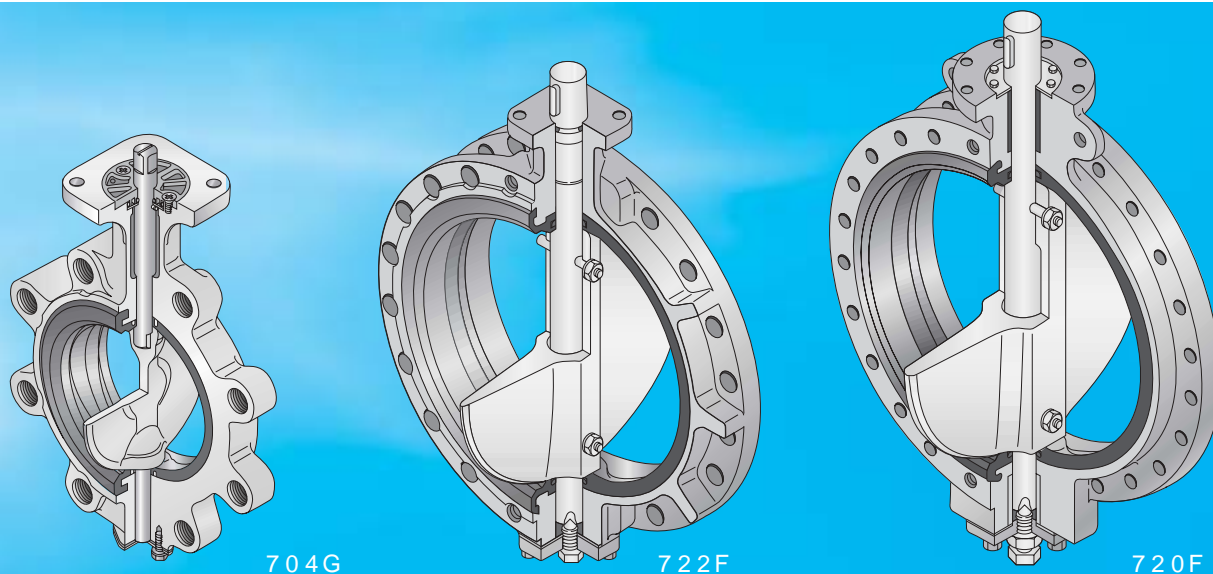


704G (Lugged) 722F/720F (Double flanged)



Butterfly Valves
TRITEC
302A/303Q
304A/304Q
302Y/304Y
337Y/336Y
304M (HLV)
507V/508V
846T/847T/847Q
841T/842T
773Z (NAV-Z)
700G/704G/705G
731P/732P 732X/731X
700E/700K
704G/722F/720F
227P
903C/904C

Bubble Tight Closure and Long Life

Introduction

Today's ships have to work hard. With the extensive use of automated systems, minimum manning levels, extended journeys and quick turn round times, maintenance time is at a premium. Equipment must be ultra reliable and also meet the latest standards.

Long life and leak tight

The 704G/722F/720F are designed to meet all of these requirements. They are tough valves made to international standards with worldwide marine approvals. Long term leak tightness was achieved through attention to details in the spindle sealing and seat design.

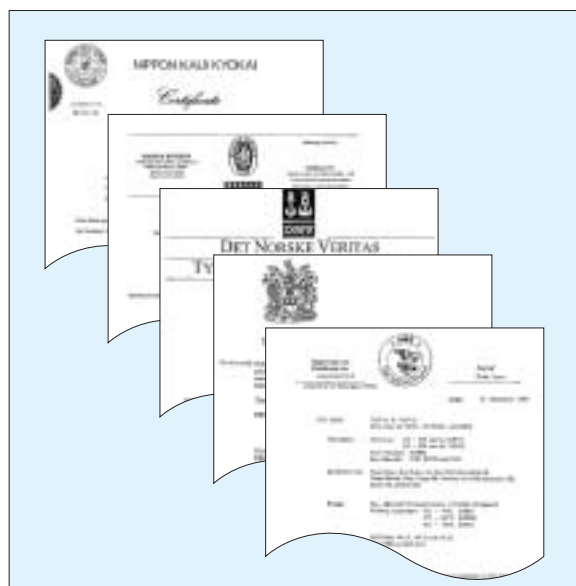
Low cost maintenance

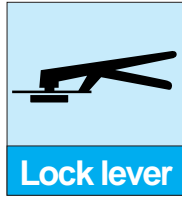
The seat and disc can easily be replaced under a planned maintenance schedule. This replacability does not affect the valve's function as this seat is positively located in machined grooves in the valve body.

Certification / Approval

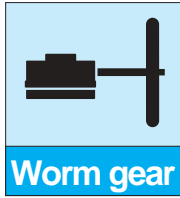
Satisfies requirements of the major certification/approvals such as.

- Det Norske Veritas (DNV)
- Lloyd's Register of Shipping (LR)
- American Bureau of Shipping (ABS)
- Nippon Kaiji Kyokai (NK)
- Bureau Veritas (BV)
- Korean Register of Shipping (KR)





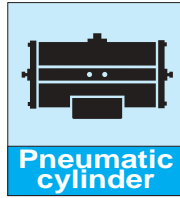
Lock lever



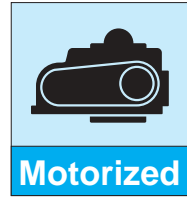
Worm gear



Center handle



Pneumatic cylinder



Motorized

Standard specifications

Type	704G		722F		720F	
	Lugged type		Flanged type			
Valve nominal size	50mm to 100mm*1		125mm to 800mm		850mm to 1350mm	
Applicable flange standard	JIS 10K (JIS 5K, ANSI 125 /150, PN10)*2					
Max. working pressure	1.0MPa					
Body shell test	1.5MPa					
Seat leak test	1.1MPa					
Working temperature range	10 to 80 degrees C (NBR), 20 to 120 degrees C (EPDM)					
Standard materials*3	Body	Cast steel, JIS SCPH2				
	Disc	SCS 14 (316SS)	SCS13 (304SS)			
	Stem	SUS 420J2	SUS 403			
	Seat ring*4	NBR, EPDM				
Painting	Epoxy primer finish (Munsell N7)					

*1. Available up to 600mm.

*2. Semi-standard. Consult us

*3. Other materials, such as ductile iron body, aluminum bronze disc, etc., are also available. Consult us.

*4. Seating on 1000mm types and above are vulcanized to the body.

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

**731P/732P
732X/731X**

700E/700K

704G/722F/720F

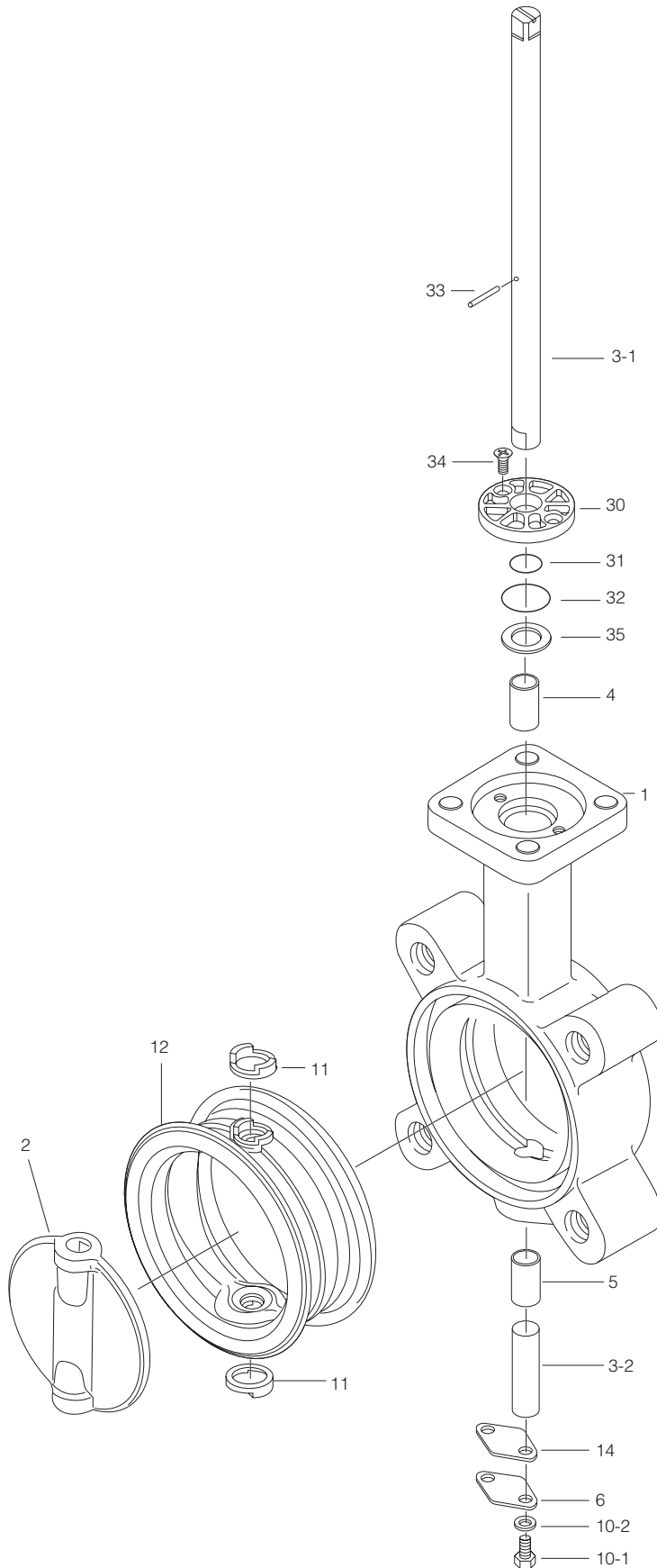
227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

704G Expanded view of components

Butterfly Valves
TRITEC
302A/303Q
304A/304Q
302Y/304Y
337Y/336Y
304M (HLV)
507V/508V
846T/847T/847Q
841T/842T
773Z (NAV-Z)
700G/704G/705G
731P/732P 732X/731X
700E/700K
704G/722F/720F
227P
903C/904C



704G Parts list

704G Parts list(50mm to 100mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3-1	Upper stem	1	
3-2	Lower stem	1	
4	Bearing	1	
5	Bearing	1	
6	Bottom cover	1	
10-1	Hexagon bolt	2	
10-2	Spring washer	2	
11	Secondary ring	2	
12	Seat ring	1	
14	Gasket	1	
30	Bushing	1	
31	O-ring	1	
32	O-ring	1	
33	Spring pin	1	
34	Machine screw	2	
35	Plate	1	

Remark: The indicates recommended spare parts. They are supplied as "Seat ring set" with a small hexagonal spanner to remove set screws.

