

NanoPure



STAINLESS STEEL

3 PIECE BALL VALVE

INSTRUMENT / UHP



"NanoPure" is a brand of Gas Delivery Total Solution, belongs to King Lai Group, who was founded 1991 in Taiwan and expanded production facility in Kunshan, Jiangsu Province, China. Supplying tubing/piping and fitting materials service for Semiconductor, FPD, LED and Photovoltaic industries, the core idea of *"NanoPure"* is providing "High purity materials" with high quality components for gas delivery applications.

Gas supply and delivery is always the topic to study in Semiconductor processing. To ensure the accuracy of the processing, the purity of gas sources is the vital factors. Keeping the purity while the gas has been transferred into processing tools is highly monitored by process engineers.

"NanoPure" is composed of people who are specialist in stainless steels fabrication. By making sure the selection of finest materials, we provide finest products. The key point is how to control the quality of materials which makes big difference of welding quality while installing or welding



assembly. There will be the potential impurity or inclusion in welding process. Therefore, electropolish is the solvable process for increasing reliability of stainless steel to against corrosion gases.

"NanoPure" aims to provide the highest quality products, so the quality control and uniformity are essential points to promise customers. In the meantime, we do put emphasis on the details of products such as dimension and tolerance which are important for quality control and therefore remain the high yield rate for assembly.

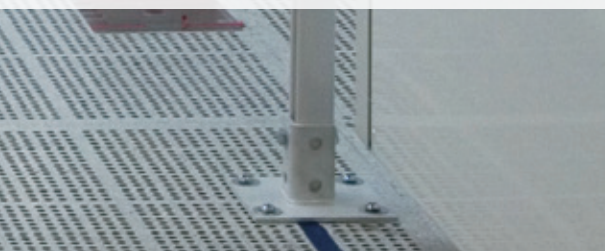


Operational packages can be followed according to the customer's instruction, the ranging from normal standard clean package to Ultra High Purity clean room package.

"NanoPure" In addition to UHP products, we also provide various products needed by various Industries, such as Oil & Gas Industries, Process Instrumentation, Power Generation, Pulp & Paper, Chemical, Analytical Instrumentation, Hydrogen Fuel Cells and Natural Gas.

"NanoPure" considers every single key processing during the fabrication.

Our goal is keeping
continually improvement to reach customers' satisfaction!



3 PIECE

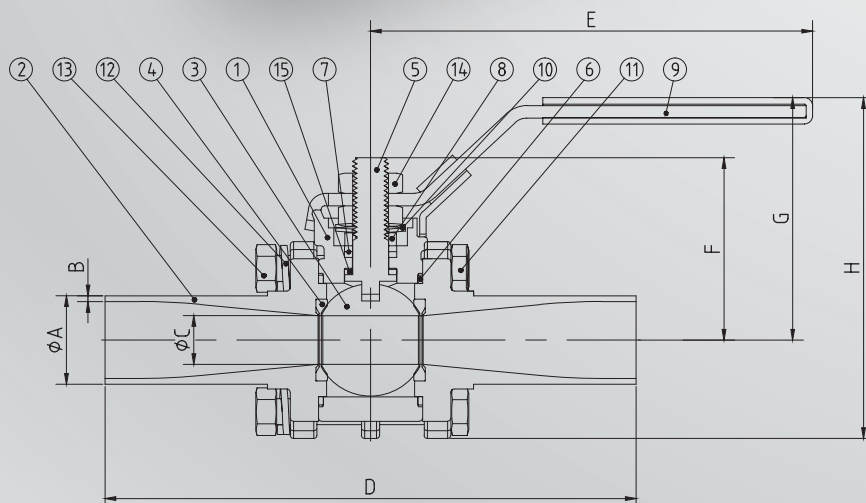
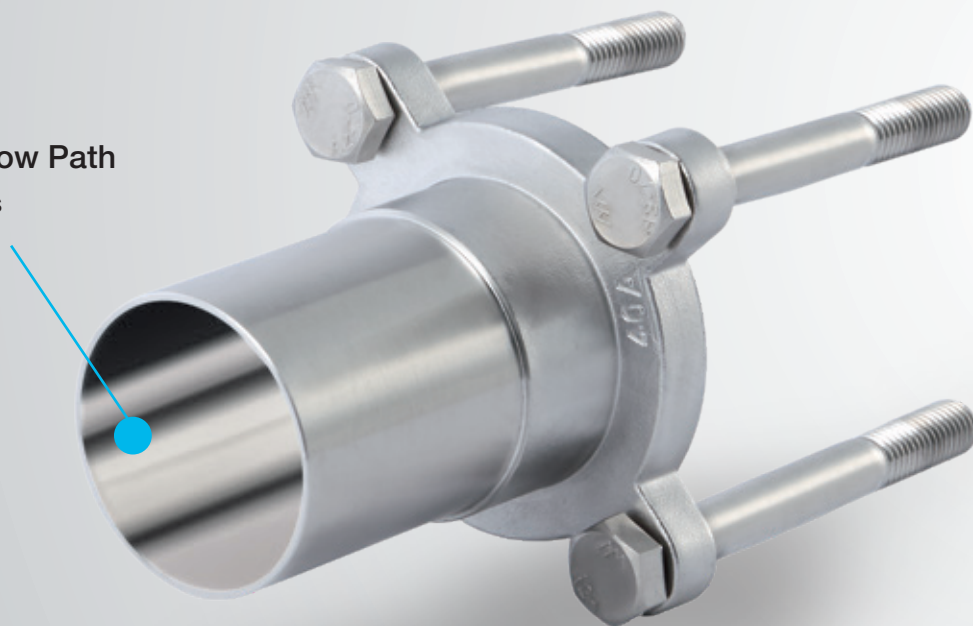
STAINLESS STEEL

