

- Premium quality, Full Port Sch 80 design.
- Ball is vented upstream to keep interior of valve wetted to the main fluid source when valve is in closed position. For use with Sodium Hypochlorite (Bleach) solutions.
- Blocked carrier held securely with a patented locking-strip, which also allows for external seat-wear adjustment.
- Dual stem o-rings. The stem is designed to shear above the secondary o-ring under excessive force. This is an important safety feature.
- Two stem-stops for positive shut-off. Floating ball design for pressure-assisted sealing downstream.
- True Union design permits easy removal of valve body for service. Complete inventory of repair parts is readily available.
- Vacuum rating: 26 Hg (inches mercury) with less than 1 Hg loss.
- 100% tested for a bubble-tight seal.
- Meets ASTM F-1970 for pressure-rating.
- Socket dimensions meet all ASTM requirements: PVC D-2467, D-2464; CPVC F-439, F437
- Available in PVC, CPVC, certified to NSF/ANSI 61-G & 372



Electric and Pneumatic Actuated valves, brackets and accessories are also available.



**SAMPLE ENGINEERING SPECIFICATIONS:** All thermoplastic True Union Ball Valves ½ - 4" shall be Full Port, Schedule 80, and shall be produced of PVC Type I, cell class 12454 or CPVC Type IV, cell class 23447 material. O-rings shall be made of Viton® FKM material. Valves seats shall be made of PTFE material. Ball shall be vented upstream to keep interior of valve wetted to the main fluid source when valve is in closed position. Valves shall be capable of being adjusted externally for seat-wear, and shall meet ASTM standard F-1970 for pressure rating. End connectors shall be of socket, thread or flange type.



Pressure rating, Cv, Torque, Wgt.

VALVE SIZE	SOCKET & THREAD, PVC & CPVC	FLANGED, PVC & CPVC	Cv <sup>2</sup>	OPENING TORQUE <sup>3</sup>	WGT. (LBS)
1/2	235	150	22	16	0.54
3/4	235	150	55	35	0.84
1	235	150	112	60	1.03
1-1/4	235	150	178	110	3.13
1-1/2	235	150	285	110	2.93
2	235	150	540	180	5.30
3	150	150	1348	600	9.75
4	150	150	2602	1000	16.15
6 <sup>1</sup>	150	150	2602	1000	21.50

<sup>1</sup> 6" valve is 4" valve with 6 x 4 reducers.

<sup>2</sup> GPM of water at 1 psi pressure drop, calculated from Hazen-Williams equation.

<sup>3</sup> Torque required at maximum pressure rating, with valve installed and interior o-rings wetted.

NOTE: Max recommended fluid velocity is 5 feet per second.

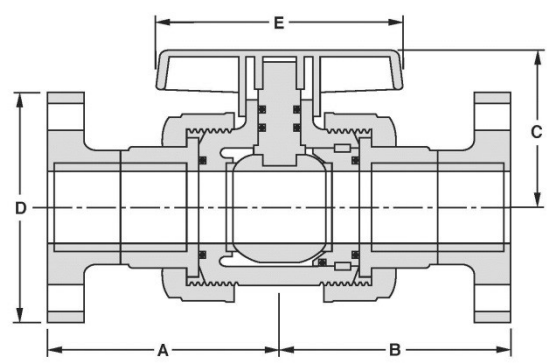
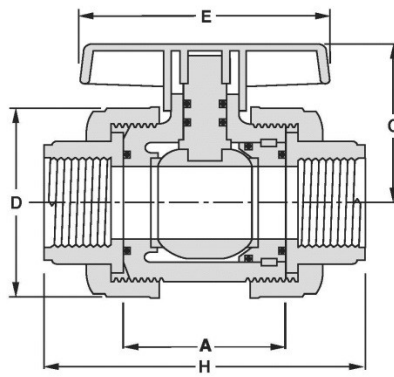
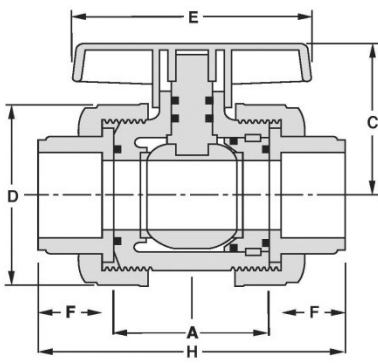
Colonial recommends a minimum installation distance of 5x the pipe diameter from a pump or other sources of turbulence.

**Do not use with compressed air or gas.**

Pressure ratings per ASTM F-1970, non-shock water at 73°F

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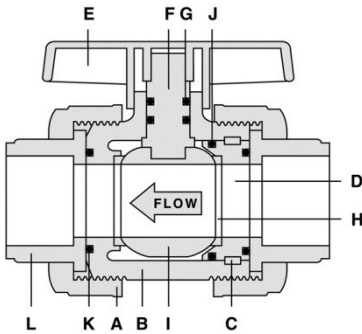
SLIP X SLIP	A	C	D	E	F	H
1/2"	2-1/16"	1-29/32"	2-1/32"	3-7/32"	15/16"	4-1/4"
3/4"	2-5/8"	2-3/8"	2-15/32"	3-7/16"	1"	5-1/8"
1"	2-7/8"	2-19/32"	2-27/32"	4"	1-5/32"	5-3/8"
1-1/4"	3-3/8"	3-19/32"	4-3/32"	5"	1-13/32"	6-1/8"
1-1/2"	3-3/8"	3-19/32"	4-3/32"	5"	1-13/32"	6-1/2"
2"	4-1/4"	4-9/32"	5-5/16"	5-31/31"	1-17/32"	7-3/4"
3"	5-7/8"	5-13/32"	7-7/32"	7-5/8"	1-15/16"	10-5/16"
4"	7"	6-1/32"	8-9/16"	9-15/32"	2-9/32"	12-3/16"

