



# PVC & CPVC TRUE UNION 2000 VALVES

TU2000-2-1024

## One of the Most Versatile, Compact Valve Designs Available

Spears® True Union 2000 Ball Valves, 3-Way Ball Valves and Ball Check Valves provide maximum versatility with fully interchangeable valve cartridges. Provides for easier system design modifications and upgrades in multiphase projects, or anywhere changes in valve types are desired. Simply exchange any True Union 2000 valve in-line using existing union nuts. Also mates with Spears® Schedule 80 Unions and Diaphragm Valves. All True Union 2000 valves feature a low profile, compact design for minimal space requirements. Available in PVC or CPVC with choice of EPDM or FKM O-ring seals and socket, threaded, flanged, spigot or optional Spears® patented Special Reinforced (SR) threaded end connectors. Additionally, Spears® offers valve Retrofit Kits for easy in-line replacement of other valves and factory installed Actuation Packages. Assembled with silicone-free lubricant.



### True Union 2000 Industrial Ball Valve

- Multi-featured Industrial Grade
- Built-in Handle Lockout
- Fully Serviceable, Replaceable Components
- Safe-T-Blocked® Seal Carrier - Full Rated Pressure
- ISO Pattern Actuation Mounting Option
- Spears® Dual O-ring Safe-T-Shear® Stem
- Self Adjusting PTFE Floating Seat Design
- Sizes 1/2" - 4" pressure rated to 235 psi @ 73° F, sizes 6" - 8" and all flanged to 150 psi @ 73° F
- Valve Sizes 1/2" - 4" with EPDM NSF® Certified for Potable Water Use
- Also Available in SPEARS® Low Extractable High Purity, PVC Material
- Produced in IPS sizes 1/2" - 6" with Socket, Threaded, Flanged, Spigot or SR Threaded End Connectors
- 8" with Socket and Flanged End Connectors

### True Union 2000 Industrial 3-Way Valve

- Industrial Grade, Multiport, Diverter, L-Pattern & T-Pattern configurations Vertical 3-Way or Horizontal Diverter (shown)
- Built-in Handle Lockout
- Fully Serviceable, Replaceable Components
- Safe-T-Blocked® Seal Carrier - Full Rated Pressure
- ISO Pattern Actuation Mounting Option
- Spears® Dual O-ring Safe-T-Shear® Stem
- Self Adjusting PTFE Floating Seat Design
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73° F, sizes 2-1/2" - 4" and all flanged to 150 psi @ 73° F
- EPDM NSF® Certified for Potable Water Use
- Produced in IPS sizes 1/2" - 4" with Socket, Flanged, Spigot or SR Threaded End Connectors



**PROGRESSIVE PRODUCTS FROM SPEARS®  
INNOVATION & TECHNOLOGY**

Visit our website:  
[www.spearsmfg.com](http://www.spearsmfg.com)



## True Union 2000 Industrial Ball Check Valve

- Industrial Grade
- Flow-Tested for Minimum Turbulence
- Fully Serviceable, Replaceable Components, uses Standard O-ring Seat
- Safe-T-Blocked® Seal Carrier - Full Rated Pressure
- Easily Converted to Foot Valve
- Valve Sizes 1/2" - 4" with EPDM NSF® Certified for Potable Water Use
- Also Available in SPEARS® Low Extractable, High Purity PVC Material
- Sizes 1/2" - 4" pressure rated to 235 psi @ 73° F, sizes 6" - 8" and all flanged to 150 psi @ 73° F
- Produced in IPS sizes 1/2" - 6" with Socket, Threaded, Flanged, Spigot or optional SR Threaded End Connectors
- Produced in size 8" with Socket and Flanged End Connectors



## Foot Valve Screens

- Easily converts Ball Check Valve to Foot Valve.
- Standard IPS spigot connection fits socket valve end connector.
- Enlarged screen provides open area equivalent to valve for optimum flow characteristics.
- Chemical and corrosion resistant PVC, CPVC or Compact HDPE Threaded construction.