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-2)

700G/704G/705G

731P/732P
732X/731X

700E/700K

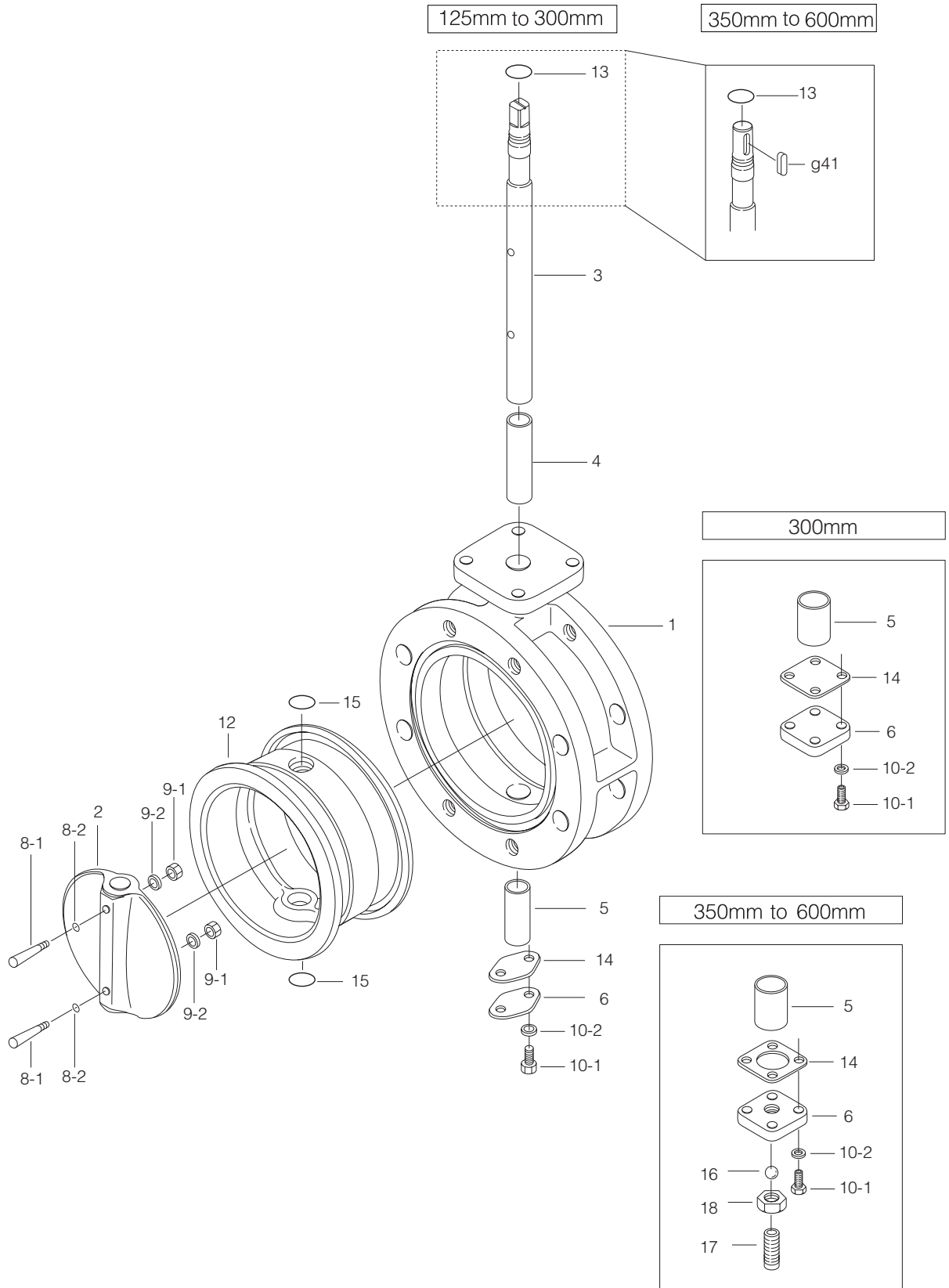
704G/722F/720F

227P

903C/904C

722F Expanded view of components

Butterfly Valves
TRITEC
302A/303Q
304A/304Q
302Y/304Y
337Y/336Y
304M (HLV)
507V/508V
846T/847T/847Q
841T/842T
773Z (NAV-Z)
700G/704G/705G
731P/732P 732X/731X
700E/700K
704G/722F/720F
227P
903C/904C



722F Parts list

722F Parts list(125mm to 300mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
4	Bushing	1	
5	Bushing	1	
6	Bottom cover	1	
8-1	Taper bolt	1	125mm
		2	150mm to 300mm
8-2	O-ring	4	Only 300mm
9-1	Hexagon nut	1	125mm
		2	150mm to 300mm
9-2	Spring washer	1	125mm
		2	150mm to 300mm
10-1	Hexagon bolt	2	125mm to 250mm
		4	300mm
10-2	Spring washer	2	125mm to 250mm
		4	300mm
12	Seat ring	1	
13	O-ring	1	
14	Gasket	1	
15	O-ring	2	See Remark 2.

722F Parts list(350mm to 600mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
4	Bushing	1	
5	Bushing	1	
6	Bottom cover	1	
8-1	Taper bolt	2	
8-2	O-ring	4	
9-1	Hexagon nut	2	
9-2	Spring washer	2	
10-1	Hexagon bolt	4	
10-2	Spring washer	4	
12	Seat ring	1	
13	O-ring	1	
14	Gasket	1	
15	O-ring	2	See Remark 2.
16	Ball	1	
17	Hollow bolt	1	
18	Lock nut	1	
g41	Key	1	

Remark 1: The indicates recommended spare parts. They are supplied as "Seat ring set" with a small hexagonal spanner to remove hollow bolt (P.17).

Remark 2: The O-ring material (item number 15) should be the same as the sea tring (item number 12).

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

**731P/732P
732X/731X**

700E/700K

704G/722F/720F

227P

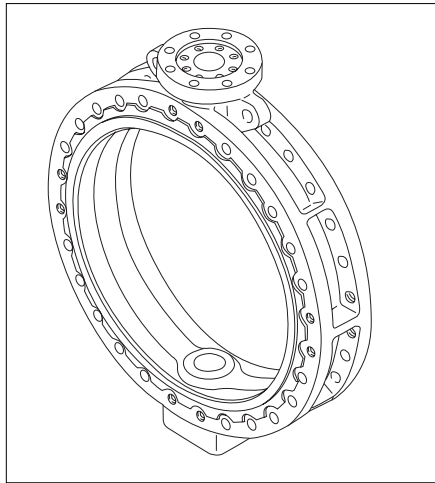
903C/904C

704G(Lugged) 722F/720F(Double flanged)

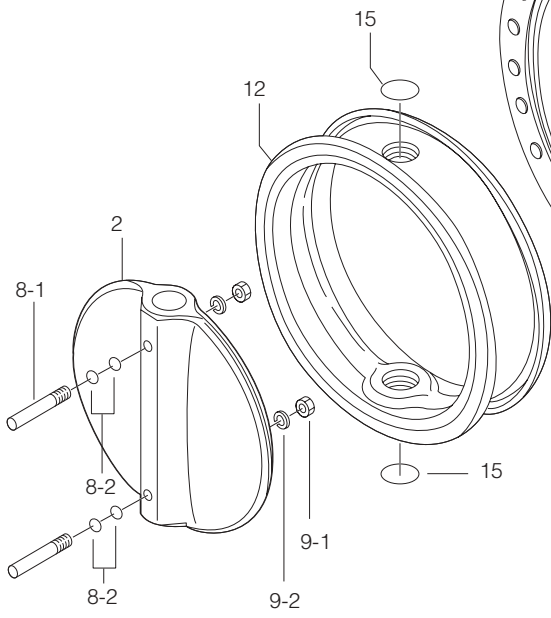
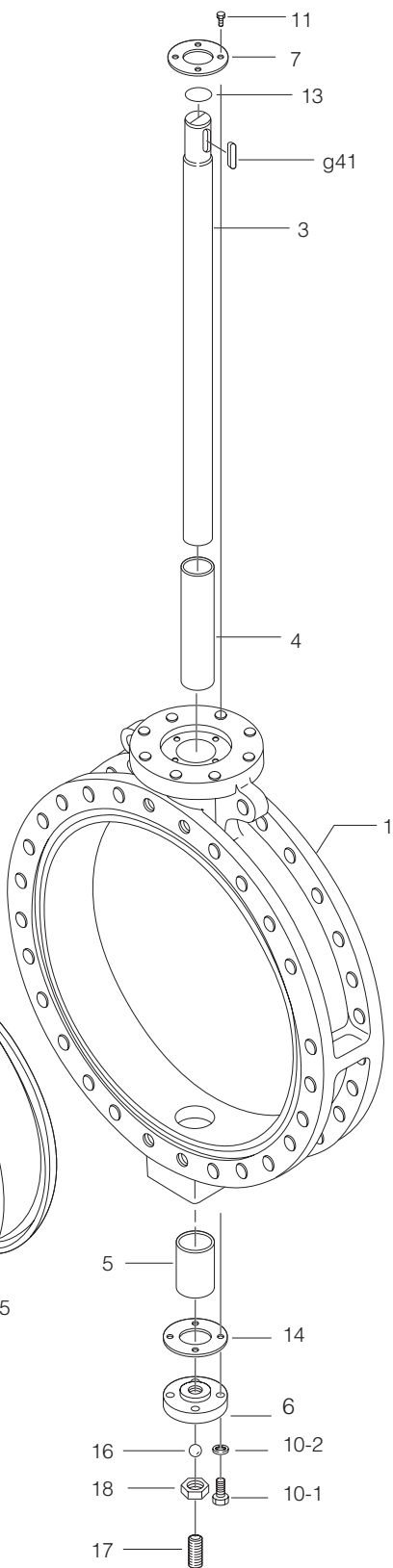
722F · 720F Expanded view of components

