



# DAJA

DAJA-UHP-14-0.0

大甲永和機械工業股份有限公司  
TACHIA YUNG HO MACHINE INDUSTRY CO., LTD.



Quality certification :

- 1994: Certified to ISO 9002
- 1998: Certified to ISO 14001
- 2002: Certified to ISO 9001 (replacing ISO 9002)
- 2007: Certified to JIS MARK (JQA JIS B2312) (JQA JIS B2313)
- 2009: Certified to ISO 9001 : 2008

OEM/ODM SERVICE FOR :

- 1.High Purity Pipe, Valve and Pipe Fitting for Semiconductor, TFT-LCD and Solar Panel Industries.
- 2.High Purity Stainless Steel Bend and Pipe Formed Fittings.
- 3.High Purity Micro BW Fittings.
- 4.High Purity Face Seal Fittings.
- 5.High Purity UHP CGA/Diss Fittings.
- 6.Compression Fittings.
- 7.High Purity Ball Valves.
- 8.Manifold Pipe/Tube.
- 9.Diaphragm Valve and Valve Body.
- 10.EP, Electro-polishing Service & Ultra High Purity Cleaning and Packing.






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## Diaphragm Valve & Ball Valve

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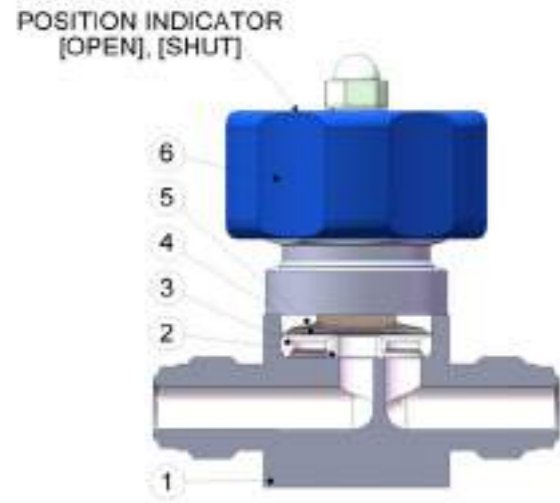
## Diaphragm Valve

Ohno-Daja DL-EN series metal diaphragm valve is designed and developed by Ohno Bellows Ind. Co. to meet the high purity requirement in gas distribution control system. Since the first generation of the valve product released in 1980, this new compact design has evolved to the fifth generation based on technical improvements accumulating from field service experiences.



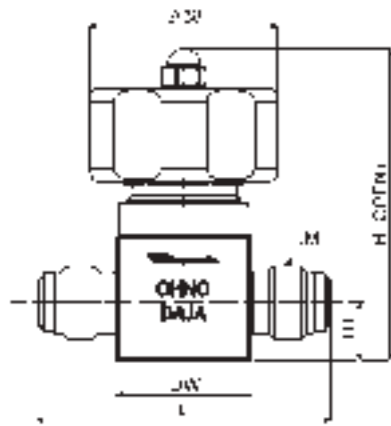
- (1) Wetted surface contact area is degreased and cleaned by DI water reinforced with ultrasonic power. The product's moisture is removed before high purity packaging to meet the stringent requirement of high purity standards.
- (2) Metal to metal diaphragm sealing assures low risk of external leak in field service.
- (3) Compact valve body design for space saving and easier handling in field location.
- (4) Visualized window design over wheel handle provides clear confirmation of open or shut status on field.

