	M6	1.97	1.18	1.38
1-1/2	M6	1.97	1.18	1.38
2	M6	2.36	1.18	1.57



Support Bracket – Dimension (inches)

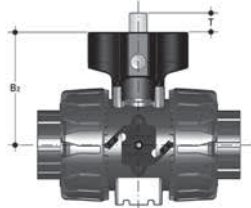
Size	J	f	l	l1	l2
2-1/2	M6	0.25	0.69	3.54	2.04
3	M8	0.33	0.83	4.43	2.48
4	M8	0.33	0.83	5.39	2.64



Actuation Pad – Dimension (inches)

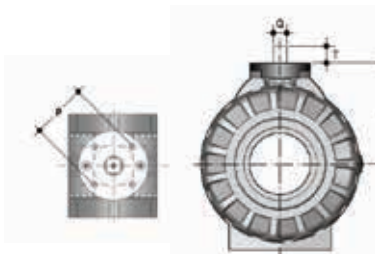
Size	B <sub>2</sub>	p	P	j	J	T	Q
1/2	2.28	F03	F04	0.22	0.22	0.47	0.43
3/4	2.89	F03	F05	0.22	0.26	0.47	0.43
*3/4	2.89	F04		0.22		0.47	0.43
1	2.91	F03	F05	0.22	0.26	0.47	0.43
*1	2.91	F04		0.22		0.43	0.43
1-1/4	3.82	F05	F07	0.26	0.33	0.63	0.55
1-1/2	4.09	F05	F07	0.26	0.33	0.63	0.55
2	4.49	F05	F07	0.26	0.33	0.63	0.55

\*Available upon request.



Actuation Pad – Dimension (inches)

Size	P	J	T	Q
2-1/2	F07	0.35	0.63	0.55
3	F07	0.35	0.63	0.55
4	F07	0.35	0.75	0.67



### Weights

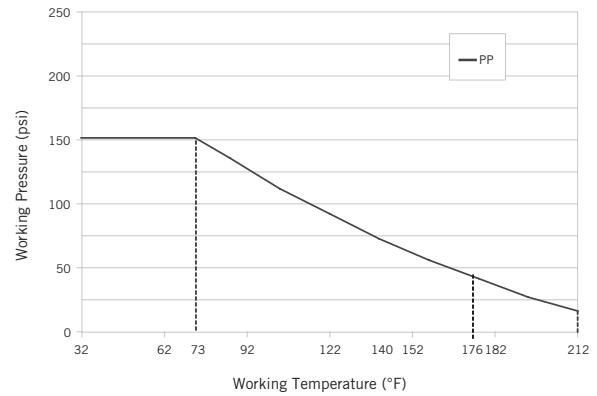
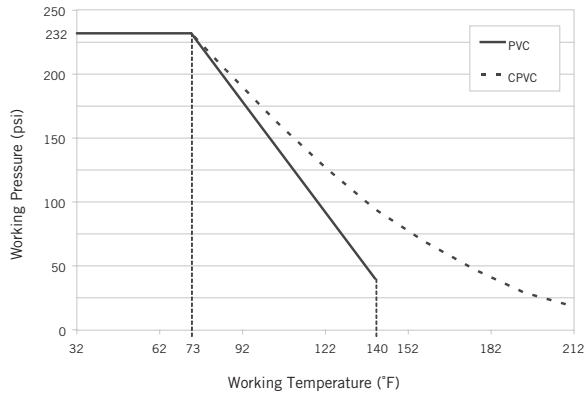
Approximate Weight (lbs)

Size (inches)	IPS / Metric Socket			FNPT Threaded		
	IPS	Metric		PVC	CPVC	PP
1/2	20mm	0.47	0.51	0.32	0.46	0.31
3/4	25mm	0.76	0.82	0.48	0.74	0.50
1	32mm	0.99	1.06	0.66	0.99	0.67
1-1/4	40mm	1.58	1.70	1.06	1.49	1.01
1-1/2	50mm	2.15	2.31	1.50	2.11	1.43
2	63mm	3.77	4.06	2.57	3.68	2.50
2-1/2	-	9.68	10.5	-	9.69	10.5
3	-	15.9	17.3	-	16.0	17.4
4	-	24.4	26.9	-	24.5	27.0

