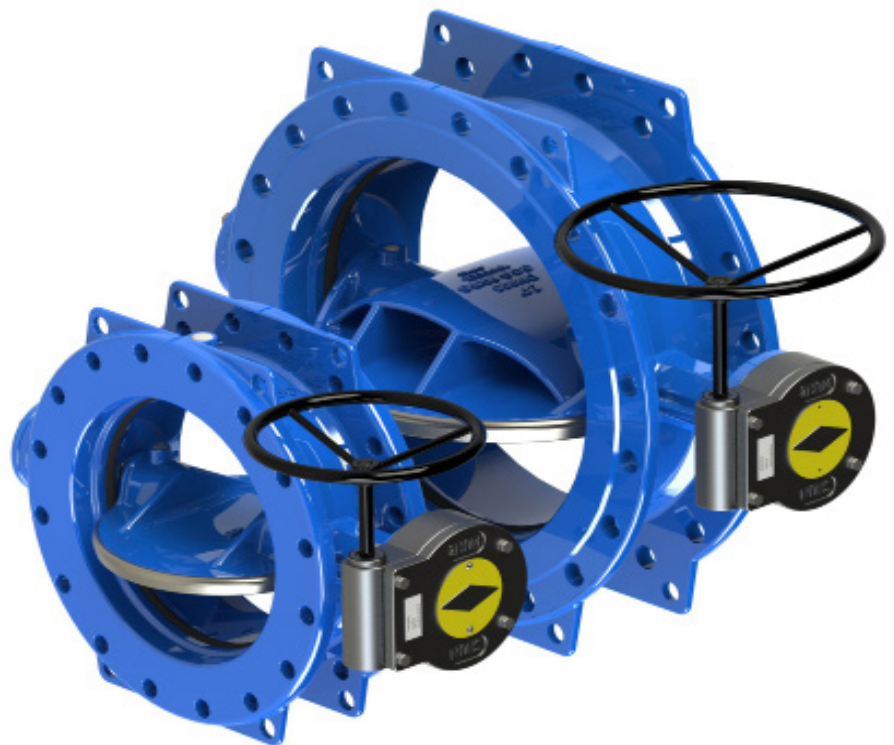


FBGD-Double Eccentric Flange Butterfly Valve

Features:

- . The valve is made of DI body and DI disc.
- . Advanced newly design with dovetail seal design and captured by epoxy on the back, with multiple raised ring to have more contact with disc but less friction during closure.
- . The double eccentric design provides less contact area of seal with disc, and less stress at the open position of the disc.
- . The disc design with arch shape and thru disc can provide better flow capacity, stronger and less weight
- . The shaft and disc connection with tangential pin which can be exchangeable and provide rigid connection.
- . The DN 100-500MM use flat disc, and DN 600-1200MM use arch shape disc.
- . Epoxy coated interior and exterior.
- . Valve design meets or exceeds EN 593.
- . Top flange connection meets ISO 5211-1982, and F/F meets EN 558-1 series 13 & 14.

FBGD is a double eccentric flange butterfly valve, with soft seal on the body, it has the lowest operational torque, much less wearing, the dovetail seal design has been proven over half century service with reliability.

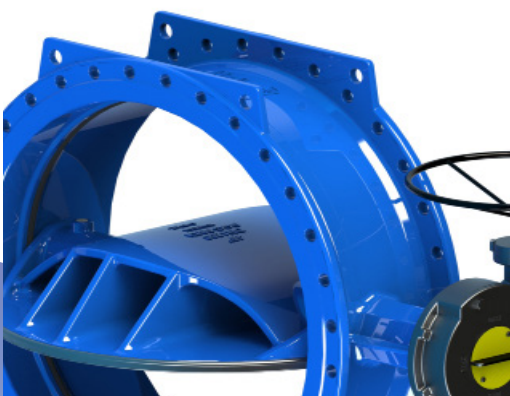


Technical Data:

