700S, originally designed for marine applications and expanded the area into various Industrial applications.

Trouble free and minimum maintenance proven by more than 30years in service with reliable construction and features.

Immediate replacements model for FIG.700E and 700K(both discontinued) with the same design features and construction (Other than alignment holes).
The face to face dimensions are the same as 700E/K with interchangeable seat and Disc assembly designs.

Features

1.Raised Seat Ring

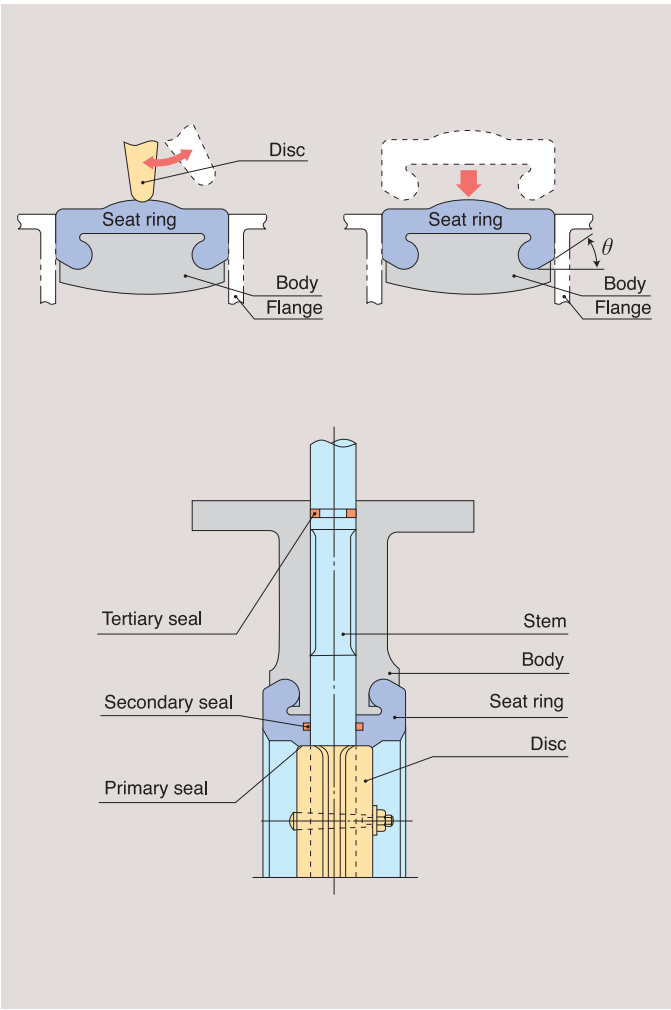
The central part of seat ring is raised so that the disc is thrust into it when the valve is closed, and the resilient force of elastomer maintains bubble-tight shutoff. Various types of material are available for the seat ring to meet with service requirement.

2.Rounded Dove-Tail Design

The unique rounded dove-tail design net only makes it easy for replacement of seat ring but also prevents it from stripping off the body. This design eliminates the need of gasket when butterfly valve is installed in between piping flanges.

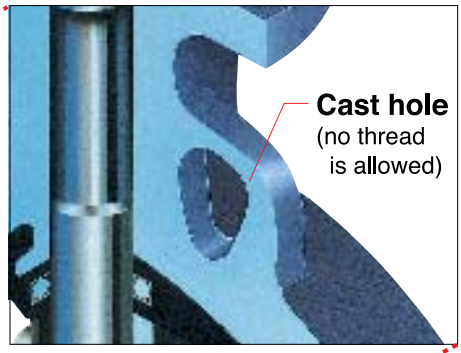
3.Tripple Seals

In addition to the primary seal between the seat ring and disc, two O-rings are provided on the top and bottom seat ring glands to form the secondary seal. Another "O"ring on the upper item gland serves as the third seal for prevention of fluid leakage and intrusion of dusts. This triple sealing system ensures non-leakage. The stainless steel housings for "O"rings on the seat ring glands help to stiffen them up and improve wear resistance.



