

Features

- Functions as a diverter, selector, or mixing valve
- All materials comply with FDA and USDA requirements
- Dyneon® TF-1641 (PTFE) FDA approved ball seats and cavity fillers
- Triple PTFE/Viton® high cycle live loaded stem seal packing
- Highly polished internals and end caps with 8-12 Ra finish
- Tri-Clamp ends for hygienic connections
- Electro-polished exterior actuator surfaces
- Spring Return or Double Acting Actuators
- Corrosion resistant 316 stainless steel body, pistons & rack
- NEMA 4/4X (IP66) enclosure for washdown applications
- Coated springs for additional corrosion resistance (for spring return models)
- Externally adjustable stroke
- Pre-lubricated and tested to minimum 1 million operations
- Highly visible valve position indicator
- Valve tested per API598

Applications

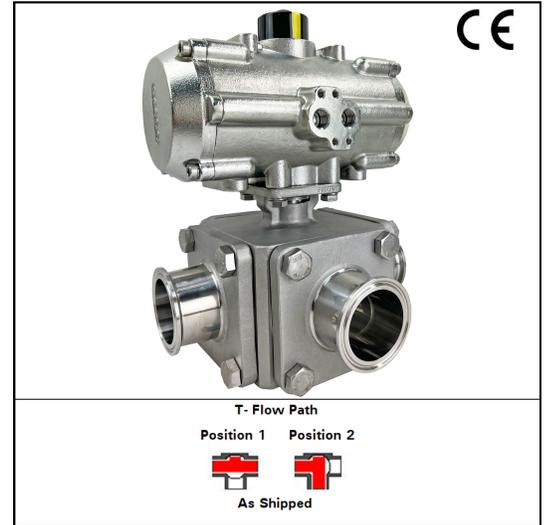
Sanitary 3-way ball valves are typically used for food, beverage, pharmaceutical, personal care, and pet care applications where sanitary construction is required, as well as for utility, process, and corrosive environment applications where quick clamp connections are beneficial. Often used as a diverter, selector, or mixing valve with a variety of flow path options through the valve.

Operation

Double acting rack & pinion actuators use air pressure to open and air pressure to close the ball valve (4-way pilot). Spring return rack & pinion actuators use air pressure to open and springs to close the ball valve (3-way pilot). Actuator will work with filtered dry or lubricated compressed air. Air supply pilot pressure should be between 80 and 120 PSI. Easy to read visual valve position indicator located on top of actuator.

Construction

Valve Body	ASTM 316 Stainless Steel
Ball/Stem	ASTM 316 stainless steel
Ball Seats/ Cavity Filler	Dyneon® PTFE
Stem Seals	PTFE/ Viton®
Actuator Seals	NBR (Buna-N)
Actuator Body	ASTM 316 Stainless Steel
Position Indicator	Plastic
Fasteners	ASTM 304 Stainless Steel



Description

Heavy duty stainless steel quarter turn rack & pinion actuators designed for long life and tested for a minimum 1 million operations. Sanitary 3-way T-port flow pattern ball valve has four Dyneon® PTFE ball seats, allowing for full pressure at any port. Adjustable live loaded stem seal packing helps compensate for wear, pressure and temperature fluctuations, extending the cycle life of the valve. Blow-out proof stem. Cavity fillers avoid media entrapment and quick clamp end connections allow for easy cleaning. Standard Namur mounting pads for optional accessory confirmation switches, pilot valves and valve positioners.