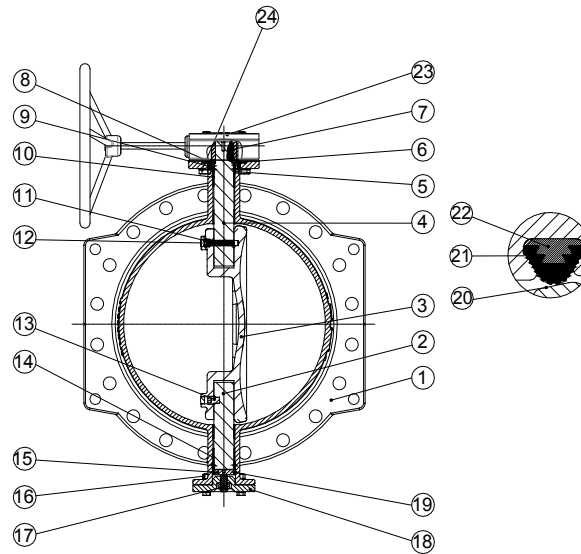
Size Range: DN100-1200mm
Ratings: 1.0Mpa; 1.6Mpa
Working Temperature: -10°C ~80°C
Flow media: Water & Wastewater

Service Fields:

Water works system, waste water system, water distribution system, HVAC system, industry, power plant.
Please consult factory for higher pressure ratings.