Typical Application  
(VALVE NOT INCLUDED)



Check Valve Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4	6	8 <sup>1</sup>
<b>C<sub>v</sub></b>	<b>6.3</b>	<b>17</b>	<b>25</b>	<b>65</b>	<b>86</b>	<b>130</b>	<b>200</b>	<b>275</b>	<b>500</b>	<b>800</b>	<b>N/A</b>

1: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

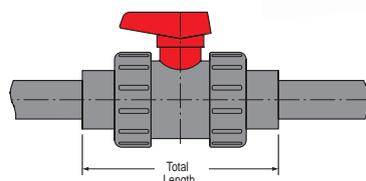
## Economical True Union 2000 Standard Ball Valve

- High quality Standard Ball Valve
- Allows future system upgrade
- Excellent for OEM Applications
- Replaceable Seats
- Safe-T-Blocked® Seal Carrier - Full Rated Pressure
- Spears® Safe-T-Shear® Stem
- Self Adjusting Floating Seat
- Sizes 1/2" - 2" pressure rated to 235 psi @ 73° F, sizes 2-1/2" - 4" and all flanged to 150 psi @ 73° F
- EPDM NSF® Certified for Potable Water Use
- Produced in IPS sizes 1/2" - 4" with Socket, Threaded, Flanged, Spigot or SR Threaded End Connectors

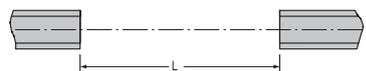


## True Union 2000 Retrofit Valves or Kits

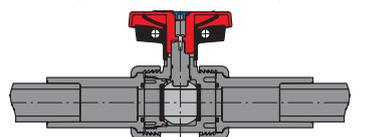
Easily converts any system over to all True Union 2000 style valves for consistent valve type and uniform maintenance. Special extended socket style End Connectors (2) allow retrofit replacement of other brand valves in existing piping systems with a True Union 2000 valve. Simply cut out old valve according to specified dimension and install retrofit end connectors. End connectors are provided with either EPDM or FKM O-rings. Can be ordered as End Connector Kit or fully assembled Retrofit Valve.



BALL VALVE FOR REPLACEMENT



PIPE LAYING LENGTH AFTER CUTTING



TRUE UNION 2000 BALL VALVE INSTALLED WITH RETROFIT KIT



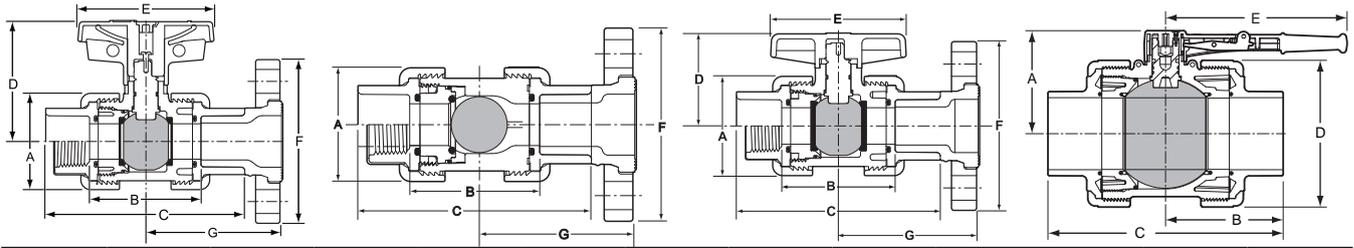
RFK Series

Size	1/2	3/4	1	1-1/4	1-1/2	2	2-1/2	3	4
<b>L</b>	<b>4-29/32</b>	<b>5-7/16</b>	<b>6-3/32</b>	<b>7-1/4</b>	<b>7-1/2</b>	<b>8-17/32</b>	<b>10-3/4</b>	<b>11-7/16</b>	<b>14-5/16</b>

Contact Spears® for Special Kits/Valves to replace older Spears® (Regular Style) True Union Ball Valves.

# True Union 2000 Valve Dimensional Data

Industrial Ball Valve, Ball Check Valve, Standard Ball Valve, 6" & 8" Industrial Lever Handle

