

True Union Blocking Ball Valve



Material:	PVC, CPVC, PP, PVDF
Size:	1/2" - 4"
Pressure Rating:	230 psi 1/2" - 2"; 150 psi 2 1/2" - 4"
Seats:	PTFE
Seals:	EPDM or FPM
Connections:	IPS Socket Metric Socket Metric Butt Fusion NPT Threaded ANSI 150 Flanged

ISO 9002 CERTIFIED

Materials of Construction:

PVC: Type 1, Class 12454B, ASTM D1784

CPVC: Type 4, Class 23447, ASTM D1970

Seals: EPDM or FPM

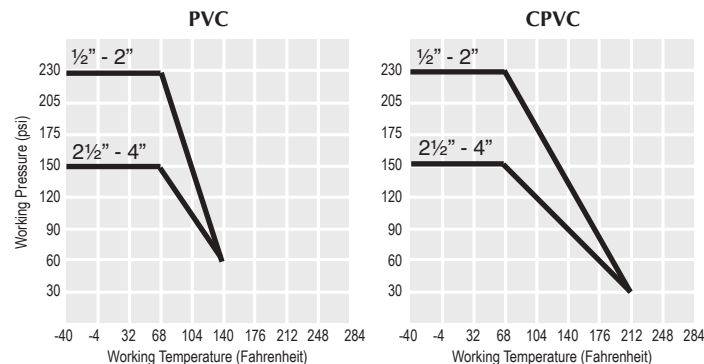
Seats: PTFE

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, PTFE seat shall be energized by O-ring, ball shall be machined and tumbled to ensure roundness, as manufactured by SIMTECH.

Features

- Full port
- Bidirectional flow
- Low maintenance and extended operational life
- Handle equipped as a spanner device to adjust carrier
- PTFE seat energized by O-ring
- Ball machined and tumbled to ensure roundness
- Special mounting pads are molded on body for actuator mounting or valve anchoring
- Blowout proof stem
- Safety shear stem design
- Double O-Ring Seal on Stem

Pressure/Temperature Graph: Working PSI/Fahrenheit





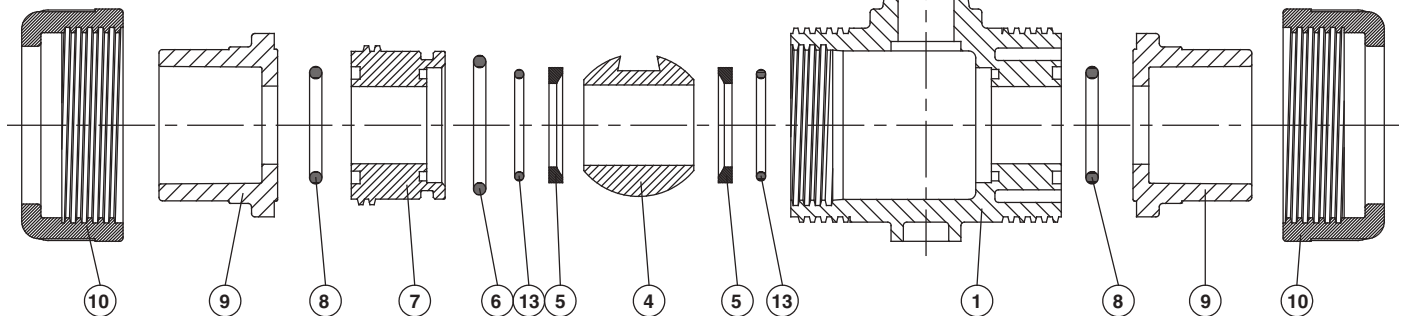
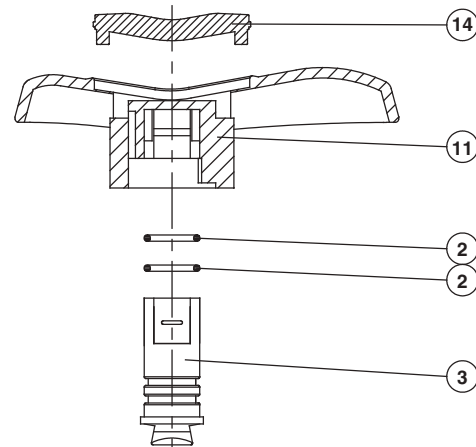
Flow Rate in Gallons per minute

ND	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
Bore Size	.512	.709	.910	1.18	1.50	1.89	2.36	2.72	3.94
C _v	12.5	28	50.9	81	150	230	360	485	768

C_v is the number of gallons per minute of water at a temperature of 68°F that will flow through a valve with a 1 psi pressure differential at a specified travel.

