

# Catalogue

## OKM Butterfly Valve Model 615



**OKM**



Cert. No. Q17412

# 615X

**Butterfly Valves**

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

For Construction and General Industries



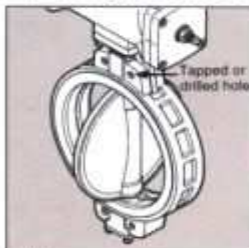
**OKUMURA ENGINEERING corp.**

# Butterfly Valves for Construction and General Industries Offer Proven Low Torque and Long Service Life.



\* The figure shows the 400 mm (16 inch) nominal size 615X.

## ■ Piping Connection

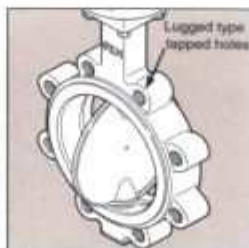


- **A type** <Semi-lugged wafer type with tapped holes>  
40 to 300 mm (1 1/2 to 12 inch) (semi-custom)  
350 to 1200 mm (14 to 48 inch) (standard)

- **B type** <Semi-lugged wafer type with drilled holes>  
40 to 350 mm (1 1/2 to 14 inch) (semi-custom)



- **C type** <Wafer type with piping guide rib>  
40 to 300 mm (1 1/2 to 12 inch) (standard)

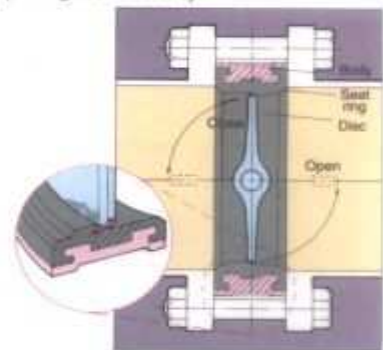


- **E type** <Full-lugged type with tapped holes>  
40 to 600 mm (1 1/2 to 24 inch) (manufactured upon order)

\* A type [350 to 1200 mm (14 to 48 inch)] and C type [40 to 300 mm (1 1/2 to 12 inch)] are standard. Contact us if you need types other than the above.

## “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.

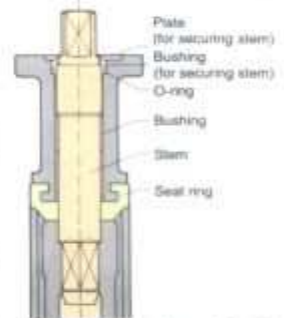


## Wear Resistance for Long Service Life

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.

## 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.



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

## Pinless Structure for Trouble-Free Maintenance and Operation

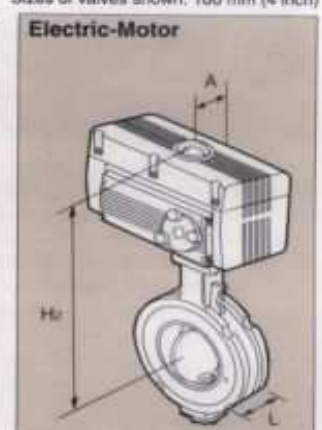
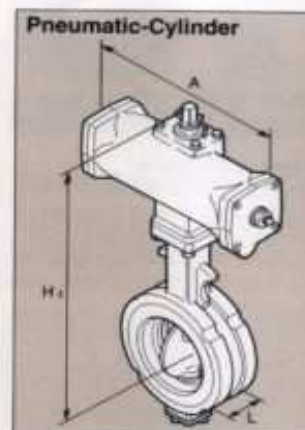
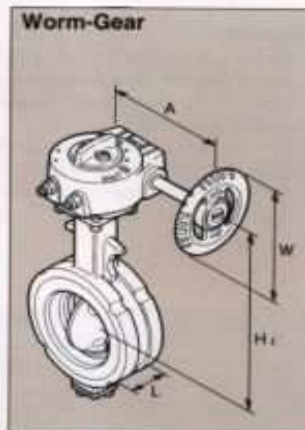
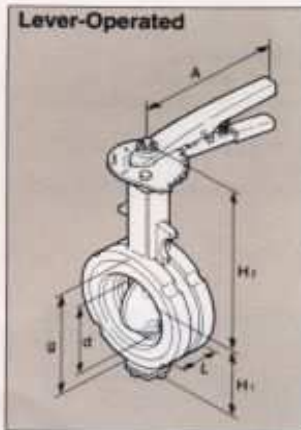
The hexagonal stem is fitted into the matching hexagonal disc [nominal size: 40 to 600 mm (1 1/2 to 24 inch)] without pins, thus providing a smooth disc surface with minimum resistance to fluid flow and assuring easy maintenance. A bushing and a plate are provided at the upper part of the stem to prevent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



