

612X 615X

CAST IRON 1.0MPa BUTTERFLY VALVES



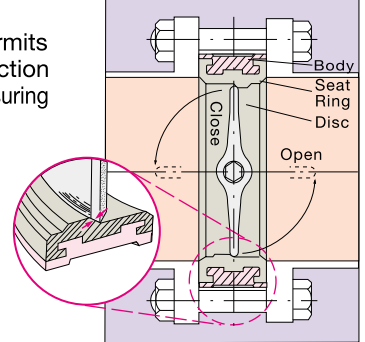
612XC-M

Wide Selection Range (40 to 1200 mm), 100% Tight Shut-off, Low Torque, Long Service Life

For Construction and General Industries

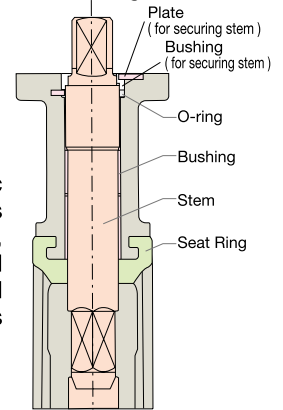
"Touch" Seat Design for Reliability and Low Cost

The unique "Touch" seat design permits the disc to close with virtually no friction between the disc and the valve seat, assuring leak-tight shut-off. Extremely low torque is required to open and close the disc, allowing the actuator to be surprisingly compact and light, and improving cost-efficiency.



Wear Resistance for Long Service Life

The "Touch" seat design minimizes wear on the seat ring. Each bushing mounted above and beneath the stem offers high wear and friction resistance, thus preventing galling and sticking, and assuring long life.



*Sizes of valves shown:
350 to 600 mm (14 to 24 inch)

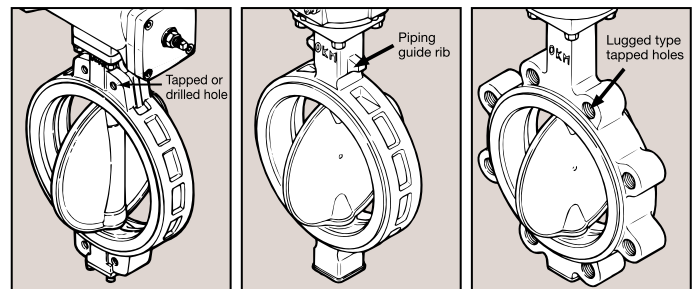
Multiple Sealing Structure Eliminates External Leaks

Primary sealing is provided between the disc and the seat ring, and secondary sealing is provided between the stem and the seat ring, thus assuring tight shut-off. An O-ring is mounted between the stem and the bushings for additional sealing. In addition, the valve is covered at its bottom to eliminate external leaks.

Pinless Structure for Trouble-Free Maintenance and Operation

The hexagonal stem is fitted into the matching hexagonal disc [nominal size: 40 to 600 mm (1 1/2 to 24 inch)] without pins, thus providing a smooth disc surface with minimum resistance to fluid flow and assuring easy maintenance. A bushing and a plate are provided at the upper part of the stem to prevent the stem from pulling out of the disc.

Piping Connection



- **A type** <Semi-lugged wafer type with tapped holes>
40 to 300 mm (semi-custom)
350 to 1200 mm (standard)
 - **B type** <Semi-lugged wafer type with drilled holes>
40 to 350 mm (semi-custom)
 - **C type** <Wafer type with piping guide rib>
40 to 300 mm (standard)
 - **E type** <Full-lugged type with tapped holes>
40 to 600 mm (manufactured upon order)
- *A type (350 to 1200 mm) and C type (40 to 300 mm) are standard.
Contact us if you need types other than the above.