Butterfly Valves
TRITEC
302A/303Q
304A/304Q
302Y/304Y
337Y/336Y
304M (HLV)
507V/508V
846T/847T/847Q
841T/842T
773Z (NAV-Z)
700G/704G/705G
731P/732P 732X/731X
700E/700K
704G/722F/720F
227P
903C/904C

1000mm to 1350mm



722F and 720F, 650mm to 1350mm



722F·720F Parts list

722F and 720F Parts list(722F: 650mm to 800mm / 720F: 850mm to 1350mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
4	Bushing	1	
5	Bushing	1	
6	Bottom cover	1	
7	Retainer plate	1	
8-1	Taper bolt	2	650mm to 900mm
		4	1000mm to 1350mm
8-2	O-ring	4	650mm to 900mm
		8	1000mm to 1350mm
9-1	Hexagon nut	2	650mm to 900mm
		4	1000mm to 1350mm
9-2	Spring washer	2	650mm to 900mm
		4	1000mm to 1350mm
10-1	Hexagon bolt	4	650mm to 850mm
		8	900mm to 1350mm
10-2	Spring washer	4	650mm to 850mm
		8	900mm to 1350mm
11	Hexagon bolt	4	650mm to 850mm
		8	900mm to 1350mm
12	Seat ring	1	Vulcanized on 1000mm to 1350mm types.
13	O-ring	1	See Remark 2.
14	Gasket	1	
15	O-ring	2	See Remark 2.
16	Ball	1	
17	Hollow bolt	1	
18	Lock nut	1	
g41	Key	1	

Remark 1: The indicates recommended spare parts. They are supplied as "Seat ring set" with a small hexagonal spanner to remove hollow bolt (P.17).

Since the seat ring is vulcanized to the body of types 1000mm to 1350mm, please consult us if you wish to replace it.

Remark 2: The O-ring material (item numbers 13 and 15) should be the same as the seatring (item number 12).

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

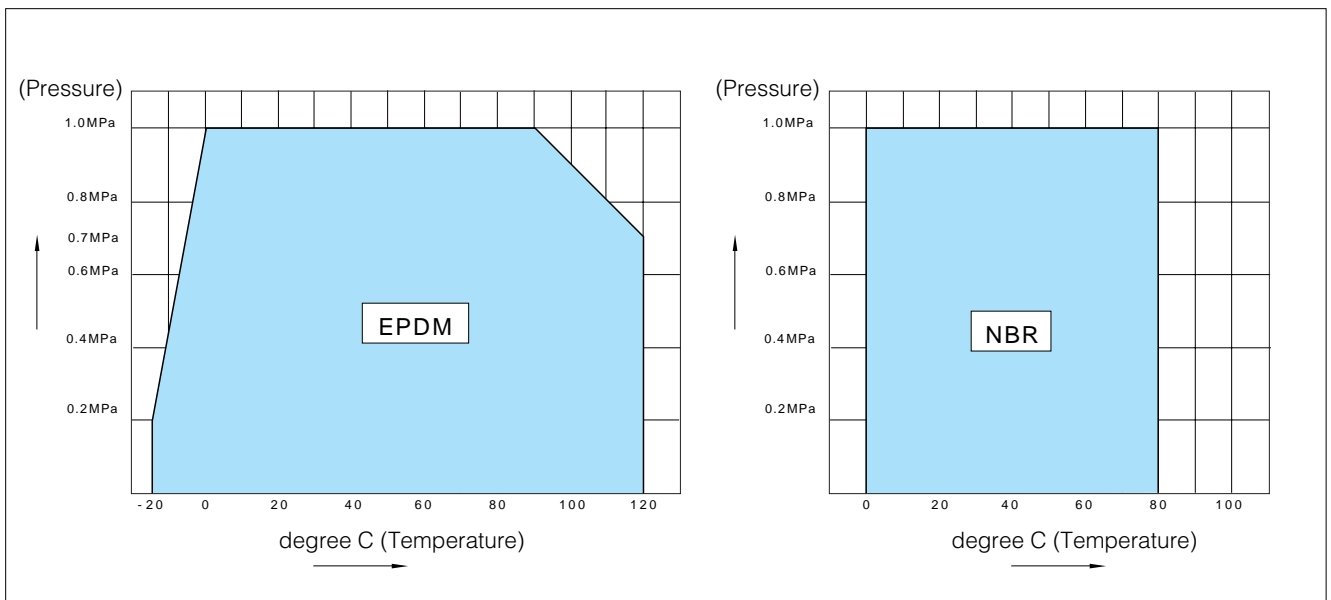
704G Actuator selection chart

704G

Model	Category	Size <small>(mm / inch)</small>			
		50	65	80	100
		2	2 1/2	3	4
1T	Standard Heavy duty	1T-1			
2U	Standard Heavy duty	2U-0	2U-1		
2G	Standard Heavy duty	2G-1			
3I	Standard Heavy duty	3I-1			3I-2
3R, 3Q	Standard Heavy duty	3R-1, 3Q-1	3R-2 3Q-2	3R-3 3Q-3	
4I	ON-OFF Control	4I-0			4I-1
4E	Standard Heavy duty	SRE-010			

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

704G/722F/720F Pressure-temperature rating



722F Actuator selection chart

722F

Model	Category	Size ($\frac{mm}{inch}$)																	
		125	150	200	250	300	350	400	450	500	550	600	650	700	750	800			
		5	6	8	10	12	14	16	18	20	22	24	26	28	30	32			
1T	Standard	1T-2		1T-3															
	Heavy duty	1T-2		1T-3															
2U, 2S	Standard	2U-2		2U-3		2U-4		2U-5			2U-6		MGH-4	MGH-4 1/2					
	Heavy duty	2U-2		2U-3		2U-4		2U-5			2U-6		MGH-4	MGH-4 1/2					
2G, 2R	Standard	2G-2		2G-3		2G-4		2R-3			2R-4								
	Heavy duty	2G-2		2G-3		2G-4		2R-3			2R-4								
3I, 3A	Standard	3I-2		3I-3		3I-4		3I-5		TGA-180		TGA-200		TGA-220		TGA-250			
	Heavy duty	3I-2		3I-3		3I-4		3I-5		TGA-140	TGA-160		TGA-180	TGA-200	TGA-220		TGA-250		
3R, 3Q 3U, 3K	Standard	3R-3, 3Q-3		3R-4 3Q-4	TG-10S	TG-12S			TG-14S		TG-20S								
	Heavy duty	3R-4, 3Q-4		TG-10S	TG-10S	TG-12S			TG-14S		TG-20S								
4I	ON-OFF	4I-2		4I-2.5	4I-3			4I-4											
	Control	4I-2		4I-2.5	4I-3			4I-4											
4E, 4L	Standard	SRE-020		SRE-060		LTKD-01 0.2kW/MGH-3		LTKD-01 0.4kW/MGH-3		LTKD-02 0.75kW /MGH-4	LTKD-05 0.75kW /MGH-4		LTKD-05 0.75kW /MGH-5	LTKD-05 1.5kW /MGH-5	LTKD-1 1.5kW /MGH-5				
	Heavy duty	SRE-020		SRE-060		LTKD-01 0.2kW/MGH-3		LTKD-01 0.4kW/MGH-3		LTKD-02 0.75kW /MGH-4	LTKD-05 0.75kW /MGH-4		LTKD-05 0.75kW /MGH-5	LTKD-05 1.5kW /MGH-5	LTKD-1 1.5kW /MGH-5				

Remark: For the 400mm type with the accessories below, type 4I-4 should be selected.

- Micom unit
- Servo unit
- Speed control unit
- Potentiometer

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

720F Actuator selection chart

720F

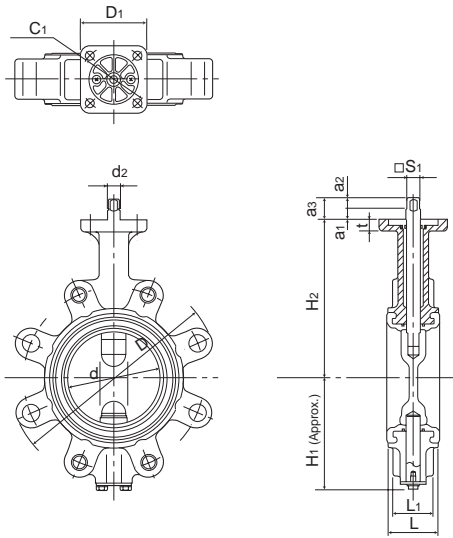
Model	Category	Size ($\frac{mm}{inch}$)					
		850	900	1000	1100	1200	1350
		34	36	40	44	48	54
2S	Standard	MGH-5		MGH-6			MGH-7
	Heavy duty	MGH-5		MGH-6			MGH-7
3A	Standard	TGA-220	TGA-250				
	Heavy duty	TGA-220	TGA-250				
4L	Standard	LTKD-1 1.5kW/MGH-5		LTKD-1 1.5kW/MGH-6			LTKD-1 2.2kW /MGH-7
	Heavy duty	LTKD-1 1.5kW/MGH-5		LTKD-1 1.5kW/MGH-6			LTKD-1 2.2kW /MGH-7

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

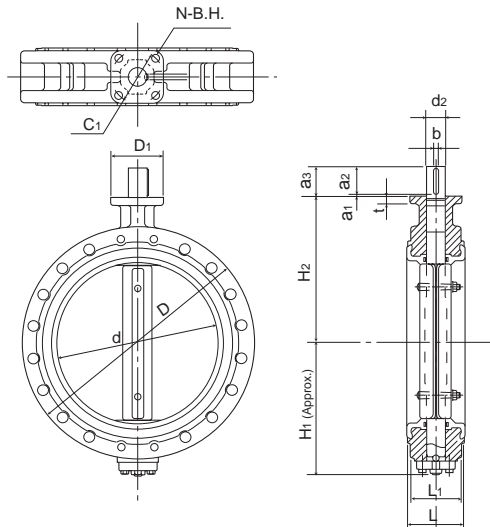
704G(Lugged) 722F/720F(Double flanged)