Specification				
Size	Working Pressure	Working Temperature	Flow Coefficient	Weight (kg)
1/4	Vac. ~0.98MPa (10kgf/cm <sup>2</sup> )	-10°C ~ 65°C	0.3	0.21
3/8			0.5	0.25
1/2			1.2	0.65
3/4				
Test & Inspection			Quality Control	
Shell Test		1.48MPa (15kgf/cm <sup>2</sup> )	■ wetted surface roughness (BODY) EP : electro-polishing finish BA : Ra 0.25μm, mechanical polish finish ■ 100% pressure test and Helium leak test before packaging, double layer with high purity bagging in clean room.	
Air tight / Seat Closure test		1.08MPa (11kgf/cm <sup>2</sup> )		
Helium Leak Rate test	External	≤ 7.09 × 10 <sup>-10</sup> Pa. M <sup>3</sup> / sec		
	Across seat	≤ 7.09 × 10 <sup>-10</sup> Pa. M <sup>3</sup> / sec		



No.	Part Name	Q'ty	Material
1	BODY	1	SCS16A
2	SEAT	1	PCTFE
3	SEAT RETAINER	1	SUS316L
4	DIAPHRAGM	1 set	Ni Alloy
5	BONNET	1	SUS304
6	HAND WHEEL	1	ADC12

• Wetted contact parts are highlighted with blue & bold letter.



Size	Type Code	L	H	H1	W	C
1/4	DL-EN-04MR-BA DL-EN-04MR-EP	57	61	11.2	26	25
3/8	DL-EN-08MR-BA DL-EN-08MR-EP	67	61	11.2	26	25
1/2	DL-EN-12MR-BA DL-EN-12MR-EP	80	85.5	16	35	35

- Please specify TYPE CODE while placing the order.
- Above dimensions can be modified by the manufacturer for a better practice without prior notice.
- BA grade product is mechanical polishing to Ra 0.25µm for wetted surface contact area.



