

### Features

- Functions as diverter valve or selector valve
- All valve materials comply with FDA, USDA, and 3-A requirements
- Tri-Clamp ends for hygienic connections
- TFM-1600 ball seats with virgin PTFE cavity fillers
- Triple PTFE/ Viton® high cycle live loaded stem seal packing
- Highly polished internals and end caps with 8-12 Ra finish
- Full Port direct mount ISO5211 valve
- Spring Return or Double Acting Actuators
- Type IP66 & IP68 weatherproof actuator
- Rugged scotch yoke construction tested for 1 million+ cycles
- Anodized aluminum body with epoxy-polyester end covers
- Namur and ISO mounting standards
- Highly visible valve position indicator
- Actuator factory lubricated for normal lifetime

### Applications

Sanitary 3-way ball valves are typically used for food, beverage, pharmaceutical, personal care, and pet care applications where 3-A sanitary construction is required, as well as for utility, process, and corrosive environment applications where quick clamp connections are beneficial.

### Operation

Double acting scotch yoke actuators use air pressure to open and air pressure to close the ball valve (4-way pilot). Spring return scotch yoke 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. Recommended air supply pilot pressure should be between 58 and 87 PSI. Easy to read visual valve position indicator located on top of actuator.

Note:3A standard 68-00 requires a minimum 1" clearance between valve and actuator. Valworx High Temp kits can be used to satisfy this requirement.

### Construction

<b>Valve Body</b>	ASTM 316 Stainless Steel
<b>Ball/Stem</b>	ASTM 316stainless steel
<b>Ball Seats/ Cavity Filler</b>	TFM-1600 Virgin PTFE
<b>Stem Seals</b>	PTFE/ Viton®
<b>Actuator Seals</b>	NBR
<b>Actuator Body/ End Covers</b>	Hard anodized aluminium/ Polyester coated aluminium
<b>Position Indicator</b>	Glass filled Polyamide
<b>Fasteners</b>	ASTM 304 Stainless Steel



### Description

Heavy duty quarter turn scotch yoke actuators designed for long life and tested for a minimum 1 million+ operations. Investment cast 3-piece full port stainless steel body and end caps for unrestricted flow and minimum pressure loss. Valve seals are TFM 1600 and cavity filled virgin PTFE. Self adjusting live loaded stem seal packing helps compensate for wear, pressure or 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 and pilot valves.

### Approvals– Actuators

- CE Declaration of conformity
- EN ISO 12100:2010
- EN ISO 4414:2010
- ISO5211/ DIN3337 valve mounting
- Namur VDI/VDE 3845 accessory mounting