Main Valve-DN100-500-Flat Disc

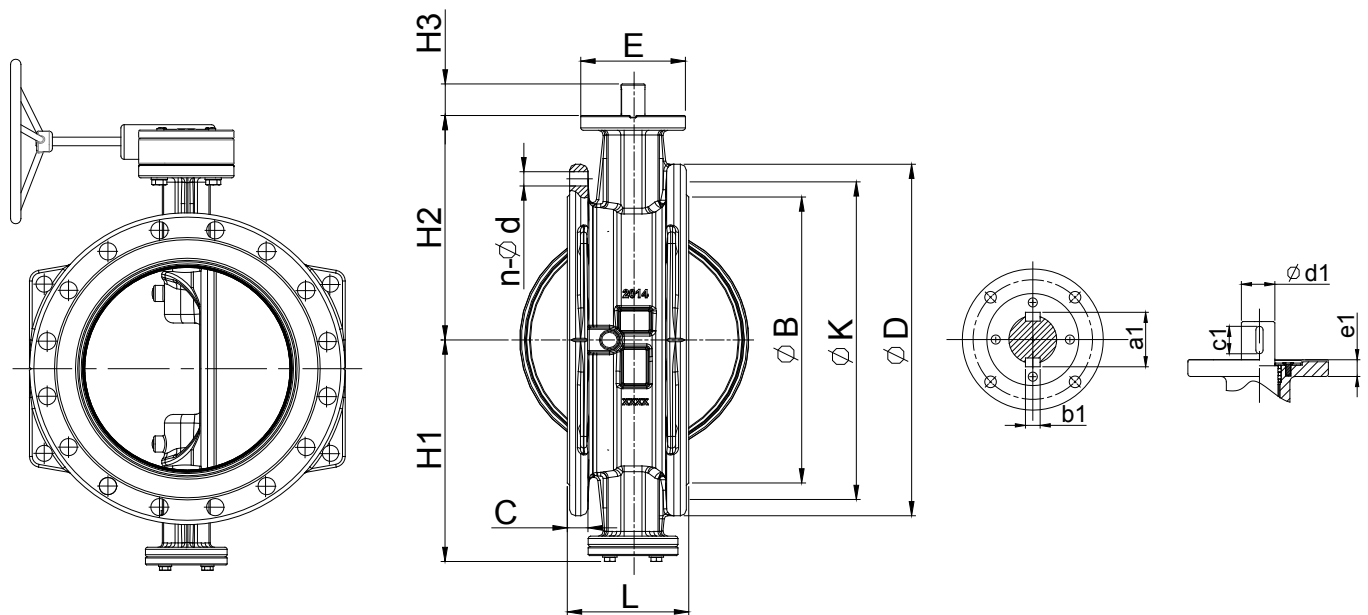


Parts List

No.	Part Name	Material	Standard
1	Body	Ductile Iron	GJS 500-7
2	Lower Shaft	Stainless Steel	AISI 420/304/316
3	Disc	Ductile Iron	GJS 500-7
4	Main Shaft	Stainless Steel	AISI 420/304/316
5	Backup Ring	Plastic	PTFE
6	Retaining Plate	Carbon Steel	Commercial
7	Shaft Key	Carbon Steel	Commercial
8	In Hex Bolt	Carbon Steel	Commercial
9	O-ring	Rubber	NBR
10	Shaft Bearing	Carbon Steel + Bronze/PTFE	Commercial
11	In Hex Bolt	Carbon Steel	Commercial
12	Pin	Stainless Steel	AISI 431
13	In Hex Bolt	Carbon Steel	Commercial
14	Shaft Bearing	Carbon Steel + Bronze/PTFE	Commercial
*15	Position Plate	Ductile Iron	GJS 500-7
16	Hex Bolt	Carbon Steel	Commercial
17	In Hex Bolt	Carbon Steel	Commercial
18	Bottom Flange	Ductile Iron	GJS 500-7
19	O-ring	Rubber	NBR
20	Disc Seat	Stainless Steel/DI	316SS L/GJS500-7 +Exoxycoated
21	Body Seat	Rubber	EPDM
22	Wedge	Epoxy	Commercial
23	Operator	Worm Gear op.	Commercial
24	Hex Bolt	Stainless Steel	AISI 304

* 1. For size $\geq$ DN350

Dimension-DN100-500



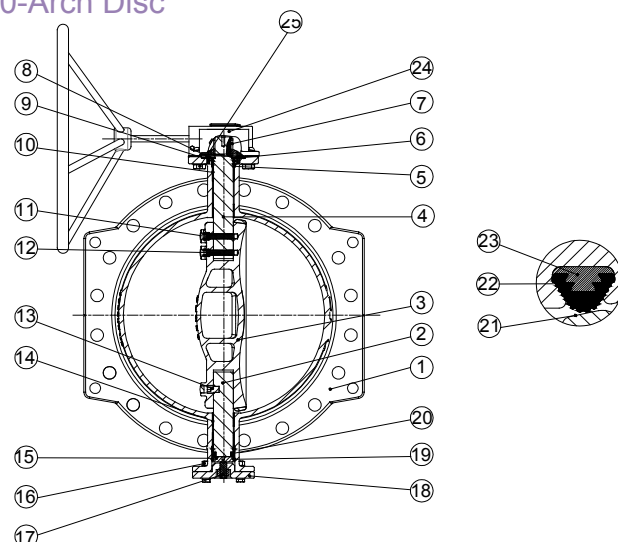
Top Flange (Gland) Standard ISO 5211

DN	ISO 5211	a1	b1	c1	Ød1	e1	DN	ISO 5211	a1	b1	c1	Ød1	e1
100	F07	15	4	18	12	15	350	F12	36	8	45	30	25
150	F10	25	6	30	20	18	400	F14	46	12	50	40	25
200	F10	31	8	45	25	18	450	F14	46	12	50	40	25
250	F10	31	8	45	25	20	500	F14	46	12	50	40	25
300	F12	36	8	45	30	18							

Unit: mm

DN	L		H1	H2	H3	ØB		ØK		ØD		n-Ød		C	
	#13	#14				PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16
100	127	190	155	155	25	156		180		220		8-Ø19		19	
150	140	210	212	215	40	211		240		285		8-Ø23		19	
200	152	230	248	250	48	266		295		340		8-Ø23	12-Ø23	20	
250	165	250	268	280	48	319		350	355	405		12-Ø23	12-Ø28	22	
300	178	270	322	315	50	370		400	410	460		12-Ø23	12-Ø28	24.5	
350	190	290	350	335	50	429		460	470	520		16-Ø23	16-Ø28	26.5	
400	216	310	375	355	55	480		515	525	580		16-Ø28	16-Ø31	28	
450	222	330	415	405	55	530	548	565	585	640		20-Ø28	20-Ø31	30	
500	229	350	450	425	55	582	609	620	650	715		20-Ø28	20-Ø34	31.5	