## Ball Valve

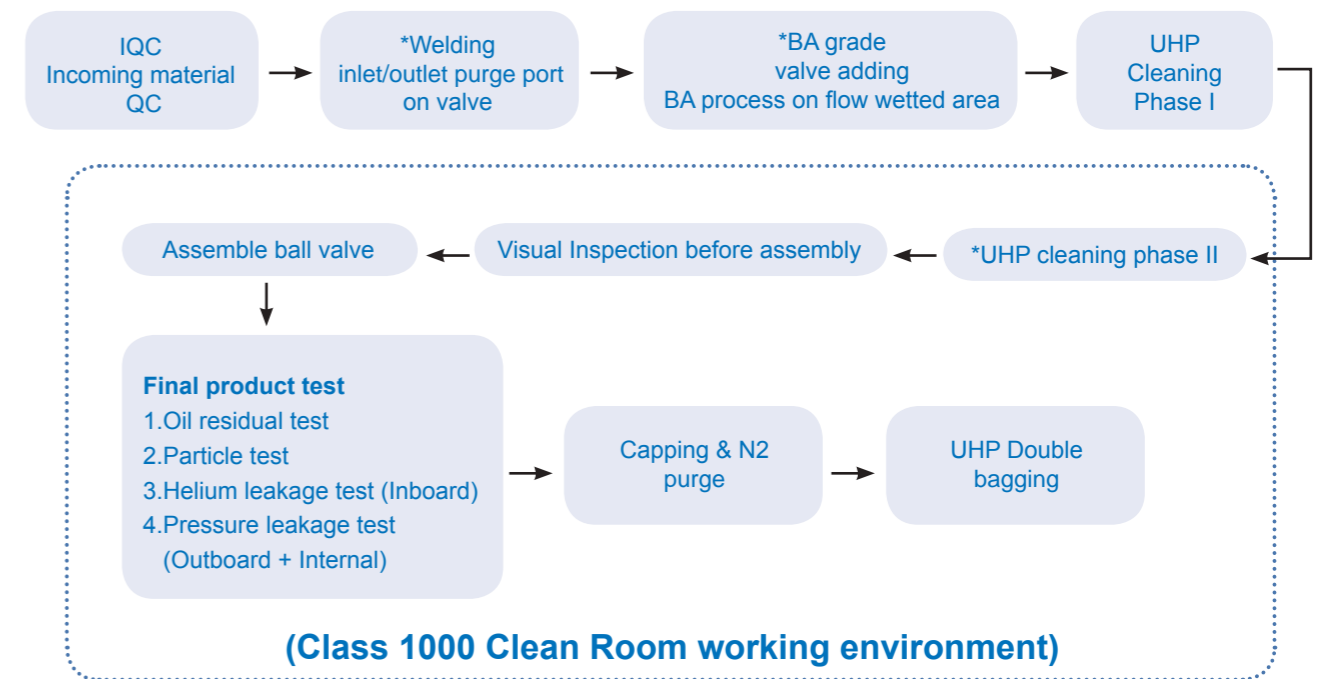
### Scope of the application

The design of DAJA Ball Valve is specialized for serving high purity gas distribution system, demanding high purity, oil free, low particle, low working pressure and high Cv value. It is recommended to work in CDA and bulk gas piping line as a shut-off control device.

### Specifications

Item	Performance	Description	BA grade	AP grade
1	Purity	Oil residual rate	0.05 mg/ft <sup>2</sup>	0.1 mg/ft <sup>2</sup>
		Static particle test	0.3µm < 10pcs	0.3µm < 30pcs
		Cleaning DI water electrical resistivity	>0.5MΩ	—
		Valve assembly and packaging environment	Class 1000	Class 1000
2	Low leakage	Outboard & internal leakage test	10kg/cm <sup>2</sup> , no leak	10kg/cm <sup>2</sup> , no leak
3	High corrosion resistance material	Valve body	Stainless Steel, polishing to BA grade, Ra 0.4µm	Stainless Steel, mill finish
		End cap	Stainless Steel, polishing to BA grade, Ra 0.4µm	Stainless steel, mill finish

### BA/AP Ball Valve Manufacturing Process



• Note: Process with "star \*" marking is a specific work for custom-made product.

**10K-HP ECO Mini Ball Valve (316)**

**•MINI-ECO Series**

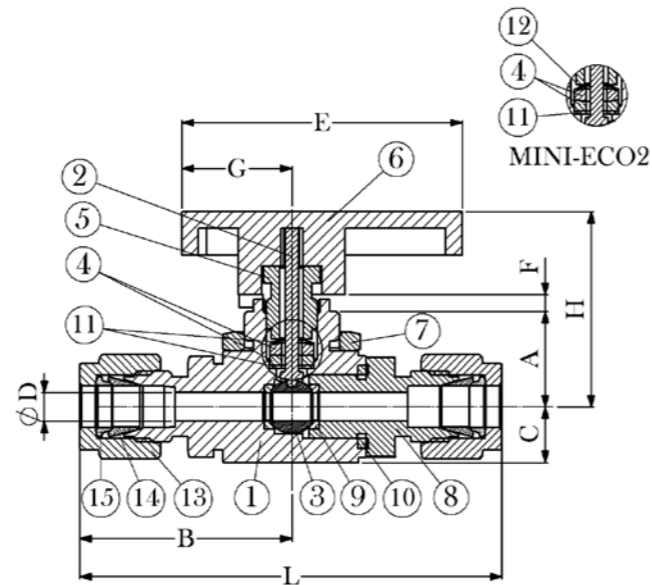
Model No.	Size
MINI-ECO2	1/4"
MINI-ECO3	3/8"
MINI-ECO4	1/2"
MINI-ECO6	3/4"



• Standard design w/compression fitting connection.