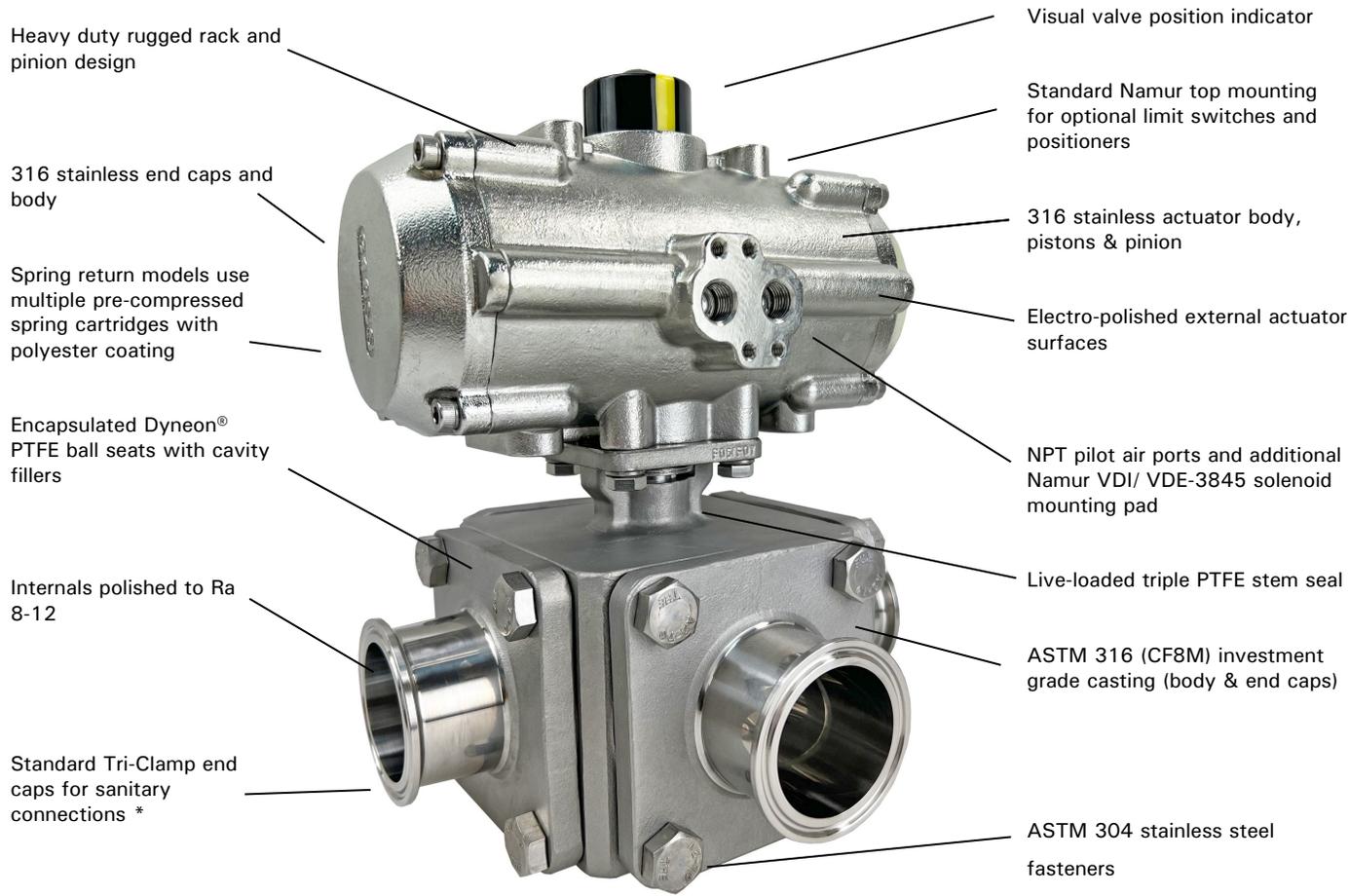
Approvals- Actuators

- CE Declaration of conformity
- ISO5211/ DIN3337 valve mounting
- Namur VDI/VDE 3845 accessory mounting

Standards- Valves

- Construction:
 - ANSI B16/B2/B18
 - FDA 21 CFR 177.1550
 - ANSI B16.34
- Pressure Testing:
 - API 598
- Marking
 - MSS-SP-25

Features



* Refer to specifications table for Tri-Clamp size

* Note: Tri-Clamp size is **NOT** determined by the OD of the end cap

International standard ISO5211 valve mounting pad



Pressure-Temperature

Shell Pressure Rating (Max)*: 1000 PSI @ 120°F (1/2" to 2"),
600 PSI (2 1/2" to 3")

Air Pilot Pressure Required: 80-120 PSI (5.5-8.3 Bar)

Temperature Rating: -4° to 356° F (-20 to 180°C)

