

True Union Ball Valve w/ Locking Handle



ISO 9002 CERTIFIED

Material:	PVC, PP, PVDF
Size:	1/2" - 2" (for 2 1/2" to 4" see TBL Series)
Pressure Rating:	230 psi 1/2" - 2": PVC, PVDF 150 psi 1/2" - 2": PP
Seats:	PTFE
Seals:	EPDM or FPM
Connections:	IPS Socket (PVC) Metric Socket (PP, PVDF) Metric Butt Fusion (PP, PVDF) NPT Threaded (PVC, PP, PVDF) ANSI 150 Flanged (PVC, PP, PVDF)

Materials of Construction:

PVC: Type 1, per ASTM D1784

PP: per ASTM D4101

PVDF: Type 1 per ASTM D3222

Seals: EPDM or Viton

Seats: PTFE

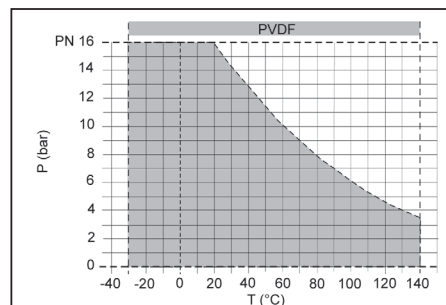
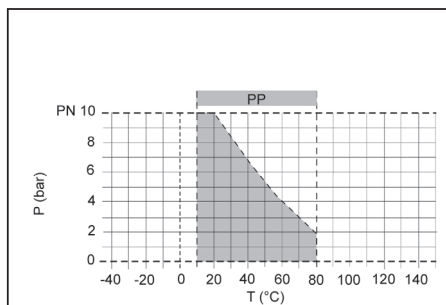
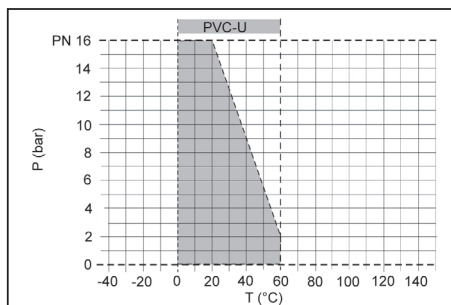
Guide Specification:

All ball valves constructed of the materials indicated. Valves shall be manufactured with an adjustable carrier, threaded into the body to ensure the valve is blocking in both directions. Valve stem shall be a safety shear stem with double O-ring seals. Body shall have unions on both ends and handle shall incorporate a spanner for adjusting and removing the carrier, teflon seat shall be energized by O-ring, ball shall be machined and tumbled to ensure roundness. Handle is of a safety design, with locking switch as a standard. Lockout / Tagout option available

Special Features

- Low maintenance and extended operational life
- Energized Teflon Seats
- Safety handle equipped with locking switch
- Electric and Pneumatic Actuation Available
- Double O-Ring Seal on Stem
- Butress Threads
- PP union Nuts & Stem are Glass Filled for Strength
- Threaded Panel mount design
- Vented Ball as Option
- Lockout / Tag Out Option available

Pressure/Temperature Graph: Working PSI/Fahrenheit



P = Operating Pressure
T = Temperature

The pressure/temperature limits are applicable for the stated nominal pressures and a computed operating life factor of 25 years.

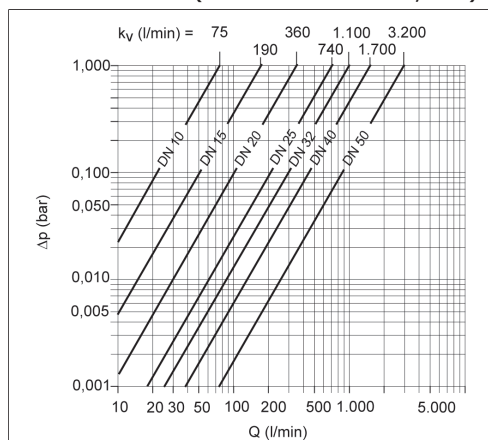
These are standard values for harmless media (DIN 2403), to which the valve material is resistant. For other media please refer to the chemical resistance guide. The durability of wear parts depends on the operating conditions of the application.