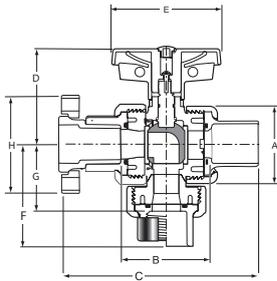


Nominal Size	Dimensions Reference (inches, ±1/16)											
	A	B <sup>1</sup>		C		D		E		F	G	
		Soc/Thd	Spigot	Socket	Thread	Spigot	Industrial	Standard	Industrial			Standard
1/2	1-7/8	2-3/8	2-7/8	4-3/16	3-3/16	4-5/8	2-9/16	1-5/8	2-13/16	2-1/2	3-1/2	2-31/32
3/4	2-1/4	2-3/4	3-1/4	4-3/4	4-1/4	5-1/4	2-7/8	2	3-3/8	3	3-7/8	3-5/16
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	2-5/16	3-7/16	3-7/16	4-1/2	3-5/8
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	2-13/16	3-7/8	3-9/16	4-5/8	3-31/32
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	3-1/16	4-3/16	3-7/8	5	4-3/8
2	4-1/4	4-25/32	5-3/16	7-3/4	7-13/16	8-1/4	4-1/2	3-3/4	5-3/32	5	6	5-1/4
2-1/2	5-3/8	6-7/8	7-13/16	10-7/16	9-11/16	11-3/8	5-1/8	5-7/8	6-1/4	7-5/8	7-1/2	6
3	6-3/16	7	7-13/16	10-11/16	9-7/8	11-9/16	5-7/8	5-7/8	7-5/8	7-5/8	7-1/2	6-13/16
4	7-3/4	7-5/16	8-1/4	11-7/8	10-1/4	12-3/4	6-3/4	6-3/4	9	6-3/4	9	7-1/2
6	11-5/8	11-1/16	13	17-1/16	15-3/4	18-1/2	8-1/8	---	14-5/16	---	11-1/4	10-3/16
8 <sup>2</sup>	11-5/8	23-3/16	---	31-7/8	---	---	8-1/8	---	14-5/16	---	13-1/2	17-13/16

1: Valve Lay Length

2: 8" Venturied Valves are 6" ball valves fitted with 6x8 end connector adapters.

## 2000 Industrial 3-Way Ball Valve (47 & 50 Series)

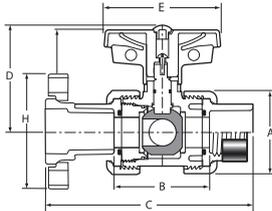


Nominal Size	Vertical 3-Way Ball Valves <sup>3</sup>														Oper. <sup>2</sup> Torque (in. lbs.)
	A	B <sup>1</sup>		C			D	E	F			G		H	
		Soc/SR	Spig	Soc	SR	Spig			Soc	SR	Spig	Soc/SR	Spig		
1/2	1-7/8	2-7/16	2-15/16	4-1/4	3-27/32	4-3/4	2-9/16	2-13/16	2-3/4	2-9/16	2-13/16	1-11/16	2	3-1/2	12
3/4	2-1/4	2-3/4	3-5/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	3-7/8	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	4-1/4	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	4-5/8	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	5	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	6	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	7-1/2	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	7-1/2	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	9	336

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. flow velocity; due to adjustment differences during installation, actual values may vary.

3: Diverter style valve, no shutoff on branch



Nominal Size	Horizontal Diverter Ball Valves <sup>3</sup>														Oper. <sup>2</sup> Torque (in. lbs.)
	A	B <sup>1</sup>		C			D	E	F			G		H	
		Soc/SR	Spig	Soc	SR	Spig			Soc	SR	Spig	Soc/SR	Spig		
1/2	1-3/16	2-7/16	2-15/16	4-3/16	3-13/16	4-3/4	2-9/16	2-13/16	2-9/16	2-3/8	2-13/16	1-11/16	2	3-1/2	12
3/4	2-1/4	2-3/4	3-5/16	4-3/4	4-1/4	5-3/8	2-7/8	3-5/16	3	2-3/4	3-5/16	2	2-5/16	3-7/8	12
1	2-1/2	2-7/8	3-1/2	5-1/8	4-11/16	5-3/4	3-1/8	3-7/16	3-1/4	3	3-9/16	2-1/8	2-7/16	4-1/4	20
1-1/4	3-1/16	3-1/4	3-13/16	5-3/4	5-3/16	6-5/16	3-5/8	3-13/16	3-3/4	3-3/8	4-1/16	2-3/8	2-13/16	4-5/8	25
1-1/2	3-1/2	3-1/2	4	6-1/4	5-7/16	6-3/4	4	4-3/16	4-3/16	3-13/16	4-1/2	2-3/16	3-1/8	5	40
2	4-1/4	4-3/4	5-3/16	7-3/4	6-3/4	8-1/4	4-1/2	5-1/8	5	4-1/2	5-5/16	3-1/2	3-3/4	6	67
2-1/2	5-3/8	5-7/8	7-13/16	9-5/16	8-1/2	11-3/8	5-1/8	6-1/4	5-7/8	5-1/2	6-7/16	4-1/8	5-5/16	7-1/2	120
3	6-3/16	6-7/8	7-13/16	10-11/16	9-3/4	11-9/16	5-7/8	7-5/8	6-11/16	6-3/16	7-3/16	4-3/4	5-5/16	7-1/2	120
4	7-1/2	7-1/4	8-1/4	11-13/16	10-1/4	12-13/16	6-3/4	9-3/16	7-1/8	6-3/4	8-3/4	5-7/8	6-1/2	9	336