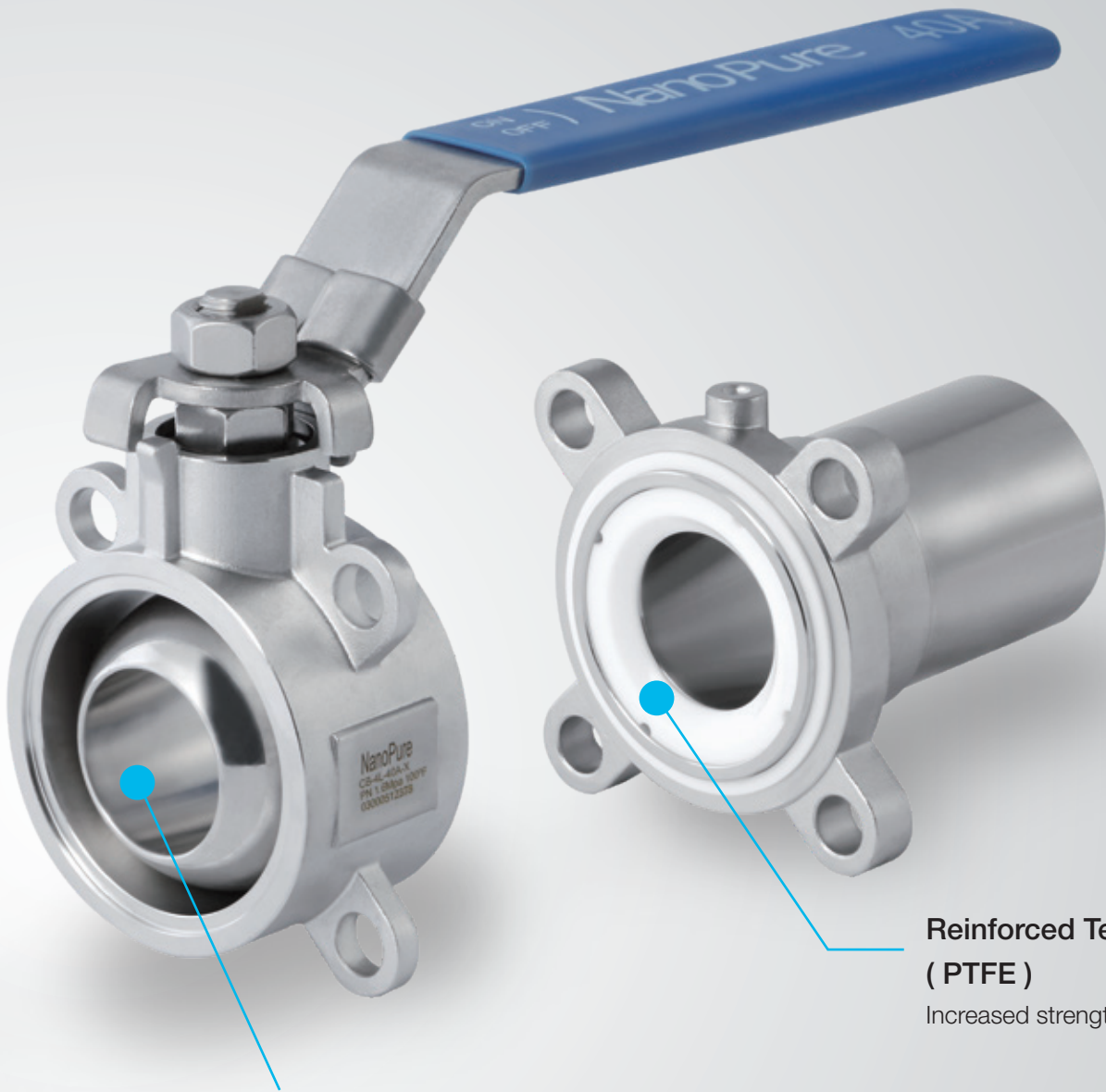
BALL VALVES

The Nanopure Ball Valve is 100% pressure tested, cleaned, and assembled in a class 1,000 cleanroom.

High-Purity Polished Flow Path

The same high-purity surfaces



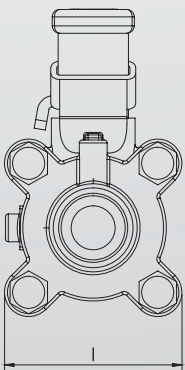


Stainless Steel Ball

Full port I.D. for minimum flow turbulence

Reinforced Teflon Seats (PTFE)

Increased strength for longer life



ITEM	PART NO.	DESCRIPTION
1	300 Series SS	Body
2	304L / 316L	End Connector
3	300 Series SS	Ball
4	PTFE	Seal Parking For Ball
5	300 Series SS	Stem
6	PTFE	Seal Parking For Body
7	PTFE	Seal Parking For Stem
8	300 Series SS	Gland
9	300 Series SS, Vinyl	Handle Module
10	300 Series SS	Disc Spring
11	300 Series SS	Bolt
12	300 Series SS	Spring Washer
13	300 Series SS	Nut
14	300 Series SS	Stem Nut
15	PTFE	Stem Packing

TECHNICAL PARAMETER

Size	A	B	C	D	E	F	G	H	I
15A	21.70	1.65	10.00	135.00	136.00	38.70	71.00	95.80	49.50
20A	27.20	1.65	15.00	162.30	162.00	56.00	76.30	106.60	60.60
25A	34.00	1.65	20.60	163.40	162.00	56.00	76.30	106.60	60.60
32A	42.70	1.65	25.00	194.00	162.00	60.60	80.30	113.60	66.60