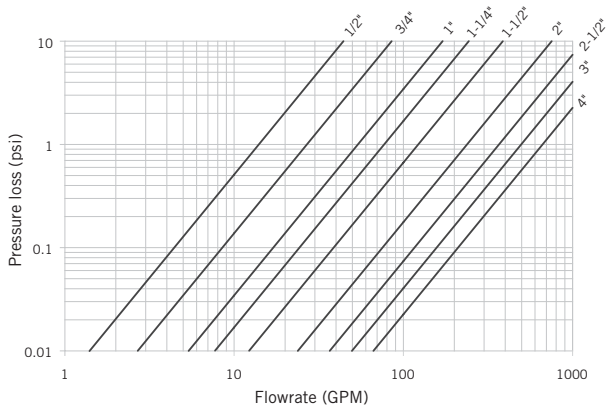
# VKD SERIES BALL VALVES

## Product Data Sheet

### Pressure – Temperature Ratings



### Pressure Loss Chart



### Flow Coefficients

Size (in)	C <sub>v</sub>
1/2	14.0
3/4	27.0
1	53.9
1-1/4	77.0
1-1/2	123
2	238
2-1/2	368
3	497
4	665

### Customize VKD EasyFit

It is often necessary to customize a valve by labelling or tagging it in order to mark, protect and identify it.

The 2-1/2" to 4" VKD is equipped with a specially designed water resistant module for the customization of the valve. The module is housed in the handle and is composed of a transparent PVC service plug and a white tag holder. The transparent plug can be easily removed to be used for self-labelling on its blank side. Self labelling can be done in several ways, but we recommend designing and printing custom labels through the EasyFit Labelling System (LSE).



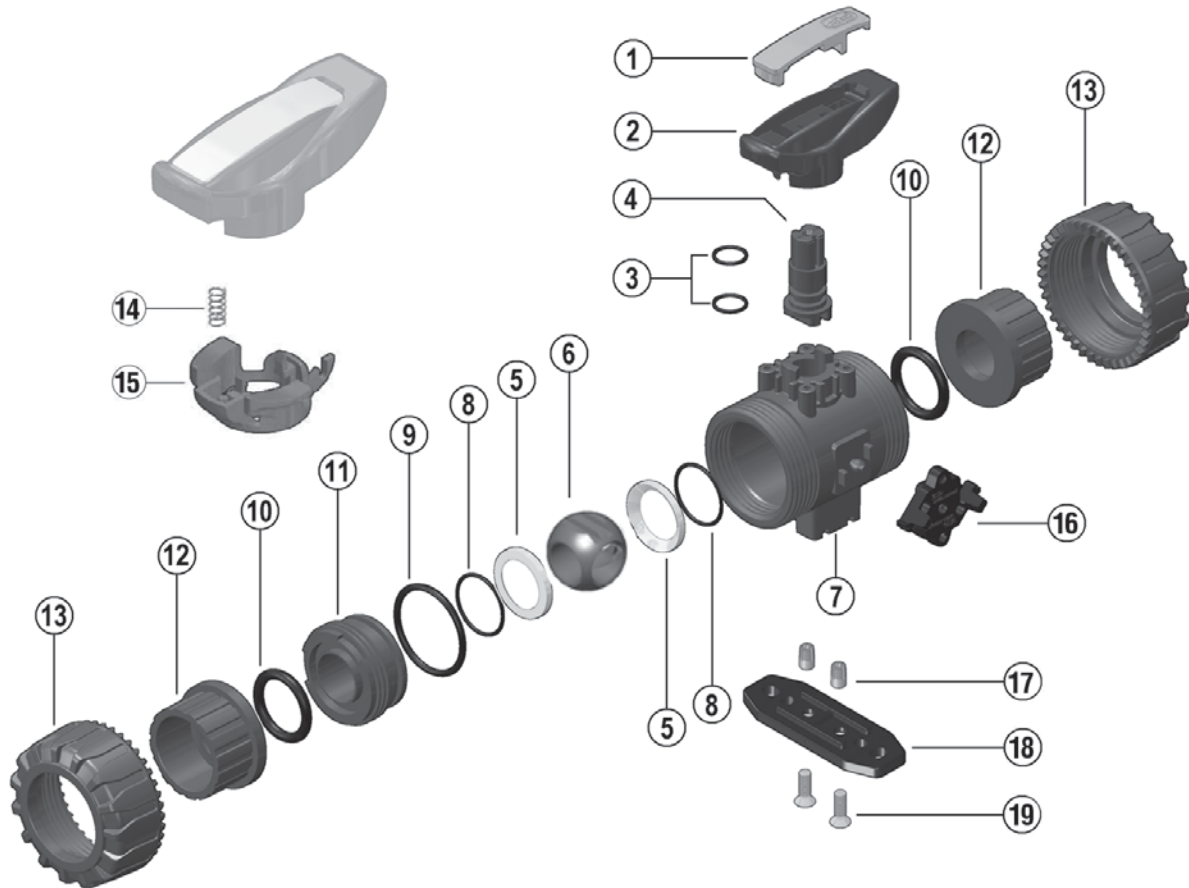
- A** Transparent PVC Service Plug
- B** PVC Tag Holder
- C** EasyFit Multifunction Handle