*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.*

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

Sizes of valves shown: 100 mm (4 inch)



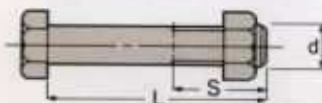
Nominal size	Face to Face					Lever-Operated			Worm-Gear				Pneumatic-Cylinder			Electric-Motor		
	inch	mm	L	d	g	H <sub>1</sub>	H <sub>2</sub>	A	Weight	H <sub>1</sub>	A	W	Weight	H <sub>1</sub>	A	Weight	H <sub>1</sub>	A
1 1/2	40	33	43	69	66	166	160	2.4	159	132	100	4.0	275	192	3.4	303	138	10.7
2	50	43	55	81	69	174	160	2.9	167	132	100	4.5	283	192	3.9	311	138	11.2
2 1/2	65	46	66	104	80	187	160	3.8	177	132	100	5.4	293	192	4.7	321	138	12.1
3	80	46	84	115	89	192	200	4.0	182	132	100	5.5	298	234	5.3	326	138	12.2
4	100	52	100	136	106	204	200	4.9	194	132	100	6.4	310	234	6.2	338	138	13.1
5	125	56	130	167	123	234	260	8.0	215	170	125	10.2	361	284	10.8	358	138	15.8
6	150	56	154	196	138	249	260	9.8	230	170	125	12.0	403	362	15.7	373	138	17.6
8	200	60	200	242	168	288	360	15.0	259	197	160	17.8	455	416	23.7	416	106	24.4
10	250	68	251	300	223	-	-	-	319	255	200	32.0	505	416	35.0	466	106	33.0
12	300	78	297	346	260	-	-	-	349	255	200	46.0	585	516	54.0	496	106	47.0

(Weight: kg)

\* The applicable fluid pressure for the 200 mm (8 inch) lever operated type is 0.49 MPa (5 kgf/cm<sup>2</sup>) or less.

**■ Piping Bolt Sizes**

For C type



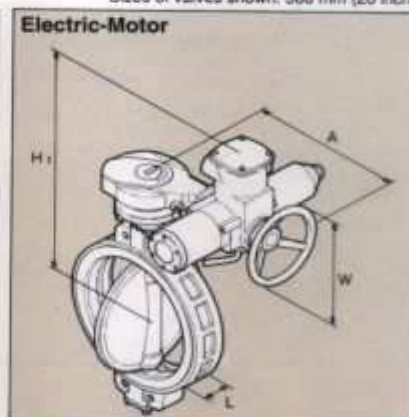
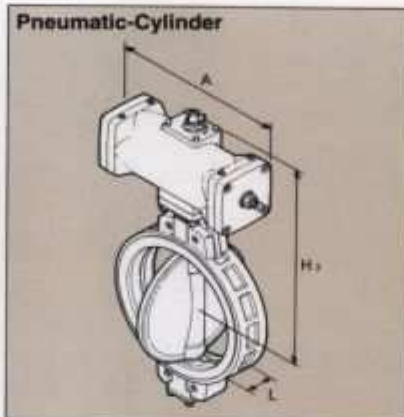
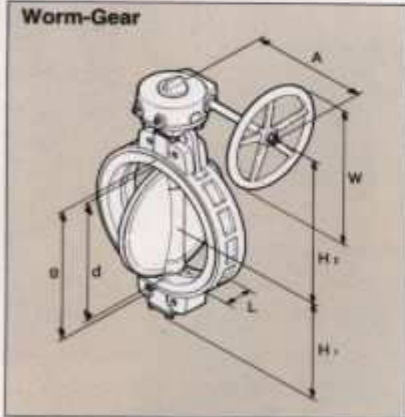
Nominal Size		JIS 5K		JIS 10K	
inch	mm	Qty	Hexagonal Bolt & Nut d×L×S	Qty	Hexagonal Bolt & Nut d×L×S
1 1/2	40	4	M12×75×30	4	M16×85×38
2	50	4	M12×90×30	4	M16×100×38
2 1/2	65	4	M12×90×30	4	M16×110×38
3	80	4	M16×100×38	8	M16×110×38
4	100	8	M16×110×38	8	M16×110×38
5	125	8	M16×110×38	8	M20×120×46
6	150	8	M16×120×38	8	M20×130×52
8	200	8	M20×130×52	12	M20×130×52
10	250	12	M20×140×52	12	M22×150×56
12	300	12	M20×150×52	16	M22×160×56