704G/722F/720F Dimension list

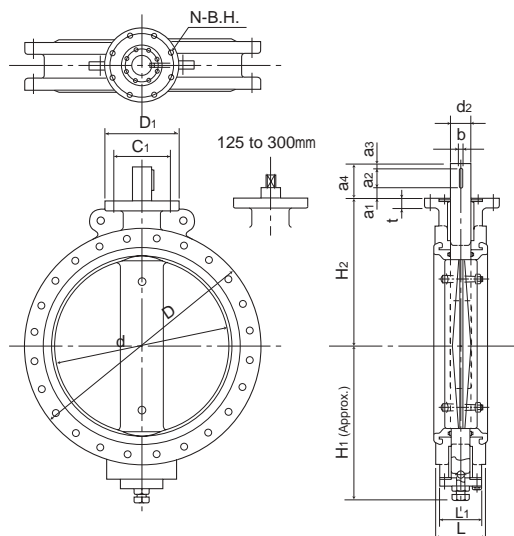
704G



722F



720F



704G Dimensions

Nominal size	Dimension (mm)																		Approx. weight (kg)	
	d	L	L ₁	D	H ₁	H ₂	d ₂	a ₁	a ₂	a ₃	S ₁	D ₁	t	C ₁	RE	BH				
50	2	56	43	33	155	67	138	10		10.5	21.5	8						3.4		
65	2 1/2	69		36	175	78	151						70	12	70	10	9	4.4		
80	3	84	46	36	187	85	156	12				10						5.0		
100	4	104	52	42	220	117	167	14		11	11.5	22.5						7.7		
125	5	130		46	250	143	191	16										8.8		
150	6	153.5	56	46	276	164	202	18			16.5	27.5	14					10.4		
200	8	199	60	50	334(329)	176	227	22	10	20	30	18		102	14	102	23.5	11	16.3	
250	10	253	68	58	402	215	280	28											27	
300	12	302		78	472(438)	253	312		5		30	35	24		125	16	125	32.4	13	39
350	14	337		70	533(505)	276	348			32										66
400	16	394	102	90	596.7	338	383	40			45									107
450	18	441	114	102	633.8(620)	368	413	46			56	3		140		140		28	19	128
500	20	492	127	115	691	403	453	50		6										170
600	24	584	154	142	819.3(795)	458	528	55			70			165		165			23	275

722F Dimensions

Nominal size	Dimension (mm)																		Approx. weight (kg)		
	d	L	L ₁	D	H ₁	H ₂	d ₂	a ₁	a ₂	a ₃	S ₁	b	D ₁	t	C ₁	RE	BH				
125	5	129			250	139	165													18	
150	6	154	100		280	157	180	18	11	16.5	27.5	14								19	
200	8	194			330	181	210	22	10	20	30	18		102	14	102	24	11		37	
250	10	250			400	221	250	30													43
300	12	296	110		445	251	280	32	5	30	35	24								52	
350	14	334	120	110	490	298	320	40		45	54		12		125	16	125	32	13	70	
400	16	384	130	116	560	334	360	46		56	65									93	
450	18	435	150	134	620	356	390						14	140		140			19	132	
500	20	482	160	140	675	382	420	50	6											182	
550	22	531			745	418	460			70	79				25					225	
600	24	581	170	156	795	476	490	55					16	165		165				270	
650	26	627			845	586	510	65		60	75		18	260	32	220			23	415	
700	28	670	180	160	905	629	560														585
750	30	723	190	170	970	659	590	75	10	80	95		20	320	35	280				680	
800	32	772	200	180	1020	679	620														810

720F Dimensions

Nominal size	Dimension (mm)																		Approx. weight (kg)		
	d	L	L ₁	D	H ₁	H ₂	d ₂	a ₁	a ₂	a ₃	a ₄	b	D ₁	t	C ₁	N	BH				
850	34	822	210		1070	709	650	75		80	5	95	20		40						
900	36	858	230		1120	759	685														
1000	40	975	250	210	1235	819	745		10					320		280	8	23			
1100	44	1070	280	210	1345	874	820	95		100		120	24		45						
1200	48	1170	300	225	1465	948	880				10										
1350	54	1314	330	300	1630	1030	960	120	60	140		210	32								

Please consult us.

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P
732X/731X

700E/700K

704G/722F/720F

227P

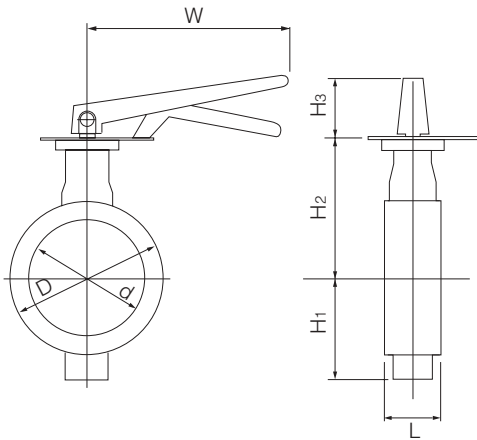
903C/904C

Lock lever type 704G-1T(50mm to 100mm) / 722F-1T(125mm to 200mm)

Type	Nominal size		Dimension (mm)								Lever type	Approx. weight (kg)
	mm	inch	d	D	L	H ₁		H ₂	H ₃	W		
						JIS5K	JIS10K					
704G	50	2	56	155	43	68	68	138	66	200	1T-1	4.0
	65	2 1/2	69	175	46	79	79	151	66	200	1T-1	5.0
	80	3	84	187	46	86	109	156	66	200	1T-1	5.6 (6.1)
	100	4	104	146	52	117	117	167	66	200	1T-1	8.3
722F	125	5	129	250	100	139	139	165	92	300	1T-2	19.3
	150	6	154	280	100	157	157	180	92	300	1T-2	20.3
	200	8	194	330	100	181	181	210	97	350	1T-3	38.7

Remark: Value in brackets is for JIS 10K flanges.

704G/722F-1T



1T Installation direction

1TTL S (standard)	1TLR	1TRS	1TRR
1TXS	1TXR	1TVS	1TVR

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

**731P/732P
732X/731X**

700E/700K

704G/722F/720F

227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

Worm gear type 704G-2U(50mm to 100mm) / 722F-2U(125mm to 600mm) / 722F-2S(650mm to 800mm) / 720F-2S(850mm to 1350mm)

704G-2U (50mm to 100mm)

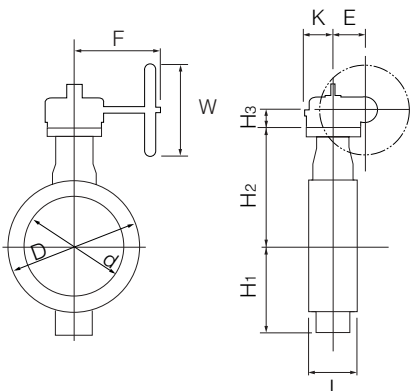
Type	Nominal size		Dimension (mm)											Gear type	Approx. weight (kg)
	mm	inch	d	D	L	H ₁		H ₂	H ₃	E	K	F	W		
						JIS5K	JIS10K								
704G	50	2	56	155	43	68	68	138	29.5	36	46	160	100	2U-0	5.7
	65	2 1/2	69	175	46	79	79	151	29.5	36	46	160	100	2U-0	6.7
	80	3	84	187	46	86	109	156	29.5	36	46	160	100	2U-1	7.3 (7.8)
	100	4	104	146	52	117	117	167	29.5	36	46	160	100	2U-1	10.0

Remark: Value in brackets is for JIS 10K flanges.

722F-2U (125mm to 600mm) / 722F-2S (650mm to 800mm) / 720F-2S (850mm to 1350mm)

Type	Nominal size		Dimension (mm)										Gear type	Approx. weight (kg)
	mm	inch	d	D	L	H ₁	H ₂	H ₃	E	K	F	W		
722F	125	5	129	193	55	132	165	34.5	44	53	173.5	160	2U-2	22.2
	150	6	154	224	60	145	180	34.5	44	53	173.5	160	2U-2	23.2
	200	8	194	272	65	181	210	41.5	67	75	198	200	2U-3	45
	250	10	250	332	80	221	250	41.5	67	75	198	200	2U-3	51
	300	12	296	382	90	261	280	48	87.5	90	222.5	200	2U-4	66
	350	14	334	425	100	297	320	50	90	105	266	280	2U-5	86
	400	16	384	486	110	333	360	50	90	105	266	280	2U-5	109
	450	18	435	544	120	355	390	50	90	105	266	280	2U-5	148
	500	20	482	596	140	381	420	50	90	105	266	280	2U-5	198
	550	22	531	653	150	417	460	61	113	140	352	400	2U-6	256
	600	24	581	710	160	475	490	61	113	140	352	400	2U-6	301
	650	26	627	845	170	558	510	65	140	198	400	450	MGH-4	473
	700	28	670	905	180	639	560	75	185	267	457	500	MGH-4 1/2	692
	750	30	723	970	190	659	590	75	185	267	457	500	MGH-4 1/2	787
800	32	772	1020	200	679	620	75	185	267	457	500	MGH-4 1/2	917	
720F	850	34	822	1070	210	709	650	100	210	293	490	500	MGH-5	1050
	900	36	858	1120	230	759	685	100	210	293	490	500	MGH-5	1150
	1000	40	975	1235	250	819	745	100	210	293	490	500	MGH-6	1384
	1100	44	1070	1345	280	874	820	100	210	293	490	500	MGH-6	1584
	1200	48	1170	1465	300	948	880	100	210	293	490	500	MGH-6	1984
	1350	54	1314	1630	330	1030	960	151	280	293	675	600	MGH-7	2330

704G/722F/720F-2U/2S



2U/2S Installation direction

2UA/2SA (standard)	2UAR/2SAR
2UB/2SB	2UBR/2SBR

Center handle type 704G-2G(50mm to 100mm) / 722F-2G (125mm to 300mm) / 722F-2R (350mm to 600mm)

704G-2G (50mm to 100mm)

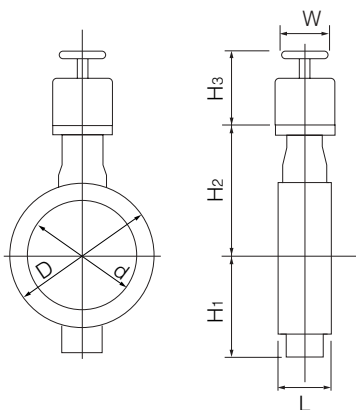
Nominal size		Dimension (mm)								Center handle type	Approx. weight (kg)
mm	inch	d	D	L	H ₁		H ₂	H ₃	W		
					JIS5K	JIS10K					
50	2	56	155	43	68	68	138	136	100	2G-1	6.3
65	2 1/2	69	175	46	79	79	151	136	100	2G-1	7.3
80	3	84	187	46	86	109	156	136	100	2G-1	7.9(8.4)
100	4	104	146	52	117	117	167	136	100	2G-1	10.6

Remark: Value in brackets is for JIS 10K flanges.