# VKD SERIES BALL VALVES

## Product Data Sheet

Components: Sizes 1/2" to 2"



#	Component	Material	Qty
1	insert	PVC / CPVC / PP	1
2	handle	PVC / CPVC / PP	1
3	stem o-ring	EPDM / FPM	2
4	stem	PVC / CPVC / PP	1
5	ball seat	PTFE	2
6	ball	PVC / CPVC / PP	1
7	body	PVC / CPVC / PP	1
8	ball seat o-ring	EPDM / FPM	2
9	body o-ring	EPDM / FPM	1
10	socket o-ring	EPDM / FPM	2

#	Component	Material	Qty
11	carrier with stop ring	PVC / CPVC / PP	1
12	end connector	PVC / CPVC / PP	2
13	union nut	PVC / CPVC / PP	2
14*	spring	SS	1
15*	handle lock	GRPP	1
16	DUAL BLOCK®	POM	1
17*	bracket bushing	SS / brass	2
18*	mounting plate	GRPP	1
19*	screw	SS	2

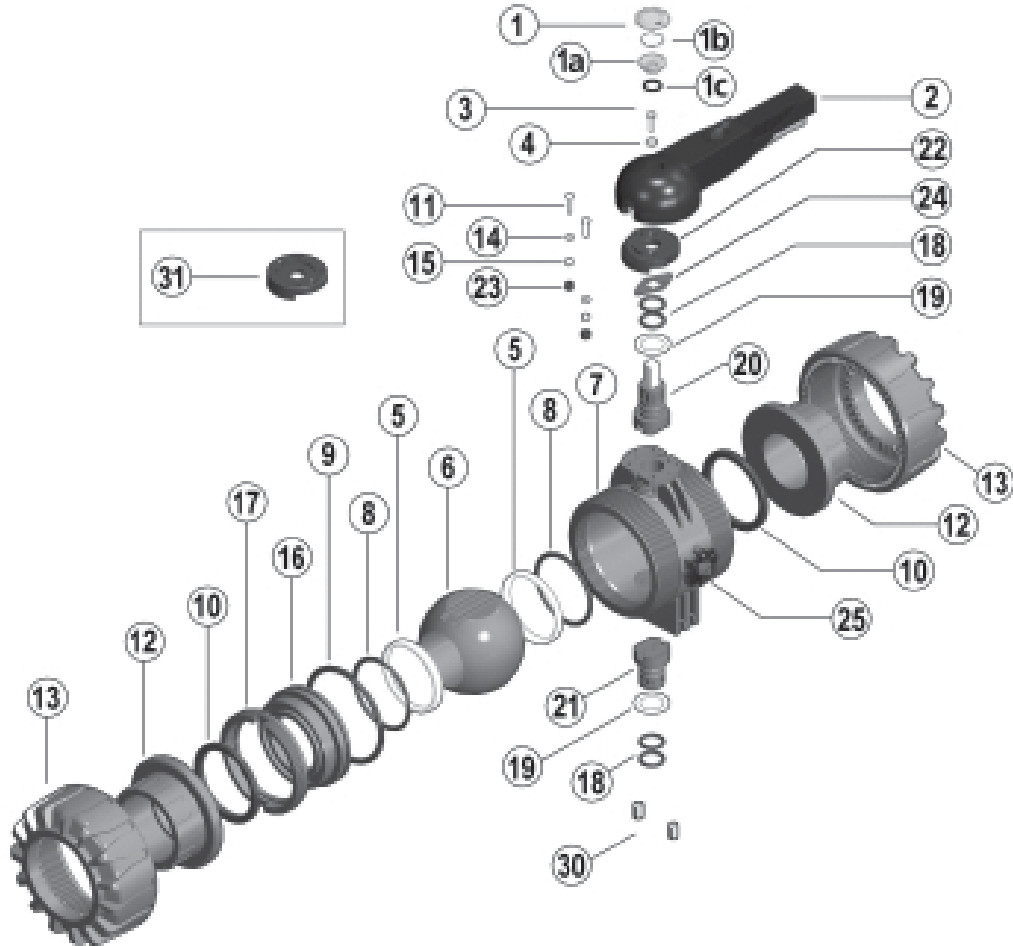
\* Optional Accessories



# VKD SERIES BALL VALVES

## Product Data Sheet

Components: Sizes 2-1/2" to 4"



#	Component	Material	Qty
1 a,b,c	transparent service plug	PE	1