*See P/T Chart

Actuator Temperature Rating: -4 to 176° F (-20 to 80° C)

Optional Accessories

- DMS: Direct Mount Solenoid
- pilot to electrically operate the ball valve
- VPS: Valve Position Switches
- limit switches to confirm valve position
- HTB: High Temperature Bracket
- increases media working temperature

Specifications (English units)

Stock Number	Pipe Size (inch)	Tri-Clamp Size (inch)	Cv Flow Factor	Max Shell Pressure (PSI)*	Cycle Time /90° (seconds)	Pilot Air Port (NPT)	Air Volume/ 90° (cubic inches)
VALVE WITH SPRING RETURN ACTUATOR							
576500A	1/2	3/4	4.3	1000	1	1/4	12.2
576501A	3/4	3/4	10.4	1000	1	1/4	12.2
576502A	1	1-1/2	17.3	1000	1	1/4	12.2
576503A	1-1/2	1-1/2	43.3	1000	1	1/4	12.2
576504C	2	2	77.9	1000	3	1/4	54.9
576505A	2-1/2	2-1/2	115.9	600	3	1/4	97.6
576506A	3	3	210.2	600	3	1/4	97.6
VALVE WITH DOUBLE ACTING ACTUATOR							
576400A	1/2	3/4	4.3	1000	1	1/4	12.2
576401A	3/4	3/4	10.4	1000	1	1/4	12.2
576402A	1	1-1/2	17.3	1000	1	1/4	12.2
576403A	1-1/2	1-1/2	43.3	1000	1	1/4	12.2
576404A	2	2	77.9	1000	1	1/4	24.4
576405A	2-1/2	2-1/2	115.9	600	1	1/4	24.4
576406A	3	3	210.2	600	3	1/4	54.9

Cv = The GPM of water at 60° F that will pass through the valve with 1 PSI pressure drop

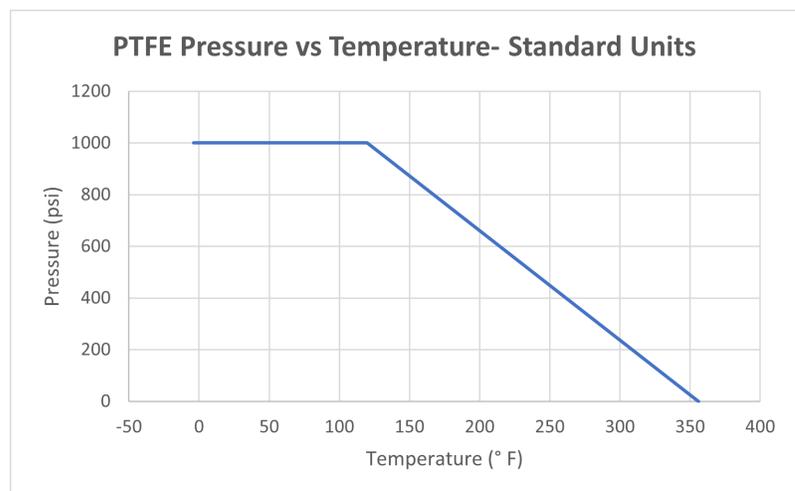
*Maximum Shell Pressure @ -4° to 356° F (reduced pressure at higher temperatures—see P/T chart)

• Torque at 1000 PSI and 72°F

Pressure/Temperature Chart (PSI/°F)

Standard Units

Temp °F	-4	120	356
Pressure	1000	1000	0



Specifications (Metric units)