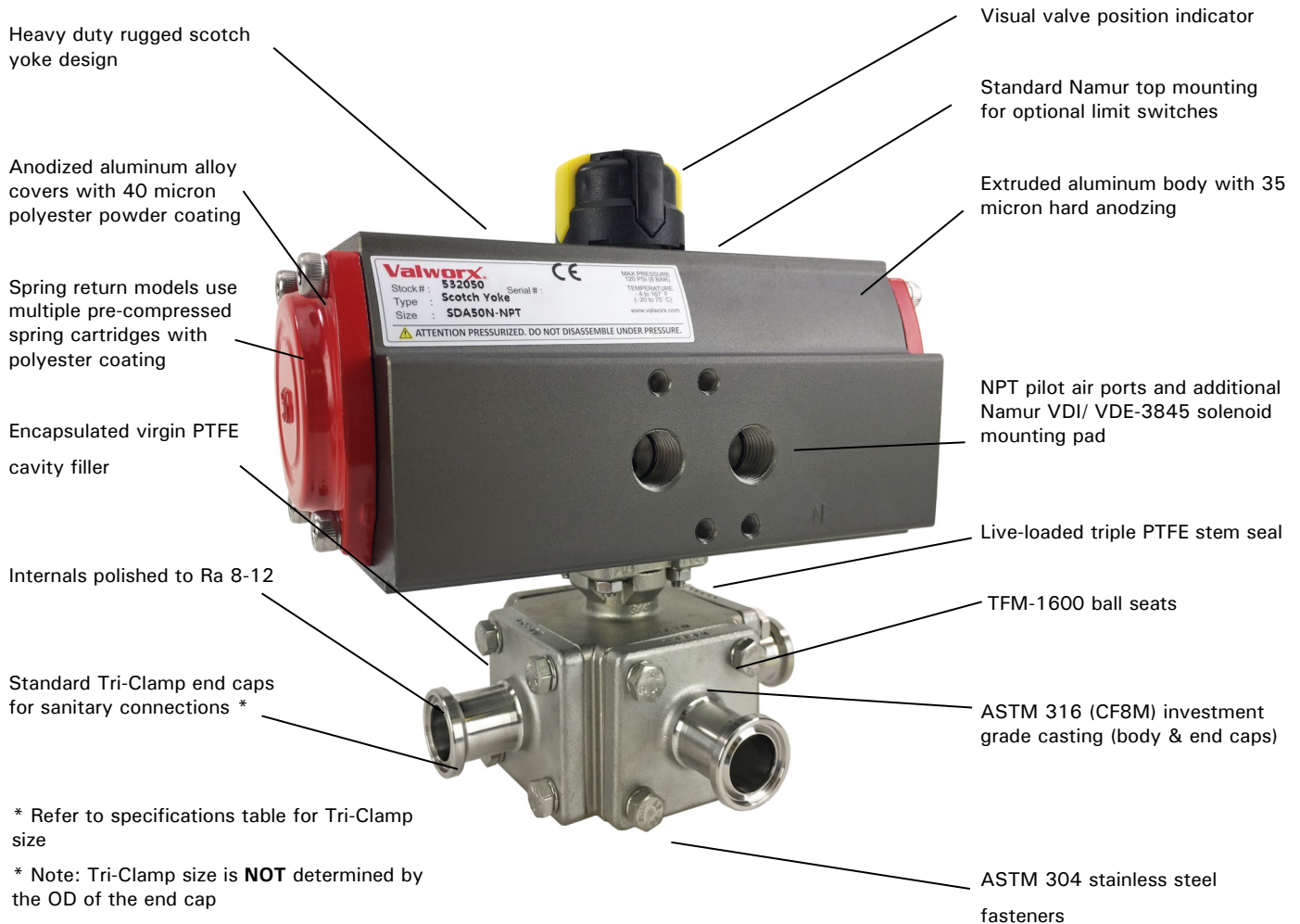
### Standards– Valves

- Construction:
  - 3A 68-00
  - ANSI B16/B2/B18
  - NSF 61
  - FDA 21 CFR 177.1550
- Pressure Testing:
  - MSS-SP82

### 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

## Features



**Pressure Rating\***: 1000 PSI @ 120°F(69 Bar\*)

**Max Pressure Room Temp**– 1000 PSI (72°F desired room temp)

**Temperature Rating**: -50° to 400° F (-45 to 200°C)

\*See P/T Chart

**Air Pilot Pressure Recommended**: 58-87PSI (4-6 Bar)

**Max Air Pilot Pressure**: 120 PSI

**Working Temperature**: 0 to 180° F (-18 to 82° C)  
Media temperatures up to 300° F (149° C)  
with optional high temp. mounting bracket

**Actuator Temperature Rating**: -4 to 167° F (-20 to 75° C)

\*See P/T chart

## Specifications (English units)

Stock Number	Pipe Size (inch)	Tri-Clamp Size (inch)	Cv Flow Factor	Pressure Max.(PSI)*	Cycle Time /90° (seconds)	Pilot Air Port (NPT)
<b>Valve with Spring Return Actuator</b>						
578300	1/2	3/4	8	1000	0.3-0.5	1/4
578301	3/4	3/4	29	1000	0.3-0.5	1/4
578302	1	1-1/2	66	1000	0.4-0.6	1/4
578303	1-1/2	1-1/2	192	1000	0.6-0.9	1/4
578304	2	2	434	1000	0.7-1.2	1/4
578305	2-1/2	2-1/2	723	1000	0.7-1.2	1/4
578306	3	3	1124	1000	1.0-2.3	1/4
<b>Valve with Double Acting Actuator</b>						
578200	1/2	3/4	8	1000	0.3	1/4
578201	3/4	3/4	29	1000	0.3	1/4
578202	1	1-1/2	66	1000	0.3	1/4
578203	1-1/2	1-1/2	192	1000	0.4	1/4
578204	2	2	434	1000	0.6	1/4
578205	2-1/2	2-1/2	723	1000	0.6	1/4
578206	3	3	1124	1000	0.8	1/4

