

# 612X 615X

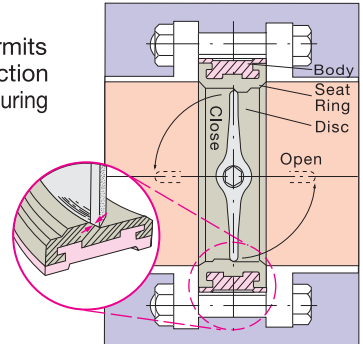
## CAST IRON 1.0MPa BUTTERFLY VALVES

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

#### For Construction and General Industries

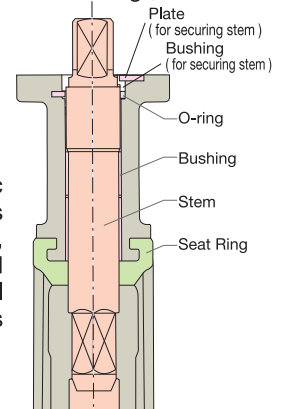
#### "Touch" Seat Design for Reliability and Low Cost

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)

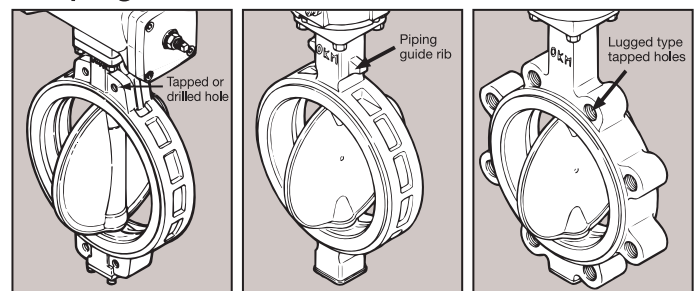
#### Multiple Sealing Structure Eliminates External Leaks

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.



612XC-M

JIS conformed product

PATENTED

## ● Standard Specifications

Model	612X	615X
Size	40mm to 300mm	350mm to 1200mm
Applicable Flange Std.	JIS5K, 10K, ASME 150Lb, ISO PN10	
Max. Service Pressure	1.0MPa	
Max. Service Temperature	-10 to 70°C NBR	-20 to 120°C EPDM※
Hydrostatic Seat Test	1.5MPa	
Hydrostatic Shell Test	1.1MPa	
Face To Face	JIS B 2002 46 Series	
Actuators	Lever-Operated , Worm-Gear , Center Handle-Gear , Pneumatic-Cylinder , Electric-Motor	
Coating	Epoxy Coating(Grey)	Epoxy Coating(Grey)

※In case of flow media contains oil or oil material, EPDM seat cannot be applicable.

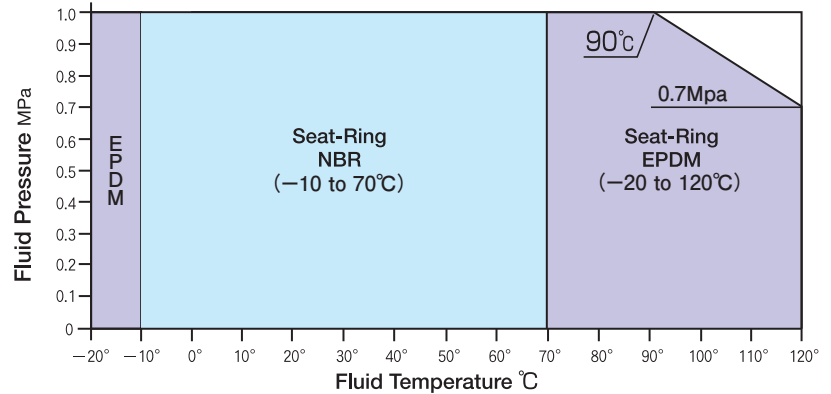
\*Please contact to us in case of using less than 0(Zero) temperature.