**•Materials Of Construction**

Item	Part Description	Specification	Q'ty
1	BODY	SUS316	1
2	STEM	SUS316	1
3	BALL	SUS316	1
4	STEM PACKING	PTFE	2
5	GLAND NUT	SUS304	1
6	HANDLE	ABS	1
7	PANEL NUT	SUS304	1
8	END CONNECTOR	SUS316	1
9	SEAT	PTFE	2
10	CONNECTOR O-Ring	PTFE	1
11	DISC SPRING	PTFE	2
12	SPRING WASHER (MINI ECO2)	SUS304	1
13	NUT	SUS316	2
14	FRONT FERRULE	SUS316	2
15	BACK FERRULE	SUS316	2



**•Dimensions**

Unit:mm

Size	A	B	C	D	E	F	G	H	L
1/4"	15	37.59	9.25	4.5	44	1.8	17.25	31	75.18
3/8"	25.1	40.4	11	7.2	60	3.1	25	55.6	80.8
1/2"	36.1	52.75	17	10.4	63	3.1	24	60	105.5
3/4"	36.1	52.75	17	15.8	63	3.1	24	60	105.5

• Note:Dimension subject to change for better performance without notice.

**20K-HP Mini Ball Valve (316)**

**•MINI Series**

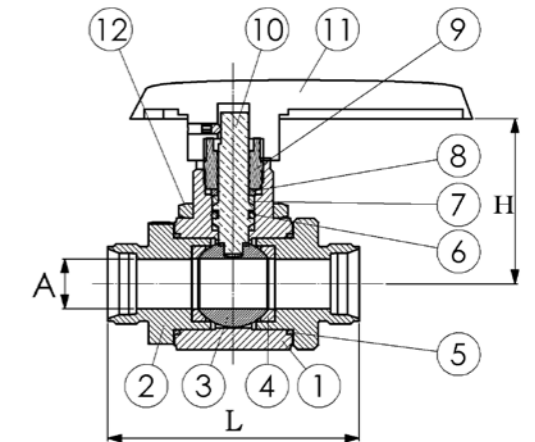
Model No.	Size
MINI-2	1/4"
MINI-3	3/8"
MINI-4	1/2"
MINI-6	3/4"



• Standard design w/compression fitting connection.

**•Materials Of Construction**

Item	Part Description	Specification	Q'ty
1	BODY	ANSI-316	1
2	CAP	ANSI-316	1
3	BALL	A315-CF8M	1
4	SEAT	PTFE	2
5	GASKET	PTFE	1
6	O-Ring	VITON	1
7	STEM PACKING	PTFE	2
8	WASHER	ANSI-304	1
9	LOCK NUT	ANSI-304	1
10	STEM	ANSI-316	1
11	HANDLE	ABS	1
12	NUT	ANSI-304	1



**•Dimensions**

Unit:mm

Size	L	H
1/4"	56.0	33.0
3/8"	56.0	33.0
1/2"	64.0	37.0
3/4"	79.5	52.5

Option :VCR type connection

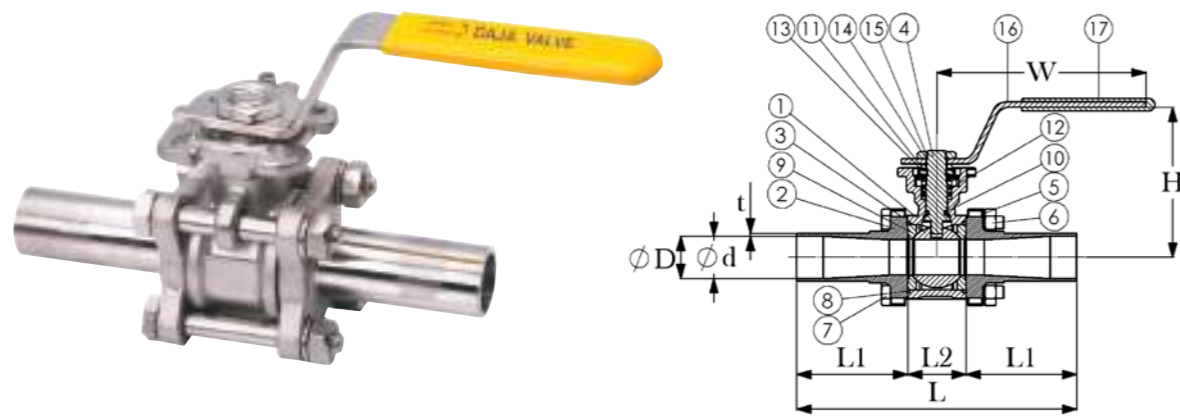
• Note:Dimension subject to change for better performance without notice.