1: Valve Lay Length

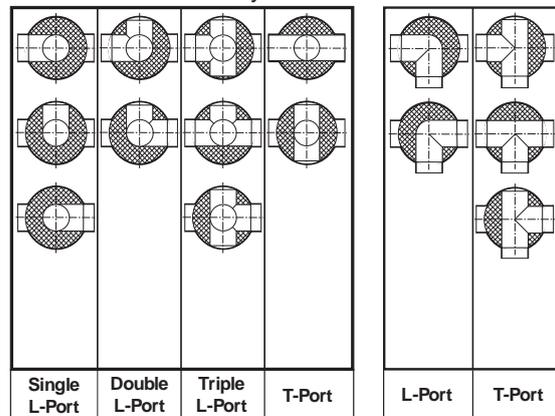
2: Torque required at valve maximum internal pressure rating, 5ft/sec. flow velocity; due to adjustment differences during installation, actual values may vary.

3: Diverter style valve, no shutoff on branch

## 3-Way Port Options

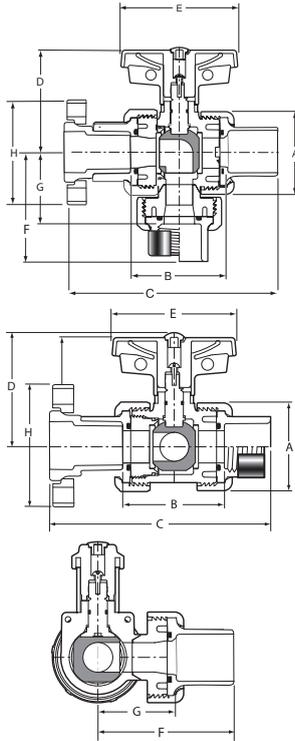
Vertical 3-way

Horizontal Diverter



Ball Port Options Viewed from Top of Valve

# True Union Industrial Full Port 3-Way Ball Valve Dimensional Data



## Industrial 3-Way Ball Valve (70 & 71 Series)

Nominal Size	Vertical Full Port 3-Way Ball Valves														Oper. <sup>2</sup> Torque (in.lbs.)
	A	B <sup>1</sup>		C			D	E	F			G		H	
		Soc/SR	Spig	Soc	SR	Spig			Soc	SR	Spig	Soc/SR	Spig		
1/2	2-1/8	3-5/8	4-1/8	5-3/8	5	5-7/8	2-5/8	2-13/16	2-11/16	2-1/2	2-15/16	1-13/16	2-11/16	3-1/2	12
3/4	2-9/16	4-1/4	4-3/4	6-1/4	5-3/4	6-3/4	3	3-3/8	3-1/8	2-7/8	3/38	2-1/8	2-3/8	3-7/8	12
1	2-7/8	4-1/2	5	6-3/4	6-3/8	7-3/8	3-3/16	3-7/16	3-1/8	3-3/16	3-11/16	2-1/2	2-1/2	4-1/4	20
1-1/4	3-9/16	5-3/4	6-1/4	8-1/8	7-5/8	8-3/4	3-3/4	3-7/8	4-1/16	3-3/4	4-3/8	3-1/8	3-1/8	4-5/8	25
1-1/2	4	6-1/4	6-5/8	9-1/16	8-1/8	9-1/2	4-3/16	4-1/4	4-1/2	4-1/16	4-3/4	3-5/16	3-5/16	5	40
2	4-5/8	7-5/16	8-1/16	10-11/32	9-1/4	10-3/4	4-9/16	5-3/32	5-1/4	4-5/8	5-3/8	3-7/8	3-7/8	6	67

1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. flow velocity; due to adjustment differences during installation, actual values may vary.

