Air Actuated Sanitary Ball Valves

2 Way Stainless Steel, Full Port
1/2" to 4" Tri-Clamp

SERIES
5712
5713

Features

- All valve materials comply with FDA and USDA requirements
- Tri-Clamp ends for hygienic connections
- 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
- 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 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 and process 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.

Construction

Valve Body	ASTM 316 Stainless Steel
Ball/Stem	ASTM 316stainless steel
Ball Seats/ Cavity Filler	Dyneon® PTFE
Stem Seals	PTFE/ Viton®
Actuator Seals	NBR
Actuator Body/ End Covers	Hard anodized aluminium/ Polyester coasted aluminium
Position Indicator	Glass filled Polyamide
Fasteners	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 cavity filled Dyneon® 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:
  - ANSI B16/B2/B18
  - FDA 21 CFR 177.1550
  - ANSI B16.34
- Pressure Testing:
  - API 598
- Marking:
  - MSS-SP-25

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

Heavy duty rugged scotch yoke design

Anodized aluminum alloy covers with 40 micron polyester powder coating

Spring return models use multiple pre-compressed spring cartridges with polyester coating

Internals polished to Ra 8-12

Standard Tri-Clamp end caps for sanitary connections *

* Refer to specifications table for Tri-Clamp size

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

Visual valve position indicator

Standard Namur top mounting for optional limit switches

Extruded aluminum body with 35 micron hard anodzing

NPT pilot air ports and additional Namur VDI/ VDE-3845 solenoid mounting pad

Live-loaded triple PTFE stem seal

Encapsulated Dyneon® PTFE ball seats with cavity filler

ASTM 316 (CF8M) investment grade casting (body & end caps)

ASTM 304 stainless steel fasteners

Pressure Rating

Shell Pressure Rating (Max)*: 1000 PSI @ 120°F (1/2" to 2"), 800 PSI (2 1/2" to 4")

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

Max Air Pilot Pressure: 120 PSI

Temperature Rating

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

*See P/T Chart

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	Shell Pressure Max.(PSI)*	Cycle Time /90° (seconds)	Pilot Air Port (NPT)	Air Volume (standard cubic
VALVE WITH SPRING RETURN ACTUATOR							
571300A	1/2	3/4	13.0	1000	0.3-0.5	1/4	73.2
571301A	3/4	3/4	18.0	1000	0.3-0.5	1/4	73.2
571302A	1	1-1/2	48.0	1000	0.3-0.5	1/4	73.2
571303A	1-1/2	1-1/2	165.0	1000	0.4-0.6	1/4	109.8
571304A	2	2	207.0	1000	0.4-0.6	1/4	109.8
571305A	2-1/2	2-1/2	450.0	800	0.7-1.2	1/4	512.6
571306A	3	3	780.0	800	5.0-6.0	1/4	1067.9
571307A	4	4	1050.0	800	5.0-6.0	1/4	1067.9
VALVE WITH DOUBLE ACTING ACTUATOR							
571200A	1/2	3/4	13.0	1000	0.3	1/4	146.5
571201A	3/4	3/4	18.0	1000	0.3	1/4	146.5
571202A	1	1-1/2	48.0	1000	0.3	1/4	146.5
571203A	1-1/2	1-1/2	165.0	1000	0.4	1/4	219.7
571204A	2	2	207.0	1000	0.4	1/4	219.7
571205A	2-1/2	2-1/2	450.0	800	0.6	1/4	402.8
571206A	3	3	780.0	800	0.6	1/4	402.8
571207A	4	4	1050.0	800	0.8	1/4	842.1

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

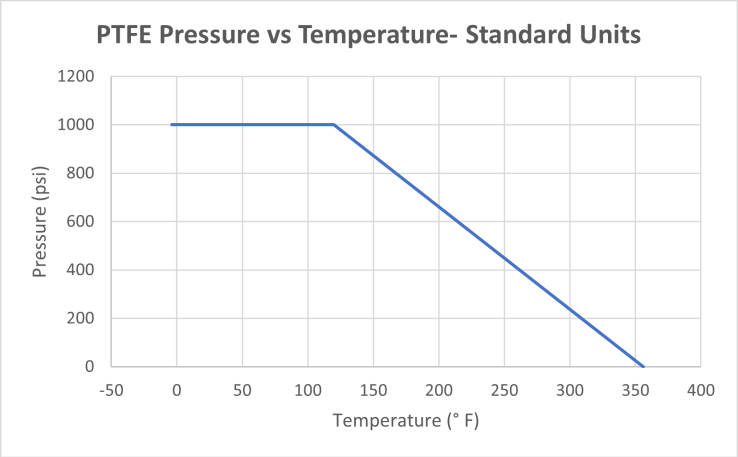
* Pressure @ -4°to 356° F (reduced pressure at higher temperatures—see P/T chart)