700S

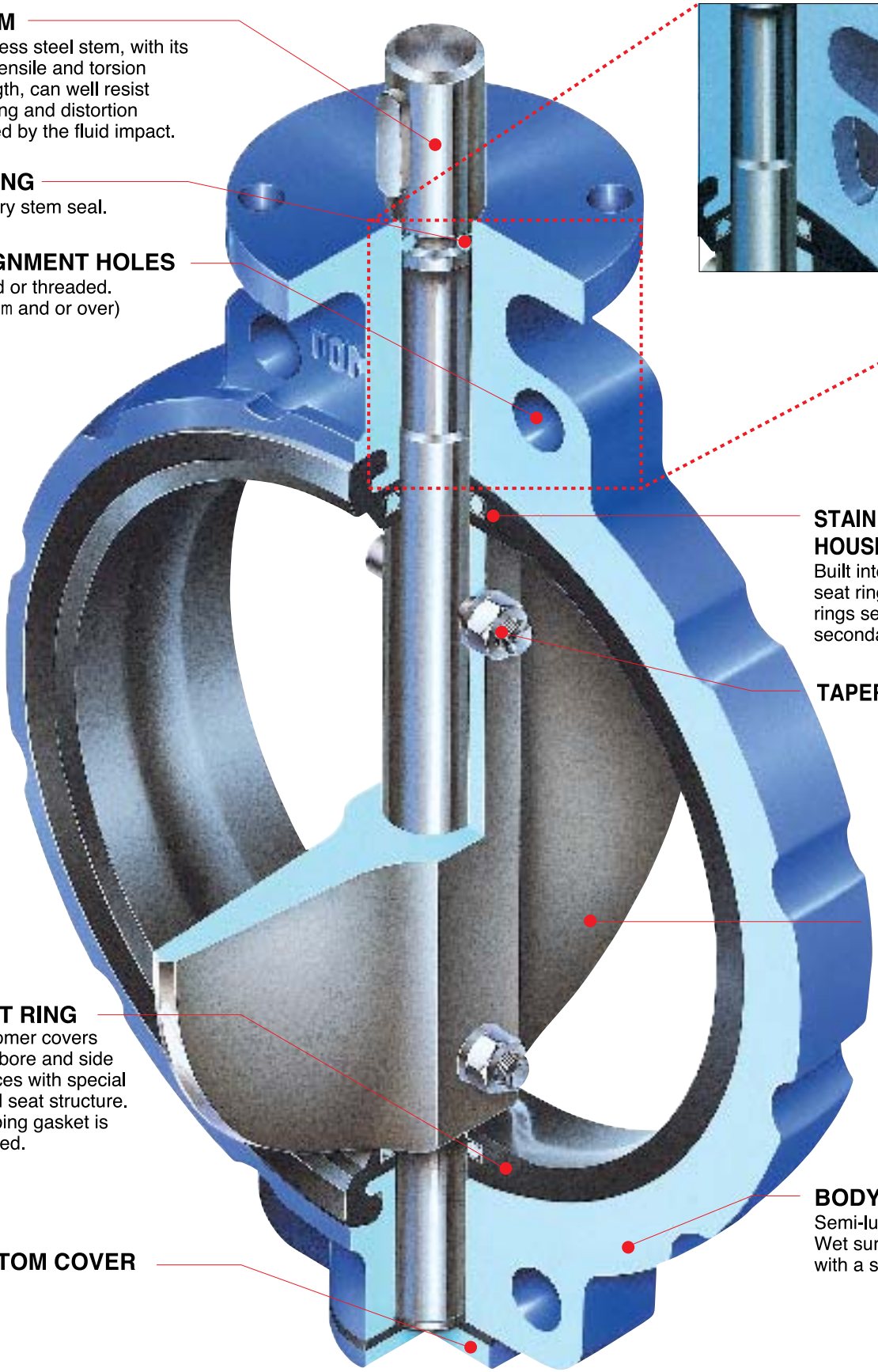
700E/700K



STEM
Stainless steel stem, with its high tensile and torsion strength, can well resist bending and distortion caused by the fluid impact.

O-RING
Tertiary stem seal.

ALIGNMENT HOLES
Drilled or threaded.
(100mm and or over)



STAINLESS STEEL HOUSING FOR O-RING
Built into upper and lower seat ring glands. The O-rings serve as the secondary seal of the stem.

TAPER BOLT AND NUT

DISC

SEAT RING
Elastomer covers inner bore and side surfaces with special raised seat structure. no piping gasket is required.

BODY
Semi-lugged wafer type;
Wet surfaces are protected with a seat ring.

