

508V Actuator Selection Chart

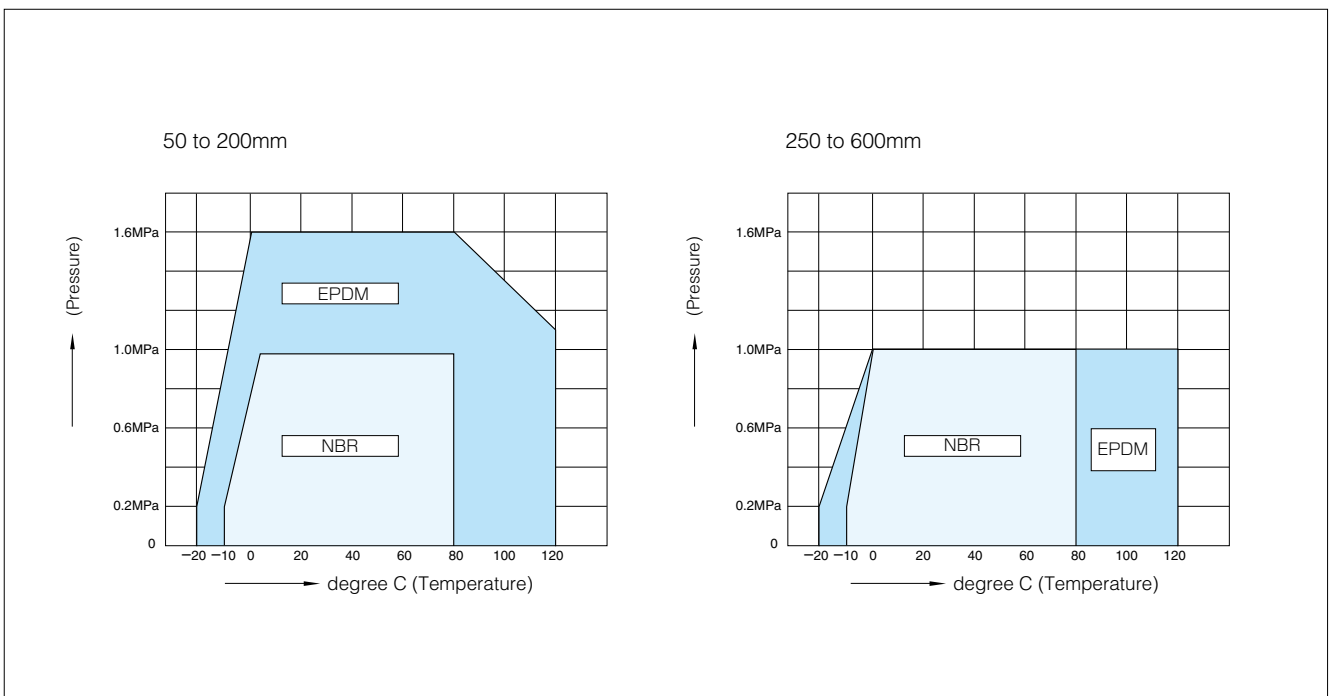
508V

Model	Category	Size (mm/inch)											
		50	80	100	150	200	250	300	350	400	450	500	600
		2	3	4	6	8	10	12	14	16	18	20	24
2U	Standard	2U-0	2U-1	2U-2	2U-3	2U-4	2U-5	MGH-3	MGH-4				
7E,3A	Standard	T35	T85	T200	T380	T750	TGA-125	TGA-140	TGA-160	TGA-200			
7G,7F 3U,3K	Standard	T85S	T200S	T380S	T750S	TG-10S	TG-12S	TG-14S	TG-20S				
4I	ON-OFF Control	4I-0	4I-1	4I-2.5	4I-3		4I-4						
4J,4L	Standard	SRJ-010		SRJ-020	SRJ-060	LTKD-01 0.2kW/ DGH-2	LTKD-01 0.4kW/ MGH-3	LTKD-02 0.75kW/ MGH-4	LTKD-05 0.75kW/ MGH-5				
6X,6W	Standard	280H		400H									

Remark: In case of 350mm type with accessories below for control type 4I-4 should be selected.

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

508V Pressure-Temperature Rating



508V Allowable differential pressure for 6X and 6W

(kPa)

Nominal size		Valve opening							
mm	inch	0°	10°	20°	30°	40°	50°	60°	70°
50	2	1600	685	334	148	86	59	45	40
80	3	1400	694	475	308	176	116	69	47
100	4	800	765	575	315	204	133	69	37
150	6	1600	783	546	360	219	152	90	44
200	8	1600	676	453	287	178	124	79	44

508V Allowable differential pressure on stem

(kPa)

Nominal size		Valve opening							
mm	inch	0°	10°	20°	30°	40°	50°	60°	70°
50	2	1600	685	334	148	86	59	45	40
80	3	1600	694	475	308	176	116	69	47
100	4	1600	765	575	315	204	133	69	37
150	6	1600	783	546	360	219	152	90	44
200	8	1600	676	453	287	178	124	79	44
250	10	1000	562	233	149	84	58	37	21
300	12	1000	220	232	149	84	58	37	21
350	14	1000	367	222	116	65	45	29	16
400	16	1000	209	118	58	52	46	33	25
450	18	1000	223	197	115	56	48	33	26
500	20	1000	162	143	97	55	44	30	23
600	24	1000	246	171	110	54	49	41	27

The above is based on the result at our test plant. The test was conducted with fresh water at ambient temperature. Therefore, please use the data for reference only. Consult us if you have a question or doubt.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

508V Maximum velocity

Fresh water	Short period	10m/s
	Continuous	7m/s
Sea water	Short period	10m/s
	Continuous	5m/s
Air (ambient temp.)	Short period	80m/s
	Continuous	30m/s

The maximum velocity shown is estimated as an average in the fully open state.

Remark: "Short period" means a few minutes creating high velocity until the disc angle reaches the designated position.

508V

508V Bare shaft (01: 50mm to 350mm, 02: 400mm to 600mm)

508V-01 (50mm to 350mm) / 508V-02 (400mm)

Nominal size		Dimension (mm)													Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	$\square S_1$	ϕd_2	b	t ₂	t	Flanges	
50	2	48	101	43	76	142	22	10.5	8	10	—	—	14	F07	2.5
80	3	75	131	46	95	158	23	11.5	12	14	—	—	14	F07	4.0
100	4	96	156	52	110	169	23	11.5	12	14	—	—	14	F07	5.3
150	6	143	217	56	160	202	28	16.5	14	18	—	—	14	F10	10.8
200	8	188	268	60	182	227	30	20	18	22	—	—	14	F10	15
250	10	248	322	68	255	280	35	30	24	28	—	—	14	F10	29
300	12	296	375	78	284	312	35	30	24	32	—	—	16	F12	42
350	14	332	420	92	320	360	35	30	24	32	—	—	16	F12	62
400	16	390	477	102	343	380	65	59	—	46	14	3.5	20	F14	112

Flange dimensions

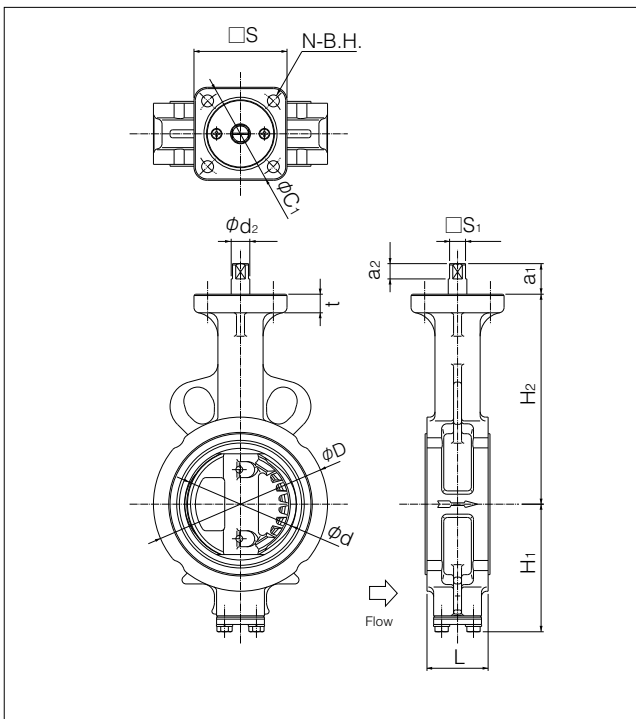
Flanges	$\square S$	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Stem design
 01: Square
 02: Round with key

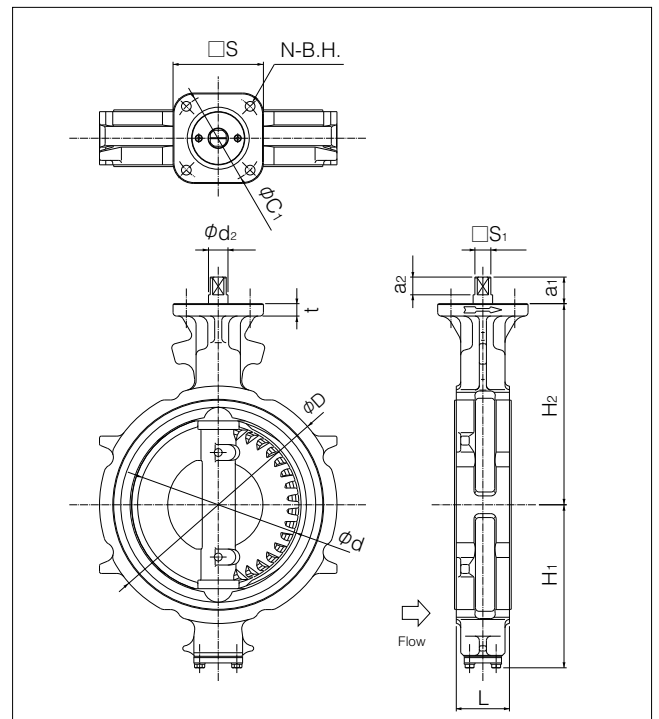
508V-02 (450mm to 600mm)

Nominal size		Dimension (mm)															Approx. Mass (kg)	
mm	inch	ϕd	ϕD		L	H ₁	H ₂	a ₁	a ₂	ϕd_2	b	t ₂	t	D ₁	C ₁	N		B.H.
			JIS10K	JIS16K														
450	18	439	532	532	114	379	420	60	53	47	12	3.5	20	200	170	4	19	143
500	20	490	610	610	127	422	450	60	53	47	12	3.5	20	200	170	4	19	196
600	24	583	826	720	154	494	530	75	65	65	18	6	25	260	220	4	23	333 (318)

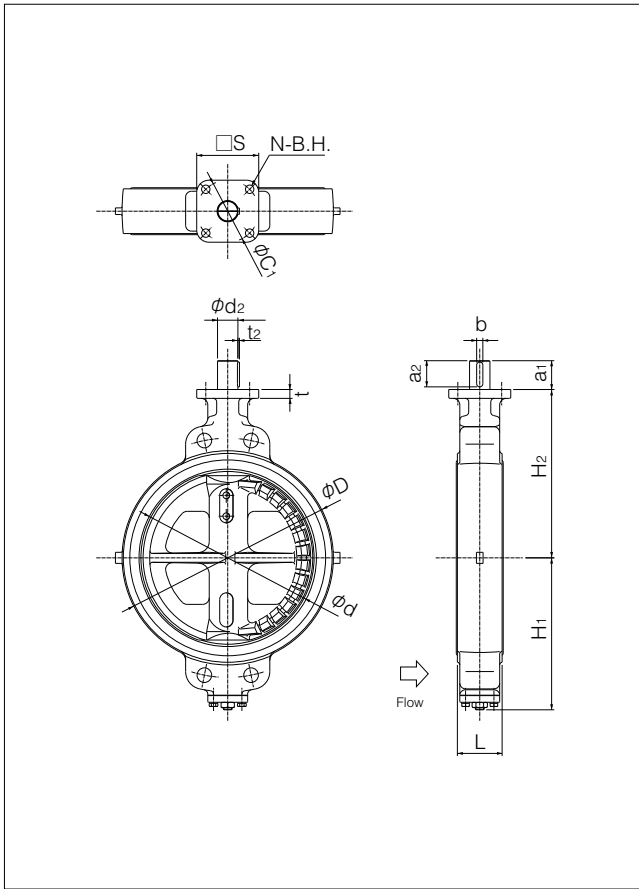
508V 50mm, 80mm



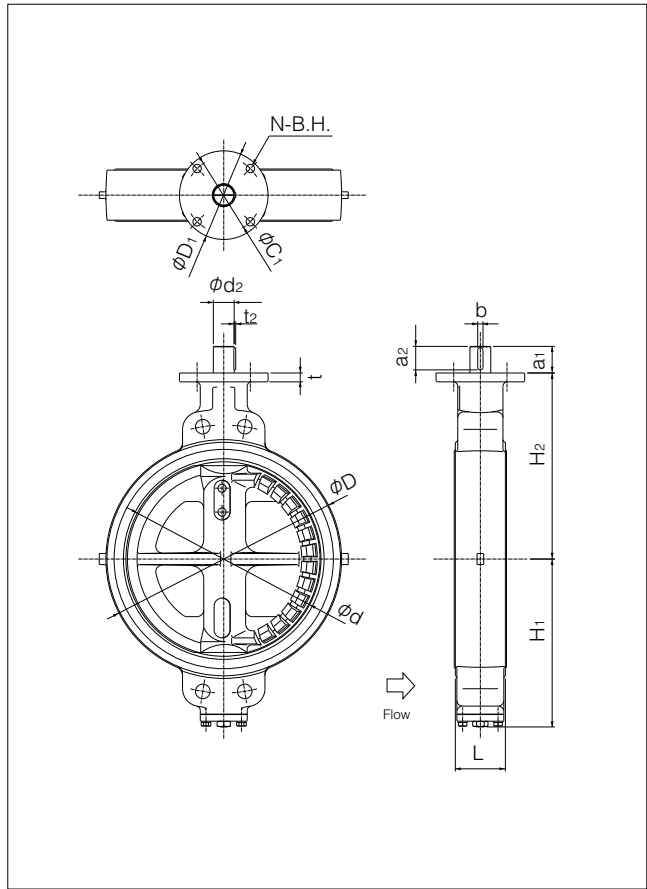
508V 100mm to 350mm



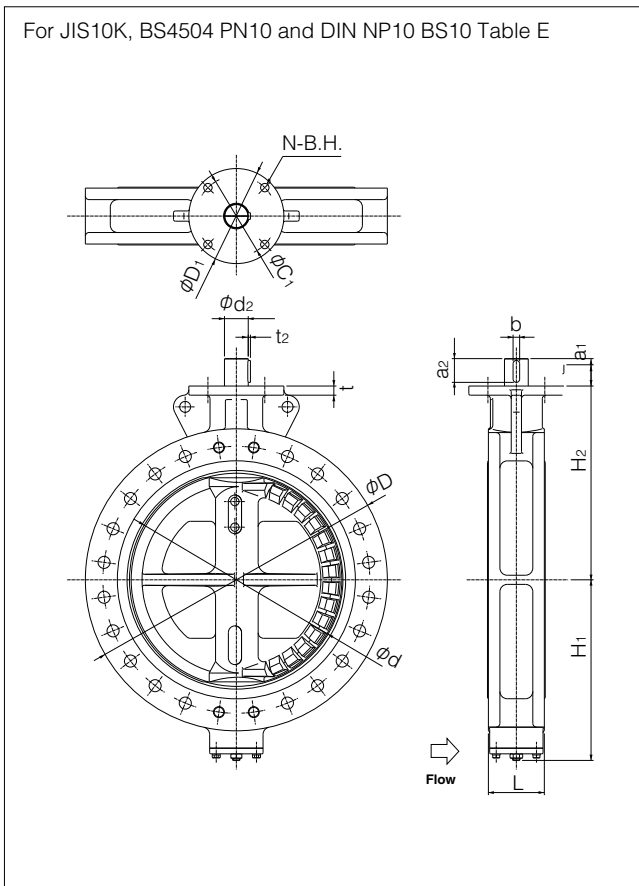
■508V 400mm



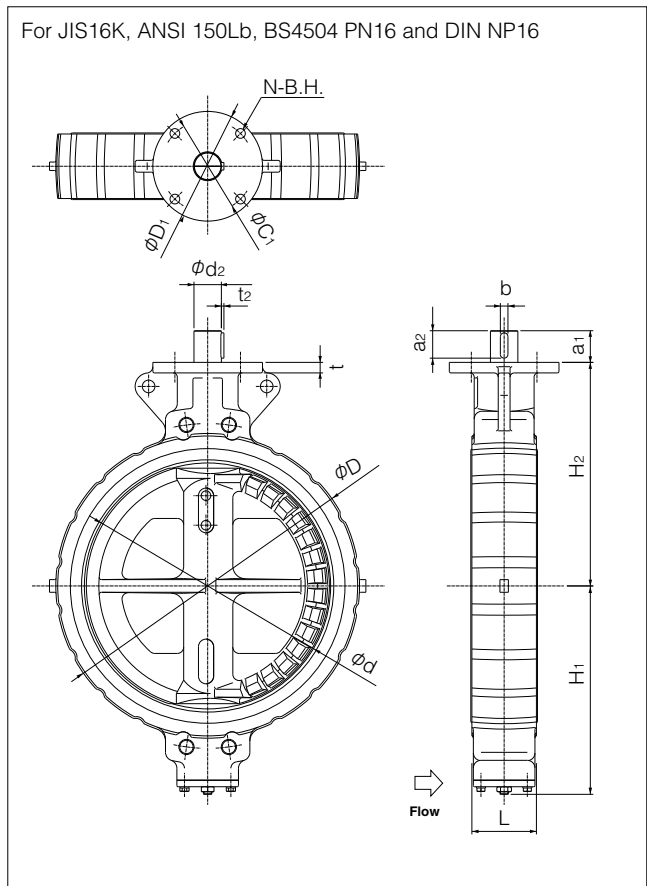
■508V 450mm, 500mm



■508V 600mm



■508V 600mm



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

508V

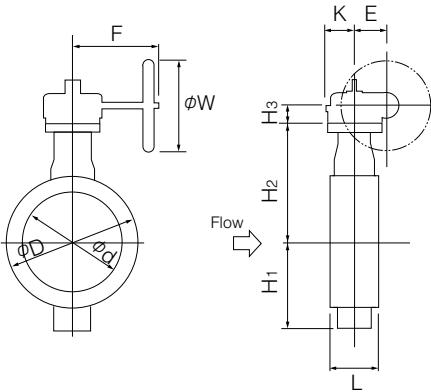
Worm gear type 508V-2U (50mm to 400mm) / 508V-2S (450mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	ϕW		
50	2	48	101	43	76	142	29.5	36	46	160	100	2U-0	4.9
80	3	75	131	46	95	158	29.5	36	46	160	100	2U-1	6.4
100	4	96	156	52	110	169	29.5	36	46	160	100	2U-1	7.7
150	6	143	217	56	160	202	34.5	44	53	173.5	160	2U-2	15.1
200	8	188	268	60	182	227	41.5	67	75	198	200	2U-3	22.8
250	10	248	322	68	255	280	41.5	67	75	198	200	2U-3	37
300	12	296	375	78	284	312	48	87.5	90	222.5	200	2U-4	57
350	14	332	420	92	320	360	48	87.5	90	222.5	200	2U-4	77
400	16	390	477	102	343	380	50	90	105	266	280	2U-5	126
450	18	439	532	114	379	420	55	117	164	335	355	MGH-3	178
500	20	490	610	127	422	450	55	117	164	335	355	MGH-3	230
600	24	583	826 (720)	154	494	530	65	140	198	400	450	MGH-4	393 (363)

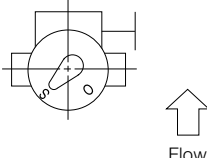
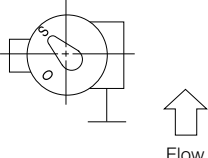
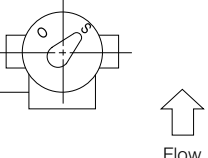
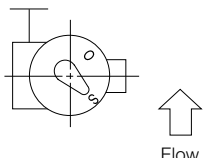
※A handle lock is attached for manual gear.

※() shows the data for JIS 16K 600mm.

508V-2U/2S



2U/2S Installation direction

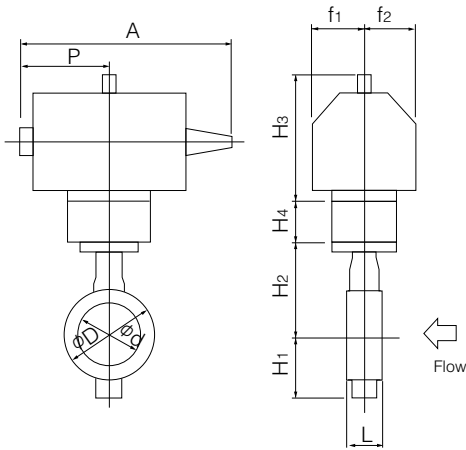
			
2UA/2SA	2UB/2SB	2UC/2SC	2UD/2SD

Double-acting pneumatic cylinder type 508V-7E (50mm to 300mm)

Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	H ₄	A	P	f ₁	f ₂		
50	2	48	101	43	76	142	125	—	274	116	57	29	T35	5
80	3	75	131	46	95	158	168	—	325	142	75	47	T85	9
100	4	96	156	52	110	169	168	—	325	142	75	47	T85	10
150	6	143	217	56	160	202	203	—	434	176	79	57	T200	19
200	8	188	268	60	182	227	231	—	511	214	91	69	T380	29
250	10	248	322	68	255	280	269	—	668	270	118	85	T750	54
300	12	296	375	78	284	312	269	—	668	270	118	85	T750	67

• A free angle adjuster comes with the cylinder.

508V-7E



7E Installation direction

<p>Retainer side</p> <p>Air port side</p> <p>Stem side</p> <p>7EA</p>	<p>Retainer side</p> <p>Air port side</p> <p>Stem side</p> <p>7EB</p>	<p>Retainer side</p> <p>Air port side</p> <p>Stem side</p> <p>7EC</p>	<p>Retainer side</p> <p>Air port side</p> <p>Stem side</p> <p>7ED</p>
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Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M

(HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H

(MKT)

903L/901C/905C (Bata-check)

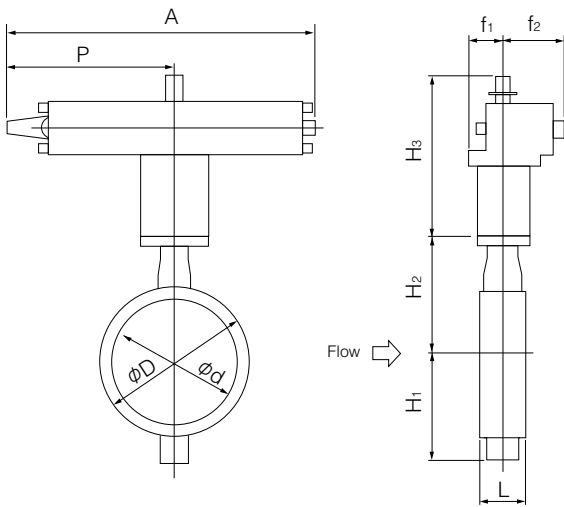
508V

Double-acting pneumatic cylinder type 508V-3A (350mm to 600mm)

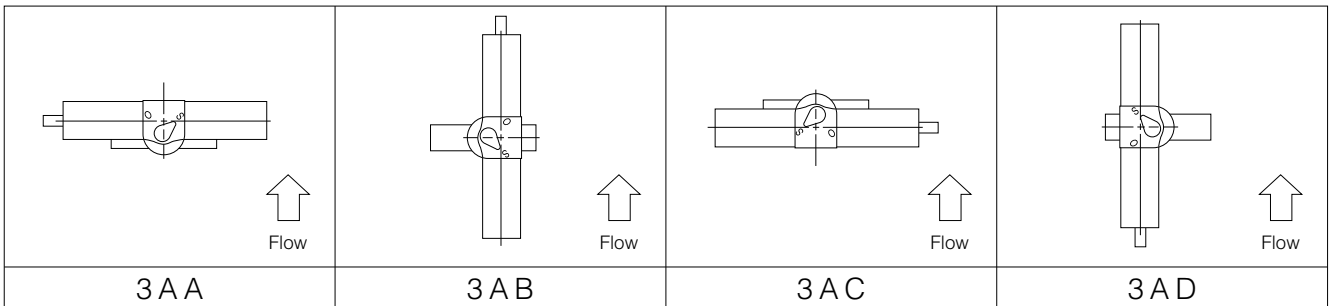
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	332	420	92	320	360	359	868	487	100	164	TGA-125	112
400	16	390	477	102	343	380	359	868	487	100	164	TGA-125	156
450	18	439	532	114	379	420	407	951	534	100	180	TGA-140	201
500	20	490	610	127	422	450	435	1092	609	130	202	TGA-160	302
600	24	583	826(720)	154	494	530	570	1339	740	160	253	TGA-200	552(522)

Remark: Value in brackets indicates 3Q (air to close).
 ● A free angle adjuster comes with the pneumatic cylinder.

508V-3A



3A Installation direction



Single-acting pneumatic cylinder type 508V-7G (Air to open: 50mm TO 150mm) / 302A-7F (Air to close: 50mm to 150mm)

■ 508V-7G

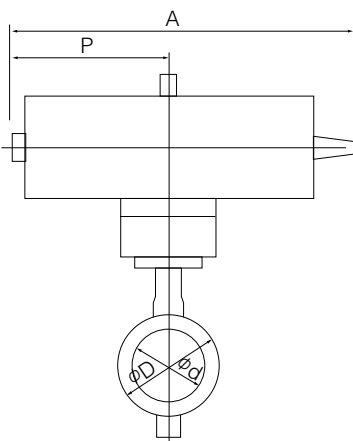
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	48	101	43	76	142	168	406	183	75	47	T85S	9
80	3	75	131	46	95	158	203	534	226	79	57	T200S	15
100	4	96	156	52	110	169	231	635	276	91	69	T380S	25
150	6	143	217	56	160	202	269	848	360	118	85	T750S	44

■ 508V-7F

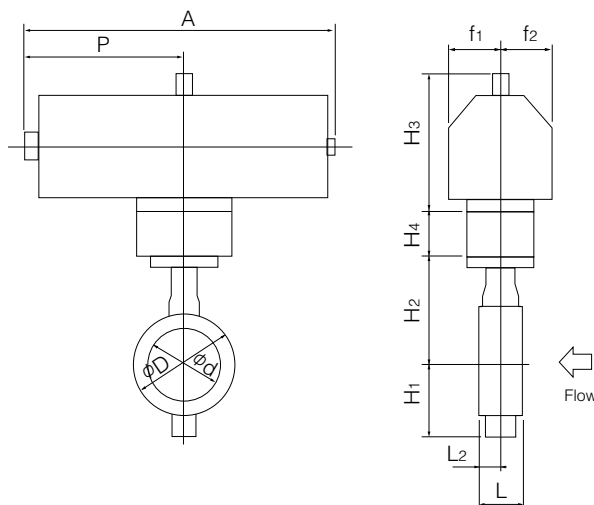
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)	
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	H ₄	A	P	f ₁			f ₂
50	2	48	101	43	76	142	168	66	439	183	75	47	T85S	9
80	3	75	131	46	95	158	203	84	539	226	79	57	T200S	15
100	4	96	156	52	110	169	231	92	665	276	91	69	T380S	25
150	6	143	217	56	160	202	269	104	853	360	118	85	T750S	44

● A free angle adjuster comes with the cylinder.

■ 508V-7G



■ 508V-7F



■ 7F Installation direction

<p>7FA</p>	<p>7FB</p>	<p>7FC</p>	<p>7FD</p>
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Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

508V

Single-acting pneumatic cylinder type 508V-3U (Air to open: 200mm to 600mm) / 508V-3K (Air to close: 200mm to 600mm)

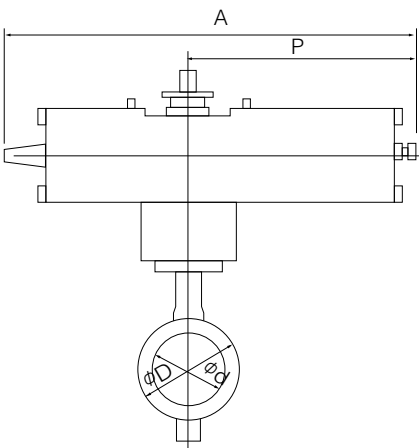
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	188	268	60	182	227	307	1030	670 (585)	70	165	TG-10S	66
250	10	248	322	68	255	280	307	1180	820 (720)	94	206	TG-12S	125
300	12	296	375	78	284	312	307	1180	820 (720)	94	206	TG-12S	143
350	14	332	420	92	320	360	340	1355	965 (865)	131	257	TG-14S	259
400	16	390	477	102	343	380	340	1355	965 (865)	131	257	TG-14S	313
450	18	439	532	114	379	420	474	1790	1230 (1095)	164	348	TG-20S	562
500	20	490	610	127	422	450	474	1790	1230 (1095)	164	348	TG-20S	614
600	24	583	826[720]	154	494	530	474	1790	1230 (1095)	164	348	TG-20S	751[721]

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

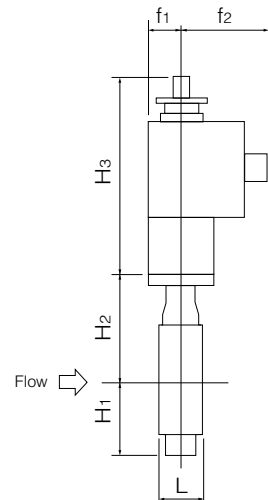
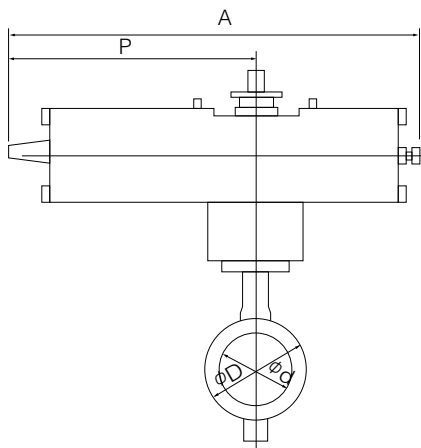
※ Brackets indicates the data for JIS 16K 600mm.

● A free angle adjuster comes with the pneumatic cylinder.

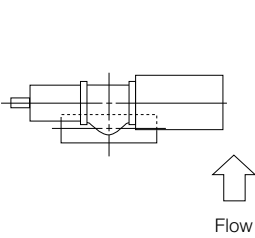
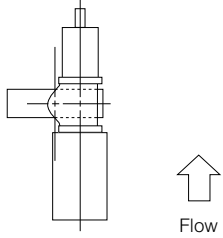
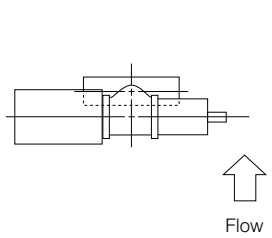
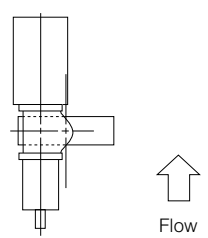
508V-3K



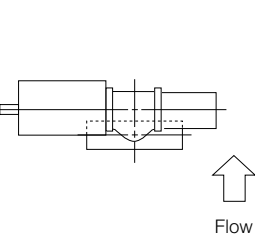
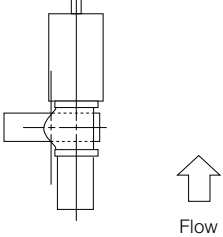
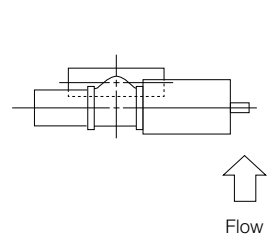
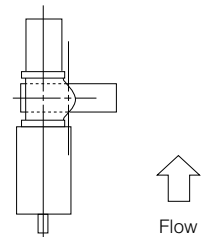
508V-3U



3K Installation direction

 3 K A	 3 K B	 3 K C	 3 K D
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3U Installation direction

 3 U A	 3 U B	 3 U C	 3 U D
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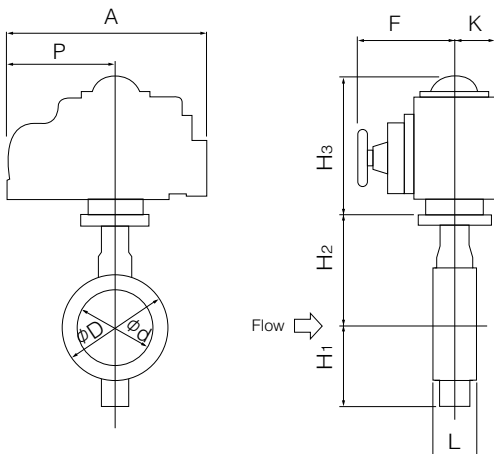
Single phase electric motor type 508V-4 I (50mm to 400mm)

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	48	101	43	76	142	150	202	100	85	54	4 I-0	6.7
80	3	75	131	46	95	158	150	202	100	85	54	4 I-0	8.2
100	4	96	156	52	110	169	165	252	138	126	65	4 I-1	11.7
150	6	143	217	56	160	202	198	310	167	154	85	4 I-2.5	23.6
200	8	188	268	60	182	227	198	310	167	154	85	4 I-2.5	28.6
250	10	248	322	68	255	280	230	388	223	246	136	4 I-3	53
300	12	296	375	78	284	312	230	388	223	246	136	4 I-3	66
350	14	332	420	92	320	360	230	388	223	246	136	4 I-3	80
							255	388	223	246	136	4 I-4	91
400	16	390	477	102	343	380	230	388	223	246	136	4 I-4	131

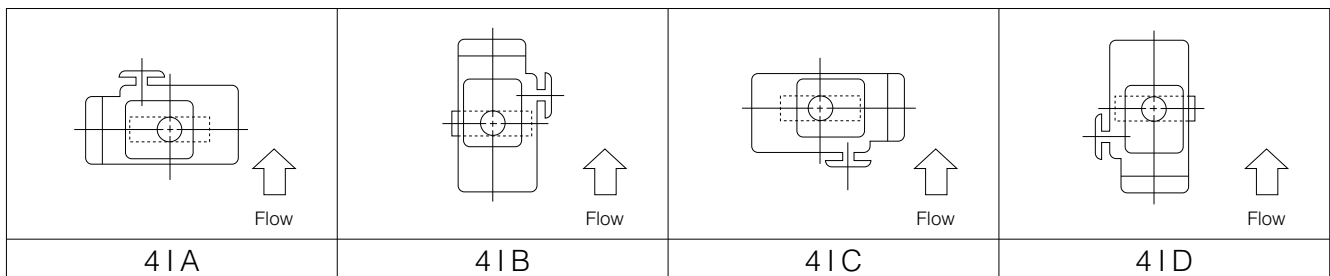
Remark: For 350mm type with accessories below for control type 4I-4 should be selected.

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

■ 508V-4 I



■ 4I Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

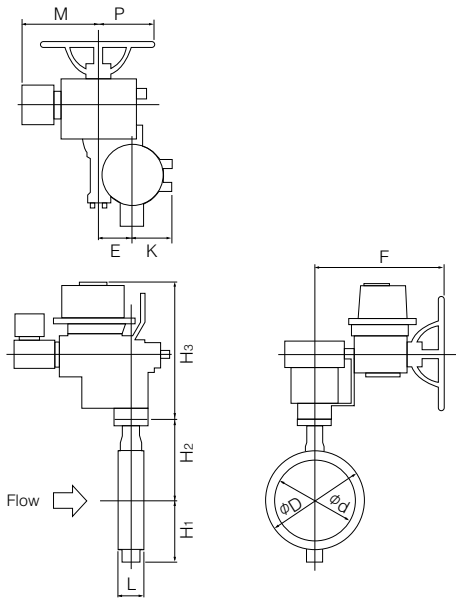
508V

Three phase motor actuator type 508V-4L (300mm to 600mm)

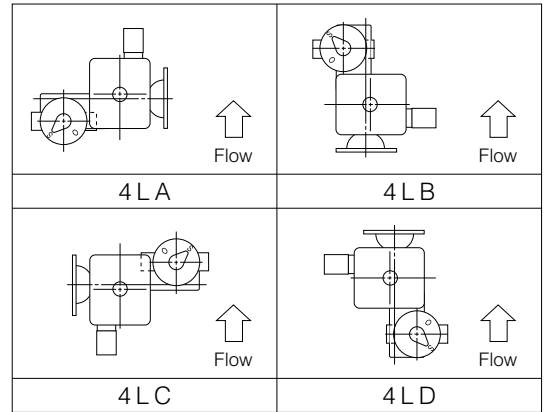
Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	M	P		
300	12	296	375	78	284	312	414	85	126	496	357	190	LTKD-01 0.2kW/ DGH-2	118
350	14	332	420	92	320	360	414	85	126	496	357	190	LTKD-01 0.2kW/ DGH-2	131
400	16	390	477	102	343	380	457	117	164	532	370	230	LTKD-01 0.4kW/ MGH-3	223
450	18	439	532	114	379	420	537	140	198	592	395	230	LTKD-02 0.75kW/ MGH-4	304
500	20	490	610	127	422	450	537	140	198	592	395	230	LTKD-02 0.75kW/ MGH-4	356
600	24	583	826(720)	154	494	530	604	210	293	748	440	360	LTKD-05 0.75kW/ MGH-5	660(630)

※Brackets indicate the data for JIS 16K 600mm.

508V-4L



4L Installation direction

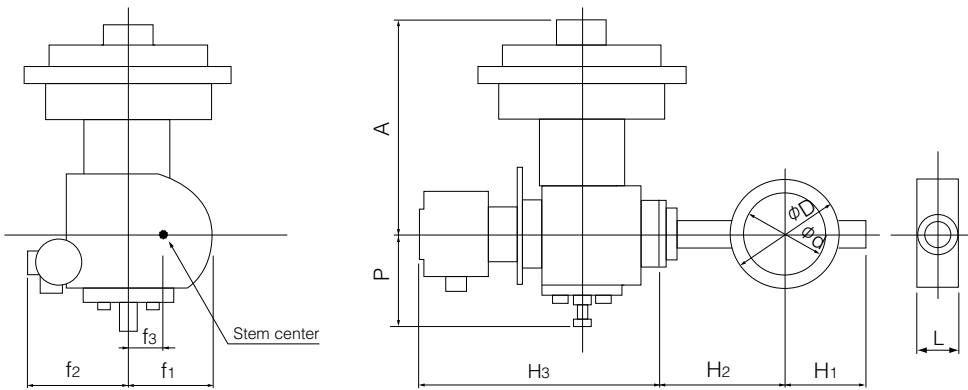


508V-6X (Air to open: 50mm to 200mm) / 508V-6W (Air to close: 50mm to 200mm) with diaphragm actuator

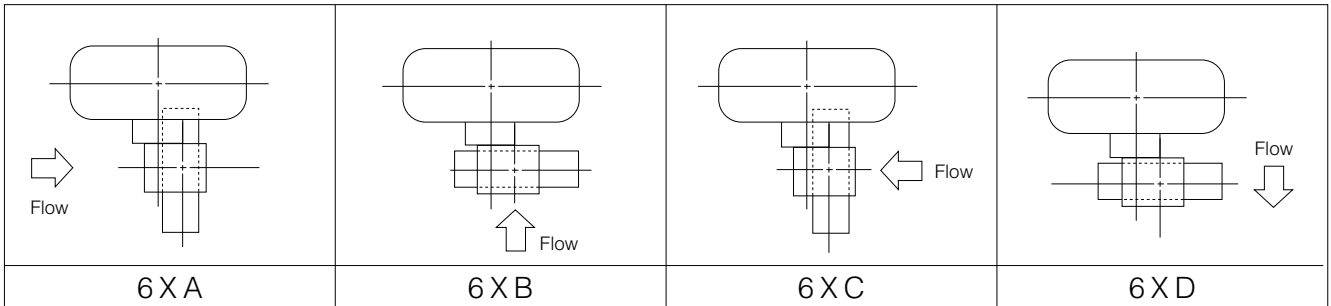
Nominal size		Dimension (mm)											Diaphragm type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂	f ₃		
50	2	48	101	43	76	142	333	310	126	140	164	36	280H	37
80	3	75	131	46	95	158	333	310	126	140	164	36	280H	38
100	4	96	156	52	110	169	333	310	126	140	164	36	280H	39
150	6	143	217	56	160	202	381	440	185	125	200	50	400H	75
200	8	188	268	60	182	227	381	440	185	125	200	50	400H	79

Remarks: H₃ shows the dimension when the positioner (TCE2000) is installed.
The H₃ dimension will change depending on the positioner type.

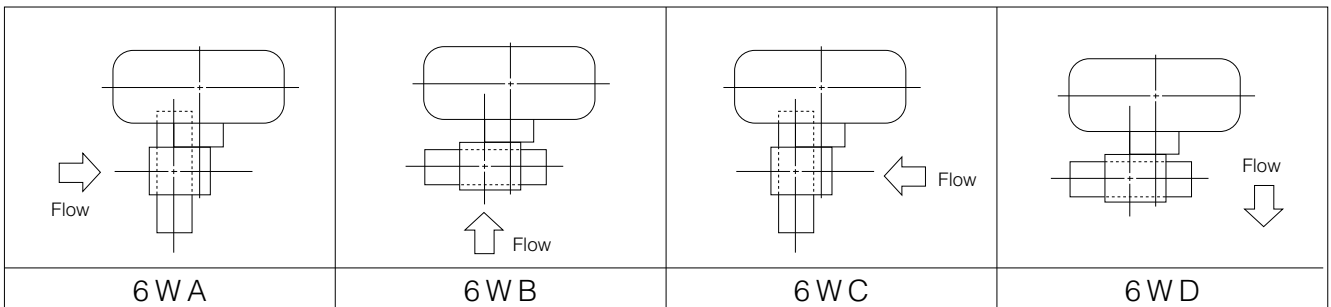
508V-6X/6W



6X Installation direction



6W Installation direction



Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

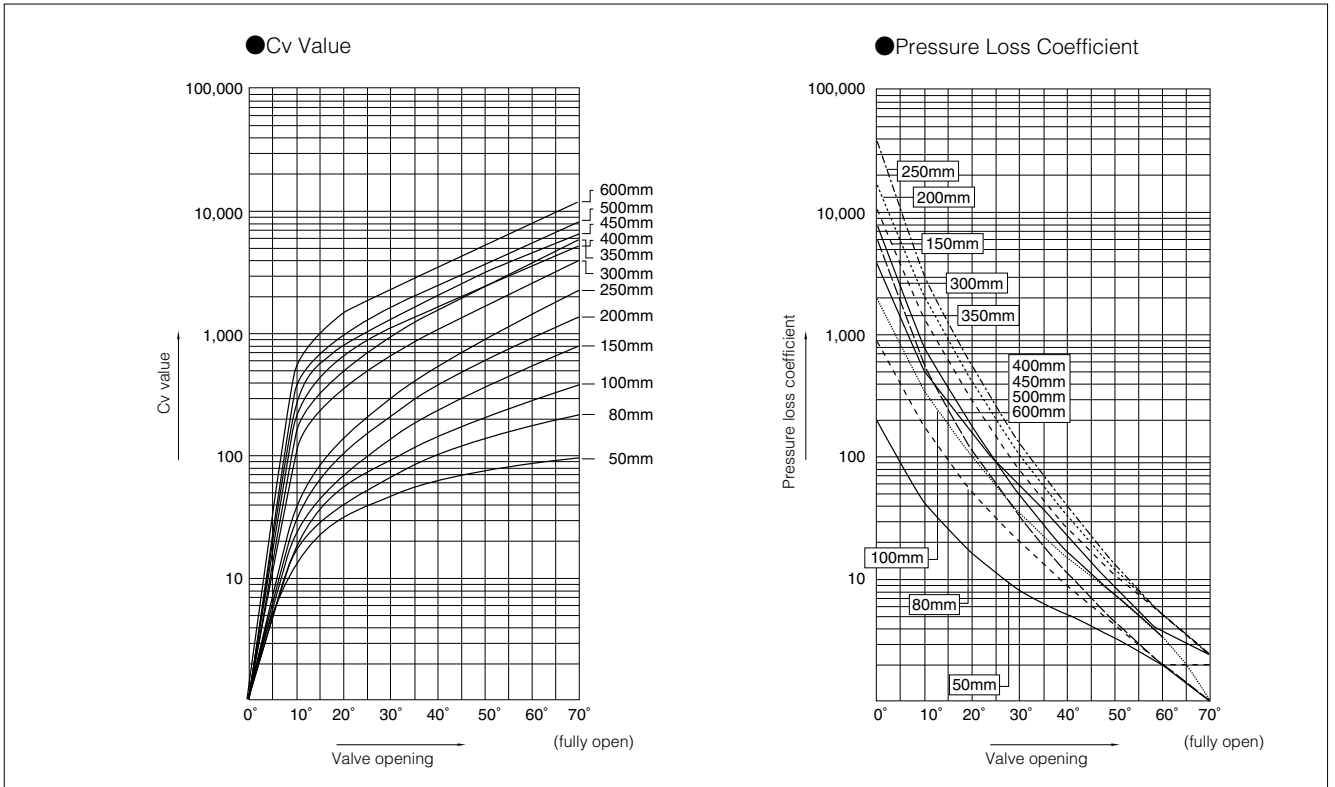
704G/722F/720F

227P

907T/908H (MKT)

903L/901C/905C (Bata-check)

508V Cv Value/Pressure Loss Coefficient



508V Cv Value

Nominal size		Valve opening						
mm	inch	10°	20°	30°	40°	50°	60°	70°
50	2	16	32	48	63	76	87	94
80	3	19	41	68	101	139	180	218
100	4	24	55	94	143	203	281	383
150	6	26	72	140	239	375	555	790
200	8	38	105	215	380	600	920	1380
250	10	42	145	300	550	910	1480	2260
300	12	118	350	670	1120	1700	2580	4000
350	14	160	500	980	1600	2450	3800	5800
400	16	249	670	1080	1650	2510	3650	5230
450	18	316	848	1370	2090	3180	4620	6620
500	20	390	1050	1690	2590	3920	5710	8170
600	24	561	1500	2430	3720	5640	8220	11800

508V Pressure Loss Coefficient

Nominal size		Valve opening						
mm	inch	10°	20°	30°	40°	50°	60°	70°
50	2	65	16	7	4	3	2	2
80	3	223	48	17	8	4	2	2
100	4	420	78	27	11	6	3	2
150	6	1640	219	57	19	8	4	2
200	8	2360	310	74	24	9	4	2
250	10	4640	390	91	27	10	4	2
300	12	1210	138	38	13	6	3	1
350	14	1030	106	28	10	4	2	1
400	16	727	100	39	17	7	3	2
450	18	723	100	38	17	7	3	2
500	20	733	101	39	17	7	3	2
600	24	741	104	39	17	7	3	2

508V Pressure Recovery Coefficient (FL) and Cavitation Coefficient (Kc)

Valve opening	10°	20°	30°	40°	50°	60°	70°
Pressure recovery coefficient (FL)	0.85	0.80	0.78	0.76	0.73	0.71	0.70
Cavitation coefficient (Kc)	0.55	0.50	0.47	0.45	0.40	0.37	0.32

Butterfly Valve
TRITEC
TT2
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344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

508V

508V Applicable pipe list in case of **A**

Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S	Minimum internal diameters of piping (mm)
mm	inch							
50	2	○	—	○	○	○	○	34
80	3	○	—	○	○	○	○	70
100	4	○	—	○	○	○	○	91
150	6	○	—	○	○	○	○	144
200	8	○	—	○	○	○	○	194
250	10	○	—	○	○	○	○	246
300	12	○	—	○	○	○	○	294
350	14	○	○	○	○	—	—	327
400	16	○	○	○	×	—	—	387
450	18	○	○	○	×	—	—	434
500	20	○	○	○	×	—	—	484
600	24	—	○	○	×	—	—	581

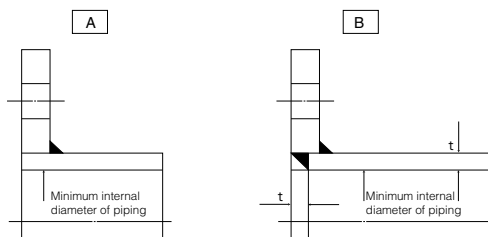
508V Applicable pipe list in case of **B**

Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S
mm	inch						
50	2	○	—	○	○	○	○
80	3	○	—	○	○	○	○
100	4	○	—	○	○	○	○
150	6	○	—	○	○	○	○
200	8	○	—	○	○	○	○
250	10	○	—	○	○	○	○
300	12	○	—	○	○	○	○
350	14	○	○	○	○	—	—
400	16	○	○	○	○	—	—
450	18	○	○	○	○	—	—
500	20	○	○	○	○	—	—
600	24	—	○	○	○	—	—

Remark 1: ○=Applicable ×=Not 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.



508V Applicable Flange Standard

Nominal size		JIS				ANSI 150Lb	BS4504		DIN		BS10 Table E
mm	inch	5K	10K	16K	20K		PN10	PN16	NP10	NP16	
50	2	D	○	○	○	○	○	○	○	○	○
80	3	○	○	○	○	○	○	○	○	○	○
100	4	○	○	○	○	○	○	○	○	○	○
150	6	○	○	○	○	○	○	○	○	○	○
200	8	○	○	○	○	○	○	○	○	○	○
250	10	×	○	○	×	○	○	○	○	○	○
300	12	×	○	○	×	○	○	○	○	○	○
350	14	×	○	○	×	○	○	○	○	○	○
400	16	×	D	D	×	D	D	D	D	D	D
450	18	×	D	D	×	D	D	D	D	D	D
500	20	×	D	D	×	D	D	D	D	D	D
600	24	×	T	T	×	T	T	T	T	T	T

○ : Can be used without flange drilling.
 D : With flange drilling
 T : With flange tapping
 × : Not applicable

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
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700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

508V Piping Bolt and Nut Sizes

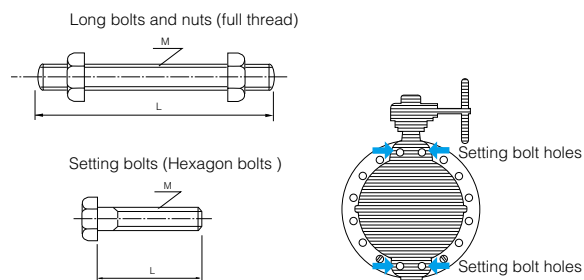
Nominal size		JIS5K		JIS10K		JIS16K		ANSI 150Lb	
mm	inch	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts
50	2	4-M12×105	—	4-M16×120	—	8-M16×125	—	4-U5/8-11UNC×140	—
80	3	4-M16×120	—	8-M16×125	—	8-M20×135	—	4-U5/8-11UNC×140	—
100	4	8-M16×130	—	8-M16×130	—	8-M20×150	—	8-U5/8-11UNC×150	—
150	6	8-M16×130	—	8-M20×155	—	12-M22×165	—	8-U3/4-10UNC×165	—
200	8	8-M20×150	—	12-M20×155	—	12-M22×170	—	8-U3/4-10UNC×165	—
250	10	—	—	12-M22×175	—	12-M24×190	—	12-U7/8-9UNC×195	—
300	12	—	—	16-M22×185	—	16-M24×210	—	12-U7/8-9UNC×205	—
350	14	—	—	16-M22×195	—	16-M30(P3)×225	—	12-U1-8UNC×240	—
400	16	—	—	16-M24×220	—	—	—	16-U1-8UNC×255	—
450	18	—	—	20-M24×230	—	—	—	16-U1 1/8-8UNC×280	—
500	20	—	—	20-M24×250	—	—	—	20-U1 1/8-8UNC×295	—
600	24	—	—	20-M30×290	8-M30×65	—	—	16-U1 1/4-8UNC×340	8-U1 1/4-8UNC×85

Remark: Bold and nut material: SS400/SS400 and SUS 304/SUS04.
 Long bold uses full threaded bolt.
 Use thin hexagon nut. (Use heavy hexagon nut for ANSI150Lb.)
 A unified screw should have 8 threads per inch if its nominal diameter exceeds 1 inch.

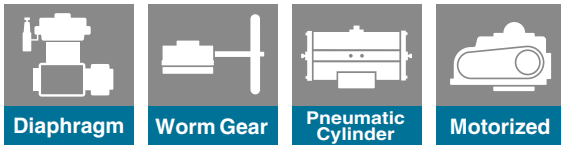
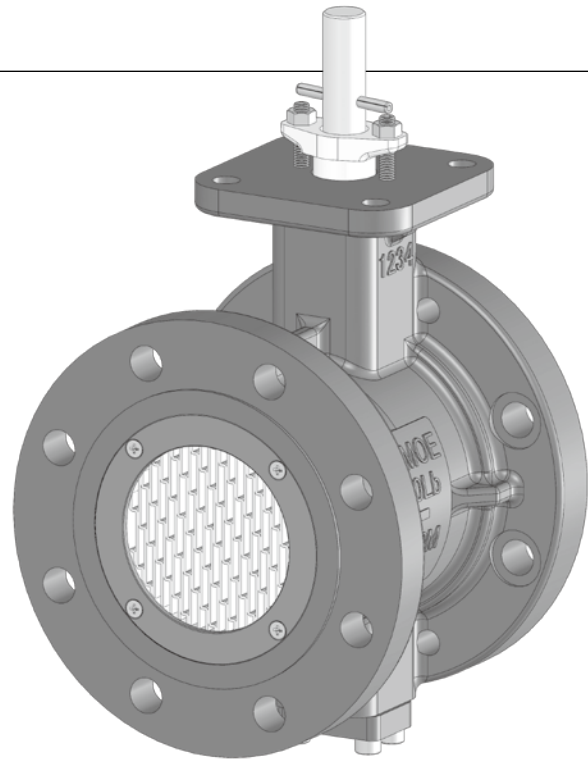
Example

Long bolts: 12 - M22 × 185
 | | |
 N M L

Setting bolts: 4 - M30 × 95
 (Hexagon bolts) | | |
 N M L

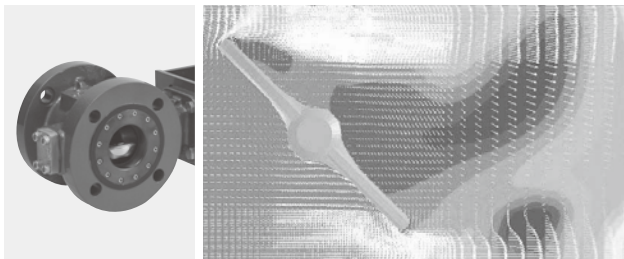


DTM



General Description

The Ultimate Rotary Control DTM provides high accurate control under most critical process conditions including higher pressure drop liquid/gas applications. DTM series valves can be supplied with or without integrated cavitation breaker in order to reduce noise level by max. 30 dB. Valves in this series also exhibit higher anti-cavitation capability.