722F-2G (125mm to 300mm) / 722F-2R (350mm to 600mm)

Nominal size		Dimension (mm)								Center handle type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	W			
125	5	129	250	100	139	165	133	100	2G-2	22	
150	6	154	280	100	157	180	133	100	2G-2	23	
200	8	194	330	100	181	210	151	200	2G-3	45	
250	10	250	400	110	221	250	151	200	2G-3	51	
300	12	296	445	110	251	280	161	200	2G-4	60	
350	14	334	490	120	298	320	279	355	2R-3	103	
400	16	384	560	130	334	360	279	355	2R-3	126	
450	18	435	620	150	356	390	279	355	2R-3	165	
500	20	482	675	160	382	420	279	355	2R-3	215	
550	22	531	745	170	418	460	343	450	2R-4	278	
600	24	581	795	170	476	490	343	450	2R-4	323	

704G/722F/720F-2G/2R



Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

Double-acting pneumatic cylinder type 704G-3I(50mm to 100mm) / 722F-3I(125mm to 450mm)

Standard(704G-3I)

Nominal size		Dimension (mm)											Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁		H ₂	H ₃	A	P	f ₁	f ₂		
					JIS5K	JIS10K								
50	2	56	155	43	68	68	138	142	190	103.5	55	50	3I-1	6.4
65	2 1/2	69	175	46	79	79	151	142	190	103.5	55	50	3I-1	7.4
80	3	84	187	46	86	109	156	142	190	103.5	55	50	3I-1	8.0 (8.5)
100	4	104	146	52	117	117	167	142	190	103.5	55	50	3I-1	10.7

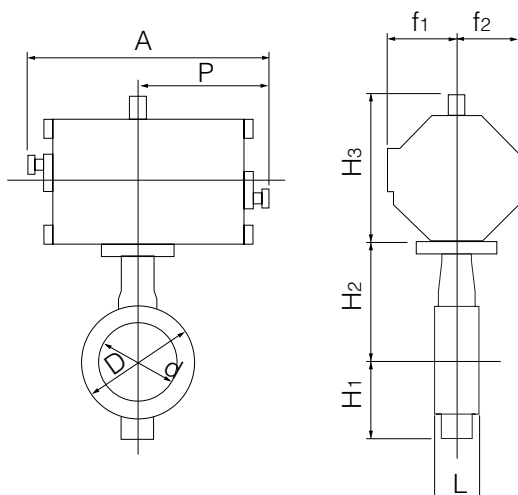
Remark: Value in brackets is for JIS 10K flanges.

Standard(722F-3I)

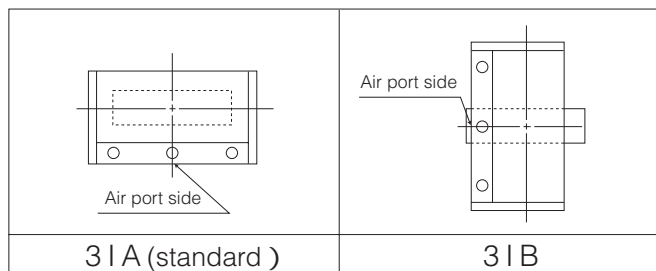
Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
125	5	129	250	100	139	165	178	272	145	74.5	65	3I-2	24
150	6	154	280	100	157	180	178	272	145	74.5	65	3I-2	25
200	8	194	330	100	181	210	220	342	181	95	93	3I-3	48
250	10	250	400	110	221	250	258	342	181	95	93	3I-3	54
300	12	296	445	110	251	280	220	462	258	95	93	3I-4	68
350	14	334	490	120	298	320	300	462	258	95	93	3I-4	96
400	16	384	560	130	334	360	324	680	340	181	85	3I-5	153
450	18	435	620	150	356	390	324	680	340	181	85	3I-5	192

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

704G/722F-3I



3I Installation direction



Double-acting pneumatic cylinder type 704G-3 I (50mm to 100mm) / 722F-3 I (125mm to 350mm)

Heavy duty(704G-3 I)

Nominal size		Dimension (mm)											Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁		H ₂	H ₃	A	P	f ₁	f ₂		
					JIS5K	JIS10K								
50	2	56	155	43	68	68	138	142	190	103.5	55	50	3 I-1	6.4
65	2 1/2	69	175	46	79	79	151	142	190	103.5	55	50	3 I-1	7.4
80	3	84	187	46	86	109	156	142	190	103.5	55	50	3 I-1	8.0 (8.5)
100	4	104	146	52	117	117	167	178	272	145	74.5	65	3 I-2	12.7

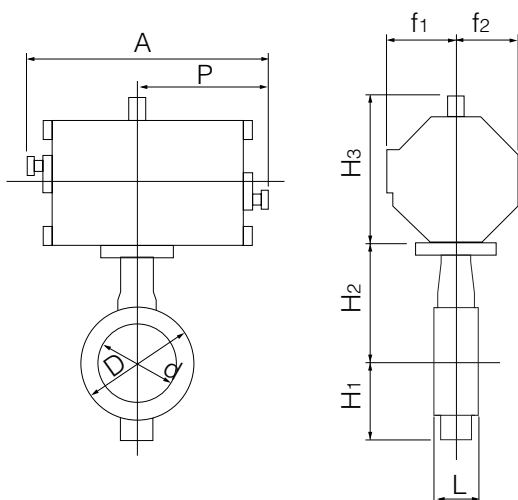
Remark: Value in brackets is for JIS 10K flanges.

Heavy duty(722F-3 I)

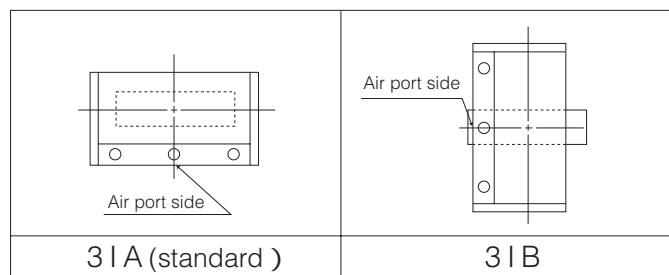
Nominal size		Dimension (mm)											Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂			
125	5	129	250	100	139	165	178	272	145	74.5	65	3 I-2	24	
150	6	154	280	100	157	180	220	342	181	95	93	3 I-3	29	
200	8	194	330	100	181	210	220	342	181	95	93	3 I-3	48	
250	10	250	400	110	221	250	220	462	258	95	93	3 I-4	59	
300	12	296	445	110	251	280	220	462	258	95	93	3 I-4	68	
350	14	334	490	120	298	320	324	680	340	181	85	3 I-5	129	

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

704G/722F-3 I



3 I Installation direction



Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

Double-acting pneumatic cylinder type 722F-3A(400mm to 800mm) / 720F-3A(850mm, 900mm)

Standard

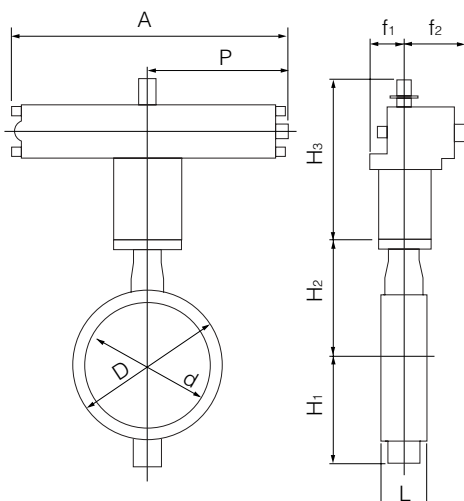
Type	Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
	mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
722F	500	20	482	675	160	382	420	465	939	483	130	202	TGA-160	272
	550	22	531	745	170	418	460	465	939	483	130	202	TGA-160	318
	600	24	581	795	170	476	490	478	1053	543	130	218	TGA-180	409
	650	26	627	845	170	586	510	478	1053	543	130	218	TGA-180	566
	700	28	670	905	180	629	560	570	1163	599	160	253	TGA-200	812
	750	30	723	970	190	659	590	570	1163	599	160	253	TGA-200	907
	800	32	772	1020	200	679	620	600	1248	642	160	270	TGA-220	1061
720F	850	34	822	1070	210	709	650	600	1248	642	160	270	TGA-220	1151
	900	36	858	1120	230	759	685	633	1381	707	160	299	TGA-250	1317

Heavy duty

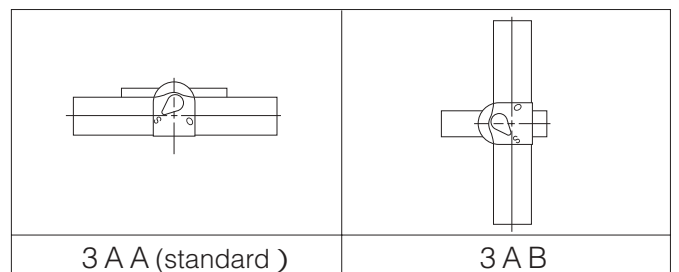
Type	Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
	mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
722F	400	16	384	486	110	333	360	412	810	417	100	180	TGA-140	145
	450	18	435	544	120	355	390	465	939	483	130	202	TGA-160	233
	500	20	482	596	140	381	420	465	939	483	130	202	TGA-160	272
	550	22	531	653	150	417	460	478	1053	543	130	218	TGA-180	364
	600	24	581	710	160	475	490	525	1163	599	160	253	TGA-200	469
	650	26	627	845	170	558	510	600	1248	642	160	270	TGA-220	672
	700	28	670	905	180	639	560	600	1248	642	160	270	TGA-220	842
	750	30	723	970	190	659	590	633	1381	707	160	299	TGA-250	996
	800	32	772	1020	200	679	620	633	1381	707	160	299	TGA-250	1126

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

722F/720F-3A



3A Installation direction



Single-acting pneumatic cylinder type 704G-3R(Air to open: 50mm to 100mm) / 704G-3Q(Air to close: 50mm to 100mm)
722F-3R(Air to open: 125mm to 200mm) / 722F-3Q(Air to close: 125mm to 200mm)

Standard(704G-3R/704G-3Q)

Remarks: Value in brackets "()" is for JIS 10K flanges.
Value in brackets "[]" indicates 3Q (air to close).

Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)	
mm	inch	d	D	L	H ₁		H ₂	H ₃	A	P	f ₁			f ₂
					JIS5K	JIS10K								
50	2	56	155	43	68	68	138	142	266	162.5 [179.5]	55	50	3R-1/3Q-1	7.4
65	2 1/2	69	175	46	79	79	151	178	407	262 [280]	74.5	65	3R-2/3Q-2	12.4
80	3	84	187	46	86	109	156	178	407	262 [280]	74.5	65	3R-2/3Q-2	13.0 (13.5)
100	4	104	146	52	117	117	167	220	462	281 [301]	95	93	3R-3/3Q-3	24.3

Standard(722F-3R/722F-3Q)

Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
125	5	129	250	100	139	165	220	462	281 [301]	95	93	3R-3/3Q-3	35
150	6	154	280	100	157	180	220	462	281 [301]	95	93	3R-3/3Q-3	36
200	8	194	330	100	181	210	220	685	427 [481]	95	93	3R-4/3Q-4	60

Remark: Value in brackets indicates "[]" 3Q (air to close).

Heavy duty(704G-3R/704G-3Q)

Remarks: Value in brackets "()" is for JIS 10K flanges.
Value in brackets "[]" indicates 3Q (air to close).

Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)	
mm	inch	d	D	L	H ₁		H ₂	H ₃	A	P	f ₁			f ₂
					JIS5K	JIS10K								
50	2	56	155	43	68	68	138	178	407	162.5 [179.5]	74.5	65	3R-2/3Q-2	11.4
65	2 1/2	69	175	46	79	79	151	178	407	262 [280]	74.5	65	3R-2/3Q-2	12.4
80	3	84	187	46	86	109	156	178	407	262 [280]	74.5	65	3R-2/3Q-2	13.0 (13.5)
100	4	104	146	52	117	117	167	220	462	281 [301]	95	93	3R-3/3Q-3	24.3

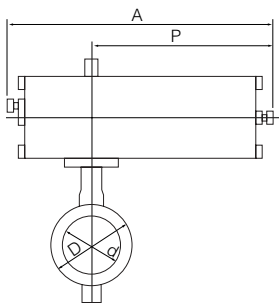
Heavy duty(722F-3R/722F-3Q)

Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
125	5	129	250	100	139	165	220	685	427 [481]	95	93	3R-4/3Q-4	40
150	6	154	280	100	157	180	220	685	427 [481]	95	93	3R-4/3Q-4	41

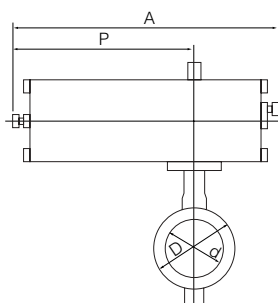
Remark: Value in brackets "[]" indicates 3Q (air to close).

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

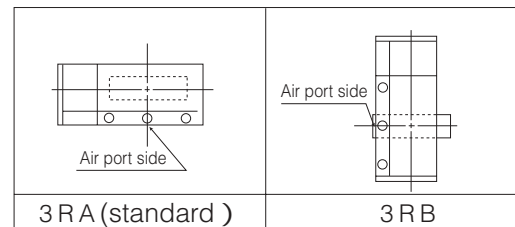
704G/722F-3Q



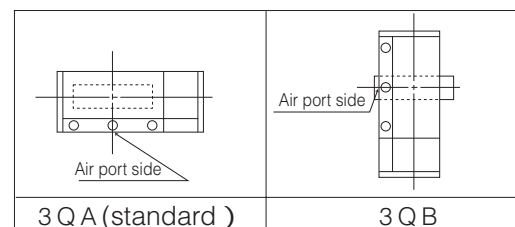
704G/722F-3R



3R Installation direction



3Q Installation direction



704G(Lugged) 722F/720F(Double flanged)

Single-acting pneumatic cylinder type 722F-3U(Air to open: 200mm to 600mm) / 722F-3K(Air to close: 200mm to 600mm)

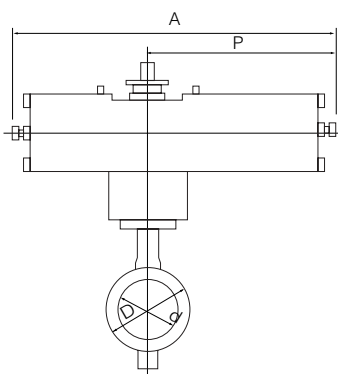
Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	250	400	110	221	250	307	945	585	70	165	TG-10S	99
300	12	296	445	110	251	280	307	1080	720	94	206	TG-12S	153
350	14	334	490	120	298	320	307	1080	720	94	206	TG-12S	171
400	16	384	560	130	334	360	340	1255	865	131	257	TG-14S	291
450	18	435	620	150	356	390	340	1255	865	131	257	TG-14S	330
500	20	482	675	160	382	420	474	1655	1095	164	348	TG-20S	593
550	22	531	745	170	418	460	474	1655	1095	164	348	TG-20S	636
600	24	581	795	170	476	490	474	1655	1095	164	348	TG-20S	681

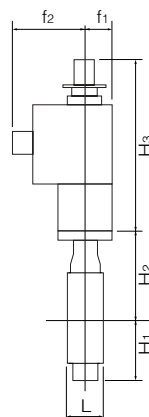
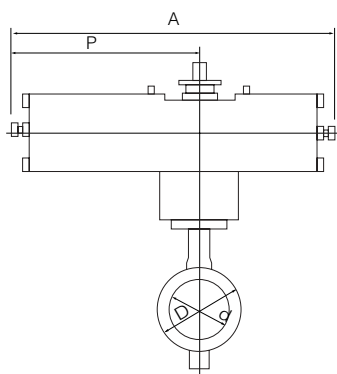
Heavy duty

Nominal size		Dimension (mm)										Cylinder type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	194	330	100	181	210	307	945	585	70	165	TG-10S	93
250	10	250	400	110	221	250	307	1080	720	94	206	TG-12S	144
300	12	296	445	110	251	280	307	1080	720	94	206	TG-12S	153
350	14	334	490	120	298	320	340	1255	865	131	257	TG-14S	267
400	16	384	560	130	334	360	340	1255	865	131	257	TG-14S	291
450	18	435	620	150	356	390	474	1655	1095	164	348	TG-20S	543
500	20	482	675	160	382	420	474	1655	1095	164	348	TG-20S	593
550	22	531	745	170	418	460	474	1655	1095	164	348	TG-20S	636
600	24	581	795	170	476	490	474	1655	1095	164	348	TG-20S	681

704G/722F/720F-3U



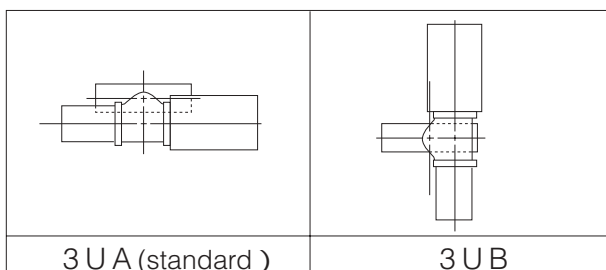
704G/722F/720F-3K



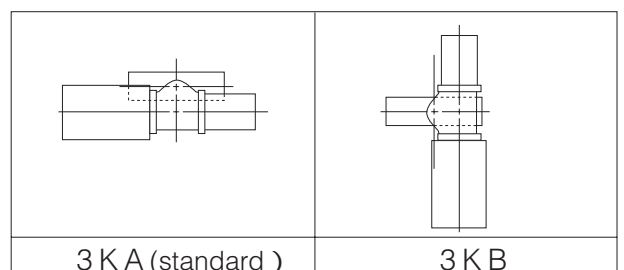
Selection criteria

Standard	Select when none of the following heavy duty items apply.
Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

3U Installation direction



3K Installation direction



Single phase motor type 704G-4 I (50mm to 100mm) / 722F-4 I (125mm to 500mm)

704G-4 I

Nominal size		Dimension (mm)											Motor type	Approx. weight (kg)
mm	inch	d	D	L	H ₁		H ₂	H ₃	A	P	F	K		
					JIS5K	JIS10K								
50	2	56	155	43	68	68	138	150	202	100	85	54	4 I-0	7.6
65	2 1/2	69	175	46	79	79	151	150	202	100	85	54	4 I-0	8.6
80	3	84	187	46	86	109	156	150	202	100	85	54	4 I-0	9.2 (9.7)
100	4	104	146	52	117	117	167	165	252	138	126	65	4 I-1	14.1

Remark: Value in brackets is for JIS 10K flanges.

722F-4 I

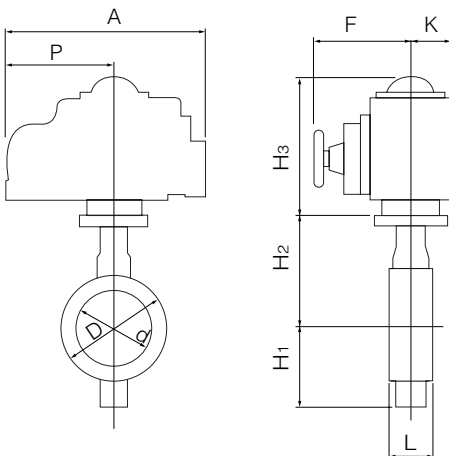
Nominal size		Dimension (mm)											Motor type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	F	K			
125	5	129	250	100	139	165	198	310	167	154	85	4 I-2	30	
150	6	154	280	100	157	180	198	310	167	154	85	4 I-2	31	
200	8	194	330	100	181	210	198	310	167	154	85	4 I-2.5	50	
250	10	250	400	110	221	250	230	388	223	246	136	4 I-3	67	
300	12	296	445	110	251	280	230	388	223	246	136	4 I-3	76	
350	14	334	490	120	298	320	230	388	223	246	136	4 I-3	93	
400	16	384	560	130	334	360	230	388	223	246	136	4 I-3	116	
							255	388	223	246	136	4 I-4	122	
450	18	435	620	150	356	390	230	388	223	246	136	4 I-4	161	
500	20	482	675	160	382	420	230	388	223	246	136	4 I-4	211	

Remark: For the 400mm type with the accessories below, type 4I-4 should be selected.