BOTTOM COVER

The above is for 200mm as a typical example.

Standard Specifications

Valve nominal size		50mm to 600mm
Applicable flange standard		JIS 5K, 10K, ANSI 125/150, ISO PN10, BS 10E, DIN10K
Max. working pressure		1.0MPa
Body shell test (Hydraulic)		1.5MPa
Seat leak test		1.1MPa
Working temperature range		NBR (−10℃ to 80℃)　EPDM (−20℃ to 120℃)
Standard material*1	Body	Cast iron (FC250/A126 Class B)
	Disc*2	Ductile iron (FCD450/A395) with hard chrome plated 304 Stainless steel (SCS13/CF8) Aluminum bronze
	Stem	403 Stainless steel (SUS403)
	Seat	NBR, EPDM
Actuators	Lock lever	50mm to 200mm
	Worm gear	50mm to 600mm
	Pneumatic cylinder	50mm to 600mm
	Moterized	50mm to 600mm
Standard Coating		50mm to 300mm : Epoxy primer (Munsell N7) 350mm to 600mm : Lacquer primer (Munsell N7)

*1. Special materials such as cast steel body, aluminum bronze body, stainless steel body, as well as special disc and seat materials are available upon request.
*2. Clean face disc (split shafts design) is also available as Fig 733S.
*3. The size 650mm and over are available as 700E(JIS) or 700K(Non-JIS). See "Large Diameter Rubber seat Butterfly valve".

Dimensions

Nominal size		Dimension (mm)					Flange Standard								Approx. weight (○)
							ANSI 125 Lbs ,150 Lbs		BS 4504 NP10		JIS 5K		JIS 10K		
mm	inch	d	L	D	H_1	H_2	C	Bolt	C	Bolt	C	Bolt	C	Bolt	
50	2	55	45	90	65	105	4-3/4"	4-3/4"-U5/8	125	4-18-M16	105	4-15-M12	120	4-19-M16	2.5
65	2½	70	45	108	80	115	5-1/2"	4-3/4"-U5/8	145	4-18-M16	130	4-15-M12	140	4-19-M16	3.0
80	3	80	50	125	85	135	6"	4-3/4"-U5/8	160	8-18-M16	145	4-19-M16	150	8-19-M16	3.9
100	4	104	50	158	107	150	7-1/2"	8-3/4"-U5/8	180	8-18-M16	165	8-19-M16	175	8-19-M16	7.0
125	5	129	55	193	132	165	8-1/2"	8-7/8"-U3/4	210	8-18-M16	200	8-19-M16	210	8-23-M20	12.0
150	6	154	60	224	145	180	9-1/2"	8-7/8"-U3/4	240	8-22-M20	230	8-19-M16	240	8-23-M20	19.0
200	8	194	65	272	181	210	11-3/4"	8-7/8"-U3/4	295	8-22-M20	280	8-23-M20	290	12-23-M20	21.0
250	10	250	80	332	221	250	14-1/4"	12-1"-U7/8	350	12-22-M20	345	12-23-M20	355	12-25-M22	33.0
300	12	296	90	383	261	280	17"	12-1"-U7/8	400	12-22-M20	390	12-23-M20	400	16-25-M22	45.0
350	14	334	100	425	297	320	18-3/4"	12-1-1/8"-U1	460	16-22-M20	435	12-25-M22	445	16-25-M22	65.0
400	16	384	110	486	333	360	21-1/4"	16-1-1/8"-U1	515	16-26-M24	495	16-25-M22	510	16-27-M24	88.0
450	18	435	120	544	355	390	22-3/4"	16-1-1/4"-U1-1/8	565	20-26-M24	555	16-25-M22	565	20-27-M24	110.0
500	20	482	140	596	381	420	25"	20-1-1/4"-U1-1/8	620	20-26-M24	605	20-25-M22	620	20-27-M24	150.0
550	22	531	150	653	417	460	—	———	—	———	665	20-27-M24	680	20-33-M30	191.0
600	24	581	160	710	475	490	29-1/2"	20-1-3/8"-U1-1/4	725	20-30-M27	715	20-27-M24	730	24-33-M30	227.0