\* Bolt length applies to flange thicknesses that conform to JIS standard.

# 615X

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

Sizes of valves shown: 500 mm (20 inch)



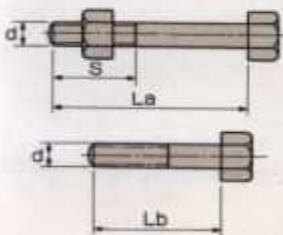
Nominal size		Face to Face				Worm-Gear				Pneumatic-Cylinder			Electric-Motor			
inch	mm	L	d	g	H <sub>1</sub>	H <sub>2</sub>	A	W	Weight	H <sub>2</sub>	A	Weight	H <sub>2</sub>	A	W	Weight
14	350	92	336	389	289	369	335	315	72	605	516	73	743	607	254	164
16	400	102	390	448	322	415	320	315	94	707	664	148	783	607	254	184
18	450	114	439	504	345	445	320	315	116	737	664	170	813	607	254	206
20	500	127	490	554	379	493	331	355	167	850	987	236	853	607	254	228
22	550	154	540	608	410	523	392	450	199	1004	1060	299	883	607	254	255
24	600	154	589	658	445	558	392	450	233	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)

\* Contact us for details on the figures shown above.

## Piping Bolt Sizes

For A type



Nominal size		JIS 5K				JIS 10K			
inch	mm	Qty	Hexagonal Bolt & Nut d x La x S	Qty	Hexagonal Bolt d x Lb	Qty	Hexagonal Bolt & Nut d x La x S	Qty	Hexagonal Bolt d x Lb
14	350	12	M22 x 170 x 56	8	M22 x 55	12	M22 x 180 x 56	8	M22 x 60
16	400	12	M22 x 190 x 56	8	M22 x 60	12	M24 x 190 x 60	8	M24 x 65
18	450	12	M22 x 200 x 56	8	M22 x 55	16	M24 x 210 x 67	8	M24 x 65
20	500	16	M22 x 210 x 56	8	M22 x 55	16	M24 x 220 x 73	8	M24 x 65
22	550	16	M24 x 240 x 73	8	M24 x 65	16	M30 x 280 x 85	8	M30 x 75
24	600	16	M24 x 240 x 73	8	M22 x 60	20	M30 x 260 x 85	8	M30 x 75
26	650	20	M24 x 260 x 60	8	M24 x 60	20	M30 x 270 x 72	8	M30 x 70
28	700	20	M24 x 260 x 60	8	M24 x 60	20	M30 x 270 x 72	8	M30 x 65
30	750	20	M30 x 290 x 72	8	M30 x 65	20	M30 x 300 x 72	8	M30 x 75
32	800	20	M30 x 290 x 72	8	M30 x 65	24	M30 x 300 x 72	8	M30 x 75
34	850	20	M30 x 300 x 72	8	M30 x 70	24	M30 x 320 x 72	8	M30 x 75
36	900	20	M30 x 310 x 72	8	M36 x 70	24	M36 x 320 x 72	8	M30 x 75
40	1000	24	M30 x 320 x 72	8	M36 x 70	24	M36 x 350 x 72	8	M36 x 75
44	1100	24	M30 x 370 x 72	8	M36 x 70	24	M36 x 390 x 85	8	M36 x 80
48	1200	28	M30 x 370 x 72	8	M36 x 70	28	M36 x 390 x 85	8	M36 x 80