Parts Listing / Exploded View

NO.	PART	MATERIAL	QTY
1	BODY	PVC, CPVC, PP, PVDF	1
2	STEM O-RING	EPDM, FPM	2
3	STEM	PVC, CPVC, PP, PVDF	1
4	BALL	PVC, CPVC, PP, PVDF	1
5	SEAT SEAL	PTFE	2
6	CARRIER O-RING	EPDM, FPM	1
7	SEAL CARRIER	PVC, CPVC, PP, PVDF	1
8	UNION O-RING	EPDM, FPM	2
9	END CONNECTOR	PVC, CPVC, PP, PVDF	2

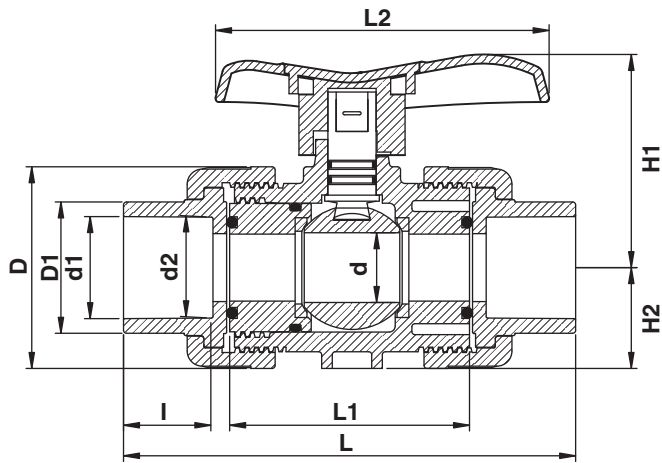




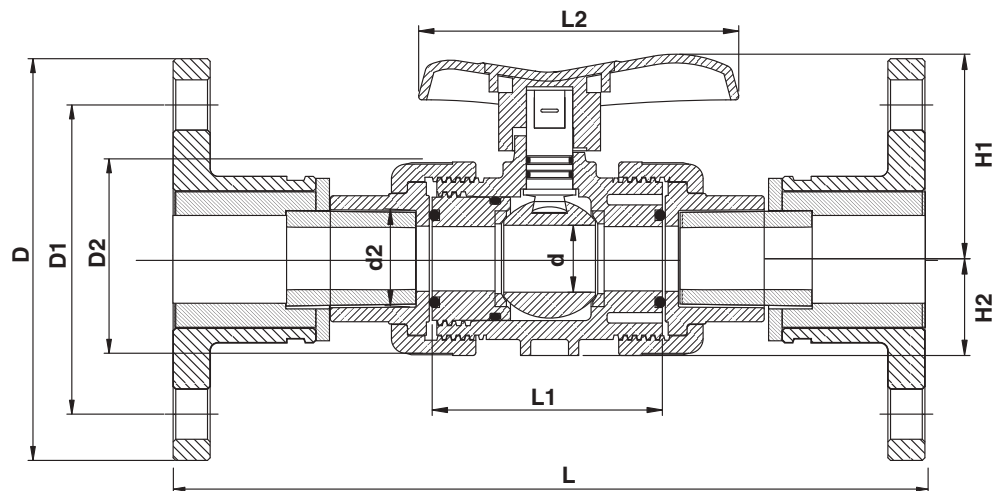
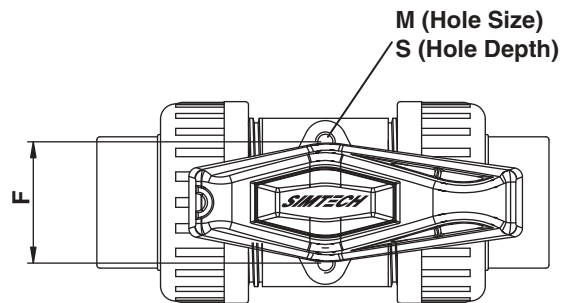
Dimensional Data - True Union