Nominal Size	Horizontal Full Port 3-Way Ball Valves														Oper. <sup>2</sup> Torque (in.lbs.)
	A	B <sup>1</sup>		C			D	E	F			G		H	
		Soc/SR	Spig	Soc	SR	Spig			Soc	SR	Spig	Soc/SR	Spig		
1/2	2-1/8	3-5/8	4-1/8	5-3/8	5	5-7/8	2-5/8	2-13/16	2-11/16	2-1/2	2-15/16	1-13/16	2-1/16	3-1/2	12
3/4	2-9/16	4-1/4	4-3/4	6-1/4	5-3/4	6-3/4	3	3-3/8	3-1/8	2-7/8	3-3/8	2-1/8	2-3/8	3-7/8	12
1	2-7/8	4-1/2	5	6-3/4	6-3/8	7-3/8	3-3/16	3-7/16	3-3/8	3-3/16	3-11/16	2-1/2	2-1/2	4-1/4	20
1-1/4	3-9/16	5-3/4	6-1/4	8-1/8	7-5/8	8-3/4	3-3/4	3-7/8	4-1/16	3-3/4	4-3/8	2-13/16	3-1/8	4-5/8	25
1-1/2	4	6-5/16	6-5/8	9-1/16	8-1/8	9-1/2	4-3/16	4-1/8	4-1/2	4-1/16	4-3/4	3-5/16	3-5/16	5	40
2	4-5/8	7-3/8	8-1/16	10-3/8	9-1/4	10-3/4	4-9/16	5-3/32	5-1/8	4-5/8	5-3/8	3-7/8	3-7/8	6	67

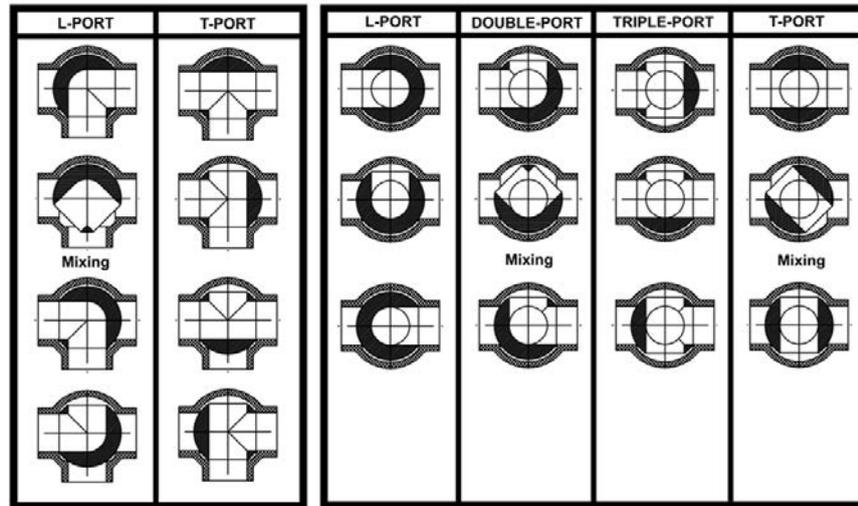
1: Valve Lay Length

2: Torque required at valve maximum internal pressure rating, 5ft/sec. flow velocity; due to adjustment differences during installation, actual values may vary.

## 3-Way Port Options

### HORIZONTAL

### VERTICAL



The Adjustable Stop Ring (Sold Separately) must be used with any "MIXING" Port Options to provide proper mid-way handle stop function.

Ball Port Options Viewed from Top of Valve



## Split Nut Kit for True Union 2000 Valves & Union 2000 Pipe Unions

Split Nut Kits are designed to replace broken union nuts on Spears® True Union 2000 Ball Valves and Union 2000 Pipe Unions. Kit includes SS316 Gear Clamp and 2-Split Nut halves. Can also be used if nut was not in place during end connector installation. Split Nut is fully serviceable to original valve pressure rating.

**NOT FOR DISTRIBUTION OF COMPRESSED AIR OR GAS**



**SPEARS® MANUFACTURING COMPANY**

15853 Olden St., Sylmar, CA 91342 • PO Box 9203, Sylmar, CA 91392

(818) 364-1611 • www.spearsmfg.com