40A	48.60	1.65	32.00	205.20	202.00	76.30	92.00	132.00	79.60
50A	60.50	1.65	40.00	211.50	202.00	86.50	98.60	142.00	86.70
65A	76.30	2.10	50.00	248.00	202.00	99.50	111.20	164.00	105.70
80A	89.10	2.10	65.00	262.00	330.00	134.50	153.50	224.70	160.90
100A	114.30	2.10	80.00	301.00	330.00	145.50	165.50	252.50	196.00
125A	139.80	2.80	100.00	330.00	500.00	172.00	187.30	288.50	229.00
150A	165.20	2.80	125.00	364.00	500.00	192.00	207.50	333.00	250.80
1/2"	12.70	1.24	10.00	103.00	129.00	34.30	50.00	71.00	42.20
3/4"	19.05	1.24/1.65	10.00	135.00	136.00	38.70	71.00	95.80	49.50
1"	25.40	1.24/1.65	15.00	162.30	162.00	56.00	76.30	106.60	60.60
1.25"	31.75	1.65	20.60	163.40	162.00	56.00	76.30	106.60	60.60
1.5"	38.10	1.65	25.00	194.00	162.00	60.60	80.30	113.60	66.60
2"	50.80	1.65	32.00	205.20	202.00	76.30	92.00	132.00	79.60
2.5"	63.50	1.65	40.00	211.50	202.00	86.50	98.60	142.00	86.70
3"	76.20	1.65	50.00	248.00	202.00	99.50	111.20	164.00	105.70
4"	101.60	2.10	80.00	301.00	330.00	145.50	165.50	252.50	196.00
5"	127.00	2.77	100.00	330.00	500.00	172.00	187.30	288.50	229.00
6"	152.40	2.77	125.00	364.00	500.00	192.00	207.50	333.00	250.80