• 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)

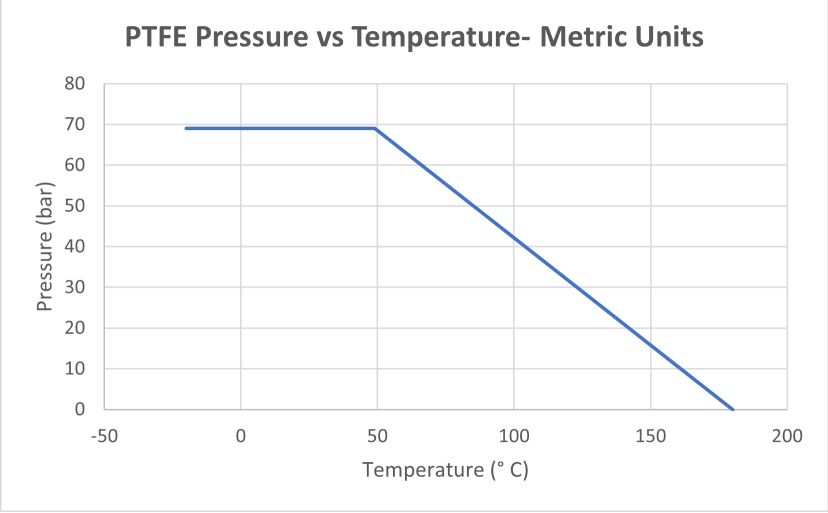
Stock Number	Pipe Size (mm)	Tri-Clamp Size (inch)	Kv Flow Factor	Shell Pressure Max.(Bar)*	Cycle Time/90° (seconds)	Pilot Air Port (NPT)	Air Volume (standard liters)
VALVE WITH SPRING RETURN ACTUATOR							
571300A	12.7	3/4	11.2	69	0.3-0.5	1/4	1.2
571301A	19.1	3/4	15.6	69	0.3-0.5	1/4	1.2
571302A	25.4	1-1/2	41.5	69	0.3-0.5	1/4	1.2
571303A	38.1	1-1/2	142.7	69	0.4-0.6	1/4	1.8
571304A	50.8	2	179.1	69	0.4-0.6	1/4	1.8
571305A	63.5	2-1/2	389.3	55	0.7-1.2	1/4	8.4
571306A	76.2	3	674.7	55	5.0-6.0	1/4	17.5
571307A	101.6	4	908.3	55	5.0-6.0	1/4	17.5
VALVE WITH DOUBLE ACTING ACTUATOR							
571200A	12.7	3/4	11.2	69	0.3	1/4	2.4
571201A	19.1	3/4	15.6	69	0.3	1/4	2.4
571202A	25.4	1-1/2	41.5	69	0.3	1/4	2.4
571203A	38.1	1-1/2	142.7	69	0.4	1/4	3.6
571204A	50.8	2	179.1	69	0.4	1/4	3.6
571205A	63.5	2-1/2	389.3	55	0.6	1/4	6.6
571206A	76.2	3	674.7	55	0.6	1/4	6.6
571207A	101.6	4	908.3	55	0.8	1/4	13.8