JIS conformed product

PATENTED

Standard Specifications

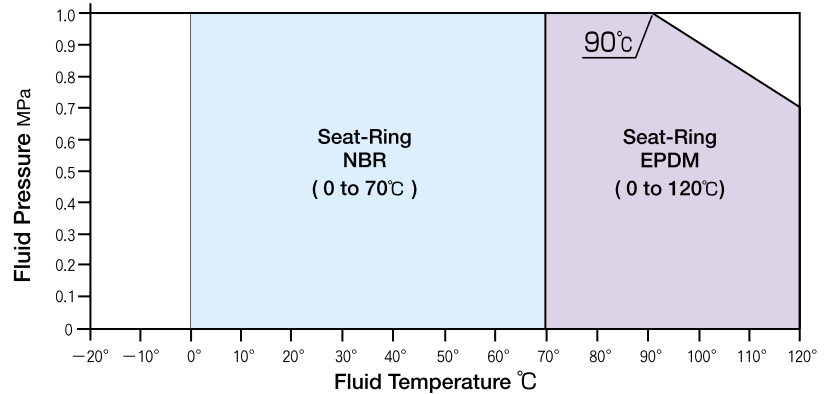
Model	612X	615X
Size	40 to 300mm	350 to 1200mm
Applicable Flange Std.	JIS5K, 10K, ANSI 150Lb, ISO, PN10	
Max. Service Pressure	1.0MPa	
Max. Service Temperature	0 to 70°C NBR	0 to 120°C EPDM
Hydrostatic Seat Test	1.5MPa	
Hydrostatic Shell Test	1.1MPa	
Face To Face	JIS B 2032 46 Series	
Actuators	Lever-Operated , Worm-Gear , Center Handle-Gear , Pneumatic-Cylinder , Electric-Motor	
Coating	Lacquer Primer (Munsell N5)	Lacquer Primer (Munsell N7)

Standard Materials

Part Name	Material	
	612X	615X
Body	C TYPE FDC450 A · B · E TYPE FC250	FC250
Disc	SCS14 (40 to 300mm) CAC701 (50 to 300mm)	SCS13 FDC450
Seat Ring	NBR, EPDM	
Spindle (stem)	SUS420J2	
O-ring	NBR	
Gasket	NBR	Asbestos-Free

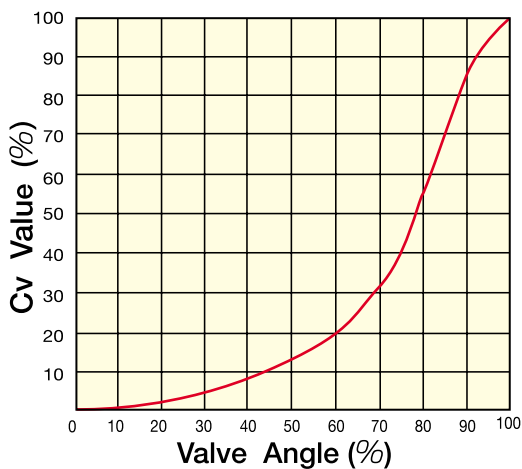
*Material and shape vary depending on the valve size.

Temperature and Pressure Ratings



*This table conforms to the JIS standard (JIS B 2032).
Contact us if you operate your valve outside the above pressure and temperature ranges.

Flow Characteristics

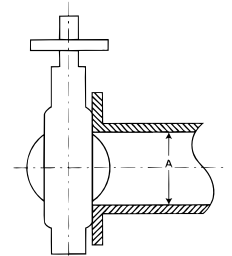


Cv Values with Valve Fully Open

Size (mm)	Full open Cv Value	Size (mm)	Full open Cv Value	Size (mm)	Full open Cv Value
40	102	300	6200	750	39500
50	165	350	7550	800	46000
65	250	400	10700	850	56000
80	380	450	13800	900	69400
100	650	500	17000	1000	80500
125	1100	550	21400	1100	99000
150	1790	600	25200	1200	118300
200	3300	650	28600	-	-
250	4400	700	35000	-	-

Min. Internal Diameters Of Piping

Nominal Size (mm)	Min. Internal Diameters Of Piping A
40	30
50	37
65	50
80	73
100	88
125	120
150	146
200	196
250	244
300	289

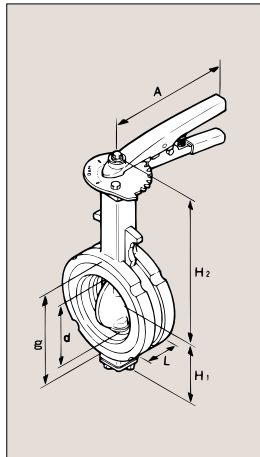


Reliability and Low Cost; these are the advantages that light-weight and compact butterfly valves offer.
OKM's unique "Touch" seat design and multiple sealing structure assure highly reliable and low cost operation.