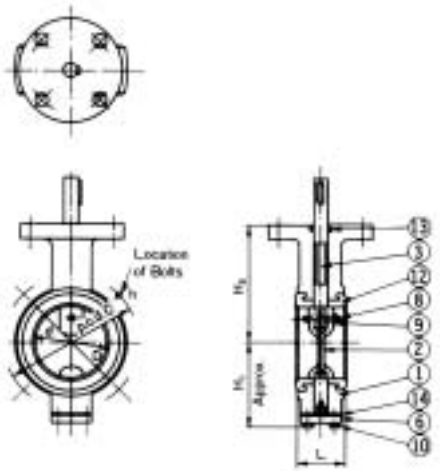
Parts

No.	Parts	Materials
1	Body	Cast Iron
2	Disc	Cast Stainless Steel, or Ductile Cast Iron
3	Stem	Stainless Steel
6	Bottom Cover	Mild Steel, or Cast Iron
8	Taper Bolt	Stainless Steel
9	Nut and SP.Washer	Stainless Steel
10	Bolt and SP.Washer	Mild Steel, or High Carbon Steel

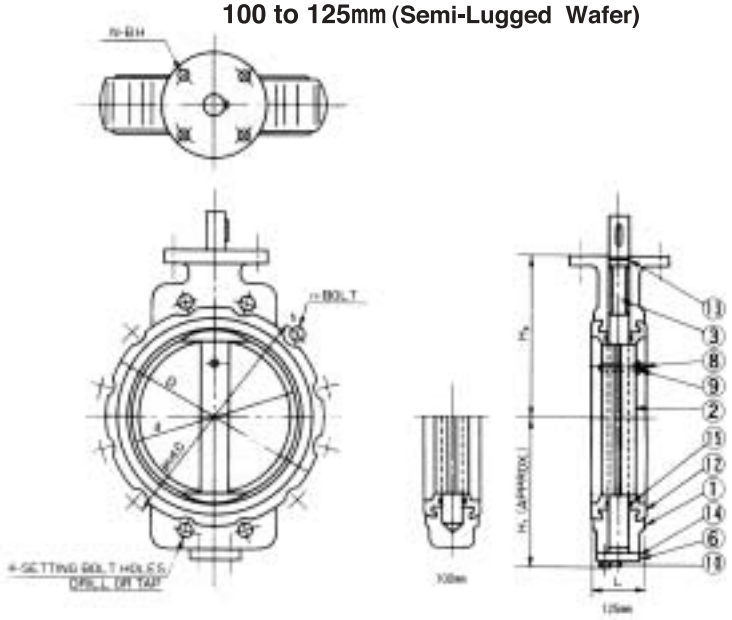
No.	Parts	Materials
12	Seat Ring	Elastomer
13	O-Ring	Elastomer
14	Gasket	Asbestos
15	O-Ring	Elastomer
16	Ball	Bearing Steel
17	Hollow Bolt	Carbon Steel
18	Lock Nut	Mild Steel
19	Eye Bolt	Carbon Steel

Body(700S)