1. Bolt length applies to flange thicknesses that conform to JIS standard.

2. The hexagonal bolt should use an BUN splitnut.

3. All Valve sizes require the hexagonal bolt/nut sets. Valve sizes 400 to 1200 mm (16 to 48 inch) also require the hexagonal bolts.

600 mm  
24 inch



## Standard Specifications

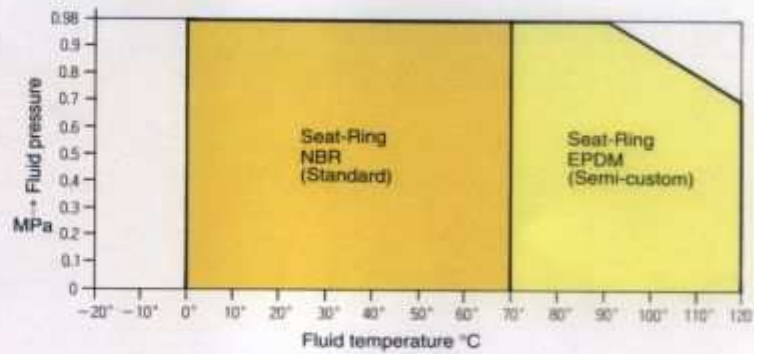
<b>Model</b>	615X wafer type butterfly valve	<b>Actuators</b>	Lever-Operated, Worm-Gear, Pneumatic-Cylinder, Electric-Motor
<b>Applicable Flange Std.</b>	JIS 5K + 10K, ANSI 125 Lb + 150 Lb, ISO PN 10	<b>Face to Face</b>	Conforms to JIS: 40 to 300 mm (1 1/2 to 12 inch) (No. 46), 350 to 600 mm (14 to 24 inch) (No. 47), 650 mm (25 inch) (No. 44) 700 to 1200 mm (28 to 48 inch) (No. 45)
<b>Max. Service Pressure</b>	0.98 MPa (10.0 kgf/cm <sup>2</sup> )	<b>Coating</b>	N-7 (Gray)
<b>Size</b>	40 to 1200 mm (1 1/2 to 48 inch)	<b>Hydrostatic Shell Test</b>	1.47 MPa (15.0 kgf/cm <sup>2</sup> )
<b>Max. Service Temperature</b>	0 to 70 °C (32 to 141 °F) NBR, 0 to 120 °C (32 to 248 °F) EPDM	<b>Hydrostatic Seal Test</b>	1.08 MPa (11.0 kgf/cm <sup>2</sup> )

## Standard Materials

Part name	Material
Body	FC 250
Disc	AL6C (50 To 200mm) FCD 480 (250 To 1200mm) SCS 14 (40 To 200mm) SCS 13 (250 To 1200mm)
Seat Ring	NBR, EPDM
Upper stem	SUS 403
Lower stem	SUS 403
Bushing	Reinforced plastic
Bushing (for securing stem)	Reinforced plastic
Plate (for securing stem)	SS 400 (galvanized)
O-ring	NBR
Gasket	Asbestos-Free

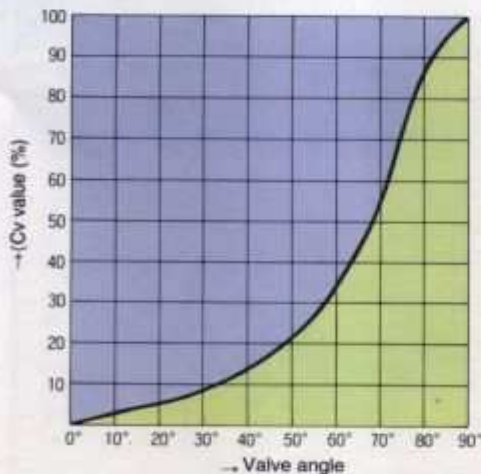
\* Material and shape vary depending on the valve size.

