saniquip stainless

PRODUCT DATA SHEET

53-Series Hygienic Ball Valve

The Saniquip 53-series hygienic slimline ball valves are high quality ball valves manufactured from forged AISI 304L or 316L stainless steel. The slimline two piece design provides a compact and economical solution while maintaining all the advantages of a full port design with zero flow restriction.

Features & Options

- Standard size range 1" to 4"
- Heavy duty machined AISI 304L or 316L stainless steel body with polished surface finish
- Full port design with zero flow restriction for minimal pressure loss
- Suitable for viscous or particulate liquids
- TFM PTFE seat material. EPDM o-rings standard - other o-ring materials on request (all seats and seals FDA compliant)
- Precision machined stem with live loaded PTFE thrust washer to ensure smooth operation at a range of different temperatures and pressures
- Available in manual or pneumatically operated executions with a full range of options and accessories including control head
- Heavy duty spring loaded stainless steel handle as standard for manual version
- Optional cavity filler seats
- Flushing and drain ports in the valve flanges for CIP/SIP
- Butt weld connections as standard. Other hygienic end connections on request

Option - Additional hole machined in ball to allow contact between the fluid inside the valve and that in the tank or pipework

Product contact steel parts	AISI 304L or AISI 316L stainless steel
Non-product contact steel parts	AISI 304 stainless steel
Seat & seals	TFM PTFE seat material. EPDM o-rings standard - other o-ring materials on request (all seats and seals FDA compliant)
Pressure rating	14 bar (tested to 16 bar). Leakage test according to BS EN 12266-1
Supply pressure for pneumatic actuators	70 - 115 psi (dry & filtered compressed air)
Temperature range	-15°C to 148°C (other seal materials available for higher temperatures)
Surface finish	Product contact surfaces Ra ≤ 0.8µm (standard) / Ra ≤ 0.4µm (optional)
Purge port connections	1/4" Male BSP

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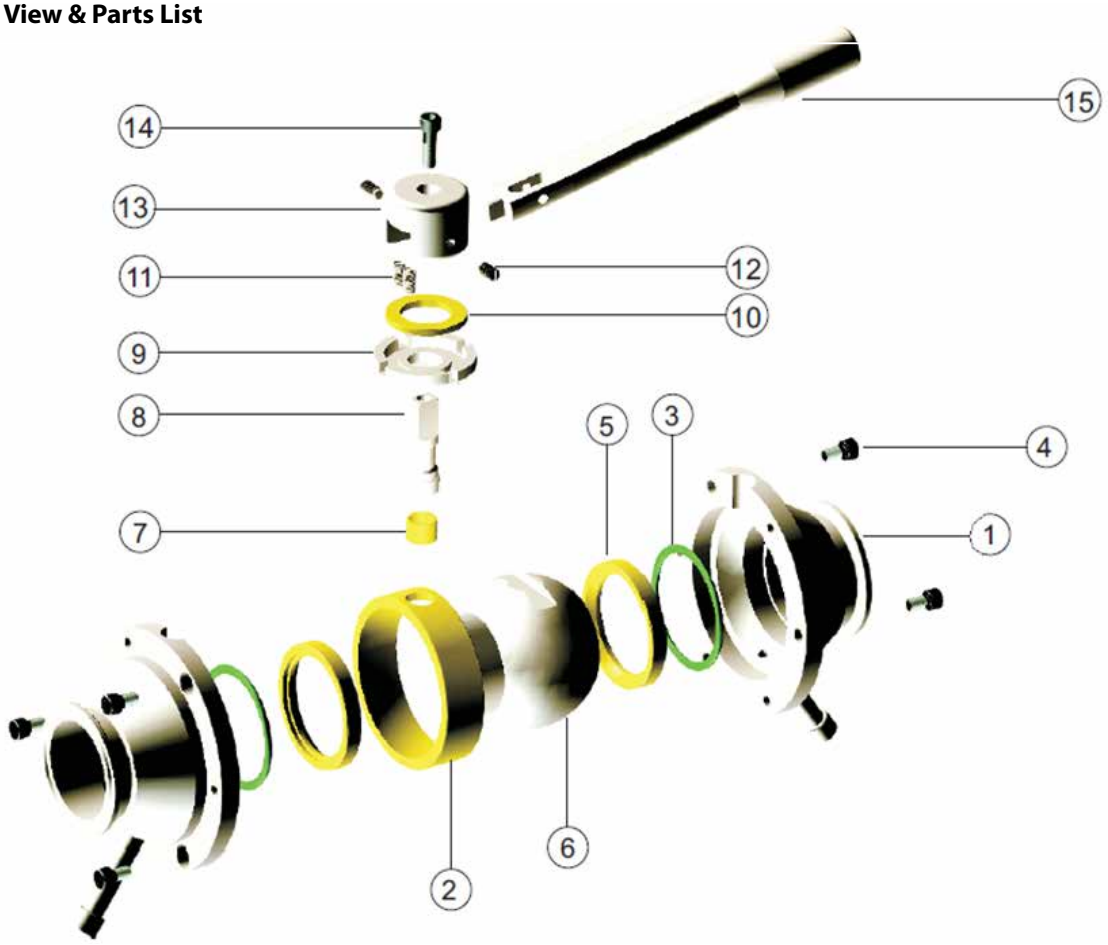
Exploded View & Parts List