Nom. Size	d	d1	d2	D	D1	F	H1	H2	I	L	L1	L2	M	S
½"	0.51	0.85	0.84	1.82	1.19	1.18	1.81	0.83	0.87	4.49	2.36	3.03	0.20	0.31
¾"	0.71	1.06	1.05	2.19	1.43	1.30	2.24	1.02	1.00	5.31	2.87	3.74	0.24	0.31
1"	0.91	1.32	1.31	2.62	1.70	1.57	2.76	1.30	1.13	5.87	3.11	4.33	0.24	0.43
1¼"	1.18	1.67	1.66	3.23	2.08	1.85	2.95	1.54	1.25	6.69	3.46	5.00	0.31	0.43
1½"	1.50	1.91	1.89	3.88	2.46	2.05	3.70	1.61	1.38	6.93	3.74	5.63	0.31	0.43
2"	1.89	2.39	2.37	4.72	3.01	2.76	4.45	2.09	1.50	8.15	4.49	6.46	0.31	0.59
2½"	2.40	2.89	2.87	5.51	3.62	-	5.02	2.56	1.75	10.83	5.35	7.09	-	-
3"	2.72	3.52	3.49	6.42	4.25	-	5.71	2.95	1.88	11.97	6.22	8.82	-	-
4"	3.90	4.52	4.49	8.86	5.75	-	7.17	4.06	2.25	13.07	6.93	9.86	-	-
6" *	3.90	6.63	4.49	8.86	7.63	-	7.17	4.06	2.25	19.93	6.93	9.86	-	-

*4" Valve Ventured to 6"



½" Through 4"

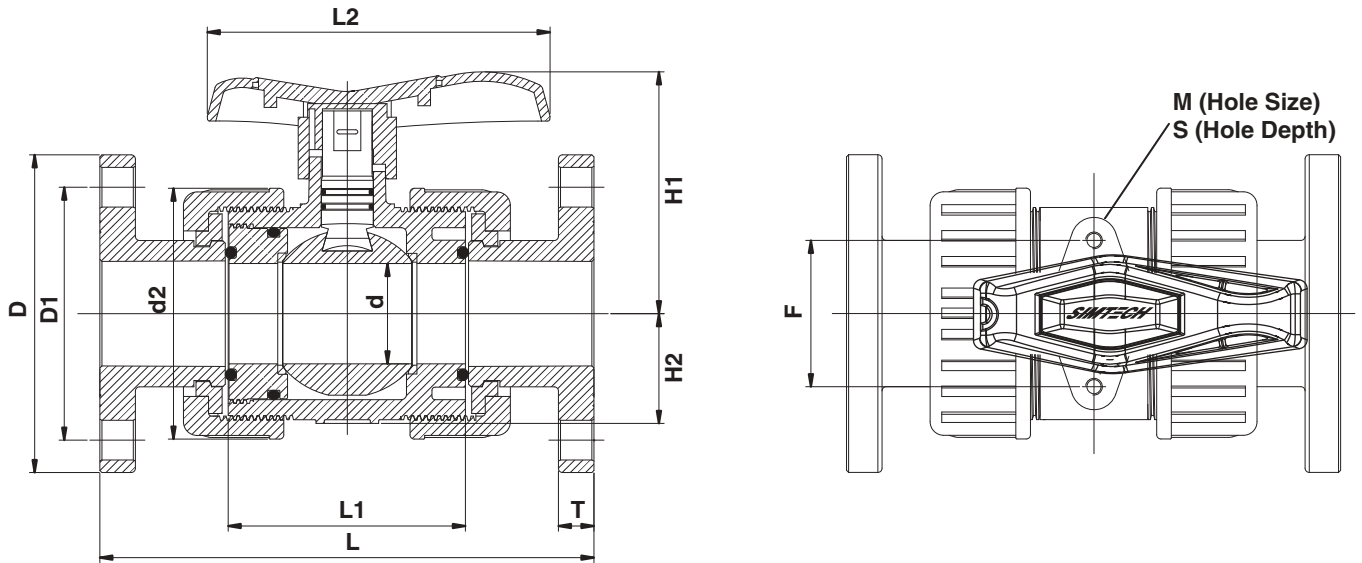


6"