Main Valve-DN600-1200-Arch Disc

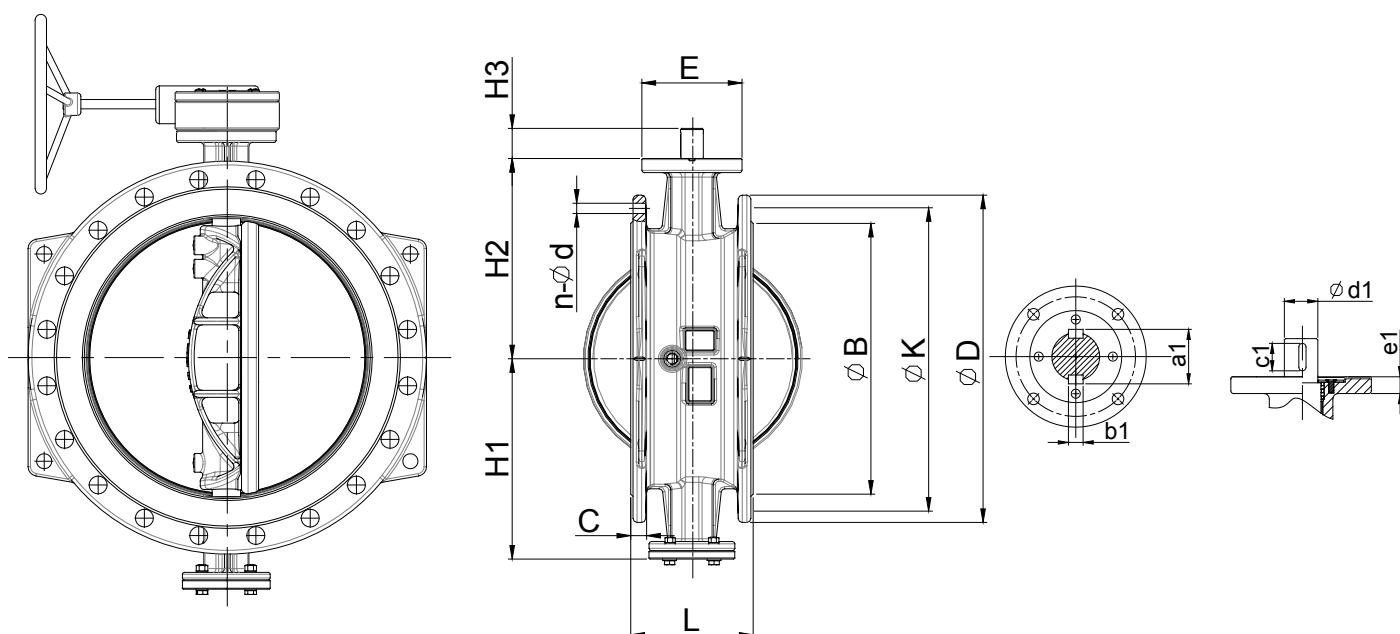


Parts List

No.	Part Name	Material	Standard
1	Body	Ductile Iron	GJS 500-7
2	Lower Shaft	Stainless Steel	AISI 420/304/316
3	Disc	Ductile Iron	GJS 500-7
4	Main Shaft	Stainless Steel	AISI 420/304/316
5	Backup Ring	Plastic	PTFE
6	Retaining Plate	Carbon Steel	Commercial
7	Shaft Key	Carbon Steel	Commercial
8	In Hex Bolt	Carbon Steel	Commercial
9	O-ring	Rubber	NBR
10	Shaft Bearing	Carbon Steel + Bronze/PTFE	Commercial
11	In Hex Bolt	Carbon Steel	Commercial
12	Pin	Stainless Steel	AISI 431
13	In Hex Bolt	Carbon Steel	Commercial
14	Shaft Bearing	Carbon Steel + Bronze/PTFE	Commercial
15	Position Plate	Carbon Steel	Commercial
16	Hex Bolt	Carbon Steel	Commercial
17	In Hex Bolt	Carbon Steel	Commercial
18	Bottom Flange	Ductile Iron	GJS 500-7
*19	Thrust Bearing	Steel	Commercial
20	O-ring	Rubber	NBR
21	Disc Seat	DI+Epoxy/Stainless Steel	316SS L/GJS500-7 + Epoxycoated
22	Body Seat	Rubber	EPDM
23	Wedge	Epoxy	Commercial
24	Operator	Worm Gear op.	Commercial
25	Hex Bolt	Stainless Steel	AISI 304