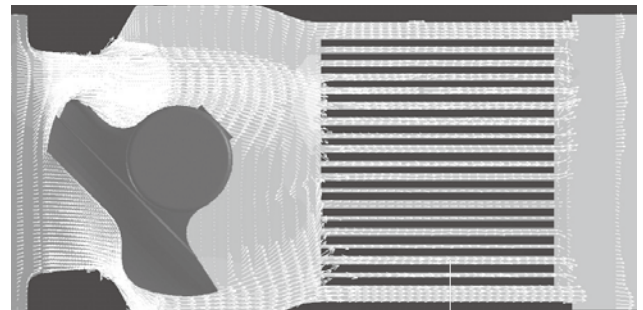


Conventional Butterfly Valve

Local static pressure drop and quick pressure recovery causes cavitation



DTM Series



Cavitation breaker

(Note) Colors show the pressure distribution. Red means a high pressure and blue means a low pressure.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
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302Y/304Y
304M (HLV)
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DTM
846T/847T/847Q
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731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Features and Benefits

The ultimate rotary control DTM valve provides accurate control and low noise levels, even at high velocities.

Wide rangeability, 100:1

Improves flow control with a wide range of control from closed to fully open.

Noise reduction by 20dB or more

Features the latest anti-cavitation technology pioneered by TOMOE that delivers superior control and low turbulence in the line. As a result, there is a 20dB reduction in flow induced valve noise and associated damage to piping and equipment compared to conventional valves.

Can handle high differential pressure

Capable of handling extremely high differential pressure with control in the opening range of 0 – 30% and differential pressures greater than 2MPa.

High performance seat structure

Excellent durability and high performance characteristics achieved with metal seat design. Seat leakage of Class V and Rate A for a soft seal.

Ease of maintenance

Designed for easy maintenance – for example, seat and cavitation breaker can be replaced simply and quickly.

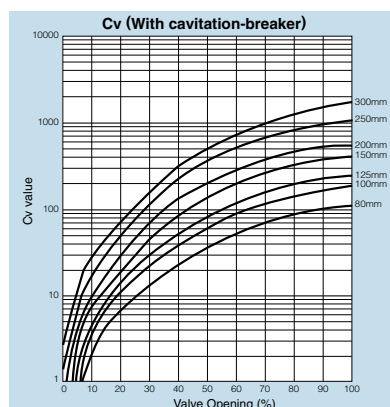
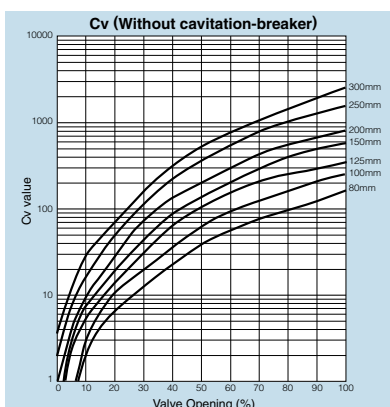
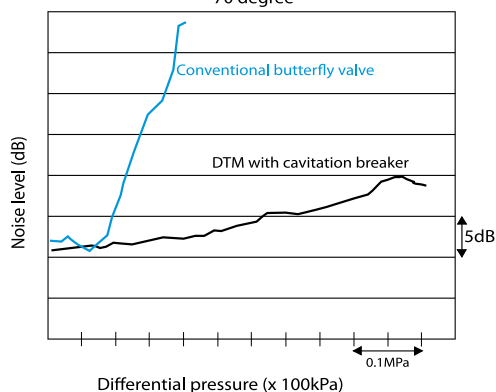
High performance diaphragm actuator

A new high performance diaphragm pneumatic actuator that is compact, highly accurate and has proven long life in the field has been designed to manage the DTM valve actuation process with optimum efficiency.

Optional RPTFE seat

The DTM is also available with an RPTFE seat which provides zero leakage to ISO 5208 Rate A.

Noise comparison in valve opening
70 degree



Standard Specifications

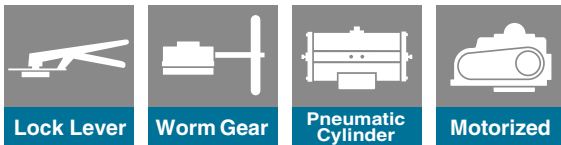
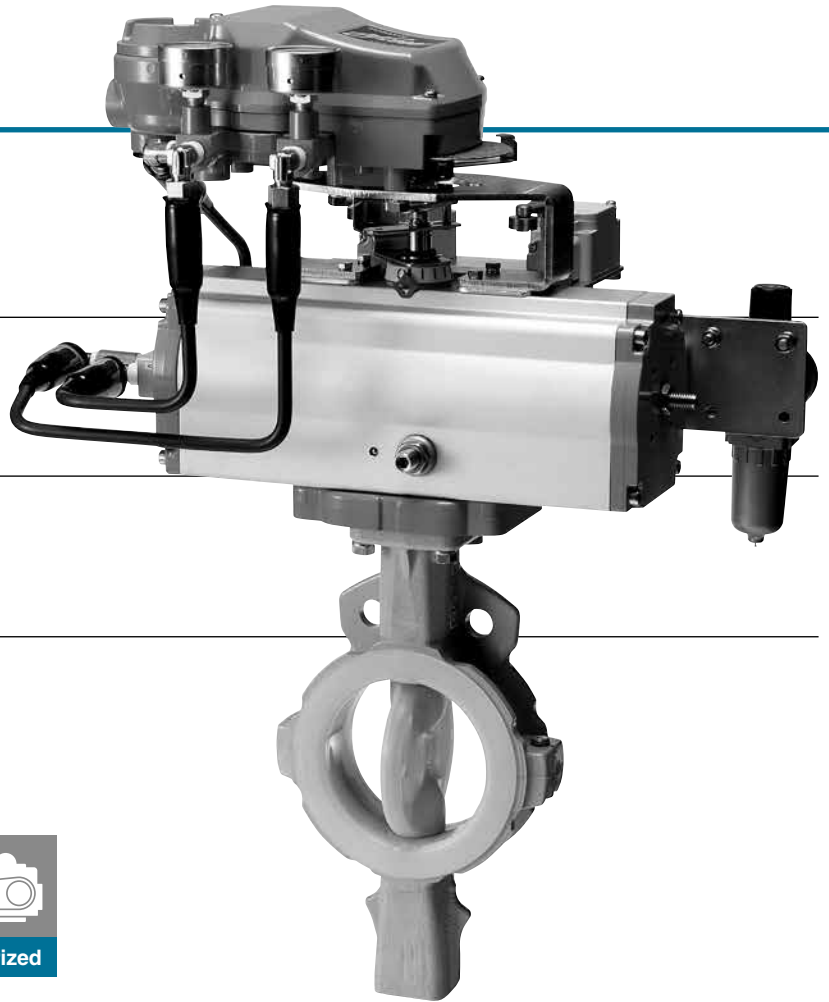
Valve type	Rotary control butterfly valve (with low noise characteristics)		
Valve nominal size	80, 100, 125, 150, 200, 250, 300mm		
Pressure rating	ASME B 16.5 Class 150, 300mm		
Applicable flange standard	JIS10, 16, 20, 30K, ASME B 16.5 CLASS 150, 300		
Body Style	Double flanged		
Face-to-face dimensions	IEC 60534-3-2 (JIS B 2005-3-2)		
Flow characteristics	Equal percent		
Rangeability	100:1		
Flow direction	Flow to retainer side		
Max. working pressure / Closed	Class 150 : 2MPa / Class 300 : 5.1MPa		
Max. differential pressure / Open by 30%	Class 150 : 0.8MPa / Class 300 : 2MPa		
Seat leakage	ANSI B 16.104 Class V (9ANSI/FCI 70-2)	ISO 5208 Rate A (Zero leakage)	
Temperature range	-29 to 400 degrees C	-10 to 230 degrees C	
Standard materials	Body	WCB or CF8M	
	Disc	CF8M	
	Stem	Stainless steel	
	Seat ring	Stainless steel	RPTFE
	Cavitation breaker	Stainless steel	
Applicable gaskets	Any standard gasket with inner/outer ring can be used		
Actuator	Diaphragm actuator, pneumatic cylinder, motorised		

※It is possible that seat leakage occur when fluid (e.g. powder and/or liquid) is solidified by working temperature and other cause. Consult us. Please note that use with vertical line such as bottom area of discharge spout of hopper, and tank.

846T Wafer

847T Wafer

847Q Lugged



Features and Benefits

New design features of the TOMOE 847 series result in vastly improved sealing performance in applications where conditions are potentially hazardous.

High tension coil spring

(250, 300mm: coned disc spring)
Ensures a stable seal at both the upper and lower gland even at extreme temperatures or when thermal shock occurs.

Minimum 3mm PFA thickness

(250, 300mm: PTFE)
Seamfree PFA injection moulding (PTFE compression moulding) on the seat and disc to a minimum thickness of 3mm prevents permeation of dangerous fluids or gases.

No special gasket needed

Stable flange sealing performance is ensured by concentric circular grooves on the flange faces thereby eliminating the need for a special gasket when operating under specified temperatures.
The wider sealing area also ensures minimum "creep" at high temperatures.
Flange sealing mechanism is independent of the seating and gland seals which ensures there is no loss of line fluid.
Soft gaskets can be used when fitting the valve in the pipeline.

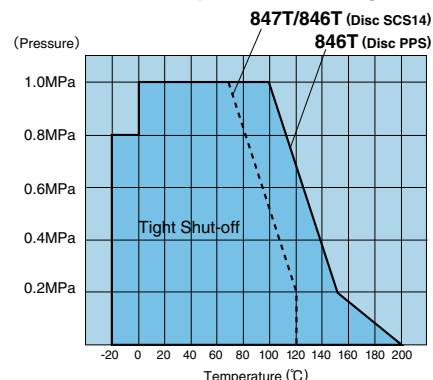
Total sealing

Valve structure includes primary, secondary and independent tertiary seal, ie. gland packing. There is also a fourth seal of O-rings on the top/bottom stems, ie. dust seal.

Lining

(50~200mm: PFA, 250~300mm: PTFE)
Seamless construction of the valve lining of the 847 Series ensures complete stability in all conditions.
Design and construction of conventional valves often means permeation of fluids or gases, particularly at high temperatures. By employing an injection moulding method and utilising the properties of PFA, PTFE at a minimum thickness of 3mm, the 847 Series is able to eliminate faults common to PTFE-lined valves of conventional design.

Pressure-Temperature Leakage Chart



General Description

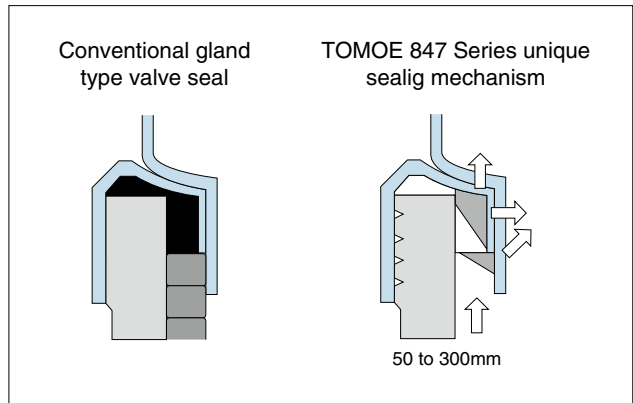
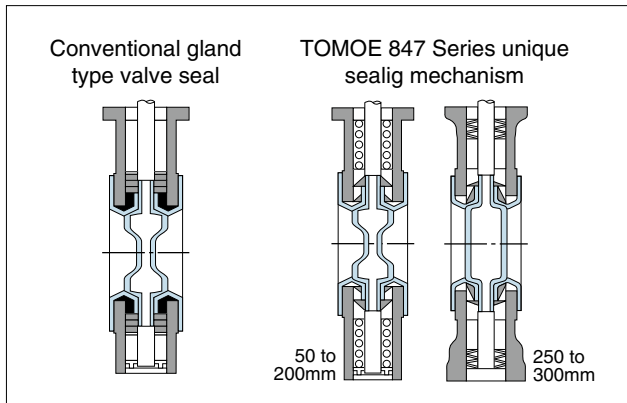
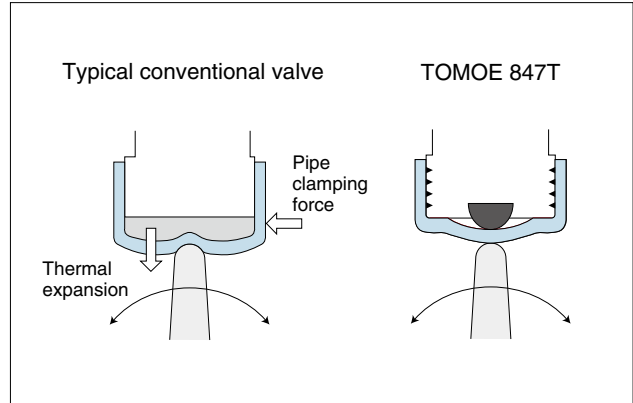
Chemically resistant butterfly valves. The unique construction of the TOMOE 847 Series provides superior strength and sealing properties essential in applications where conditions are potentially hazardous.

Sealing Properties

The upper and lower stem housings of the 847 Series valve have the same length high tension coil springs which provide stable sealing performance in cases of temperature change. Conventional valves usually employ a shorter spring in the lower stem housing. This can lead to a loading imbalance on the seat making it difficult to maintain consistent sealing performance.

The sealing design features a triple acting sealing mechanism controlled by the balanced spring forces. (250, 300mm: Coned disc springs).

In addition, stem seal leakage caused by excessive pipe flange damping forces is eliminated because the stem seal arrangement and the pipe flange seal are totally independent.



Butterfly Valve
TRITEC
TT2
334A
344Q
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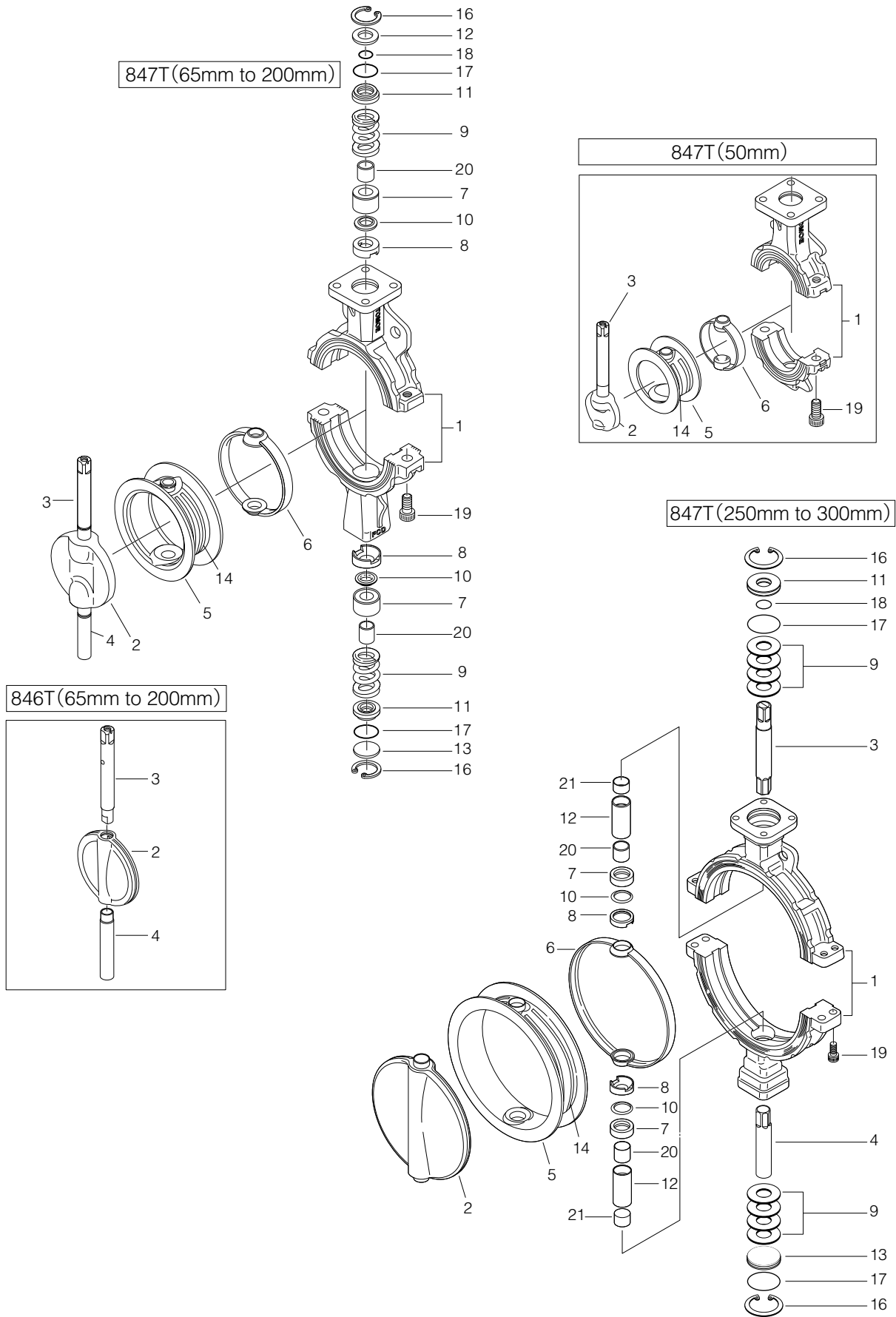
Standard Specifications

Type	846T	847T
Valve nominal size	65 to 300mm (8 sizes)	50 to 300mm (9 sizes)
Applicable flange standard	JIS 5K/10K, ANSI 125 lb/150 lb, ISO 7005-1 PN 6/10/16, BS10 Table E, DIN 2632 PN 6/10/16, BS 4504 PN 6/10/16	
Face-to-face dimensions	JIS B 2002 46 series/ ISO 5752 wafer butterfly valves (short)	
Max. working pressure ※1	1.0 MPa	
Body shell test	1.5 MPa	
Seat leak test	1.1 MPa	
Working temperature range	PPS disc: -20 to 120 degrees C Stainless disc: -20 to 200 degrees C	-20 to 200 degrees C
Working temperature in continuous use ※1	PPS disc: 0 to 80 degrees C Stainless disc: 0 to 150 degrees C	0 to 150 degrees C
Standard materials	Body	Ductile iron, FCD-S (A395)
	Disc	SCS14, PPS (65 to 200mm)
	Stem	SUS329J1
	Seat ring	65 to 200mm: PFA / 250, 300mm: PTFE (Backup rubber: Fluorocarbon rubber)
Coating	Up to 200mm : Epoxy resin coating (Munsell N7) 250 and 300mm : Polyester powder baking finish (Munsell N7)	

※1 "Working temperature in continuous use" stands for the temperature continuously kept exceeding one hour.
 ※2 Export license by Japanese Ministry is required 847T for all sizes and 846T up to 100mm. Please consult us the detail.

846T/847T (Wafer)/847Q (Lugged)

846T/847T Expanded view of components



846T/847T Parts list

■ 846T/847T Parts list (846T: 65 to 200mm, 847T: 50 to 200mm)

No.	Description	Q'ty	Remarks
1	Body	1	
★ 2	Disc	1	See Remark 2, only 847T
★ 3	Upper stem	1	See Remark 2, only 847T
★ 4	Lower stem	1	See Remark 2, only 847T
★ 5	Seat ring	1	See Remark 2.
★ 6	Back-up rubber	1	See Remark 2.
7	Bearing	1	50mm
		2	65mm to 200mm
8	Secondary ring	1	50mm
		2	65mm to 200mm
9	Spring	1	50mm
		2	65mm to 200mm
★ 10	Gland packing	1	50mm
		2	65mm to 200mm
11	Dust seal	1	50mm
		2	65mm to 200mm
12	Retaining spring	1	
13	Bottom cover	1	Only 65mm to 200mm
14	Plate	4	Attached on seat ring
16	C- ring	1	50mm
		2	65mm to 200mm
★ 17	O-ring	1	50mm
		2	65mm to 200mm
★ 18	O-ring	1	
		2	50mm to 150mm
19	Hexagon hole bolt	4	200mm
		1	50mm
20	Bearing	2	65mm to 200mm
		2	

■ 846T / 847T Parts list (250mm, 300mm)

No.	Description	Q'ty	Remarks
1	Body	1	
★ 2	Disc	1	See Remark 3, only 847T
3	Upper stem	1	
4	Lower stem	1	
★ 5	Seat ring	1	
★ 6	Back-up rubber	1	
7	Bearing	2	
8	Secondary ring	2	
9	Spring	8	
★ 10	Gland packing	2	
11	Dust seal	1	
12	Bearing	2	
13	Bottom cover	1	
14	Plate	4	Attached on seat ring
16	C-ring	2	
★ 17	O-ring	2	
★ 18	O-ring	1	
19	Hexagon hole bolt	2	250mm
		4	300mm
20	Bearing	2	
21	Bearing	2	

Remark 1: The ★ indicates recommended spare parts. They are supplied as "Seat ring set".

Remark 2: Item number 5 (seating) and 6 (Back-up rubber) are supplied as a set. For 847T type, item number 2 (disc), 3 (upper stem) and 4 (lower stem) are supplied as an assembled unit.

Remark 3: Item number 5 (seating) and 6 (Back-up rubber) are supplied as a set. For 847T type, item number 2 (disc) is supplied as an assembled unit.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T/847T (Wafer)/847Q (Lugged)

847T Actuator selection chart

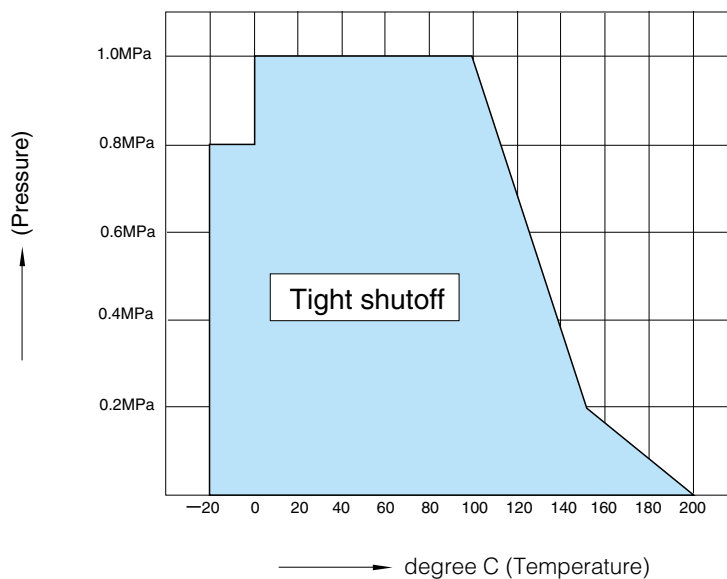
847T

Model	Category	Size ($\frac{mm}{inch}$)								
		50	65	80	100	125	150	200	250	300
		2	2 1/2	3	4	5	6	8	10	12
1T	Standard	1T-1			1T-2		1T-3			
	Heavy duty	1T-1			1T-2		1T-3			
2U	Standard	2U-1		2U-2			2U-3		2U-4	
	Heavy duty	2U-1		2U-2			2U-3		2U-4	
7E, 3A	Standard	T85		T200		T380		T750		TGA-125
	Heavy duty	T85		T200		T380		T750		TGA-125
7G,7F 3U,3K	Standard	T200S		T380S		T750S		TG-10S		TG-12S TG-14S
	Heavy duty	T200S		T380S		T750S		TG-10S		TG-12S TG-14S
4 I	Standard	4 I-0		4 I-1		4 I-2		4 I-2.5		4 I-3
	Heavy duty	4 I-0		4 I-1		4 I-2		4 I-2.5		4 I-3
4J	Standard	SRJ-010			SRJ-020		SRJ-060			
	Heavy duty	SRJ-010			SRJ-020		SRJ-060			

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

846T/847T Pressure-temperature rating

846T/847T (SCS14)



846T Actuator selection chart

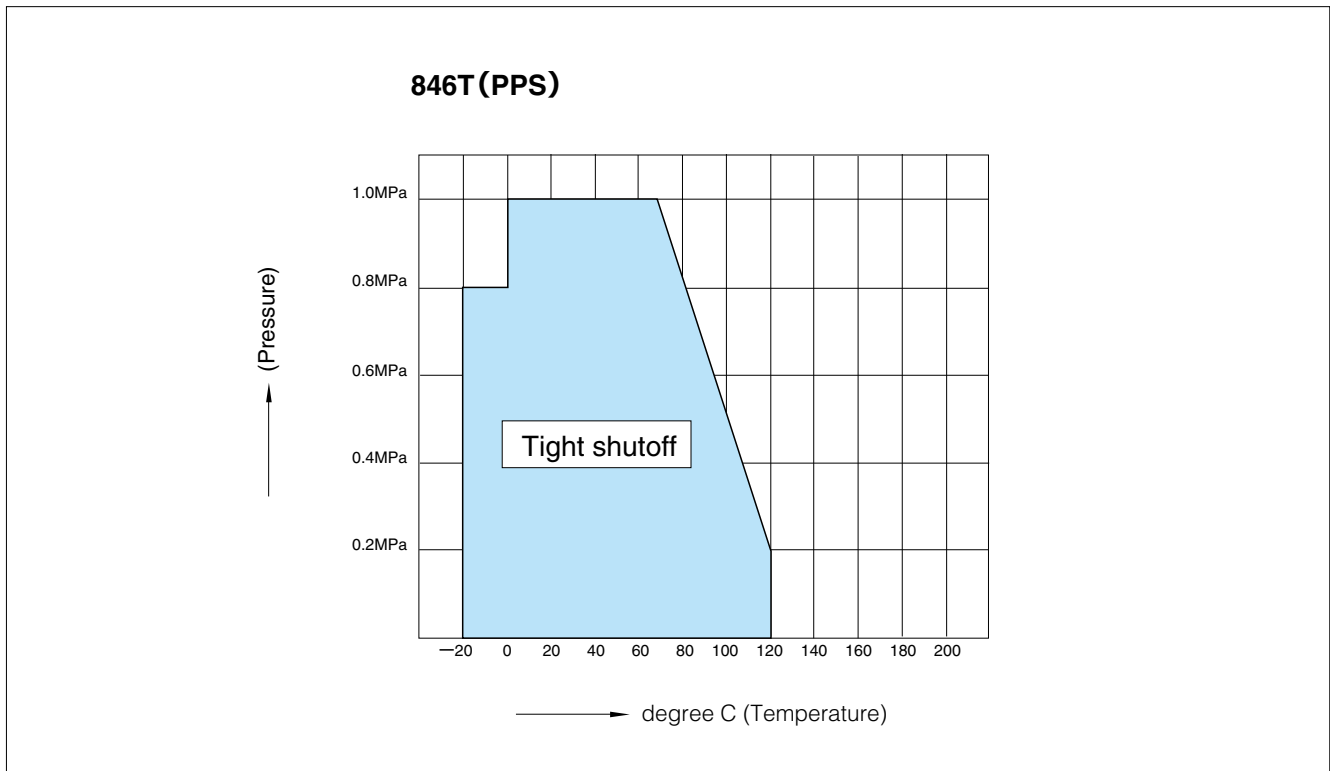
846T

Model	Category	Size (mm/inch)							
		65	80	100	125	150	200	250	300
		2 1/2	3	4	5	6	8	10	12
1T	Standard	1T-1		1T-2		1T-3			
	Heavy duty								
2U	Standard	2U-1		2U-2		2U-3		2U-4	
	Heavy duty								
7E	Standard	T85		T200		T380		T750	
	Heavy duty							TGA-125	
7G, 7F 3U, 3K	Standard	T200S		T380S		T750S		TG-12S	
	Heavy duty							TG-10S TG-14S	
4I	Standard	4I-0		4I-1		4I-2		4I-2.5	
	Heavy duty							4I-3	
4J	Standard	SRJ-010		SRJ-020		SRJ-060			
	Heavy duty								

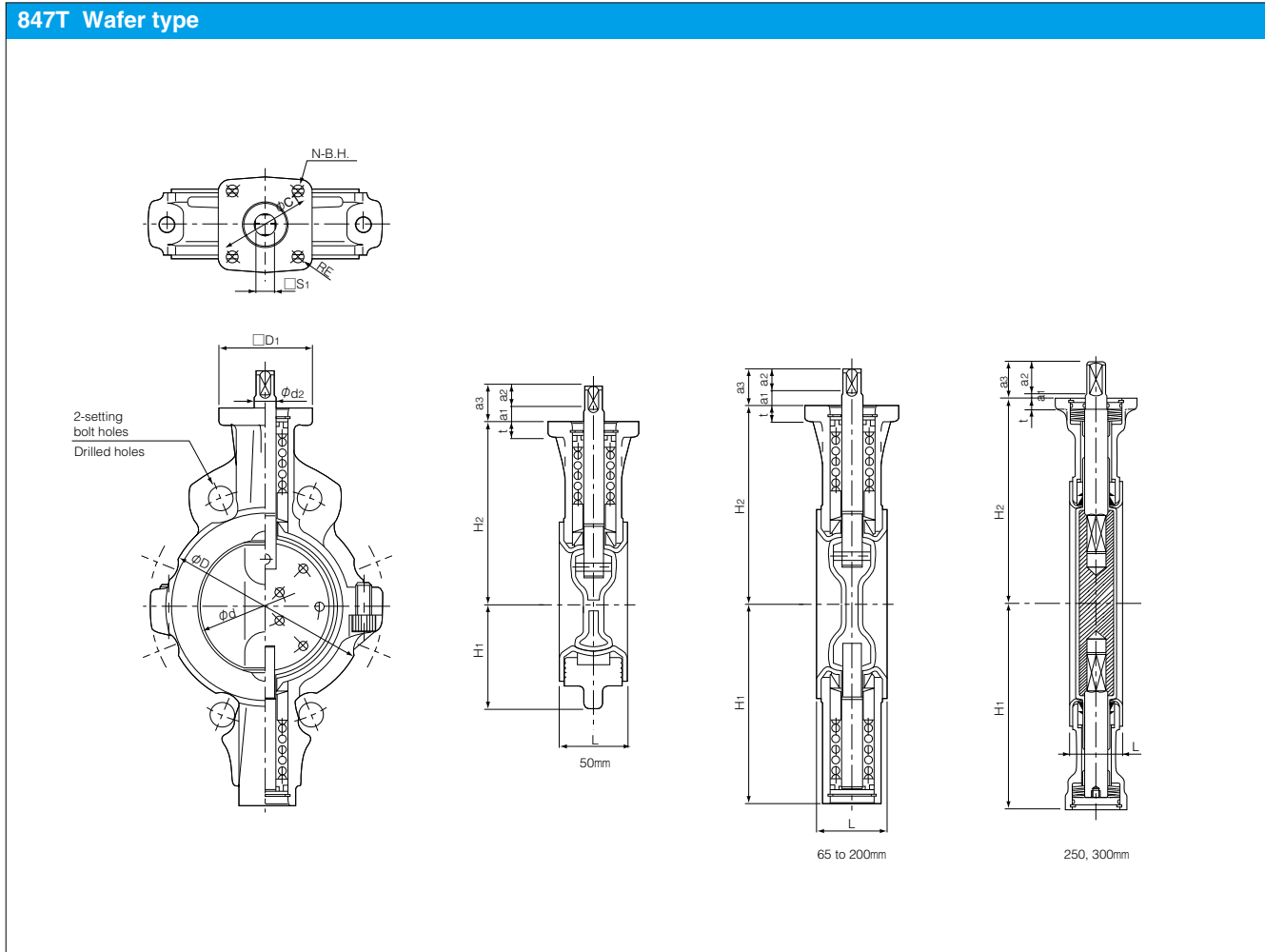
Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T Pressure-temperature rating



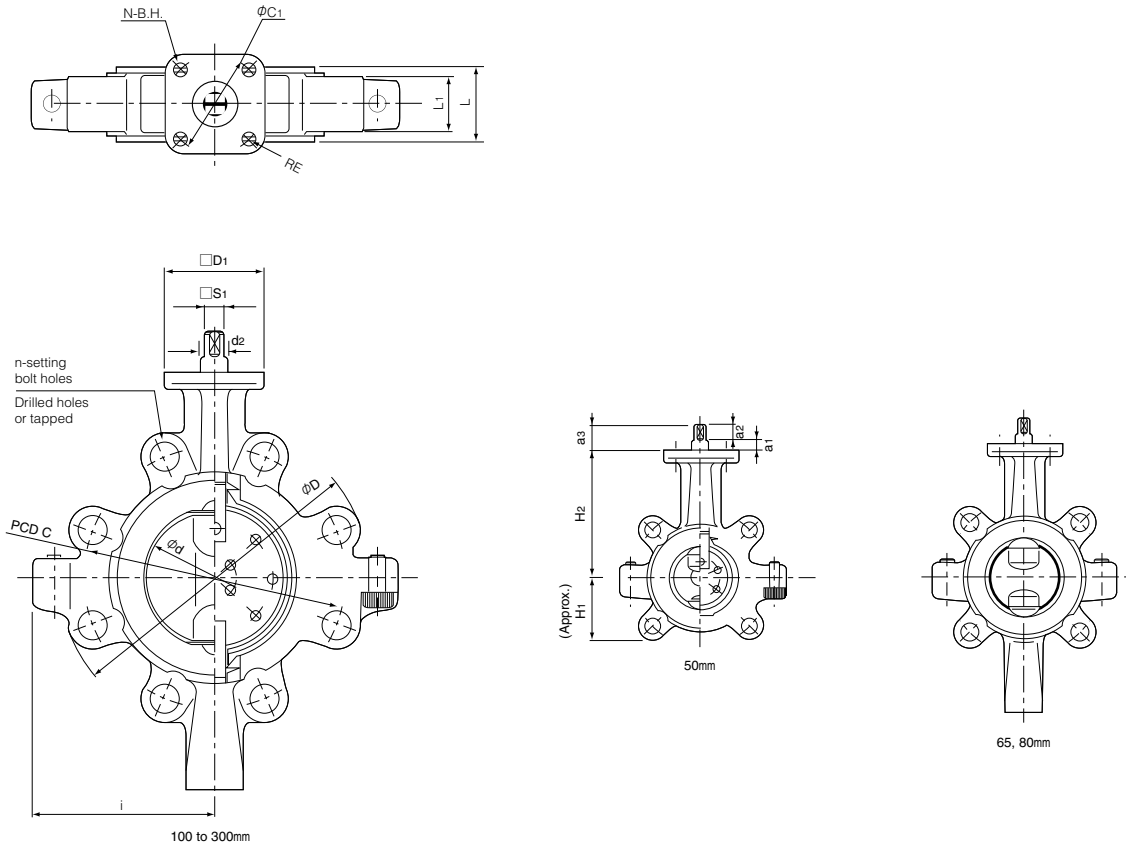
846T/847T (Wafer)/847Q (Lugged)



■ Dimensions

Nominal size		Dimension (mm)																	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	d ₂	a ₁	a ₂	a ₃	S ₁	D ₁	t	RE	ϕC_1	N	B.H.		
50	2	53.4	96	43	62	118.5	14	11	12	23	12	70	12	10	70	4	9	2.2	
65	2 1/2	67	115	46	125	125	14	11	12	23	12	70	12	10	70	4	9	3.3	
80	3	82	131	46	132.5	132.5	14	11	12	23	12	70	12	10	70	4	9	3.6	
100	4	102	152	52	148	148	16	11	17	28	14	70	12	10	70	4	9	5	
125	5	127.6	190	56	171	171	18	11	17	28	14	102	14	23.5	102	4	11	8.5	
150	6	151.6	217	56	183	183	18	11	17	28	14	102	14	23.5	102	4	11	10.1	
200	8	197	266	60	220	220	22	10	21	31	18	102	14	23.5	102	4	11	14.6	
250	10	247.5	320	68	260	260	28	5	30	35	24	102	14	24	102	4	11	28	
300	12	296.4	374	78	297	297	30	5	30	35	24	125	16	32	125	4	13	38	

847Q Lugged type



■ Dimensions

Nominal size		Dimension (mm)																		Approx. Mass (kg)
mm	inch	φd	φD	L	L ₁	H ₁	H ₂	i	d ₂	a ₁	a ₂	a ₃	S ₁	D ₁	t	RE	φC ₁	N	B.H.	
50	2	150.6	53.4	43	32	58	118.5	80	14	11	12	23	12	70	12	10	70	4	9	3.3
65	2 1/2	175	67	46	34	125	125	86	14	11	12	23	12	70	12	10	70	4	9	4.4
80	3	184	82	46	34	132.5	132.5	90	14	11	12	23	12	70	12	10	70	4	9	4.7
100	4	223	102	52	40	148	148	130	16	11	17	28	14	70	12	10	70	4	9	8.6
125	5	252	127.6	56	43	171	171	150	18	11	17	28	14	102	14	23.5	102	4	11	12.6
150	6	276	151.6	56	44	183	183	163	18	11	17	28	14	102	14	23.5	102	4	11	13.3
200	8	331	197	60	50	220	220	180	22	10	21	31	18	102	14	23.5	102	4	11	21.3
250	10	406	247.5	68	52	260	260	242	28	5	30	35	24	102	14	24	102	4	11	37
300	12	476	296.4	78	66	297	297	270.5	30	5	30	35	24	125	16	32	125	4	13	54

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M

(HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

**731P/732P/
732Q/752W**

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H

(MKT)

**903L/901C/
905C (Bata-check)**

846T/847T (Wafer)/847Q (Lugged)

Lock lever type 847T-1T (50mm to 200mm) / 846T-1T (65mm to 200mm)

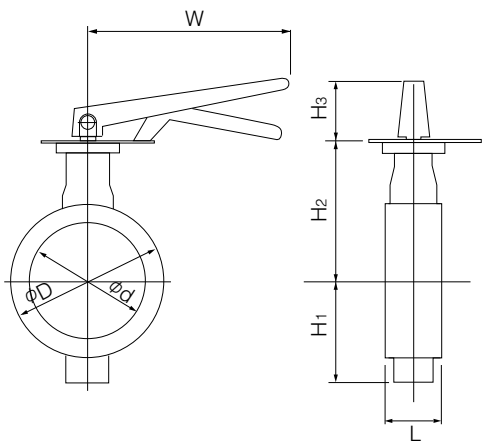
847T-1T

Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
50	2	53.4	96	43	62	118.5	66	200	1T-1	2.8
65	2 1/2	67	115	46	125	125	66	200	1T-1	3.9
80	3	82	131	46	132.5	132.5	66	200	1T-1	4.2
100	4	102	152	52	148	148	66	200	1T-1	5.6
125	5	127.6	190	56	171	171	92	300	1T-2	9.8
150	6	151.6	217	56	183	183	92	300	1T-2	11.4
200	8	197	266	60	220	220	97	350	1T-3	16.3

846T-1T

Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
65	2 1/2	67	115	46	125	125	66	200	1T-1	3.9
80	3	82	131	46	132.5	132.5	66	200	1T-1	4.3
100	4	102	152	52	148	148	66	200	1T-1	5.7
125	5	127.6	190	56	171	171	92	300	1T-2	9.8
150	6	151.6	217	56	183	183	92	300	1T-2	11.4
200	8	197	266	60	220	220	97	350	1T-3	16

846T/847T-1T



Worm gear type 847T-2U(50mm to 300mm) / 846T-2U(65mm to 300mm)

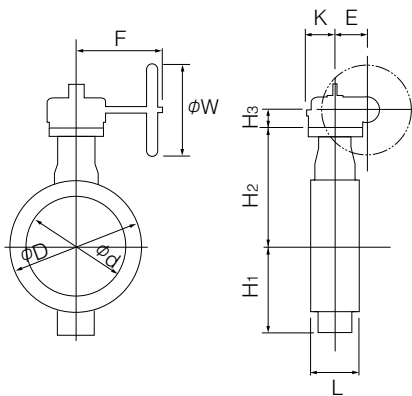
■847T-2U

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
50	2	53.4	96	43	62	118.5	29.5	36	46	160	100	2U-1	4.5
65	2 1/2	67	115	46	125	125	29.5	36	46	160	100	2U-1	5.6
80	3	82	131	46	132.5	132.5	29.5	36	46	160	100	2U-1	5.9
100	4	102	152	52	148	148	34.5	44	53	173.5	160	2U-2	9.2
125	5	127.6	190	56	171	171	34.5	44	53	173.5	160	2U-2	12.7
150	6	151.6	217	56	183	183	34.5	44	53	173.5	160	2U-2	14.3
200	8	197	266	60	220	220	41.5	67	75	198	200	2U-3	22.2
250	10	247.5	320	68	260	260	41.5	67	75	198	200	2U-3	36
300	12	296.4	374	78	297	297	48	87.5	90	222.5	200	2U-4	52

■846T-2U

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
65	2 1/2	67	115	46	125	125	29.5	36	46	160	100	2U-1	5.6
80	3	82	131	46	132.5	132.5	29.5	36	46	160	100	2U-1	6
100	4	102	152	52	148	148	34.5	44	53	173.5	160	2U-2	9.3
125	5	127.6	190	56	171	171	34.5	44	53	173.5	160	2U-2	12.7
150	6	151.6	217	56	183	183	34.5	44	53	173.5	160	2U-2	14.3
200	8	197	266	60	220	220	41.5	67	75	198	200	2U-3	21.9
250	10	247.5	320	68	260	260	41.5	67	75	198	200	2U-3	36
300	12	296.4	374	78	297	297	48	87.5	90	222.5	200	2U-4	52

■846T/847T-2U



■2U Installation direction

2UA (standard)	2UAR	2UB	2UBR

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T/847T (Wafer)/847Q (Lugged)

Double-acting pneumatic cylinder type 847T-7E (50mm to 300mm)

847T-7E Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	53.4	96	43	62	118.5	168	276	142	75	47	T85	8
65	2 1/2	67	115	46	125	125	168	276	142	75	47	T85	9
80	3	82	131	46	132.5	132.5	168	276	142	75	47	T85	9
100	4	102	152	52	148	148	203	346	176	79	57	T200	14
125	5	127.6	190	56	171	171	203	346	176	79	57	T200	17
150	6	151.6	217	56	183	183	203	346	176	79	57	T200	19
200	8	197	266	60	220	220	231	423	214	91	69	T380	30
250	10	247.5	320	68	260	260	269	546	270	118	85	T750	52
300	12	296.4	374	78	297	297	269	546	270	118	85	T750	62

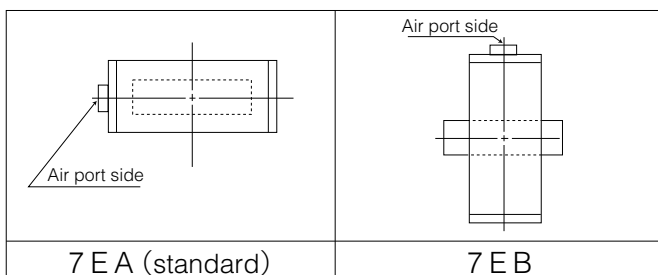
847T-7E, 3A Heavy duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	53.4	96	43	62	118.5	168	276	142	75	47	T85	8
65	2 1/2	67	115	46	125	125	168	276	142	75	47	T85	9
80	3	82	131	46	132.5	132.5	168	276	142	75	47	T85	9
100	4	102	152	52	148	148	203	346	176	79	57	T200	14
125	5	127.6	190	56	171	171	203	346	176	79	57	T200	17
150	6	151.6	217	56	183	183	231	423	214	91	69	T380	25
200	8	197	266	60	220	220	231	423	214	91	69	T380	30
250	10	247.5	320	68	260	260	269	546	270	118	85	T750	52
300	12	296.4	374	78	297	297	269	754	373	167	100	TGA-125	81

847T-7E, 3A High Temperature Specification (For fluids over 100 degrees C)

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	53.4	96	43	62	118.5	243	276	142	75	47	T85	8
65	2 1/2	67	115	46	125	125	243	276	142	75	47	T85	9
80	3	82	131	46	132.5	132.5	243	276	142	75	47	T85	9
100	4	102	152	52	148	148	278	346	176	79	57	T200	14
125	5	127.6	190	56	171	171	278	346	176	79	57	T200	17
150	6	151.6	217	56	183	183	306	423	214	91	69	T380	25
200	8	197	266	60	220	220	331	423	214	91	69	T380	30
250	10	247.5	320	68	260	260	369	546	270	118	85	T750	52
300	12	296.4	374	78	297	297	359	754	373	167	100	TGA-125	81

7E,3A Installation direction



Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

Double-acting pneumatic cylinder type 846T-7E / 3A (65mm to 300mm)

■846T-7E Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
65	2 1/2	67	115	46	125	125	168	276	142	75	47	T85	9
80	3	82	131	46	132.5	132.5	168	276	142	75	47	T85	9
100	4	102	152	52	148	148	203	346	176	79	57	T200	14
125	5	127.6	190	56	171	171	203	346	176	79	57	T200	17
150	6	151.6	217	56	183	183	203	346	176	79	57	T200	19
200	8	197	266	60	220	220	231	423	214	91	69	T380	29
250	10	247.5	320	68	260	260	269	546	270	118	85	T750	52
300	12	296.4	374	78	297	297	269	546	270	118	85	T750	62

■846T-7E/3A Heavy duty

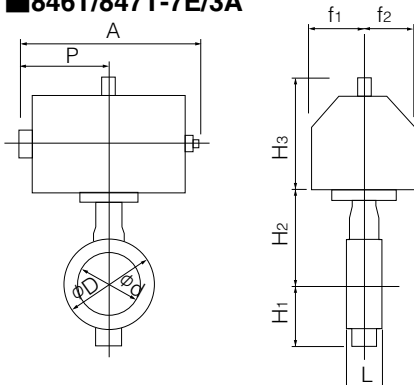
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
65	2 1/2	67	115	46	125	125	168	276	142	75	47	T85	9
80	3	82	131	46	132.5	132.5	168	276	142	75	47	T85	9
100	4	102	152	52	148	148	203	346	176	79	57	T200	14
125	5	127.6	190	56	171	171	203	346	176	79	57	T200	17
150	6	151.6	217	56	183	183	231	423	214	91	69	T380	23
200	8	197	266	60	220	220	231	423	214	91	69	T380	29
250	10	247.5	320	68	260	260	269	546	270	118	85	T750	52
300	12	296.4	374	78	297	297	359	754	373	167	100	TGA-125	81

■846T-7E/3A High Temperature Specification (For fluids over 100 degrees C)

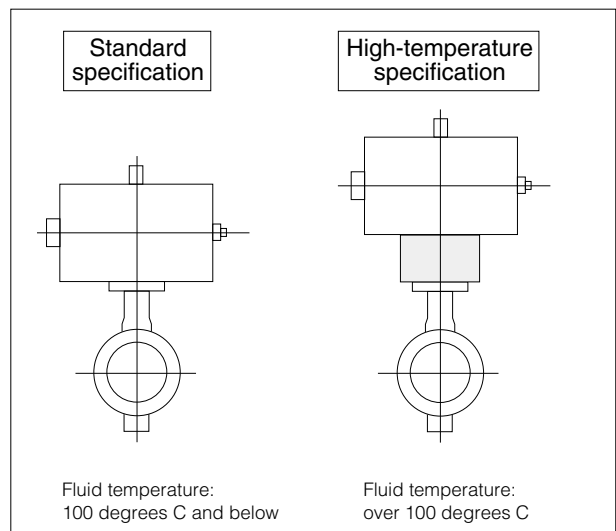
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
65	2 1/2	67	115	46	125	125	243	276	142	75	47	T85	9
80	3	82	131	46	132.5	132.5	243	276	142	75	47	T85	9
100	4	102	152	52	148	148	278	346	176	79	57	T200	14
125	5	127.6	190	56	171	171	278	346	176	79	57	T200	17
150	6	151.6	217	56	183	183	306	423	214	81	69	T380	23
200	8	197	266	60	220	220	331	423	214	81	69	T380	29
250	10	247.5	320	68	260	260	369	546	270	118	85	T750	52
300	12	296.4	374	78	297	297	369	754	373	167	100	TGA-125	81

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

■846T/847T-7E/3A



■Caution for actuator mounting



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T/847T (Wafer)/847Q (Lugged)

Single-acting pneumatic cylinder type 847T-7G (Air to open: 50mm to 200mm) / 847T-7F (Air to close: 50mm to 200mm)

847T-7G/7F Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	53.4	96	43	62	118.5	203	449	226	79	57	T200S	13
65	2 1/2	67	115	46	125	125	203	449	226	79	57	T200S	14
80	3	82	131	46	132.5	132.5	203	449	226	79	57	T200S	15
100	4	102	152	52	148	148	231	550	276	91	69	T380S	24
125	5	127.6	190	56	171	171	231	550	276	91	69	T380S	28
150	6	151.6	217	56	183	183	269	723	360	118	85	T750S	43
200	8	197	266	60	220	220	269	723	360	118	85	T750S	47

847T-7G/7F Heavy duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	53.4	96	43	62	118.5	203	449	226	79	57	T200S	13
65	2 1/2	67	115	46	125	125	203	449	226	79	57	T200S	14
80	3	82	131	46	132.5	132.5	231	550	276	91	69	T380S	23
100	4	102	152	52	148	148	231	550	276	91	69	T380S	24
125	5	127.6	190	56	171	171	269	723	360	118	85	T750S	41
150	6	151.6	217	56	183	183	269	723	360	118	85	T750S	43

847T-7G/7F High Temperature Specification (For fluids over 100 degrees C)

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	53.4	96	43	62	118.5	278	449	226	79	57	T200S	13
65	2 1/2	67	115	46	125	125	278	449	226	79	57	T200S	16
80	3	82	131	46	132.5	132.5	306	550	276	91	69	T380S	24
100	4	102	152	52	148	148	306	550	276	91	69	T380S	26
125	5	127.6	190	56	171	171	344	723	360	118	85	T750S	45
150	6	151.6	217	56	183	183	344	723	360	118	85	T750S	46

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

Single-acting Pneumatic Cylinder Type 846T-7G (Air to open: 65mm to 200mm) / 846T-7F (Air to close: 65mm to 200mm)

■ 846T-7G/7F Heavy Duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
65	2 1/2	67	115	46	125	125	203	449	226	79	57	T200S	14
80	3	82	131	46	132.5	132.5	203	449	226	79	57	T200S	15
100	4	102	152	52	148	148	231	550	276	91	69	T380S	24
125	5	127.6	190	56	171	171	231	550	276	91	69	T380S	28
150	6	151.6	217	56	183	183	269	723	360	118	85	T750S	43
200	8	197	266	60	220	220	269	723	360	118	85	T750S	47

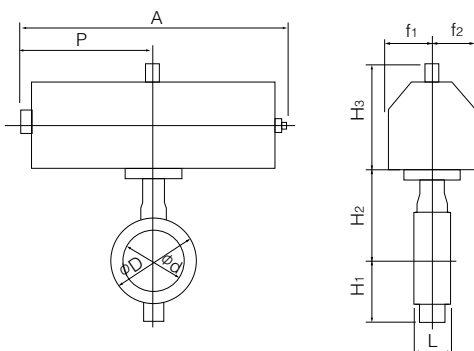
■ 846T-7G/7F Heavy Duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
65	2 1/2	67	115	46	125	125	203	449	226	79	57	T200S	14
80	3	82	131	46	132.5	132.5	231	550	276	91	69	T380S	23
100	4	102	152	52	148	148	231	550	276	91	69	T380S	24
125	5	127.6	190	56	171	171	269	723	360	118	85	T750S	41
150	6	151.6	217	56	183	183	269	723	360	118	85	T750S	43

■ 846T-7G/7F High Temperature Specification (SCS14 Disc: For fluids over 100 degrees C)

Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
65	2 1/2	67	115	46	125	125	278	449	226	79	57	T200S	16
80	3	82	131	46	132.5	132.5	306	550	276	91	69	T380S	24
100	4	102	152	52	148	148	306	550	276	91	69	T380S	26
125	5	127.6	190	56	171	171	344	723	360	118	85	T750S	45
150	6	151.6	217	56	183	183	344	723	360	118	85	T750S	46

■ 846T/847T-7F/7G



Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

■ 7F/7G Installation Direction

7FA / 7GA (standard)	7FB / 7GB

■ Caution for Actuator Mounting

Fluid temperature: 100 degrees C and below	Fluid temperature: over 100 degrees C

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T/847T (Wafer)/847Q (Lugged)

Single-acting Pneumatic Cylinder Type 847T-3U (Air to open: 200mm to 300mm) / 847T-3K (Air to close: 200mm to 300mm)
846T-3U (Air to open: 200mm to 300mm) / 846T-3K (Air to close: 200mm to 300mm)