For temperatures below 0°C (PP < +10°C) please specify the precise operating conditions of the application.

The rated pressure depends on the valve size and material.

Pressure Loss - Flow Diagram

Pressure Loss Curve (Standard Values for H₂O, 20°C)



ΔP = Pressure Loss

Q = Flow

Pressure loss and k_v value

The diagram shows the pressure loss ΔP in relation to the flow Q .

Conversion aid:

$$c_v = k_v * 0.07$$

$$f_v = k_v * 0.0585$$

Units:

k_v (l/min)

c_v (gal/min) US

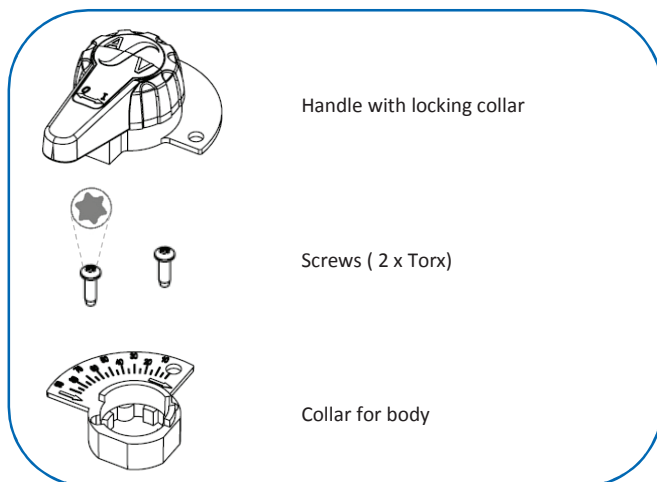
f_v (gal/min) GB

Torque Ratings

Size	½"	¾"	1"	1¼"	1½"	2"
In/Lbs	35.4	53.1	53.1	88.5	177.0	177.0

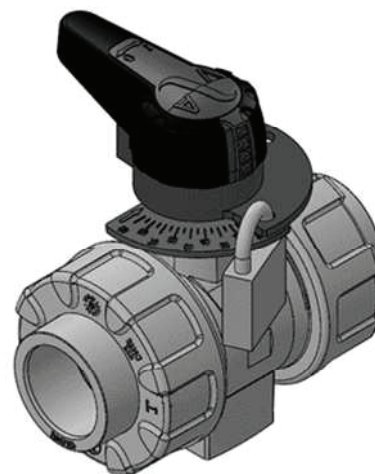
Optional Lock-Out / Tag-Out

Contents of Retrofit Kit



Required tools

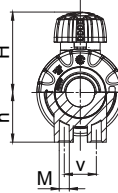
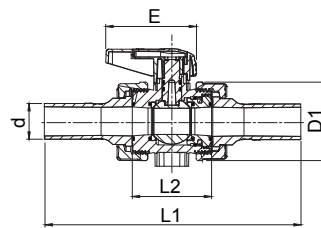
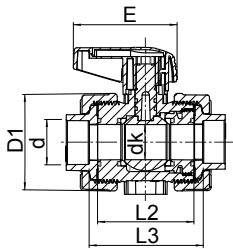
Torx Key
DN10 – DN 25 = T10
DN32 – DN50 = T20



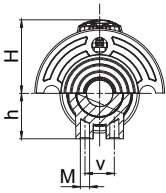
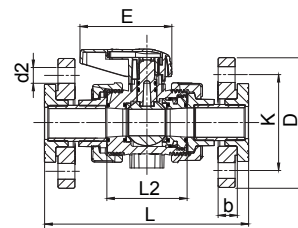
Padlock Hole Size: Ø5mm