## ● Standard Materials

Part Name	Material	
	612X	615X
Body	C TYPE FCD450 A·B·E TYPE FC250	FC250
Disc	SCS14	SCS13 FCD450
Seat Ring	NBR, EPDM	
Stem	SUS420J2	
O-ring	NBR	
Gasket	NBR	Asbestos-Free

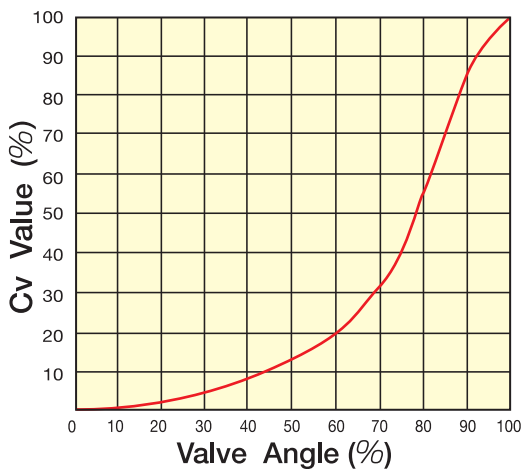
\*Material and shape vary depending on the valve size.

## ● 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.  
\*EPDM:Maximum temperature 100°C in case of continuous using.

## ● Flow Characteristics

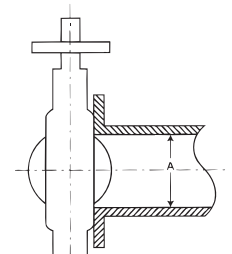


## ● Cv Values with Valve Fully Open

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

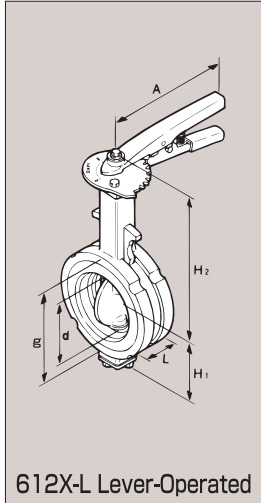


Reliability and Low Cost; these are the advantages that light-weight and compact butterfly valves offer.  
OKM's unique "Touch" seat design and multiple sealing structure assure highly reliable and low cost operation.

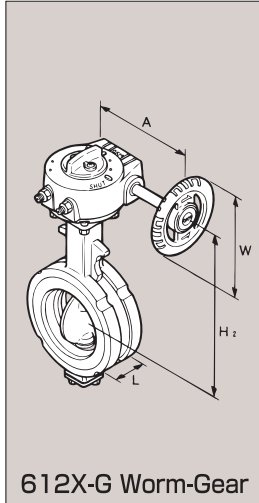
# 612X

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

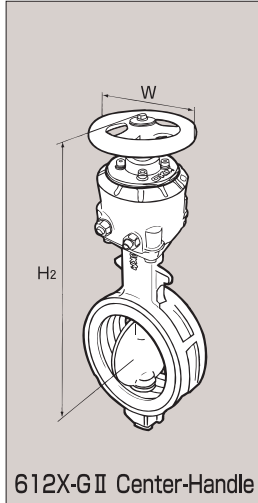
※Shapes vary according to sizes.



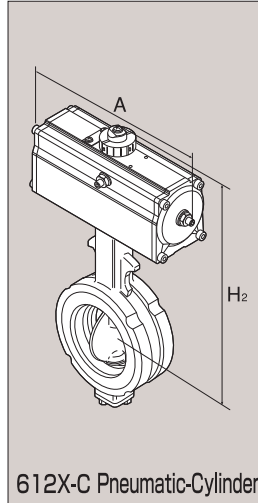
612X-L Lever-Operated



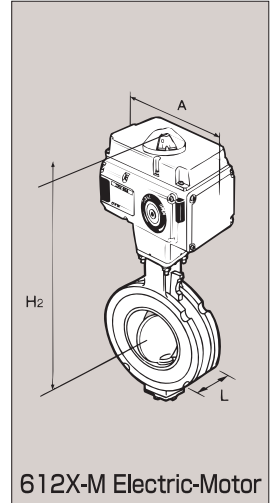
612X-G Worm-Gear



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-CII Single-Acting Type.