Dimensional Data - Flanged

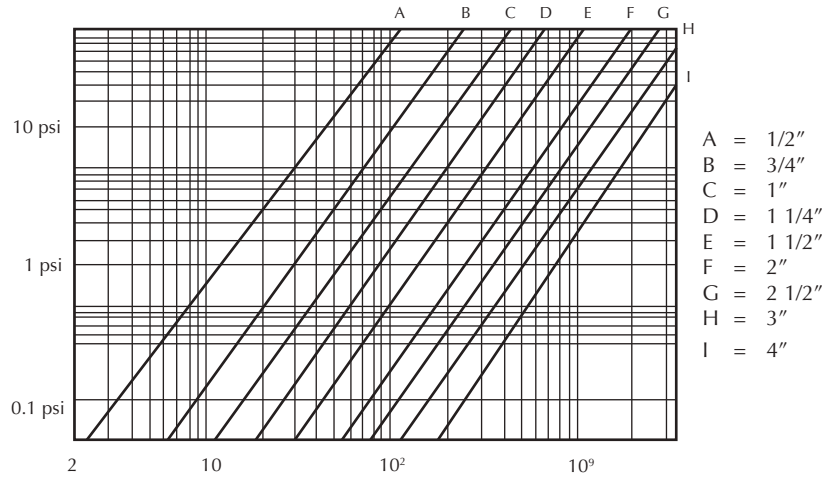
Nom. Size	PVC & CPVC L	PP & PVDF L	d2	d	D	D1	L1	L2	H1	H2	F	M	S	T	# Holes	Hole Size
½"	5.63	6.20	1.82	0.51	3.50	2.40	2.36	3.03	1.81	0.83	1.18	0.20	0.28	0.51	4	0.63
¾"	6.77	6.82	2.19	0.71	3.86	2.76	2.87	3.74	2.24	1.02	1.30	0.24	0.31	0.59	4	0.63
1"	7.36	7.64	2.62	0.91	4.25	3.11	3.11	4.33	2.76	1.30	1.57	0.24	0.43	0.59	4	0.63
1¼"	7.48	8.54	3.23	1.18	4.61	3.50	3.46	5.00	2.95	1.54	1.85	0.31	0.43	0.63	4	0.63
1½"	8.35	8.90	3.88	1.50	5.00	3.90	3.74	5.63	3.58	1.61	2.05	0.31	0.43	0.67	4	0.63
2"	9.21	10.33	4.72	1.89	5.98	4.76	4.49	6.46	4.45	2.09	2.76	0.31	0.59	0.67	4	0.75
2½"	10.20	12.58	5.51	2.40	7.01	5.51	5.31	7.09	4.57	2.56	-	-	-	0.71	4	0.75
3"	11.97	14.27	6.30	2.72	7.52	5.98	6.14	8.82	5.12	2.95	-	-	-	0.71	4	0.75
4"	14.65	15.20	8.86	3.90	9.02	7.52	6.93	10.94	7.01	4.06	-	-	-	0.71	8	0.75
6"*	22.02	-	8.86	3.90	11.00	9.50	6.93	10.94	7.01	4.06	-	-	-	1.09	8	0.75

*4" Valve Ventured to 6"





Pressure Loss—Flow Diagram



TBB Series Electric Actuators and Accessories

Special Features:

S3 is the new concept ¼ turn multi voltage electric actuator that finally offers all the solutions that utilize the reversible electric actuators for the operation and control of the valves.

ALL S3 TYPES AND MODELS have the following STANDARD features:

ATC - AUTOMATIC TEMPERATURE CONTROL:

An internal 4w thermostatically controlled anti-condensation heater maintains the internal between +20° C and +30° C, (68° F – 86° F) eliminating the possibility of damage by condensation.