**10K-HP ECO Ball Valve (304L)**

●ECO Series

Unit:mm

Model NO.	Size	ΦD	Φd	t	W	H	L1	L2	L
ECO 15	15A	21.7	18.4	1.65	114	75	57.0	26.50	140.5
ECO 20	20A	27.2	23.9	1.65	133	79	62.5	33.00	158.0
ECO 25	25A	34.0	30.7	1.65	133	81	60.5	37.20	158.0
ECO 32	32A	42.7	39.4	1.65	187	90	78.5	46.60	203.6
ECO 40	40A	48.6	45.3	1.65	187	118	80.0	55.00	215.0
ECO 50	50A	60.5	57.2	1.65	187	107	81.0	69.60	231.6
ECO 65	65A	76.3	72.1	2.10	315	147	97.0	85.40	279.4
ECO 80	80A	89.1	84.9	2.10	315	167	99.0	98.50	296.5
ECO 100	100A	114.3	110.1	2.10	315	187	99.0	130.20	328.2



●Materials Of Construction

Unit:mm

Item	Part Description	Specification	Q'ty	Item	Part Description	Specification	Q'ty
1	BODY	A-351 CF3	1	10	THURST WASHER	RPTFE	1
2	END CAP	A-351 CF3	2	11	STEM O-Ring	VITON	2
3	BALL	A-351 CF3	1	12	GLAND PACKING	PTFE	1
4	STEM	SUS304	1	13	GLAND NUT	SUS304	1
5	BOLT WASHER	SUS304	4	14	HANDLE WASHER	SUS304	1
6	BOLT NUT	SUS304	4	15	HANDLE NUT	SUS304	1
7	BOLT	A2-70	4	16	HANDLE	SUS304	1
8	JOINT GASKET	PTFE	2	17	HANDLE COVER	VINYL	1
9	SEAT	TFM1600/PTFE	2				

Option:1. OPP, IOPP Purge Port w/compression fitting connection  
2. 10K Flange Connection

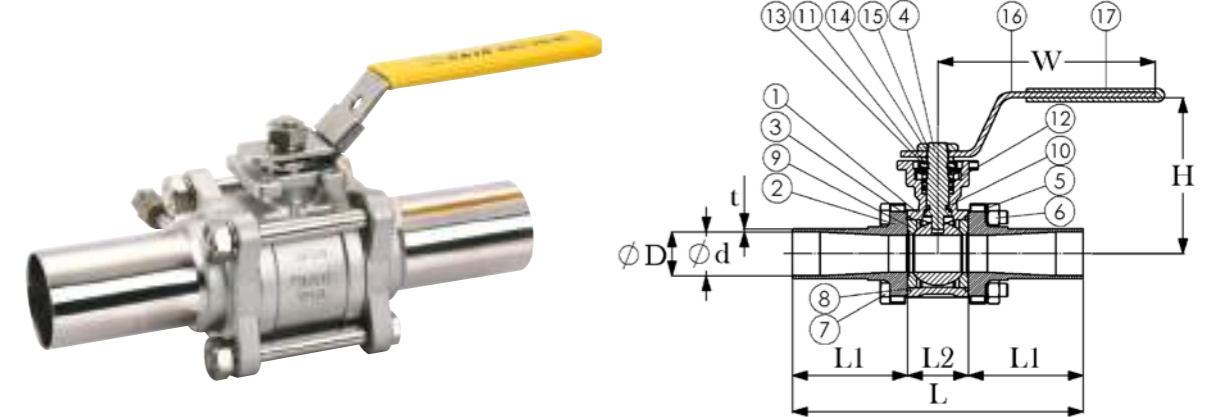
● Note:Dimension subject to change for better performance without notice.