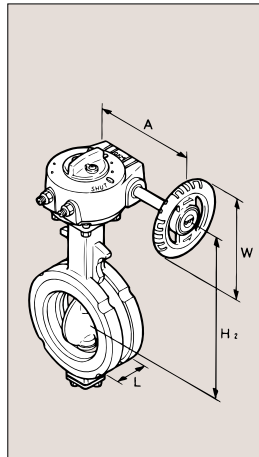
612X

● **Dimensions: 40 to 300 mm (1 1/2 to 12 inch)**

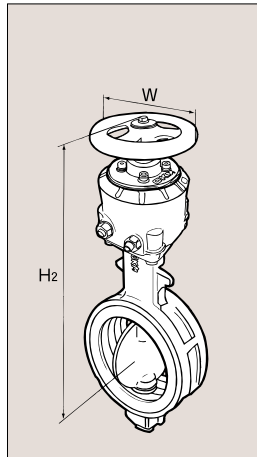
※Shapes vary according to saizes.



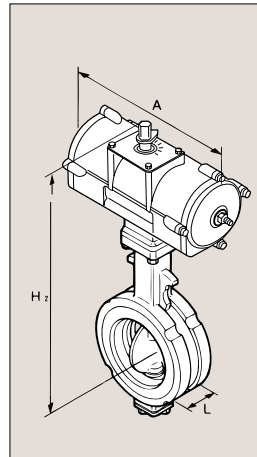
612X-L Lever-Operated



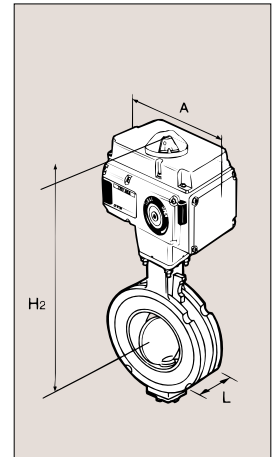
612X-G Worm-Gear



612X-GII Center-Handle



612X-C Pneumatic-Cylinder



612X-M Electric-Motor

For Option Unit (Positioner, Limit Switch, Solenoid valve, etc), contact us for assistance separately.

※Also we have the model:
612X-C II Single-Acting Type.

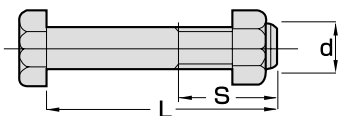
Nominal Size							612X-L Lever-Operated			612X-G Worm-Gear			612X-GII Center-Handle			612X-C Pneumatic-Cylinder			612X-M Electric-Motor		
inch	mm	L	d	g	H1	H2	A	Weight	H2	A	W	Weight	H2	W	Weight	H2	A	Weight	H2	A	Weight
1 1/2	40	33	43	43	66	166	160	2.4	159	132	100	4.0	270	100	4.6	270	236	3.8	301	180	6.2
2	50	43	55	81	69	174	160	2.9	167	132	100	4.5	278	100	5.1	278	236	4.3	309	180	6.7
2 1/2	65	46	66	104	80	187	160	3.8	177	132	100	5.4	288	100	6.0	288	236	5.2	319	180	7.6
3	80	46	84	115	89	192	200	4.0	182	132	100	5.5	293	100	6.1	293	236	5.3	324	180	7.7
4	100	52	100	136	106	204	200	4.9	194	132	100	6.4	305	100	7.0	305	236	6.0	387	277	15.1
5	125	56	130	167	123	234	260	8.0	215	170	125	10.2	329	140	10.1	358	276	10.8	407	277	17.8
6	150	56	154	196	138	249	260	9.8	230	170	125	12.0	344	140	11.9	404	342	15.7	422	277	19.6
8	200	60	200	242	168	288	360	15.0	259	197	160	17.8	408	200	21.8	457	420	22.4	471	301	26.4
10	250	68	246	300	223	-	-	-	319	255	200	32.0	458	200	30.4	507	420	31.0	521	301	35.0
12	300	78	295	346	260	-	-	-	349	255	200	46.0	488	200	44.4	583	506	54.0	551	301	49.0

(Weight : kg)

※200mm lever type is suitable for fluid pressure less than 0.5MPa.
 ※40 to 300mm motorized type will be CRV / RCEL / NOAH.