847T-3U/3K Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	247.5	320	68	260	260	307	1080	720	94	206	TG-12S	123
300	12	296.4	374	78	297	297	307	1080	720	94	206	TG-12S	133

847T-3U/3K Heavy Duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	197	266	60	220	220	307	945	585	75	165	TG-10S	66
250	10	247.5	320	68	260	260	340	1255	865	131	257	TG-14S	219
300	12	296.4	374	78	297	297	340	1255	865	131	257	TG-14S	229

846T-3U/3K Standard

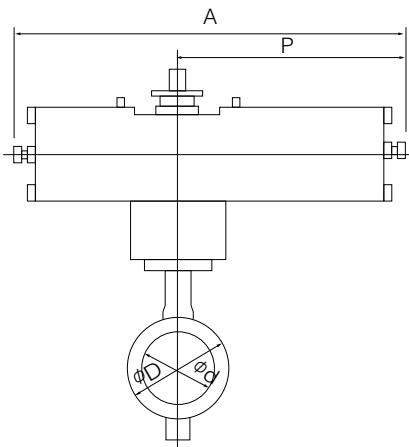
Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	247.5	320	68	260	260	307	1080	720	94	206	TG-12S	122
300	12	296.4	374	78	297	297	307	1080	720	94	206	TG-12S	132

846T-3U/3K Heavy Duty

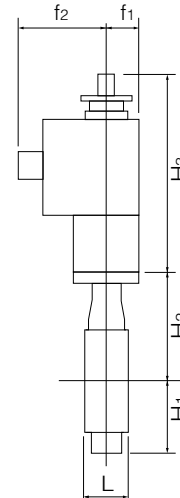
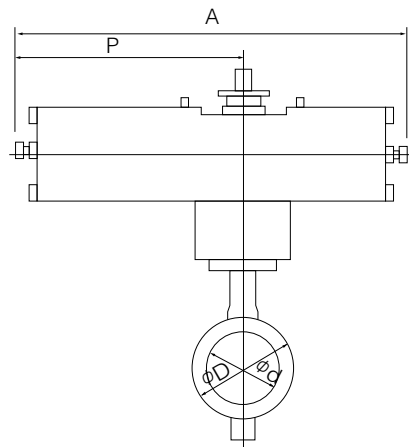
Nominal size		Dimension (mm)										Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	197	266	60	220	220	307	945	585	70	165	TG-10S	66
250	10	247.5	320	68	260	260	340	1255	865	131	257	TG-14S	218
300	12	296.4	374	78	297	297	340	1255	865	131	257	TG-14S	228

Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Working temperature is over 60 degrees C ② Powder or high viscosity fluids (consult us) ③ Velocity more than 3 m/s ④ Throttling ⑤ Slow travelling time of valve: more than 30 sec. ⑥ Dead end, pump outlet, emergency open

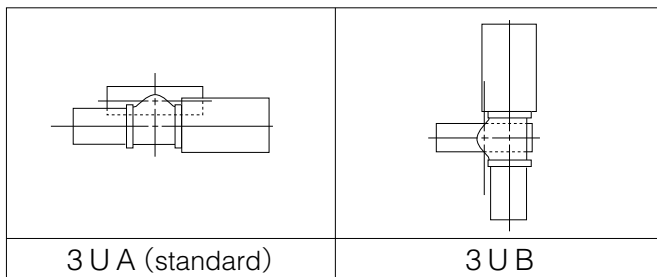
■846T/847T-3U



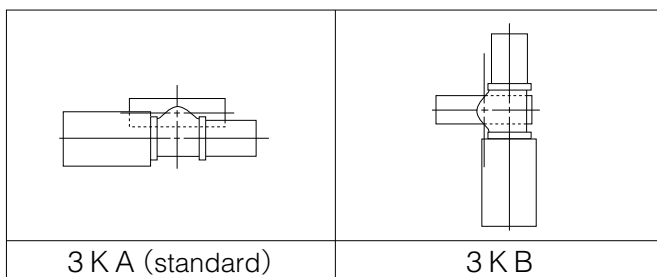
■846T/847T-3K



■3U Installation direction



■3K Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T/847T (Wafer)/847Q (Lugged)

Single phase electric motor type 847T-4I(50mm to 300mm) / 846T-4I(65mm to 300mm)

■847T-4I

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	53.4	96	43	62	118.5	150	202	100	85	54	4 I-0	6.4
65	2 1/2	67	115	46	125	125	150	202	100	85	54	4 I-0	7.5
80	3	82	131	46	132.5	132.5	165	252	138	126	65	4 I-1	10
100	4	102	152	52	148	148	165	252	138	126	65	4 I-1	11.4
125	5	127.6	190	56	171	171	198	310	167	154	85	4 I-2	20.3
150	6	151.6	217	56	183	183	198	310	167	154	85	4 I-2	22
200	8	197	266	60	220	220	198	310	167	154	85	4 I-2.5	27
250	10	247.5	320	68	260	260	230	388	223	246	136	4 I-3	52
300	12	296.4	374	78	297	297	230	388	223	246	136	4 I-3	62

■847T-4I High temperature specification(SCS14 Disc: For fluids over 100 degrees C)

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	53.4	96	43	62	118.5	225	202	100	85	54	4 I-0	7.5
65	2 1/2	67	115	46	125	125	225	202	100	85	54	4 I-0	8.6
80	3	82	131	46	132.5	132.5	240	252	138	126	65	4 I-1	11.1
100	4	102	152	52	148	148	240	252	138	126	65	4 I-1	12.7
125	5	127.6	190	56	171	171	273	310	167	154	85	4 I-2	21.5
150	6	151.6	217	56	183	183	273	310	167	154	85	4 I-2	23.1
200	8	197	266	60	220	220	273	310	167	154	85	4 I-2.5	29.2
250	10	247.5	320	68	260	260	305	388	223	246	136	4 I-3	54
300	12	296.4	374	78	297	297	305	388	223	246	136	4 I-3	64

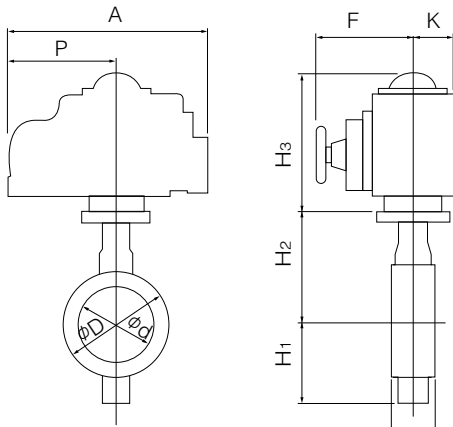
■846T-4I

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
65	2 1/2	67	115	46	125	125	150	202	100	85	54	4 I-0	7.5
80	3	82	131	46	132.5	132.5	165	252	138	126	65	4 I-1	10.1
100	4	102	152	52	148	148	165	252	138	126	65	4 I-1	11.5
125	5	127.6	190	56	171	171	198	310	167	154	85	4 I-2	20.3
150	6	151.6	217	56	183	183	198	310	167	154	85	4 I-2	22
200	8	197	266	60	220	220	198	310	167	154	85	4 I-2.5	27.6
250	10	248	338	90	221	250	233	388	223	246	136	4 I-3	55
300	12	295	382	90	261	280	233	388	223	246	136	4 I-3	63

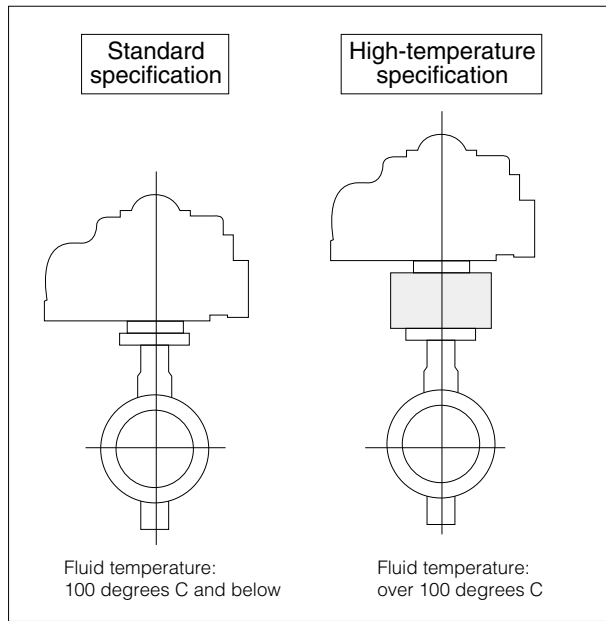
■846T-4I High temperature specification(SCS14 Disc: For fluids over 100 degrees C)

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
65	2 1/2	67	115	46	125	125	225	202	100	85	54	4 I-0	8.6
80	3	82	131	46	132.5	132.5	240	252	138	126	65	4 I-1	11.2
100	4	102	152	52	148	148	240	252	138	126	65	4 I-1	12.8
125	5	127.6	190	56	171	171	273	310	167	154	85	4 I-2	21.5
150	6	151.6	217	56	183	183	273	310	167	154	85	4 I-2	23.1
200	8	197	266	60	220	220	273	310	167	154	85	4 I-2.5	28.9
250	10	247.5	320	68	260	260	305	388	223	246	136	4 I-3	54
300	12	296.4	374	78	297	297	305	388	223	246	136	4 I-3	64

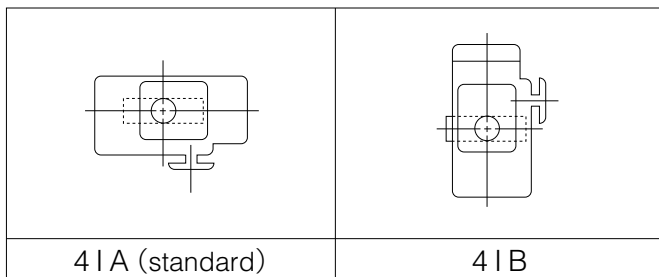
■ 846T/847T-4 I



■ Caution for actuator mounting



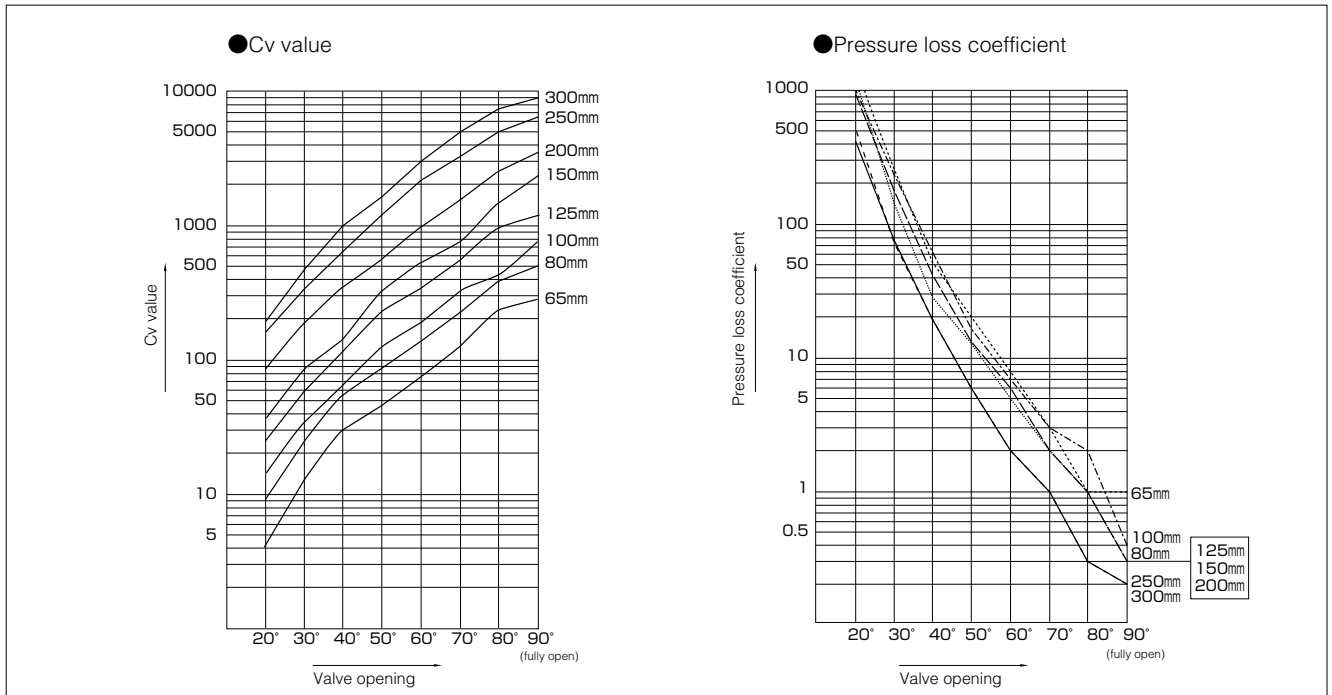
■ 4I Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

846T/847T (Wafer)/847Q (Lugged)

846T Cv value/pressure loss coefficient



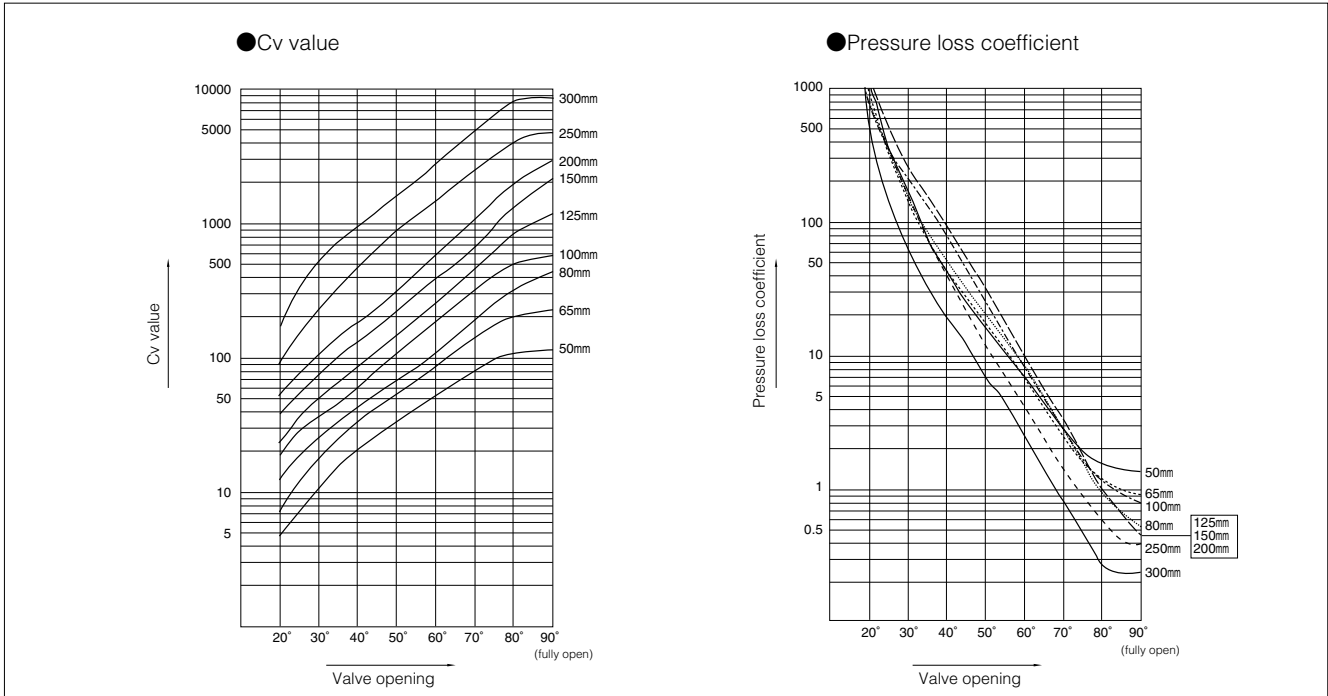
846T Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
65	2 1/2	5	13	30	48	74	129	220	293
80	3	9	25	56	85	130	225	396	500
100	4	16	33	65	125	198	311	405	772
125	5	26	59	122	211	338	555	951	1295
150	6	37	77	145	303	507	767	1400	2166
200	8	83	178	355	592	906	1557	2573	3248
250	10	130	351	675	1225	2125	3375	5091	6200
300	12	194	487	972	1764	3011	4966	7412	8900

846T Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
65	2 1/2	1829	270	51	20	8	3	1	1
80	3	1136	147	29	13	5	2	1	0.3
100	4	1015	239	62	17	7	3	2	0.4
125	5	931	181	42	14	6	2	1	0.3
150	6	901	208	59	13	5	2	1	0.2
200	8	548	119	30	11	5	2	1	0.3
250	10	528	72	20	6	2	1	0.3	0.2
300	12	488	78	20	6	2	1	0.3	0.2

847T Cv value/pressure loss coefficient



847T Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
50	2	5	10	20	32	50	78	107	114
65	2 1/2	7	18	33	51	83	140	202	229
80	3	12	25	43	67	106	184	318	428
100	4	19	35	58	103	178	309	493	585
125	5	23	49	83	141	250	441	808	1170
150	6	38	75	127	218	383	621	1260	2080
200	8	52	105	177	305	547	995	1890	2910
250	10	75	210	415	745	1250	2200	3520	4270
300	12	140	475	850	1420	2400	4190	6780	7780

847T Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
50	2	675	169	42	16	7	3	1	1
65	2 1/2	933	141	42	18	7	2	1	1
80	3	639	147	50	21	8	3	1	1
100	4	720	212	77	24	8	3	1	1
125	5	1190	262	91	32	10	3	1	0.4
150	6	855	219	77	26	8	3	1	0.3
200	8	1396	342	121	41	13	4	1	0.4
250	10	1485	189	49	15	5	2	1	0.5
300	12	860	75	23	8	3	1	0.4	0.3

- Butterfly Valve
- TRITEC**
- TT2**
- 334A**
- 344Q**
- 302A/303Q**
- 304A/304Q**
- 304YA**
- 302Y/304Y**
- 304M (HLV)**
- 507V/508V**
- DTM**
- 846T/847T/847Q**
- 841T/842T**
- 700Z**
- 700G/704G/705G**
- 72WG/72SG/72LG**
- 731P/732P/732Q/752W**
- 731R**
- 700E/700K/700S**
- 704G/722F/720F**
- 227P**
- 907T/908H (MKT)**
- 903L/901C/905C (Bata-check)**

846T/847T (Wafer)/847Q (Lugged)

847T/846T Applicable pipe list in case of A

847T

Nominal size		SGP	Sch20	Sch40	VP (TS flange)	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
mm	inch							
50	2	○	○	○	○	○	○	34
65	2 1/2	○	○	○	○	○	○	51
80	3	○	○	○	○	○	○	70
100	4	○	○	○	○	○	○	91
125	5	○	○	○	○	○	○	118
150	6	○	○	○	○	○	○	144
200	8	○	○	○	○	○	○	194
250	10	○	○	○	○	○	○	246
300	12	○	○	○	○	○	○	294

846T

Nominal size		SGP	Sch20	Sch40	VP (TS flange)	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
mm	inch							
65	2 1/2	○	○	○	○	○	○	51
80	3	○	○	○	○	○	○	70
100	4	○	○	○	○	○	○	91
125	5	○	○	○	○	○	○	118
150	6	○	○	○	○	○	○	144
200	8	○	○	○	○	○	○	194
250	10	○	○	○	○	○	○	246
300	12	○	○	○	○	○	○	294

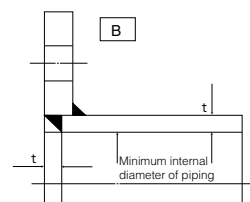
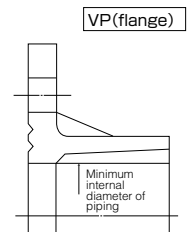
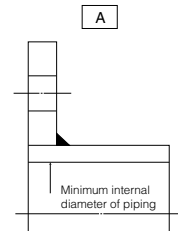
847T/846T Applicable pipe list in case of B

847T

Nominal size		SGP	Sch20	Sch40	Sch10S	Sch20S
mm	inch					
50	2	○	○	○	○	○
65	2 1/2	○	○	○	○	○
80	3	○	○	○	○	○
100	4	○	○	○	○	○
125	5	○	○	○	○	○
150	6	○	○	○	○	○
200	8	○	○	○	○	○
250	10	○	○	○	○	○
300	12	○	○	○	○	○

846T

Nominal size		SGP	Sch20	Sch40	Sch10S	Sch20S
mm	inch					
65	2 1/2	○	○	○	○	○
80	3	○	○	○	○	○
100	4	○	○	○	○	○
125	5	○	○	○	○	○
150	6	○	○	○	○	○
200	8	○	○	○	○	○
250	10	○	○	○	○	○
300	12	○	○	○	○	○



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.

847T Applicable flange standard

Nominal size		JIS		ANSI		BS4504 PN10	DIN NP10	BS10 Table E
mm	inch	5K	10K	125Lb	150Lb			
50	2	○	○	○	○	○	○	○
65	2 1/2	○	○	○	○	○	○	○
80	3	D	D	D	D	D	D	D
100	4	D	D	D	D	D	D	D
125	5	D	D	D	D	D	D	D
150	6	D	D	D	D	D	D	D
200	8	D	D	D	D	D	D	D
250	10	D	D	D	D	D	D	D
300	12	D	D	D	D	D	D	D

○ : Can be used without flange drilling
D : With flange drilling

846T Applicable flange standard

Nominal size		JIS		ANSI		BS4504 PN10	DIN NP10	BS10 Table E
mm	inch	5K	10K	125Lb	150Lb			
65	2 1/2	○	○	○	○	○	○	○
80	3	D	D	D	D	D	D	D
100	4	D	D	D	D	D	D	D
125	5	D	D	D	D	D	D	D
150	6	D	D	D	D	D	D	D
200	8	D	D	D	D	D	D	D
250	10	D	D	D	D	D	D	D
300	12	D	D	D	D	D	D	D

○ : Can be used without flange drilling
D : With flange drilling

847T/ 846T Piping bolt and nut sizes

■ Piping bolts sizes

Nominal size		JIS 5K	JIS 10K	ANSI 125Lb/150Lb	DIN NP10, BS4504 PN10
mm	inch	Hexagon bolts and nuts	Hexagon bolts and nuts	Long bolts and nuts	Long bolts and nuts
50	2	4-M12× 90×30	4-M16×105×40	4-5/8-11UNC×145×45	4-M16×125×30
65	2 1/2	4-M12× 90×30	4-M16×105×40	4-5/8-11UNC×155×50	4-M16×125×30
80	3	4-M16×105×40	8-M16×110×40	4-5/8-11UNC×155×50	8-M16×130×30
100	4	8-M16×110×40	8-M16×110×40	8-5/8-11UNC×165×50	8-M16×140×35
125	5	8-M16×110×40	8-M20×120×50	8-3/4-10UNC×175×55	8-M16×140×35
150	6	8-M16×120×40	8-M20×130×50	8-3/4-10UNC×175×55	8-M20×155×40
200	8	8-M20×130×50	12-M20×135×50	8-3/4-10UNC×175×55	8-M20×160×40
250	10	12-M20×135×50	12-M22×150×60	12-7/8- 9UNC×215×55	12-M20×175×40
300	12	12-M20×150×50	16-M22×160×60	12-7/8- 9UNC×215×55	12-M20×185×40

●The bolt lengths fit the JIS or steel flanges.

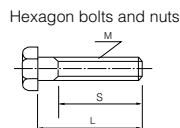
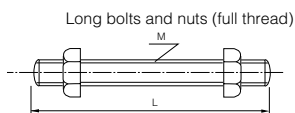
Remark: ※ Use thin hexagon nuts for hexagon bolts.(Except for ANSI : nuts for ANSI is heavy nut)

※ Material: Consult us when other than SS400 (Mild steel)

Example

Long bolts: 12 - M22 × 185 × 45
N M L S

Hexagon bolts: 4 - M30 × 95 × 65
N M L S



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

841T Wafer

842T Wafer



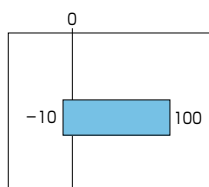
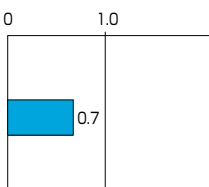
Valve nominal size

841T 350 to 600mm

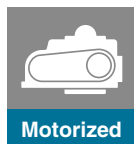
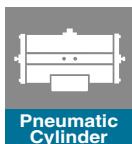
842T 350 to 600mm

Max. Working pressure MPa

Working temperature range, degrees C



CE CE Marking (842T)



Features and Benefits

Bubble tight seal and no leakage

PTFE does not react to most of the chemicals used in modern chemical processing – even at high temperatures and high pressures. It is recognised as an ideal material for industrial valves that handle highly corrosive fluids. PTFE has a low friction coefficient and excellent lubricity when used in contact with metal surfaces.

TOMOE's 841T and 842T butterfly valves take full advantage of the superior qualities of PTFE: it protects all wetted parts and guides all stems. The 841T and 842T valves have a proven record of excellent performance and long life in heavy duty applications requiring tight shut-off, low torque and smooth operation.

Triple seal prevents leakage

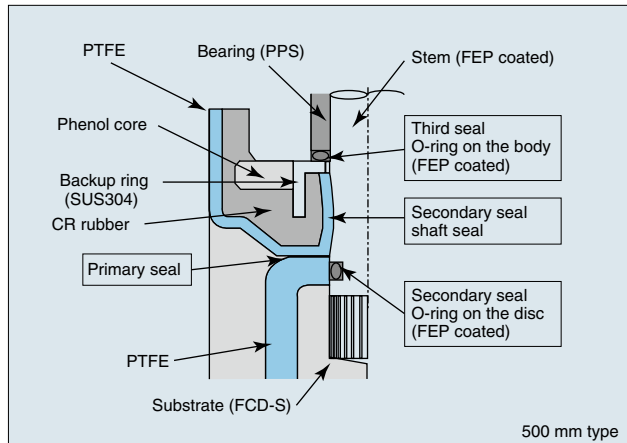
The special feature of TOMOE butterfly valves is the seat ring design. The interference between the disc and the raised central area of the seat ring shuts off the flow completely. The resilient elastomer seat cushion ensures reliable shut off for the life of the valve.

TOMOE butterfly valves are bi-directional and withstand pressures to 0.7 MPa from either direction.

The upper and lower positions of the seat ring, where the stem passes through, use a triple seal design to prevent leakage to the atmosphere as shown in the illustration.

General Description

Chemically resistant butterfly valves with a proven record of excellent performance and long life in heavy duty applications.



Where you can see advantages over other types of valves

- In corrosion resistant pipelines requiring mechanical strength as well as heat resistance.
Chemical Industry: Chlorine gas, acetic acid, sulfuric acid, hydrochloric acid, and other highly corrosive fluids.
- In non-toxic environments where the fluid must not contact any metallic or organic materials.
Food Industry: Cooking oil, seasoning, syrup, and other food products.
- In reduced pressure or high temperature pipelines where conventional valves cannot be used because of piping space requirements and valve weight.
General Industry: Steam lines, hot air, special process gases, dyes, and so on.
- In processes involving hazardous fluids that require clean pipelines free from machining burrs, scales, and grease.
Piping: Pipelines for oxygen and other highly oxidizing agents.
- In processes requiring sanitation or vacuum service.
vacuum service.
Handling: Processing food, transporting powder or granular solids.
- In low temperature processes where low heat gain is an advantage.
Cooling: Cooling air, chilled water, and brine.

Standard Specifications

Type	841T	842T
Body shape (centring method)	Concentric design, wafer type	
Valve nominal size	350, 400, 450, 500, 600mm	350, 400, 450, 500, 600mm
Applicable flange standard	JIS 10K, ANSI 125 lb/150 lb, DIN PN10, BS 4504 PN10, BS 10Table E	
Face-to-face dimensions	Manufacturer standard	
Max. working pressure	0.7 MPa	
Seat leakage	Tight shut-off	
Flow direction	Bi-directional	
Pressure test	Body shell	1.05 MPa (Hydraulic)
	Seat leakage	0.7 MPa (Hydraulic)
Working temperature range	- 10 to 100 degrees C	
Working temperature in continuous use ※1	0 to 90 degrees C	
Standard materials	Body	FCD-S
	Disc	SCS14
	Stem	SUS316
	Seat ring	PTFE (back-up rubber: CR)
Top flange	Manufacturer standard	
Applicable gaskets	Rubber gasket cannot be used. Moulded gaskets require special dimensions (refer to dimension chart). Off-the-shelf seat gaskets can be used for 350 to 400mm. 450 to 600mm require special inner diameter dimensions (refer to dimension chart).	
Coating	350mm and larger: Lacquer primer (Munsell N7)	

※1 "Working temperature in continuous use" stands for the temperature continuously kept exceeding one hour.

※2 Export license by Japanese Ministry is required 842T for all sizes. Please consult us the detail.

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M

(HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/

732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H

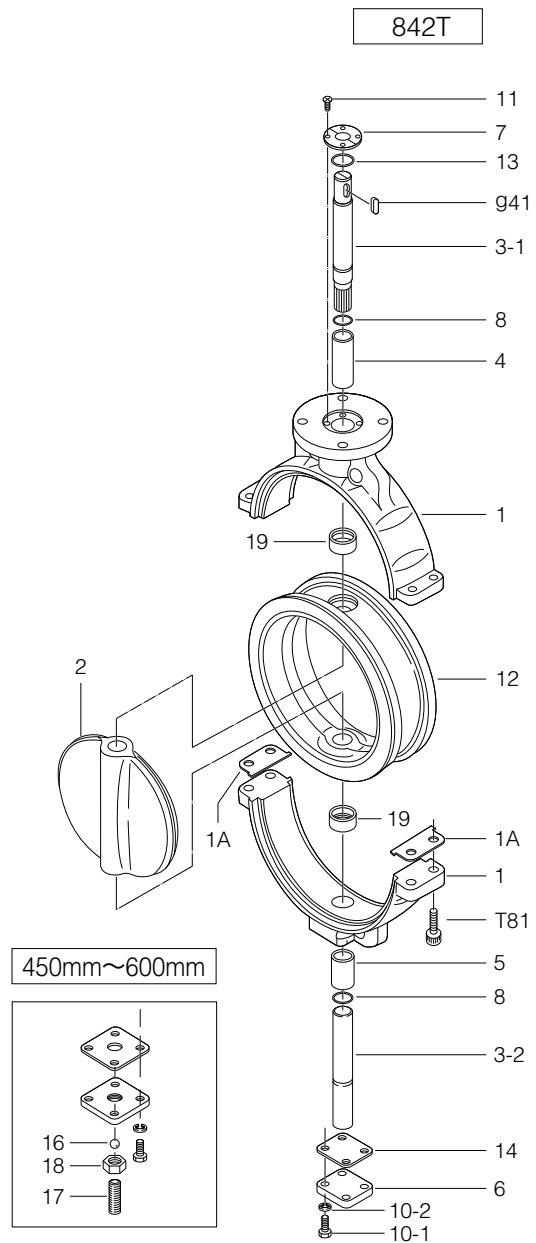
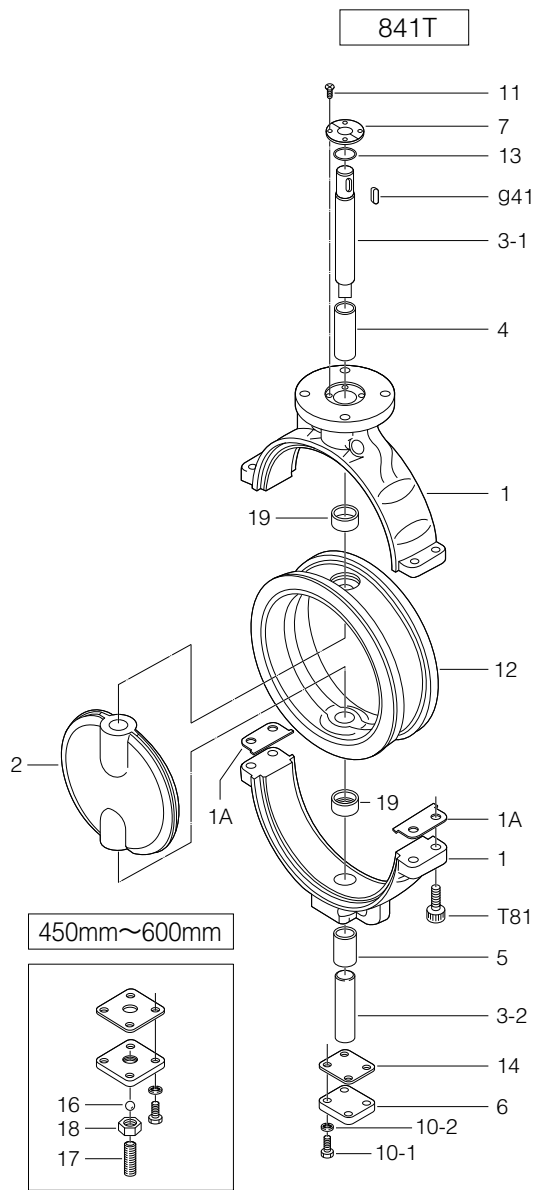
(MKT)

903L/901C/

905C (Bata-check)

841T/842T

841T / 842T Expanded View of Components



841T / 842T Parts list

■ 841T Parts list

No.	Description	Q'ty	Remarks
1	Body	1	
★ 1A	Packing	2	
2	Disc	1	
3-1	Upper stem	1	
3-2	Lower stem	1	
★ 4	Bushing	1	
★ 5	Bushing	1	
6	Bottom cover	1	
7	Retainer plate	1 Set	
10-1	Hexagon bolt	4	
10-2	Spring washer	4	
11	Machine screw	4	
★ 12	Seat ring	1	
★ 13	O-ring	1	
14	Gasket	1	
16	Ball	1	Only 450mm to 600mm
17	Hollow bolt	1	Only 450mm to 600mm
18	Lock nut	1	Only 450mm to 600mm
19	Back-up rubber	2	
T81	Hexagon hole bolt	4	
g41	Key	1	

■ 842T Parts list

No.	Description	Q'ty	Remarks
1	Body	1	
★ 1A	Packing	2	
2	Disc	1	
3-1	Upper stem	1	
3-2	Lower stem	1	
★ 4	Bushing	1	
★ 5	Bushing	1	
6	Bottom cover	1	
7	Retainer plate	1 Set	
★ 8	O-ring	2	
10-1	Hexagon bolt	4	
10-2	Spring washer	4	
11	Machine screw	4	
★ 12	Seat ring	1	
★ 13	O-ring	1	
14	Gasket	1	
16	Ball	1	Only 450mm to 600mm
17	Hollow bolt	1	Only 450mm to 600mm
18	Lock nut	1	Only 450mm to 600mm
19	Back-up ring	2	
T81	Hexagon hole bolt	4	
g41	Key	1	

Remark: The ★ indicates recommended spare parts. They are supplied as "Seat ring set".

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

841T/842T

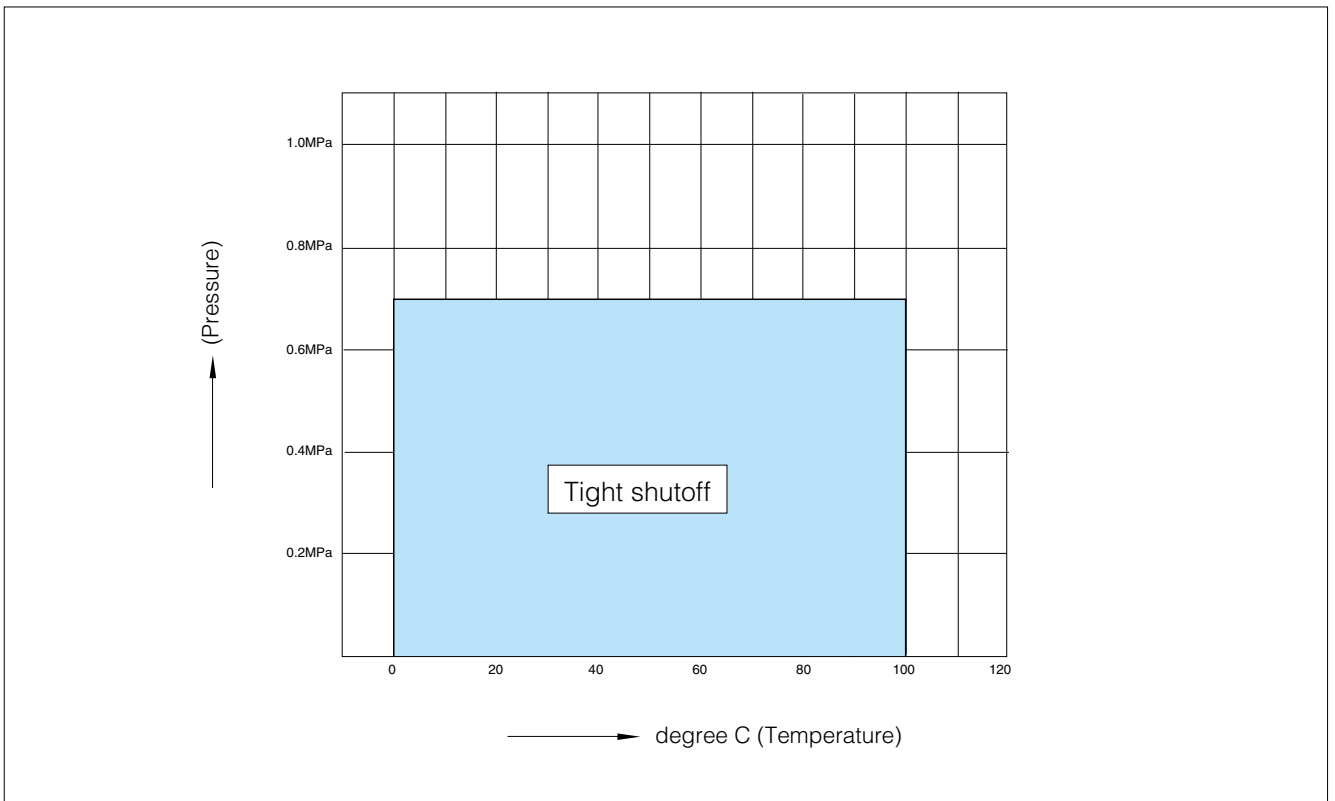
841T/842T Actuator selection chart

841T/842T

Model	Category	Size <small>(mm / inch)</small>				
		350	400	450	500	600
		14	16	18	20	24
2S	Standard	MGH-3			MGH-4	
	Heavy duty	MGH-3			MGH-4	
3A	Standard	TGA-125	TGA-140	TGA-160		TGA-200
	Heavy duty	TGA-140	TGA-160	TGA-180		
3U,3K	Standard	TG-14S		TG-20S		
	Heavy duty	TG-14S		TG-20S		
4 I	ON-OFF	4 I-4				
	Control					
4L	Standard	LTKD-01 0.4kW/MGH-3		LTKD-02 0.75kW/ MGH-3	LTKD-05 0.75kW/ MGH-4	
	Heavy duty	LTKD-01 0.4kW/MGH-3		LTKD-02 0.75kW/ MGH-3	LTKD-05 0.75kW/ MGH-4	

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

841T/842T Pressure-temperature rating



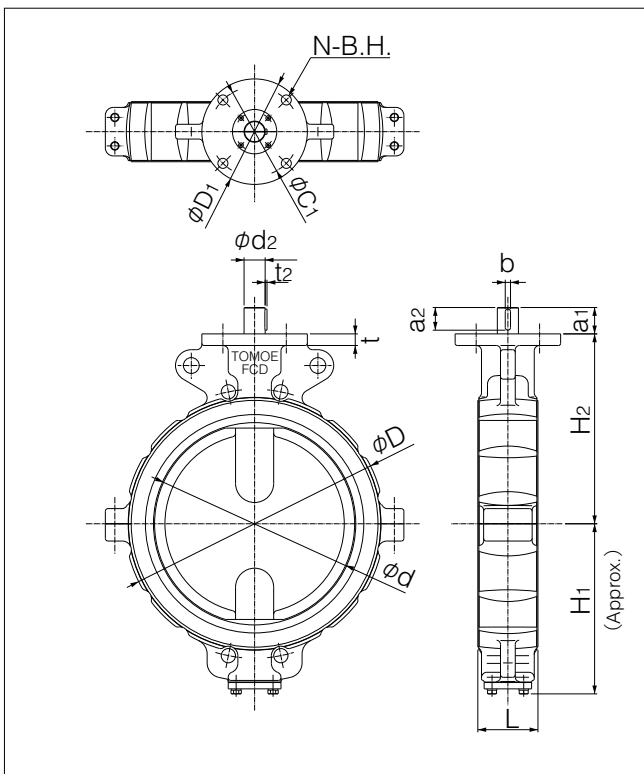
Bare shaft 841T-02(350mm to 600mm) / 842T-02(350mm to 600mm)

■841T/842T

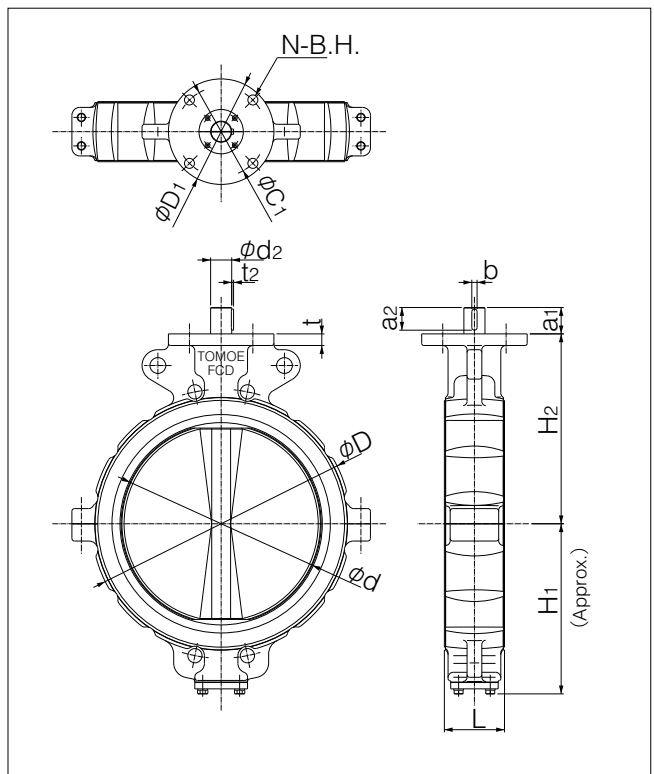
Nominal size		Dimension (mm)														Approx. Mass (kg)	
mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	ϕd_2	b	t ₂	t	D ₁	C ₁	N		B.H.
350	14	332	428	100	293	320	50	43	40	10	3.5	20	200	170	4	19	60
400	16	383	491	110	323	360	50	43	40	10	3.5	20	200	170	4	19	80
450	18	435	540	120	367	390	60	53	47	12	3.5	20	200	170	4	19	123
500	20	482	595	140	383	420	60	53	47	12	3.5	20	200	170	4	19	188
600	24	581	700	160	478	490	75	65	65	18	6	25	260	220	4	23	266

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

■841 T 350mm to 600mm



■842 T 350mm to 600mm



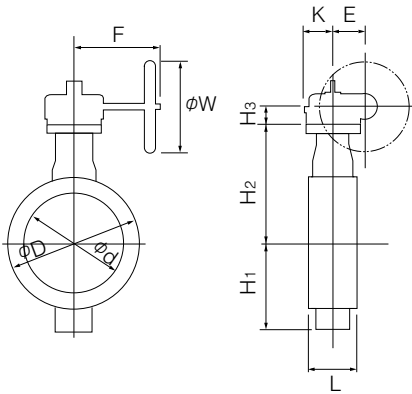
841T/842T

Worm gear type 841T-2S (350mm to 600mm) / 842T-2S (350mm to 600mm)

841T/842T

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
350	14	332	428	100	293	320	55	117	164	325	280	MGH-3	93
400	16	383	491	110	323	360	55	117	164	325	280	MGH-3	113
450	18	435	540	120	367	390	55	117	164	335	355	MGH-3	155
500	20	482	595	140	383	420	55	117	164	335	355	MGH-3	220
600	24	581	700	160	478	490	65	140	198	400	450	MGH-4	320

841T/842T-2S



2S Installation direction

2SA (standard)	2SAR	2SB	2SBR

Double-acting pneumatic cylinder type 841T-3A (350mm to 600mm) / 842T-3A (350mm to 600mm)

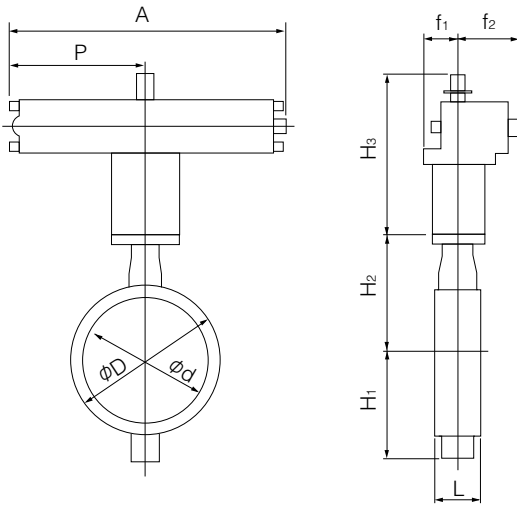
■ Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	332	428	100	293	320	359	743	362	100	164	TGA-125	106
400	16	383	491	110	323	360	407	810	393	100	180	TGA-140	139
450	18	435	540	120	367	390	435	939	456	130	202	TGA-160	220
500	20	482	595	140	383	420	435	939	456	130	202	TGA-160	260
600	24	581	700	160	478	490	570	1163	564	160	253	TGA-200	450

■ Heavy duty

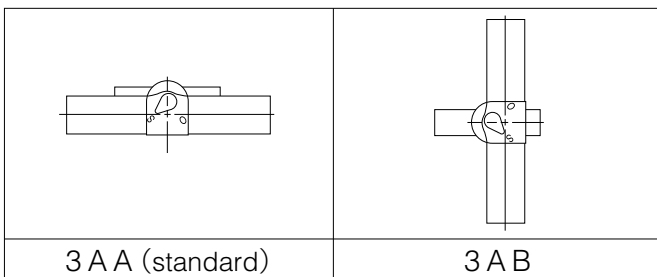
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	332	428	100	293	320	407	810	393	100	180	TGA-140	106
400	16	383	491	110	323	360	435	939	456	130	202	TGA-160	190
450	18	435	540	120	367	390	478	1053	510	130	218	TGA-180	252
500	20	482	595	140	383	420	478	1053	510	130	218	TGA-180	292
600	24	581	700	160	478	490	570	1163	564	160	253	TGA-200	450

■ 841T/842T-3A



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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

■ 3A Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

841T/842T

Single-acting pneumatic cylinder type 841T-3U (Air to open: 250mm to 600mm) / 841T-3K (Air to close: 250mm to 600mm)
842T-3U (Air to open: 350mm to 600mm) / 842T-3K (Air to close: 350mm to 600mm)

Standard

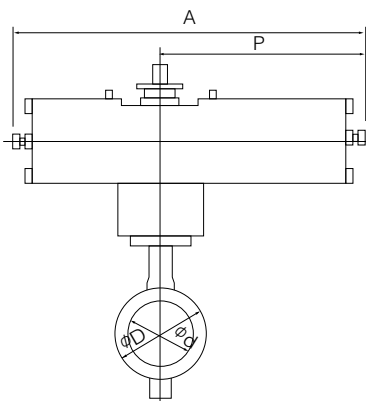
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	332	428	100	293	320	340	1255	865	131	257	TG-14S	246
400	16	383	491	110	323	360	340	1255	865	131	257	TG-14S	266
450	18	435	540	120	367	390	340	1255	865	131	257	TG-14S	305
500	20	482	595	140	383	420	474	1655	1095	164	348	TG-20S	588
600	24	581	700	160	478	490	474	1655	1095	164	348	TG-20S	665

Heavy duty

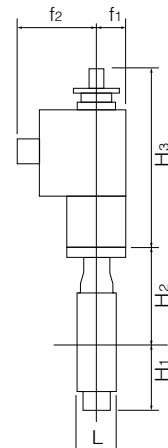
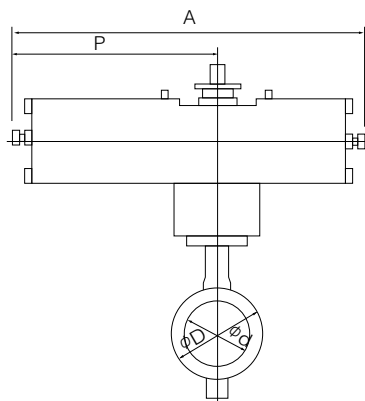
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	332	428	100	293	320	340	1255	865	131	257	TG-14S	246
400	16	383	491	110	323	360	474	1655	1095	164	348	TG-20S	483
450	18	435	540	120	367	390	474	1655	1095	164	348	TG-20S	523
500	20	482	595	140	383	420	474	1655	1095	164	348	TG-20S	588
600	24	581	700	160	478	490	474	1655	1095	164	348	TG-20S	655

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

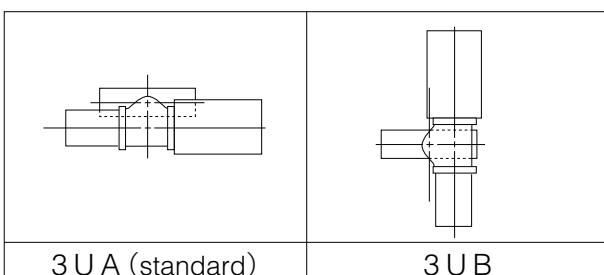
841T/842T-3U



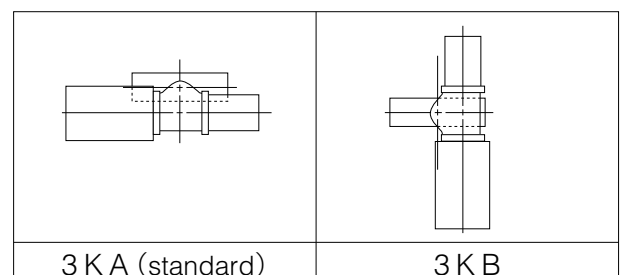
841T/842T-3K



3U Installation direction



3K Installation direction

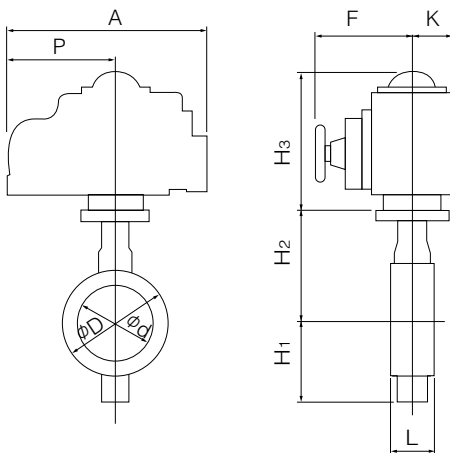


Single phase electric motor type 841T-4I(350mm to 450mm) / 842T-4I(350mm to 450mm)

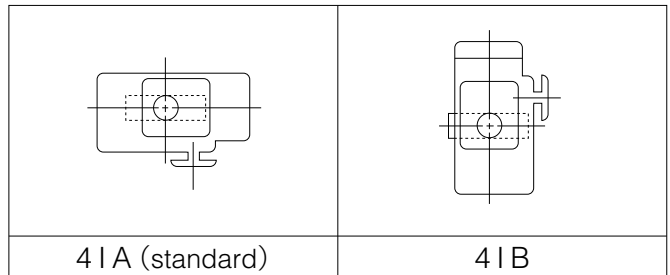
■841T/842T

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
350	14	332	428	100	293	320	233	388	223	246	136	4 I-4	89
400	16	383	491	110	323	360	233	388	223	246	136	4 I-4	109
450	18	435	540	120	367	390	233	388	223	246	136	4 I-4	158

■841T/842T-4I



■4I Installation direction



4 I A (standard)

4 I B

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M

(HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/

732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H

(MKT)

903L/901C/

905C(Bata-check)

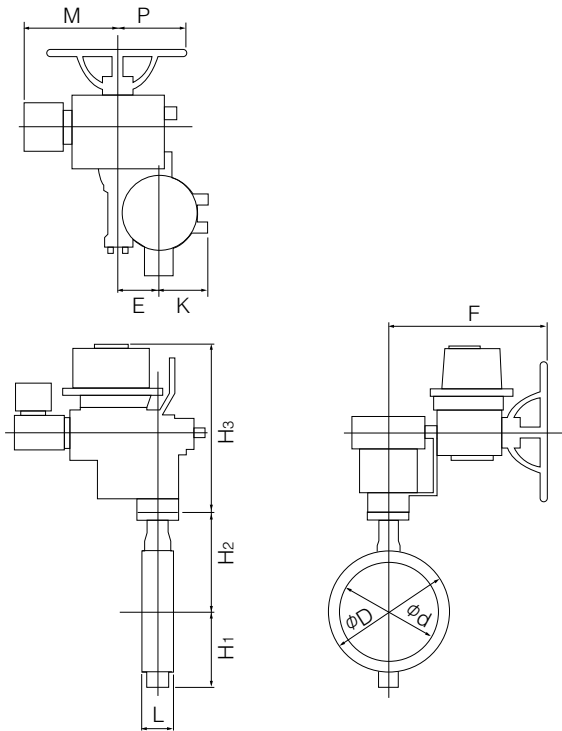
841T/842T

Three phase motor actuator type 841T-4L (350mm to 600mm) / 842T-4L (350mm to 600mm)