**10K-HP SUPA Ball Valve (316L)**

●SUPA Series

Unit:mm

Model NO.	Size	ΦD	Φd	t	W	H	L1	L2	L
SUPA 15	15A	21.7	18.4	1.65	100	57.80	71.5	27.2	170.2
SUPA 20	20A	27.2	23.9	1.65	130	63.70	71.9	32.2	176.0
SUPA 25	25A	34.0	30.7	1.65	150	72.70	86.4	39.2	212.0
SUPA 32	32A	42.7	39.4	1.65	150	81.68	86.8	49.2	222.8
SUPA 40	40A	48.6	45.3	1.65	180	87.70	86.9	58.0	231.8
SUPA 50	50A	60.5	57.2	1.65	180	104.00	87.8	67.0	242.6
SUPA 65	65A	76.3	72.1	2.10	260	135.00	87.4	85.2	260.0
SUPA 80	80A	89.1	84.9	2.10	260	145.00	90.6	98.8	280.0
SUPA 100	100A	114.3	110.1	2.10	292	173.30	93.0	123.0	309.0



●Materials Of Construction

Unit:mm

Item	Part Description	Specification	Q'ty	Item	Part Description	Specification	Q'ty
1	BODY	A-351 CF8M	1	10	THURST WASHER	RPTFE	1
2	END CAP	A-351 CF3M	2	11	STEM O-Ring	VITON	2
3	BALL	SUS316	1	12	GLAND PACKING	PTFE	1
4	STEM	SUS316	1	13	GLAND NUT	SUS304	1
5	BOLT WASHER	SUS304	4	14	HANDLE WASHER	SUS304	1
6	BOLT NUT	SUS304	4	15	HANDLE NUT	SUS304	1
7	BOLT	SUS304	4	16	HANDLE	SUS304	1
8	JOINT GASKET	PTFE	2	17	HANDLE COVER	VINYL	1
9	SEAT	RPTFE/PTFE	2				

Option:1. OPP, IOPP Purge Port  
2. 10K Flange Connection

● Note:Dimension subject to change for better performance without notice.

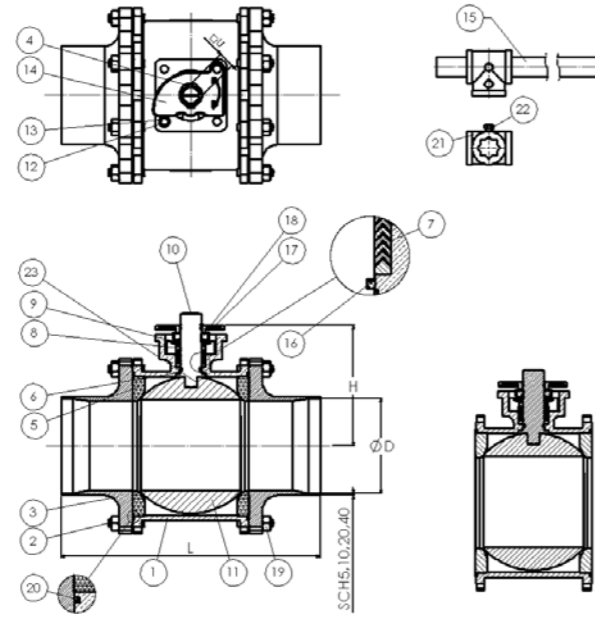
**10K-HP JUMBO Ball Valve (304L)**

**•JUMBO Series**

Unit:mm

Model NO.	Size	ΦD	t	H	L	Operation
JUMBO 125	125A	139.8	2.8	158	413	Handle
JUMBO 150	150A	165.2	2.8	188	435	Handle