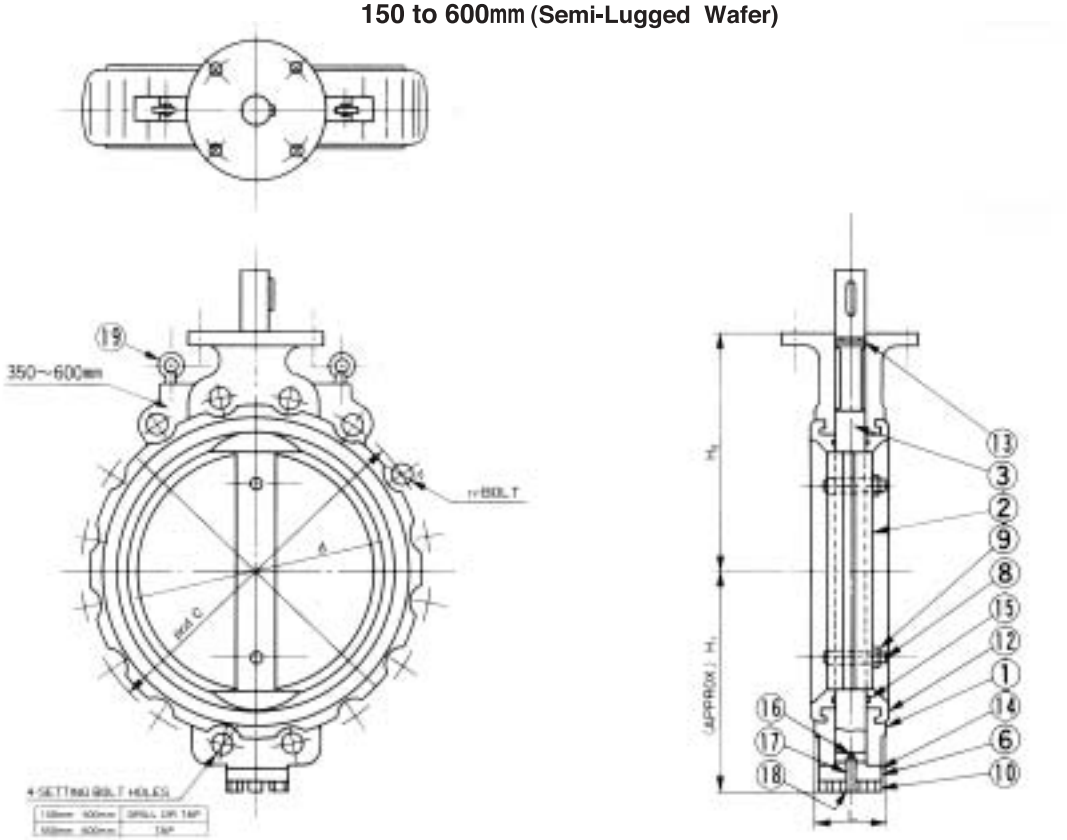
50 to 80mm (Wafer)



100 to 125mm (Semi-Lugged Wafer)

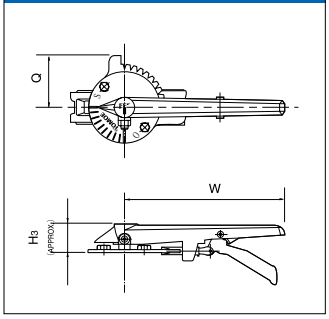


150 to 600mm (Semi-Lugged Wafer)



Body Constructions and Dimensions

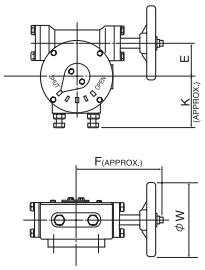
Lock lever type 1L



Dimension list

Nominal size		Dimension (mm)			Approx. weight (kg)
mm	inch	H3	Q	W	
50	2	45	75	220	1.5
65	2½				1.5
80	3			255	1.5
100	4				1.5
125	5	51	87.5	300	1.8
150	6				1.8
200	8	53	102.5	350	2.0

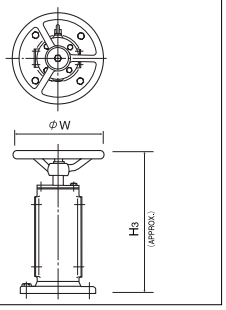
Worm gear type 2S



Dimension list

Nominal size		Dimension (mm)				Approx. weight (kg)
mm	inch	K	E	F	W	
50	2	93	58	144	130	5.9
65	2½					5.9
80	3					5.9
100	4					5.9
125	5			156	160	6.3
150	6					6.3
200	8	126	85	229	200	14.2
250	10					14.2
300	12					14.2
350	14	164	117	325	280	29.1
400	16					29.1
450	18			335	355	32.0
500	20					32.0
550	22	198	140	400	450	55.0
600	24					55.0

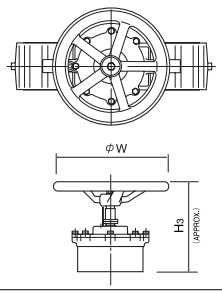
Center handle type 2C



Dimension list

Nominal size		Dimension (mm)		Approx. weight (kg)
mm	inch	H3	W	
50	2	220	160	4.5
65	2½			4.5
80	3			4.5
100	4			4.5
125	5	260	200	9.5
150	6			9.5
200	8	295	280	16.0
250	10			16.0
300	12			16.0