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

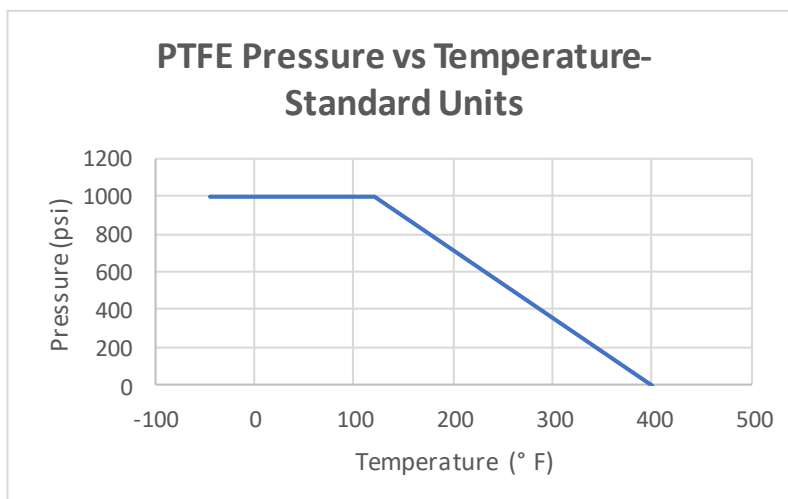
\* Pressure @ -50° to 400° F (reduced pressure at higher temperatures—see P/T chart)

• Torque at 1000 PSI and 72°F

## Pressure/Temperature Chart (PSI/°F)

Standard Units

Temp °F	-45	120	400
Pressure	1000	1000	0



## Specifications (Metric units)

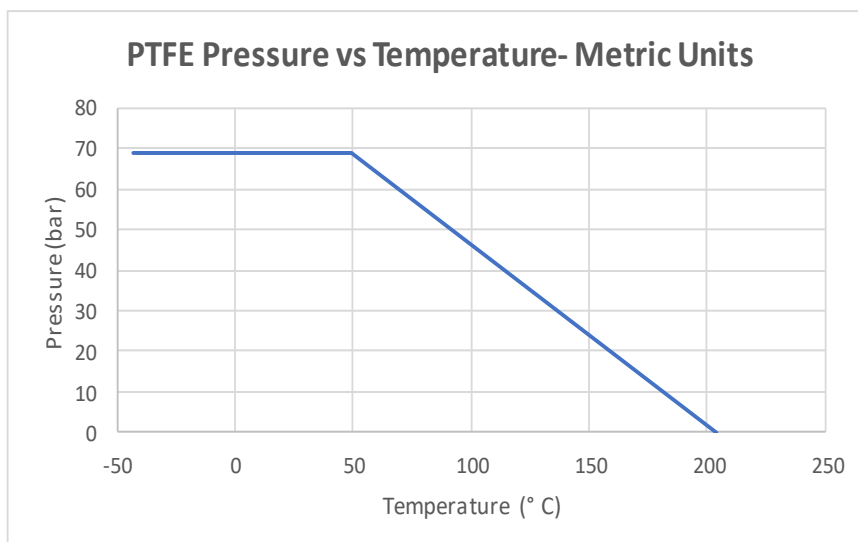
Stock Number	Pipe Size (mm)	Tri-Clamp Size (inch)	Kv Flow Factor	Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Pilot Air Port (NPT)
<b>VALVE WITH SPRING RETURN ACTUATOR</b>						
578300	12.7	3/4	7	69	0.3-0.5	1/4
578301	19.1	3/4	25	69	0.3-0.5	1/4
578302	25.4	1-1/2	57	69	0.4-0.6	1/4
578303	38.1	1-1/2	107	69	0.6-0.9	1/4
578304	50.8	2	165	69	0.7-1.2	1/4
578305	63.5	2-1/2	374	69	0.7-1.2	1/4
578306	76.2	3	623	69	1.0-2.3	1/4
<b>VALVE WITH DOUBLE ACTING ACTUATOR</b>						
578200	12.7	3/4	7	69	0.3	1/4
578201	19.1	3/4	25	69	0.3	1/4
578202	25.4	1-1/2	57	69	0.3	1/4
578203	38.1	1-1/2	107	69	0.4	1/4
578204	50.8	2	165	69	0.6	1/4
578205	63.5	2-1/2	374	69	0.6	1/4
578206	76.2	3	623	69	0.8	1/4

\* Pressure range @ -45° to 200° C (reduced pressure for higher temperatures—see P/T chart)