Flow Coefficient ASTM Tube Sizes

Tube (A269)	Ball Orifice	Cv
1/2"	10	17
3/4"	10	17
1"	15	37
1.25"	20	68
1.5"	25	110
2"	32	186
2.5"	38	269
3"	50	481
4"	80	1,301
5"	100	2,085
6"	125	3,338
8"	150	4,902

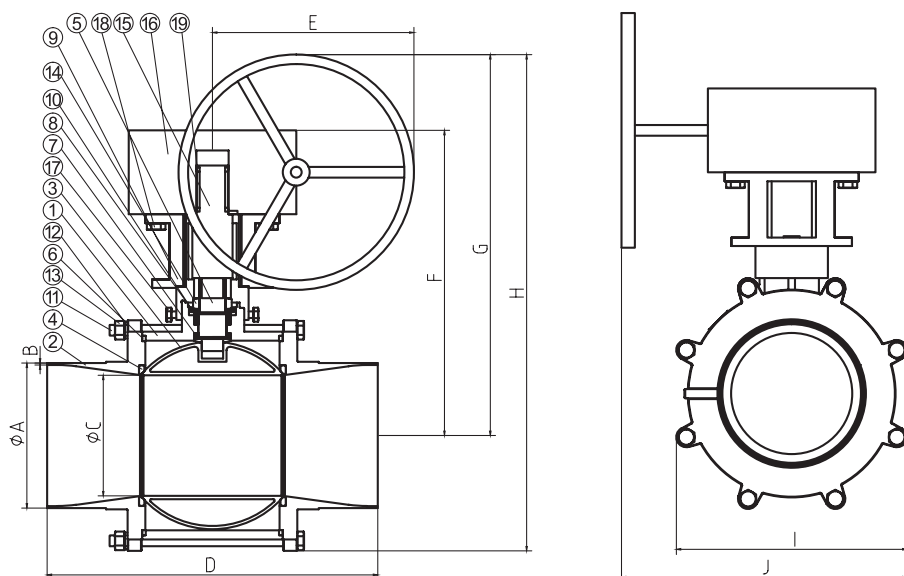
Flow Coefficient JIS PIPE Sizes (Schedule 5S)

JIS PIPE Sizes	Ball Orifice	Cv
15A	10	17
20A	15	37
25A	20.6	68
32A	25	110
40A	32	186
50A	40	269
65A	50	481
80A	65	839
100A	80	1,301
125A	100	2,085
150A	125	3,338
200A	180	4,902
250A	220	10,765
300A	260	16,811



ITEM	DESCRIPTION
------	-------------

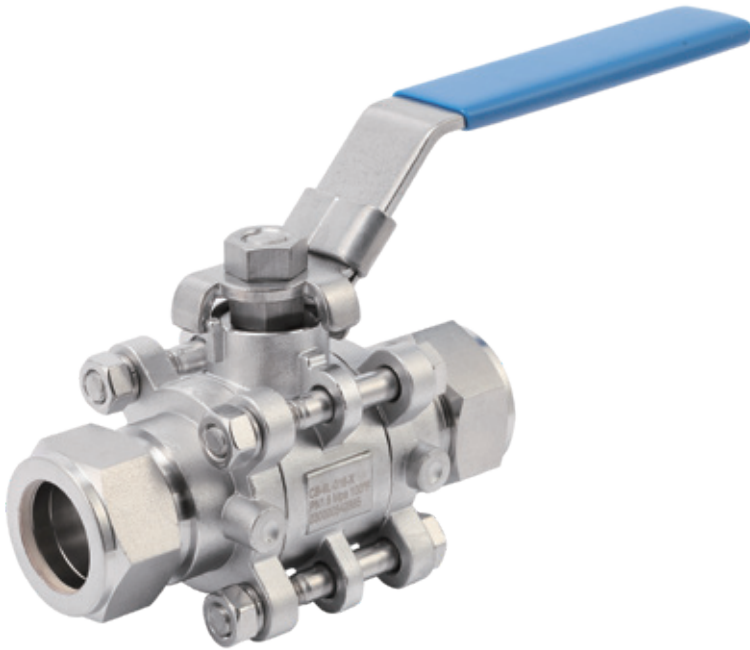
1	Body
2	End Connector
3	Ball
4	Seal Parking For Ball
5	Stem
6	Seal Parking For Body
7	Stem Packing
8	Gland
9	Support
10	Disc Spring
11	Bolt
12	Spring Washer
13	Nut
14	Stem Nut
15	Worm Shaft
16	Gear Box
17	Stop Bolt Nut
18	Stop Bolt Nut
19	Key