No.	Part No.	Description	Material
1	5301	Flange	AISI 316L / AISI 304L
2	5302	Seat	PTFE
3	5303	O-ring	EPDM
4	5304	Cap screw	AISI 304
5	5305	Seat	TFM PTFE
6	5306	Ball	AISI 316L / AISI 304L
7	5307	Bushing	PTFE
8	5308	Stem	AISI 316L / AISI 304L
9	5309	Index base	AISI 303
10	5310	Thrust ring	POM
11	5311	Spring	AISI 304
12	5312	Grub screw	AISI 304
13	5313	Block	AISI 303
14	5314	Cap screw	AISI 304
15	5315	Handle	AISI 303

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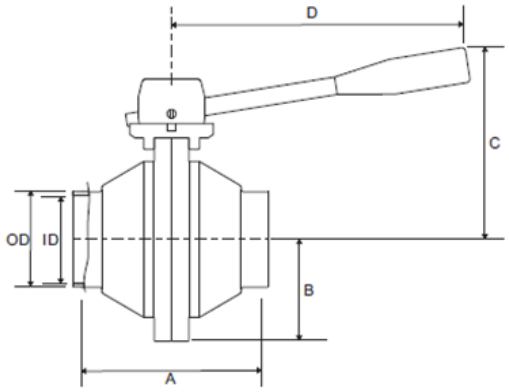
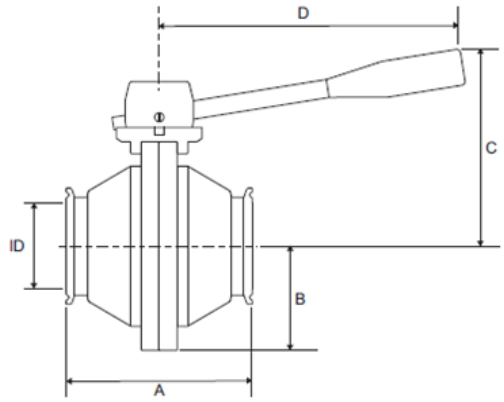
Dimensions - Butt Weld End Connections



Dimensions	1″	1½″	2″	2½″	3″	4″
A	79.4	90.9	103.9	123	136.1	169.9
B	40.5	50	57.5	67.1	78.6	98.4
C	65.9	75.4	108.3	117.9	167.5	187.3
D	152.4	152.4	152.4	152.4	215.9	215.9
I.D.	22.2	34.9	47.6	60.3	72.6	97.6

Dimensions - Clamp End Connections



Dimensions	1″	1½″	2″	2½″	3″	4″
A	79.4	90.9	103.9	123	136.1	169.9
B	40.5	50	57.5	67.1	78.6	98.4
C	65.9	75.4	108.3	117.9	167.5	187.3
D	152.4	152.4	152.4	125.4	215.9	215.9
O.D.	25.4	38.1	50.8	63.5	76.2	101.6
I.D.	22.2	34.9	47.6	60.3	72.6	97.6

Torque and Kv Values

Size	Torque Value (Nm)	Kv Value (m^3/hr)
1″	8	56.4
1½″	20	164
2″	27	370
2½″	38	618
3″	52	960
4″	84	1795