2	handle	PVC	1
3	bolt	SS	1
4	washer	SS	1
5	ball seat	PTFE	2
6	ball	PVC / CPVC	1
7	body	PVC / CPVC	1
8	ball seat o-ring	EPDM / FPM	2
9	body o-ring	EPDM / FPM	1
10	socket seal	EPDM / FPM	2
11	bolt	SS	2
12	end connector	PVC / CPVC	2
13	union nut	PVC / CPVC	2
14	washer	SS	2
15	nut	SS	2
16	carrier	PVC / CPVC	1

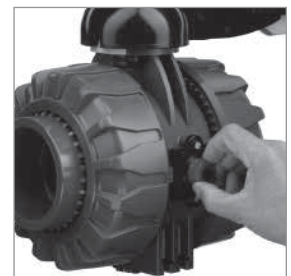
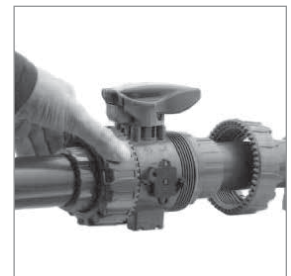
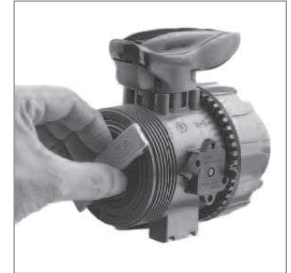
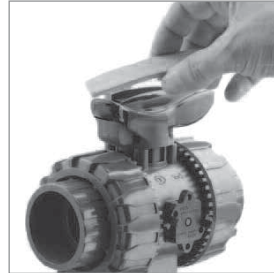
#	Component	Material	Qty
17	stop ring	PVC / CPVC	1
18	stem o-ring	EPDM / FPM	4
19	bushing	PTFE	2
20	upper stem	PVC / CPVC & SS	1
21	lower stem	PVC / CPVC	1
22	pad	GRPP	1
23	protective cap	PE	2
24	spring	SS	2
25	nut block	GRPP	2
26	cover	PP	1
27	nut block button	GRPP	1
28	protective cap	PE	1
29	screw	nylon	2
30	bracket bushing	brass	2
31	actuation pad	GRPP	1