Padlock to be provided by customer

Dimensional Data - Manual



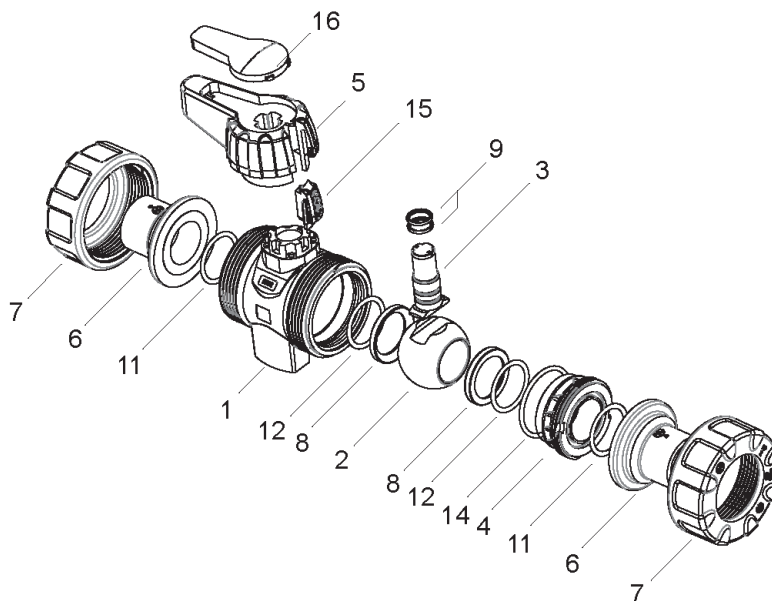
Socket / Spigot Valve



Flanged Valve

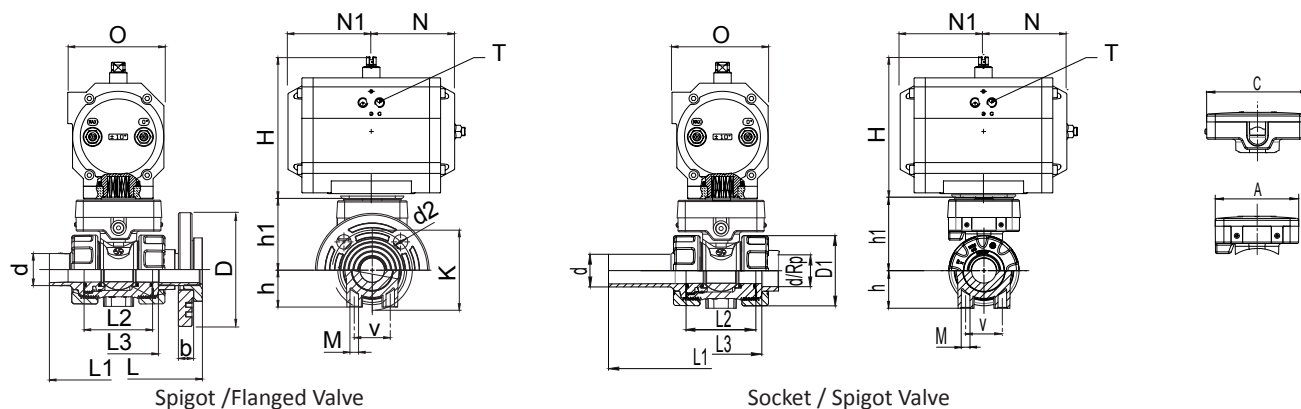
Nom. Size	b	d	d2	D	D1	E	h	H	K	L	L1	L2	L3 PP	L3 PVC	L3 PVDF	M	V
½"	0.51	0.79	0.63	3.74	1.97	2.60	1.06	1.89	2.36	5.91	5.16	2.22	2.68	2.48	2.66	M5	0.98
¾"	0.55	0.98	0.63	4.13	2.32	3.19	1.18	2.22	2.76	6.69	5.65	2.56	3.03	2.83	3.03	M5	0.98
1"	0.63	1.26	0.63	4.45	2.76	3.21	1.57	2.56	3.15	7.09	6.02	2.80	3.31	3.11	3.27	M6	1.02
1¼"	0.71	1.57	0.63	5.12	3.39	3.60	1.81	3.31	3.50	8.27	6.77	3.35	3.94	3.70	3.92	M8	1.77
1½"	0.71	1.97	0.63	5.24	3.94	3.60	2.17	3.52	3.86	9.06	7.56	3.50	4.21	3.78	4.13	M8	1.77
2"	0.75	2.48	0.79	6.30	4.94	5.63	2.76	4.53	4.76	10.94	8.66	3.98	4.65	4.25	4.65	M8	1.77