## 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)	Cv value	Size (mm)	Cv value	Size (mm)	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	--	--

# 615<sup>SERIES</sup> Butterfly Valves

Butterfly Valves for Construction and General Industries Offer Proven Low Torque and Long Service Life.

Unique "Touch" Seat Design for Reliability and Low Cost

Unique "S-Shaped" Disc Enhances Infinite Flow Control



**615W/WAFER type** (Working Pressure 10kgf/cm<sup>2</sup>(0.98MPa)·16kgf/cm<sup>2</sup>(1.56MPa))  
**615 L/LUG type** (Working Pressure 10kgf/cm<sup>2</sup>(0.98MPa)·16kgf/cm<sup>2</sup>(1.56MPa))

Cert. No. Q17412



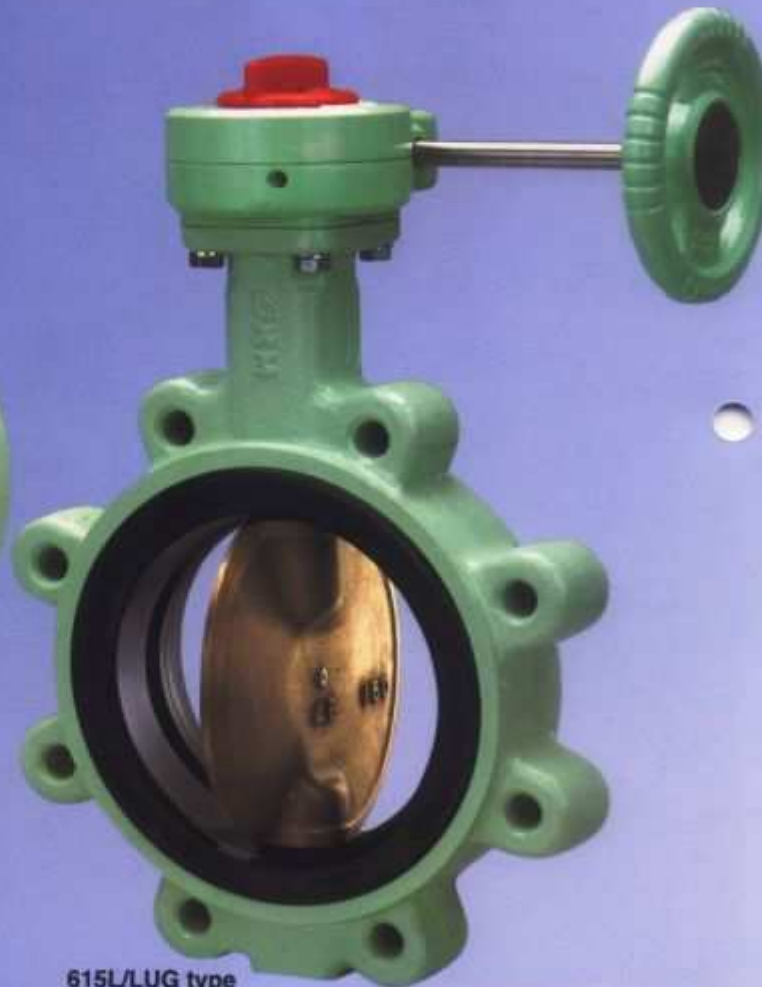
**OKUMURA**

# Butterfly Valves for Construction and General Industries Offer Proven Low Torque and Long Service Life.

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.