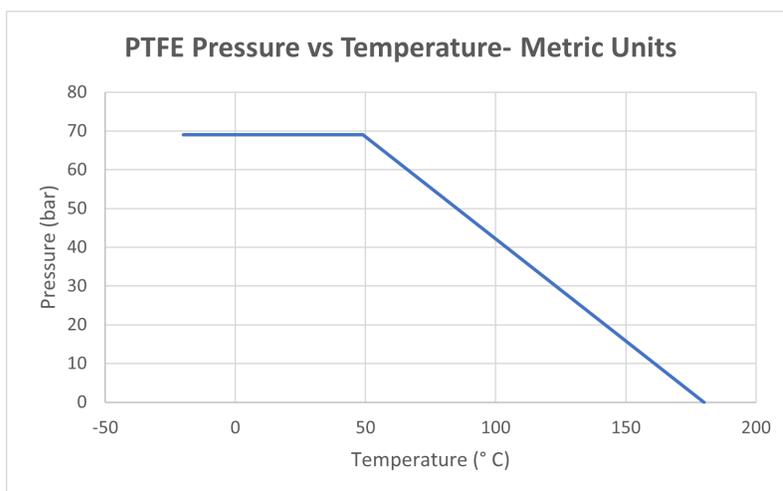
Stock Number	Pipe Size (mm)	Tri-Clamp Size (inch)	Kv Flow Factor	Max Shell Pressure (Bar)*	Cycle Time/90° (seconds)	Pilot Air Port (NPT)	Air Volume/90° (liters)
VALVE WITH SPRING RETURN ACTUATOR							
576500A	12.7	3/4	5.0	69	1	1/4	0.2
576501A	19.1	3/4	12.0	69	1	1/4	0.2
576502A	25.4	1-1/2	20.0	69	1	1/4	0.2
576503A	38.1	1-1/2	50.0	69	1	1/4	0.2
576504C	50.8	2	90.0	69	3	1/4	0.9
576505A	63.5	2-1/2	134.0	41	3	1/4	1.6
576506A	76.2	3	243.0	41	3	1/4	1.6
VALVE WITH DOUBLE ACTING ACTUATOR							
576400A	12.7	3/4	5.0	69	1	1/4	0.2
576401A	19.1	3/4	12.0	69	1	1/4	0.2
576402A	25.4	1-1/2	20.0	69	1	1/4	0.2
576403A	38.1	1-1/2	50.0	69	1	1/4	0.2
576404A	50.8	2	90.0	69	1	1/4	0.4
576405A	63.5	2-1/2	134.0	41	1	1/4	0.4
576406A	76.2	3	243.0	41	3	1/4	0.9

* Maximum Shell Pressure range @ -20° to 180° C (reduced pressure for higher temperatures—see P/T chart)