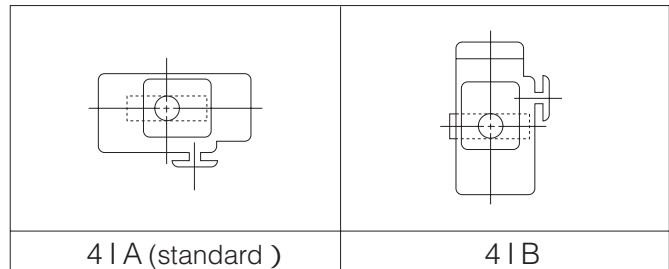
- Micom unit
- Servo unit
- Speed control unit
- Potentiometer

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.), slurry ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

704G/722F-4 I



4 I Installation direction



Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

Three phase motor actuator type 704G-4E(50mm to 100mm) / 722F-4E(125mm to 300mm)

704G-4E

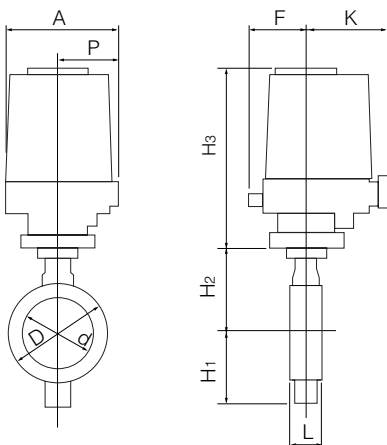
Nominal size		Dimension (mm)											Motor type	Approx. weight (kg)
mm	inch	d	D	L	H ₁		H ₂	H ₃	A	P	F	K		
					JIS5K	JIS10K								
50	2	56	155	43	68	68	138	318	200	105	92	175	SRE-010	14.2
65	2 1/2	69	175	46	79	79	151	318	200	105	92	175	SRE-010	15.2
80	3	84	187	46	86	109	156	318	200	105	92	175	SRE-010	15.8 (16.3)
100	4	104	146	52	117	117	167	318	200	105	92	175	SRE-010	18.5

Remark: Value in brackets is for JIS 10K flanges.

722F-4E

Nominal size		Dimension (mm)											Motor type	Approx. weight (kg)
mm	inch	d	D	L	H ₁	H ₂	H ₃	A	P	F	K			
125	5	129	250	100	139	165	329	200	105	92	175	SRE-020	30	
150	6	154	280	100	157	180	329	200	105	92	175	SRE-020	31	
200	8	194	330	100	181	210	337	250	130	111	219	SRE-060	55	
250	10	250	400	110	221	250	337	250	130	111	219	SRE-060	61	
300	12	296	445	110	251	280	353	250	130	111	219	SRE-060	71	

704G/722F-4E



Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

Three phase motor actuator type 722F-4L(350mm to 800mm) / 720F-4L(850mm to 1350mm)

Type	Nominal size		Dimension (mm)											Cylinder type	Approx. weight (kg)
	mm	inch	d	D	L	H ₁	H ₂	H ₃	E	K	F	M	P		
722F	350	14	334	490	120	298	320	487	117	164	533	357	230	LTKD-01 0.2kW/ MGH-3	171
	400	16	384	560	130	334	360	487	117	164	533	357	230	LTKD-01 0.2kW/ MGH-3	194
	450	18	435	620	150	356	390	487	117	164	533	370	230	LTKD-01 0.4kW/ MGH-3	237
	500	20	482	675	160	382	420	487	117	164	533	370	230	LTKD-01 0.4kW/ MGH-3	287
	550	22	531	745	170	418	460	559	140	198	592	395	230	LTKD-02 0.75kW/ MGH-4	388
	600	24	581	795	170	476	490	559	140	198	637	440	375	LTKD-05 0.75kW/ MGH-4	477
	650	26	627	845	170	586	510	570	140	198	637	440	375	LTKD-05 0.75kW/ MGH-4	625
	700	28	670	905	180	629	560	640	210	293	747	440	375	LTKD-05 0.75kW/ MGH-5	915
	750	30	723	970	190	659	590	640	210	293	747	477	375	LTKD-05 1.5kW/ MGH-5	1010
720F	800	32	772	1020	200	679	620	680	210	293	797	537	425	LTKD-1 1.5kW/ MGH-5	1205
	850	34	822	1070	210	709	650	680	210	293	797	537	425	LTKD-1 1.5kW/ MGH-5	1295
	900	36	858	1120	230	759	685	680	210	293	797	537	425	LTKD-1 1.5kW/ MGH-5	1395
	1000	40	975	1235	250	819	745	700	210	293	762	537	425	LTKD-1 1.5kW/ MGH-6	1670
	1100	44	1070	1345	280	874	820	700	210	293	762	537	425	LTKD-1 1.5kW/ MGH-6	1870
	1200	48	1170	1465	300	948	880	700	210	293	762	537	425	LTKD-1 1.5kW/ MGH-6	2270
	1350	54	1314	1630	330	1030	960	700	280	293	810	540	410	LTKD-1 2.2kW/ MGH-7	2650

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P
732X/731X

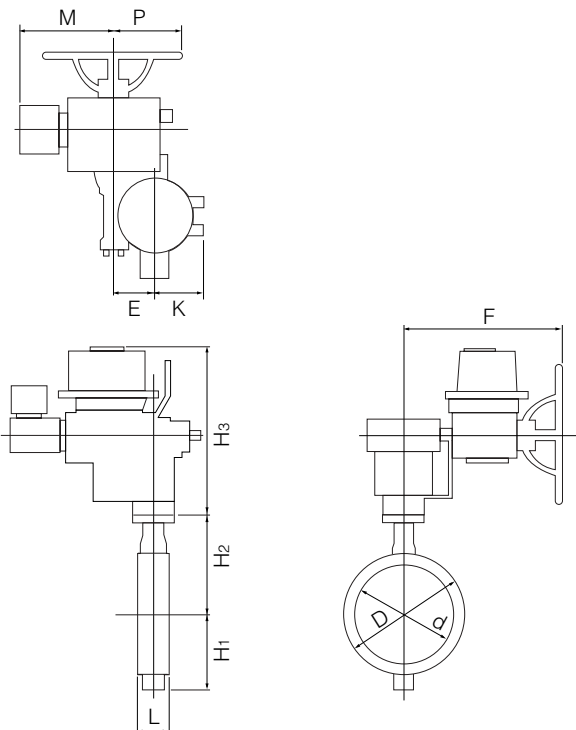
700E/700K

704G/722F/720F

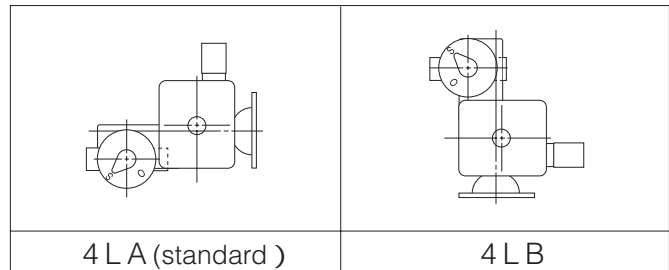
227P

903C/904C

722F/720F-4L

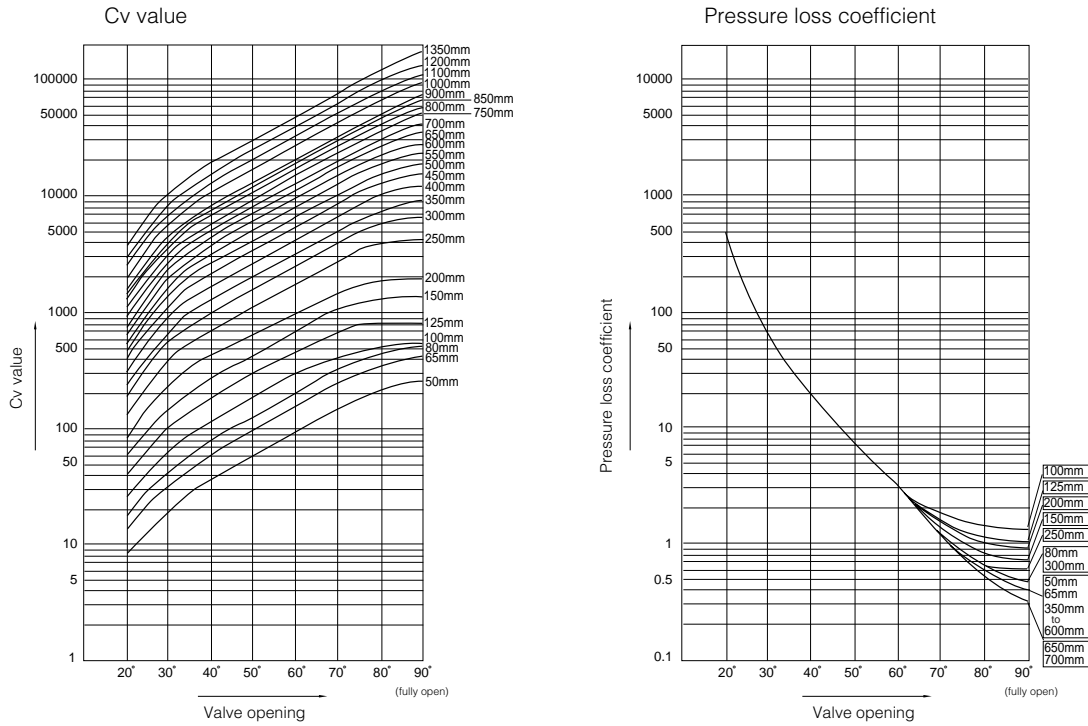


4L Installation direction



704G(Lugged) 722F/720F(Double flanged)