**•JUMBO 125A**  
**•JUMBO 150A**



**•Materials Of Construction**

Item	Part Description	Specification	Q'ty	Item	Part Description	Specification	Q'ty
1	BODY	CF8	1	13	STOPPER NUT	A2-70	1
2	HEAVY BOLTS	A2-70	16	14	STOP PLATE	CF8	1
3	END CAP	CF3	2	15	HANDLE	304	1
4	RETAINER	SUS304	1	16	O-RING	VITON	1
5	SEAT	PTFE	2	17	GLAND NUT	SUS304	1
6	THURST WASHER	PTFE	1	18	TAB WASHER	SUS304	1
7	STEM PACKING	PTFE	7	19	HEAVY NUTS	SUS304	16
8	GLAND	SUS304	1	20	GASKET	PTFE	2
9	DISC SPRING	SUS301	2	21	HANDLE SOCKET	SUS304	1
10	STEM	SUS304	1	22	HEX BOLT(HANDLE)	A2-70	1
11	BALL	CF3	1	23	ANTI STATIC(OPTIONAL)		
12	STOPPER HAS SCREW	A2-70	1				

Option:1. OPP, IOPP Purge Port  
2. 10K Flange Connection

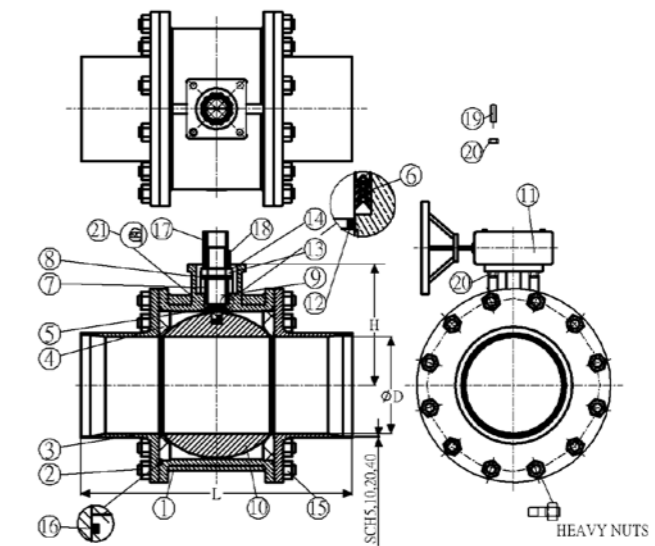
• Note:Dimension subject to change for better performance without notice.

**•JUMBO Series**

Unit:mm

Model NO.	Size	ΦD	t	H	L	Operation
JUMBO 200	200A	216.3	2.8	250	560	Gear box w/wheel
JUMBO 250	250A	267.4	4.0	310	620	Gear box w/wheel
JUMBO 300	300A	318.5	4.5	350	676	Gear box w/wheel

**•JUMBO 200A**  
**•JUMBO 250A**  
**•JUMBO 300A**



**•Materials Of Construction**

Item	Part Description	Specification	Q'ty	Item	Part Description	Specification	Q'ty
1	BODY	CF8	1	12	O-Ring	VITON	1
2	HEAVY BOLTS	A2-70	24	13	GLAND NUT	SUS304	1
3	END CAP	CF3	2	14	TAB WASHER	SUS304	1
4	SEAT	PTFE	2	15	HEAVY NUTS	SUS304	24
5	THURST WASHER	PTFE	1	16	GASKET	PTFE	2
6	STEM PACKING	PTFE	5	17	KEY	SUS304	1
7	GLAND	SUS304	1	18	SOCKET FOR GEAR BOX	A536	1
8	DISC SPRING	SUS301	2	19	SOCKET SET SCREWS	A2-70	4
9	STEM	SUS304	1	20	NUT	A2-70	4
10	BALL	CF3	1	21	ANTI STATIC	SUS304	1
11	STANDARD GEAR OPERATION	ASTM A536	1 set				

Option:1. OPP, IOPP Purge Port  
2. 10K Flange Connection

• Note:Dimension subject to change for better performance without notice.

MEMO

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MEMO

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