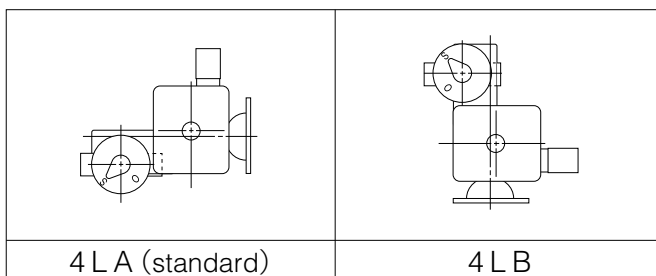
841T/842T

Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	M	P		
350	14	332	428	100	293	320	458	117	164	533	373	230	LTKD-01 0.4kW /MGH-3	186
400	16	383	491	110	323	360	458	117	164	533	373	230	LTKD-01 0.4kW /MGH-3	206
450	18	435	540	120	367	390	458	117	164	533	373	230	LTKD-01 0.4kW /MGH-3	249
500	20	482	595	140	383	420	492	117	164	567	370	230	LTKD-02 0.75kW /MGH-3	328
600	24	581	700	160	478	490	570	140	198	637	440	230	LTKD-05 0.75kW /MGH-4	485

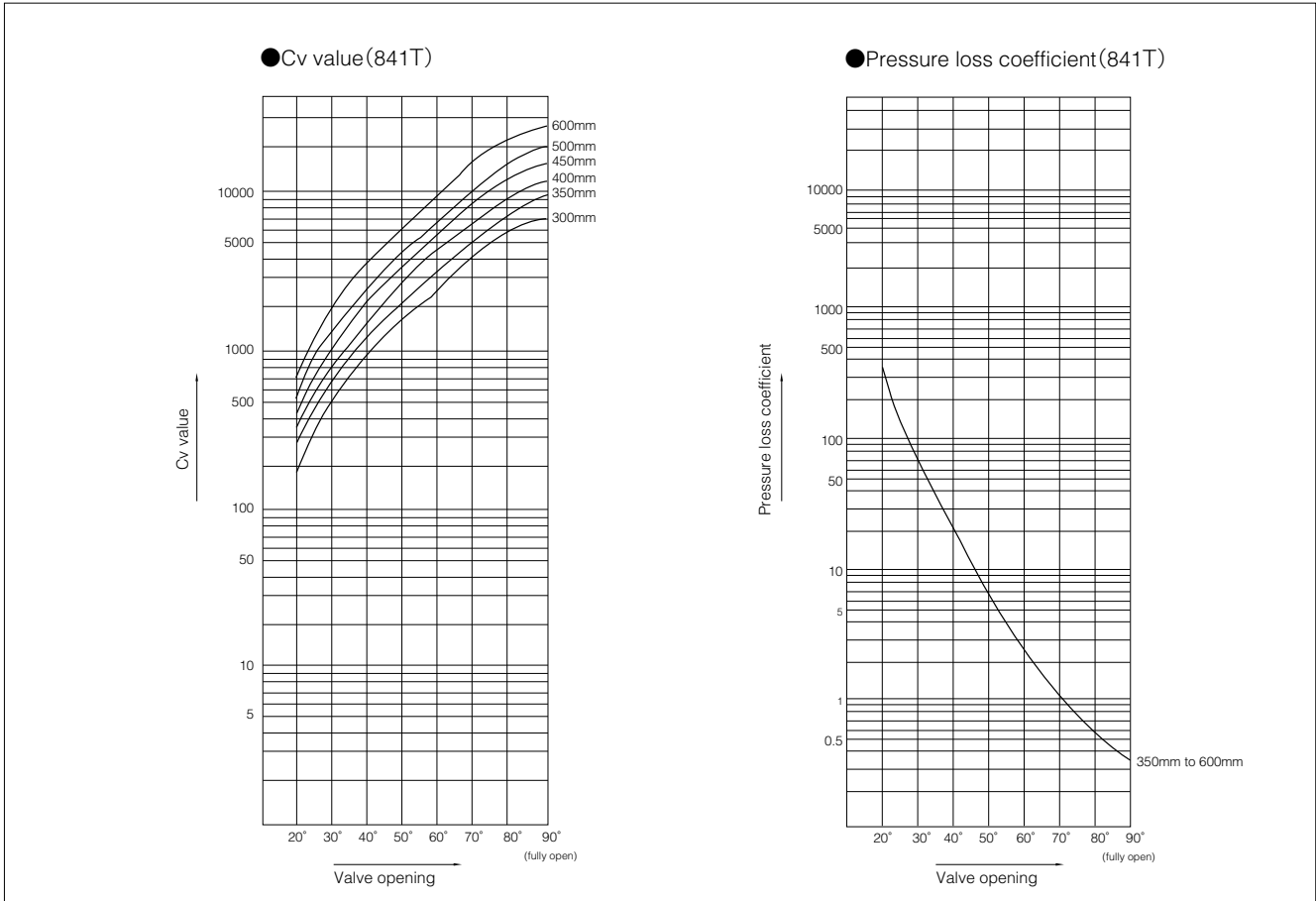
841T/842T-4L



4L Installation direction



841T Cv value/pressure loss coefficient



- Butterfly Valve
- TRITEC**
- TT2**
- 334A**
- 344Q**
- 302A/303Q**
- 304A/304Q**
- 304YA**
- 302Y/304Y**
- 304M (HLV)**
- 507V/508V**
- DTM**
- 846T/847T/847Q**
- 841T/842T**
- 700Z**
- 700G/704G/705G**
- 72WG/72SG/72LG**
- 731P/732P/732Q/752W**
- 731R**
- 700E/700K/700S**
- 704G/722F/720F**
- 227P**
- 907T/908H (MKT)**
- 903L/901C/905C (Bata-check)**

841T Cv value

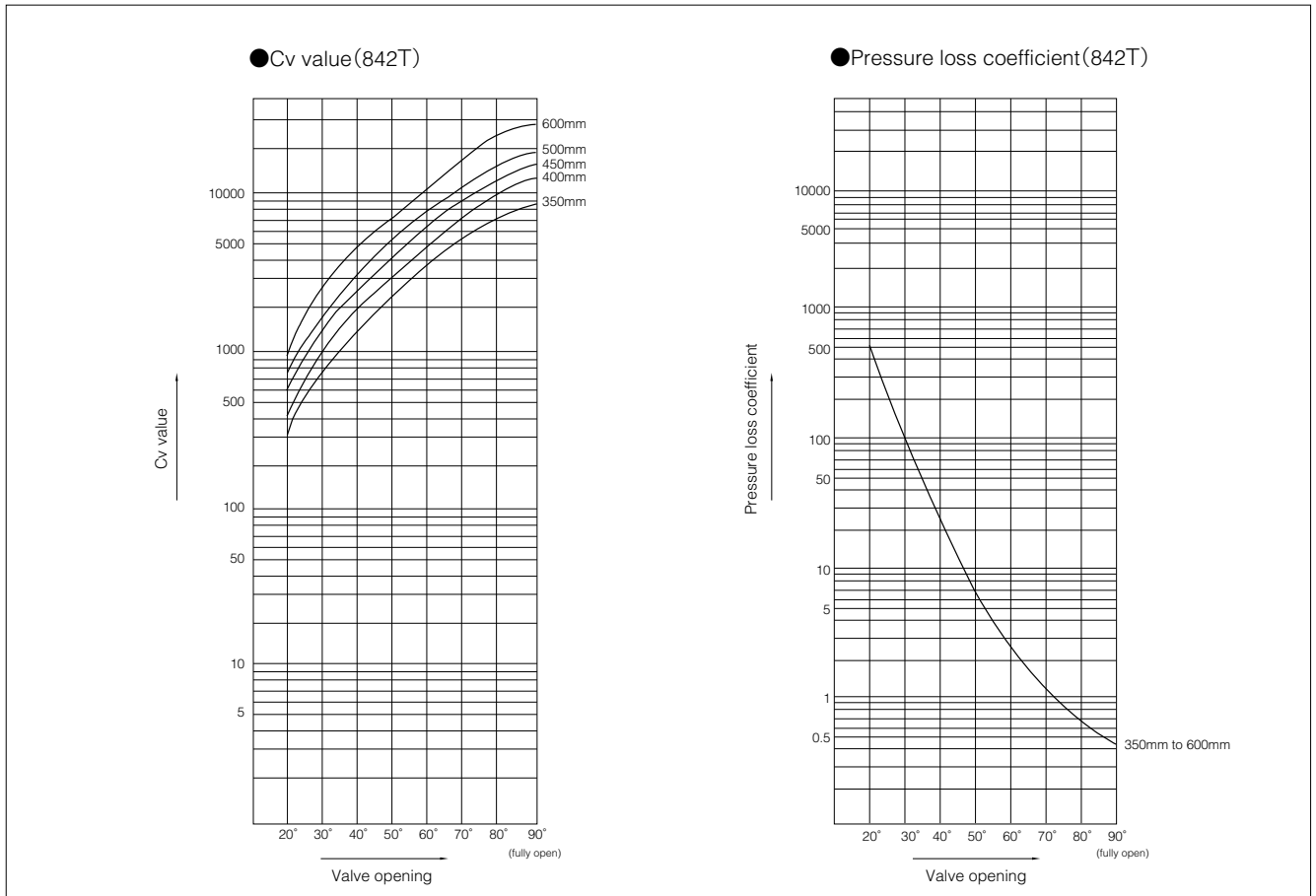
Nominal size		Valve opening							
		20°	30°	40°	50°	60°	70°	80°	90°
mm	inch								
350	14	218	646	1224	2074	3373	5223	7784	9200
400	16	287	869	1632	2703	4306	6766	10289	12000
450	18	364	1150	2122	3437	5510	8993	13081	15500
500	20	450	1401	2589	4210	6753	10966	15993	19000
600	24	656	2060	3795	6141	9835	15952	23001	27600

841T Pressure loss coefficient

Nominal size		Valve opening							
		20°	30°	40°	50°	60°	70°	80°	90°
mm	inch								
350	14	600	68	19	7	3	1	0.4	0.3
400	16	606	66	19	7	3	1	0.4	0.3
450	18	611	61	18	7	3	1	0.4	0.3
500	20	619	64	19	7	3	1	0.4	0.3
600	24	618	63	18	7	3	1	1	0.3

841T/842T

842T Cv value/pressure loss coefficient



842T Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
350	14	284	766	1465	2264	3675	5349	7378	8800
400	16	384	1060	1993	3015	4845	7209	9860	12000
450	18	558	1298	2339	3888	6060	8917	12455	15000
500	20	586	1608	3078	4738	7473	11002	15154	18000
600	24	878	2414	4476	6871	11346	16828	22464	26000

842T Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
350	14	354	49	13	6	2	1	1	0.3
400	16	337	44	13	5	2	1	1	0.3
450	18	261	48	15	5	2	1	1	0.3
500	20	365	49	13	6	2	1	1	0.3
600	24	345	46	13	6	2	1	1	0.3

841T/842T Applicable flange standard

Nominal size		JIS 10K	ANSI		BS4504 PN10	DIN NP10	BS10 Table E
mm	inch		125Lb	150Lb			
350	14	D	D	D	D	D	D
400	16	D	D	D	D	D	D
450	18	T	T	T	T	T	T
500	20	T	T	T	T	T	×
600	24	T	T	T	T	T	×

D: With flange drilling
T: With flange tapping
×: Not applicable

841T/842T Applicable pipe list in case of **A**

Nominal size		SGP	Sch20	Sch40	VP (TS Flange)	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
mm	inch							
350	14	○	○	○	○	—	—	322
400	16	○	○	○	—	—	—	372
450	18	○	○	○	—	—	—	421
500	20	○	○	○	—	—	—	463
600	24	—	○	○	—	—	—	566

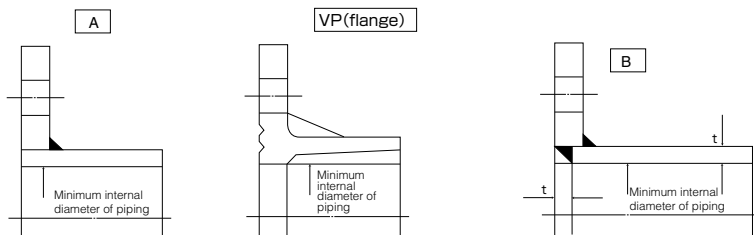
841T/842T Applicable pipe list in case of **B**

Nominal size		SGP	Sch20	Sch40	Sch10S	Sch20S
mm	inch					
350	14	○	○	○	—	—
400	16	○	○	○	—	—
450	18	○	○	○	—	—
500	20	○	○	○	—	—
600	24	—	○	○	—	—

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.

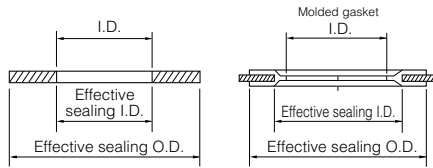


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

841T/842T

841T/842T Applicable gasket dimensions

Nominal size		841T/842T			
mm	inch	Recommended effective sealing I.D. (mm)	Max. effective sealing I.D. (mm)	Minimum I.D. (mm)	Min. effective sealing I.D. (mm)
350	14	359	359	332	416
400	16	410	410	383	479
450	18	457	457	435	533
500	20	508	508	482	590
600	24	610	610	581	693



841T/842T Applicable standard for piping gasket list

Nominal size		Recommended effective sealing I.D. (mm)	Sheet gasket		PTFE molded gasket	
mm	inch		JIS10K	ANSI 125Lb/150Lb	JIS10K	ANSI 125Lb/150Lb
350	14	359	○	○	×	×
400	16	410	○	○	×	×
450	18	457	×	×	×	×
500	20	508	×	×	×	×
600	24	610	×	×	×	×

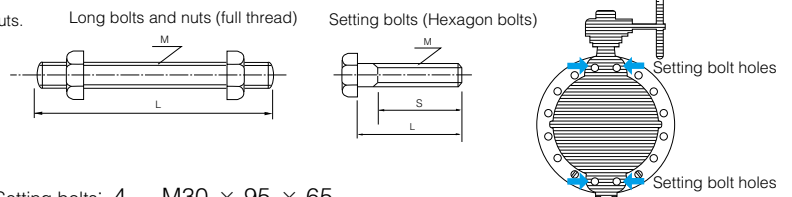
○ : Standard gasket can be used
 × : Standard gasket cannot be used. Use one with special dimensions.

841T/842T Piping bolt and nut sizes

■ Piping bolts sizes

Nominal size		JIS 10K		ANSI 125Lb/150Lb	
mm	inch	Long bolts and nuts	Setting bolts	Long bolts and nuts	Setting bolts
350	14	16-M22×215×45	—	12-U1 ×260×60	—
400	16	16-M24×230×50	—	16-U1 ×260×60	—
450	18	16-M24×245×50	8-M24×70×54	12-U1 1/8×285×65	8-U1 1/8× 85×70
500	20	16-M24×265×50	8-M24×70×54	16-U1 1/8×310×65	8-U1 1/8× 90×70
600	24	20-M30×300×60	8-M30×80×66	16-U1 1/4×345×70	8-U1 1/4×100×70

Remarks:
 1. Use thin hexagon nuts. For ANSI 125Lb and 150Lb, use heavy hexagon nuts.
 2. If the nominal diameter of the unified screw exceeds 1 inch, make the threading 8 threads per inch.
 3. The table above does not apply if the material used is a special material which is not SS400.



Example

Long bolts: 12 - M22 × 185 × 46
 | | | |
 N M L S

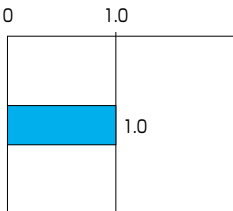
Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) | | | |
 N M L S

700Z

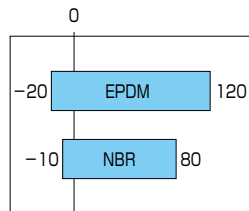
Valve nominal size

40 to 300mm

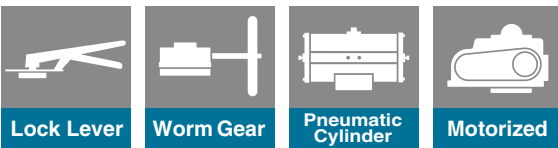
Max. working pressure MPa



Working temperature range °C

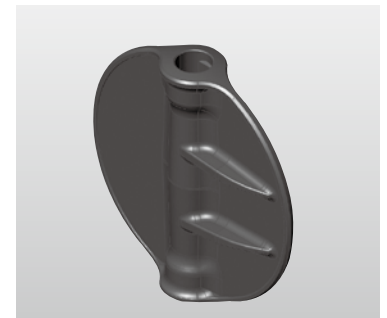
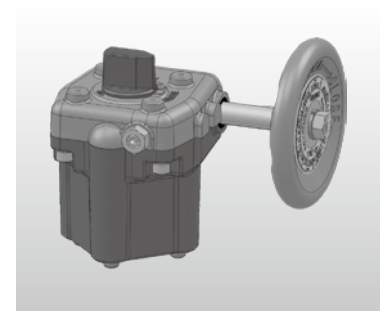


JIS JIS B 2032 Compliant
 (This product conforms to General Specifications for Machinery and Equipment of the Ministry of Land, Infrastructure, Transport and Tourism.)



Evolution of Long Sellers Sealing performance and Durability Improved!

- Gears and lever have been integrated with valve body to achieve both functionality and downsizing.
- Resin-aluminum hybrid gearbox improves the strength and durability of valves with anti-condensation performance added.
- High anti-condensation performance of the Z series has been inherited. (Gear valves)
- New lightweight valve disc with optimized seal shape improves the sealing performance and operability of valves.
- Modified rubber seat structure stabilizes the sealing performance of valve seat.
- Strong bearings have been adopted to significantly improve the durability of valve opening/closing. (Automatic valves)
- Special valve body has been developed for automatic valves to improve their strength and durability.



***Note : These valves are different in face-to-face dimensions from the first 700Z (Coating color: Light blue; Munsell 10BG-6/4) developed in 1980 and discontinued in August 2003.**

Standard Specifications

Body type (Connection)	Concentric rubber seated butterfly valve, flangeless (wafer) type	
Valve nominal size	40, 50, 65, 80, 100, 125, 150, 200, 250, 300mm	
Flange accommodation	JIS5K/10K, ASME125/150Lb, DIN PN10, BS4504 PN10, GB/T 9113.1 1MPa	
Face-to-face dimensions	JIS B 2002 ¹⁹⁸⁷ Series 46 (ISO 5752 table5/BS5155/API609)	
Max. working pressure	1.0 MPa	
Allowable seat leakage rate	JIS B 2003 ²⁰¹³ Rate A (Tight shut-off)	
Flow direction	Bi-directional	
Test	Body shell test	1.5 MPa (Hydraulic pressure)
Pressure	Seat leak test	1.1 MPa (Pneumatic pressure)
Working temperature range	EPDM: -20 ~ 120°C (Option: NBR: -10 ~ 80°C)	
Working temperature in continuous use ^{*1}	EPDM: 0 ~ 70°C (Option: NBR: 0 ~ 60°C)	
Standard materials	Body	Aluminum die cast alloy ADC12
	Disc ^{*2}	SCS13 (A351 CF8), SCS14 (A351 CF8M), PPS (40~200mm)
	Stem ^{*2}	SUS420J2 (AISI420)
	Seat ring	EPDM ^{*3,4} (Option: NBR)
Top flange	Lever/Gear type: Valve integrated type, Cylinder/ Electric motor type: In accordance with ISO 5211	
Actuator ^{*5}	Manual, pneumatic, electric	
Pipe flow velocity (limit value)	Up to 3 m/s (Valve fully-open, continuous operation, ambient temp. and fresh water)	
Coating	Urethane coating (Munsell 2.5BG 6/12)	
Condensation property	No condensation in the upper part of gears at ambient temperature 30°C and humidity 80% with cold water at 5°C ^{*6}	

※1 'Working temperature in continuous use' stands for the temperature continuously kept exceeding on hour.

※2 Materials shown in (): equivalent materials in ASTM/AISI standard.

※3 If the fluid contains even a slight amount of oil, never use an EPDM rubber seat ring. If the fluid contains chlorine, the seat ring may deteriorate early due to combined factors including density and temperature. For details consult our sales office.

※4 In the pipe lines where chemicals containing calcium are supplied, it is recommended to use an EPDM rubber seat ring to protect pipes.

※5 The actuator of the product cannot be replaced.

※6 These values are based on data obtained in a laboratory and may vary if the temperature and humidity distributions in the field are not uniform. Even in an environment having these values, condensation can occur if ambient or water temperature changes suddenly.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

700Z Actuator Selection Chart

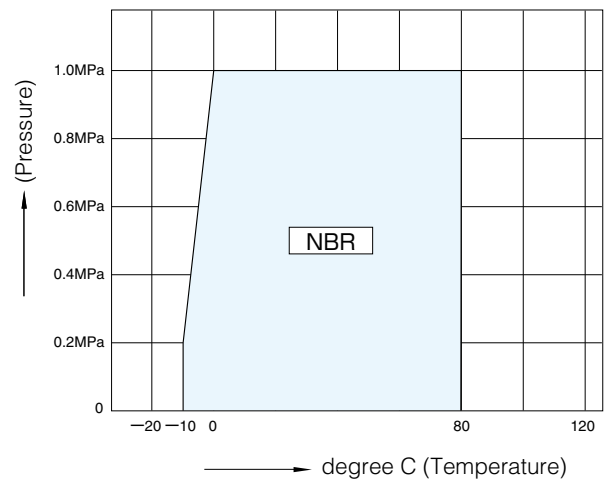
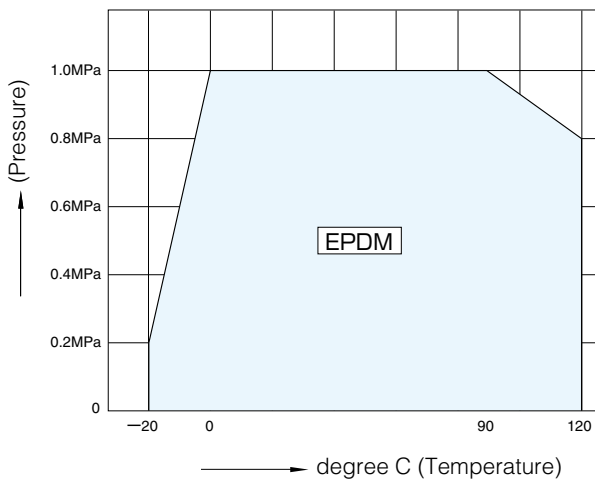
Type	Model	Category	Size (mm/inch)									
			40	50	65	80	100	125	150	200	250	300
			1 1/2	2	2 1/2	3	4	5	6	8	10	12
Lock lever	1J,1T	Standard	1J-1			1J-2		1T-2				
		Heavy duty										
Worm gear	2F	Standard	2F-G0Z		2F-G00		2F-G01		2F-G02		2F-G03	
		Heavy duty										
Double-action pneumatic	7E	Standard	T35		T85		T200		T380		T750	
		Heavy duty										
Single-action pneumatic	7G,7F 3K,3U	Standard	T85S		T200S		T380S		T750S		TG-12S	
		Heavy duty										
Single phase motor	4I	ON-OFF	4I-00		4I-0		4I-1	4I-2		4I-2.5	4I-3	
		Control										

Note) In case of the single-phase motorized actuator 4I that has the following optional equipment, "Control" specification is applied.

- 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 Gas, powder or high viscosity slurry (crude oil, etc.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

700Z Pressure-Temperature Rating

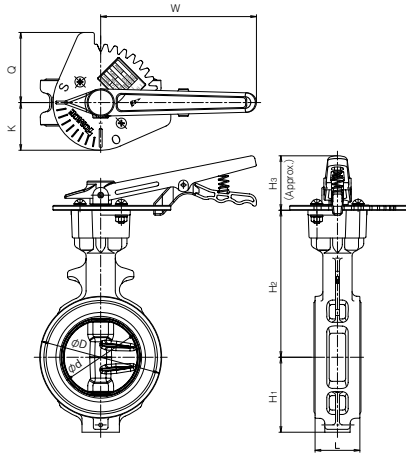


※Prolonged use in high temperature may deteriorate sealing ability or durability.

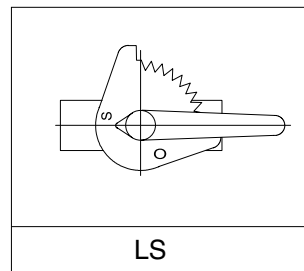
Lock Lever Type 700Z-1J(40mm to 125m)、1T(150m)

Nominalsize		Dimension (mm)									Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	Q	K	W	
40	1 1/2	45	80	35	47	144	56	72	49	160	0.8
50	2	56	91	43	57	150	56	72	49	160	0.9
65	2 1/2	69	111	46	64	163	56	72	49	160	1.1
80	3	84	125	46	77	151	56	72	49	160	1.4
100	4	104	147	52	94	162	70	72	49	200	1.9
125	5	130	180	56	108	190	70	72	49	200	3.0
150	6	153.5	210	56	125	201	96	88	63	300	5.0

700Z-1J/1T



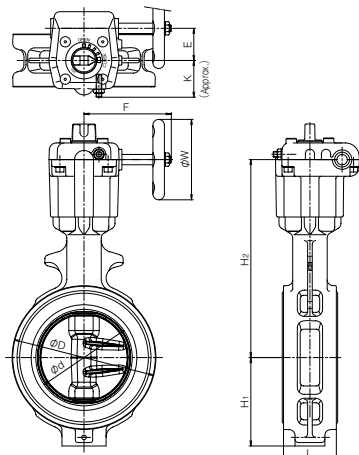
1J Installation direction



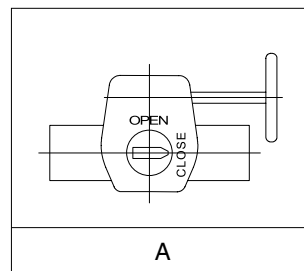
Worm Gear Type 700Z-2F(40mm to 300mm)

Nominalsize		Dimension (mm)									Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	E	K	F	ϕW	
40	1 1/2	45	80	35	47	160	22.5	26	85	70	0.8
50	2	56	91	43	57	166	22.5	26	85	70	1.0
65	2 1/2	69	111	46	64	179	22.5	26	85	70	1.2
80	3	84	125	46	77	172	28	31	110	70	1.7
100	4	104	147	52	94	183	28	31	110	70	2.2
125	5	130	180	56	108	211	46	42	133	100	3.8
150	6	153.5	210	56	125	222	46	42	133	100	4.7
200	8	199	255	60	167	257	53	40	162	125	7.2
250	10	253	322	68	186	316	71	54	206	200	13
300	12	302	375	78	216	348	71	54	206	200	18

700Z-2F



2F Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

700Z

Double-acting Pneumatic Cylinder Type 700Z-7E (40mm to 300mm)

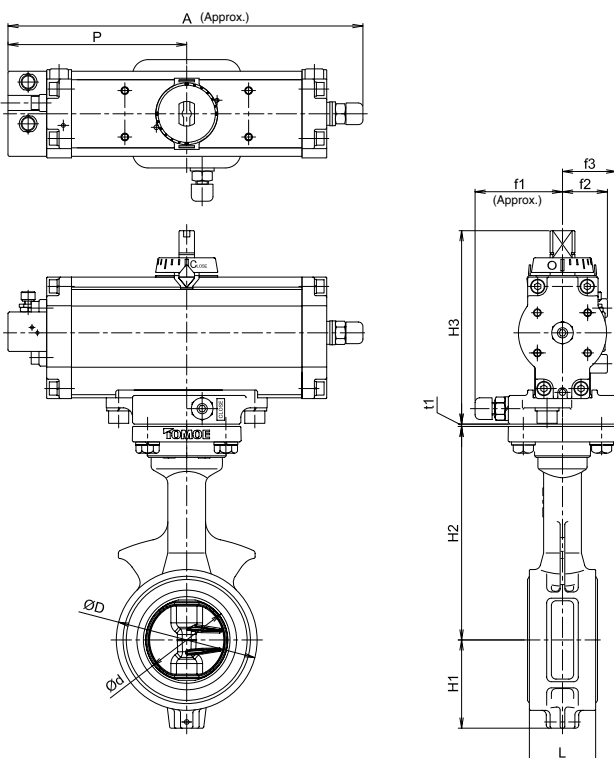
Standard

Nominal size		Dimension (mm)												Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂	f ₃	t ₁		
40	1 1/2	45	80	35	47	132	125	228	116	57	29	35	1	T35	2.6
50	2	56	91	43	57	138	125	228	116	57	29	35	1	T35	2.7
65	2 1/2	69	111	46	64	151	125	228	116	57	29	35	1	T35	2.9
80	3	84	125	46	77	156	125	228	116	57	29	35	1	T35	3.4
100	4	104	147	52	94	167	168	276	142	75	47	51	1	T85	6.8
125	5	130	180	56	108	191	168	276	142	75	47	51	1.5	T85	8.1
150	6	153.5	210	56	125	202	203	346	176	79	57	51	1.5	T200	12.3
200	8	199	255	60	167	227	203	346	176	79	57	51	1.5	T200	14.5
250	10	253	322	68	186	280	231	423	214	91	69	63	1.5	T380	25.5
300	12	302	375	78	216	312	269	546	270	118	85	70	1.5	T750	39.6

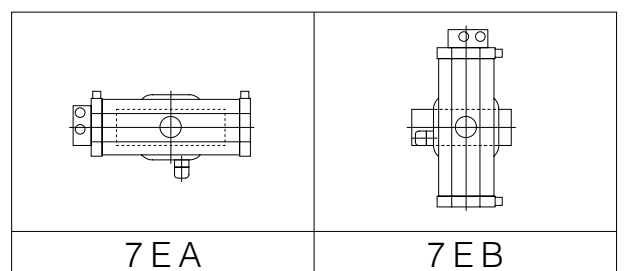
Heavy Duty

Nominal size		Dimension (mm)												Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂	f ₃	t ₁		
40	1 1/2	45	80	35	47	132	125	228	116	57	29	35	1	T35	2.6
50	2	56	91	43	57	138	125	228	116	57	29	35	1	T35	2.7
65	2 1/2	69	111	46	64	151	125	228	116	57	29	35	1	T35	2.9
80	3	84	125	46	77	156	168	276	142	75	47	51	1	T85	6.4
100	4	104	147	52	94	167	168	276	142	75	47	51	1	T85	6.8
125	5	130	180	56	108	191	203	346	176	79	57	51	1.5	T200	11.4
150	6	153.5	210	56	125	202	203	346	176	79	57	51	1.5	T200	12.3
200	8	199	255	60	167	227	231	423	214	91	69	63	1.5	T380	20.7
250	10	253	322	68	186	280	231	423	214	91	69	63	1.5	T380	25.5
300	12	302	375	78	216	312	269	546	270	118	85	70	1.5	T750	39.6

700Z-7E



7E Installation Direction



Single-acting Pneumatic Cylinder Type 700Z-7G(40mm to 200mm)/700Z-7F(40mm to 200mm)

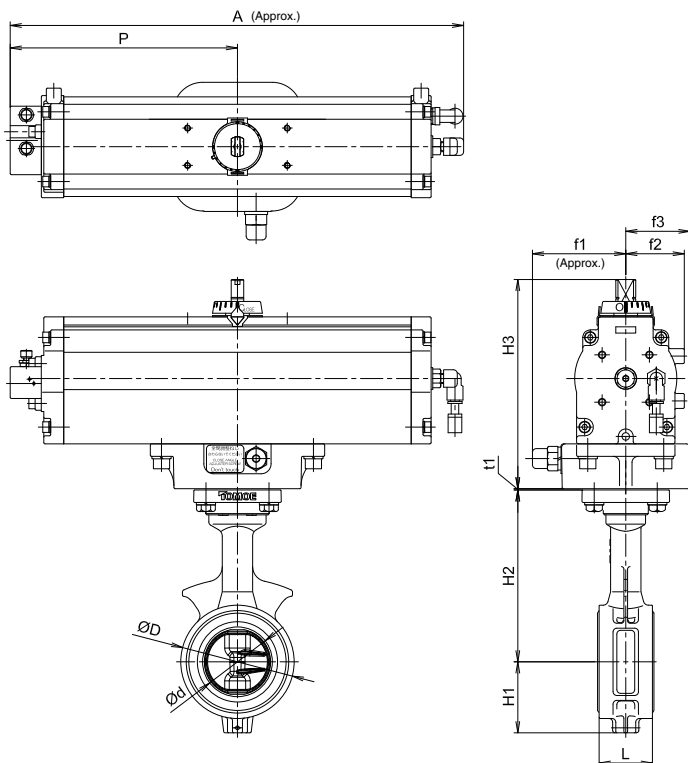
■ Standard

Nominal size		Dimension (mm)												Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂	f ₃	t ₁		
40	1 1/2	45	80	35	47	132	168	364	183	75	47	51	1	T85S	7.2
50	2	56	91	43	57	138	168	364	183	75	47	51	1	T85S	7.3
65	2 1/2	69	111	46	64	151	168	364	183	75	47	51	1	T85S	7.5
80	3	84	125	46	77	156	203	449	226	79	57	51	1	T200S	12.5
100	4	104	147	52	94	167	203	449	226	79	57	51	1	T200S	12.9
125	5	130	180	56	108	191	231	550	276	91	69	63	1.5	T380S	22.5
150	6	153.5	210	56	125	202	231	550	276	91	69	63	1.5	T380S	23.4
200	8	199	255	60	167	227	269	723	360	118	85	70	1.5	T750S	39.2
250	10	253	322	68	186	280	269	723	360	118	85	70	1.5	T750S	43.8

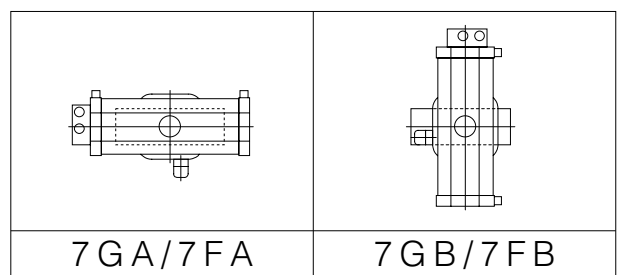
■ Heavy Duty

Nominal size		Dimension (mm)												Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂	f ₃	t ₁		
40	1 1/2	45	80	35	47	132	168	364	183	75	47	51	1	T85S	7.2
50	2	56	91	43	57	138	168	364	183	75	47	51	1	T85S	7.3
65	2 1/2	69	111	46	64	151	203	449	226	79	57	51	1	T200S	12.0
80	3	84	125	46	77	156	203	449	226	79	57	51	1	T200S	12.5
100	4	104	147	52	94	167	231	550	276	91	69	63	1	T380S	21.2
125	5	130	180	56	108	191	231	550	276	91	69	63	1.5	T380S	22.5
150	6	153.5	210	56	125	202	269	723	360	118	85	70	1.5	T750S	37.0
200	8	199	255	60	167	227	269	723	360	118	85	70	1.5	T750S	39.2

■ 700Z-7G/7F



■ 7G/7F Installation Direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

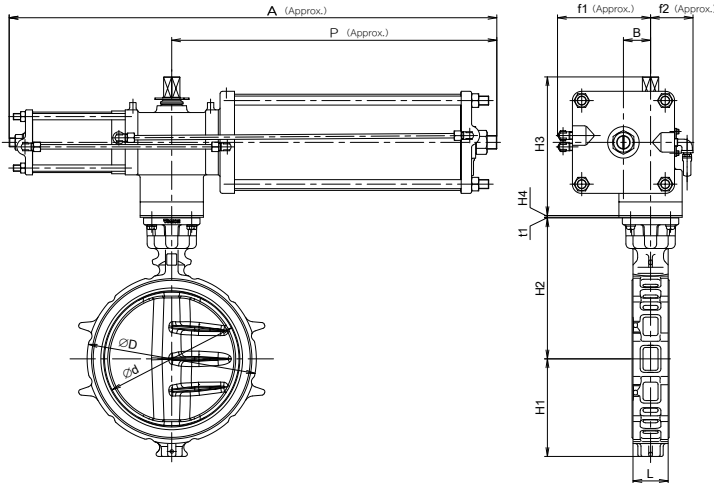
700Z

Single-acting Pneumatic Cylinder Type 700Z-3U (250mm to 300mm)

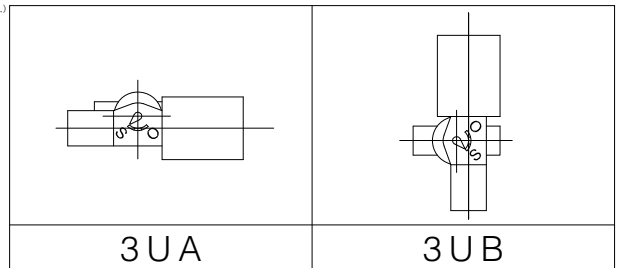
Standard

Nominal size		Dimension (mm)													Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	H ₄	A	P	B	f ₁	f ₂	t ₁		
250	10	253	322	68	186	280	307	4	1080	720	60	206	94	1.5	TG-12S	110.8
300	12	302	375	78	216	312	307	4	1080	720	60	206	94	1.5	TG-12S	115.3

700Z-3U



3U Installation Direction

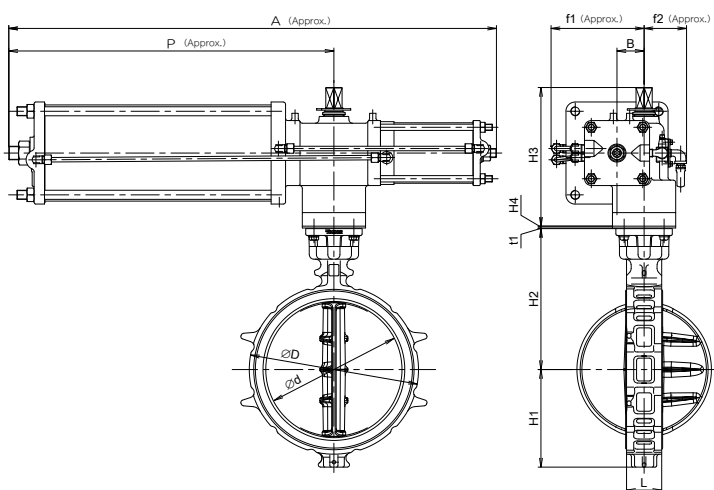


Single-acting Pneumatic Cylinder Type 700Z-3K (250mm to 300mm)

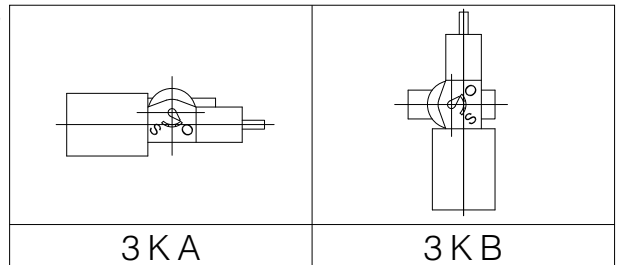
Standard/Heavy Duty

Nominal size		Dimension (mm)													Cylinder type	Approx. Weight (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	H ₄	A	P	B	f ₁	f ₂	t ₁		
250	10	253	322	68	186	280	307	4	1080	720	60	206	94	1.5	TG-12S	110.8
300	12	302	375	78	216	312	307	4	1080	720	60	206	94	1.5	TG-12S	115.3

700Z-3K



3K Installation Direction

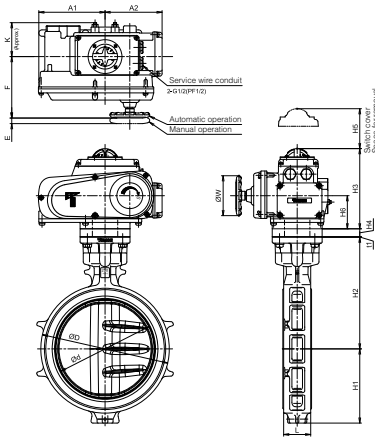


Single Phase Electric Motor Type 700Z-4 I (40mm to 300mm)

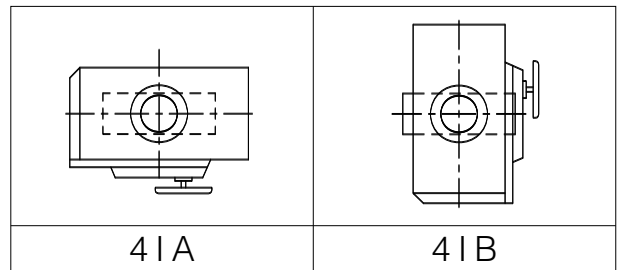
■ ON-OFF

Nominal size		Dimension (mm)																	Motor type	Approx. Weight (kg)
mm	inch	φd	φD	L	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	A ₁	A ₂	E	F	K	φW	t ₁			
40	1 1/2	45	80	35	47	132	121	—	100	57	84	77	39	58	45	80	1	4I-00	3.0	
50	2	56	91	43	57	138	121	—	100	57	84	77	39	58	45	80	1	4I-00	3.1	
65	2 1/2	69	111	46	64	151	121	—	100	57	84	77	39	58	45	80	1	4I-00	3.3	
80	3	84	125	46	77	156	150	—	100	43	100	102	43	85	54	80	1	4I-0	6.1	
100	4	104	147	52	94	167	150	—	100	43	100	102	43	85	54	80	1	4I-0	6.5	
125	5	130	180	56	108	191	165	14	100	61	138	114	12	126	65	70	1.5	4I-1	10.3	
150	6	153.5	210	56	125	202	198	—	100	80	167	143	14	154	85	100	1.5	4I-2	16.2	
200	8	199	255	60	167	227	198	—	100	80	167	143	14	154	85	100	1.5	4I-2	18.4	
250	10	253	322	68	186	280	201	20	100	80	167	143	14	154	85	100	1.5	4I-2.5	26.3	
300	12	302	375	78	216	312	230	4	100	98	223	165	23	246	136	200	1.5	4I-3	41.0	

■ 700Z-4 I (ON-OFF)



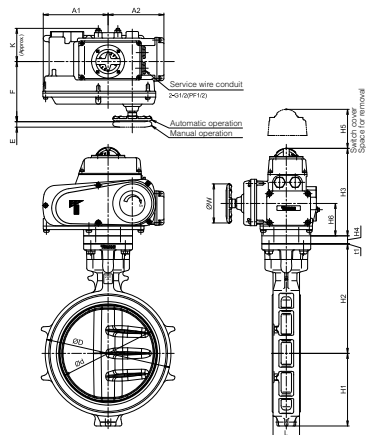
■ 4 I Installation Direction



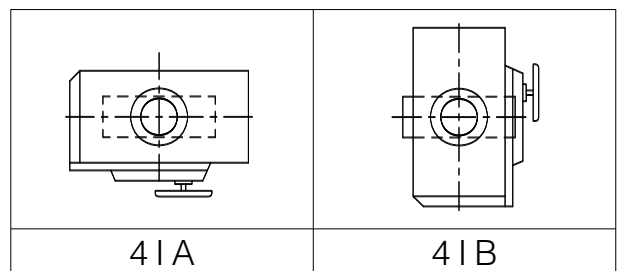
■ Control

Nominal size		Dimension (mm)																	Motor type	Approx. Weight (kg)
mm	inch	φd	φD	L	H ₁	H ₂	H ₃	H ₄	H ₅	H ₆	A ₁	A ₂	E	F	K	φW	t ₁			
40	1 1/2	45	80	35	47	132	176	—	100	43	100	102	43	85	54	80	1	4I-0	5.3	
50	2	56	91	43	57	138	176	—	100	43	100	102	43	85	54	80	1	4I-0	5.4	
65	2 1/2	69	111	46	64	151	176	—	100	43	100	102	43	85	54	80	1	4I-0	5.6	
80	3	84	125	46	77	156	176	—	100	43	100	102	43	85	54	80	1	4I-0	6.1	
100	4	104	147	52	94	167	176	—	100	43	100	102	43	85	54	80	1	4I-0	6.5	
125	5	130	180	56	108	191	191	14	100	61	138	114	12	126	65	70	1	4I-1	10.3	
150	6	153.5	210	56	125	202	224	—	100	80	167	143	14	154	85	100	1	4I-2	16.2	
200	8	199	255	60	167	227	224	—	100	80	167	143	14	154	85	100	1	4I-2.5	20.0	
250	10	253	322	68	186	280	227	20	100	80	167	143	14	154	85	100	1.5	4I-2.5	26.3	
300	12	302	375	78	216	312	255	4	100	98	223	165	23	246	136	200	1.5	4I-3	41.0	

■ 700Z-4 I (Control)



■ 4 I Installation Direction



Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M

(HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/

732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

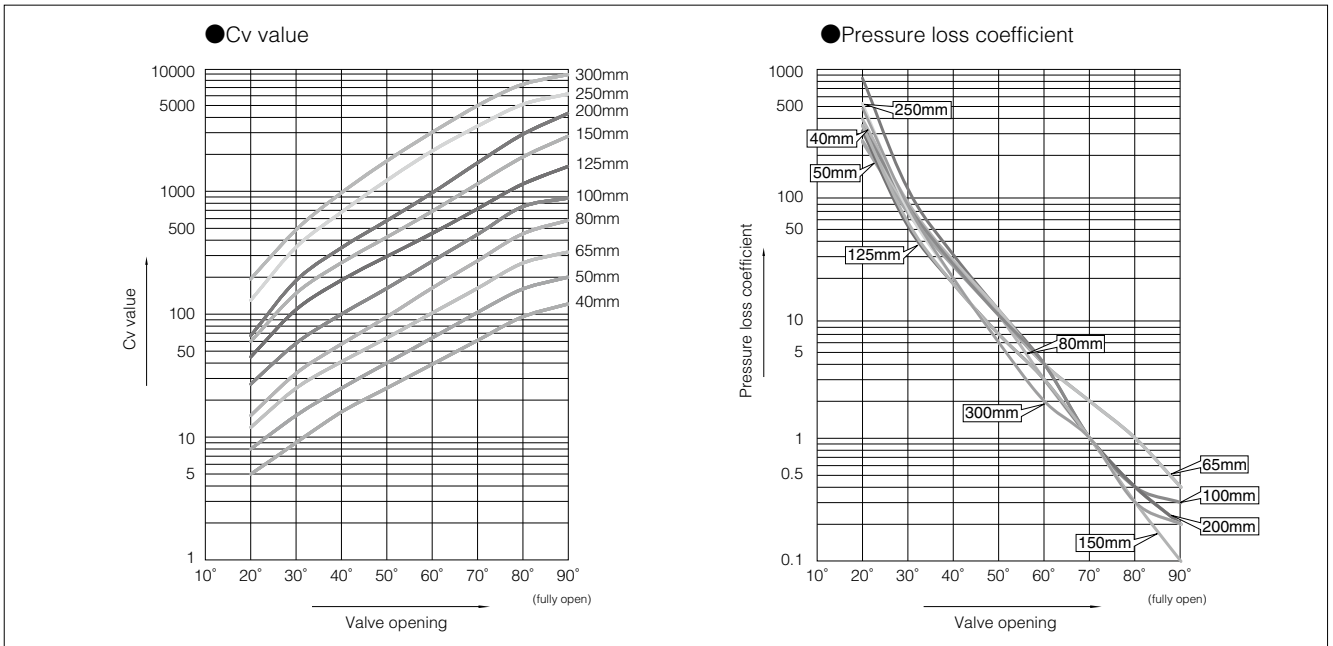
907T/908H

(MKT)

903L/901C/

905C (Bata-check)

700Z Cv value / pressure loss coefficient



700Z Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1 1/2	5	9	16	25	39	61	95	121
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
125	5	45	109	189	295	453	719	1144	1590
150	6	60	148	262	423	685	1147	1897	2800
200	8	67	188	347	576	969	1698	2902	4300
250	10	130	351	675	1225	2125	3375	5091	6200
300	12	194	487	972	1764	3011	4966	7412	8900

700Z Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1 1/2	264	72	26	10	4	2	1	0.4
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
125	5	316	53	18	7	3	1	0.4	0.2
150	6	348	57	18	7	3	1	0.3	0.1
200	8	849	106	31	11	4	1	0.4	0.2
250	10	528	72	20	6	2	1	0.3	0.2
300	12	488	78	20	6	2	1	0.3	0.2

700Z Applicable pipe list in case of **A**, **B**

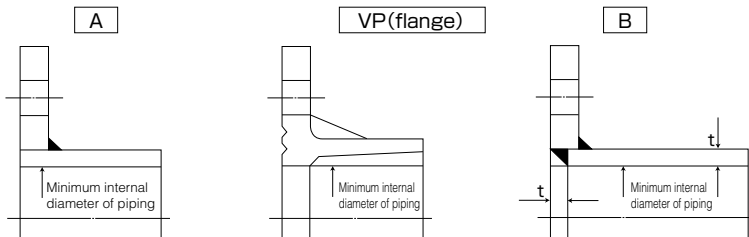
Nominal size		SGP	Sch20	Sch40	VP (TS flange)	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
mm	inch							
40	1 1/2	○	—	○	○	○	○	29
50	2	○	○	○	○	○	○	38
65	2 1/2	○	○	○	○	○	○	54
80	3	○	○	○	○	○	○	72
100	4	○	○	○	○	○	○	92
125	5	○	○	○	○	○	○	119
150	6	○	○	○	○	○	○	145
200	8	○	○	○	○	○	○	194
250	10	○	○	○	○	○	○	247
300	12	○	○	○	○	○	○	295

Remark 1: The symbols above mean the following.

○: Piping possible —: Not standardized

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.



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

700Z Piping bolt and nut sizes

Hexagon bolt & nut

Nominal size		JIS 5K	JIS 10K
mm	inch	Hexagon bolts and nuts	Hexagon bolts and nuts
40	1 1/2	4-M12× 75×30	4-M16× 90×38
50	2	4-M12× 90×30	4-M16×100×38
65	2 1/2	4-M12× 90×30	4-M16×105×38
80	3	4-M16× 95×38	8-M16×105×38
100	4	8-M16×105×38	8-M16×110×38
125	5	8-M16×110×38	8-M20×125×46
150	6	8-M16×115×38	8-M20×130×52
200	8	8-M20×130×52	12-M20×130×52
250	10	12-M20×140×52	12-M22×150×60
300	12	12-M20×150×52	16-M22×160×60

Long bolt & nut

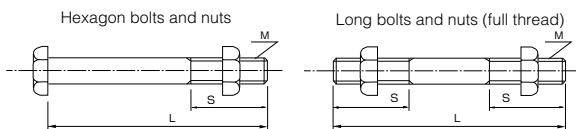
Nominal size		JIS 5K	JIS 10K	ANSI 125Lb/150Lb
mm	inch	Long bolts and nuts	Long bolts and nuts	Long bolts and nuts
40	1 1/2	4-M12× 95×25	4-M16×110×25	4-U1/2 ×110×32
50	2	4-M12×105×25	4-M16×120×30	4-U5/8 ×140×38
65	2 1/2	4-M12×110×25	4-M16×125×30	4-U5/8 ×140×38
80	3	4-M16×120×30	8-M16×125×30	4-U5/8 ×140×38
100	4	8-M16×130×30	8-M16×130×30	8-U5/8 ×150×38
125	5	8-M16×130×30	8-M20×150×40	8-U3/4 ×160×51
150	6	8-M16×140×35	8-M20×155×40	8-U3/4 ×165×51
200	8	8-M20×155×40	12-M20×155×40	8-U3/4 ×175×51
250	10	12-M20×165×40	12-M22×175×45	12-U7/8 ×195×58
300	12	12-M20×175×40	16-M22×185×45	12-U7/8 ×205×58

Remark: Please use a hexagon nut with 80% threading. (For ANSI, use heavy nut.)

Example

Long bolts : 12 - M22 × 185 × 45 Hexagon bolts : 12 - M22 × 60 × 50

N
M
L
S
N
M
L
S



700G Wafer

704G Full lugged

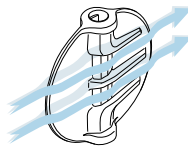
705G Semi lugged



Features and Benefits

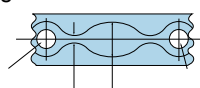
Rib disc

The 316 stainless steel (JIS SCS14) rib disc comes standard from 50mm to 300mm. Thin profile disc reinforced by ribs (patent pending) provides larger Cv compared to our conventional design. It also reduces weight while maintaining mechanical strength. A flat face disc is also available on request.



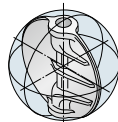
Patented cosine curve seat ring

The cosine curve seat ring reduces valve operating torque substantially and allows the torque to be adjusted according to the working pressure.



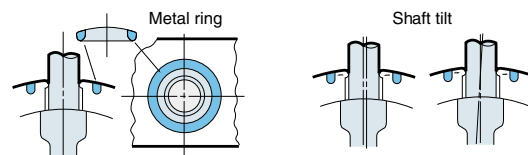
Much longer life with spherical design

Similar to a spherical body rotating inside a spherical area, the operation of the disc is smooth and unhindered. Torque is reduced and the valve life is lengthened by 300%.



Self-aligning stem seal through backup ring

The stem seal is the primary and secondary seal system. The backup ring functions as the self-aligning stem seal.



Long bonnet

The long neck shape allows insulation of up to 50mm after the valve is installed. 701G: Nylon coated body is also available (50 to 300mm).

Please contact us for more information.

Two aligning methods (350 to 600mm)

Two valve models are available: the casted hole type (700G) and the tapped and drilled hole type (705G). They accommodate all the applicable flange standards.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Beta-check)

Discs and seats come in various materials to meet a wide range of needs. These are the ultimate general purpose valves and they provide excellent cost performance.

General Description

Handling, durability and longevity are the basic aspects by which valve performance can be improved. TOMOE have now developed the 700G series, a superior, pressure-proof, general purpose valve, with the addition of a wide range of features to offer improved performance and better cost efficiency.

The 700G series is designed to satisfy many international flange standards for use worldwide.