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

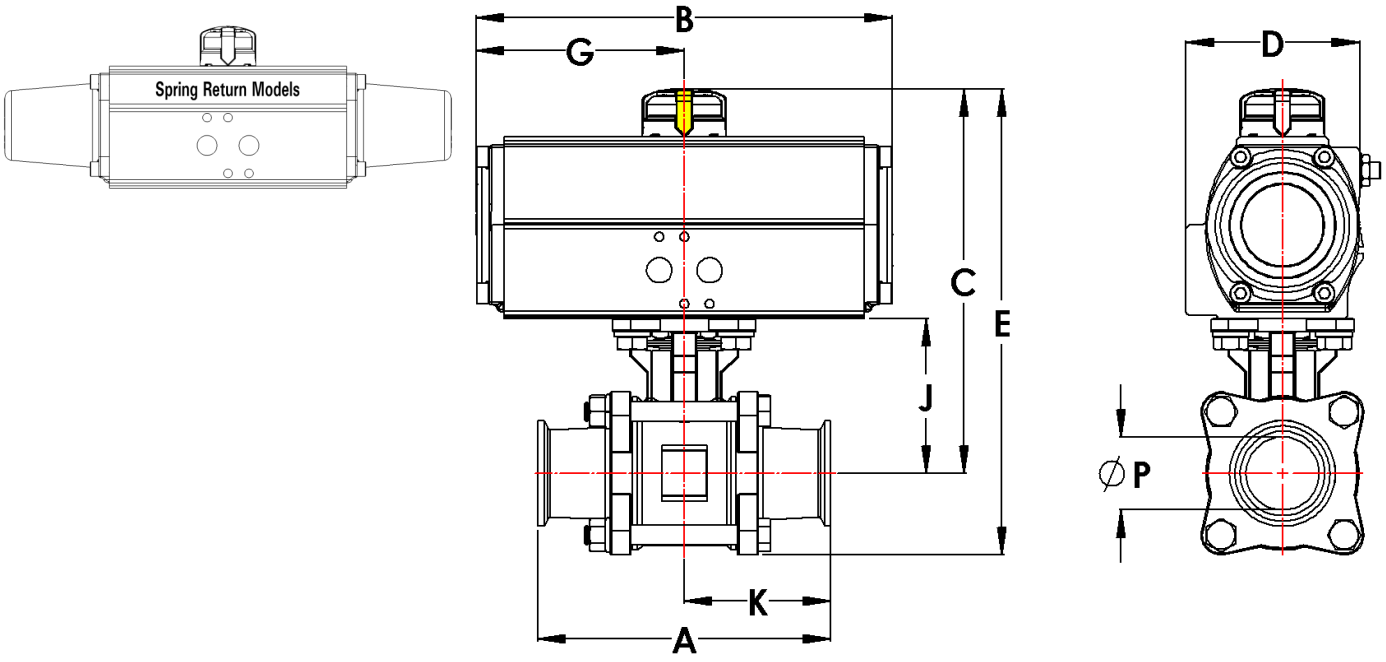
Pressure/Temperature Chart (Bar/°C)