704G/722F/720F Cv value/Pressure loss coefficient



704G/722F/720F Cv value

Nominal size	Nominal size		Valve opening							
	mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
704G	50	2	8	15	25	40	64	103	160	200
	65	2 1/2	12	25	41	64	102	162	260	320
	80	3	15	33	57	95	163	271	450	580
	100	4	27	58	100	162	269	444	749	880
722F	125	5	40	102	180	297	457	692	767	800
	150	6	61	146	272	429	710	1039	1295	1350
	200	8	71	239	417	646	969	1457	1836	1950
	250	10	139	375	693	1135	1746	2724	3855	4200
	300	12	184	544	995	1593	2461	3909	5571	6400
	350	14	215	678	1248	1982	3028	4827	7054	9000
	400	16	304	905	1656	2649	4094	6460	9782	12000
	450	18	381	1158	2136	3433	5274	8120	12430	15000
	500	20	496	1440	2631	4209	6434	10085	15436	17500
	550	22	571	1765	3234	5141	7833	12066	17999	22500
	600	24	688	2074	3815	6126	9433	14595	21897	26500
	650	26	817	2441	4473	7159	11013	17254	26972	32500
	700	28	934	2807	5122	8152	12511	19728	30929	39000
750	30	935	3220	5965	9450	14328	22687	38260	52000	
800	32	1200	3721	6791	10771	16553	26976	43316	59000	
720F	850	34	1164	4018	7516	12063	18567	29284	46350	66000
	900	36	1358	4497	8298	13177	20139	32362	53126	73000
	1000	40	1784	5835	10740	17060	26110	42070	68860	95000
	1100	44	2075	7030	13020	20680	31530	50420	83340	114000
	1200	48	2570	8520	15710	24900	37930	60280	98640	138000
1350	54	3385	10180	18810	30490	47840	75750	119000	173000	

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

704G/722F/720F Pressure loss coefficient

Nominal size	Nominal size		Valve opening							
	mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
704G	50	2	257	68	25	10	4	2	1	0.4
	65	2 1/2	310	75	28	11	4	2	1	0.4
	80	3	394	83	27	10	3	1	0.4	0.2
	100	4	350	78	26	10	4	1	0.4	0.3
722F	125	5	399	61	19	7	3	1	1	1
	150	6	336	58	17	7	2	1	1	1
	200	8	745	65	22	9	4	2	1	1
	250	10	464	63	19	7	3	1	1	1
	300	12	545	62	19	7	3	1	1	0.4
	350	14	615	62	18	7	3	1	1	0.3
	400	16	540	61	18	7	3	1	1	0.3
	450	18	560	61	18	7	3	1	1	0.3
	500	20	510	61	18	7	3	1	1	0.4
	550	22	571	60	18	7	3	1	1	0.3
	600	24	561	62	18	7	3	1	1	0.3
	650	26	553	62	18	7	3	1	1	0.4
	700	28	573	63	19	8	3	1	1	0.3
	750	30	758	64	19	7	3	1	0.5	0.3
800	32	599	62	19	7	3	1	0.5	0.3	
720F	850	34	815	68	20	8	3	1	0.5	0.3
	900	36	756	69	20	8	3	1	0.5	0.3
	1000	40	645	60	18	7	3	1	0.4	0.2
	1100	44	701	61	18	7	3	1	0.4	0.2
	1200	48	658	60	18	7	3	1	0.4	0.2
	1350	54	611	68	20	8	3	1	0.5	0.2

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C

704G(Lugged) 722F/720F(Double flanged)

704G/722F/720F Applicable flange standard

Type	Nominal size		JIS		ANSI		BS4504 PN10	DIN NP10
	mm	inch	5K	10K	125Lb	150Lb		
704G	50	2	○	○	○	○	○	○
	65	2 1/2	○	○	○	○	○	○
	80	3	◎	○	◎	◎	○	○
	100	4	○	○	○	○	○	○
722F	125	5	○	○	◎	◎	○	○
	150	6	○	○	◎	◎	○	○
	200	8	○	○	◎	◎	◎	◎
	250	10	○	○	◎	◎	○	○
	300	12	○	○	◎	◎	○	○
	350	14	○	○	◎	◎	◎	◎
	400	16	○	○	◎	◎	○	○
	450	18	○	○	◎	◎	○	—
	500	20	○	○	◎	◎	◎	◎
	550	22	○	○	—	—	—	—
	600	24	○	○	◎	◎	◎	◎
	650	26	○	○	Consult us if the flange standard is not JIS 5K/10K in 650mm type and over.			
	700	28	○	○				
	750	30	○	○				
	800	32	○	○				
	850	34	○	○				
900	36	○	○					
720F	1000	40	○	○				
	1100	44	○	○				
	1200	48	○	○				
	1350	54	○	○				

○ : Can be used without flange drilling.
 ◎ : Tapped holes only. (ANSI body only)

704G/722F/720F Applicable pipe list in case of **A**

Type	Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
	mm	inch							
704G	50	2		-					34
	65	2 1/2		-					51
	80	3		-					70
	100	4		-					91
722F	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
	650	26	-				-	-	612
	700	28	-		-	-	-	-	653
	750	30	-		-	-	-	-	705
800	32	-		-	-	-	-	754	
720F	850	34	-		-	-	-	-	803
	900	36	-		-	-	-	-	834
	1000	40	-		-	-	-	-	950
	1100	44	-		-	-	-	-	1040
	1200	48	-		-	-	-	-	1138
	1350	54	-		-	-	-	-	1277

Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P
732X/731X

700E/700K

704G/722F/720F

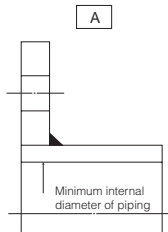
227P

903C/904C

Remark 1: =Applicable

Remark 2: Butterfly valves are inserted into a pipe that was fitted with the disc when fully open.

In cases where you are using a pipe or flange that is less than the minimum inner pipe diameter, use is still possible if means are taken such as inserting a spacer between the valve and flange. For details, please consult us.



704G(Lugged) 722F/720F(Double flanged)

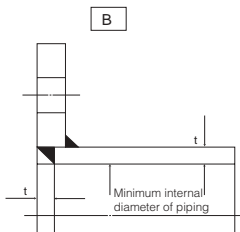
704G/722F/720F Applicable pipe list in case of **B**

Type	Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S
	mm	inch						
704G	50	2		-				
	65	2 1/2		-				
	80	3		-				
	100	4		-				
722F	125	5		-				
	150	6		-				
	200	8		-				
	250	10		-				
	300	12		-				
	350	14					-	-
	400	16					-	-
	450	18					-	-
	500	20					-	-
	550	22	-				-	-
	600	24	-				-	-
	650	26	-				-	-
	700	28	-		-	-	-	-
	750	30	-		-	-	-	-
	800	32	-		-	-	-	-
	720F	850	34	-		-	-	-
900		36	-		-	-	-	-
1000		40	-		-	-	-	-
1100		44	-		-	-	-	-
1200		48	-		-	-	-	-
1350		54	-		-	-	-	-

Remark 1: =Applicable

Remark 2: Butterfly valves are inserted into a pipe that was fitted with the disc when fully open.

In cases where you are using a pipe or flange that is less than the minimum inner pipe diameter, use is still possible if means are taken such as inserting a spacer between the valve and flange. For details, please consult us.



704G/722F/720F Piping bolts sizes

Type	Nominal size		JIS 5K		JIS 10K	
	mm	inch	Hexagon bolts	Hexagon	Hexagon bolts	Hexagon
704G	50	2	—	8-M12×30×25	—	8-M16×35×30
	65	2 1/2	—	8-M12×35×30	—	8-M16×35×30
	80	3	—	8-M16×35×30	—	16-M16×35×30
	100	4	—	16-M16×40×35	—	16-M16×40×35
722F	125	5	8-M16×60×38	8-M16×40×35	8-M20×65×46	8-M20×45×37
	150	6	8-M16×60×38	8-M16×40×35	8-M20×70×46	8-M20×50×42
	200	8	8-M20×65×46	8-M20×50×42	16-M20×70×46	8-M20×50×42
	250	10	16-M20×70×46	8-M20×50×42	16-M22×75×50	8-M22×50×42
	300	12	16-M20×70×46	8-M20×50×42	24-M22×75×50	8-M22×50×42
	350	14	16-M22×80×50	8-M22×55×47	24-M22×80×50	8-M22×55×47
	400	16	24-M22×85×50	8-M22×55×47	24-M24×90×54	8-M24×60×50
	450	18	24-M22×90×50	8-M22×60×50	32-M24×100×54	8-M24×65×54
	500	20	32-M22×90×50	8-M22×60×50	32-M24×100×54	8-M24×70×54
	550	22	32-M24×100×54	8-M24×65×54	32-M30×110×66	8-M30×70×54
	600	24	32-M24×100×54	8-M24×65×54	40-M30×110×66	8-M30×70×54
	650	26	40-M24×100×54	8-M24×70×54	40-M30×110×66	8-M30×80×66
	700	28	40-M24×100×54	8-M24×70×54	40-M30×110×66	8-M30×80×66
	750	30	40-M30×110×66	8-M30×80×66	40-M30×115×66	8-M30×80×66
800	32	40-M30×110×66	8-M30×80×66	48-M30×115×66	8-M30×80×66	
720F	850	34	40-M30×110×66	8-M30×80×66	48-M30×115×66	8-M30×80×66
	900	36	40-M30×115×66	8-M30×75×66	48-M30×120×66	8-M30×80×66
	1000	40	40-M30×130×72	16-M30×90×66	40-M36×145×84	16-M36×110×78
	1100	44	40-M30×130×72	16-M30×90×66	40-M36×145×84	16-M36×110×78
	1200	48	48-M30×130×72	16-M30×90×66	48-M36×150×84	16-M36×110×78
	1350	54	56-M30×135×72	16-M30×90×66	56-M42×165×96	16-M42×110×90

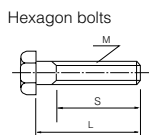
Remarks:

1. The bolt for valve positioning uses the screw hole.
2. The hexagon bolt is used in the screw hole part for valve positioning.
3. Please use a hexagon nut with 80% threading.
4. For uses other than marine, use SS400 as the bolt (and nut) material.

Example

Hexagon bolts: 4 - M30 x 95 x 65

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Butterfly Valves

TRITEC

302A/303Q

304A/304Q

302Y/304Y

337Y/336Y

304M (HLV)

507V/508V

846T/847T/847Q

841T/842T

773Z (NAV-Z)

700G/704G/705G

731P/732P

732X/731X

700E/700K

704G/722F/720F

227P

903C/904C