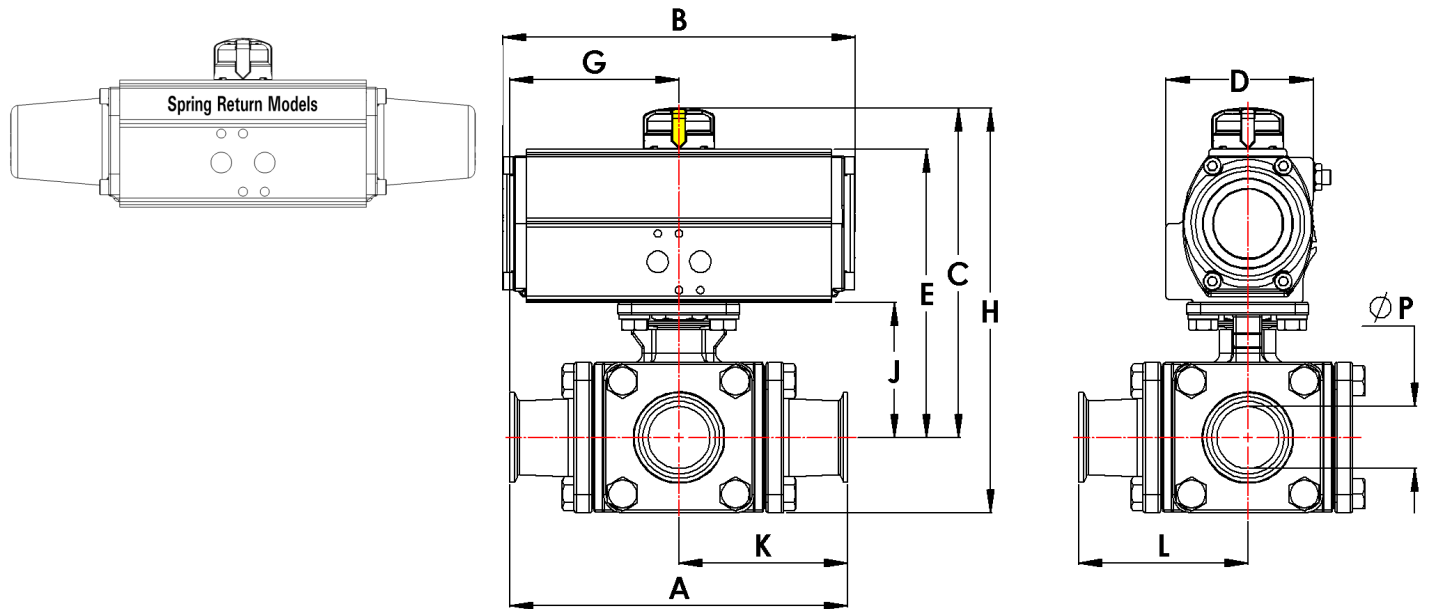
## Pressure/Temperature Chart (Bar/°C)