# VKD SERIES BALL VALVES

## Product Data Sheet

### Installation Procedures

1. Remove the union nuts (part #13 on previous pages) and slide them onto the pipe.
2. Please refer to the appropriate connection style sub-section:
  - a. For socket style, solvent cement or fuse the end connectors (12) onto the pipe ends. For correct solvent cementing procedure, please refer to the section entitled, "Joining Methods – Solvent Cementing" in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems". **Be sure to allow sufficient cure time before continuing with the valve installation.**
  - b. For threaded style, thread the end connectors (12) onto the pipe ends. For correct joining procedure, please refer to the section entitled, "Joining Methods – Threading" in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems".
3. Open and close the valve to ensure that the carrier (11 or 16) is at the desired adjustment. If adjustment is required, ensure that the valve is in the closed position then remove the insert tool (1) from the handle (2). For sizes 2-1/2" to 4", use the tool that accompanies the valve. Line up the moldings on the tool with the slots in the carrier. Tighten or loosen to the desired position then replace the tool on the handle.
4. Ensure that the valve is in the closed position, and that the socket o-rings (10) are properly fitted in their grooves. If anchoring is required, insert the bracket bushings (17) into the bottom of the valve (sizes 1/2" to 2" only). Carefully place the valve in the system between the two end connections and fix if necessary.
5. Tighten the union nut on the side opposite to that which is marked "ADJUST". Hand tightening is typically sufficient to maintain a seal for the maximum working pressure. **Over-tightening may damage the threads on the valve body and/or the union nut, and may even cause the union nut to crack.**
6. Tighten the union nut on the side marked "ADJUST". Tightening the union nuts in this order results in the best possible valve performance due to optimum positioning and sealing of the ball and seat support system.
7. Open and close the valve to again ensure that the cycling performance is adequate. If adjustment is required, place the valve in the closed position, loosen the union nuts, remove the valve from the system, and then continue from Step 3.
8. Engage the Dual Block® system by affixing the molded piece (16, sizes 1/2" to 2") to the side of the valve body or by turning the red knob (27, sizes 2-1/2" to 4") to the locked position. This feature will prevent back-off of the union nuts during operation.

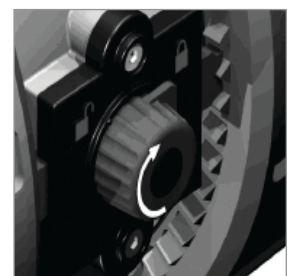


1/2" – 2" Dual Block® Mechanism

2-1/2" – 4" Dual Block® Mechanism



FREE



LOCK

### Valve Maintenance

#### Disassembly

1. If removing the valve from an operating system, isolate the valve from the rest of the line. **Be sure to depressurize and drain the valve and isolated branch.**
2. If necessary, detach the valve from the support structure by disassembling the connections to the optional bracket on the bottom of the valve body (7).
3. Unlock the Dual Block® system by compressing the two ends of the molded piece (16, sizes 1/2" to 2") or by turning the red knob (27, sizes 2-1/2" to 4") to the unlocked position. Loosen both union nuts (13) and drop the valve out of the line. If retaining the socket o-rings (10), take care that they are not lost when removing the valve from the line.
4. Place the valve in the open position then line up the moldings on the wrench tool (1, sizes 1/2" to 2") with the slots in the carrier (found on the side marked "ADJUST"). Loosen and remove the carrier (11 or 16).
5. Carefully press the ball (6) out of the valve body, taking care not to score or damage the outer surface.
6. Remove the handle (2) by pulling upwards (sizes 1/2" to 2") or by removing transparent service plug (1 a,b,c), bolt (3) and washer (4) (sizes 2-1/2" to 4").
7. On sizes 2-1/2" to 4", remove the throttling pad (22) by loosening and removing the bolts (11), washers (14), nuts (15), and caps (23).
8. Press the stem (4 or 20) into the valve body from above. On sizes 2-1/2" to 4", remove the lower stem (21) by pushing it into the valve body from below.
9. The stem o-rings (3 or 18), body o-ring (9), ball seats (5), ball seat o-rings (8), and bushings (19, sizes 2-1/2" to 4") can now be removed and/or replaced.

**Note:** It is not typically necessary to disassemble the Dual Block® components.

#### Assembly

**Note:** Before assembling the valve components, it is advisable to lubricate the o-rings with a water soluble lubricant. **Be sure to consult the "IPEX Chemical Resistance Guide" and/or other trusted resources to determine specific lubricant-rubber compatibilities.**

1. Replace the stem o-rings (3 or 18), body o-ring (9), ball seat o-rings (8), ball seats (5), and bushings (19, sizes 2-1/2" to 4") in their proper positions.
2. Insert the stem (4 or 20) into position from inside the valve body (7). On sizes 2-1/2" to 4", insert the lower stem (21) as well.
3. On sizes 2-1/2" to 4", replace the throttling pad (22) and affix in position using the bolts (11), washers (14), and nuts (15). Replace the caps (23) over the nuts.
4. Replace the handle (2). On sizes 2-1/2" to 4", affix using the bolt (3) and washer (4), then replace the transparent service plug (1 a,b,c).
5. Carefully insert the ball (6) into the valve body, taking care not to score or damage the outer surface. **Ensure that the valve handle and ball position correspond to the same operating position.**
6. Insert the threaded carrier (11 or 16) and tighten into the valve body. Use the wrench tool to sufficiently tighten.
7. Place the end connectors (12) into the union nuts (13), then thread onto the valve body taking care that the socket o-rings remain properly fitted in their grooves.
8. Engage the Dual Block® system by affixing the molded piece (16, sizes 1/2" to 2") to the side of the valve body or by turning the red knob (27, sizes 2-1/2" to 4") to the locked position.