**615W/WAFER type**  
Working Pressure  
10kgf/cm<sup>2</sup> · 16kgf/cm<sup>2</sup>



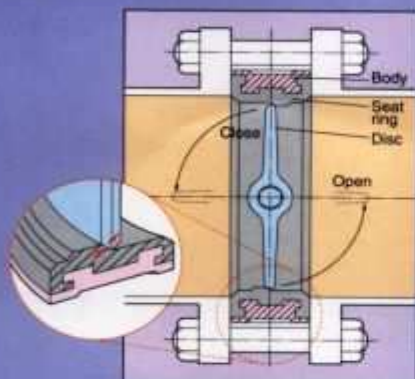
**615L/LUG type**  
Working Pressure  
10kgf/cm<sup>2</sup> · 16kgf/cm<sup>2</sup>

Design and materials are subject to change without notice.



## Unique "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.

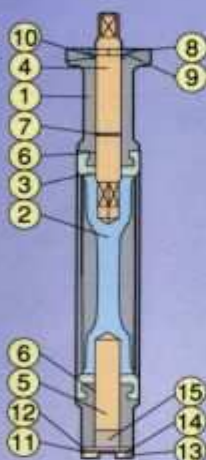


## Wear Resistance for Long Service Life

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.

## 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.

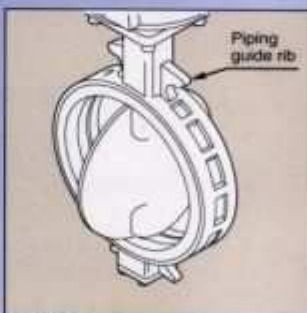
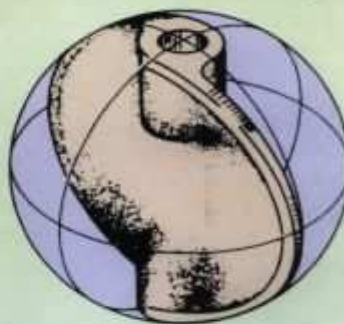


## Pinless Structure for Trouble-Free Maintenance and Operation

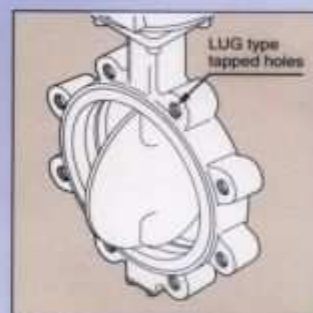
The hexagonal stem is fitted into the matching hexagonal disc [nominal size: 50 to 300mm (2 to 12 inch)] without pins, thus providing a smooth disc surface with minimum resistance to fluid flow and assuring easy maintenance. A bushing and a plate are provided at the upper part of the stem to prevent the stem from pulling out of the disc.

## Unique "S-Shaped" Disc Enhances Infinite Flow Control

The "S-Shaped" disc enhances the Cv rating and promotes flow control with minimum turbulence. The valve can be operated at the lowest possible operating torque with bubble-tight shutoff at the maximum operating pressure.



●615W type  
(WAFFER type with piping guide rib)



●615L type  
(LUG type with tapped holes)

## STANDARD SPECIFICATIONS & MATERIALS

Max. Working Pressure (Non-Shock)	10 kgf/cm <sup>2</sup> (0.98MPa)		16 kgf/cm <sup>2</sup> (1.56MPa)	
	615W WAFFER type	615L LUG type	615W WAFFER type	615L LUG type
Model	615W WAFFER type	615L LUG type	615W WAFFER type	615L LUG type
Applicable Flange Standard	5K, 10K ANSI 125, 150lb ISO PN10 others	ANSI 125, 150lb only	5K, 10K ANSI 125, 150lb ISO PN10 others	ANSI 125, 150lb only
Body	Standard	FC250:50-300mm	FC250:50-150mm FCD450:200-300mm	
	Option	FCD450:50-300mm	FCD450:50-150mm	
Disc	AIBC:Aluminium Bronze SCS14:Stainless Steel		SCS13:Stainless Steel SCS14:Stainless Steel	
Max. Temp.	NBR:80°C EPDM:120°C			
Seat Ring	NBR EPDM		NBR EPDM(Optional)	