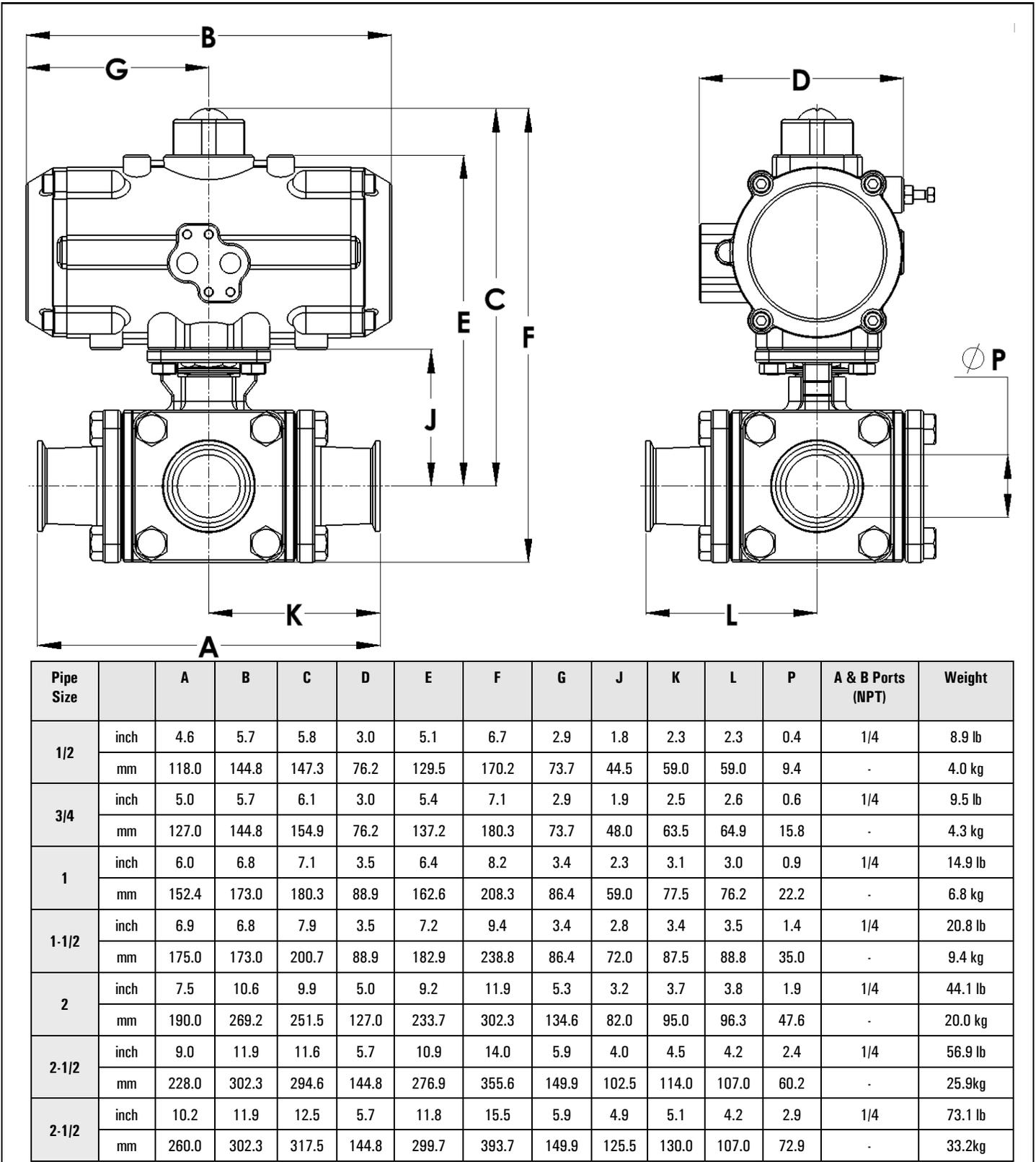
Pressure/Temperature Chart (Bar/°C)