Metric Units

Temp °C	-20	49	180
Pressure	69	69	0

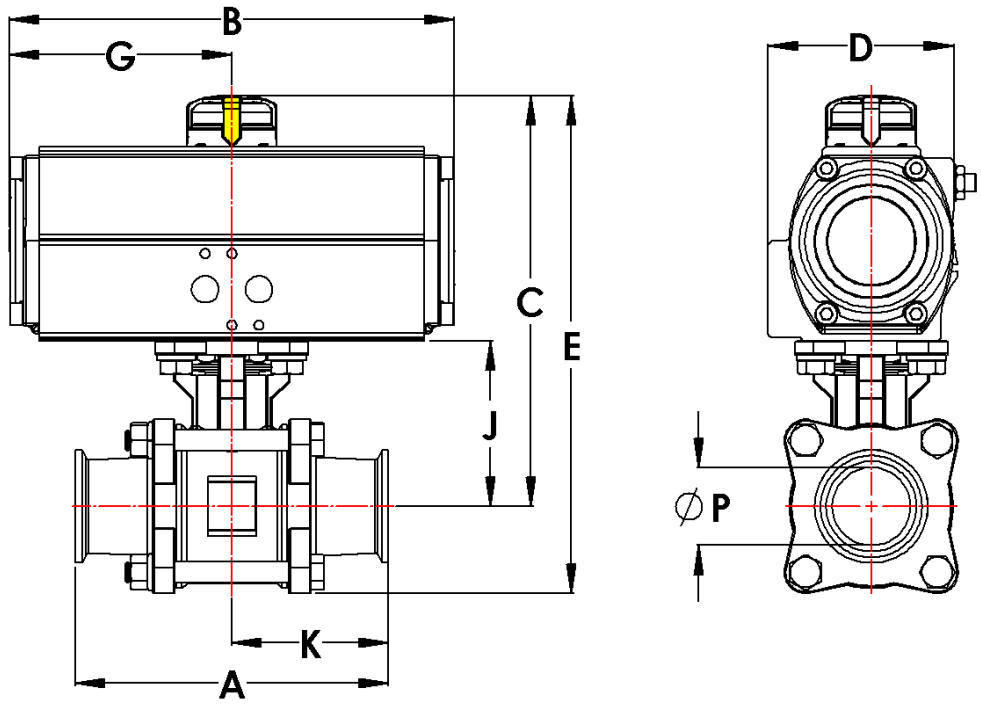


Dimensions: Spring Return



Stock Number	Pipe Size		A	B	C	D	E	G	J	K	P	A & B Ports (NPT)	Weight
571300A	1/2	inch	3.5	10.1	4.9	2.9	5.8	5.1	1.5	1.8	0.4	1/4	4.5 lb
		mm	88.9	256.5	124.5	73.7	147.3	129.5	37.0	44.5	10.2	-	2.2 kg
571301A	3/4	inch	4.0	10.1	5.2	2.9	6.2	5.1	1.8	2.0	0.6	1/4	5.1 lb
		mm	101.6	256.5	132.1	73.7	157.5	129.5	45.0	50.5	15.2	-	2.3 kg
571302A	1	inch	4.5	10.1	5.5	2.9	6.6	5.1	2.1	2.2	0.9	1/4	5.9 lb
		mm	114.3	256.5	139.7	73.7	167.6	129.5	53.5	57.0	22.9	-	2.7 kg
571303A	1-1/2	inch	5.5	12.3	15.9	3.5	17.4	6.2	2.9	2.8	1.4	1/4	11.4 lb
		mm	139.7	312.4	403.9	88.9	442.0	157.5	74.8	70.0	35.6	-	5.2 kg
571304A	2	inch	6.2	12.3	16.3	3.5	18.1	6.2	3.3	3.1	1.9	1/4	14.4 lb
		mm	157.5	312.4	414.0	88.9	459.7	157.5	83.5	78.0	48.3	-	6.5 kg
571305A	2-1/2	inch	7.0	19.6	24.6	5.0	26.8	9.8	4.3	3.9	2.4	1/4	36.1 lb
		mm	177.8	497.8	624.8	127.0	680.7	248.9	108.8	98.5	61.0	-	16.4 kg
571306A	3	inch	9.0	23.8	29.2	5.9	31.8	11.9	4.7	4.5	2.9	1/4	62.1 lb
		mm	228.6	604.5	741.7	149.9	807.7	302.3	118.3	114.5	73.7	-	28.2 kg
571307A	4	inch	9.5	23.8	30.6	5.9	34.5	11.9	6.1	4.8	3.8	1/4	84.7 lb
		mm	241.3	604.5	77.2	149.9	876.3	302.3	153.8	121.5	96.5	-	38.4 kg

Dimensions: Double Acting



Stock Number	Pipe Size		A	B	C	D	E	G	J	K	P	A & B Ports (NPT)	Weight
571200A	1/2	inch	3.5	6.3	4.9	2.9	5.8	3.2	1.5	1.8	0.4	1/4	4.1 lb
		mm	88.9	160.0	124.5	73.7	147.3	81.3	37.0	44.5	10.2	-	1.9 kg
571201A	3/4	inch	4.0	6.3	5.2	2.9	6.2	3.2	1.8	2.0	0.6	1/4	4.4 lb
		mm	101.6	160.0	132.1	73.7	157.5	81.3	45.0	50.5	15.2	-	2.0 kg
571202A	1	inch	4.5	6.3	5.5	2.9	6.6	3.2	2.1	2.2	0.9	1/4	5.2 lb
		mm	114.3	160.0	139.7	73.7	167.6	81.3	53.5	57.0	22.9	-	2.4 kg
571203A	1-1/2	inch	5.5	7.9	7.0	3.5	8.5	4.0	2.9	2.8	1.4	1/4	10.0 lb
		mm	139.7	200.1	177.8	88.9	215.9	101.6	74.8	70.0	35.6	-	4.5 kg
571204A	2	inch	6.2	7.9	7.4	3.5	9.2	4.0	3.3	3.1	1.9	1/4	13.0 lb
		mm	157.5	200.1	188.0	88.9	233.7	101.6	83.5	78.0	48.3	-	5.9 kg
571205A	2-1/2	inch	7.0	9.9	9.1	3.9	11.3	5.0	4.3	3.9	2.4	1/4	24.4 lb
		mm	177.8	251.5	231.1	99.1	287.0	127.0	108.8	98.5	61.0	-	11.1 kg
571206A	3	inch	9.0	9.9	9.5	3.9	12.1	5.0	4.7	4.5	2.9	1/4	32.8 lb
		mm	228.6	251.5	241.3	99.1	307.3	127.0	118.3	114.5	73.7	-	14.9 kg
571207A	4	inch	9.5	12.2	11.8	5.0	15.7	6.1	6.1	4.8	3.8	1/4	62.0 lb
		mm	241.3	309.9	299.7	127.0	398.8	154.9	153.8	121.5	96.5	-	28.1 kg