FPT X FPT	A	C	D	E	H
1/2"	2-1/16"	1-29/32"	2-1/32"	3-7/32"	3-11/16"
3/4"	2-5/8"	2-3/8"	2-15/32"	3-7/16"	4-5/16"
1"	2-7/8"	2-19/32"	2-27/32"	4"	5"
1-1/4"	3-3/8"	3-19/32"	4-3/32"	5"	6-1/16"
1-1/2"	3-3/8"	3-19/32"	4-3/32"	5"	5-3/4"
2"	4-1/4"	4-9/32"	5-5/16"	5-31/32"	6-11/16"
3"	5-7/8"	5-13/32"	7-7/32"	7-5/8"	10-1/4"
4"	7"	6-1/32"	8-9/16"	9-15/32"	12-3/16"

FLANGED	A	B	L*	C	D	E
1/2"	3-3/16"	3-3/16"	6-12/32"	1-29/32"	3-17/32"	3-7/32"
3/4"	3-3/4"	3-3/4"	7-1/2"	2-3/8"	3-29/32"	3-7/16"
1"	4"	4"	8"	2-19/32"	4-9/32"	4"
1-1/4"	4-1/2"	4-1/2"	9"	3-19/32"	4-21/32"	5"
1-1/2"	4-13/16"	4-13/16"	9-5/8"	3-19/32"	5-1/32"	5"
2"	5-5/8"	5-5/8"	11-1/4"	4-9/32"	6"	5-31/32"
3"	7"	7"	14"	5-13/32"	7-1/2"	7-5/8"
4"	7-5/16"	7-5/16"	14-5/8"	6-17/32"	9-7/16"	9-15/32"

For 2-1/2" size, see the Colonial Commercial Series TUBV (V27050N, V27052N, V27053N, V27054N) on separate submittal.

\* L Overall Dim (A + B)



Part	Component	Qty	Material
A	Union Nut	2	PVC, CPVC
B	Body	1	PVC, CPVC
C	Locking Strip	1	PVDF
D	Carrier	1	PVC, CPVC
E	Handle	1	ABS
F	Stem	1	PVC, CPVC
G	Stem O-Ring	2	Viton®
H	Ball Seat	2	PTFE
I	Ball	1	PVC, CPVC
J	Carrier O-Ring	1	Viton®
K	Face O-Ring	2	Viton®
L	Connector	2	PVC, CPVC

De-rate pressure for elevated process temps per the chart below:

Temp (°F)	PVC	CPVC
73	1.00	1.00
80	0.88	0.96
90	0.75	0.92
100	0.62	0.85
110	0.50	0.77
120	0.40	0.70
130	0.30	0.62
140	0.22	0.55
150	NR	0.47
160	NR	0.40
170	NR	0.32
180	NR	0.25
200	NR	0.18
210	NR	0.15
220	NR	NR

MATERIAL CHOICES	SOCKET & THREADED END CONNECTORS	SOCKET	THREADED	FLANGED	SOCKET & THREADED END CONNECTORS	SOCKET	THREADED	FLANGED
SIZE	PVC w/VITON®			CPVC w/VITON®				
1/2"	V07102N-V	-	-	V07122N-V	V07104N-V	-	-	V07124N-V
3/4"	V08102N-V	-	-	V08122N-V	V08104N-V	-	-	V08124N-V
1"	V10102N-V	-	-	V10122N-V	V10104N-V	-	-	V10124N-V
1-1/4"	V14102N-V	-	-	V14122N-V	V17104N-V	-	-	V14124N-V
1-1/2"	V17102N-V	-	-	V17122N-V	V17104N-V	-	-	V17124N-V
2"	V20102N-V	-	-	V20122N-V	V20104N-V	-	-	V20124N-V
3"	-	V30102N-V	V30112N-V	V30122N-V	-	V30104N-V	V30114N-V	V30124N-V
4"	-	V40102N-V	V40112N-V	V40122N-V	-	V40104N-V	V40114N-V	V40124N-V
*16"	-	V60102N-V	-	V60122N-V	-	V60104N-V	-	V60124N-V

**VENTED True Union Ball Valve:**

**Problem:** In sodium hypochlorite (bleach) applications, plating of the PVC or CPVC interior body, or valve failure, may occur when valve is left in the closed position, allowing solution in the interior of the body to become isolated, to decompose and outgas.

**Solution:** Colonial offers factory-customized True Union Ball Valves featuring a ball that is vented to the upstream port, allowing the interior of the ball and body to remain wetted to the upstream line, preventing the occurrence of plating.

To order, add "-V" to the valve part numbers. Example: V20102N-V.