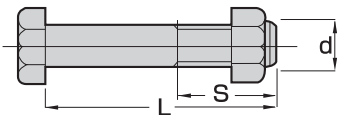
Nominal Size							612X-L Lever-Operated			612X-G Worm-Gear			612X-GII Center-Handle			612X-C Pneumatic-Cylinder			612X-M Electric-Motor		
inch	mm	L	d	g	H1	H2	A	Weight	H2	A	W	Weight	H2	W	Weight	H2	A	Weight	H2	A	Weight
1 1/2	40	33	43	69	66	166	160	2.4	159	132	100	4.0	270	100	4.6	230	179	3.2	301	180	6.2
2	50	43	55	81	69	174	160	2.9	167	132	100	4.5	278	100	5.1	238	179	3.7	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	248	179	4.6	319	180	7.6
3	80	46	84	115	89	192	200	4.0	182	132	100	5.5	293	100	6.1	253	179	4.7	324	180	7.7
4	100	52	100	136	106	204	200	4.9	194	132	100	6.4	305	100	7.0	265	179	5.6	387	277	15.1
5	125	56	130	167	123	234	260	8.0	215	170	125	10.2	329	140	10.1	330	271	11.1	407	277	17.8
6	150	56	154	196	138	249	260	9.8	230	170	125	12.0	344	140	11.9	345	271	12.9	422	277	19.6
8	200	60	200	242	168	288	360	15.0	259	197	160	17.8	408	200	22.0	401	355	21.0	471	301	27.0
10	250	68	246	300	223	-	-	-	319	255	200	32.0	458	200	31.0	483	445	41.0	521	301	35.0
12	300	78	295	346	260	-	-	-	349	255	200	46.0	488	200	45.0	513	445	51.0	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.

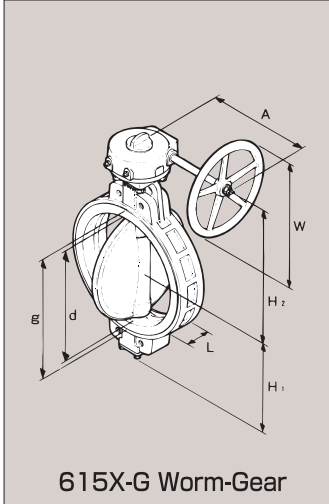
Nominal Size		JIS 5K		JIS 10K	
inch	mm	Qty	Hexagonal bolt&Nut d×L×S	Qty	Hexagonal bolt&Nut d×L×S
1 1/2	40	4	M12x 75x30	4	M16x 85x38
2	50	4	M12x 90x30	4	M16x100x38
2 1/2	65	4	M12x 90x30	4	M16x110x38
3	80	4	M16x100x38	8	M16x110x38
4	100	8	M16x110x38	8	M16x110x38
5	125	8	M16x110x38	8	M20x120x46
6	150	8	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.

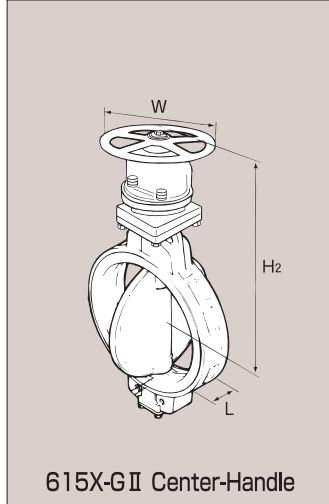
# 615X

● Dimensions: 350 to 1200 mm (14 to 48 inch)