Structure

The body is available in various designs such as wafer, semi-lugged and full-lugged, with various materials such as ductile iron, carbon steel, etc. The disc is also available with high-grade stainless steel, type 316, nylon coating, aluminium, bronze or PPS. The patented cosine-curve structure is adopted for the seat ring. The 700G series is superior to conventional models in all respects.

Standard Specifications

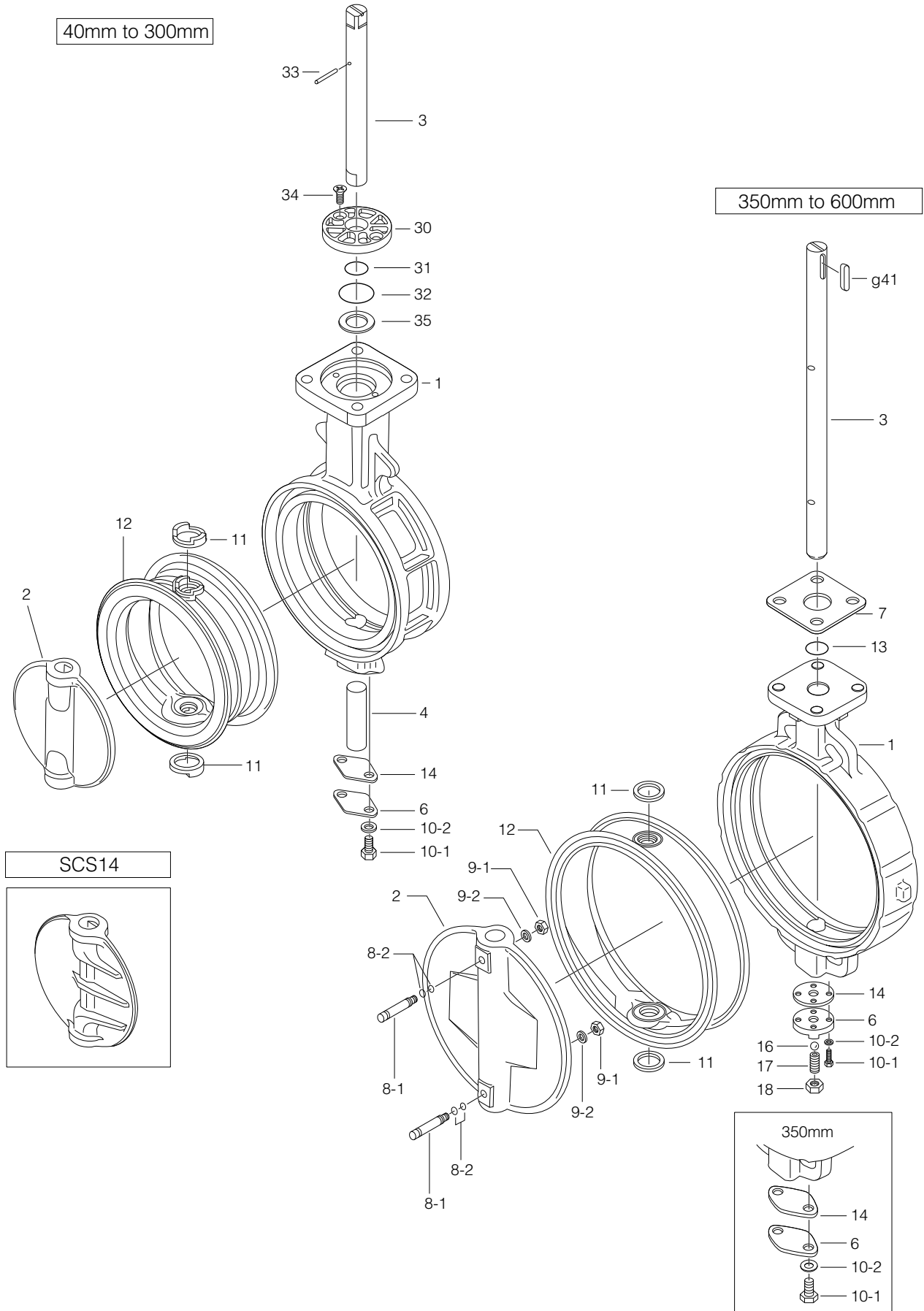
Model	700G (Wafer)			704G (Fully lugged)		705G (Semi lugged)	
Valve nominal size	40 to 300mm	350 to 550mm	600mm	50 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm
Applicable flange standard	JIS 5K/10K, ANSI 125lb/150lb, DIN PN10/PN16, BS 4504 PN10/PN16, BS 10' E'	JIS 5K/10K	JIS 5K/10K, ANSI 125lb/150lb, DIN PN10, BS4504 PN10	JIS 5K/10K, ANSI 125lb/150lb, DIN PN10/PN16, BS4504 PN10/PN16, BS 10' E'	JIS 5K/10K, ANSI 125lb/150lb, DIN PN10, BS4504 PN10	JIS 5K/10K, ANSI 125lb/150lb, DIN PN10/PN16, BS4504 PN10/PN16, BS10' E'	JIS 5K/10K, ANSI 125lb/150lb, DIN PN10, BS4504 PN10 only
Face-to-face dimensions	API 609 / ISO 5752 (20 series)						
Max. working pressure	1.0 MPa						
Body shell test (hydraulic)	1.5 MPa						
Seat leak test (pneumatic) ※1	1.1 MPa						
Working temperature range ※2,※3	NBR : -10 to 80 degrees C, *EPDM : -20 to 120 degrees C						
Working temperature in continuous use ※4	NBR : 0 to 60 degrees C, *EPDM : 0 to 70 degrees C						
Standard materials	Body ※5	Ductile iron, JIS FCD450	Cast iron, JIS FC 250	Ductile iron, JIS FCD450		Ductile iron, JIS FCD 450	Cast iron, JIS FC250, Ductile iron, JIS FCD450
	Disc	316 stainless steel, JIS SCS14 ※6	304 stainless steel, JIS SCS13 316 stainless steel, JIS SCS14	316 stainless steel, JIS SCS14 ※6	304 stainless steel, JIS SCS 13, 316 stainless steel, JIS SCS14	316 stainless steel, JIS SCS 14 ※6	304 stainless steel, JIS SCS 13, 316 stainless steel, JIS SCS 14
		PPS (50 to 200mm) Aluminium bronze JIS CAC702 (50 to 600mm)	Aluminium bronze JIS CAC702	PPS (50 to 200mm) Aluminium bronze JIS CAC702 (50 to 600mm)	Aluminium bronze JIS CAC702	PPS (50 to 200mm) Aluminium bronze JIS CAC702 (50 to 600mm)	Aluminium bronze JIS CAC702
		Ductile iron, JIS FCD 450		Ductile iron, JIS FCD 450	Ductile iron, JIS FCD 450 with hard chrome plating	Ductile iron, JIS FCD 450	
Stem	SUS420J2 / SUS329J1 as an option						
Seat ring ※7	NBR, *EPDM ※7						
Actuators	Lock lever	40 to 200mm	-	50 to 200mm	-	50 to 200mm	-
	Worm gear	40 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm
	Centre handle	40 to 300mm	-	50 to 300mm	-	50 to 300mm	-
	Pneumatic	40 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm
	Motorised	40 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm	50 to 300mm	350 to 600mm
Coating ※8	Epoxy primer finish (Munsell N7)						

- ※1 16bar finish is also available subject to working conditions.
 - ※2 Working temperature range varies depending on combination of disc materials and seating. Please consult us.
 - ※3 Please consult us when using NBR and EPDM seating continuously above 60 degrees C and 70 degrees C respectively.
 - ※4 "Working temperature in continuous use" stands for the temperature continuously kept exceeding one hour.
 - ※5 Cast steel body or stainless steel body is also available.
 - ※6 Rib disc: standard. Flat face disc: optional.
 - ※7 Heat resistant EPDM (to 150 degrees C), FKM, SEP, CR and white-NBR seats are also available. See below table.
 - ※8 Polyester powder backed finish (V-Pet #4000) for 700G size 40 to 300mm. Epoxy resin coating for 705G size 50 to 300mm.
 - ※9 Export license by Japanese Ministry is required up to 100mm with FKM seating. Please consult us the detail.
- * Never use an EPDM rubber seat ring if the valve is being used for oil or for a fluid containing even a slight amount of oil.

Seat ring material table

Material	Standard		On request						
	EPDM	NBR	Food Grade EPDM	Heat resistant EPDM	HI-NBR	W-NBR	FKM	CR	SEP
Working temperature range (degrees C)	-20~120	-10~80	-20~120	-10~150	-5~80	-10~70	-10~60	-10~80	-10~60
Working temperature in continuous use (degrees C)	0~70	0~60	0~70	0~130	0~60	0~60	0~50	0~60	0~50
Max. working pressure (MPa)	1.0	1.0	1.0	0.5	1.0	0.5	0.5	1.0	0.5

700G Expanded view of components



700G Parts list

■ 700G Parts list (40mm to 300mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Upper stem	1	
4	Lower stem	1	See Remark 2.
6	Bottom cover	1	
10-1	Hexagon bolt	2	
10-2	Spring washer	2	
★ 11	Secondary ring	2	Only 50mm to 300mm
★ 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	

■ 700G Parts list (350mm to 600mm)

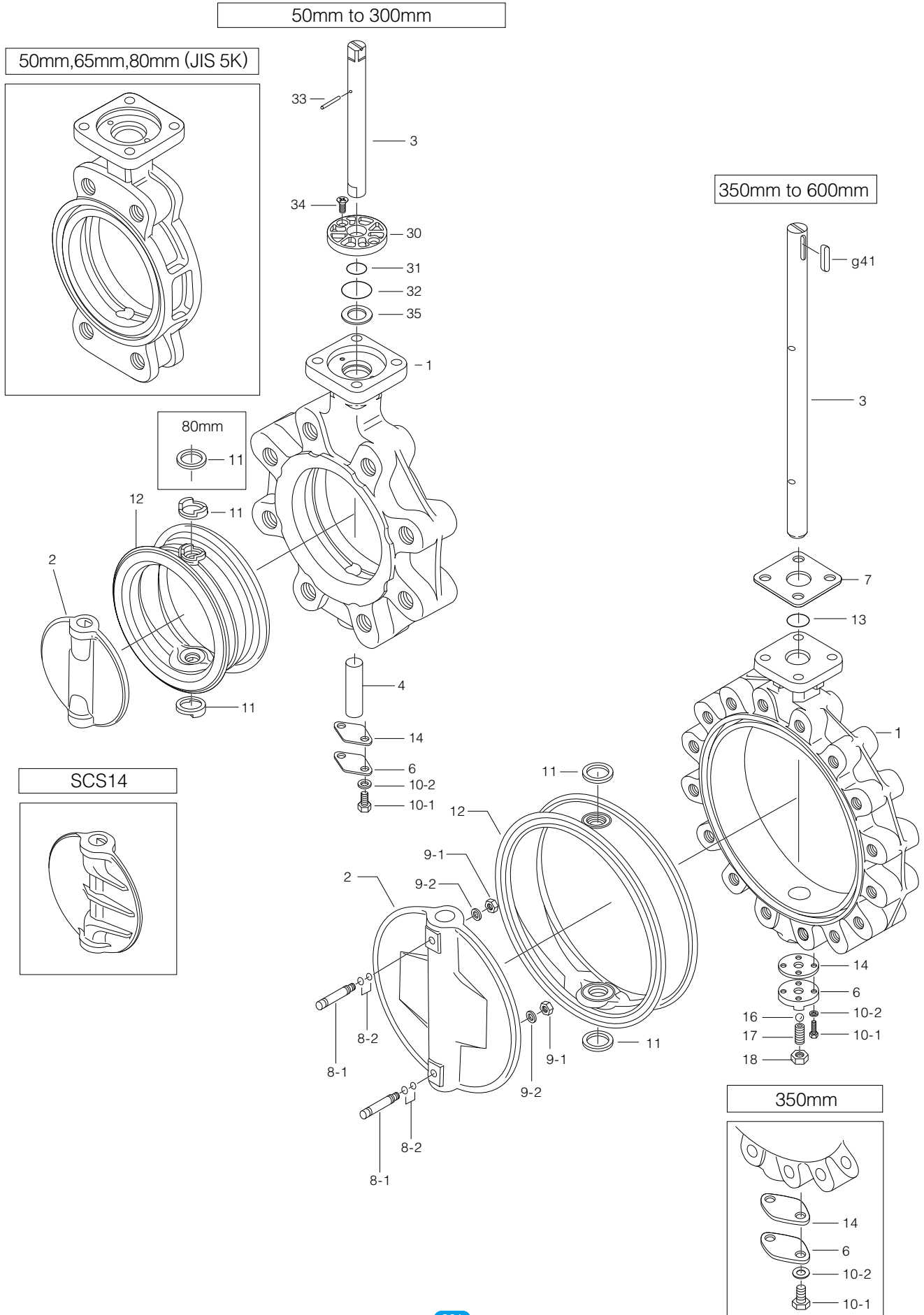
No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
6	Bottom cover	1	
7	Retainer plate	1	
★ 8-1	Taper bolt	2	
★ 8-2	O-ring	4	
★ 9-1	Hexagon nut	2	
★ 9-2	Spring washer	2	
10-1	Hexagon bolt	2	350mm
		4	400mm to 600mm
10-2	Spring washer	2	350mm
		4	400mm to 600mm
★ 11	Secondary ring	2	350mm
11	Secondary ring	2	400mm to 600mm
★ 12	Seat ring	1	
★ 13	O-ring	1	
★ 14	Gasket	1	
16	Ball	1	Only 400mm to 600mm
17	Hollow bolt	1	Only 400mm to 600mm
18	Lock nut	1	Only 400mm to 600mm
g41	Key	1	

Remark 1: The ★ indicates recommended spare parts. They are supplied as "Seat ring set".

Remark 2: When the disc material is PPS, the lower stem length of types 50mm to 100mm is different from standard.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

704G Expanded View of Components



704G Parts list

■ 704G Parts list (50mm to 300mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Upper stem	1	
4	Lower stem	1	See Remark 2.
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	

■ 704G Parts list (350mm to 600mm)

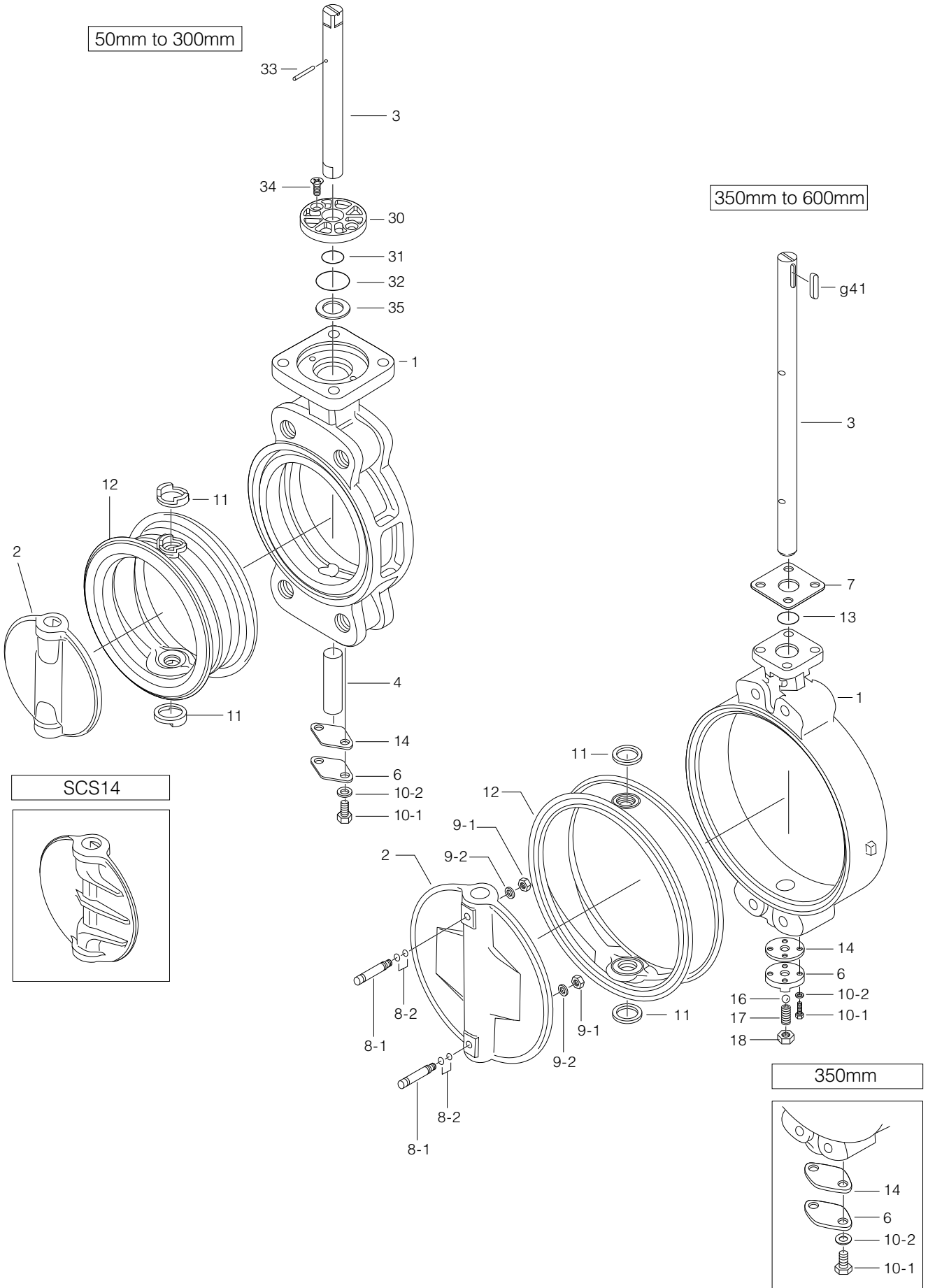
No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
6	Bottom cover	1	
7	Retainer plate	1	
★ 8-1	Taper bolt	2	
★ 8-2	O-ring	4	
★ 9-1	Hexagon nut	2	
★ 9-2	Spring washer	2	
10-1	Hexagon bolt	2	350mm
		4	400mm to 600mm
10-2	Spring washer	2	350mm
		4	400mm to 600mm
★ 11	Secondary ring	2	350mm
11	Secondary ring	2	400mm to 600mm
★ 12	Seat ring	1	
★ 13	O-ring	1	
★ 14	Gasket	1	
16	Ball	1	Only 400mm to 600mm
17	Hollow bolt	1	Only 400mm to 600mm
18	Lock nut	1	Only 400mm to 600mm
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.

Remark 2: When the disc material is PPS, the lower stem length of types 50mm to 100mm is different from standard.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

705G Expanded view of components



705G Parts list

■ 705G Parts list (50mm to 300mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Upper stem	1	
4	Lower stem	1	See Remark 2.
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	

■ 705G Parts list (350mm to 600mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
6	Bottom cover	1	
7	Retainer plate	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	2	350mm
		4	400mm to 600mm
10-2	Spring washer	2	350mm
		4	400mm to 600mm
★ 11	Secondary ring	2	350mm
11	Secondary ring	2	400mm to 600mm
★ 12	Seat ring	1	
★ 13	O-ring	1	
★ 14	Gasket	1	
16	Ball	1	Only 400mm to 600mm
17	Hollow bolt	1	Only 400mm to 600mm
18	Lock nut	1	Only 400mm to 600mm
g41	Key	1	

Remark 1: The ★ indicates recommended spare parts. They are supplied as "Seat ring set".

Remark 2: When the disc material is PPS, the lower stem length of types 50mm to 100mm is different from standard.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

700G / 704G / 705G Actuator Selection Chart

700G/704G/705G

Model	Category	Size (mm / inch)																								
		40	50	65	80	100	125	150	200	250	300	350	400	450	500	550 ^{**1}	600									
		1 1/2	2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	22	24									
1T	Standard	1T-1			1T-2			1T-3																		
	Heavy duty																									
2U	Standard	2U-0		2U-1		2U-2		2U-3		2U-4		2U-5		2U-6												
	Heavy duty																									
2G,2R	Standard	2G-1				2G-2			2G-3		2G-4	2R-3			2R-4											
	Heavy duty																									
7E,3A	Standard	T35		T85			T200			T380		T750		TGA-125	TGA-140	TGA-160		TGA-180								
	Heavy duty																									
7G,7F 3U,3K	Standard	T85S	T200S		T380S			T750S		TG-10S		TG-12S		TG-14S		TG-20S										
	Heavy duty																									
4I ^{**}	ON-OFF	4I-00		4I-0		4I-1	4I-2	4I-2.5		4I-3		4I-4														
	Control																									
4J,4L	Standard	SRJ-010				SRJ-020			SRJ-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										
	Heavy duty																									

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

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

^{**1} 550mm is available for 700G and 705G only.

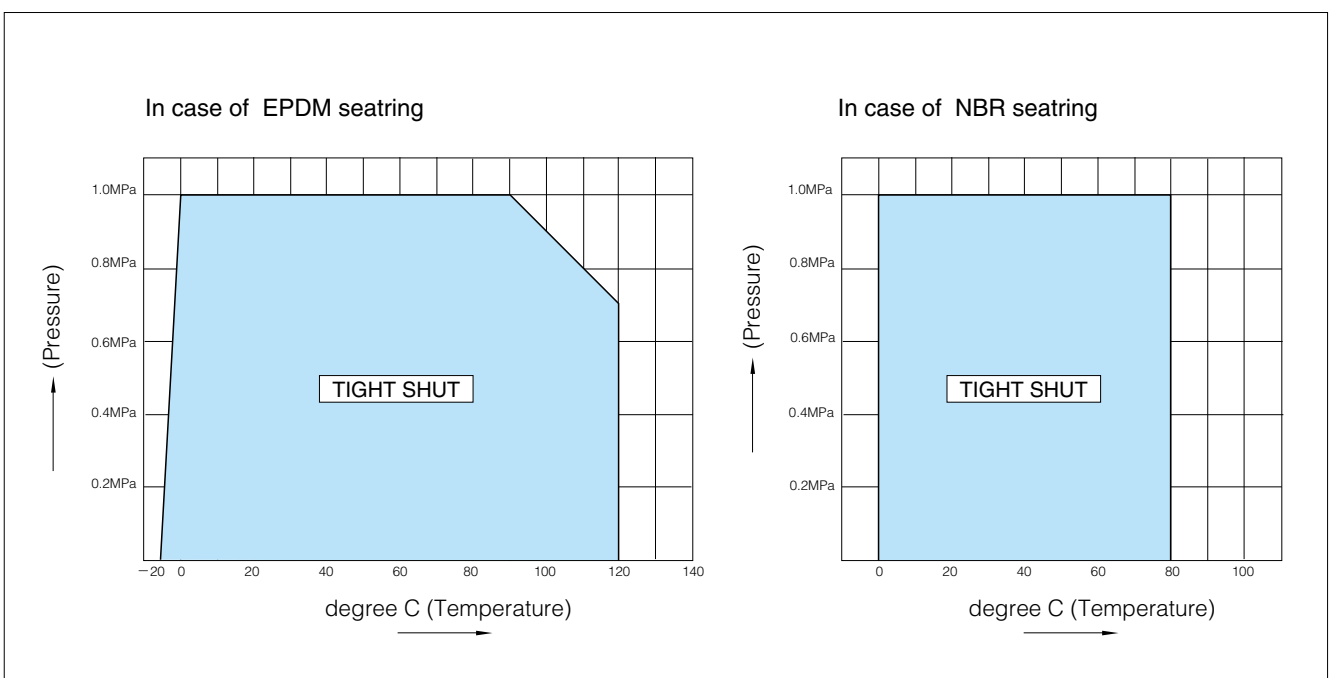
Selection criteria	Standard
	Heavy duty

Select when none of the following heavy duty items apply.

Select when any of the following items apply.

- ① Powder or high viscosity fluid (crude oil, etc.)
- ② Control specification (with positioner)
- ③ Emergency open valve or pipe dead end valve

700G / 704G / 705G Pressure-Temperature Rating



700G Bare shaft (01: 40mm to 300mm, 02: 350mm to 600mm)

700G

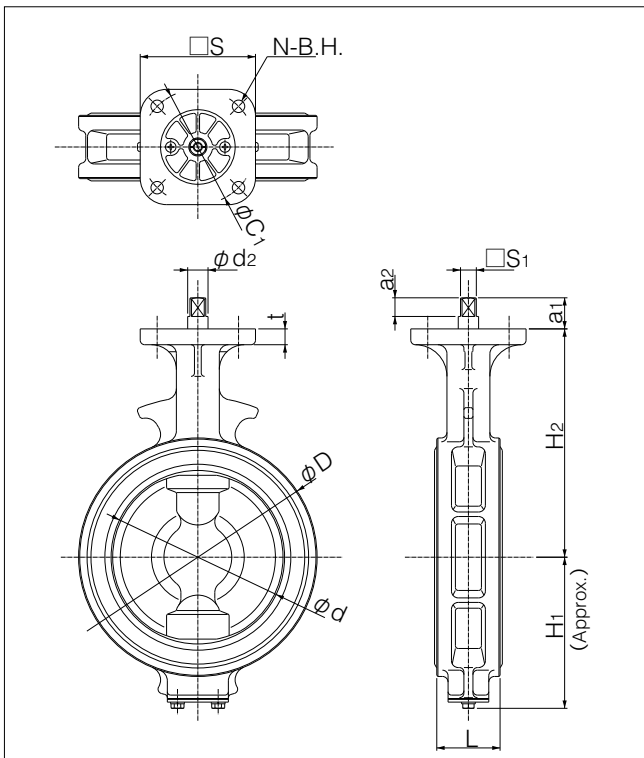
Shaft type	Nominal size		Dimension (mm)													Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	$\square S_1$	ϕd_2	b	t ₂	t	Top flange	
01	40	1 1/2	45	80	35	61	132	21.5	10.5	8	10	—	—	12	F07	1.5
	50	2	56	90	43	68	138	21.5	10.5	8	10	—	—	12	F07	1.8
	65	2 1/2	69	115	46	79	151	21.5	10.5	8	10	—	—	12	F07	2.5
	80	3	84	126	46	86	156	22.5	11.5	10	12	—	—	12	F07	2.6
	100	4	104	146	52	103	167	22.5	11.5	12	14	—	—	12	F07	3.4
	125	5	130	181	56	118	191	27.5	16.5	14	16	—	—	14	F10	5.4
	150	6	153.5	211	56	135	202	27.5	16.5	14	18	—	—	14	F10	7
	200	8	199	256	60	177	227	30	20	18	22	—	—	14	F10	10.4
	250	10	253	322	68	215	280	35	30	24	28	—	—	14	F10	18
	300	12	302	367	78	253	312	35	30	24	32	—	—	16	F12	25
02	350	14	337	410	78	276	348	48	43	—	32	10	3	23	F14	42
	400	16	394	467	102	338	383	54	48	—	40	12	3	23	F14	64
	450	18	441	525	114	368	413	65	59	—	46	14	3.5	23	F14	87
	500	20	492	580	127	403	453	79	73	—	50	14	3.5	28	F14	114
	550	22	524.2	633	150	416	460	79	73	—	55	16	4	25	F16	178.6
	600	24	584	682	154	458	528	79	73	—	55	16	4	28	F16	191

Top flange dimension list

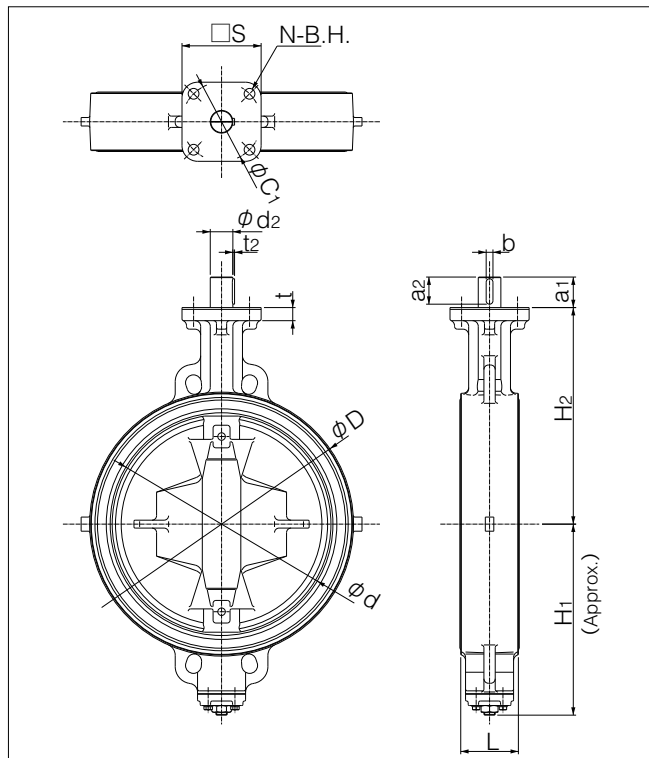
Flange type	$\square S$	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Shaft type
 01 : Square
 02 : Round (Key way)

700G 40mm~300mm



700G 350mm~500mm



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

704G Bare shaft (01: 50mm to 300mm, 02: 350mm to 600mm)

704G

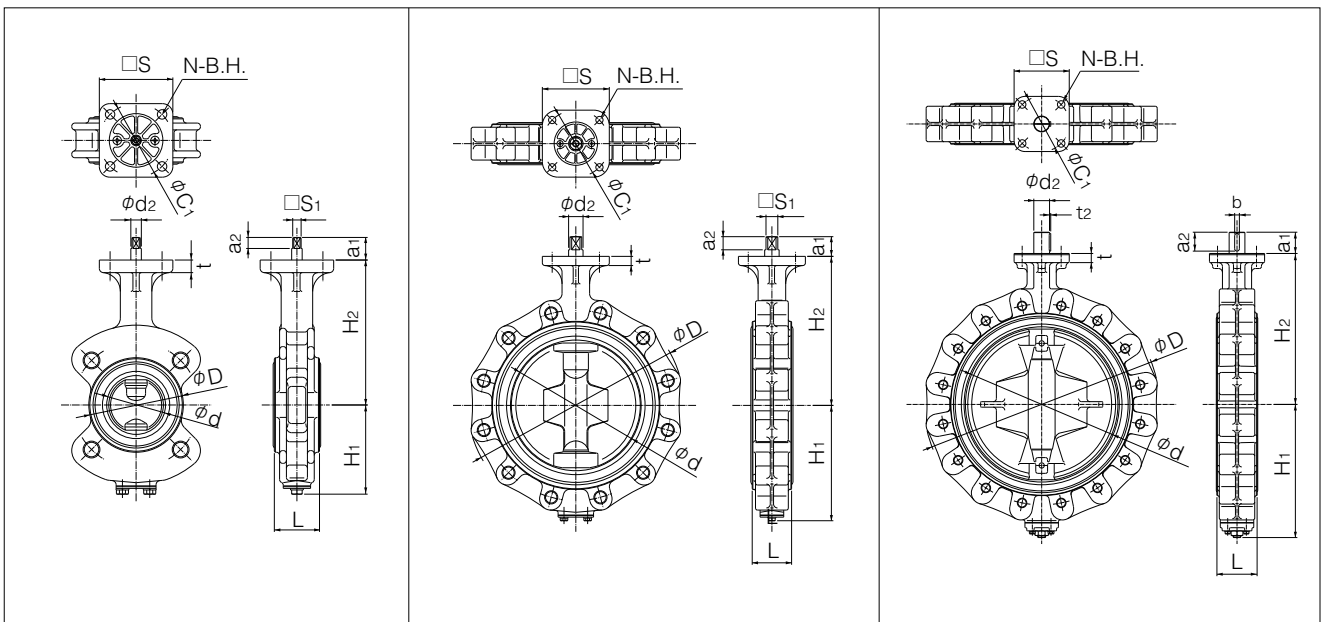
Shaft type	Nominal size		Dimension (mm)													Approx. Mass (kg)	
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	a ₁	a ₂	□S ₁	ϕd_2	b	t ₂	t		Top flange
				JIS5K	JIS10K												
01	50	2	56	90	90	43	85	138	21.5	10.5	8	10	—	—	12	F07	2.5
	65	2 1/2	69	115	115	46	94	151	21.5	10.5	8	10	—	—	12	F07	3.5
	80	3	84	126	190	46	109	156	22.5	11.5	10	12	—	—	12	F07	4 (4.8)
	100	4	104	223	223	52	117	167	22.5	11.5	12	14	—	—	12	F07	6.7
	125	5	130	250	250	56	143	191	27.5	16.5	14	16	—	—	14	F10	8.8
	150	6	153.5	276	276	56	164	202	27.5	16.5	14	18	—	—	14	F10	10.4
	200	8	199	334	329	60	176	227	30	20	18	22	—	—	14	F10	16.3
	250	10	253	402	402	68	215	280	35	30	24	28	—	—	14	F10	27
	300	12	302	472	438	78	253	312	35	30	24	32	—	—	16	F12	39
02	350	14	337	533	505	78	276	348	48	43	—	32	10	3	23	F14	66
	400	16	394	597	597	102	338	383	54	48	—	40	12	3	23	F14	107
	450	18	441	634	626	114	368	413	65	59	—	46	14	3.5	23	F14	128
	500	20	492	696	696	127	403	453	79	73	—	50	14	3.5	28	F14	170
	600	24	584	820	795	154	458	528	79	73	—	55	16	4	28	F16	275 (269)

Remark: In case of JIS10K the mass with round bracket.

Top flange dimension list

Flange type	□S	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Shaft type	01 : Square
	02 : Round (Key way)



705G Bare shaft(01: 50mm to 300mm, 02: 350mm to 600mm)

705G

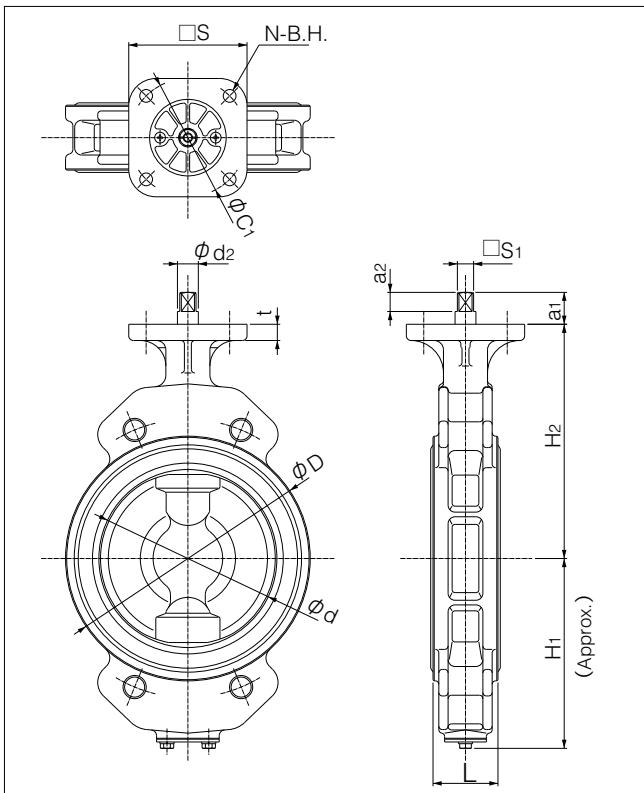
Shaft type	Nominal size		Dimension (mm)													Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	$\square S_1$	ϕd_2	b	t ₂	t	Top flange	
01	50	2	56	90	43	85	138	21.5	10.5	8	10	—	—	12	F07	2.5
	65	2 1/2	69	115	46	94	151	21.5	10.5	8	10	—	—	12	F07	3.5
	80	3	84	126	46	109	156	22.5	11.5	10	12	—	—	12	F07	4
	100	4	104	146	52	117	167	22.5	11.5	12	14	—	—	12	F07	5
	125	5	130	181	56	143	191	27.5	16.5	14	16	—	—	14	F10	8
	150	6	153.5	211	56	164	202	27.5	16.5	14	18	—	—	14	F10	11
	200	8	199	256	60	186	227	30	20	18	22	—	—	14	F10	15
	250	10	253	322	68	215	280	35	30	24	28	—	—	14	F10	24
02	300	12	302	367	78	253	312	35	30	24	32	—	—	16	F12	31
	350	14	337	410	78	276	348	48	43	—	32	10	3	23	F14	47
	400	16	394	467	102	338	383	54	48	—	40	12	3	23	F14	72
	450	18	441	525	114	368	413	65	59	—	46	14	3.5	23	F14	96
	500	20	492	580	127	403	453	79	73	—	50	14	3.5	28	F14	127
	550	22	524.2	633	150	416	460	79	73	—	55	16	4	25	F16	178.6
	600	24	584	682	154	458	528	79	73	—	55	16	4	28	F16	191

Top flange dimension list

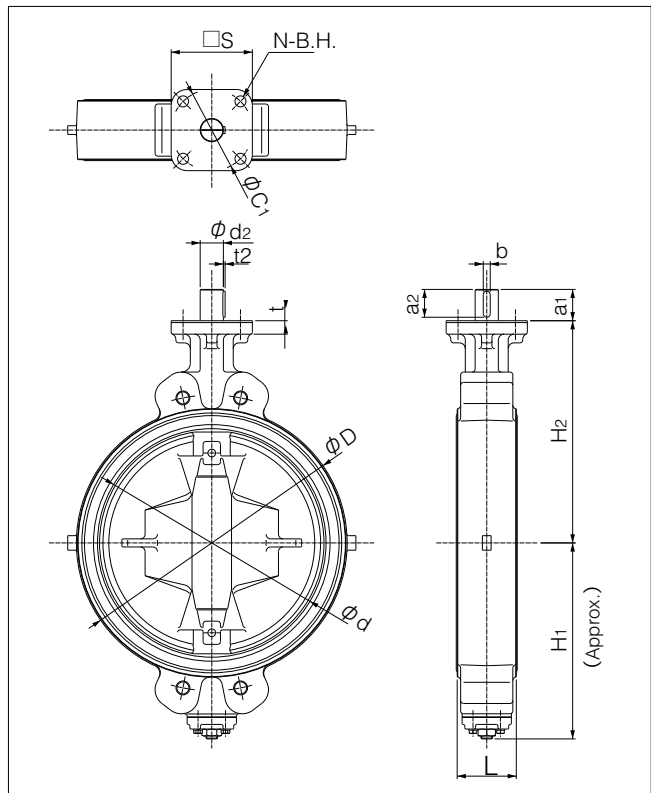
Flange type	$\square S$	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Shaft type	01 : Square
	02 : Round (Key way)

705G 50mm~300mm



705G 350mm~600mm

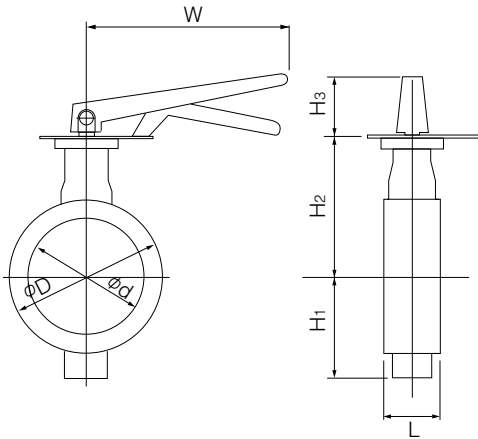


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Lock lever type 700G-1T (40mm to 200mm)

Nominal size		Dimension (mm)							Lever type	Approx.Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
40	1 1/2	45	80	35	61	132	66	200	1T-1	2.1
50	2	56	90	43	68	138	66	200	1T-1	2.4
65	2 1/2	69	115	46	79	151	66	200	1T-1	3.1
80	3	84	126	46	86	156	66	200	1T-1	3.2
100	4	104	146	52	103	167	66	200	1T-1	4
125	5	130	181	56	118	191	92	300	1T-2	6.7
150	6	153.5	211	56	135	202	92	300	1T-2	8.3
200	8	199	256	60	177	227	97	350	1T-3	12.1

■700G-1T



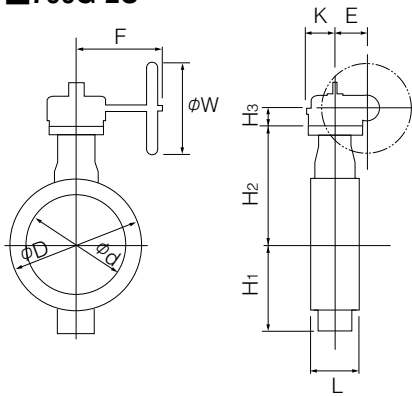
■1T Installation direction

1TLS (standard)	1TLR	1TRS	1TRR
1TXS	1TXR	1TVS	1TVR

Worm gear type 700G-2U (40mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
40	1 1/2	45	80	35	61	132	29.5	36	46	160	100	2U-0	3.8
50	2	56	90	43	68	138	29.5	36	46	160	100	2U-0	4.1
65	2 1/2	69	115	46	79	151	29.5	36	46	160	100	2U-0	4.8
80	3	84	126	46	86	156	29.5	36	46	160	100	2U-1	4.9
100	4	104	146	52	103	167	29.5	36	46	160	100	2U-1	5.7
125	5	130	181	56	118	191	34.5	44	53	173.5	160	2U-2	9.6
150	6	153.5	211	56	135	202	34.5	44	53	173.5	160	2U-2	11.2
200	8	199	256	60	177	227	41.5	67	75	198	200	2U-3	18
250	10	253	322	68	215	280	41.5	67	75	198	200	2U-3	26
300	12	302	367	78	253	312	48	87.5	90	222.5	200	2U-4	39
350	14	337	410	78	276	348	48	87.5	90	222.5	280	2U-4	58
400	16	394	467	102	338	383	50	90	105	266	280	2U-5	80
450	18	441	525	114	368	413	50	90	105	266	280	2U-5	103
500	20	492	580	127	403	453	50	90	105	266	280	2U-5	130
550	22	524.2	633	150	416	460	61	113	140	352	400	2U-6	210
600	24	584	682	154	458	528	61	113	140	352	400	2U-6	222

700G-2U



2U Installation direction

2U A (standard)	2U AR	2U B	2U BR

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

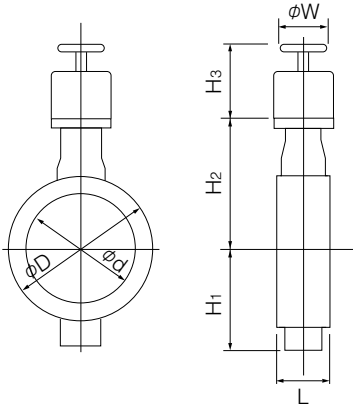
907T/908H (MKT)

903L/901C/905C (Bata-check)

Center handle type 700G-2G (40mm to 300mm) / 700G-2R (350mm to 600mm)

Nominal size		Dimension (mm)							Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
40	1 1/2	45	80	35	61	132	136	100	2G-1	4.4
50	2	56	90	43	68	138	136	100	2G-1	4.7
65	2 1/2	69	115	46	79	151	136	100	2G-1	5.4
80	3	84	126	46	86	156	136	100	2G-1	5.5
100	4	104	146	52	103	167	136	100	2G-1	6.3
125	5	130	181	56	118	191	133	100	2G-2	9.2
150	6	153.5	211	56	135	202	133	100	2G-2	10.8
200	8	199	256	60	177	227	151	200	2G-3	17.5
250	10	253	322	68	215	280	151	200	2G-3	25.1
300	12	302	367	78	253	312	161	200	2G-4	32.1
350	14	337	410	78	276	348	409	355	2R-3	75
400	16	394	467	102	338	383	409	355	2R-3	97
450	18	441	525	114	368	413	409	355	2R-3	121
500	20	492	580	127	403	453	409	355	2R-3	148
550	22	524.2	633	150	416	460	498	450	2R-4	262
600	24	584	682	154	458	528	498	450	2R-4	244

700G-2G/2R



Double-acting pneumatic cylinder type 700G-7E (40mm to 350mm)

Standard

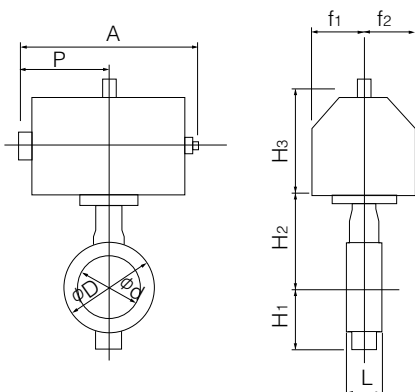
Nominal size		Dimension (mm)										Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	125	228	116	57	29	T35	4
50	2	56	90	43	68	138	125	228	116	57	29	T35	4
65	2 1/2	69	115	46	79	151	125	228	116	57	29	T35	5
80	3	84	126	46	86	156	168	276	142	75	47	T85	8
100	4	104	146	52	103	167	168	276	142	75	47	T85	8
125	5	130	181	56	118	191	168	276	142	75	47	T85	10
150	6	153.5	211	56	135	202	203	346	176	79	57	T200	15
200	8	199	256	60	177	227	231	423	214	91	69	T380	25
250	10	253	322	68	215	280	231	423	214	91	69	T380	32
300	12	302	367	78	253	312	269	546	270	118	85	T750	49
350	14	337	410	78	276	348	269	546	270	118	85	T750	74

Heavy duty

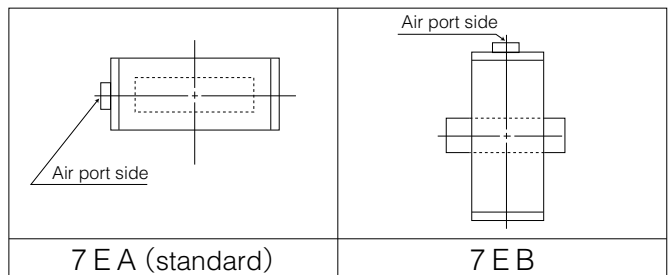
Nominal size		Dimension (mm)										Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	125	228	116	57	29	T35	4
50	2	56	90	43	68	138	125	228	116	57	29	T35	4
65	2 1/2	69	115	46	79	151	125	228	116	57	29	T35	5
80	3	84	126	46	86	156	168	276	142	75	47	T85	8
100	4	104	146	52	103	167	203	346	176	79	57	T200	12
125	5	130	181	56	118	191	203	346	176	79	57	T200	14
150	6	153.5	211	56	135	202	203	346	176	79	57	T200	15
200	8	199	256	60	177	227	231	423	214	91	69	T380	25
250	10	253	322	68	215	280	231	423	214	91	69	T380	32
300	12	302	367	78	253	312	269	546	270	118	85	T750	49

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

700G-7E



7E Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Beta-check)

Double-acting pneumatic cylinder type 700G-3A (350mm to 600mm)

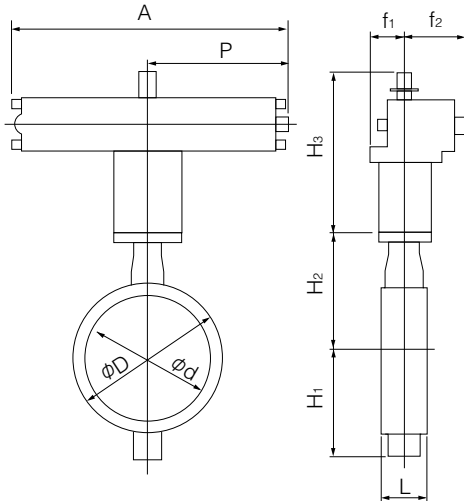
Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
400	16	394	467	102	338	383	364	743	381	100	164	TGA-125	101
450	18	441	525	114	368	413	412	810	417	100	180	TGA-140	138
500	20	492	580	127	403	453	465	939	483	130	202	TGA-160	204
550	22	524.2	633	150	416	460	465	954	483	130	203	TGA-160	287
600	24	584	682	154	458	528	478	1053	543	218	69	TGA-180	330

Heavy duty

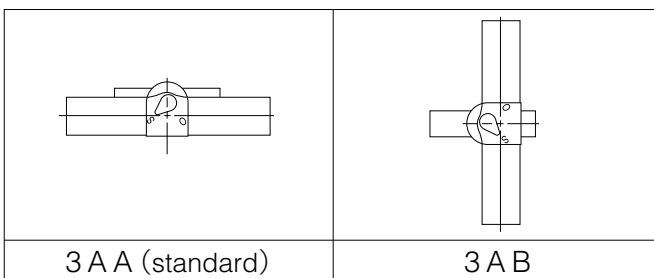
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	337	410	78	276	348	364	743	381	100	164	TGA-125	80
400	16	394	467	102	338	383	412	810	417	100	180	TGA-140	116
450	18	441	525	114	368	413	465	939	483	130	202	TGA-160	188
500	20	492	580	127	403	453	465	939	483	130	202	TGA-160	204
550	22	524.2	633	150	416	460	478	1169	543	130	221	TGA-180	328
600	24	584	682	154	458	528	525	1163	599	160	253	TGA-200	390

700G-3A



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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

3A Installation direction



Single-acting pneumatic cylinder type 700G-7G (Air to open: 40mm to 250mm) / 700G-7F (Air to close: 40mm to 250mm)

■ Standard

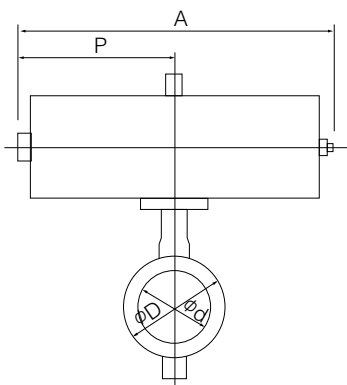
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	168	364	183	75	47	T85S	8
50	2	56	90	43	68	138	168	364	183	75	47	T85S	8
65	2 1/2	69	115	46	79	151	203	449	226	79	57	T200S	14
80	3	84	126	46	86	156	203	449	226	79	57	T200S	14
100	4	104	146	52	103	167	203	449	226	79	57	T200S	15
125	5	130	181	56	118	191	231	550	276	91	69	T380S	25
150	6	153.5	211	56	135	202	231	550	276	91	69	T380S	26
200	8	199	256	60	177	227	269	723	360	118	85	T750S	43
250	10	253	322	68	215	280	269	723	360	118	85	T750S	51

■ Heavy duty

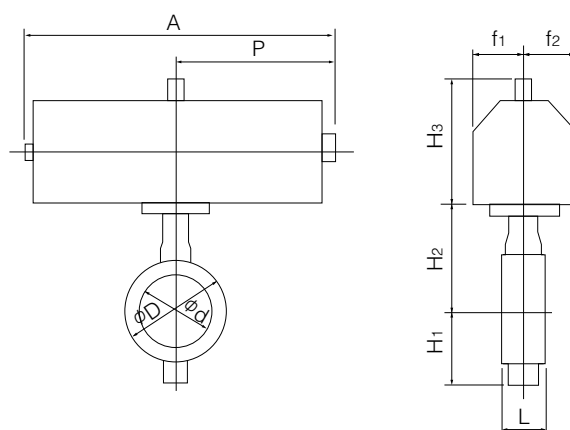
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	168	364	183	75	47	T85S	8
50	2	56	90	43	68	138	168	364	183	75	47	T85S	8
65	2 1/2	69	115	46	79	151	203	449	226	79	57	T200S	14
80	3	84	126	46	86	156	203	449	226	79	57	T200S	14
100	4	104	146	52	103	167	231	550	276	91	69	T380S	23
125	5	130	181	56	118	191	231	550	276	91	69	T380S	25
150	6	153.5	211	56	135	202	269	723	360	118	85	T750S	40

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

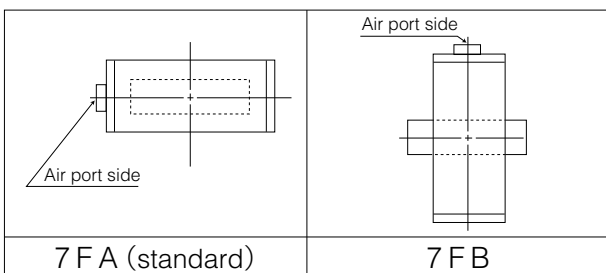
■ 700G-7F



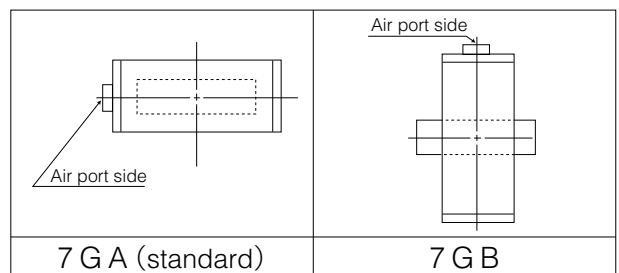
■ 700G-7G



■ 7F Installation direction



■ 7G Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Single-acting pneumatic cylinder type 700G-3U (Air to open: 200mm to 600mm) / 700G-3K (Air to close: 200mm to 600mm)

Standard

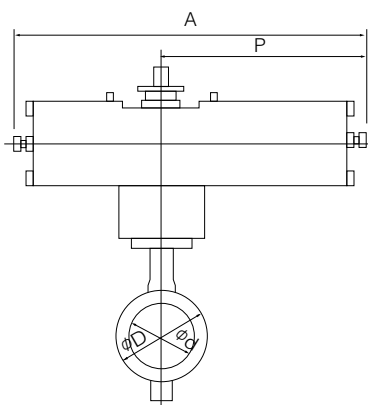
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	253	322	68	215	280	307	945	585	70	165	TG-10S	74
300	12	302	367	78	253	312	307	1080	720	94	206	TG-12S	126
350	14	337	410	78	276	348	307	1080	720	94	206	TG-12S	143
400	16	394	467	102	338	383	340	1255	865	131	257	TG-14S	262
450	18	441	525	114	368	413	340	1255	865	131	257	TG-14S	285
500	20	492	580	127	403	453	474	1655	1095	164	348	TG-20S	525
550	22	524.2	633	150	416	460	474	1655	1095	164	348	TG-20S	594
600	24	584	682	154	458	528	474	1655	1095	164	348	TG-20S	602

Heavy duty

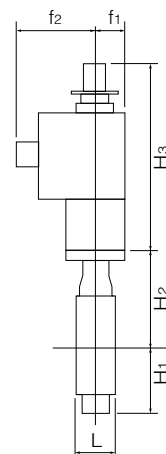
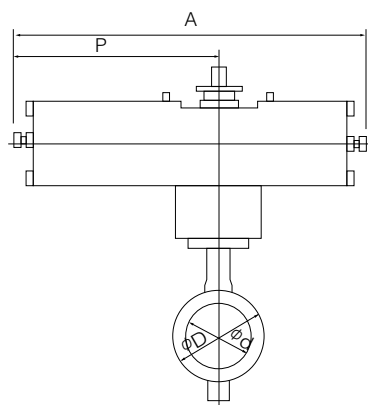
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	199	256	60	177	227	307	945	585	70	165	TG-10S	66
250	10	253	322	68	215	280	307	1080	720	94	206	TG-12S	119
300	12	302	367	78	253	312	307	1080	720	94	206	TG-12S	126
350	14	337	410	78	276	348	340	1255	865	131	257	TG-14S	239
400	16	394	467	102	338	383	340	1255	865	131	257	TG-14S	262
450	18	441	525	114	368	413	474	1655	1095	164	348	TG-20S	498
500	20	492	580	127	403	453	474	1655	1095	164	348	TG-20S	525
550	22	524.2	633	150	416	460	474	1655	1095	164	348	TG-20S	594
600	24	584	682	154	458	528	474	1655	1095	164	348	TG-20S	602

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

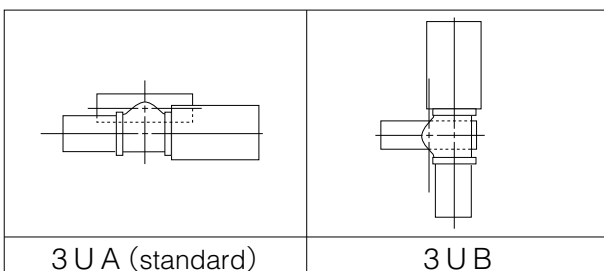
700G-3U



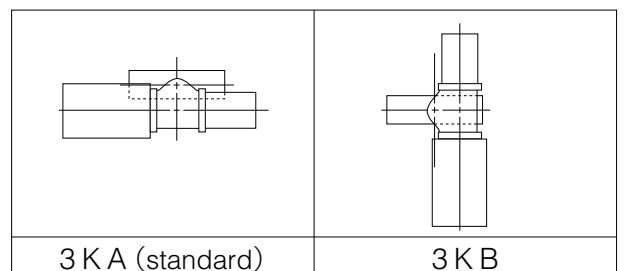
700G-3K



3U Installation direction



3K Installation direction



Single phase electric motor type 700G-4I (40mm to 500mm)

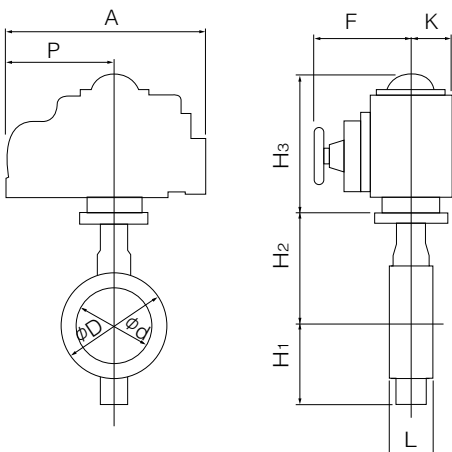
Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
40	1 1/2	45	80	35	61	132	120	161	84	58	45	4 I-00	4
							150	202	100	85	54	4 I-0	5.7
50	2	56	90	43	68	138	120	161	84	58	45	4 I-00	4.3
							150	202	100	85	54	4 I-0	6
65	2 1/2	69	115	46	79	151	150	202	100	85	54	4 I-0	6.7
80	3	84	126	46	86	156	150	202	100	85	54	4 I-0	6.8
100	4	104	146	52	103	167	165	252	138	126	65	4 I-1	9.8
125	5	130	181	56	118	191	198	310	167	154	85	4 I-2	16.6
150	6	153.5	211	56	135	202	198	310	167	154	85	4 I-2	18.2
200	8	199	256	60	177	227	198	310	167	154	85	4 I-2.5	21.6
250	10	253	322	68	215	280	198	310	167	154	85	4 I-2.5	30.8
300	12	302	367	78	253	312	230	388	223	246	136	4 I-3	48.2
350	14	337	410	78	276	348	230	388	223	246	136	4 I-3	65
400	16	394	467	102	338	383	230	388	223	246	136	4 I-3	87
							255	388	223	246	136	4 I-4	93
450	18	441	525	114	368	413	230	388	223	246	136	4 I-4	116
500	20	492	580	127	403	453	230	388	223	246	136	4 I-4	143

Note 1: For nominal size 40, 50 mm type (for control), the 4I-0 type should be selected. (The 4I-00 type is only designed for ON-OFF operation.)