● Piping Bolt Sizes

For C type



For Type 612XA, 612XB, 612XE,
contact us for assistance separately.

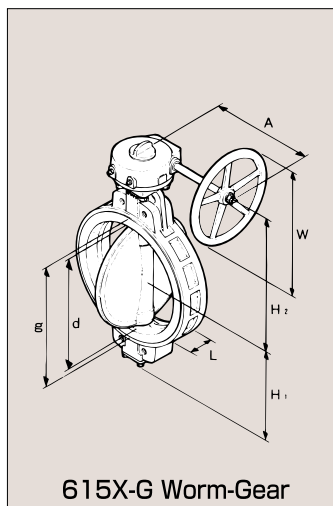
Nominal Size		JIS 5K		JIS 10K	
inch	mm	Qty	Hexagonal bolt&Nut d×L×S	Qty	Hexagonal bolt&Nut d×L×S
1 1/2	40	4	M12x 75x30	4	M16x 85x38
2	50	4	M12x 90x30	4	M16x100x38
2 1/2	65	4	M12x 90x30	4	M16x110x38
3	80	4	M16x100x38	8	M16x110x38
4	100	8	M16x110x38	8	M16x110x38
5	125	8	M16x110x38	8	M20x120x46
6	150	8	M16x120x38	8	M20x130x52
8	200	8	M20x130x52	12	M20x130x52
10	250	12	M20x140x52	12	M22x150x56
12	300	12	M20x150x52	16	M22x160x56

1. Bolt length applies to flange thicknesses that conform to JIS standard.
 2. The hexagonal bolt should use an 8UN splitnut.

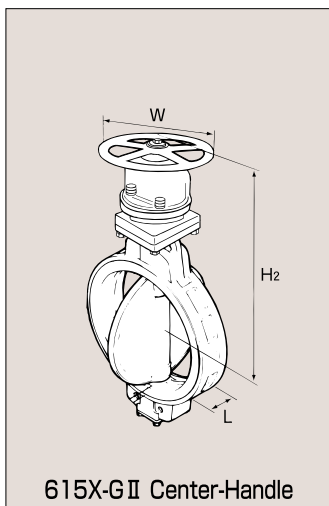
615X

● Dimensions: 350 to 1200 mm

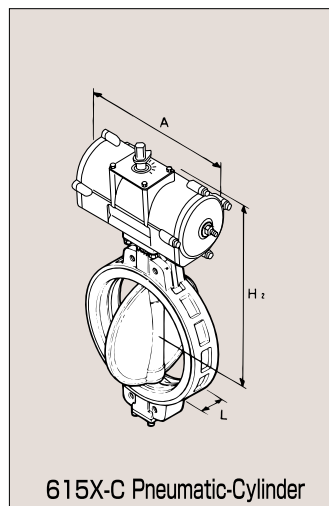
※Shapes vary according to sizes.