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Vertical Actuator Specification

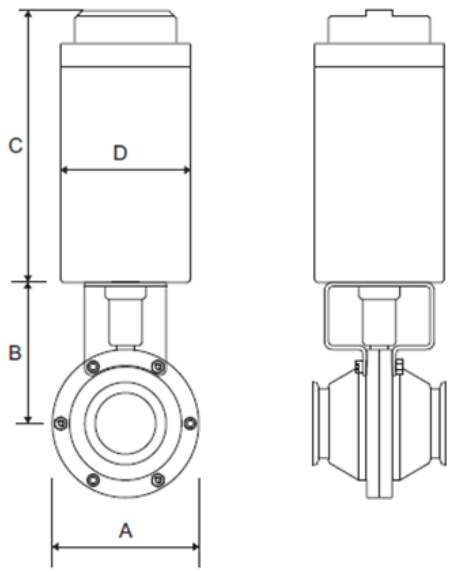
Pressure	Up to 8 bar
Temperature range	-20°C to 80°C
Media	Filtered dry air, preferably lubricated
Construction	Suitable for indoor or outdoor installation
Material	AISI 304 stainless steel
Finish	Polished
Rotation (standard)	Air to open, spring to close (spring return) or air to open, air to close (double acting)
Movement (standard)	90°
Lubrication	Factory lubricated for the normal life of actuators
Life	100,000 operations (minimum)

Actuator Torques @ 90 PSI

MODEL			9C35	9C40	9C50
AIR TO AIR TORQUE (Nm)			72	84	210
AIR TO SPRING TORQUE (Nm)	SPRING STROKE	END	35	40	120
		START	26	28	65
	AIR STROKE	END	46	74	250
		START	34	40	200

Vertical Actuator - 9C4 (Air / Spring), 9C5 (Air / Air)

Valve Size	1″	1½″	2″	2½″	3″	4″
Actuator Size (D)	3.5		4		5	
A	81	100	114.7	133.7	157.2	196.9
B	88.1	92.1	109.1	119.9	127	146.8
C	214.3	214.3	214.3	214.3	317.5	317.5



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53-Series Hygienic Ball Valve

Horizontal Actuator Specification

Pressure	Up to 8 bar
Temperature range	-20°C to 80°C
Media	Filtered dry air, preferably lubricated
Construction	Suitable for indoor or outdoor installation
Material	Housing Aluminium Alloy
Finish	Two coat polyurethane paint
Rotation (standard)	Air to open, spring to close (spring return) or air to open, air to close (double acting)
Movement (standard)	90°
Lubrication	Factory lubricated for the normal life of actuators
Life	500,000 operations (minimum)

Actuator Torques @ 90 PSI

MODEL			E25	E40	E100	E200	E350	P150
AIR TO AIR TORQUE (Nm)			27	51	115	251	436	174
AIR TO SPRING TORQUE (Nm)	SPRING STROKE	END	13	25	58	125	206	109
		START	4	8	21	41	63	65
	AIR STROKE	END	21	40	88	196	347	102
		START	13	25	55	123	223	59

Recommended Horizontal Actuator Model (Double Acting / Spring Return)

Valve Size	1"	1½"	2"	2½"	3"	4"
Double Acting	ED25	ED40	ED40	ED100	ED200	ED200
Spring Return	ES40	ES100	ES100	PS150	ES350	ES350

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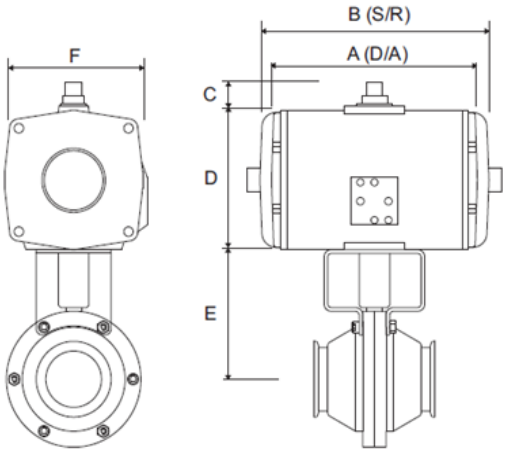
Dimensions Ball Valve with Horizontal Actuator