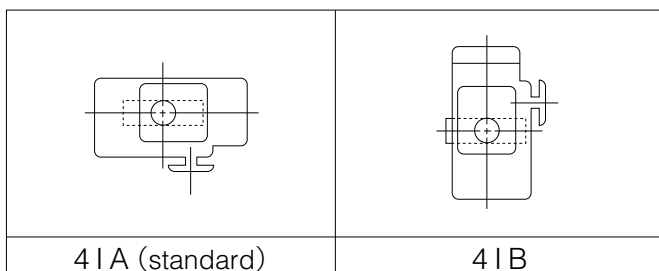
Remark: For 400mm type with the accessories below, type 4I-4 should be selected.

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

700G-4 I



4 I Installation direction

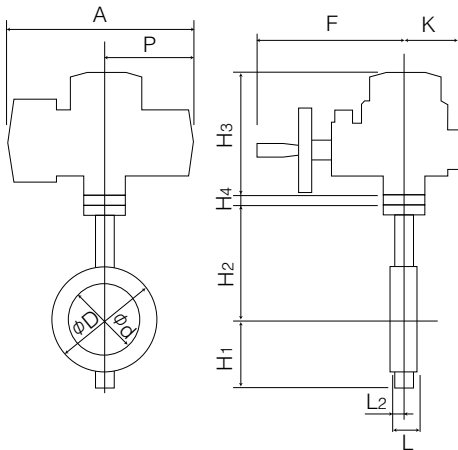


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

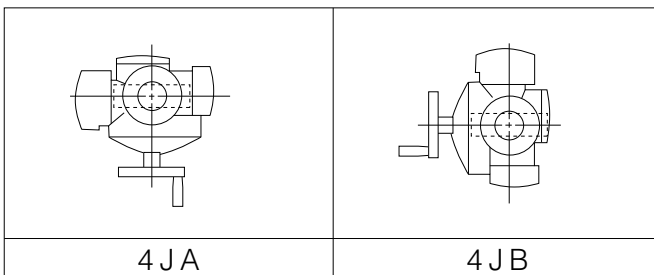
Three phase motor actuator type 700G-4J (40mm to 300mm)

Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	H ₄	A	P	F	K		
40	1 1/2	45	80	35	61	132	218	3.2	353	167	286	104	SRJ-010	15.2
50	2	56	90	43	68	138	218	3.2	353	167	286	104	SRJ-010	15.5
65	2 1/2	69	115	46	79	151	218	3.2	353	167	286	104	SRJ-010	16.2
80	3	84	126	46	86	156	218	3.2	353	167	286	104	SRJ-010	16.3
100	4	104	146	52	103	167	218	3.2	353	167	286	104	SRJ-010	16.9
125	5	130	181	56	118	191	218	15	353	167	286	104	SRJ-020	19.6
150	6	153.5	211	56	135	202	218	15	353	167	286	104	SRJ-020	21
200	8	199	256	60	177	227	235	3.2	393	191	330	130	SRJ-060	38
250	10	253	322	68	215	280	235	3.2	393	191	330	130	SRJ-060	50
300	12	302	367	78	253	312	235	20	393	191	330	130	SRJ-060	61

700G-4J



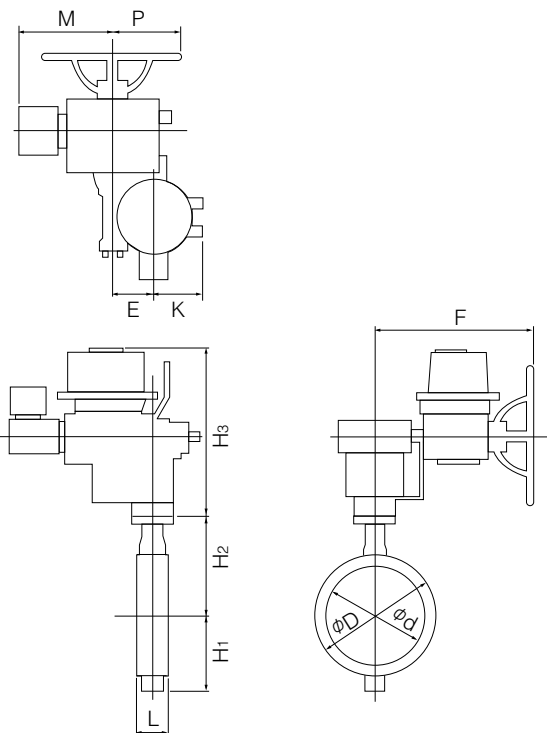
4J Installation direction



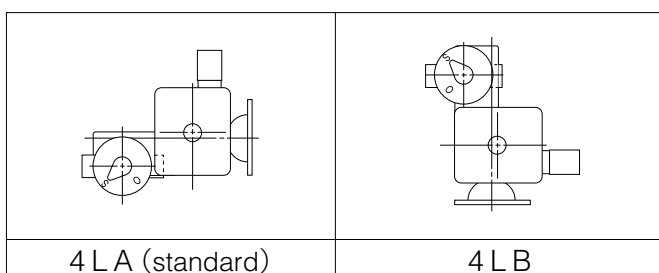
Three phase motor actuator type 700G-4L (350mm to 600mm)

Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	M	P		
350	14	337	410	78	276	348	487	117	164	533	357	230	LTKD-01 0.2kW /MGH-3	143
400	16	394	467	102	338	383	487	117	164	533	357	230	LTKD-01 0.2kW /MGH-3	165
450	18	441	525	114	368	413	487	117	164	533	370	230	LTKD-01 0.4kW /MGH-3	192
500	20	492	580	127	403	453	487	117	164	533	370	230	LTKD-01 0.4kW /MGH-3	219
550	22	524.2	633	150	416	460	558	140	198	594	375	230	LTKD-20 0.75kW /MGH-1	325
600	24	584	682	154	458	528	590	140	198	637	440	375	LTKD-05 0.75kW /MGH-4	398

■ 700G-4L



■ 4L Installation direction



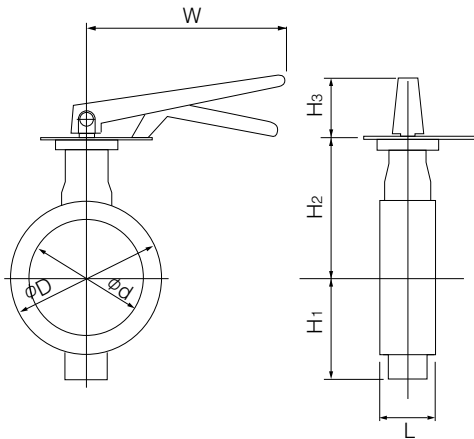
Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Lock lever type 704G-1T (50mm to 200mm)

Nominal size		Dimension (mm)								Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	W		
			JIS5K	JIS10K							
50	2	56	90	90	43	85	138	66	200	1T-1	3.1
65	2 1/2	69	115	115	46	94	151	66	200	1T-1	4.1
80	3	84	126	190	46	109	156	66	200	1T-1	4.6 (5.4)
100	4	104	223	223	52	117	167	66	200	1T-1	8
125	5	130	250	250	56	143	191	92	300	1T-2	11.9
150	6	153.5	276	276	56	164	202	92	300	1T-2	15.1
200	8	199	334	329	60	186	227	97	350	1T-3	22.2 (23.7)

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

704G-1T



1T Installation direction

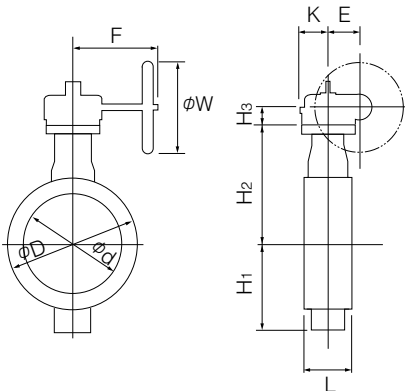
1T-1 (standard)	1T-2	1T-3	1T-4
1T-5	1T-6	1T-7	1T-8

Worm gear type 704G-2U(50mm to 600mm)

Nominal size		Dimension (mm)											Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	E	K	F	W		
			JIS5K	JIS10K										
50	2	56	90	90	43	85	138	29.5	36	46	160	100	2U-0	4.8
65	2 1/2	69	115	115	46	94	151	29.5	36	46	160	100	2U-0	5.8
80	3	84	126	190	46	109	156	29.5	36	46	160	100	2U-1	6.3 (7.1)
100	4	104	223	223	52	117	167	29.5	36	46	160	100	2U-1	9.7
125	5	130	250	250	56	143	191	34.5	44	53	173.5	160	2U-2	14.8
150	6	153.5	276	276	56	164	202	34.5	44	53	173.5	160	2U-2	18.8
200	8	199	334	329	60	186	227	41.5	67	75	198	200	2U-3	27 (28.5)
250	10	253	402	402	68	215	280	41.5	67	75	198	200	2U-3	40
300	12	302	472	438	78	253	312	48	87.5	90	222.5	200	2U-4	58 (56)
350	14	337	533	505	78	276	348	48	87.5	90	222.5	280	2U-4	86 (86)
400	16	394	597	597	102	338	383	50	90	105	266	280	2U-5	123
450	18	441	634	626	114	368	413	50	90	105	266	280	2U-5	148 (151)
500	20	492	696	696	127	403	453	50	90	105	266	280	2U-5	195
600	24	584	820	795	154	458	528	61	113	140	352	400	2U-6	306 (300)

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

704G-2U



2U Installation direction

2UA (standard)	2UAR	2UB	2UBR

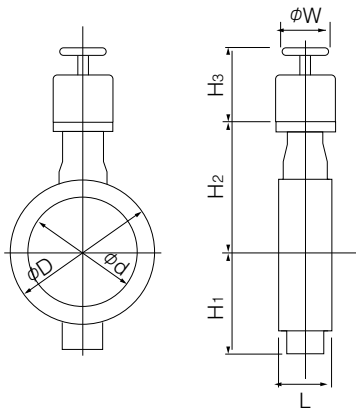
Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

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

Nominal size		Dimension (mm)								Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	W		
			JIS5K	JIS10K							
50	2	56	90	90	43	85	138	136	100	2G-1	5.4
65	2 1/2	69	115	115	46	94	151	136	100	2G-1	6.4
80	3	84	126	190	46	109	156	136	100	2G-1	6.9 (7.7)
100	4	104	223	223	52	117	167	136	100	2G-1	10.3
125	5	130	250	250	56	143	191	133	100	2G-2	14.4
150	6	153.5	276	276	56	164	202	133	100	2G-2	17.6
200	8	199	334	329	60	186	227	151	200	2G-3	26.1 (27.6)
250	10	253	402	402	68	215	280	151	200	2G-3	40
300	12	302	472	438	78	253	312	161	200	2G-4	52 (50)
350	14	337	533	505	78	276	348	409	355	2R-3	103 (103)
400	16	394	597	597	102	338	383	409	355	2R-3	140
450	18	441	634	626	114	368	413	409	355	2R-3	166 (169)
500	20	492	696	696	127	403	453	409	355	2R-3	213
600	24	584	820	795	154	458	528	498	450	2R-4	328 (322)

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

704G-2G/2R



Double-acting pneumatic cylinder type 704G-7E (50mm to 350mm)

Standard

Nominal size			Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	φd	φD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
50	2	56	90	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	190	46	109	156	168	276	142	75	47	T85	11 (10)
100	4	104	223	223	52	117	167	168	276	142	75	47	T85	12
125	5	130	250	250	56	143	191	168	276	142	75	47	T85	14
150	6	153.5	276	276	56	164	202	203	346	176	79	57	T200	19
200	8	199	334	329	60	176	227	231	423	214	91	69	T380	29 (31)
250	10	253	402	402	68	215	280	231	423	214	91	69	T380	41
300	12	302	472	438	78	253	312	269	546	270	118	85	T750	63
350	14	337	533	505	78	276	348	269	546	270	118	85	T750	94

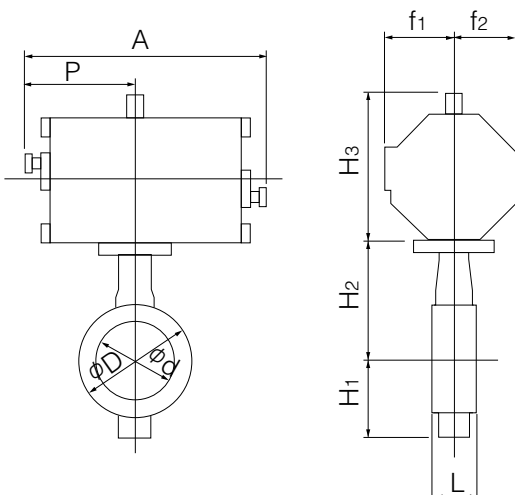
Heavy duty

Nominal size			Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	φd	φD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
50	2	56	90	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	190	46	109	156	168	276	142	75	47	T85	11 (10)
100	4	104	223	223	52	117	167	203	346	176	79	57	T200	15
125	5	130	250	250	56	143	191	203	346	176	79	57	T200	17
150	6	153.5	276	276	56	164	202	203	346	176	79	57	T200	19
200	8	199	334	329	60	176	227	231	423	214	91	69	T380	29 (31)
250	10	253	402	402	68	215	280	231	423	214	91	69	T380	41
300	12	302	472	438	78	253	312	269	546	270	118	85	T750	63

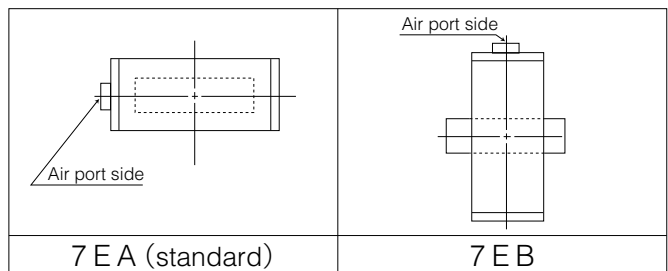
Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

704G-7E



7E Installation direction



Double-acting pneumatic cylinder type 704G-3A (350mm to 600mm)

Standard

Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
400	16	394	597	597	102	338	383	364	743	381	100	164	TGA-125	153
450	18	441	634	626	114	368	413	412	810	417	100	180	TGA-140	191
500	20	492	696	696	127	403	453	465	939	483	130	202	TGA-160	269
600	24	584	820	795	154	458	528	478	1053	543	130	218	TGA-180	414 (408)

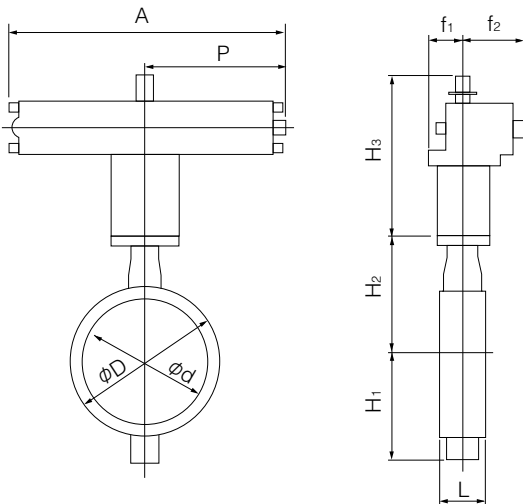
Heavy duty

Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
350	14	337	533	505	78	276	348	364	743	381	100	164	TGA-125	109
400	16	394	597	597	102	338	383	412	810	417	100	180	TGA-140	159
450	18	441	634	626	114	368	413	465	939	483	130	202	TGA-160	233 (236)
500	20	492	696	696	127	403	453	465	939	483	130	202	TGA-160	269
600	24	584	820	795	154	458	528	525	1163	599	160	253	TGA-200	474 (468)

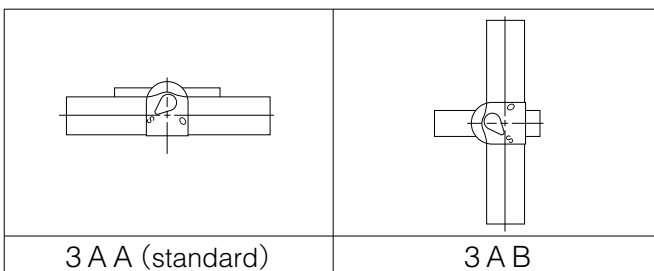
Remark: Value in brackets is for JIS 10K flanges.

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

704G-3A



3A Installation direction



Single-acting pneumatic cylinder type 704G-7G (Air to open: 50mm to 250mm) / 704G-7F (Air to close: 50mm to 250mm)

■ Standard

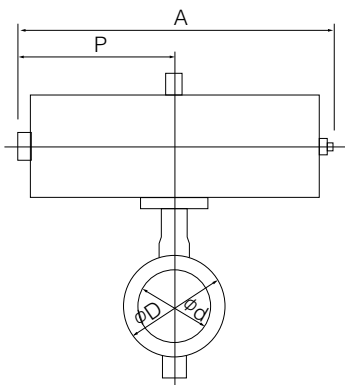
Nominal size			Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	φd	φD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
50	2	56	90	90	43	85	138	168	364	183	75	47	T85S	9
65	2 1/2	69	115	115	46	94	151	203	449	226	79	57	T200S	15
80	3	84	126	190	46	109	156	203	449	226	79	57	T200S	15 (16)
100	4	104	223	223	52	117	167	203	449	226	79	57	T200S	19
125	5	130	250	250	56	143	191	231	550	276	91	69	T380S	30
150	6	153.5	276	276	56	164	202	231	550	276	91	69	T380S	33
200	8	199	334	329	60	176	227	269	723	360	118	85	T750S	52 (53)
250	10	253	402	402	68	215	280	269	723	360	118	85	T750S	65

■ Heavy duty

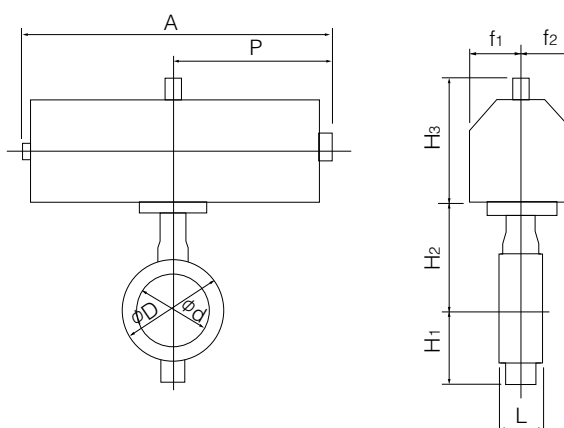
Nominal size			Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	φd	φD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
50	2	56	90	90	43	85	138	168	364	183	75	47	T85S	9
65	2 1/2	69	115	115	46	94	151	203	449	226	79	57	T200S	15
80	3	84	126	190	46	109	156	203	449	226	79	57	T200S	15 (16)
100	4	104	223	223	52	117	167	231	550	276	91	69	T380S	27
125	5	130	250	250	56	143	191	231	550	276	91	69	T380S	30
150	6	153.5	276	276	56	164	202	269	723	360	118	85	T750S	47

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

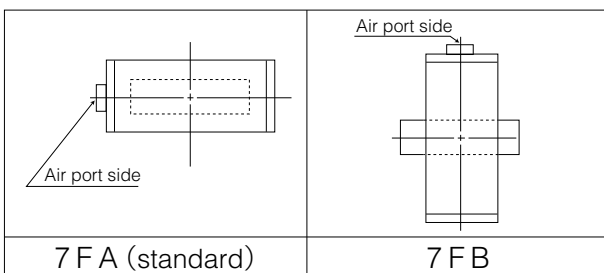
■ 704G-7F



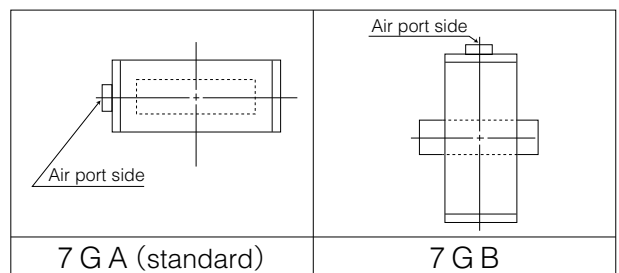
■ 704G-7G



■ 7F Installation direction



■ 7G Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

704G (Full lugged)

Single-acting pneumatic cylinder type 704G-3U (Air to open: 200mm to 600mm) / 704G-3K (Air to close: 200mm to 600mm)

Standard

Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
250	10	253	402	402	68	215	280	307	945	585	70	165	TG-10S	88
300	12	302	472	438	78	253	312	307	1080	720	94	206	TG-12S	145 (143)
350	14	337	533	505	78	276	348	307	1080	720	94	206	TG-12S	171 (171)
400	16	394	597	597	102	338	383	340	1255	865	131	257	TG-14S	305
450	18	441	634	626	114	368	413	340	1255	865	131	257	TG-14S	330 (333)
500	20	492	696	696	127	403	453	474	1655	1095	164	348	TG-20S	590
600	24	584	820	795	154	458	528	474	1655	1095	164	348	TG-20S	686 (680)

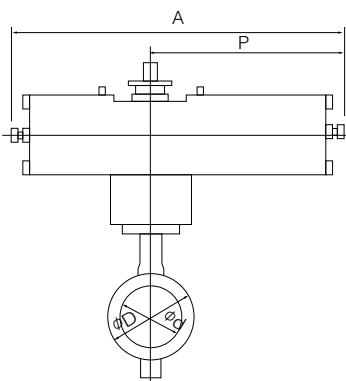
Heavy duty

Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS5K	JIS10K										
200	8	199	334	329	60	186	227	307	945	585	70	165	TG-10S	75 (77)
250	10	253	402	402	68	215	280	307	1080	720	94	206	TG-12S	133
300	12	302	472	438	78	253	312	307	1080	720	94	206	TG-12S	145 (143)
350	14	337	533	505	78	276	348	340	1255	865	131	257	TG-14S	267 (267)
400	16	394	597	597	102	338	383	340	1255	865	131	257	TG-14S	305
450	18	441	634	626	114	368	413	474	1655	1095	164	348	TG-20S	543 (546)
500	20	492	696	696	127	403	453	474	1655	1095	164	348	TG-20S	590
600	24	584	820	795	154	458	528	474	1655	1095	164	348	TG-20S	686 (680)

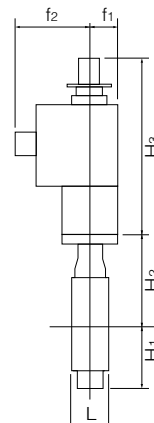
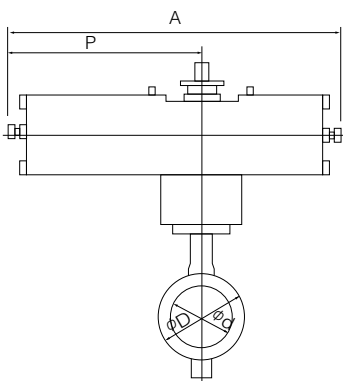
Remark: Value in brackets is for JIS 10K flanges.

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

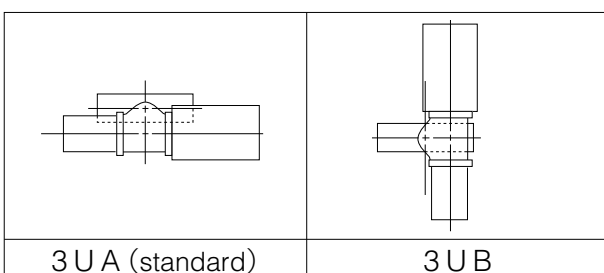
704G-3U



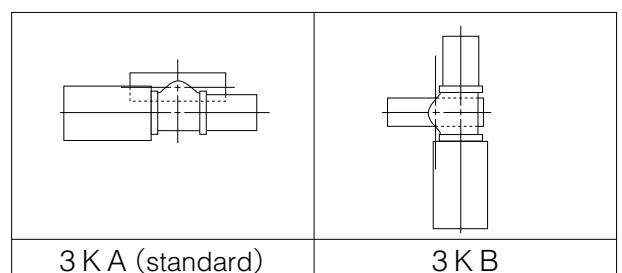
704G-3K



3U Installation direction



3K Installation direction



Single phase electric motor type 704G-4I (50mm to 500mm)

Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	F	K		
			JIS5K	JIS10K										
50	2	56	90	90	43	85	138	120	161	84	58	45	4I-00	5.9
								150	202	100	85	54	4I-0	6.7
65	2 1/2	69	115	115	46	94	151	150	202	100	85	54	4I-0	7.7 (9)
80	3	84	126	190	46	109	156	150	202	100	85	54	4I-0	8.2
100	4	104	223	223	52	117	167	165	252	138	126	65	4I-1	13.8
125	5	130	250	250	56	143	191	198	310	167	154	85	4I-2	21.8
150	6	153.5	276	276	56	164	202	198	310	167	154	85	4I-2	25 (31.7)
200	8	199	334	329	60	186	227	198	310	167	154	85	4I-2.5	30.2
250	10	253	402	402	68	215	280	198	310	167	154	85	4I-2.5	45 (66)
300	12	302	472	438	78	253	312	230	388	223	246	136	4I-3	68 (93)
350	14	337	533	505	78	276	348	230	388	223	246	136	4I-3	93
400	16	394	597	597	102	338	383	230	388	223	246	136	4I-3	130
								255	388	223	246	136	4I-4	136 (164)
450	18	441	634	626	114	368	413	230	388	223	246	136	4I-4	161
500	20	492	696	696	127	403	453	230	388	223	246	136	4I-4	208

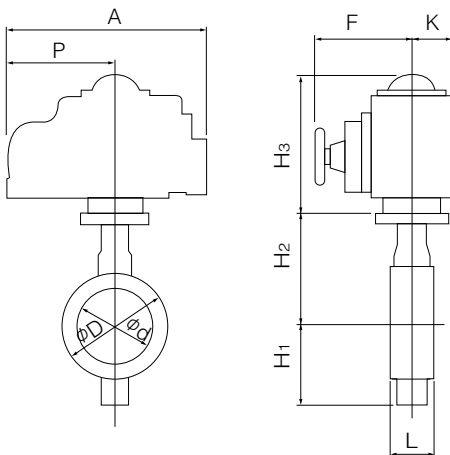
Note 1: For nominal size 50 mm (for control), the 4I-0 type should be selected. (The 4I-00 type is only designed for ON-OFF operation.)

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

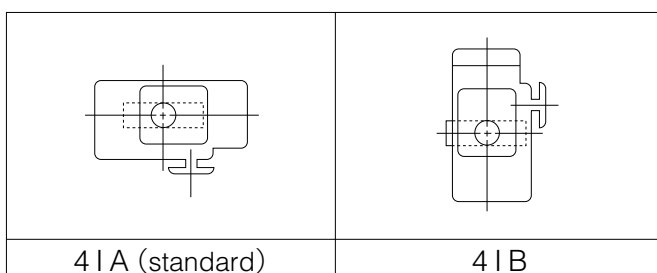
Remark: For 300mm with the accessories below, type 4I-4 should be selected.

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

704G-4I



4I Installation direction



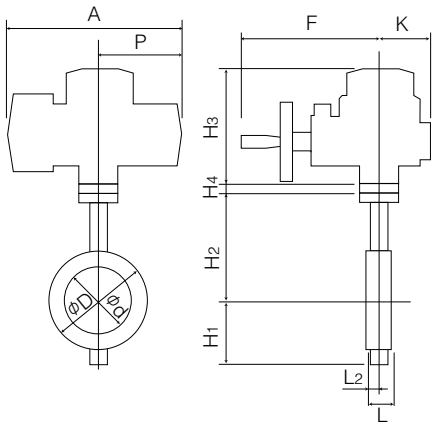
Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Three phase motor actuator type 704G-4J (50mm to 300mm)

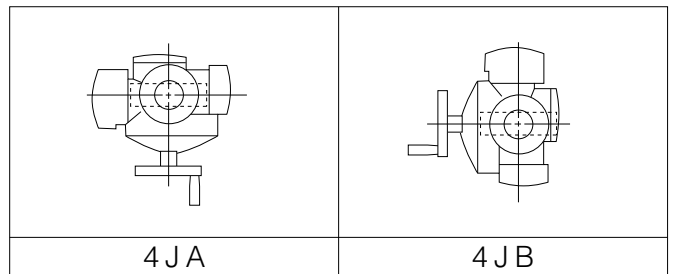
Nominal size		Dimension (mm)												Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	H ₄	A	P	F	K		
			JIS5K	JIS10K											
50	2	56	90	90	43	85	138	218	3.2	353	167	286	104	SRJ-010	15.5
65	2 1/2	69	115	115	46	94	151	218	3.2	353	167	286	104	SRJ-010	16.5 (17.8)
80	3	84	126	190	46	109	156	218	3.2	353	167	286	104	SRJ-010	17
100	4	104	223	223	52	117	167	218	3.2	353	167	286	104	SRJ-010	10.4
125	5	130	250	250	56	143	191	218	15	353	167	286	104	SRJ-020	23.6
150	6	153.5	276	276	56	164	202	218	15	353	167	286	104	SRJ-020	26.8
200	8	199	334	329	60	186	227	235	3.2	393	191	330	130	SRJ-060	37
250	10	253	402	402	68	215	280	235	3.2	393	191	330	130	SRJ-060	50 (33.5)
300	12	302	472	438	78	253	312	235	20	393	191	330	130	SRJ-060	62 (42)

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

704G-4J



4J Installation direction

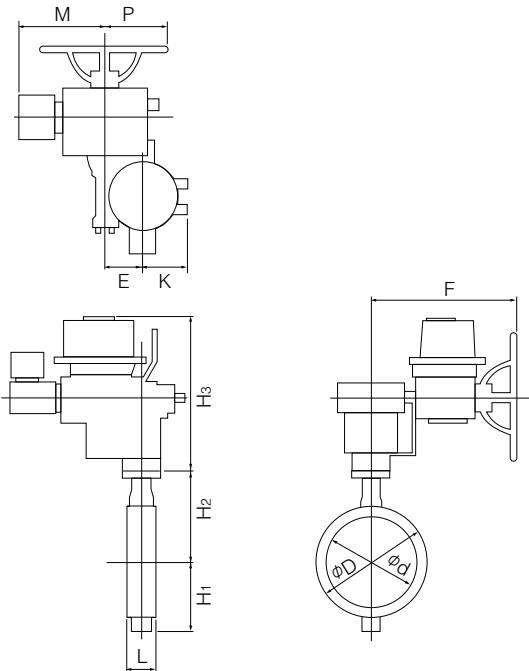


Three phase motor actuator type 704G-4L (350mm to 600mm)

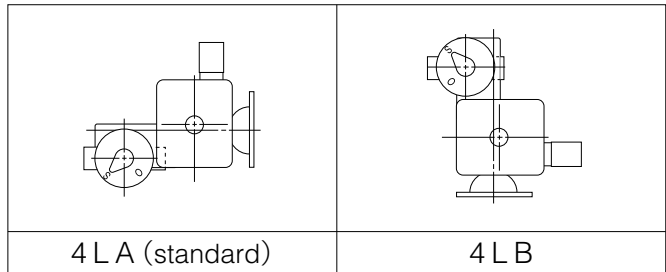
Nominal size		Dimension (mm)												Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	E	K	F	M	P		
			JIS5K	JIS10K											
350	14	337	533	505	78	276	348	487	117	164	533	357	230	LTKD-01 0.2kW /MGH-3	171 (171)
400	16	394	597	597	102	338	383	487	117	164	533	357	230	LTKD-01 0.2kW /MGH-3	208
450	18	441	634	626	114	368	413	487	117	164	533	370	230	LTKD-01 0.4kW /MGH-3	237 (240)
500	20	492	696	696	127	403	453	487	117	164	533	370	230	LTKD-01 0.4kW /MGH-3	284
600	24	584	820	795	154	458	528	590	140	198	637	440	375	LTKD-05 0.75kW /MGH-4	482 (476)

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

■704G-4L



■4L Installation direction

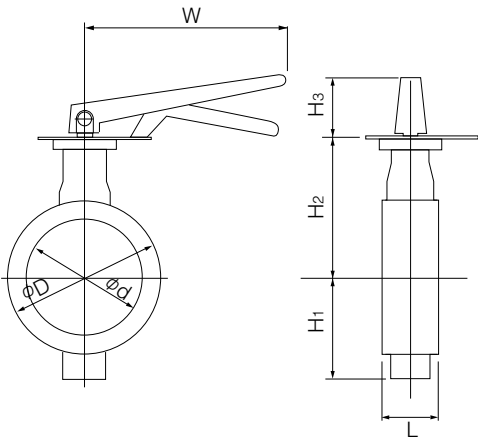


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Lock lever type 705G-1T (50mm to 200mm)

Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
50	2	56	90	43	85	138	66	200	1T-1	3.1
65	2 1/2	69	115	46	94	151	66	200	1T-1	4.1
80	3	84	126	46	109	156	66	200	1T-1	4.6
100	4	104	146	52	117	167	66	200	1T-1	5.6
125	5	130	181	56	143	191	92	300	1T-2	9.3
150	6	153	211	56	164	202	92	300	1T-2	12.3
200	8	199.0	256	60	186	227	97	350	1T-3	16.7

■ 705G-1T



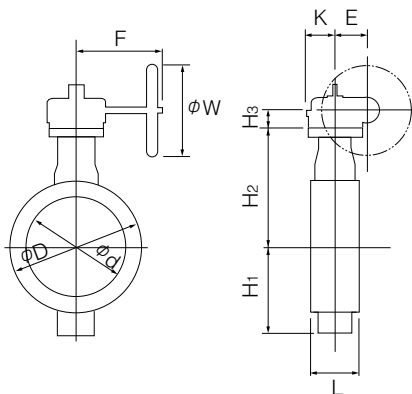
■ 1T Installation direction

1TLS (standard)	1TLR	1TRS	1TRR
1TXS	1TXR	1TVS	1TVR

Worm gear type 705G-2U(50mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
50	2	56	90	43	85	138	29.5	36	46	160	100	2U-0	4.8
65	2 1/2	69	115	46	94	151	29.5	36	46	160	100	2U-0	5.8
80	3	84	126	46	109	156	29.5	36	46	160	100	2U-1	6.3
100	4	104	146	52	117	167	29.5	36	46	160	100	2U-1	7.3
125	5	130	181	56	143	191	34.5	44	53	173.5	160	2U-2	12.2
150	6	153.5	211	56	164	202	34.5	44	53	173.5	160	2U-2	16
200	8	199	256	60	186	227	41.5	67	75	198	200	2U-3	23
250	10	253	322	68	215	280	41.5	67	75	198	200	2U-3	32
300	12	302	367	78	253	312	48	87	90	222.5	200	2U-4	45
350	14	337	410	78	276	348	48	87.5	90	222.5	280	2U-4	63
400	16	394	467	102	338	383	50	90	105	266	280	2U-5	88
450	18	441	525	114	368	413	50	90	105	266	280	2U-5	112
500	20	492	580	127	403	453	50	90	105	266	280	2U-5	143
550	22	524.2	633	150	416	460	61	113	140	352	400	2U-6	210
600	24	584	682	154	458	528	61	113	140	352	400	2U-6	222

705G-2U



2U Installation direction

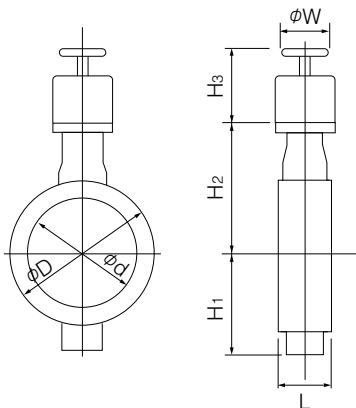
2UA (standard)	2UAR	2UB	2UBR

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Center handle type 705G-2G (50mm to 300mm) / 705G-2R (350mm to 600mm)

Nominal size		Dimension (mm)							Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
50	2	56	90	43	85	138	136	100	2G-1	5.4
65	2 1/2	69	115	46	94	151	136	100	2G-1	6.4
80	3	84	126	46	109	156	136	100	2G-1	6.9
100	4	104	146	52	117	167	136	100	2G-1	7.9
125	5	130	181	56	143	191	133	100	2G-2	11.8
150	6	153.5	211	56	164	202	133	100	2G-2	14.8
200	8	199	256	60	186	227	151	200	2G-3	22.1
250	10	253	322	68	215	280	151	200	2G-3	32
300	12	302	367	78	253	312	161	200	2G-4	39
350	14	337	410	78	276	348	409	355	2R-3	80
400	16	394	467	102	338	383	409	355	2R-3	105
450	18	441	525	114	368	413	409	355	2R-3	130
500	20	492	580	127	403	453	409	355	2R-3	161
550	22	524.2	633	150	416	460	498	450	2R-4	262
600	24	584	682	154	458	528	498	450	2R-4	244

705G-2G/2R



Double-acting pneumatic cylinder type 705G-7E (50mm to 350mm)

Standard

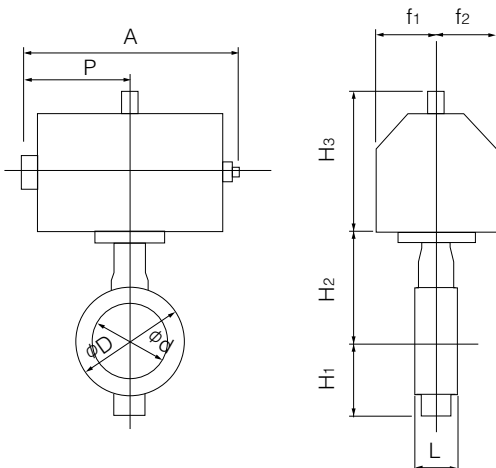
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	46	109	156	168	276	142	75	47	T85	9
100	4	104	146	52	117	167	168	276	142	75	47	T85	10
125	5	130	181	56	143	191	168	276	142	75	47	T85	13
150	6	153.5	211	56	164	202	203	346	176	79	57	T200	19
200	8	199	256	60	186	227	231	423	214	91	69	T380	29
250	10	253	322	68	215	280	231	423	214	91	69	T380	38
300	12	302	367	78	253	312	269	546	270	118	85	T750	55
350	14	337	410	78	276	348	324	546	270	118	85	T750	79

Heavy duty

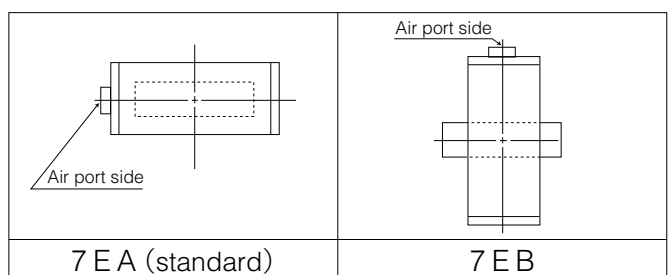
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	46	109	156	168	276	142	75	47	T85	9
100	4	104	146	52	117	167	203	346	176	79	57	T200	13
125	5	130	181	56	143	191	203	346	176	79	57	T200	16
150	6	153.5	211	56	164	202	203	346	176	79	57	T200	19
200	8	199	256	60	186	227	231	423	214	91	69	T380	29
250	10	253	322	68	215	280	231	423	214	91	69	T380	38
300	12	302	367	78	253	312	269	546	270	118	85	T750	55

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

705G-7E



7E Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Double-acting pneumatic cylinder type 705G-3A (400mm to 600mm)

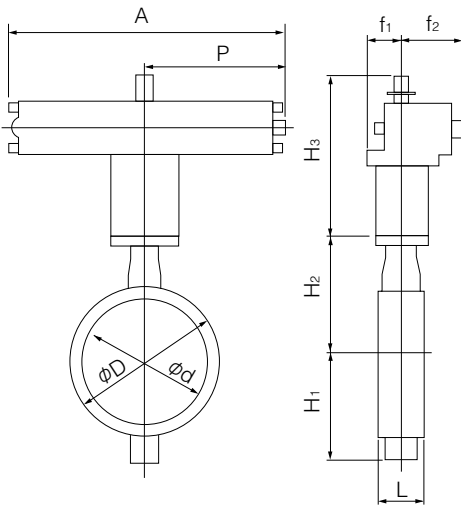
Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
400	16	394	467	102	338	383	364	743	381	100	164	TGA-125	110
450	18	441	525	114	368	413	412	810	417	100	180	TGA-140	150
500	20	492	580	127	403	453	465	939	483	130	202	TGA-160	217
550	22	524.2	633	150	416	460	465	954	483	130	203	TGA-160	287
600	24	584	682	154	458	528	478	1053	543	130	218	TGA-180	330

Heavy duty

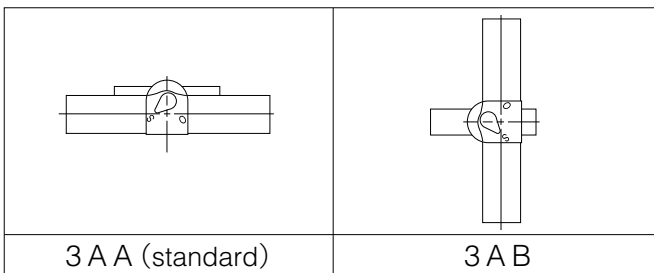
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	337	410	78	276	348	364	743	381	100	164	TGA-125	85
400	16	394	467	102	338	383	412	810	417	100	180	TGA-140	124
450	18	441	525	114	368	413	465	939	483	130	202	TGA-160	197
500	20	492	580	127	403	453	465	939	483	130	202	TGA-160	217
550	24	524.2	633	150	416	460	478	1069	543	130	221	TGA-200	328
600	24	584	682	154	458	528	525	1163	599	160	253	TGA-200	390

705G-3A



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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

3A Installation direction



Single-acting pneumatic cylinder type 705G-7G (Air to open: 50mm to 250mm) / 705G-7F (Air to close: 50mm to 250mm)

■ Standard

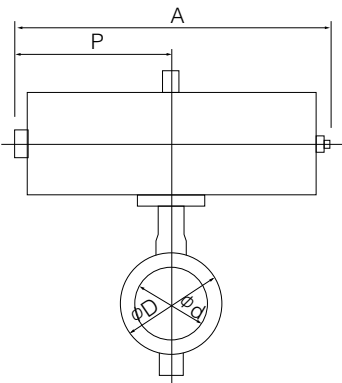
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	168	364	183	75	47	T85S	9
65	2 1/2	69	115	46	94	151	203	449	226	79	57	T200S	14
80	3	84	126	46	109	156	203	449	226	79	57	T200S	15
100	4	104	146	52	117	167	203	449	226	79	57	T200S	16
125	5	130	181	56	143	191	231	550	276	91	69	T380S	27
150	6	153.5	211	56	164	202	231	550	276	91	69	T380S	30
200	8	199	256	60	186	227	269	723	360	118	85	T750S	48
250	10	253	322	68	215	280	269	723	360	118	85	T750S	57

■ Heavy duty

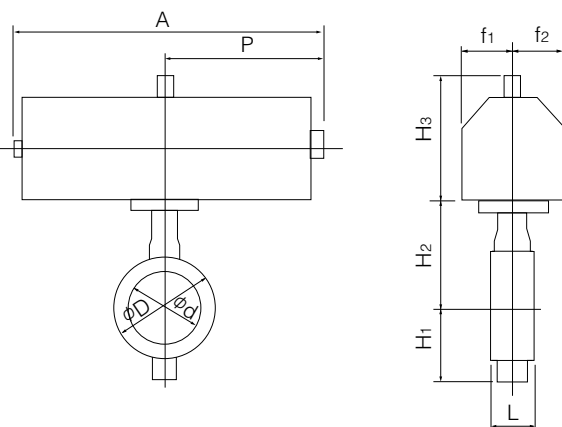
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	168	369	183	75	47	T85S	9
65	2 1/2	69	115	46	94	151	203	449	226	79	57	T200S	14
80	3	84	126	46	109	156	203	449	226	79	57	T200S	15
100	4	104	146	52	117	167	231	550	276	91	69	T380S	24
125	5	130	181	56	143	191	231	550	276	91	69	T380S	27
150	6	153.5	211	56	164	202	269	723	360	118	85	T750S	44

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

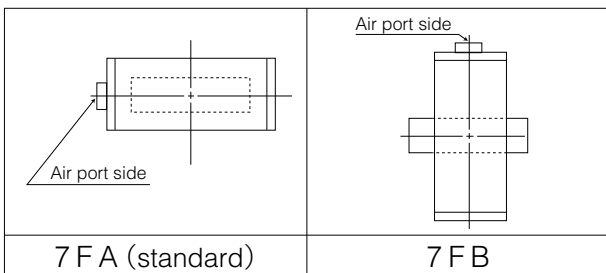
■ 705G-7F



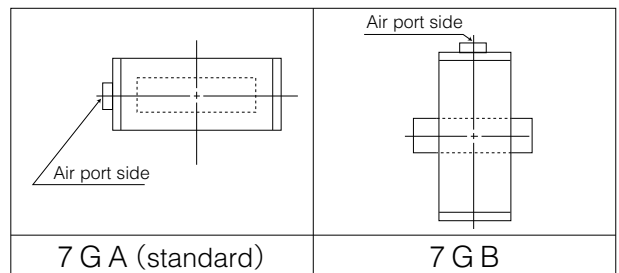
■ 705G-7G



■ 7F Installation direction



■ 7G Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Single-acting pneumatic cylinder type 705G-3U (Air to open: 200mm to 600mm) / 705G-3K (Air to close: 200mm to 600mm)

Standard

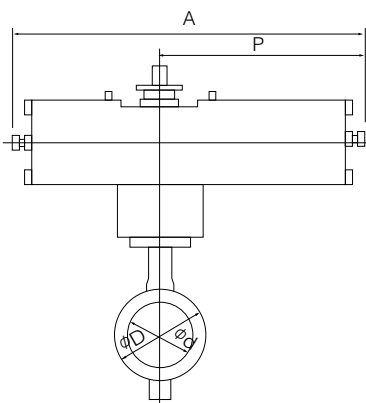
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	253	322	68	215	280	307	945	585	70	165	TG-10S	80
300	12	302	367	78	253	312	307	1080	720	94	206	TG-12S	132
350	14	337	410	78	276	348	307	1080	720	94	206	TG-12S	148
400	16	394	467	102	338	383	340	1255	865	131	257	TG-14S	270
450	18	441	525	114	368	413	340	1255	865	131	257	TG-14S	294
500	20	492	580	127	403	453	474	1655	1095	164	348	TG-20S	538
550	22	524.2	633	150	416	460	474	1655	1095	164	348	TG-20S	594
600	24	584	682	154	458	528	474	1655	1095	164	348	TG-20S	602

Heavy duty

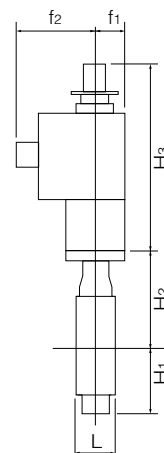
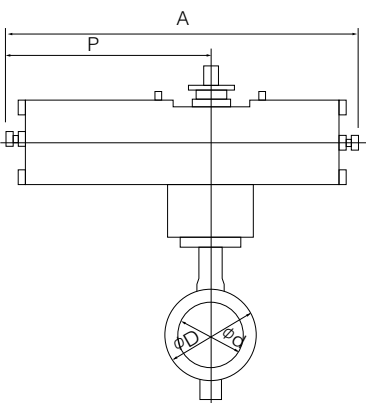
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	199	256	60	186	227	307	945	585	70	165	TG-10S	71
250	10	253	322	68	215	280	307	1080	720	94	206	TG-12S	125
300	12	302	367	78	253	312	307	1080	720	94	206	TG-12S	132
350	14	337	410	78	276	348	340	1255	865	131	257	TG-14S	244
400	16	394	467	102	338	383	340	1255	865	131	257	TG-14S	270
450	18	441	525	114	368	413	474	1655	1095	164	348	TG-20S	507
500	20	492	580	127	403	453	474	1655	1095	164	348	TG-20S	538
550	22	524.2	633	150	416	460	474	1655	1095	164	348	TG-20S	594
600	24	584	682	154	458	528	474	1655	1095	164	348	TG-20S	602

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

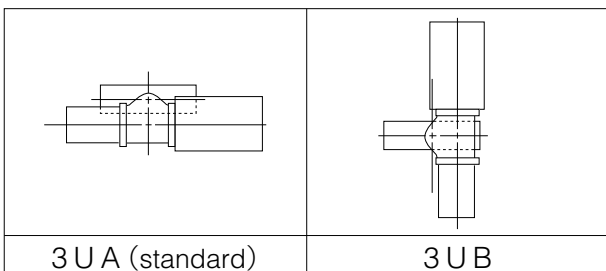
705G-3U



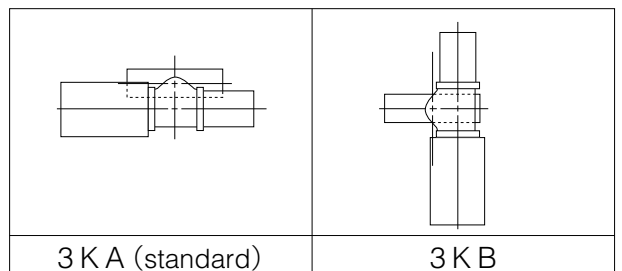
705G-3K



3U Installation direction



3K Installation direction



Single phase electric motor type 705G-4I (50mm to 500mm)

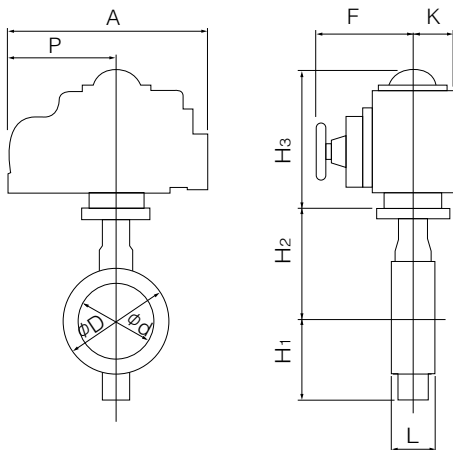
Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	56	90	43	85	138	120	161	84	58	45	4 I-00	5.3
							150	202	100	85	54	4 I-0	6.7
65	2 1/2	69	115	46	94	151	150	202	100	85	54	4 I-0	7.7
80	3	84	126	46	109	156	150	202	100	85	54	4 I-0	8.2
100	4	104	146	52	117	167	165	252	138	126	65	4 I-1	11.4
125	5	130	181	56	143	191	198	310	167	154	85	4 I-2	19.2
150	6	153.5	211	56	164	202	198	310	167	154	85	4 I-2	22.2
200	8	199	256	60	186	227	198	310	167	154	85	4 I-2.5	26.2
250	10	253	322	68	215	280	198	310	167	154	85	4 I-2.5	37
300	12	302	367	78	253	312	230	388	223	246	136	4 I-3	55
350	14	337	410	78	276	348	230	388	223	246	136	4 I-3	70
							255	388	223	246	136	4 I-4	101
400	16	394	467	102	338	383	230	388	223	246	136	4 I-3	95
450	18	441	525	114	368	413	230	388	223	246	136	4 I-4	125
							255	388	223	246	136	4 I-4	125
500	20	492	580	127	403	453	230	388	223	246	136	4 I-4	156

Note 1: For nominal size 50 mm type (for control), the 4I-0 type should be selected. (The 4I-00 type is only designed for ON-OFF operation.)