AVS - AUTO VOLTAGE SENSING:

The S3 actuators are, within the voltage ranges specified for "L" or "H" series, multi-voltage capable and make automatic internal adjustments to ensure the actuator operates, irrespective of the power supply

"L" series operates from 12 to 24V AC or 12 to 24 V DC

"H" series operates from 85 to 250V AC or DC

ETL - ELECTRONIC TORQUE LIMITER:

Continuous electric monitoring of the motor produces smooth operation and accurate control of the motor consumption up to the maximum permissible torque. Should the maximum torque be exceeded, the ETL automatically cuts the power to the motor to prevent damage to the actuator, and automatically relaxes the gearbox to allow simple operation of the manual override.

MO - MANUAL OVERRIDE:

For emergency manual operation, operated by a selector lever on the side of the actuator, with automatic motor power tripping when selected.

PES - PROTECTED ELECTRICAL SUPPLY:

This take 2 forms; first the actuator is protected against short circuit when connected and while the actuator won't operate if incorrectly connected, no internal damage will result, and secondly, the S3 accepts the same wiring connection for either AC or DC operation (grey connector).

External DIN plugs eliminate the need to remove the actuator's cover to connect.

VCO - VISUAL CONTROL OF OPERATION:

- A external LED indicates the normal operation of the actuator.
- A flashing LED frequency 1 advises that the actuator's torque limiter has been exceeded and the ETL has activated.
- A flashing LED frequency 2 advises that the actuator is in MANUAL position.

VFC - VOLT FREE CONTACTS:

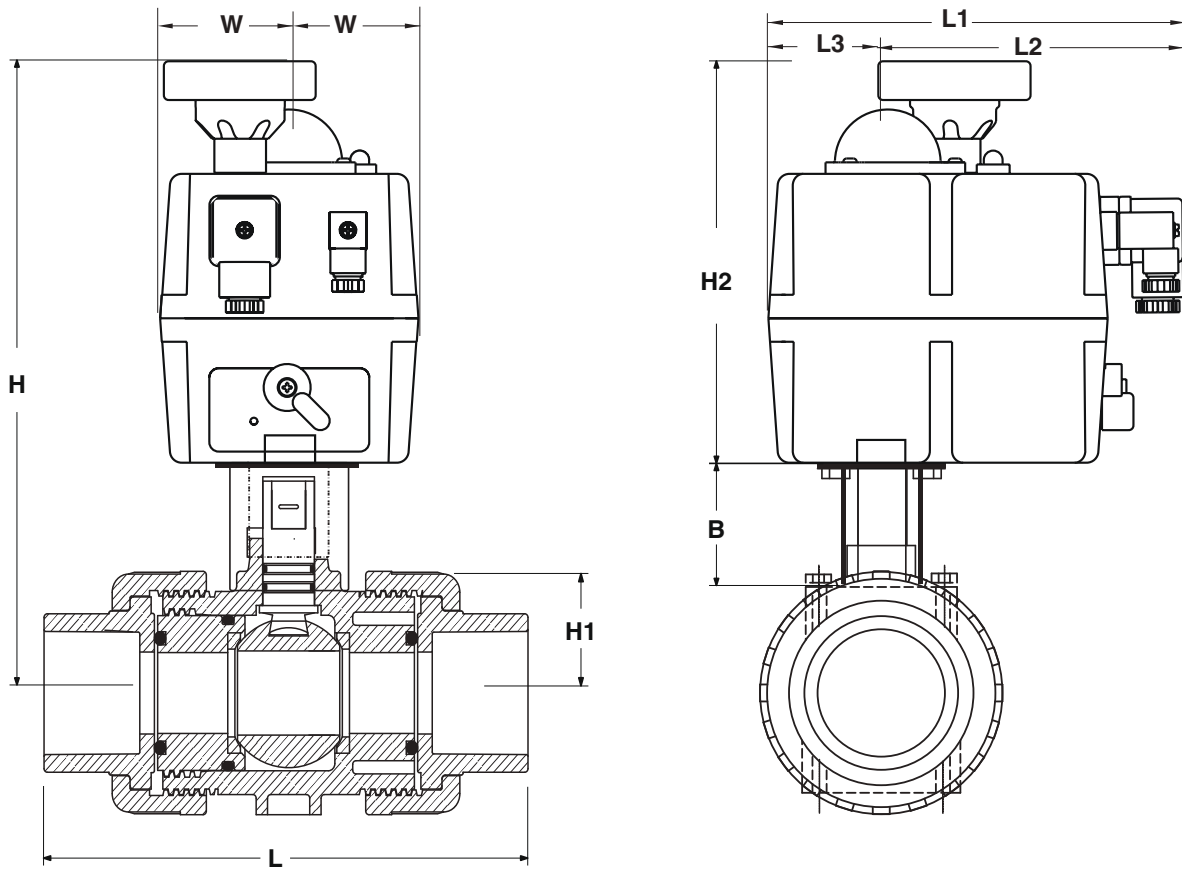
1 set of open and closed volt free contacts are provided