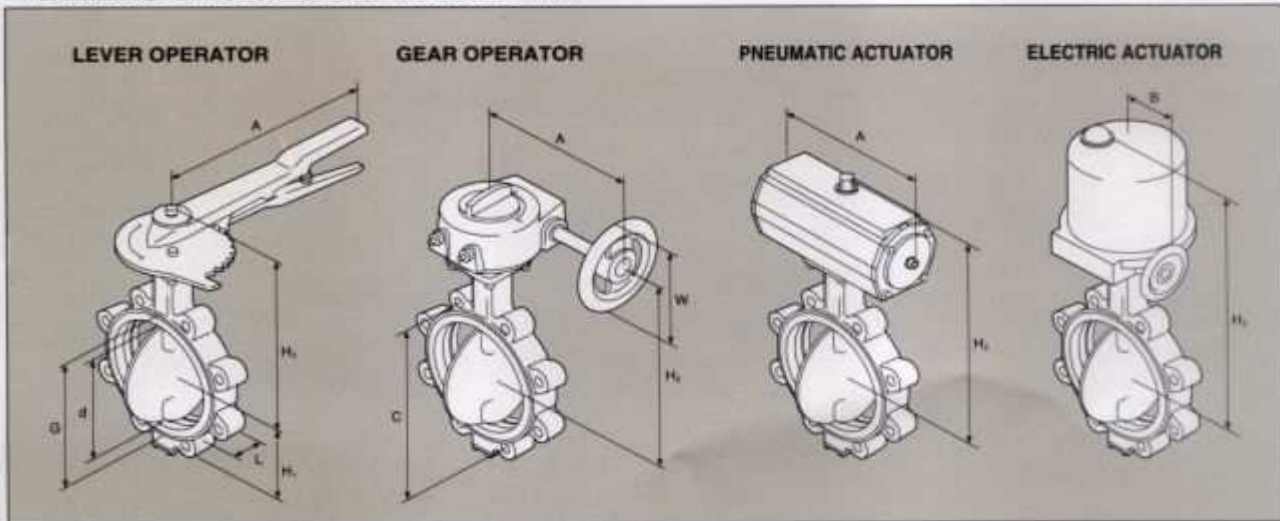
If you inquire of this model state us clearly the working pressure.

## NOMENCLATURE & MATERIALS

1 Body	Cast iron	9 Bush	Plastic
2 Disc	Stainless steel or aluminum-bronze	10 O-ring	Buna-N
3 Seat ring	EPDM or Buna-N	11 Cover	Carbon steel(Zinc plated)
4 Upper stem	Stainless steel	12 Gasket	Asbestos free
5 Lower stem	Stainless steel	13 Cover bolt	Carbon steel(Zinc plated)
6 Bush	Plastic	14 Spring washer	Carbon steel(Zinc plated)
7 Ring	Stainless steel	15 Distance piece	Stainless steel
8 Screws	Carbon steel(Zinc plated)		

Design and materials are subject to change without notice.