Size	A	B	C	D	E	F	G	H	I	J
200A	216.3	2.8	180	493.2	300	455.5	568.5	740.5	345	426.1
8"	203.2	2.77	180	493.2	300	455.5	568.5	740.5	345	426.1
250A	267.4	4	220	567	350	505.5	641.5	853.5	424	490
300A	318.5	4.5	260	665	350	535.5	671.5	915	487	521.5

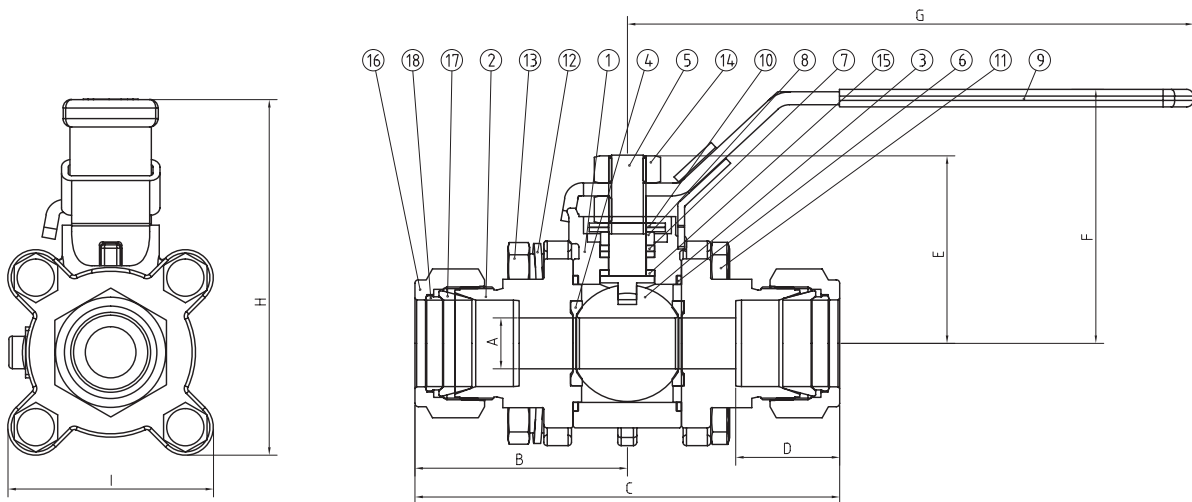
TECHNICAL PARAMETER

Rotary welding



ITEM DESCRIPTION

1	Body
2	End Connector
3	Ball
4	Seal Parking For Ball
5	Stem
6	Seal Parking For Body
7	Seal Parking For Stem
8	Gland
9	Handle Module
10	Disc Spring
11	Bolt
12	Spring Washer
13	Nut
14	Stem Nut
15	Stem Packing
16	Nut
17	Front Ferrule
18	Back Ferrule