SIMTECH has designed and made the third generation of electric actuators that incorporates 6 models in each one of the series "L" (Low Voltage) & "H" (High Voltage) covering the following operational torques: 20, 35, 55, 85, 140 and 300 Nm

QUICK AND EASY TO INSTALL

These user friendly actuators are designed to be fully connected WITHOUT REMOVING THE ACTUATOR COVER via externally supplied DIN plugs, simply wire the plugs and they are ready for use ! A wiring diagram label showing how to wire the plugs is affixed to the side of the actuator. Standard wiring (3 wire) for either AC or DC power supply is identical with a common, and a live switch between open and close. However, for DC power supplies, the actuators will also operate on a 2 wire system with a user supplied voltage polarity switch, used to reverse the motor, if this wiring configuration is preferred.

Dimensional Data



Size	B	H	H1	H2	PVC & CPVC L	PP & PVDF L	L1	L2	L3	W	Actuator
1/2"	1.10	8.66	0.83	6.73	4.49	4.27	6.97	4.96	2.01	2.17	S3-E20
3/4"	1.57	9.33	1.02	6.73	5.31	4.87	6.97	4.96	2.01	2.17	S3-E20
1"	1.57	9.61	1.30	6.73	5.87	5.45	6.97	4.96	2.01	2.17	S3-E20
1 1/4"	2.17	10.43	1.54	6.73	6.69	6.10	6.97	4.96	2.01	2.17	S3-E20
1 1/2"	2.17	10.51	1.61	6.73	6.93	6.10	6.97	4.96	2.01	2.17	S3-E20
2"	2.17	10.94	2.05	6.73	8.15	7.20	6.97	4.96	2.01	2.17	S3-E20
2 1/2"	2.78	13.78	3.29	7.72	10.83	9.57	6.97	4.96	2.01	2.17	S3-E55
3"	2.78	14.07	3.58	7.72	11.97	10.59	6.97	4.96	2.01	2.17	S3-E55
4"	2.78	15.61	5.12	7.72	26.59	11.30	6.97	4.96	2.01	2.17	S3-E55

Dimensions in inches

The Pneumatic rack & pinion actuators are the next generation of innovation featuring a slimmer body design while maintaining extensive options for easy valve integration, flexible customization, and the same reliable operation, all backed by the industry's best unlimited cycle life warranty. Standard with NAMUR mounting for accessories, is setting the industry standard.

APneumatic Actuators have the following STANDARD features:

Compact Design

The rack & pinion engineering polymer actuators produce linear torque output in a compact design utilizing the same body and end caps for double acting and spring return models.

Namur Mounting

Each actuator comes standard with NAMUR VDI/VDE 3845 mounting standard on all sizes and made with an insert in alloy UNI 5076 (ASTM B 179) coated with highly corrosion resistant epoxy. No special blocks are required to mount solenoid valves, limit switches or positioners. Air connections are ¼" NPT as standard.

High Visibility Beacon

A simple and compact visual indicator comes standard on each unit.

ISO 5211 Valve Connection

The female output drive is standard with a double square output drive, according to ISO 5211 guidelines. Direct mounting ball valves is simple and quick.

Alternate Operating Pressure

Air pressure operation from 40 to 150 psi (2 to 10 Bar). Water, nitrogen and compatible hydraulic fluids may also be used to power the actuator.

Rugged Tooth Design

The pinion teeth are engaged the full length and stroke of the piston, and designed for the toughest flow conditions. The pinion height allows manual override without needing to remove the indicator.