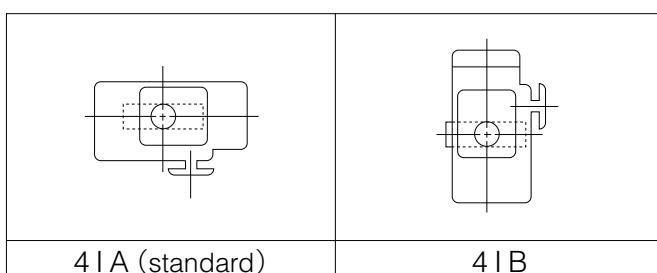
Remark: For 400mm type with the accessories below, type 4I-4 should be selected.

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

705G-4 I



4 I Installation direction

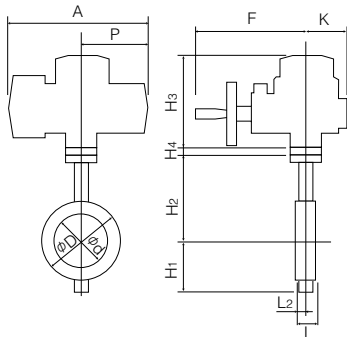


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

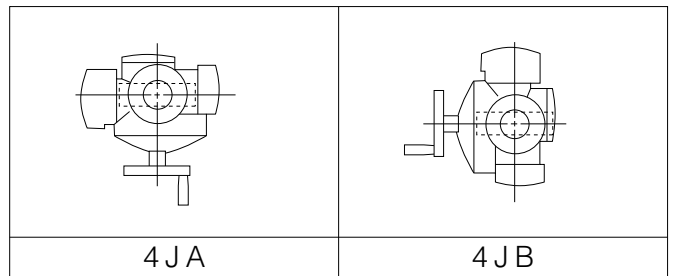
Three phase motor actuator type 705G-4J(50mm to 300mm)

Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	H ₄	A	P	F	K		
50	2	56	90	43	85	138	218	3.2	353	167	286	104	SRJ-010	16.2
65	2 1/2	69	115	46	94	151	218	3.2	353	167	286	104	SRJ-010	17.2
80	3	84	126	46	109	156	218	3.2	353	167	286	104	SRJ-010	17.7
100	4	104	146	52	117	167	218	3.2	353	167	286	104	SRJ-010	18.5
125	5	130	181	56	143	191	218	15	353	167	286	104	SRJ-020	22.2
150	6	153.5	211	56	164	202	218	15	353	167	286	104	SRJ-020	25
200	8	199	256	60	186	227	235	3.2	393	191	330	130	SRJ-060	43
250	10	253	322	68	215	280	235	3.2	393	191	330	130	SRJ-060	56
300	12	302	367	78	253	312	235	20	393	191	330	130	SRJ-060	67

705G-4J



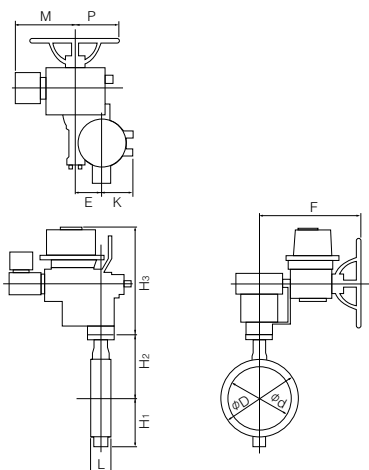
4J Installation direction



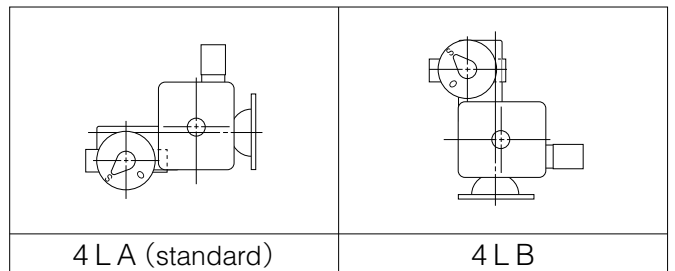
Three phase motor actuator type 705G-4L(350mm to 600mm)

Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	M	P		
350	14	337	410	78	276	348	487	117	164	533	357	230	LTKD-01 0.2kW /MGH-3	148
400	16	394	467	102	338	383	487	117	164	533	357	230	LTKD-01 0.2kW /MGH-3	173
450	18	441	525	114	368	413	487	117	164	533	370	230	LTKD-01 0.4kW /MGH-3	201
500	20	492	580	127	403	453	487	117	164	533	370	230	LTKD-01 0.4kW /MGH-3	232
600	24	584	682	154	458	528	590	140	198	637	440	375	LTKD-05 0.75kW /MGH-4	398

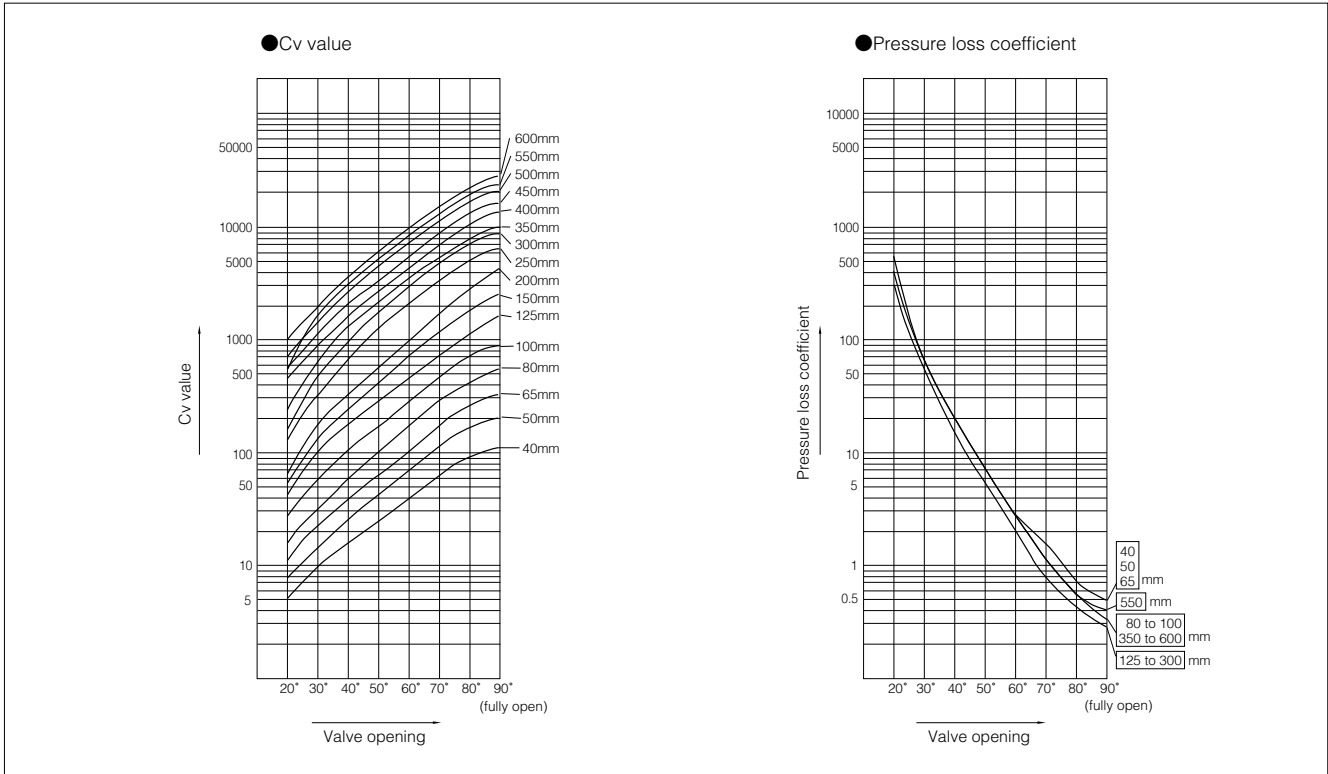
705G-4L



4L Installation direction



700G/704G/705G Cv value/pressure loss coefficient



700G/704G/705G Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1 1/2	5	9	16	25	39	61	95	121
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
125	5	45	109	189	295	453	719	1144	1590
150	6	60	148	262	423	685	1147	1897	2800
200	8	67	188	347	576	969	1698	2902	4300
250	10	130	351	675	1225	2125	3375	5091	6200
300	12	194	487	972	1764	3011	4966	7412	8900
350	14	232	662	1350	2030	3294	5167	7832	9620
400	16	468	964	1648	2724	4529	6815	10553	12700
450	18	583	1202	2068	3448	5692	8384	13116	15500
500	20	758	1555	2656	4379	7214	10845	17100	19800
550	22	571	1765	3234	5141	7833	12066	17999	22500
600	24	1037	2141	3681	6129	10106	14911	22827	27300

- Butterfly Valve
- TRITEC**
- TT2**
- 334A**
- 344Q**
- 302A/303Q**
- 304A/304Q**
- 304YA**
- 302Y/304Y**
- 304M (HLV)**
- 507V/508V**
- DTM**
- 846T/847T/847Q**
- 841T/842T**
- 700Z**
- 700G/704G/705G**
- 72WG/72SG/72LG**
- 731P/732P/732Q/752W**
- 731R**
- 700E/700K/700S**
- 704G/722F/720F**
- 227P**
- 907T/908H (MKT)**
- 903L/901C/905C (Bata-check)**

700G(Wafer)/704G(Full lugged)/705G(Semi lugged)

700G / 704G / 705G Pressure Loss Coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1 1/2	264	72	26	10	4	2	1	0.4
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
125	5	316	53	18	7	3	1	0.4	0.2
150	6	348	57	18	7	3	1	0.3	0.1
200	8	849	106	31	11	4	1	0.4	0.2
250	10	528	72	20	6	2	1	0.3	0.2
300	12	488	78	20	6	2	1	0.3	0.2
350	14	531	65	16	7	3	1	0.4	0.3
400	16	227	54	18	7	2	1	0.4	0.3
450	18	239	56	19	7	3	1	0.4	0.3
500	20	218	52	18	7	2	1	0.4	0.3
550	22	571	60	18	7	3	1	0.6	0.4
600	24	247	58	20	7	3	1	1	0.3

700G Applicable Flange Standard

Nominal size		JIS		ANSI		BS4504		DIN		BS10
mm	inch	5K	10K	125Lb	150Lb	PN10	PN16	NP10	NP16	Table E
40	1 1/2	○	○	○	○	○	○	○	○	○
50	2	○	○	○	○	○	○	○	○	○
65	2 1/2	○	○	○	○	○	○	○	○	△
80	3	○	○	◎	◎	◎	◎	◎	◎	○
100	4	○	○	◎	◎	◎	◎	◎	◎	○
125	5	○	○	◎	◎	◎	◎	◎	◎	○
150	6	○	○	○	○	○	○	○	○	○
200	8	○	○	◎	◎	◎	◎	◎	◎	○
250	10	○	○	○	○	○	○	○	○	○
300	12	○	○	◎	◎	◎	◎	◎	◎	○
350	14	○	○	×	×	×	×	×	×	×
400	16	○	○	×	×	×	×	×	×	×
450	18	○	○	×	×	×	×	×	×	×
500	20	○	○	×	×	×	×	×	×	×
550	22	T	T	×	×	×	×	×	×	×
600	24	T	T	△	△	△	×	△	×	×

○ : Can be used without flange drilling.

◎ : Can be used without flange drilling. (Use ANSI body.)

△ : With additional flange drilling.

T : With flange tapping.

×

704G Applicable Flange Standard

Nominal size		JIS		ANSI		BS4504		DIN		BS10
mm	inch	5K	10K	125Lb	150Lb	PN10	PN16	NP10	NP16	Table E
50	2	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T
65	2 1/2	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T
80	3	◎D/T	○D/T	◎D/T	◎D/T	○D/T	○D/T	○D/T	○D/T	◎D/T
100	4	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T
125	5	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T
150	6	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T
200	8	◎D/T	○D/T	◎D/T	◎D/T	◎D/T	○D/T	◎D/T	○D/T	◎D/T
250	10	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T	○D/T
300	12	◎D/T	○D/T	◎D/T	◎D/T	◎D/T	◎D/T	◎D/T	◎D/T	◎D/T
350	14	◎D/T	○D/T	◎D/T	◎D/T	○D/T	×	○D/T	×	×
400	16	○D/T	○D/T	○D/T	○D/T	○D/T	×	○D/T	×	×
450	18	◎D/T	○D/T	◎D/T	◎D/T	○D/T	×	○D/T	×	×
500	20	○D/T	○D/T	○D/T	○D/T	○D/T	×	○D/T	×	×
600	24	◎T	○T	◎T	◎T	◎T	×	◎T	×	×

○D/T: Drilled or tapped hole
 ◎D/T: Drilled or tapped hole (JIS 5K / ANSI body used)
 △D/T: Drilled or tapped hole (DIN body used)
 ○T: Tapped hole only
 ◎T: Tapped hole only (JIS 5K / ANSI body used)
 △T: Tapped hole only (DIN body used)
 ×: Not applicable.

705G Applicable Flange Standard

Nominal size		JIS		ANSI		BS4504		DIN		BS10
mm	inch	5K	10K	125Lb	150Lb	PN10	PN16	NP10	NP16	Table E
50	2	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
65	2 1/2	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
80	3	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
100	4	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
125	5	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
150	6	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
200	8	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
250	10	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
300	12	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T	D/T
350	14	D/T	D/T	D/T	D/T	D/T	×	D/T	×	×
400	16	D/T	D/T	D/T	D/T	D/T	×	D/T	×	×
450	18	D/T	D/T	D/T	D/T	D/T	×	D/T	×	×
500	20	D/T	D/T	D/T	D/T	D/T	×	D/T	×	×
550	22	T	T	×	×	×	×	×	×	×
600	24	T	T	T	T	T	×	T	×	×

D/T: Drilled or tapped hole
 T: Tapped hole only
 ×: Not applicable.

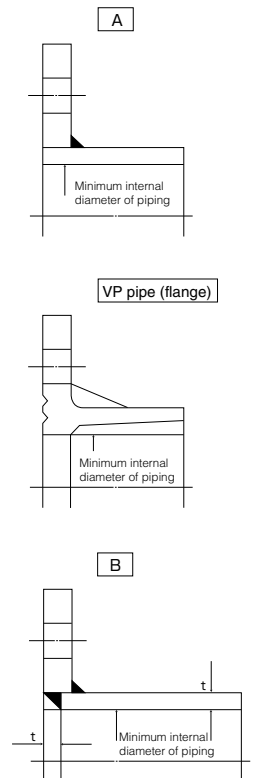
Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

700G / 704G / 705G Applicable Pipe List in Case of **A**

Nominal size		SGP	STPY	Sch20	Sch40	VP (TS flange)	Sch10S	Sch20S	Minimum internal diameters of piping (mm)
mm	inch								
40	1 1/2	○	—	—	○	○	○	○	29
50	2	○	—	○	○	○	○	○	38
65	2 1/2	○	—	○	○	○	○	○	54
80	3	○	—	○	○	○	○	○	72
100	4	○	—	○	○	○	○	○	92
125	5	○	—	○	○	○	○	○	119
150	6	○	—	○	○	○	○	○	145
200	8	○	—	○	○	○	○	○	194
250	10	○	—	○	○	○	○	○	247
300	12	○	—	○	○	○	○	○	295
350	14	○	○	○	○	○	—	—	333
400	16	○	○	○	○	—	—	—	382
450	18	○	○	○	○	—	—	—	427
500	20	○	○	○	○	—	—	—	477
550	22	—	○	○	○	—	—	—	509
600	24	—	○	○	○	—	—	—	569

700G / 704G / 705G Applicable Pipe List in Case of **B**

Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S
mm	inch						
40	1 1/2	○	—	—	○	○	○
50	2	○	—	○	○	○	○
65	2 1/2	○	—	○	○	○	○
80	3	○	—	○	○	○	○
100	4	○	—	○	○	○	○
125	5	○	—	○	○	○	○
150	6	○	—	○	○	○	○
200	8	○	—	○	○	○	○
250	10	○	—	○	○	○	○
300	12	○	—	○	○	○	○
350	14	○	○	○	○	—	—
400	16	○	○	○	○	—	—
450	18	○	○	○	○	—	—
500	20	○	○	○	○	—	—
550	22	—	○	○	○	—	—
600	24	—	○	○	○	—	—



Remark 1: The symbols above mean the following.

○: Piping possible —: Not standardized

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.

700G Piping Bolts and Nuts Sizes

■ For Hexagon Bolts and Nuts

Nominal size		JIS 5K		JIS 10K	
mm	inch	Hexagon Bolts and Nuts	Setting Bolts	Hexagon Bolts and Nuts	Setting Bolts
40	1 1/2	4-M12× 75×30	—	4-M16× 90×38	—
50	2	4-M12× 90×30	—	4-M16×100×38	—
65	2 1/2	4-M12× 90×30	—	4-M16×105×38	—
80	3	4-M16× 95×38	—	8-M16×105×38	—
100	4	8-M16×105×38	—	8-M16×110×38	—
125	5	8-M16×110×38	—	8-M20×125×46	—
150	6	8-M16×115×38	—	8-M20×130×52	—
200	8	8-M20×130×52	—	12-M20×130×52	—
250	10	12-M20×140×52	—	12-M22×150×60	—
300	12	12-M20×150×52	—	16-M22×160×60	—
350	14	12-M22×155×45	—	16-M22×160×45	—
400	16	16-M22×180×45	—	16-M24×190×45	—
450	18	16-M22×190×45	—	20-M24×205×45	—
500	20	20-M22×205×45	—	20-M24×215×45	—
550	22	16-M24×235×50	8-M24× 65×54	16-M30×255×60	8-M30× 80×66
600	24	16-M24×235×50	8-M24× 70×54	20-M30×255×60	8-M30× 75×60

■ For Long Bolts and Nuts

Nominal size		JIS 5K		JIS 10K		ANSI 125Lb/150Lb	
mm	inch	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts
40	1 1/2	4-M12× 95×25	—	4-M16×110×25	—	4-U1/2 ×110×32	—
50	2	4-M12×105×25	—	4-M16×120×30	—	4-U5/8 ×140×38	—
65	2 1/2	4-M12×110×25	—	4-M16×125×30	—	4-U5/8 ×140×38	—
80	3	4-M16×120×30	—	8-M16×125×30	—	4-U5/8 ×140×38	—
100	4	8-M16×130×30	—	8-M16×130×30	—	8-U5/8 ×150×38	—
125	5	8-M16×130×30	—	8-M20×150×40	—	8-U3/4 ×160×51	—
150	6	8-M16×140×35	—	8-M20×155×40	—	8-U3/4 ×165×51	—
200	8	8-M20×155×40	—	12-M20×165×40	—	8-U3/4 ×175×51	—
250	10	12-M20×165×40	—	12-M22×175×45	—	12-U7/8 ×195×58	—
300	12	12-M20×175×40	—	16-M22×185×45	—	12-U7/8 ×205×58	—
350	14	12-M22×185×45	—	16-M22×185×45	—	12-U1 ×225	—
400	16	16-M22×205×45	—	16-M24×220×50	—	16-U1 ×255	—
450	18	16-M22×225×45	—	20-M24×245×50	—	16-U1 1/8 ×280	—
500	20	20-M22×230×45	—	20-M24×265×50	—	20-U1 1/8 ×295	—
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× 70×54	20-M30×300×60	8-M30× 75×60	16-U1 1/4 ×340	8-U1 1/4×95×70

Remarks:

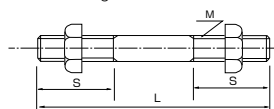
1. Please use a hexagon nut with 80% threading. (For ANSI, use heavy nut.)
 2. A unified screw should have 8 threads per inch if its nominal diameter exceeds 1 inch.
- * Nominal size "600 mm" requires hexagon bolt for setting.

Example

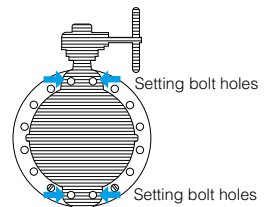
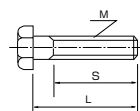
Long bolts: 12 - M22 × 185 × 45
 Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)

Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)

Long bolts and nuts



Setting bolts (Hexagon bolts)



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

704G Piping Bolts and Nuts Sizes

* Dimensions on the table show when the piping flange hole are tapped. For drilled holes, please consult us.

Nominal size		JIS 5K	JIS 10K	ANSI 125Lb	ANSI 150Lb	DIN NP10 BS 4504 PN10
mm	inch					
50	2	8-M12×30×28	8-M16×35×33	8-U 5/8×35×30	8-5/8-11UNC×38	8-M16×35×33
65	2 1/2	8-M12×35×33	8-M16×35×33	8-U 5/8×40×30	8-5/8-11UNC×40	8-M16×35×33
80	3	8-M16×35×33	16-M16×35×33	8-U 5/8×40×38	8-5/8-11UNC×45	16-M16×40×38
100	4	16-M16×40×38	16-M16×40×38	16-U 5/8×45×38	16-5/8-11UNC×45	16-M16×40×38
125	5	16-M16×40×38	16-M20×45×41	16-U 3/4×50×44	16-3/4-10UNC×50	16-M16×40×38
150	6	16-M16×40×38	16-M20×45×41	16-U 3/4×50×44	16-3/4-10UNC×50	16-M20×45×41
200	8	16-M20×45×41	24-M20×50×46	16-U 3/4×55×44	16-3/4-10UNC×55	16-M20×50×46
250	10	24-M20×50×46	24-M22×50×46	24-U 7/8×60×50	24-7/8- 9UNC×60	24-M20×55×50
300	12	24-M20×55×51	32-M22×55×51	24-U 7/8×60×50	24-7/8- 9UNC×60	24-M20×55×50
350	14	24-M22×60×50	32-M22×60×50	24-U1 ×70×57	24-1- 8UNC×70	32-M20×60×46
400	16	32-M22×60×50	32-M24×70×50	32-U1 ×75×57	32-1- 8UNC×70	32-M24×70×50
450	18	32-M22×60×50	40-M24×70×50	32-U1·1/8×85×63	32-1·1/8-8UN ×80	40-M24×70×50
500	20	40-M22×60×50	40-M24×70×50	40-U1·1/8×85×63	40-1·1/8-8UN ×80	40-M24×70×50
600	24	40-M24×70×50	48-M30×75×60	40-U1·1/4×95×70	40-1·1/4-8UN ×90	40-M27×80×60

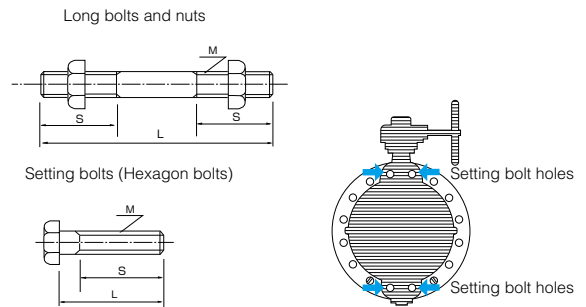
Remarks:

1. The bolt lengths are in accordance with thickness of steel flanges.
2. A unified screw should have 8 threads per inch if its nominal diameter exceeds 1 inch.
3. The list is exclusively for standard material "SS400".

Example

Long bolts: 12 - M22 × 185 × 45
 Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)

Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)



705G Piping Bolts and Nuts Sizes

■ For Hexagon Bolts and Nuts (Flange Bolt Hole: Tapped Holes)

Nominal size		JIS 5K		JIS 10K	
mm	inch	Hexagon Bolts and Nuts	Setting Bolts	Hexagon Bolts and Nuts	Setting Bolts
50	2	—	8-M12× 30×28	—	8-M16× 35×32
65	2 1/2	—	8-M12× 35×33	—	8-M16× 35×32
80	3	—	8-M16× 35×33	4-M16×110×40	8-M16× 35×32
100	4	4-M16×110×40	8-M16× 40×38	4-M16×110×40	8-M16× 40×38
125	5	4-M16×110×40	8-M16× 40×38	4-M20×120×50	8-M20× 45×41
150	6	4-M16×120×40	8-M16× 40×38	4-M20×130×50	8-M20× 45×41
200	8	4-M20×130×50	8-M20× 45×41	8-M20×135×50	8-M20× 50×46
250	10	8-M20×135×50	8-M20× 50×46	8-M22×150×60	8-M22× 55×50
300	12	8-M20×150×50	8-M20× 55×51	12-M22×160×60	8-M22× 60×55
350	14	8-M22×160×60	8-M22× 60×50	12-M22×160×40	8-M22× 60×50
400	16	12-M22×175×45	8-M22× 60×50	12-M24×190×45	8-M24× 70×50
450	18	12-M22×185×45	8-M22× 60×50	16-M24×205×45	8-M24× 70×50
500	20	16-M22×205×45	8-M22× 60×50	16-M24×215×45	8-M24× 70×50
550	22	16-M24×235×50	8-M24× 65×54	16-M30×255×60	8-M30× 80×66
600	24	16-M24×230×50	8-M24× 70×54	20-M30×255×50	8-M30× 70×60

■ For Long Bolts and Nuts (Flange Bolt Hole: Tapped Holes)

Nominal size		JIS5K		JIS10K		ANSI 125Lb/150Lb	
mm	inch	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts	Long Bolts and Nuts	Setting Bolts
50	2	—	8-M12× 30×28	—	8-M16× 35×33	—	8-U5/8-11UNC×35×30
65	2 1/2	—	8-M12× 35×33	—	8-M16× 35×33	—	8-U5/8-11UNC×40×30 (8-U5/8-11UNC×35×30)
80	3	—	8-M16× 35×33	4-M16×125×30	8-M16× 35×33	—	8-U5/8-11UNC×45×38 (8-U5/8-11UNC×40×30)
100	4	4-M16×130×30	8-M16× 40×38	4-M16×130×30	8-M16× 40×38	4-U5/8-11UNC×165×50	8-U5/8-11UNC×45×38
125	5	4-M16×130×30	8-M16× 40×38	4-M20×150×40	8-M20× 45×41	4-U3/4-10UNC×175×55	8-U3/4-10UNC×50×44
150	6	4-M16×140×35	8-M16× 40×38	4-M20×155×40	8-M20× 45×41	4-U3/4-10UNC×175×55	8-U3/4-10UNC×50×44
200	8	4-M20×155×40	8-M20× 45×41	8-M20×155×40	8-M20× 50×46	4-U3/4-10UNC×175×55	8-U3/4-10UNC×55×44
250	10	8-M20×165×40	8-M20× 50×46	8-M22×175×45	8-M22× 55×50	8-U7/8- 9UNC×215×55	8-U7/8- 9UNC×60×50
300	12	8-M20×175×40	8-M20× 55×51	12-M22×185×45	8-M22× 60×55	8-U7/8- 9UNC×215×55	8-U7/8- 9UNC×60×50
350	14	8-M22×185×45	8-M22× 60×50	12-M22×185×45	8-M22× 60×50	8-U1 - 8UNC×225	8-U1 - 8UNC×70×57
400	16	12-M22×205×45	8-M22× 60×50	12-M24×220×50	8-M24× 70×50	12-U1 - 8UNC×255	8-U1 - 8UNC×75×57
450	18	12-M22×225×45	8-M22× 60×50	16-M24×230×50	8-M24× 70×50	12-U1 1/8- 8UN×280	8-U1 1/8-8UN×85×63
500	20	16-M22×230×45	8-M22× 60×50	16-M24×245×50	8-M24× 70×50	16-U1 1/8- 8UN×295	8-U1 1/8-8UN×85×63
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× 70×54	20-M30×290×60	8-M30× 70×60	16-U1 1/4- 8UN×340	8-U1 1/4-8UN×95×70

Remarks:

Bolt/Nut material: SS400/SS400, SUS304/SUS304

The dimensions in parenthesis show ANSI125Lb. (for 65 mm and 80 mm)

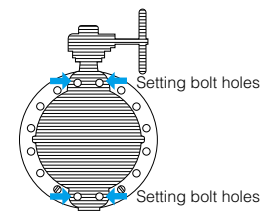
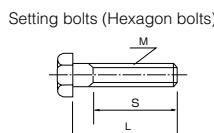
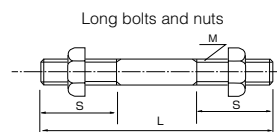
Heavy nut shall be used for ANSI125Lb/150Lb hexagon nuts.

A unified screw should have 8 threads per inch if its nominal diameter exceeds 1 inch.

Example

Long bolts: 12 - M22 × 185 × 45
 Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)

Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)

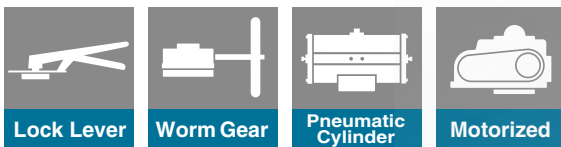
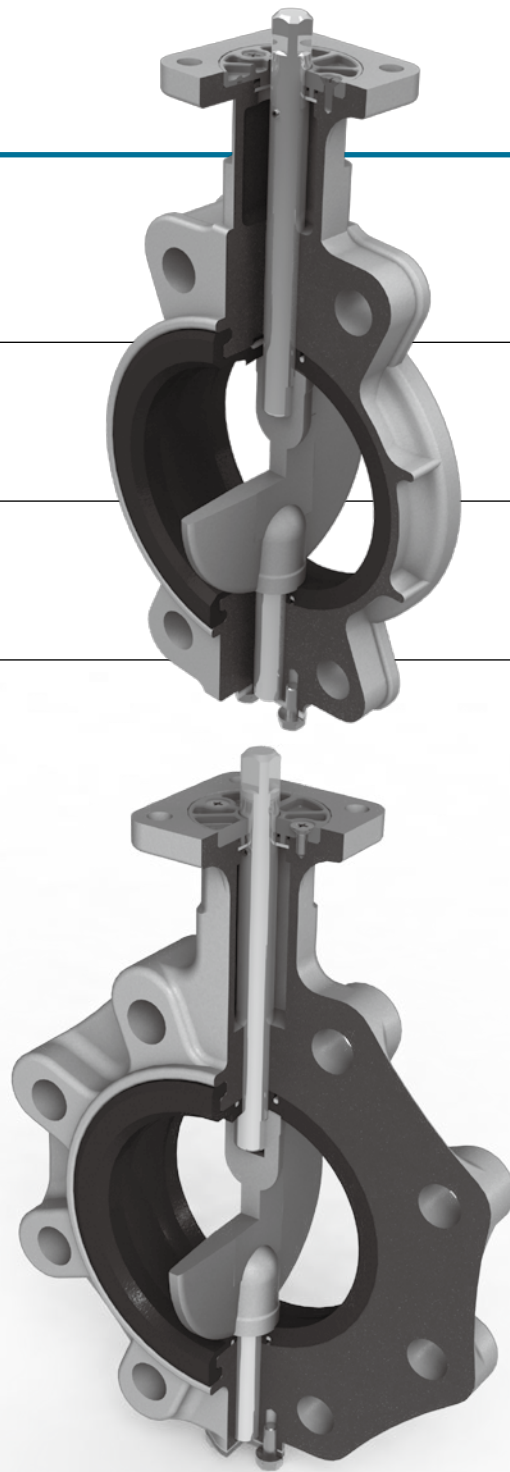


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Beta-check)

72WG Wafer

72SG Semi lugged

72LG Full lugged



Features and Benefits

New cosine-curve seat

The new cosine-curve seat (patent pending) allows better performance in reducing friction, torque and wear than the previous design.

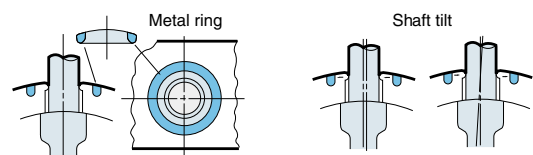
Much longer life with spherical design

Similar to a spherical body rotating inside a spherical area, the operation of the disc is smooth and unhindered. Torque is reduced and the valve life is lengthened.



Self-aligning stem seal through backup ring

The stem seal is the primary and secondary seal system. The backup ring functions as the self-aligning stem seal.



Ease of maintenance

The field replaceable seat ring makes maintenance easy and reduces maintenance costs.

Standard Specifications

Model	72WG (Wafer)	72SG (Semi lugged)	72LG (Lugged)
Valve nominal size	40 to 200mm	50 to 600mm	50 to 600mm
Applicable flange standard	DIN PN16, GB PN16, ANSI 150Lb, BS4504 PN16	DIN PN16, GB PN16, ANSI 150Lb, BS4504 PN16	DIN PN16, GB PN16, ANSI 150Lb, BS4504 PN16
Face-to-face dimensions	JIS B 2002 / ISO 5752 / API 609		
Max. working pressure	1.6Mpa		
Body shell test (hydraulic)	2.4Mpa		
Seat leak test (pneumatic)	1.76Mpa		
Working temperature range ※1	NBR : -10 to 80 degrees C, *EPDM : -20 to 120 degrees C		
Working temperature in continuous use ※2	NBR : 0 to 60 degrees C, *EPDM : 0 to 70 degrees C		
Standard materials	Body	Ductile iron, JIS FCD450	
	Disc	304 stainless steel, JIS SCS13 316 stainless steel, JIS SCS14	
	Stem	SUS420J2	
	Seat ring	NBR, *EPDM	
Actuators	Lock lever	Manual, pneumatic, electric	
Coating ※8	Powder coat paint (Munsell N7)		

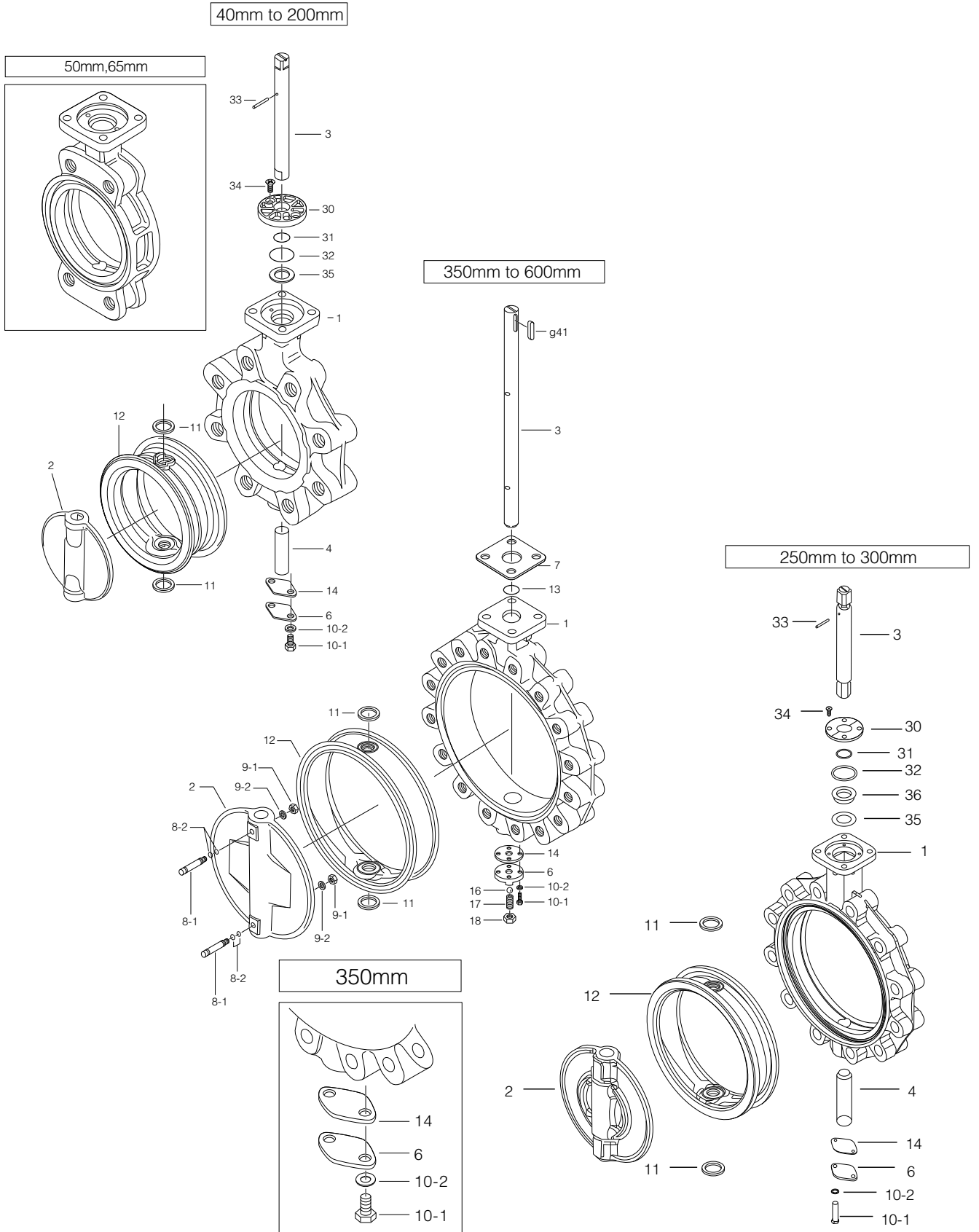
※1 Please consult us when using NBR and EPDM seating continuously above 60 degrees C and 70 degrees C respectively.

※2 "Working temperature in continuous use" stands for the temperature continuously kept exceeding one hour.

* Never use an EPDM rubber seat ring if the valve is being used for oil or for a fluid containing even a slight amount of oil.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

72WG / 72SG / 72LG Expanded view of components



※The drawing above is 72LG series.
The components of 72WG and 72SG series are the same.

72WG/72SG/72LG Parts list

■ 72WG/72SG/72LG Parts list (40mm to 300mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Upper stem	1	
4	Lower stem	1	
6	Bottom cover	1	
10-1	Hexagon bolt	2	
10-2	Spring washer	2	
★ 11	Secondary ring	2	Only 50mm to 300mm
★ 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	
36	Seal seat	1	Only 250mm to 300mm

■ 72WG/72SG/72LG Parts list (350mm to 600mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
6	Bottom cover	1	
7	Retainer plate	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	2	350mm
		4	400mm to 600mm
10-2	Spring washer	2	350mm
		4	400mm to 600mm
★ 11	Secondary ring	2	350mm
11	Secondary ring	2	400mm to 600mm
★ 12	Seat ring	1	
★ 13	O-ring	1	
★ 14	Gasket	1	
16	Ball	1	Only 400mm to 600mm
17	Hollow bolt	1	Only 400mm to 600mm
18	Lock nut	1	Only 400mm to 600mm
g41	Key	1	

Remark 1: The ★ indicates recommended spare parts. They are supplied as "Seat ring set".

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

72WG Actuator Selection Chart

72WG

Model	Category	Size ($\frac{\text{mm}}{\text{inch}}$)													
		40 1 1/2	50 2	65 2 1/2	80 3	100 4	125 5	150 6	200 8	250 10	300 12	350 14	400 16	450 18	500 20
1T	Standard Heavy duty	1T-1			1T-2			1T-3							
2U	Standard Heavy duty	2U-0		2U-1		2U-2		2U-3		2U-4		2U-5		2U-6	
7E,3A	Standard Heavy duty	T35		T85		T200		T380		T750		TGA-140		TGA-180	
7G,7F 3U,3K	Standard Heavy duty	T85S		T200S		T380S		T750S		TG-12S		TG-14S		TG-20S	
4I*	ON-OFF Control	4I-00		4I-0		4I-1		4I-2		4I-2.5		4I-3		4I-4	

Remark*: For 350mm with the accessories below, type 4I-4 should be selected.

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

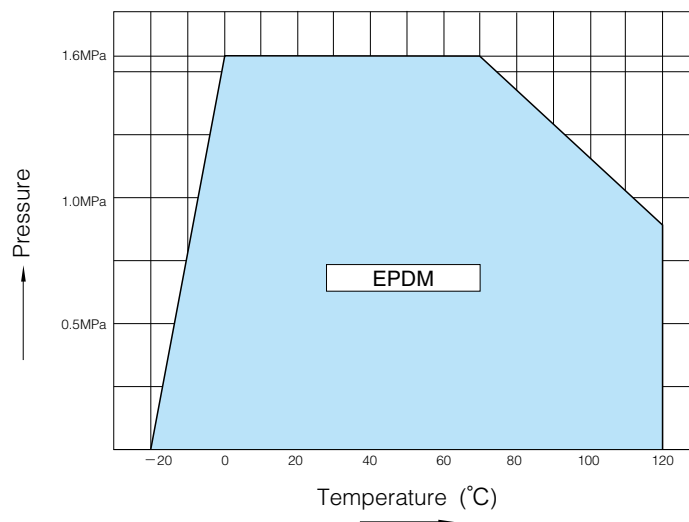
Selection criteria	Standard
	Heavy duty

Select when none of the following heavy duty items apply.

Select when any of the following items apply.

- ① Powder or high viscosity fluid (crude oil, etc.)
- ② Control specification (with positioner)
- ③ Emergency open valve or pipe dead end valve

72WG / 72SG / 72LG Pressure-Temperature Rating



72SG / 72LG Actuator Selection Chart

72SG / 72LG

Model	Category	Size (mm / inch)													
		50	65	80	100	125	150	200	250	300	350	400	450	500	600
		2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
1T	Standard	1T-1			1T-2			1T-3							
	Heavy duty														
2U	Standard	2U-0	2U-1	2U-2	2U-3	2U-4	2U-5		2U-6						
	Heavy duty														
7E,3A	Standard	T35	T85	T200		T380	T750	TGA-140		TGA-180					
	Heavy duty														
7G,7F 3U,3K	Standard	T85S	T200S		T380S	T750S	TG-10S	TG-12S	TG-14S	TG-20S					
	Heavy duty														
4I*	ON-OFF	4I-00	4I-0	4I-1	4I-2	4I-2.5	4I-3		4I-4						
	Control														

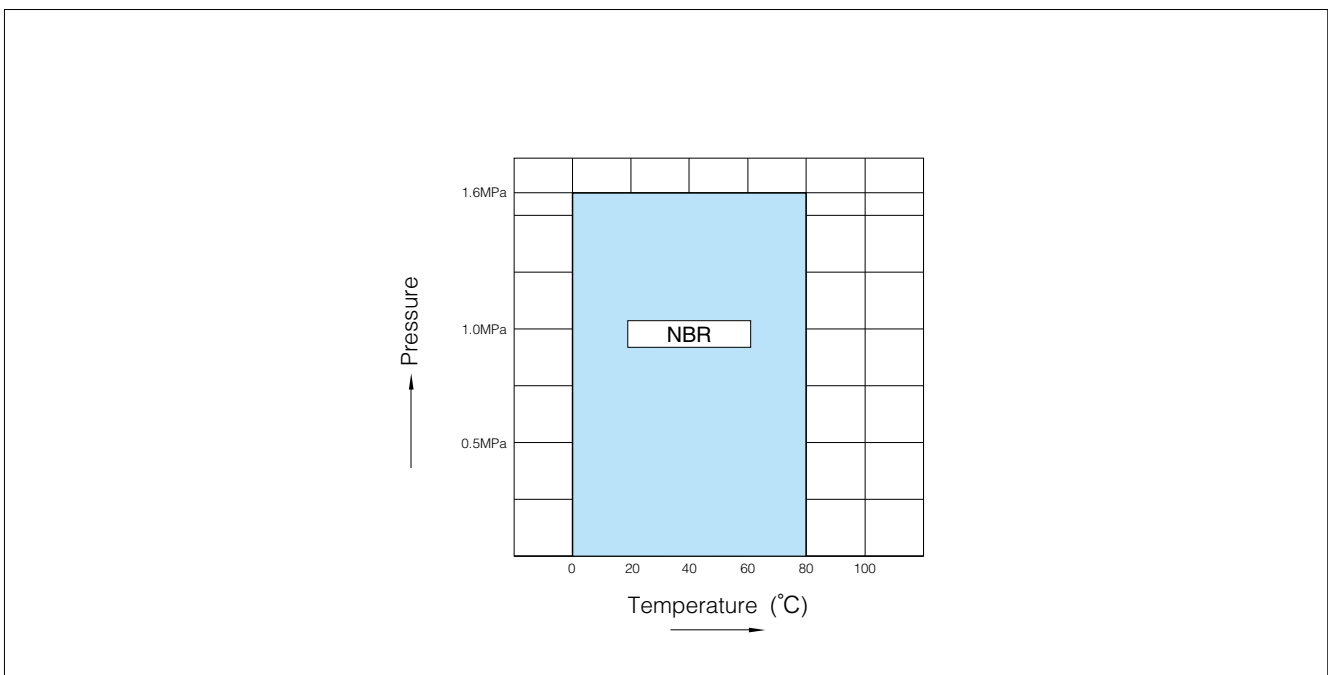
Remark*: For 350mm with the accessories below, type 4I-4 should be selected.