Metric Units

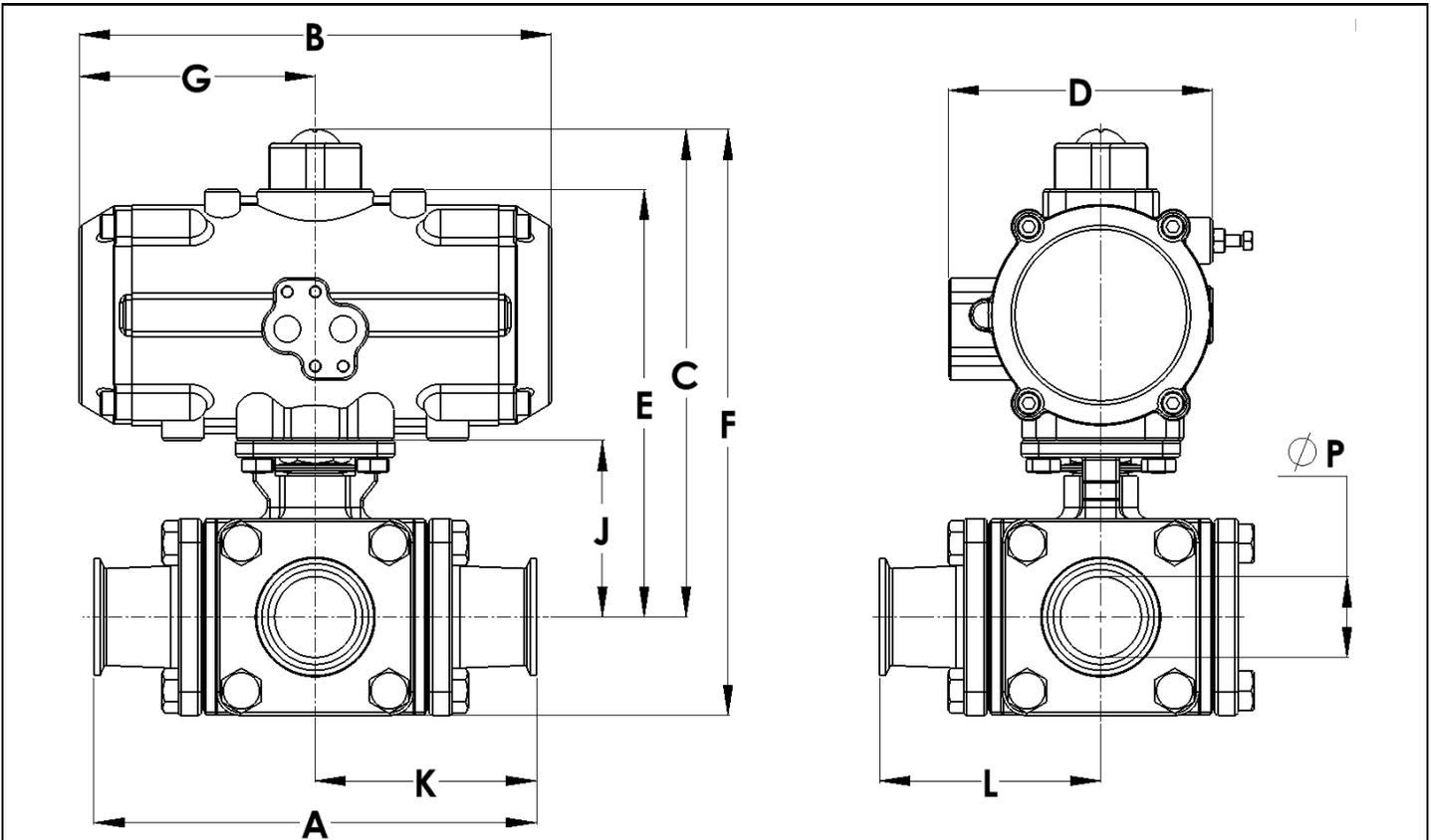
Temp °C	-20	49	180
Pressure	69	69	0



Dimensions: Spring Return



Dimensions: Double Acting



Pipe Size		A	B	C	D	E	F	G	J	K	L	P	A & B Ports (NPT)	Weight
1/2	inch	4.6	5.7	5.8	3.0	5.1	6.7	2.9	1.8	2.3	2.3	0.4	1/4	8.9 lb
	mm	118.0	144.8	147.3	76.2	129.5	170.2	73.7	44.5	59.0	59.0	10.2	-	4.0 kg
3/4	inch	5.0	5.7	6.1	3.0	5.4	7.1	2.9	1.9	2.5	2.6	0.6	1/4	9.5 lb
	mm	127.0	144.8	154.9	76.2	137.2	180.3	73.7	48.0	63.5	64.9	15.2	-	4.3 kg
1	inch	6.0	5.7	6.4	3.0	5.7	7.5	2.9	2.3	3.1	3.0	0.9	1/4	11.4 lb
	mm	152.4	144.8	162.6	76.2	144.8	190.5	73.7	59.0	77.5	76.2	22.9	-	5.2 kg
1-1/2	inch	6.9	6.8	7.9	3.5	7.2	9.4	3.4	2.8	3.4	3.5	1.4	1/4	20.4 lb
	mm	175.0	173.0	200.7	88.9	182.9	238.8	86.4	72.0	87.5	88.8	35.6	-	9.3 kg
2	inch	7.5	6.8	8.3	3.5	7.6	10.1	3.4	3.2	3.7	3.8	1.9	1/4	27.6 lb
	mm	190.0	173.0	210.8	88.9	193.0	256.5	86.4	82.0	95.0	96.3	48.3	-	12.5 kg
2-1/2	inch	9.0	8.0	10.1	4.5	9.3	12.3	4.0	4.0	4.5	4.2	2.4	1/4	36.7 lb
	mm	228.0	204.0	256.5	114.3	236.2	312.4	101.6	102.5	114.0	107.0	61.0	-	16.6 kg
3	inch	10.2	10.6	11.4	5.0	10.7	14.0	5.3	4.9	5.1	4.2	2.9	1/4	64.2 lb
	mm	260.0	269.2	289.6	127.0	271.8	355.6	134.6	125.5	130.0	107.0	73.7	-	29.1 kg