Horizontal Actuators Spring Return

Valve Size	1″	1½″	2″	2½″	3″	4″
Actuator Size	**ES40**	**ES100**	**ES100**	**PS150**	**ES350**	**ES350**
B (Spring Return)	203.2	266.7	266.7	217.5	387.4	387.4
C	19.8	19.8	19.8	19.8	19.8	19.8
D	95.3	117.9	117.9	134.9	181	181
E	88.1	92.1	109.1	119.9	127	146.8
F	96.8	117.1	117.1	143.7	182.2	182.2

Horizontal Actuators Double Acting

Valve Size	1″	1½″	2″	2½″	3″	4″
Actuator Size	**ED25**	**ED40**	**ED40**	**ED100**	**ED200**	**ED200**
A (Double Acting)	134.9	146.8	146.8	176.2	237.3	237.3
C	19.8	19.8	19.8	19.8	19.8	19.8
D	80.6	95.3	95.3	117.9	137.3	137.3
E	88.1	92.1	109.1	119.9	127	146.8
F	82.9	96.8	96.8	117.1	143.3	143.3

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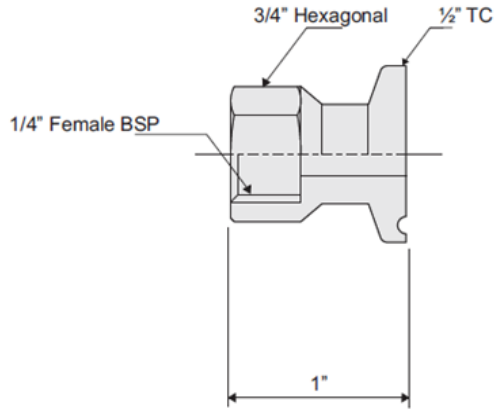
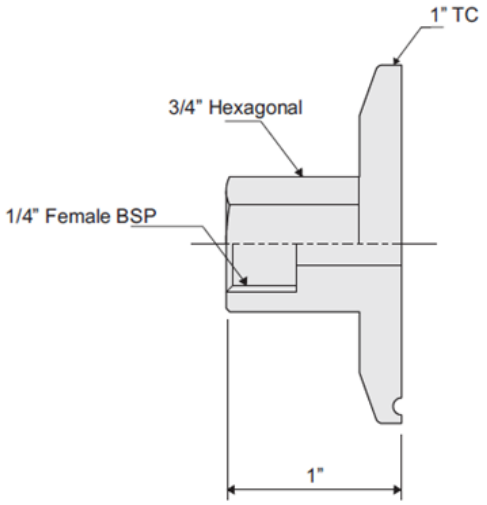
Purge Port Adapters

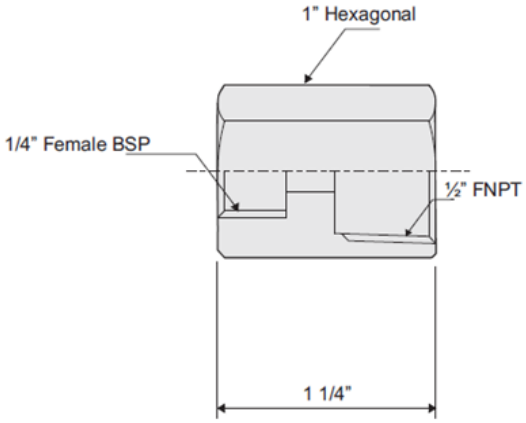
Material: AISI 316L
Surface Finish: Ra ≤ 0.8µm



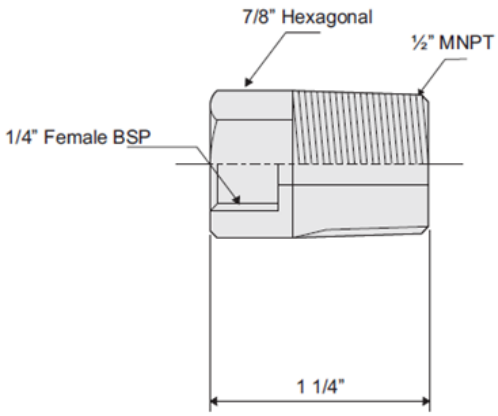
5C ½" Clamp



1C 1" Clamp



5F ½" FNPT



5M ½" MNPT

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