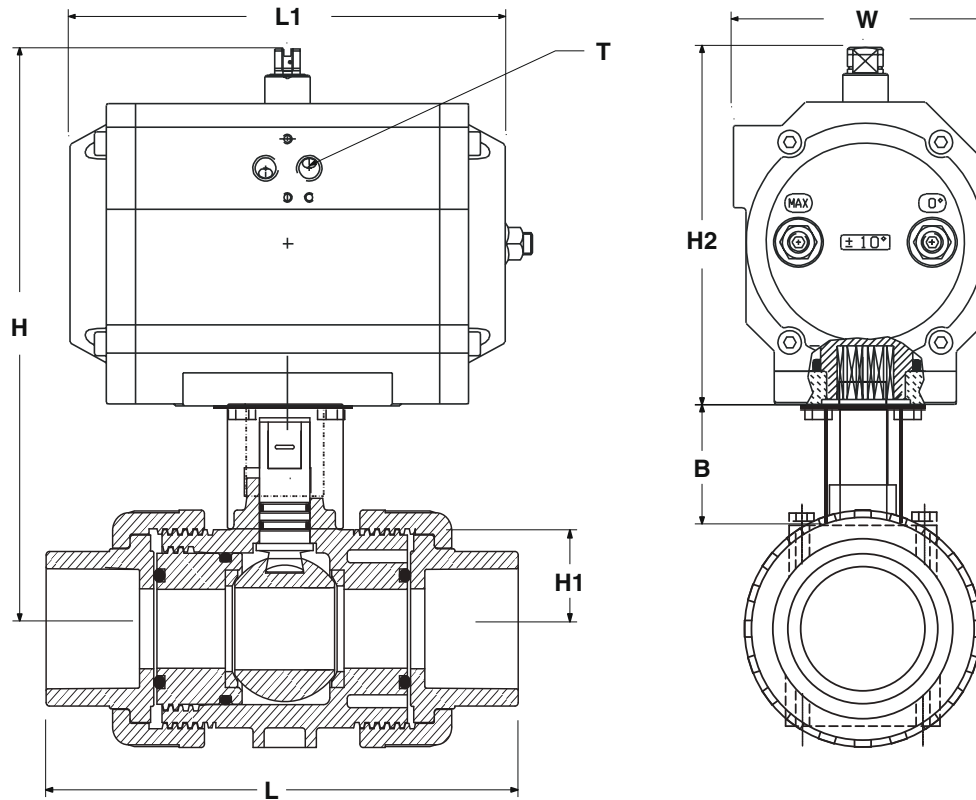
Optional Accessories

We offer a wide range of adapters for many different types of valves—including butterfly valves, ball valves and diaphragm—as well as a variety of pneumatic accessories suitable for diverse industrial environments.

Quality Assurance

100% of all units are factory pressure and leak tested, and individually boxed for shipment.

Dimensional Data



Spring Return										
Size	B	H	H1	H2	PVC & CPVC L	PP & PVDF L	L1	W	T	
½"	1.10	5.51	0.83	3.58	4.49	4.27	4.69	2.64	¼" NPT	UT11
¾"	1.57	6.18	1.02	3.58	5.31	4.87	4.69	2.64	¼" NPT	UT11
1"	1.57	6.46	1.30	3.58	5.87	5.45	4.69	2.64	¼" NPT	UT11
1¼"	2.17	8.07	1.54	4.37	6.69	6.10	6.30	3.39	¼" NPT	UT14
1½"	2.17	8.15	1.61	4.37	6.93	6.10	6.30	3.39	¼" NPT	UT14
2"	2.17	9.43	2.05	5.22	8.15	7.20	6.89	3.98	¼" NPT	UT19
2½"	2.78	10.37	2.56	5.04	10.83	9.57	9.41	3.78	¼" NPT	MT26
3"	2.78	11.56	2.95	5.83	11.97	10.59	9.06	4.49	¼" NPT	MT31
4"	2.78	14.11	4.06	7.28	13.07	11.30	9.69	5.12	¼" NPT	MT36

Double Acting										
Size	B	H	H1	H2	PVC & CPVC L	PP & PVDF L	L1	W	T	
½"	1.10	5.51	0.83	3.58	4.49	4.27	4.69	2.64	¼" NPT	UT11
¾"	1.57	6.18	1.02	3.58	5.31	4.87	4.69	2.64	¼" NPT	UT11