Parts Listing



1. Body
2. Ball
3. Stem
4. Carrier
5. Handle
6. End Connector
7. Union Nut
8. Ball Seat
9. O-ring
11. O-ring
12. O-ring
14. O-ring
15. Locking Switch
16. Inlay for Handle

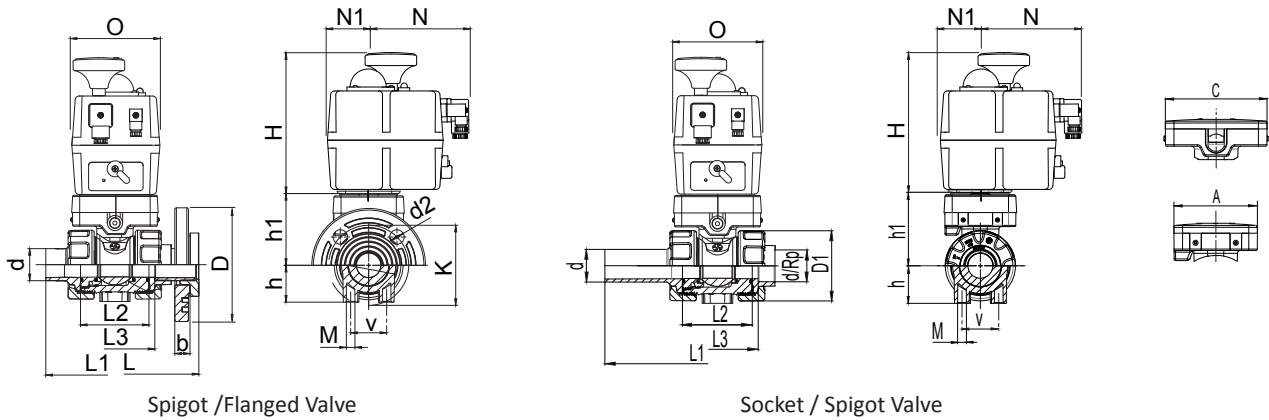
Dimensional Data - Pneumatically Actuated



Spring Return																			
Nom. Size	A	b	B1	B2	C	d2	D	D1	h	h1	H	K	L	L1	L2	L3	M	N	O
½"	2.83	0.51	1.42	2.95	3.43	0.63	3.74	1.97	1.06	2.50	3.58	2.36	5.91	5.16	2.22	2.68	M5	4.69	2.64
¾"	3.03	0.55	1.50	3.07	3.62	0.63	4.13	2.32	1.18	2.72	3.58	2.76	6.69	5.65	2.56	3.03	M5	4.69	2.64
1"	3.03	0.63	1.50	3.07	3.62	0.63	4.45	2.76	1.57	3.03	3.58	3.15	7.09	6.02	2.80	3.31	M6	4.69	2.64
1¼"	3.50	0.71	1.75	3.25	4.25	0.63	5.12	3.39	1.81	3.41	4.37	3.50	8.27	6.77	3.35	3.94	M8	6.30	3.39
1½"	3.50	0.71	1.75	3.25	4.25	0.63	5.24	3.94	2.17	3.64	4.37	3.86	9.06	7.56	3.50	4.21	M8	6.30	3.39
2"	3.64	0.75	1.81	3.31	4.43	0.79	6.30	4.94	2.76	4.25	5.24	4.76	10.94	8.74	3.98	4.65	M8	6.89	3.98