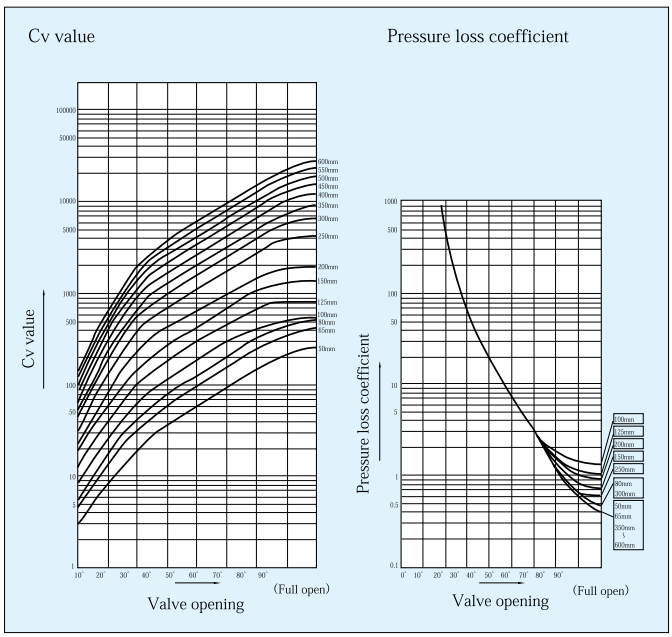
Center handle type 2R

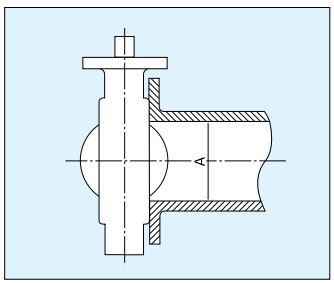


Dimension list

Nominal size		Dimension (mm)		Approx. weight (kg)
mm	inch	H3	W	
350	14	279	355	24.0
400	16			24.0
450	18			24.0
500	20			24.0
550	22	343	450	56.0
600	24			56.0

Cv value/pressure loss coefficient





Minimum internal diameters of piping

Nominal size		Minimum internal diameters of piping A(mm)
mm	inch	700S
50	2	37
65	2½	59
80	3	67
100	4	91
125	5	118
150	6	143
200	8	187
250	10	240
300	12	286
350	14	322
400	16	372
450	18	421
500	20	463
550	22	509
600	24	566

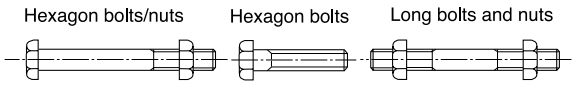
Piping Bolts and nuts sizes

700S

Nominal size		JIS 5K		JIS 10K		ANSI 125Lb/150Lb、JPI 150Lb	
mm	inch	Hexagon bolts/nuts	Hexagon bolts	Hexagon bolts/nuts	Hexagon bolts	Long bolts and nuts	Hexagon bolts
50	2	4 -M12× 90×30	————	4 -M16×100×40	————	4 -U 5/8×130×35	————
65	2½	4 -M12× 90×30	————	4 -M16×100×30	————	4 -U 5/8×135×40	————
80	3	4 -M16×100×40	————	4 -M16×110×40	————	4 -U 5/8×145×40	————
100	4	8(4)-M16×100×40	(8-M16×40×38)	8(4)-M16×110×40	(8-M16×40×38)	8(4)-U 5/8×145×40	(8-U 5/8×45×38)
125	5	8(4)-M16×110×40	(8-M16×40×38)	8(4)-M20×120×50	(8-M20×45×45)	8(4)-U 3/4×155×45	(8-U 3/4×50×44)
150	6	8(4)-M16×120×40	(8-M16×40×38)	8(4)-M20×130×50	(8-M20×50×46)	8(4)-U 3/4×165×45	(8-U 3/4×55×44)
200	8	8(4)-M20×130×50	(8-M20×50×46)	12(8)-M20×135×50	(8-M20×50×46)	8(4)-U 3/4×175×50	(8-U 3/4×55×44)
250	10	12(8)-M20×150×50	(8-M20×50×46)	12(8)-M22×160×60	(8-M22×55×50)	12(8)-U7/8×200×55	(8-U 7/8×65×50)
300	12	12(8)-M20×160×50	(8-M20×50×46)	16(12)-M22×170×60	(8-M22×55×50)	12(8)-U7/8×215×55	(8-U 7/8×65×50)