* 1. For size $\geq$ DN700. 2. Connction Bolts between top flange and operator 3. All worm gear outside bolts are AISI 304 shall be AISI 304

Dimension-DN600-1200



Top Flange (Gland) Standard ISO 5211

DN	ISO 5211		a1	b1	c1	Ød1	e1
	PN10	PN16					
600	F16		52	14	50	45	25
700	F16		68	18	70	60	25
800	F16	F25	68	18	70	60	25
900	F25		90	22	90	80	30
1000	F25		112	28	100	100	28
1200	F25		112	28	100	100	28

Unit: mm

DN	L		H1	H2	H3	ØB		ØK		ØD		n-Ød		C	
	#13	#14				PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16	PN10	PN16
600	267	390	520	525	55	682	720	725	770	780	840	20-Ø31	20-Ø37	30	36
700	292	430	600	565	75	794	794	840	840	895	910	24-Ø31	24-Ø37	32.5	39.5
800	318	470	660	640	75	901	901	950	950	1015	1025	24-Ø34	24-Ø40	35	43
900	330	510	725	718	100	1001	1001	1050	1050	1115	1125	28-Ø34	28-Ø40	37.5	46.5
1000	410	550	800	785	110	1112	1112	1160	1170	1230	1255	28-Ø37	28-Ø43	40	50
1200	470	630	950	940	110	1328	1328	1380	1390	1455	1485	32-Ø40	32-Ø49	45	57

*Other sizes are available upon request, please consult factory.

Operating Torque (Bare)