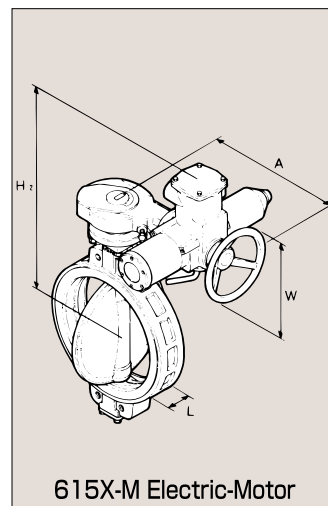
615X-G Worm-Gear



615X-GII Center-Handle



615X-C Pneumatic-Cylinder



615X-M Electric-Motor

※Also we have the model:
615X-CII Single-Acting Type

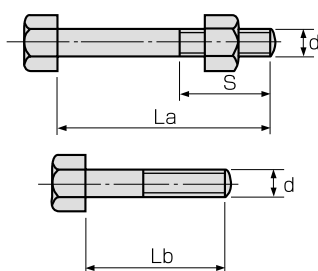
Nominal Size	inch	mm	615X-G Worm-Gear							615X-GII Center-Handle			615X-C Pneumatic-Cylinder			615X-M Electric-Motor			
			L	d	g	H ₁	H ₂	A	W	Weight	H ₂	A	Weight	H ₂	A	Weight	H ₂	A	W
14	350	92	336	389	289	369	335	315	72	511	315	61.7	605	516	73	743	607	254	164
16	400	102	390	448	322	415	320	315	94	626	355	94	707	664	148	783	607	254	184
18	450	114	439	504	345	445	320	315	116	702	355	129	737	664	170	813	607	254	206
20	500	127	490	554	379	493	331	355	167	752	355	167	850	987	236	853	607	254	228
22	550	154	540	608	410	523	392	450	199	848	450	238	1004	1060	299	883	607	254	255
24	600	154	589	658	445	558	392	450	233	883	450	272	1039	1060	333	918	607	254	289
26	650	170	634	708	468	664	513	305	349	-	-	-	1089	1060	420	928	607	254	341
28	700	165	684	756	496	709	549	305	433	-	-	-	1285	1360	610	978	643	254	508
30	750	190	731	810	540	749	549	305	598	-	-	-	1345	1360	700	1040	709	355	594
32	800	190	781	860	570	805	549	305	633	-	-	-	1375	1360	775	1070	709	355	696
34	850	203	835	911	682	862	549	305	686	-	-	-	-	-	-	1127	709	355	749
36	900	203	884	960	704	927	633	458	764	-	-	-	-	-	-	1192	788	355	843
40	1000	216	980	1050	778	982	633	458	1026	-	-	-	-	-	-	1247	838	530	1089
44	1100	254	1090	1162	873	1057	633	458	1310	-	-	-	-	-	-	1322	838	530	1373
48	1200	254	1189	1261	923	1133	674	610	1610	-	-	-	-	-	-	1398	861	530	1673

(Weight : kg)

※Motorized type of more than 350mm is selected according to the fluid pressure and power requirement. (CRV / RCEL / NOAH / Rotork)

● Piping Bolt Sizes

For A type



Nominal Size	JIS 5K						JIS 10K			
	inch	mm	Qty	Hex. bolt & nut d×La×S	Qty	Hex. bolt d×Lb	Qty	Hex. bolt & nut d×La×S	Qty	Hex. bolt d×Lb
14	350	8	M22x170x56	8	M22x55	12	M22x180x56	8	M22x60	
16	400	12	M22x190x56	8	M22x60	12	M24x190x60	8	M24x65	
18	450	12	M22x200x56	8	M22x55	16	M24x210x67	8	M24x65	
20	500	16	M22x210x56	8	M22x55	16	M24x220x73	8	M24x65	
22	550	16	M24x240x73	8	M24x65	16	M30x260x85	8	M30x75	
24	600	16	M24x240x73	8	M22x60	20	M30x260x85	8	M30x75	
26	650	20	M24x260x60	8	M24x60	20	M30x280x72	8	M30x65	
28	700	20	M24x260x60	8	M24x60	20	M30x270x72	8	M30x65	
30	750	20	M30x290x72	8	M30x65	20	M30x300x72	8	M30x75	
32	800	20	M30x290x72	8	M30x65	24	M30x300x72	8	M30x75	
34	850	20	M30x300x72	8	M30x70	24	M30x320x72	8	M30x75	
36	900	20	M30x310x72	8	M30x70	24	M30x320x72	8	M30x75	
40	1000	24	M30x320x72	8	M30x70	24	M36x350x84	8	M36x75	
44	1100	24	M30x370x72	8	M30x70	24	M36x390x84	8	M36x80	
48	1200	28	M30x370x72	8	M30x70	28	M36x390x84	8	M36x80	

1. Length of bolts are based on JIS standard and steel flange thickness.
2. Hexagonal bolts used 8 pitch nuts.
3. Hexagonal bolts & nuts, hexagonal bolts should be in a set. (350mm to 1200mm)
4. For Lug Type, 1 tap hole 2 bolts.