Nominal size		JIS 5K		JIS 10K		ANSI 125Lb/150Lb、JPI 150Lb	
mm	inch	Long bolts and nuts	Hexagon bolts	Long bolts and nuts	Hexagon bolts	Long bolts and nuts	Hexagon bolts
350	14	12(8)-M22×205×45	(8-M22×60×50)	16(12)-M22×205×45	(8-M22×60×50)	12(8)-U 1 ×240×60	(8-U 1 ×75×57)
400	16	16(12)-M22×215×45	(8-M22×60×50)	16(12)-M24×230×50	(8-M24×70×54)	16(12)-U 1 ×250×60	(8-U 1 ×75×57)
450	18	16(12)-M22×225×45	(8-M22×60×50)	20(16)-M24×245×50	(8-M24×70×54)	16(12)-U 1 1/8×275×65	(8-U1 1/8×85×63)
500	20	20(16)-M22×245×45	(8-M22×60×50)	20(16)-M24×265×50	(8-M24×70×54)	20(16)-U 1 1/8×300×70	(8-U1 1/8×90×63)
550	22	16 -M24×265×50	8-M24×65×54	16 -M30×290×60	8-M30×80×66	————	————
600	24	16 -M24×275×50	8-M24×65×54	20 -M30×300×60	8-M30×80×66	16 -U 1 1/4×335×80	(8-U1 1/4×100×70)

( ) Shows numbers of threded bolt holes
1.No positioning bolt on 80mm and below.
2.The hight of nut shall be 80% of nominal bolt diameter (100% for ANSI).
3.Unify thread over one inch shall be eight thread per inch.
4.Above data is for mied steel (SS400).



Dead-End Service

Model 700S Can be used for dead-end service with precautions as following:

1.A butterfly valve of 700S can be installed at an end of a pipeline, using threaded holes, as case may be, on the semi lugs for bolting. (Refer Fig. 1through Fig. 3 .)

2.The dead-end service should only be a tentative and short-term arrangement such as for temporary piping, with a reduced shutoff pressure in accordance with Table 1.

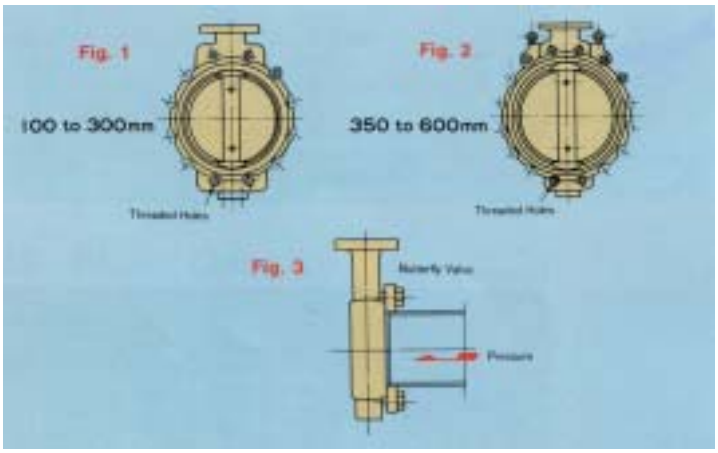


Table 1 Max. Allowable Shutoff Pressure for Dead-End Service

Nominal size (mm)	100 to 350	400 and 450	500 to 600
Pressure (MPa)	0.58	0.49	0.39

3.In case dead-end service is anticipated to continue over a long period, it is recommended to put an extra pipe flange on the outer end of butterfly valve to be tightened up together with through bolts. (Refer Fig. 4.)

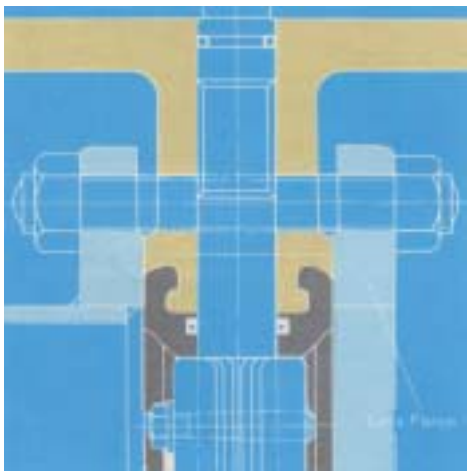


Fig. 4 Dead-End Service with Extra Flange