# VKD SERIES BALL VALVES

## Product Data Sheet

### Testing & Operation

The purpose of system testing is to assess the quality of all joints and fittings to ensure that they will withstand the design working pressure, plus a safety margin, without loss of pressure or fluid. Typically, the system will be tested and assessed in sub-sections as this allows for improved isolation and remediation of potential problems. With this in mind, the testing of a specific installed valve is achieved while carrying out a test of the overall system.

An onsite pressure test procedure is outlined in the IPEX Industrial Technical Manual Series, "Volume I: Vinyl Process Piping Systems" under the section entitled, "Testing". The use of this procedure should be sufficient to assess the quality of a valve installation. **In any test or operating condition, it is important to never exceed the pressure rating of the lowest rated appurtenance in the system.**

Important points:

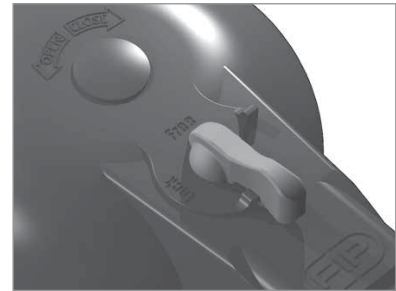
- Never test thermoplastic piping systems with compressed air or other gases including air-over-water boosters.
- When testing, do not exceed the rated maximum operating pressure of the valve.
- Avoid the rapid closure of valves to eliminate the possibility of water hammer which may cause damage to the pipeline or the valve.

**For safety reasons, please contact IPEX customer service and technical support when using volatile liquids such as hydrogen peroxide (H<sub>2</sub>O<sub>2</sub>) and sodium hypochlorite (NaClO). These liquids may vaporize causing a potentially dangerous pressure increase in the dead space between the ball and the valve body. Special VKD ball valves are available for these types of critical applications.**

**Note:** The VKD handle incorporates a locking mechanism that prevents unintentional rotation. When engaged, the spring-loaded handle release is locked and the valve cannot be cycled. A padlock can be installed through this portion of the handle as an additional safety precaution.

Please contact IPEX customer service and technical support with regard to any concern not addressed in this data sheet or the technical manual.

Size 2-1/2"

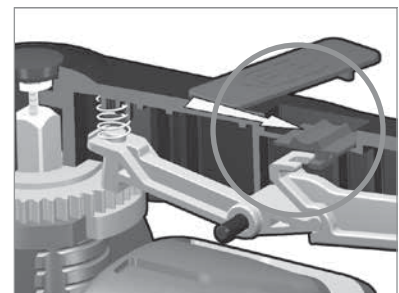


FREE

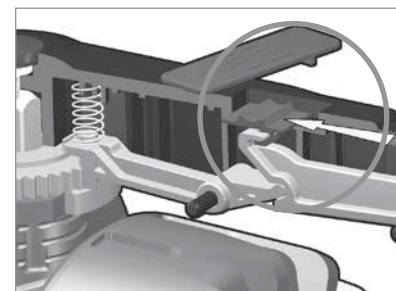


LOCK

Size 3" - 4"



FREE



LOCK

### About IPEX by Aliaxis

As leading suppliers of thermoplastic piping systems, IPEX by Aliaxis provides our customers with some of the world's largest and most comprehensive product lines. All IPEX by Aliaxis products are backed by more than 50 years of experience. With state-of-the-art manufacturing facilities and distribution centers across North America, we have established a reputation for product innovation, quality, end-user focus and performance

Markets served by IPEX by Aliaxis products are:

- Electrical systems
- Telecommunications and utility piping systems
- Industrial process piping systems
- Municipal pressure and gravity piping systems
- Plumbing and mechanical piping systems
- Electrofusion systems for gas and water
- Industrial, plumbing and electrical cements
- Irrigation systems
- PVC, CPVC, PP, PVDF, PE, ABS, and PEX pipe and fittings

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A policy of ongoing product improvement is maintained. This may result in modifications of features and/or specifications without notice.