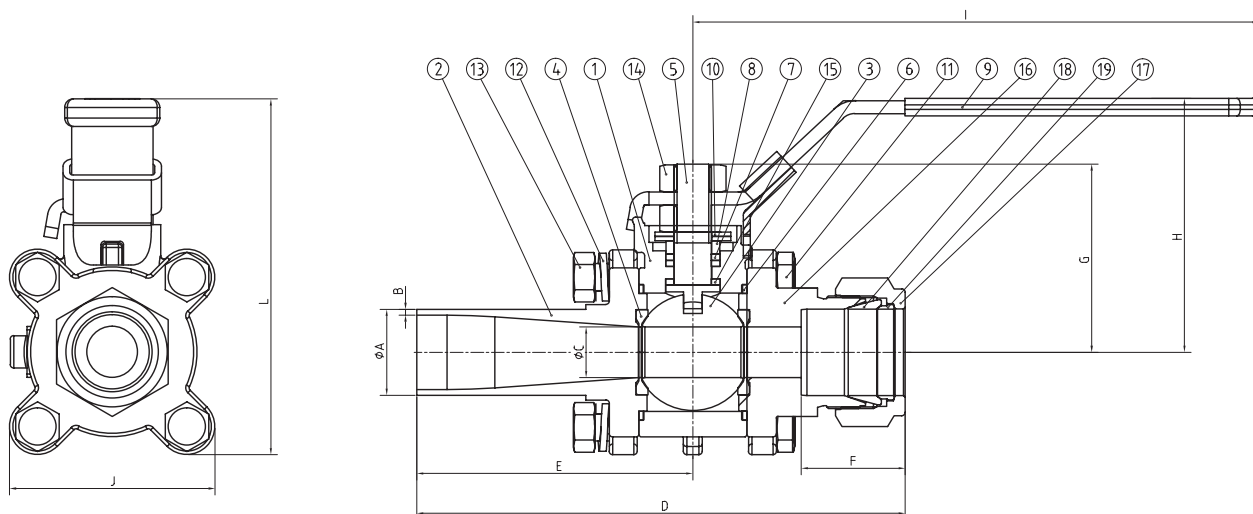
Size	A	B	C	D	E	F	G	H	I
1/2" Ferrule	10.0	51.8	103.6	23.0	34.3	49.5	128.5	70.6	42.2
3/4" Ferrule	10.0	58.8	117.6	24.3	38.7	71.0	136.0	95.8	49.5
1" Ferrule	15.0	62.8	125.6	30.8	56.0	76.3	162.0	106.6	60.6

Rotary welding



ITEM DESCRIPTION

1	Body
2	End Connector
3	Ball
4	Seal Parking For Ball
5	Stem
6	Seal Parking For Body
7	Seal Parking For Stem
8	Gland
9	Handle Module
10	Disc Spring
11	Bolt
12	Spring Washer
13	Nut
14	Stem Nut
15	Stem Packing
16	Nut
17	Front Ferrule
18	Back Ferrule



Size	A	B	C	D	E	F	G	H	I
1/2" Tube - 1/2" SWG	12.7	1.24	10	103.3	51.5	23	34.3	50	129
3/4" Tube - 3/4" SWG	19.05	1.24/1.65	10	126.3	67.5	24.3	38.7	71	136
1" Tube - 1" SWG	25.4	1.24/1.65	15	144.5	81.7	30.8	56	76.3	162

PRODUCT FEATURES

UHP Cleaning, Packaging, and Testing

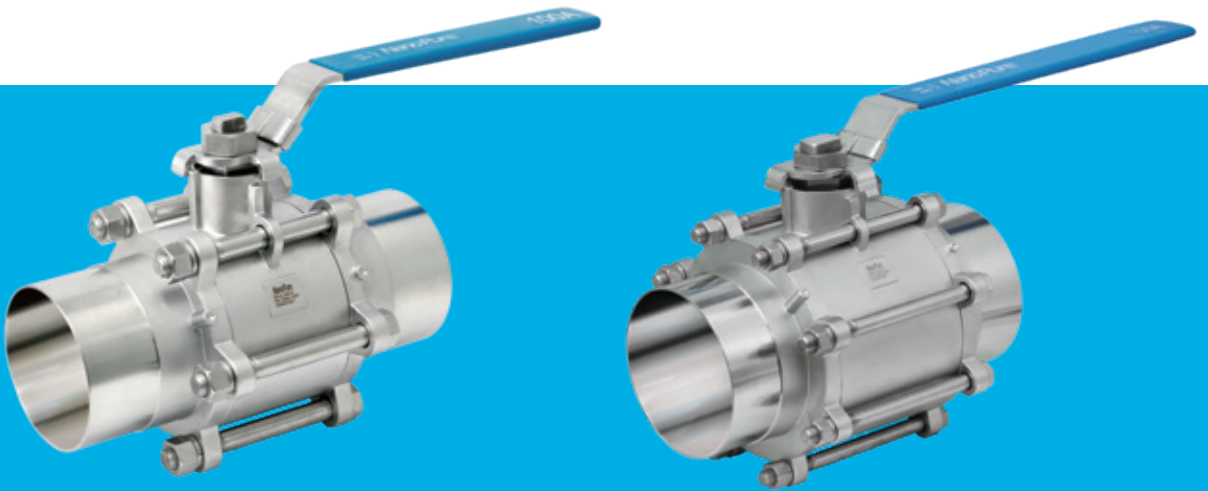
Final cleaning uses 18meg-ohm DI water and high-purity nitrogen from a cryogenic source. Every valve is tested with 100% helium across the seat and inboard across the body seals.