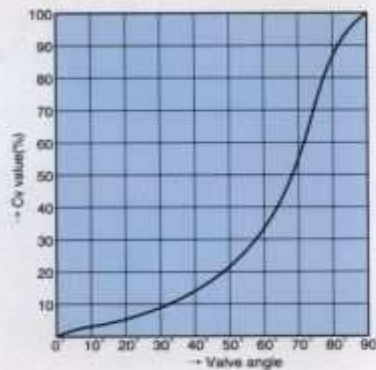
## DIMENSIONS OF 615W & 615L TYPE



Nominal Bore		LEVER OPERATOR					GEAR OPERATOR					PNEUMATIC ACTUATOR				ELECTRIC ACTUATOR							
inch	mm	L	d	G	H <sub>1</sub>	C	H <sub>2</sub>	A	Weight		H <sub>2</sub>	A	W	Weight		H <sub>2</sub>	A	Weight		H <sub>2</sub>	B	Weight	
									615W	615L				615W	615L			615W	615L			615W	615L
2	50	43	55	90	69	120.5	174	200	3.1	4.1	167	133	100	3.4	4.4	283	133	4.9	5.9	433	120	9.4	10.4
2½	65	46	66	114	80	139.5	187	200	3.9	4.9	177	133	100	4.2	5.2	293	133	5.8	6.8	443	120	10.3	11.3
3	80	46	84	125	89	152.5	192	200	4.1	5.2	182	133	100	4.4	5.5	298	133	5.9	7	448	120	10.4	11.5
4	100	52	100	146	106	190.5	204	200	5.1	7.9	194	133	100	5.4	8.2	310	133	6.8	9.6	460	120	11.3	14.1
5	125	56	130	179	123	216	240	360	8.7	12.5	215	172	125	7.7	11.5	392	185	13.3	17.1	529	135	19	22.8
6	150	56	154	210	138	241.5	255	360	11	14.3	230	172	125	10	13.3	407	185	15.1	18.4	544	135	20.8	24.1
8	200	60	200	256	168	298.5	—	—	—	—	259	197	160	15.1	20	469	236	23.8	28.7	598	185	31.1	36
10	250	68	246	320	223	362	—	—	—	—	319	255	200	37.8	47.4	519	236	32.4	42	648	185	41.2	50.8
12	300	78	295	365	260	432	—	—	—	—	349	255	200	49.4	51.9	599	270	52	64.5	698	195	63.5	76

The applicable fluid pressure for the 200mm(8inch) lever operated type is 0.49MPa(5kgf/cm<sup>2</sup>) or less.  
The size of PNEUMATIC ACTUATOR & ELECTRIC ACTUATOR are for 10kgf/cm<sup>2</sup> only.

## PERFORMANCE DATA



## PIPING BOLTS & NUTS OF 615W & 615L

Nominal Bore		615W						615L	
inch	mm	JIS 10K		JIS 16K		ANSI 125Lb/150Lb		ANSI 125Lb/150Lb	
		Qty	Hexagonal Bolt & Nut	Qty	Hexagonal Bolt & Nut	Qty	Hexagonal Bolt & Nut	Qty	Hexagonal Bolt & Nut
2	50	4	M16 × 100 × 38	8	M16 × 100 × 38	4	5/8-11UNC × 100 × 38	8	5/8-11UNC × 38
2½	65	4	M16 × 110 × 38	8	M16 × 110 × 38	4	5/8-11UNC × 115 × 38	8	5/8-11UNC × 40
3	80	8	M16 × 110 × 38	8	M20 × 120 × 46	4	5/8-11UNC × 115 × 38	8	5/8-11UNC × 45
4	100	8	M16 × 110 × 38	8	M20 × 130 × 52	8	5/8-11UNC × 130 × 38	16	5/8-11UNC × 45
5	125	8	M20 × 120 × 46	8	M20 × 130 × 56	8	3/4-10UNC × 130 × 48	16	3/4-10UNC × 50
6	150	8	M20 × 130 × 52	12	M22 × 140 × 56	8	3/4-10UNC × 140 × 48	16	3/4-10UNC × 50
8	200	12	M20 × 130 × 52	12	M22 × 150 × 56	8	3/4-10UNC × 140 × 48	16	3/4-10UNC × 55
10	250	12	M22 × 150 × 56	12	M24 × 160 × 60	12	7/8-9UNC × 165 × 56	24	7/8-9UNC × 56
12	300	16	M22 × 160 × 56	16	M24 × 170 × 60	12	7/8-9UNC × 175 × 56	24	7/8-9UNC × 65

Specification and design are subject to change without notice.



# OKM VALVE(M) SDN. BHD.

HEAD OFFICE & FACTORY  
Lot No. 12, Jalan 26/1, Section 26, Kawasan Perindustrian Hicom,  
40000 Shah Alam, Selangor Darul Ehsan, Malaysia.  
Telephone 60-3-511-1411 Facsimile 60-3-511-1366

Design and materials are subject to change without notice.