Double Acting																			
Nom. Size	A	b	B1	B2	C	d2	D	D1	h	h1	H	K	L	L1	L2	L3	M	N	O
½"	2.83	0.51	1.42	2.95	3.43	0.63	3.74	1.97	1.06	2.50	3.58	2.36	5.91	5.16	2.22	2.68	M5	4.69	2.64
¾"	3.03	0.55	1.50	3.07	3.62	0.63	4.13	2.32	1.18	2.72	3.58	2.76	6.69	5.65	2.56	3.03	M5	4.69	2.64
1"	3.03	0.63	1.50	3.07	3.62	0.63	4.45	2.76	1.57	3.03	3.58	3.15	7.09	6.02	2.80	3.31	M6	4.69	2.64
1¼"	3.50	0.71	1.75	3.25	4.25	0.63	5.12	3.39	1.81	3.41	4.37	3.50	8.27	6.77	3.35	3.94	M8	6.30	3.39
1½"	3.50	0.71	1.75	3.25	4.25	0.63	5.24	3.94	2.17	3.64	4.37	3.86	9.06	7.56	3.50	4.21	M8	6.30	3.39
2"	3.64	0.75	1.81	3.31	4.43	0.79	6.30	4.94	2.76	4.25	4.37	4.76	10.94	8.74	3.98	4.65	M8	6.30	3.39

Dimensional Data - Electrically Actuated

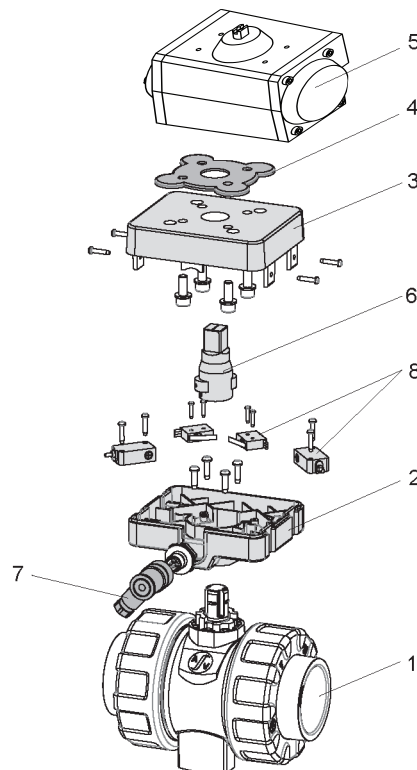


Spigot / Flanged Valve

Socket / Spigot Valve

Nom. Size	A	b	C	d2	D	D1	h	h1	H	K	L	L1	L2	L3	M	N	N1	O	V
½"	2.83	0.51	3.43	0.63	3.74	1.97	1.06	2.50	6.73	2.36	5.91	5.16	2.22	2.68	M5	4.96	2.01	4.33	0.98
¾"	3.03	0.55	3.62	0.63	4.13	2.32	1.18	2.72	6.73	2.76	6.69	5.65	2.56	3.03	M5	4.96	2.01	4.33	0.98
1"	3.03	0.63	3.62	0.63	4.45	2.76	1.57	3.03	6.73	3.15	7.09	6.02	2.80	3.31	M6	4.96	2.01	4.33	1.02
1¼"	3.50	0.71	4.25	0.63	5.12	3.39	1.81	3.41	6.73	3.50	8.27	6.77	3.35	3.94	M8	4.96	2.01	4.33	1.77
1½"	3.50	0.71	4.25	0.63	5.24	3.94	2.17	3.64	6.73	3.86	9.06	7.56	3.50	4.21	M8	4.96	2.01	4.33	1.77
2"	3.64	0.75	4.43	0.79	6.30	4.94	2.76	4.25	6.73	4.76	10.94	8.74	3.98	4.65	M8	4.96	2.01	4.33	1.77

Parts Listing



1. Ball Valve
2. Mounting box, Lower part
3. Mounting box, Upper part
4. Gasket
5. Actuator (Pneumatic or Electric)
6. Drive Adapter
7. Connector
8. Limit Switches (micro or proximity switches)