Unit: NM

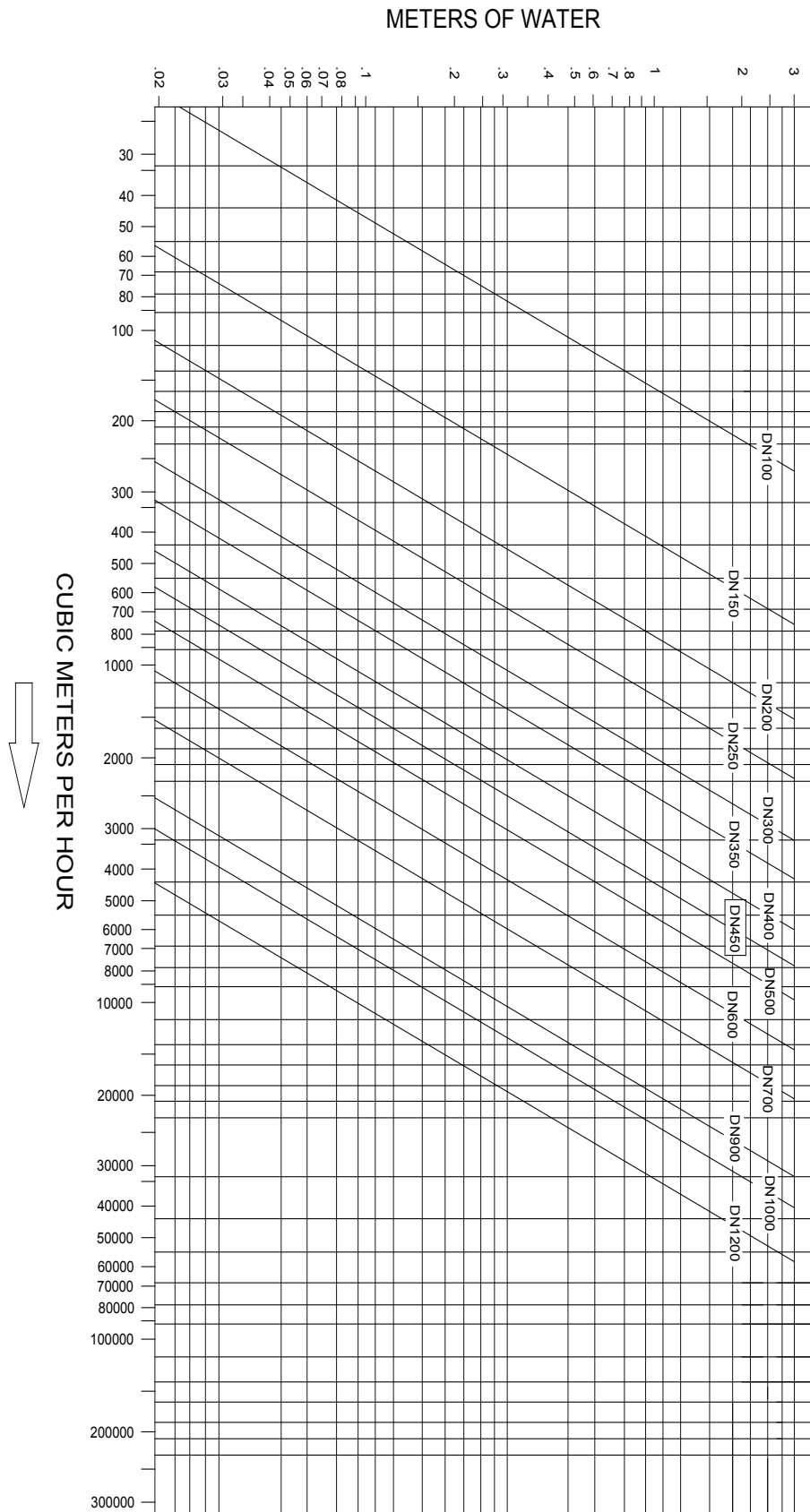
DN	Epoxy Coated Disc / SS Disc Seat		Actuator Mounting (ISO 5211)	
	PN 10	PN 16	PN 10	PN 16
100	70	85	F07	
150	118	128	F10	
200	190	210	F10	
250	228	250	F10	
300	345	372	F12	
350	600	760	F12	
400	960	1160	F14	
450	972	1280	F14	
500	1040	1680	F14	
600	1800	2500	F16	
700	1944	2592	F16	
800	3240	4428	F16	F25
900	4100	5300	F25	
1000	5850	7245	F25	
1200	8280	13320	F25	

Remarks: Above design data based on atmosphere temperature under normal water working condition, please consult factory for details.

Kv- Value

DN	Open Angel (°)								
	10°	20°	30°	40°	50°	60°	70°	80°	90°
100	8	12	26	62	124	168	311	495	624
150	13	51	103	173	276	442	719	1041	1184
200	17	108	191	304	488	794	1260	1854	2152
250	22	177	309	485	768	1242	1989	2897	3363
300	26	252	454	698	1099	1786	2835	4212	4843
350	33	302	622	1152	1702	2203	3652	6152	7302
400	51	351	761	1402	2142	2822	4602	7602	8402
450	55	414	952	1632	2522	3402	5602	8962	11002
500	67	472	1077	1922	2572	4582	7922	11812	14242
600	80	750	1718	3062	4100	7304	12612	18802	22682
700	97	868	2168	3982	5178	9272	16052	23432	28852
800	194	1390	3036	5576	7766	12702	22152	33472	46282
900	290	1762	3902	6972	9582	16822	28222	43452	52902
1000	362	2190	5056	8502	11442	21052	36162	52102	63402
1200	506	2733	6746	12261	15971	29201	48902	73802	90802

Head Loss



Ordering Code

FB G D-0400-16-F4-XXX

Model:

FB: Flange Butterfly Valve

Operator:

P: Pneumatic Operator

L: Lever Operator

G: Worm Gear Operator

E: Electric Operator

B: Bare Valve

Type:

D: Double Eccentric

Trim Code:

Please consult factory for different colour and other materials etc.

F3: EN558-1 Series 13

F4: EN558-1 Series 14

End Connection:

10: PN10

16: PN16

Valve Size:

0400: 400 mm

1200: 1200 mm