Metric Units

Temp °C	-43	49	204
Pressure	69	69	0

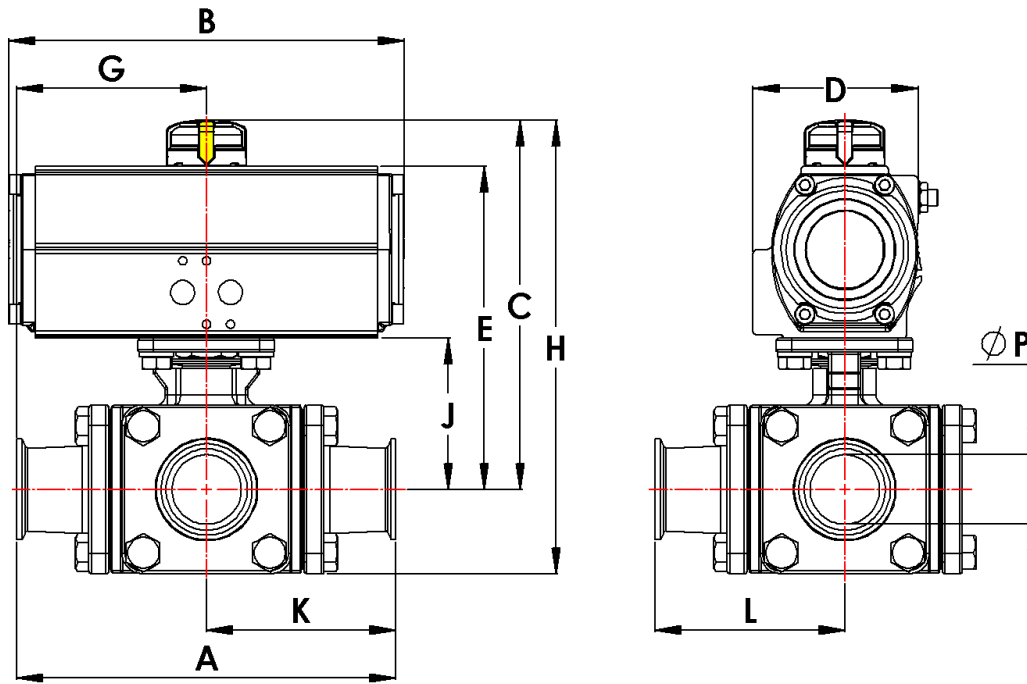


## Dimensions: Spring Return



Stock Number	Pipe Size		A	B	C	D	E	G	H	J	K	L	P	A & B Ports (NPT)	Weight
578300	1/2	inch	4.3	10.1	5.4	2.9	4.5	5.1	6.3	1.8	2.3	2.2	0.4	1/4	7.5 lb
		mm	109.2	256.5	137.7	73.7	114.7	129.5	161.1	44.7	58.9	55.9	10.2	-	3.4 kg
578301	3/4	inch	4.7	10.1	5.6	2.9	4.7	5.1	6.6	1.9	2.5	2.3	0.6	1/4	8.5 lb
		mm	119.4	256.5	142.4	73.7	119.4	129.5	168.4	48.3	63.6	58.4	15.2	-	3.9 kg
578302	1	inch	6.0	12.3	6.5	3.5	5.6	6.2	7.8	2.2	3.0	3.0	0.9	1/4	13.6 lb
		mm	152.4	312.4	166.3	88.9	143.3	157.5	197.5	57.0	76.4	76.2	22.9	-	6.2 kg
578303	1-1/2	inch	7.5	12.3	8.1	3.5	7.2	6.2	9.7	3.0	3.7	3.8	1.4	1/4	28.8 lb
		mm	190.5	312.4	204.9	88.9	182.0	157.5	247.3	75.9	95.2	96.5	35.6	-	13.0 kg
578304	2	inch	8.5	16.5	9.3	3.9	8.4	8.3	11.4	3.4	4.3	4.3	1.9	1/4	47.9 lb
		mm	215.9	419.1	237.2	99.1	214.0	210.8	289.2	85.7	108.5	109.2	48.3	-	21.7 kg
578305	2-1/2	inch	9.0	19.6	10.0	5.0	9.1	9.8	12.4	4.0	4.6	6.5	2.4	1/4	90.9 lb
		mm	228.6	497.8	254.0	127.0	231.0	248.9	315.5	102.5	116.4	165.1	61.0	-	41.3 kg
578306	3	inch	12.0	23.8	11.7	5.9	10.8	11.9	14.6	4.7	6.1	6.0	2.9	1/4	113.8 lb
		mm	304.9	604.5	297.0	149.9	273.5	302.3	372.0	120.0	154.0	152.4	73.7	-	51.6 kg

## Dimensions: Double Acting



Stock Number	Pipe Size		A	B	C	D	E	G	H	J	K	L	P	A & B Ports (NPT)	Weight
578200	1/2	inch	4.3	6.3	5.4	2.9	4.5	3.2	6.3	1.8	2.3	2.2	0.4	1/4	7.1 lb
		mm	109.2	160.0	137.7	73.7	114.7	81.3	161.1	44.7	58.9	55.9	10.2	-	3.2 kg
578201	3/4	inch	4.7	6.3	5.6	2.9	4.7	3.2	6.6	1.9	2.5	2.3	0.6	1/4	8.1 lb
		mm	119.4	160.0	142.4	73.7	119.4	81.3	168.4	48.3	63.6	58.4	15.2	-	3.7 kg
578202	1	inch	6.0	6.3	5.9	2.9	5.0	3.2	7.1	2.2	3.0	3.0	0.9	1/4	10.1 lb
		mm	152.4	160.0	150.0	73.7	127.0	81.3	181.0	57.0	76.4	76.2	22.9	-	4.6 kg
578203	1-1/2	inch	7.5	7.9	7.3	3.5	6.4	4.0	9.0	3.0	3.7	3.8	1.4	1/4	22.1 lb
		mm	190.5	200.1	185.4	88.9	162.5	101.6	228.0	75.9	95.2	96.5	35.6	-	10.0 kg
578204	2	inch	8.5	7.9	8.5	3.5	7.6	4.0	10.5	3.4	4.3	4.3	1.9	1/4	35.6 lb
		mm	215.9	200.1	215.0	88.9	192.0	101.6	267.0	85.7	108.5	109.2	48.3	-	16.1 kg
578205	2-1/2	inch	9.0	9.9	9.1	3.9	8.2	5.0	11.5	4.0	4.6	6.5	2.4	1/4	78.6 lb
		mm	228.6	251.5	231.5	99.1	208.5	127.0	293.0	102.5	116.4	165.1	61.0	-	35.7 kg
578206	3	inch	12.0	9.9	10.7	3.9	9.8	5.0	13.6	4.7	6.1	6.0	2.9	1/4	89.8 lb
		mm	304.9	251.5	271.5	99.1	248.0	127.0	346.5	120.0	154.0	152.4	73.7	-	40.7 kg