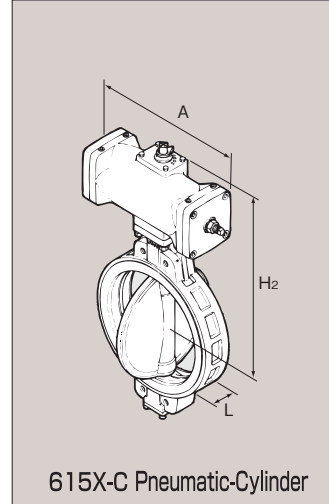
※Shapes vary according to sizes.



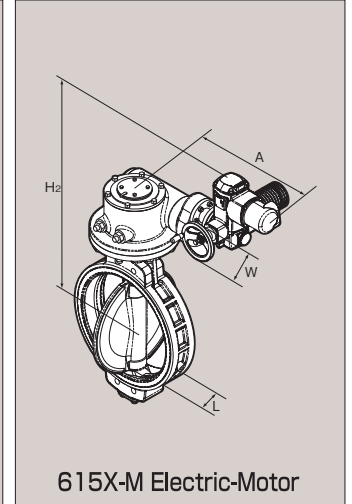
615X-G Worm-Gear



615X-GII Center-Handle



615X-C Pneumatic-Cylinder



615X-M Electric-Motor

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

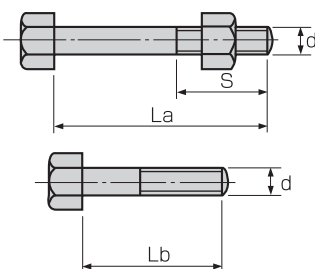
Nominal Size		615X-G Worm-Gear								615X-GII Center-Handle			615X-C Pneumatic-Cylinder			615X-M Electric-Motor			
inch	mm	L	d	g	H1	H2	A	W	Weight	H2	A	Weight	H2	A	Weight	H2	A	W	Weight
14	350	92	336	389	289	369	335	315	72	511	315	62	603	506	70	736	621	200	140
16	400	102	390	448	322	415	320	315	94	650	355	94	707	664	148	779	621	200	160
18	450	114	439	504	345	445	320	315	116	717	355	129	737	664	170	809	621	200	180
20	500	127	490	554	379	493	331	355	167	767	355	167	974	1060	266	854	621	200	215
22	550	154	540	608	410	523	392	450	199	860	450	238	1004	1060	299	894	623	250	250
24	600	154	589	658	445	558	392	450	233	895	450	272	1039	1060	333	929	623	250	280
26	650	170	634	708	468	647	421	390	350	-	-	-	1089	1060	420	934	623	250	335
28	700	165	684	756	496	722	454	390	410	-	-	-	1300	1360	610	983	659	250	490
30	750	190	731	810	540	762	454	390	495	-	-	-	1340	1360	700	1061	685	400	600
32	800	190	781	860	570	792	454	390	575	-	-	-	1370	1360	775	1091	685	400	690
34	850	203	835	911	682	933	538	450	720	-	-	-	-	-	-	1148	685	400	735
36	900	203	884	960	704	956	538	450	755	-	-	-	-	-	-	1212	765	400	815
40	1000	216	980	1050	778	1011	538	450	1015	-	-	-	-	-	-	1298	789	500	1145
44	1100	254	1090	1162	873	1154	632	590	1560	-	-	-	-	-	-	1373	789	500	1365
48	1200	254	1189	1261	923	1224	632	590	1810	-	-	-	-	-	-	1449	811	500	1710

(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 d×La×S	Qty	Hex. bolt d×Lb	Qty	Hex. bolt 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	M24x60	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.

3. Hexagonal bolts & nuts, hexagonal bolts should be in a set. ( 350mm to 1200mm)

2. Hexagonal bolts used 8 pitch nuts.

4. For Lug Type, 1 tap hole 2 bolts.