Custom Configurations Available

Nanopure can custom build specialty assemblies that reduce field installation time. Since we polish all the welds we make at our facility, the number of raw welds in your process line is reduced. And we can electronically supply a computer-generated 3-D model of your special assembly for your approval before we start making it.

Full Port Design

Dramatically decreases fluid flow resistance, using the same bore size for both valve internal components and the connecting tube. Elimination of Butted welds reduces contaminant pockets.



End Connections

Pipe & Tube stub connections are available with surface finishes mechanically polished to 25 micro-inch Ra. All tube ends are faced and squared, ready for orbital welding and permanently marked for traceability to the producing mill. Material test reports with chemistry and mechanical properties of the tube ends are sent with each valve.

Locking Device

The handle has an integral safety tab to prevent accidental operation, and it can be locked in the open or closed position with a standard padlock.

3-Piece Swing-in-Place Construction

Offers quick and easy in situ maintenance while maintaining parts alignment and allowing easy access to internal components after installation.

Stainless Steel Construction

All wetted metallic surfaces are constructed from 300 stainless steel for excellent corrosion resistance. 300-series stainless steel is also used in the remaining non-wetted components to protect from environmental corrosion.

I.D. Finish / Seal Lube

25 Ra mechanical polished / oxygen-compatible lube.

Pressure Rating (Oil Free)

Size:

A-269: 1/2 - 8" : 160 psi (11 Bar)

G3459: 15A - 300A (5S) 160 psi (11 Bar)

15A - 300A (10S) 300 psi (21 Bar)

Leak Test

1×10^{-8} scc / sec



Purge Ports

Compression or face-seal purge ports are available upstream, downstream, or both.

Easy-Torque Handle

The heavy-duty, long handle gives plenty of leverage to open or close the valve against flowing process fluid.

ORDERING INFORMATION

	15A				
	20A				
	25A	008=1/2"			L = Lever
	32A	012=3/4"			W = wheel gear
	40A	016=1"			NO = Normally Open Actuator
	50A	020=1 1/4"			- Spring Return
	65A	024=1 1/2"			NC = Normally Closed Actuator
	80A	032=2"			- Spring Return
	100A	040=2 1/2"			DA = Double Acting Actuator
	125A	048=3"	SWG Fitting		Solenoid Assist for Air Actuator
	150A	064=4"	08S=1/2"SWG	X=Without	24 = 24 VDC Solenoid Assist
	200A	080=5"	12S=3/4"SWG	IPP=Inlet	120 = 120 VAC Solenoid Assist
4L=304L	250A	096=6"	16S=1"SWG	OPP=Outlet	240 = 240 VAC Solenoid Assist
6L=316L	300A	128=8"	F=Flange	IOPP=In & Out	WL = With Limit Switch

Series	Material	Pipe Size JIS G3459	Tube Size ASTM A269	End Connector	Purge Port	Handle
CB	4L	15A	008	BW	IPP	L

3 PIECE STAINLESS STEEL **BALL VALVES**

E = Electropolished
B = Bright Annealing

Grade

B





Stock Code 300260

Lion Hygienic Materials Co., Ltd

No.22 Lufeng west road, Kunshan,
Jiangsu, P. R. China

TEL: +86 512 5767 1815

FAX: +86 512 5787 1472

Email: info@lion-kl.com

www.kl-nanopure.com