- 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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve

Butterfly Valve
TRITEC
TT2
334A
344Q
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304M (HLV)
507V/508V
DTM
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700G/704G/705G
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731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

72WG / 72SG / 72LG Pressure-Temperature Rating



72WG (Wafer) / 72SG (Semi lugged) / 72LG (Lugged)

72WG Bare shaft

72WG

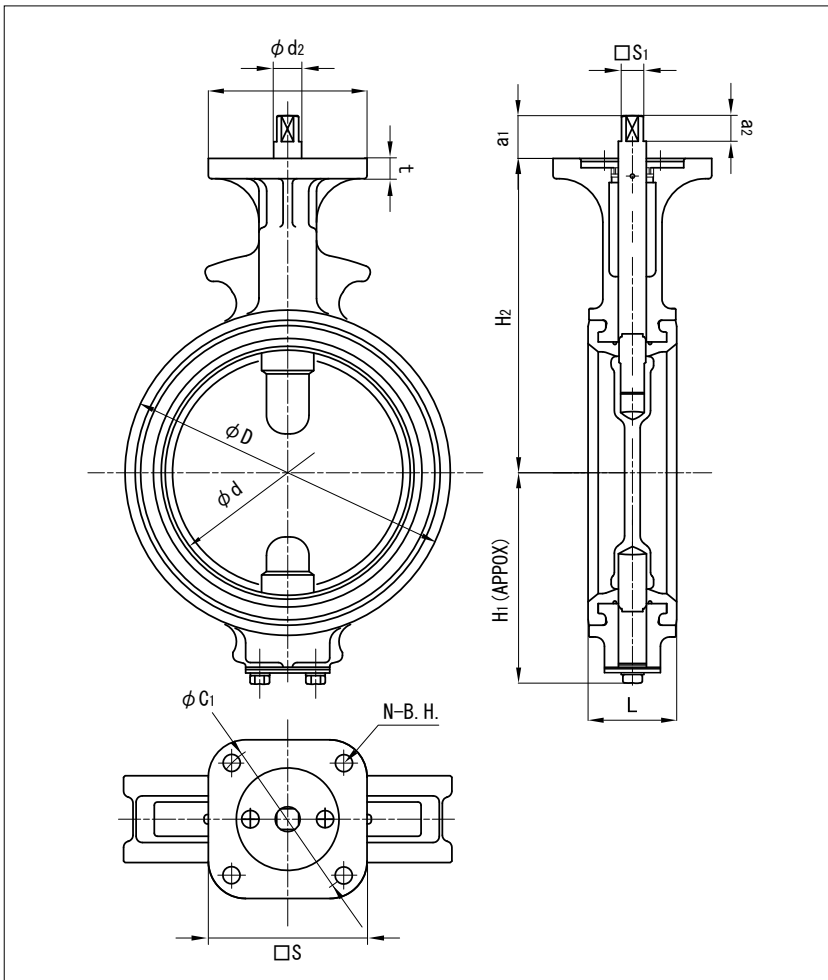
Shaft type	Nominal size		Dimension (mm)													Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	$\square S_1$	ϕd_2	b	t ₂	t	Top flange	
01	40	1 1/2	45	80	35	61	132	21.5	10.5	8	10	—	—	12	F07	1.5
	50	2	56	90	43	68	138	21.5	10.5	8	10	—	—	12	F07	1.8
	65	2 1/2	69	115	46	79	151	21.5	10.5	8	10	—	—	12	F07	2.5
	80	3	84	126	46	86	156	22.5	11.5	10	12	—	—	12	F07	2.6
	100	4	104	146	52	103	167	22.5	11.5	12	14	—	—	12	F07	3.4
	125	5	130	181	56	118	191	27.5	16.5	14	16	—	—	14	F10	5.4
	150	6	153.5	211	56	135	202	27.5	16.5	14	18	—	—	14	F10	7
200	8	199	256	60	177	227	30	20	18	22	—	—	14	F10	10.4	

Top flange dimension list

Flange type	$\square S$	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Shaft type	01 : Square
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72WG 40mm~200mm



72S G Bare shaft (01: 50mm to 300mm, 02: 350mm to 600mm)

72SG

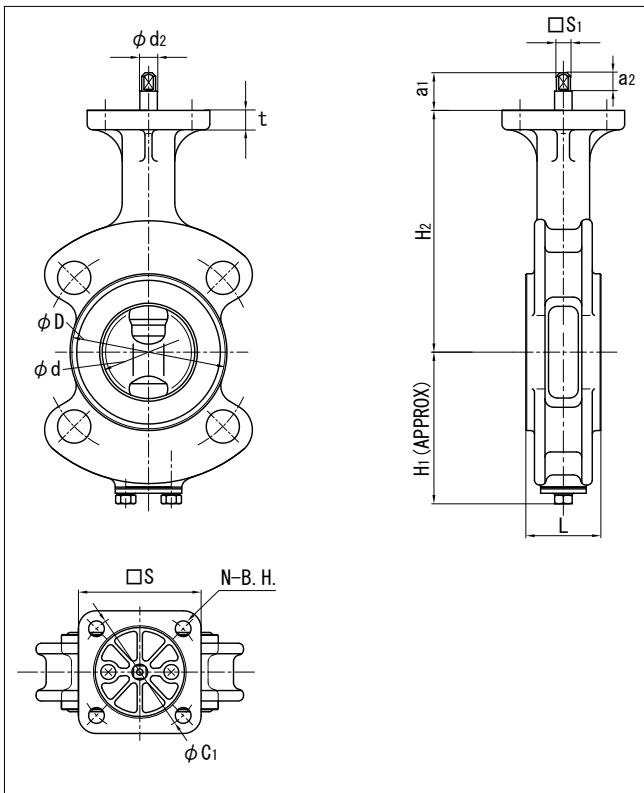
Shaft type	Nominal size		Dimension (mm)													Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	□S ₁	ϕd_2	b	t ₂	t	Top flange	
01	50	2	56	90	43	85	138	21.5	10.5	8	10	—	—	12	F07	2.8
	65	2 1/2	69	115	46	94	151	21.5	10.5	8	10	—	—	12	F07	4
	80	3	84	126	46	109	156	22.5	11.5	10	12	—	—	12	F07	4
	100	4	104	146	52	117	167	22.5	11.5	12	14	—	—	12	F07	5
	125	5	130	181	56	143	191	27.5	16.5	14	16	—	—	14	F10	8
	150	6	153.5	211	56	164	202	27.5	16.5	14	18	—	—	14	F10	11
	200	8	199	256	60	186	227	30	20	18	22	—	—	14	F10	15
	250	10	253	322	68	215	280	35	30	24	28	—	—	14	F10	27
02	300	12	302	367	78	253	312	35	30	24	32	—	—	16	F12	35
	350	14	337	410	78	276	348	48	40	—	32	10	3	23	F14	47
	400	16	394	469	102	338	383	54	45	—	40	12	3	23	F14	71.5
	450	18	441	525	114	368	413	65	56	—	46	14	3.5	23	F14	94.5
	500	20	492	580	127	403	453	79	70	—	50	14	3.5	28	F14	126
	600	24	584	682	154	458	528	79	70	—	55	16	4	28	F16	190

Top flange dimension list

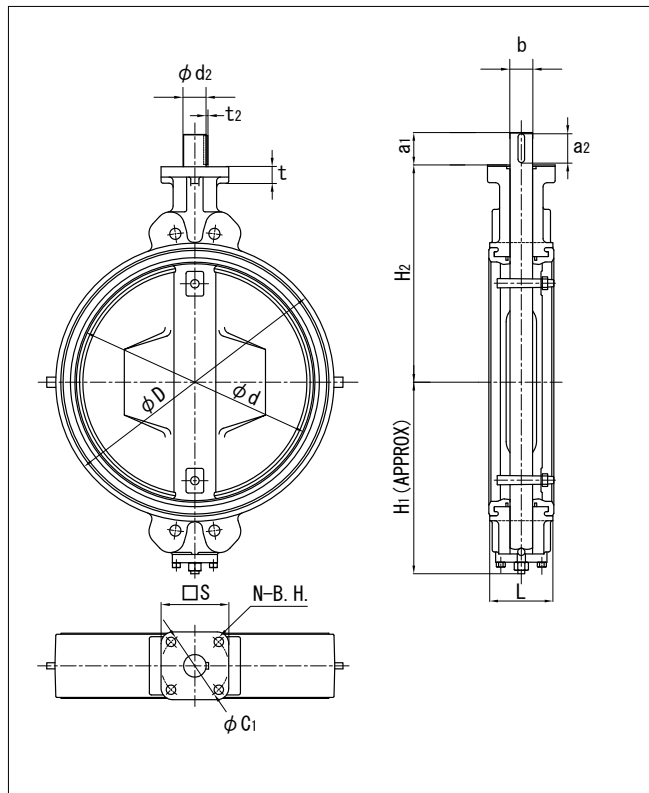
Flange type	□S	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Shaft type
 01 : Square
 02 : Round (Key way)

72SG 50mm~300mm



72SG 350mm~600mm



Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H (MKT)

903L/901C/905C (Bata-check)

72LG Bare shaft (01: 40mm to 300mm, 02: 350mm to 600mm)

72LG

Shaft type	Nominal size		Dimension (mm)													Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	$\square S_1$	ϕd_2	b	t ₂	t	Top flange	
01	50	2	56	90	43	85	138	21.5	10.5	8	10	—	—	12	F07	2.8
	65	2 1/2	69	115	46	94	151	21.5	10.5	8	10	—	—	12	F07	4
	80	3	84	190	46	109	156	22.5	11.5	10	12	—	—	12	F07	5.6
	100	4	104	223	52	117	167	22.5	11.5	12	14	—	—	12	F07	7.9
	125	5	130	250	56	143	191	27.5	16.5	14	16	—	—	14	F10	9.8
	150	6	153.5	276	56	164	202	27.5	16.5	14	18	—	—	14	F10	11.5
	200	8	199	334	60	177	227	30	20	18	22	—	—	14	F10	17.5
	250	10	253	402	68	215	280	35	30	24	28	—	—	14	F10	30
02	350	14	337	533 520	78	276	348	48	40	—	32	10	3	23	F14	65
	400	16	394	597	102	338	383	54	45	—	40	12	3	23	F14	106
	450	18	441	640 634	114	368	413	65	56	—	46	14	3.5	23	F14	127
	500	20	492	730 696	127	403	453	79	70	—	50	14	3.5	28	F14	168
	600	24	584	840 820	154	458	528	79	70	—	55	16	4	28	F16	270

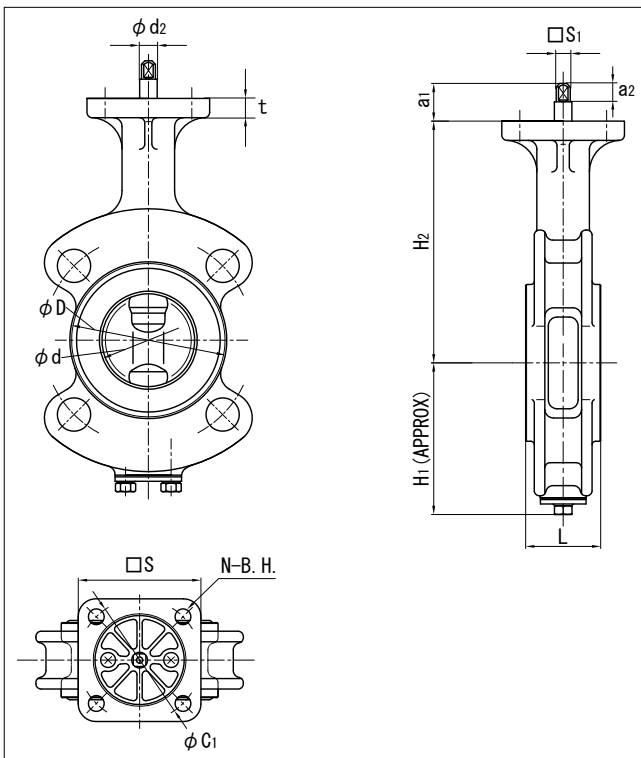
* Upper : DIN PN16 Lower : ANSI 150Lb

Top flange dimension list

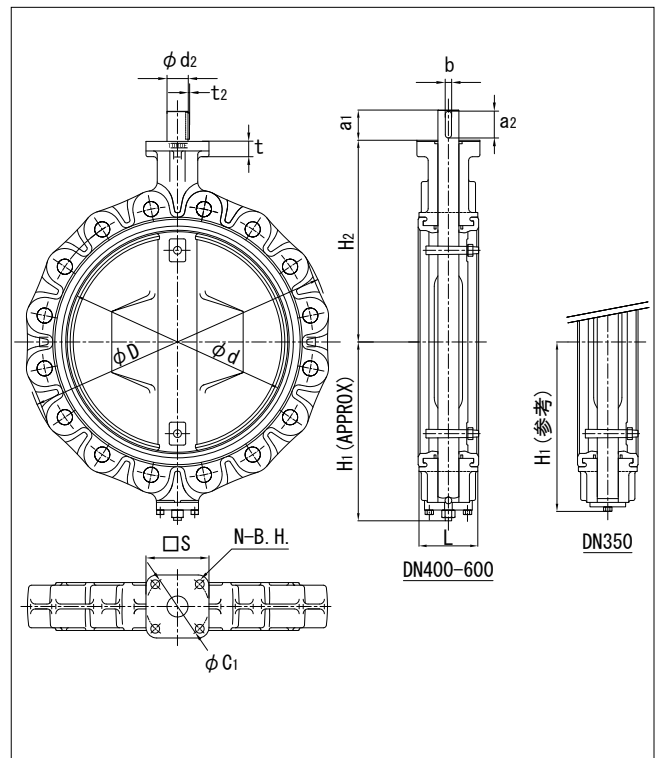
Flange type	$\square S$	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Shaft type	01 : Square
	02 : Round (Key way)

72LG 50mm~300mm



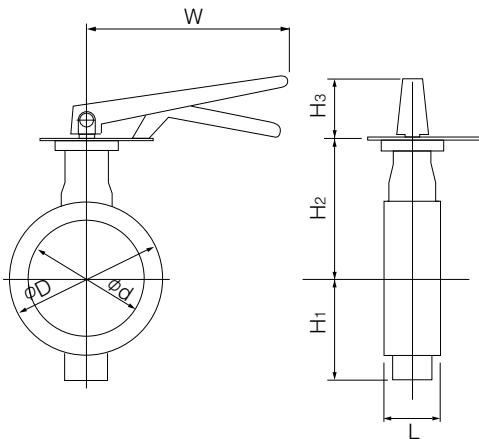
72LG 350mm~600mm



Lock lever type 72WG-1T (40mm to 200mm)

Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
40	1 1/2	45	80	35	61	132	66	200	1T-1	2.1
50	2	56	90	43	68	138	66	200	1T-1	2.4
65	2 1/2	69	115	46	79	151	66	200	1T-1	3.1
80	3	84	126	46	86	156	66	200	1T-1	3.2
100	4	104	146	52	103	167	66	200	1T-1	4
125	5	130	181	56	118	191	92	300	1T-2	6.7
150	6	153.5	211	56	135	202	92	300	1T-2	8.3
200	8	199	256	60	177	227	97	350	1T-3	12.1

72WG-1T



1T Installation direction

1 T L S (standard)	1 T L R	1 T R S	1 T R R
1 T X S	1 T X R	1 T V S	1 T V R

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

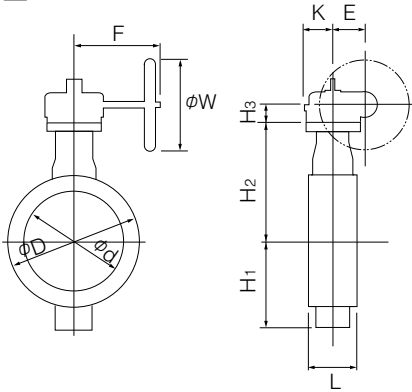
907T/908H (MKT)

903L/901C/905C (Bata-check)

Worm gear type 72WG-2U (40mm to 200mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
40	1 1/2	45	80	35	61	132	29.5	36	46	160	100	2U-0	3.8
50	2	56	90	43	68	138	29.5	36	46	160	100	2U-0	4.1
65	2 1/2	69	115	46	79	151	29.5	36	46	160	100	2U-0	4.8
80	3	84	126	46	86	156	29.5	36	46	160	100	2U-1	4.9
100	4	104	146	52	103	167	29.5	36	46	160	100	2U-1	5.7
125	5	130	181	56	118	191	34.5	44	53	173.5	160	2U-2	9.6
150	6	153.5	211	56	135	202	34.5	44	53	173.5	160	2U-2	11.2
200	8	199	256	60	177	227	41.5	67	75	198	200	2U-3	18

72WG-2U



2U Installation direction

2 U A (standard)	2 U A R	2 U B	2 U B R

Double-acting pneumatic cylinder type 72WG-7E (40mm to 200mm)

Standard

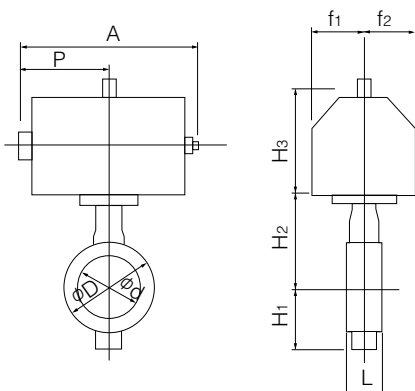
Nominal size		Dimension (mm)										Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	125	228	116	57	29	T35	4
50	2	56	90	43	68	138	125	228	116	57	29	T35	4
65	2 1/2	69	115	46	79	151	125	228	116	57	29	T35	5
80	3	84	126	46	86	156	168	276	142	75	47	T85	8
100	4	104	146	52	103	167	168	276	142	75	47	T85	8
125	5	130	181	56	118	191	168	276	142	75	47	T85	10
150	6	153.5	211	56	135	202	203	346	176	79	57	T200	15
200	8	199	256	60	177	227	231	423	214	91	69	T380	25

Heavy duty

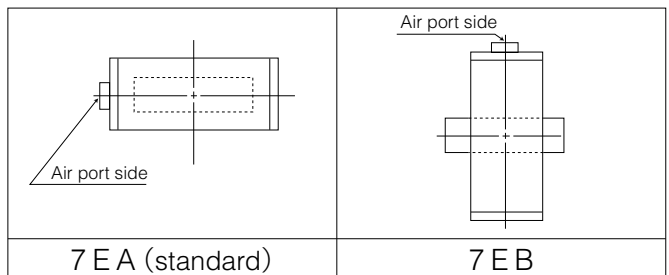
Nominal size		Dimension (mm)										Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	125	228	116	57	29	T35	4
50	2	56	90	43	68	138	125	228	116	57	29	T35	4
65	2 1/2	69	115	46	79	151	125	228	116	57	29	T35	5
80	3	84	126	46	86	156	168	276	142	75	47	T85	8
100	4	104	146	52	103	167	203	346	176	79	57	T200	12
125	5	130	181	56	118	191	203	346	176	79	57	T200	14
150	6	153.5	211	56	135	202	203	346	176	79	57	T200	15
200	8	199	256	60	177	227	231	423	214	91	69	T380	25

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

72WG-7E



7E Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

72WG (Wafer) / 72SG (Semi lugged) / 72LG (Lugged)

Single-acting pneumatic cylinder type 72WG-7G (Air to open: 40mm to 200mm) / 72WG-7F (Air to close: 40mm to 200mm)

Standard

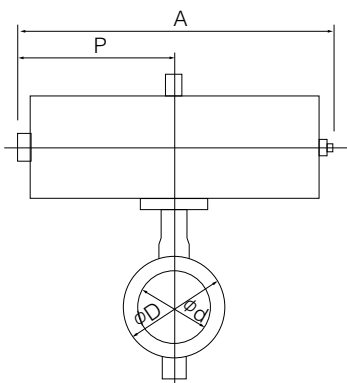
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	168	364	183	75	47	T85S	8
50	2	56	90	43	68	138	168	364	183	75	47	T85S	8
65	2 1/2	69	115	46	79	151	168	364	183	75	47	T85S	9
80	3	84	126	46	86	156	203	449	226	79	57	T200S	14
100	4	104	146	52	103	167	231	550	276	91	69	T380S	23
125	5	130	181	56	118	191	231	550	276	91	69	T380S	25
150	6	153.5	211	56	135	202	269	723	360	118	85	T750S	40
200	8	199	256	60	177	227	269	723	360	118	85	T750S	43

Heavy duty

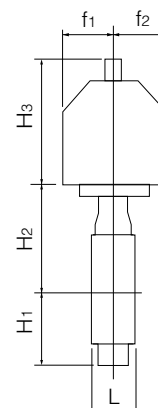
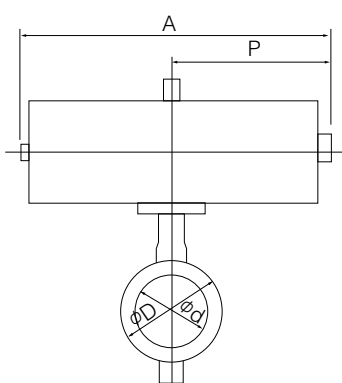
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
40	1 1/2	45	80	35	61	132	168	364	183	75	47	T85S	8
50	2	56	90	43	68	138	168	364	183	75	47	T85S	8
65	2 1/2	69	115	46	79	151	203	449	226	79	57	T200S	14
80	3	84	126	46	86	156	203	449	226	79	57	T200S	14
100	4	104	146	52	103	167	231	550	276	91	69	T380S	23
125	5	130	181	56	118	191	231	550	276	91	69	T380S	25
150	6	153.5	211	56	135	202	269	723	360	118	85	T750S	40

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

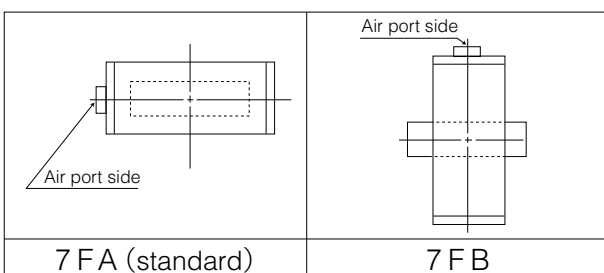
72WG-7F



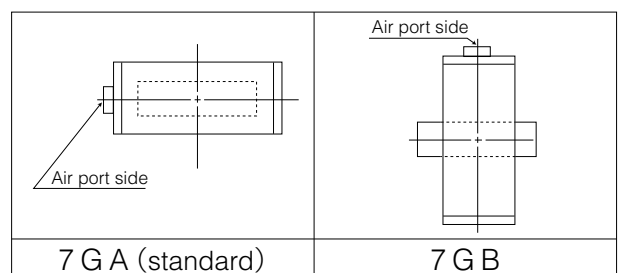
72WG-7G



7F Installation direction



7G Installation direction



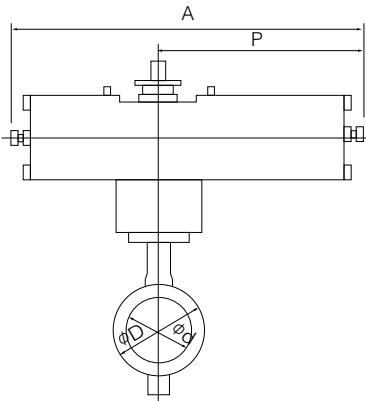
Single-acting pneumatic cylinder type 72WG-3U (Air to open: 200mm) / 72WG-3K (Air to close: 200mm)

■ Heavy duty

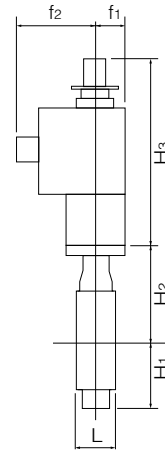
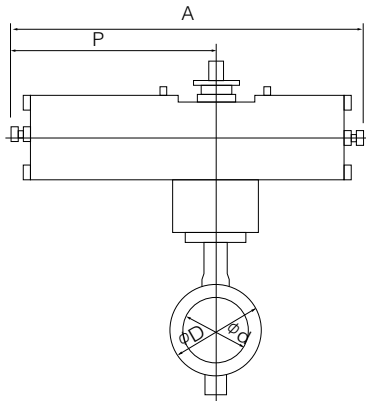
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	199	256	60	177	227	307	945	585	70	165	TG-10S	66

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

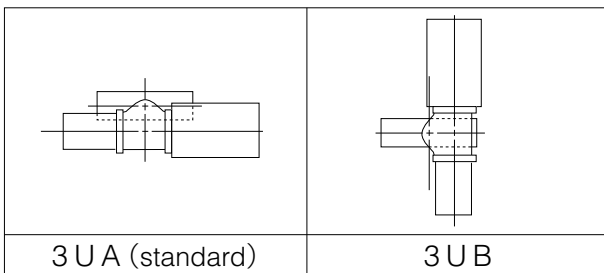
■ 72WG-3U



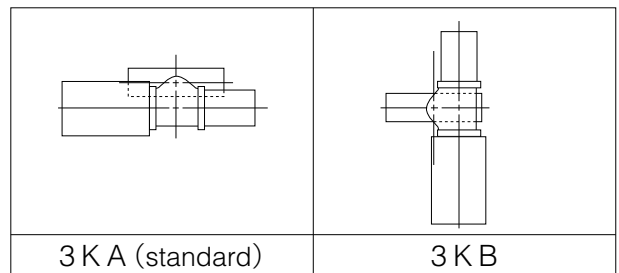
■ 72WG-3K



■ 3U Installation direction



■ 3K Installation direction



Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

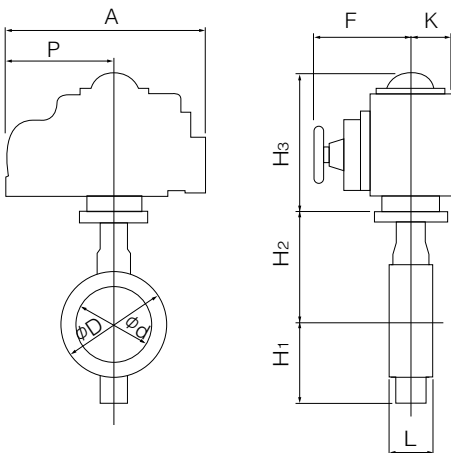
907T/908H (MKT)

903L/901C/905C (Bata-check)

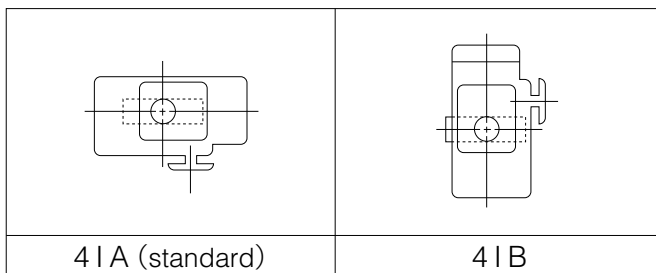
Single phase electric motor type 72WG-4I (40mm to 200mm)

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
40	1 1/2	45	80	35	61	132	120	161	84	58	45	4 I-00	4
50	2	56	90	43	68	138	120	161	84	58	45	4 I-00	4.3
65	2 1/2	69	115	46	79	151	150	202	100	85	54	4 I-0	6.7
80	3	84	126	46	86	156	150	202	100	85	54	4 I-0	6.8
100	4	104	146	52	103	167	165	252	138	126	65	4 I-1	9.8
125	5	130	181	56	118	191	198	310	167	154	85	4 I-2	16.6
150	6	153.5	211	56	135	202	198	310	167	154	85	4 I-2	18.2
200	8	199	256	60	177	227	198	310	167	154	85	4 I-2.5	21.6

72WG-4 I



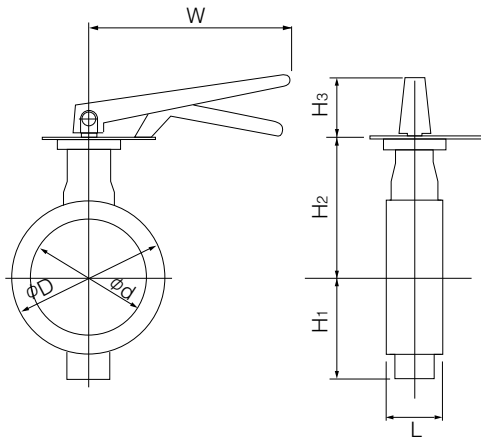
4I Installation direction



Lock lever type 72SG-1T (50mm to 200mm)

Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
50	2	56	90	43	85	138	66	200	1T-1	3.1
65	2 1/2	69	115	46	94	151	66	200	1T-1	4.1
80	3	84	126	46	109	156	66	200	1T-1	4.6
100	4	104	146	52	117	167	66	200	1T-1	5.6
125	5	130	181	56	143	191	92	300	1T-2	9.3
150	6	153	211	56	164	202	92	300	1T-2	12.3
200	8	199.0	256	60	186	227	97	350	1T-3	16.7

72SG-1T



1T Installation direction

1 T L S (standard)	1 T L R	1 T R S	1 T R R
1 T X S	1 T X R	1 T V S	1 T V R

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

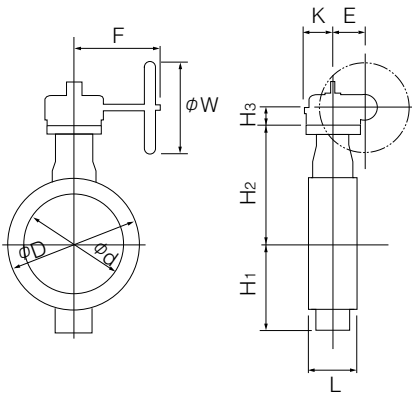
907T/908H (MKT)

903L/901C/905C (Bata-check)

Worm gear type 72SG-2U (50mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
50	2	56	90	43	85	138	29.5	36	46	160	100	2U-0	4.8
65	2 1/2	69	115	46	94	151	29.5	36	46	160	100	2U-0	5.8
80	3	84	126	46	109	156	29.5	36	46	160	100	2U-1	6.3
100	4	104	146	52	117	167	29.5	36	46	160	100	2U-1	7.3
125	5	130	181	56	143	191	34.5	44	53	173.5	160	2U-2	12.2
150	6	153.5	211	56	164	202	34.5	44	53	173.5	160	2U-2	16
200	8	199	256	60	186	227	41.5	67	75	198	200	2U-3	23
250	10	253	322	68	215	280	41.5	67	75	198	200	2U-3	38
300	12	302	367	78	253	312	48	87	90	222.5	200	2U-4	53
350	14	337	410	78	276	348	48	87.5	90	222.5	280	2U-4	63
400	16	394	469	102	338	383	50	90	105	266	280	2U-5	88
450	18	441	525	114	368	413	50	90	105	266	280	2U-5	112
500	20	492	580	127	403	453	50	90	105	266	280	2U-5	143
600	24	584	682	154	458	528	61	113	140	352	400	2U-6	222

72SG-2U



2U Installation direction

2 U A (standard)	2 U A R	2 U B	2 U B R

Double-acting pneumatic cylinder type 72SG-7E (50mm to 300mm)

Standard

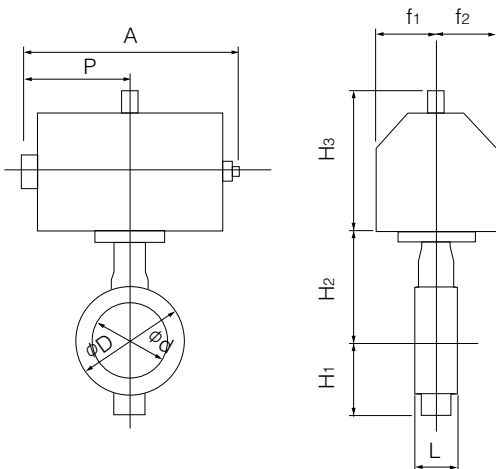
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	46	109	156	168	276	142	75	47	T85	9
100	4	104	146	52	117	167	168	276	142	75	47	T85	10
125	5	130	181	56	143	191	168	276	142	75	47	T85	13
150	6	153.5	211	56	164	202	203	346	176	79	57	T200	19
200	8	199	256	60	186	227	231	423	214	91	69	T380	29
250	10	253	322	68	215	280	231	423	214	91	69	T380	44
300	12	302	367	78	253	312	269	546	270	118	85	T750	63

Heavy duty

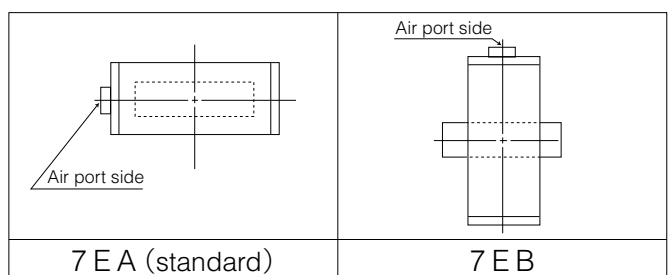
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	46	94	151	125	228	116	57	47	T35	6
80	3	84	126	46	109	156	168	276	142	75	57	T85	9
100	4	104	146	52	117	167	203	346	176	79	57	T200	13
125	5	130	181	56	143	191	203	346	176	79	57	T200	16
150	6	153.5	211	56	164	202	203	346	176	79	69	T200	19
200	8	199	256	60	186	227	231	423	214	91	69	T380	29
250	10	253	322	68	215	280	269	546	270	118	85	T750	53

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

72SG-7E



7E Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Double-acting pneumatic cylinder type 72SG-3A (300mm to 600mm)

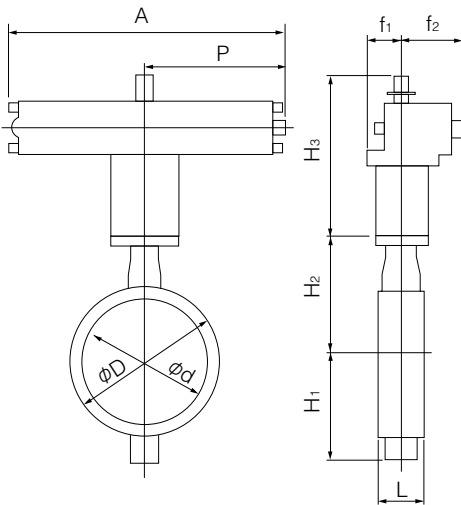
■ **Standard**

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
350	14	337	410	78	276	348	364	743	381	100	164	TGA-125	85
400	16	394	469	102	338	383	412	810	417	100	180	TGA-140	124
450	18	441	525	114	368	413	412	810	417	100	180	TGA-140	150
500	20	492	580	127	403	453	465	939	483	130	202	TGA-160	217
600	24	584	682	154	458	528	478	1053	543	130	218	TGA-180	330

■ **Heavy duty**

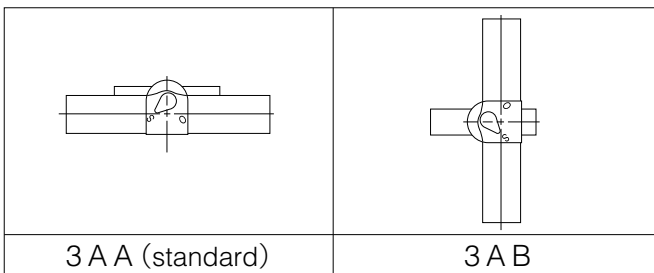
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
300	12	302	367	78	253	312	364	743	381	100	164	TGA-125	71
350	14	337	410	78	276	348	364	743	381	100	164	TGA-125	85
400	16	394	469	102	338	383	412	810	417	100	180	TGA-140	124
450	18	441	525	114	368	413	465	939	483	130	202	TGA-160	197
500	20	492	580	127	403	453	465	939	483	130	202	TGA-160	217
600	24	584	682	154	458	528	525	1163	599	160	253	TGA-200	390

■ **72SG-3A**



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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

■ **3A Installation direction**



Single-acting pneumatic cylinder type 72SG-7G (Air to open: 50mm to 200mm) / 72SG-7F (Air to close: 50mm to 200mm)

■ Standard

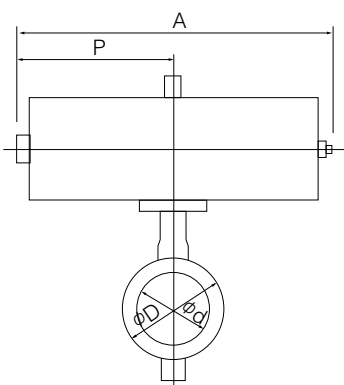
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	168	364	183	75	47	T85S	9
65	2 1/2	69	115	46	94	151	168	364	183	75	47	T85S	10
80	3	84	126	46	109	156	203	449	226	79	57	T200S	15
100	4	104	146	52	117	167	231	550	276	91	69	T380S	24
125	5	130	181	56	143	191	231	550	276	91	69	T380S	27
150	6	153.5	211	56	164	202	269	723	360	118	85	T750S	44
200	8	199	256	60	186	227	269	723	360	118	85	T750S	48

■ Heavy duty

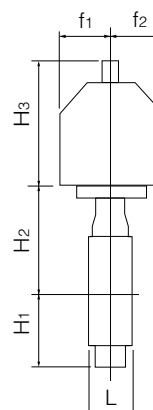
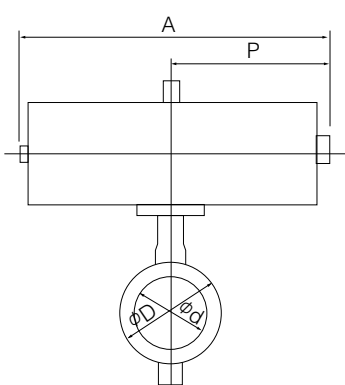
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	168	369	183	75	47	T85S	9
65	2 1/2	69	115	46	94	151	203	449	226	79	57	T200S	14
80	3	84	126	46	109	156	203	449	226	79	57	T200S	15
100	4	104	146	52	117	167	231	550	276	91	69	T380S	24
125	5	130	181	56	143	191	231	550	276	91	69	T380S	27
150	6	153.5	211	56	164	202	269	723	360	118	85	T750S	44

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

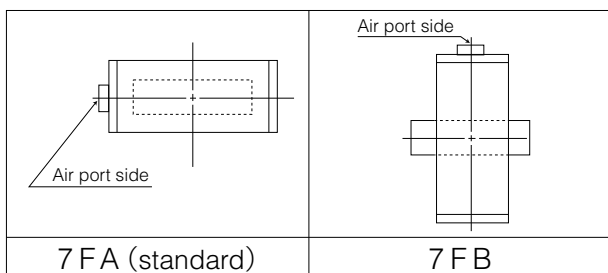
■ 72SG-7F



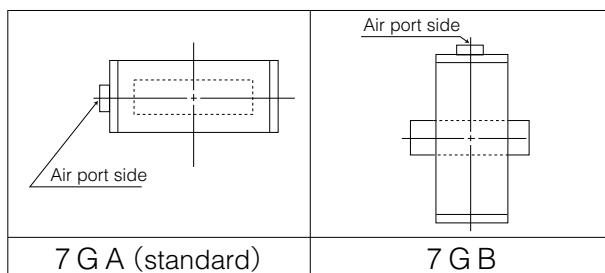
■ 72SG-7G



■ 7F Installation direction



■ 7G Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

72WG (Wafer) / 72SG (Semi lugged) / 72LG (Lugged)

Single-acting pneumatic cylinder type 72SG-3U (Air to open: 200mm to 600mm) / 72SG-3K (Air to close: 200mm to 600mm)

Standard

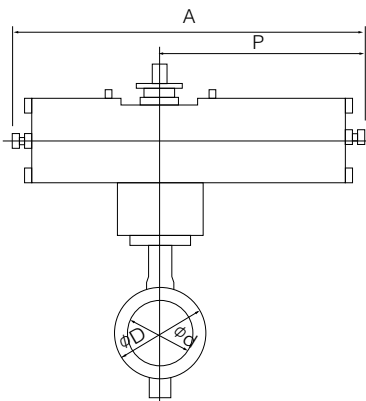
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	253	322	68	215	280	307	1080	720	94	206	TG-12S	125
300	12	302	367	78	253	312	307	1080	720	94	206	TG-12S	134
350	14	337	410	78	276	348	340	1255	865	131	257	TG-14S	244
400	16	394	469	102	338	383	340	1255	865	131	257	TG-14S	270
450	18	441	525	114	368	413	474	1655	1095	164	348	TG-20S	507
500	20	492	580	127	403	453	474	1655	1095	164	348	TG-20S	538
600	24	584	682	154	458	528	474	1655	1095	164	348	TG-20S	602

Heavy duty

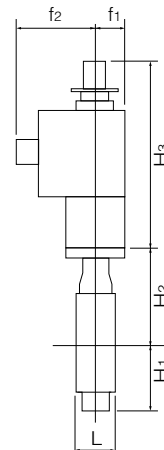
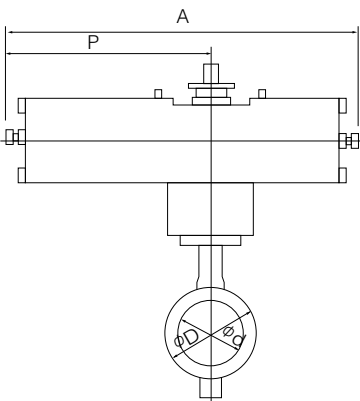
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	199	256	60	186	227	307	945	585	70	165	TG-10S	71
250	10	253	322	68	215	280	307	1080	720	94	206	TG-12S	125
300	12	302	367	78	253	312	340	1255	865	131	257	TG-14S	232
350	14	337	410	78	276	348	340	1255	865	131	257	TG-14S	244
400	16	394	469	102	338	383	474	1655	1095	164	348	TG-20S	474
450	18	441	525	114	368	413	474	1655	1095	164	348	TG-20S	507
500	20	492	580	127	403	453	474	1655	1095	164	348	TG-20S	538

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

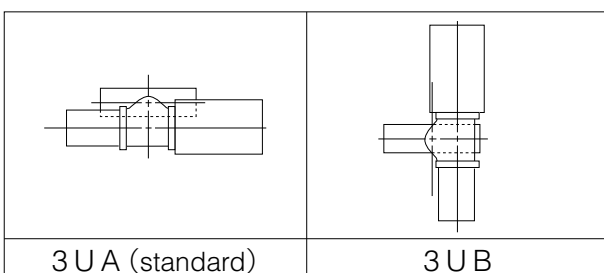
72SG-3U



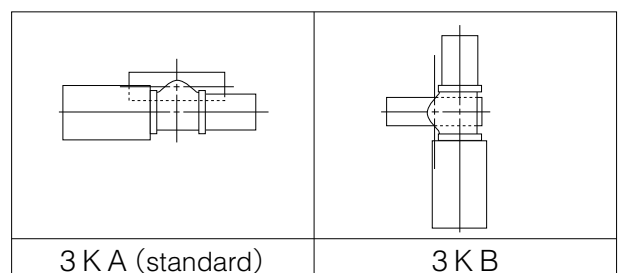
72SG-3K



3U Installation direction



3K Installation direction



Single phase electric motor type 72SG-4I (50mm to 500mm)

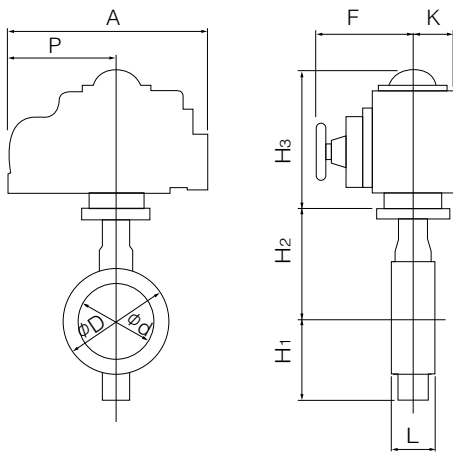
Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	56	90	43	85	138	120	161	84	58	45	4 I-00	5.3
65	2 1/2	69	115	46	94	151	150	202	100	85	54	4 I-0	7.7
80	3	84	126	46	109	156	150	202	100	85	54	4 I-0	8.2
100	4	104	146	52	117	167	165	252	138	126	65	4 I-1	11.4
125	5	130	181	56	143	191	198	310	167	154	85	4 I-2	19.2
150	6	153.5	211	56	164	202	198	310	167	154	85	4 I-2	22.2
200	8	199	256	60	186	227	198	310	167	154	85	4 I-2.5	26.2
250	10	253	322	68	215	280	230	388	223	246	136	4 I-3	50
300	12	302	367	78	253	312	230	388	223	246	136	4 I-3	63
350	14	337	410	78	276	348	230	388	223	246	136	4 I-3	70
							255	338	223	246	136	4 I-4	76
400	16	394	469	102	338	383	255	388	223	246	136	4 I-4	101
450	18	441	525	114	368	413	230	388	223	246	136	4 I-4	125
500	20	492	580	127	403	453	230	388	223	246	136	4 I-4	156

Note 1: For nominal size 50 mm type (for control), the 4I-0 type should be selected. (The 4I-00 type is only designed for ON-OFF operation.)

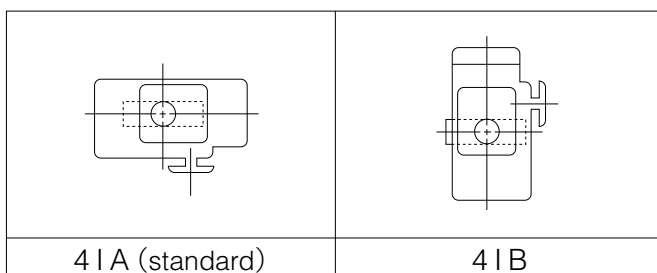
Remark: For 350mm type with the accessories below, type 4I-4 should be selected.

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

72SG-4 I



4 I Installation direction

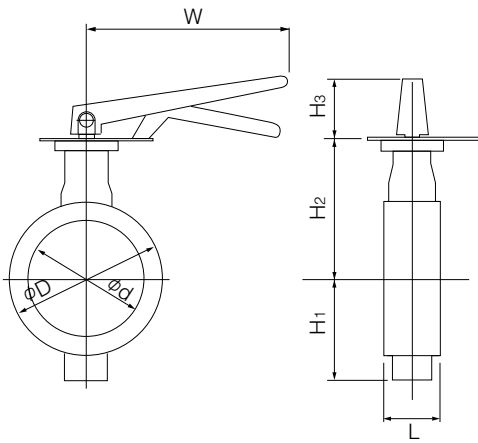


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Lock lever type 72LG-1T (50mm to 200mm)

Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
50	2	56	90	43	85	138	66	200	1T-1	3.1
65	2 1/2	69	115	46	94	151	66	200	1T-1	4.1
80	3	84	126	46	109	156	66	200	1T-1	5.4
100	4	104	146	52	117	167	66	200	1T-1	8
125	5	130	181	56	143	191	92	300	1T-2	11.9
150	6	153.5	211	56	164	202	92	300	1T-2	15.1
200	8	199	256	60	186	227	97	350	1T-3	22.2

72LG-1T



1T Installation direction

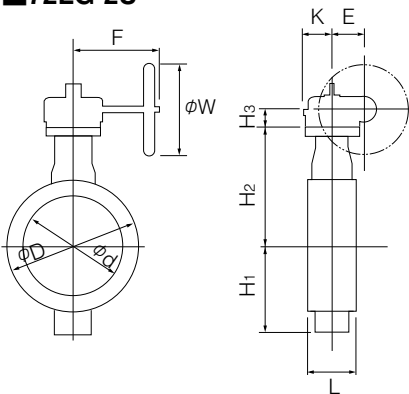
1TSL (standard)	1TLR	1TRS	1TRR
1TXS	1TXR	1TVS	1TVR

Worm gear type 72LG-2U (50mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
50	2	56	90	43	68	138	29.5	36	46	160	100	2U-0	4.8
65	2 1/2	69	115	46	79	151	29.5	36	46	160	100	2U-0	5.8
80	3	84	126	46	86	156	29.5	36	46	160	100	2U-1	7.1
100	4	104	146	52	103	167	29.5	36	46	160	100	2U-1	9.7
125	5	130	181	56	118	191	34.5	44	53	173.5	160	2U-2	14.8
150	6	153.5	211	56	135	202	34.5	44	53	173.5	160	2U-2	18.8
200	8	199	256	60	177	227	41.5	67	75	198	200	2U-3	27
250	10	253	322	68	215	280	41.5	67	75	198	200	2U-3	52
300	12	302	367	78	253	312	48	87.5	90	222.5	200	2U-4	76
* 350	14	337	533 520	78	276	348	48	87.5	90	222.5	280	2U-4	86
400	16	394	597	102	338	383	50	90	105	266	280	2U-5	123
* 450	18	441	640 634	114	368	413	50	90	105	266	280	2U-5	148
* 500	20	492	730 696	127	403	453	50	90	105	266	280	2U-5	195
* 600	24	584	840 820	154	458	528	61	113	140	352	400	2U-6	306

*Upper : DIN PN16 Lower : ANSI 150Lb

72LG-2U



2U Installation direction

2UA (standard)	2UAR	2UB	2UBR

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H (MKT)

903L/901C/905C (Bata-check)

Double-acting pneumatic cylinder type 72LG-7E (50mm to 300mm)

Standard

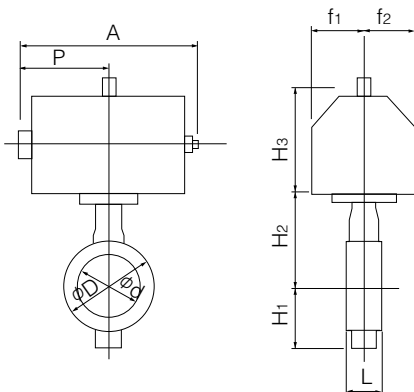
Nominal size		Dimension (mm)										Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	46	109	156	168	276	142	75	47	T85	11
100	4	104	146	52	117	167	168	276	142	75	47	T85	12
125	5	130	181	56	143	191	168	276	142	75	47	T85	14
150	6	153.5	211	56	164	202	203	346	176	79	57	T200	19
200	8	199	256	60	177	227	231	423	214	91	69	T380	31
250	10	253	322	68	215	280	231	423	214	91	69	T380	58
300	12	302	367	78	253	312	269	546	270	118	85	T750	88

Heavy duty

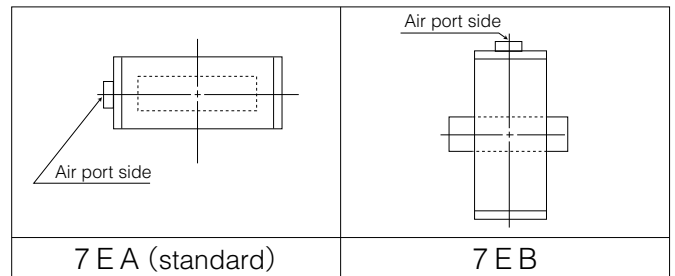
Nominal size		Dimension (mm)										Center handle type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	125	228	116	57	29	T35	5
65	2 1/2	69	115	46	94	151	125	228	116	57	29	T35	6
80	3	84	126	46	109	156	168	276	142	75	47	T85	11
100	4	104	146	52	117	167	203	346	176	79	57	T200	15
125	5	130	181	56	143	191	203	346	176	79	57	T200	17
150	6	153.5	211	56	164	202	203	346	176	79	57	T200	19
200	8	199	256	60	177	227	231	423	214	91	69	T380	31
250	10	253	322	68	215	280	269	546	270	118	85	T750	68

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

72LG-7E



7E Installation direction



Double-acting pneumatic cylinder type 72LG-3A (300mm to 600mm)

Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
* 350	14	337	533 520	78	276	348	364	743	381	100	164	TGA-125	85
400	16	394	597	102	338	383	364	743	381	100	164	TGA-140	124
* 450	18	441	640 634	114	368	413	412	810	417	100	180	TGA-140	191
* 500	20	492	730 696	127	403	453	465	939	483	130	202	TGA-160	269
* 600	24	584	840 820	154	458	528	478	1053	543	218	69	TGA-180	414

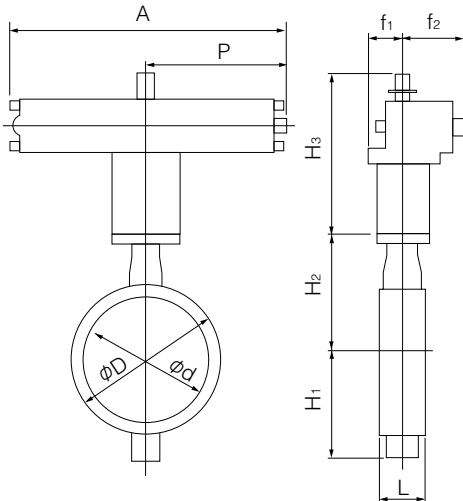
*Upper : DIN PN16 Lower : ANSI 150Lb

Heavy duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
300	12	302	367	78	253	312	364	743	381	100	164	TGA-125	75
* 350	14	337	533 520	78	276	348	364	743	381	100	164	TGA-125	85
400	16	394	597	102	338	383	412	810	417	100	180	TGA-140	124
* 450	18	441	640 634	114	368	413	465	939	483	130	202	TGA-160	233
* 500	20	492	730 696	127	403	453	465	939	483	130	202	TGA-160	269
* 600	24	584	840 820	154	458	528	525	1163	599	160	253	TGA-200	474

*Upper : DIN PN16 Lower : ANSI 150Lb

72LG-3A



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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

3A Installation direction

3 A A (standard)	3 A B

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Single-acting pneumatic cylinder type 72LG-7G (Air to open: 50mm to 200mm) / 700G-7F (Air to close: 50mm to 200mm)

Standard

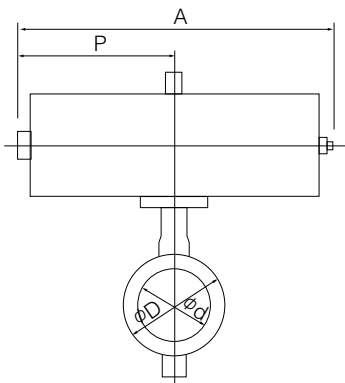
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	168	364	183	75	47	T85S	9
65	2 1/2	69	115	46	94	151	168	364	183	75	47	T85S	10
80	3	84	126	46	109	156	203	449	226	79	57	T200S	16
100	4	104	146	52	117	167	231	550	276	91	69	T380S	25.6
125	5	130	181	56	143	191	231	550	276	91	69	T380S	30
150	6	153.5	211	56	164	202	269	723	360	118	85	T750S	47
200	8	199	256	60	177	227	269	723	360	118	85	T750S	53

Heavy duty

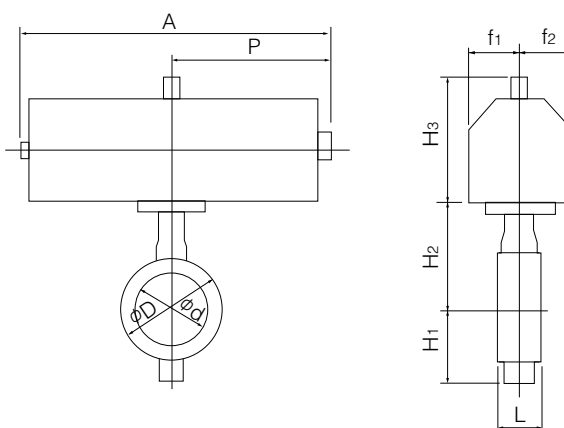
Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
50	2	56	90	43	85	138	168	364	183	75	47	T85S	9
65	2 1/2	69	115	46	94	151	203	449	226	79	57	T200S	14
80	3	84	126	46	109	156	203	449	226	79	57	T200S	16
100	4	104	146	52	117	167	231	550	276	91	69	T380S	25.6
125	5	130	181	56	143	191	231	550	276	91	69	T380S	30
150	6	153.5	211	56	164	202	269	723	360	118	85	T750S	47

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

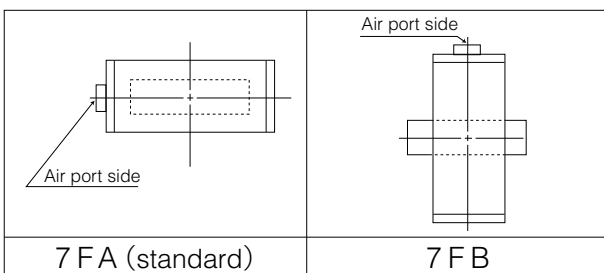
72LG-7F



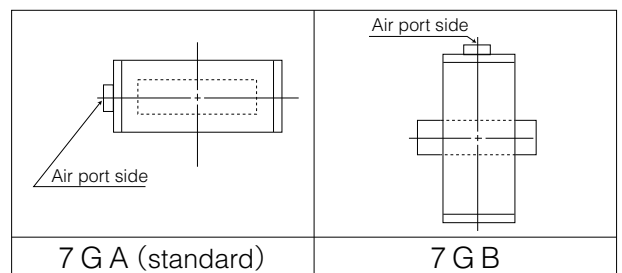
72LG-7G



7F Installation direction



7G Installation direction



Single-acting pneumatic cylinder type 72LG-3U (Air to open: 200mm to 600mm) / 72LG-3K (Air to close: 200mm to 600mm)

■ Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
250	10	253	322	68	215	280	307	1080	720	94	206	TG-12S	139
300	12	302	367	78	253	312	307	1080	720	94	206	TG-12S	158
* 350	14	337	533 520	78	276	348	340	1255	865	131	257	TG-14S	267
400	16	394	597	102	338	383	340	1255	865	131	257	TG-14S	305
* 450	18	441	640 634	114	368	413	474	1655	1095	164	348	TG-20S	543
* 500	20	492	730 696	127	403	453	474	1655	1095	164	348	TG-20S	590
* 600	24	584	840 820	154	458	528	474	1655	1095	164	348	TG-20S	686

* Upper : DIN PN16 Lower : ANSI 150Lb

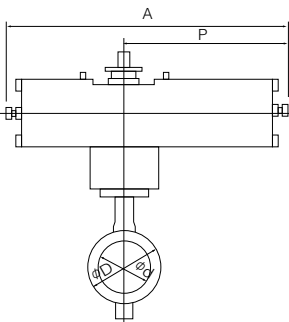
■ Heavy duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	199	256	60	177	227	307	945	585	70	165	TG-10S	77
250	10	253	322	68	215	280	307	1080	720	94	206	TG-12S	139
300	12	302	367	78	253	312	340	1255	865	131	257	TG-14S	254
* 350	14	337	533 520	78	276	348	340	1255	865	131	257	TG-14S	267
400	16	394	597	102	338	383	474	1655	1095	164	348	TG-20S	508
* 450	18	441	640 634	114	368	413	474	1655	1095	164	348	TG-20S	543
* 500	20	492	730 696	127	403	453	474	1655	1095	164	348	TG-20S	590

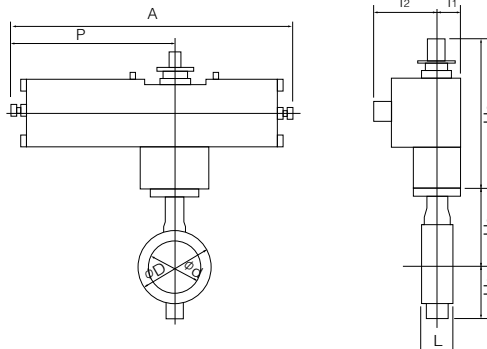
* Upper : DIN PN16 Lower : ANSI 150Lb

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

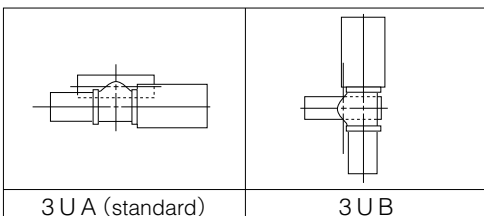
■ 72LG-3U



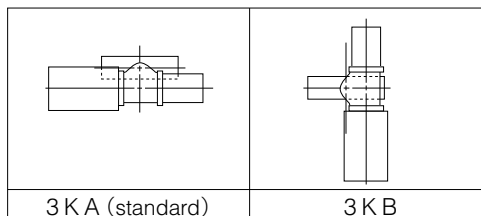
■ 72LG-3K



■ 3U Installation direction



■ 3K Installation direction



Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H (MKT)

903L/901C/905C (Bata-check)

Single phase electric motor type 72LG-4I (40mm to 500mm)

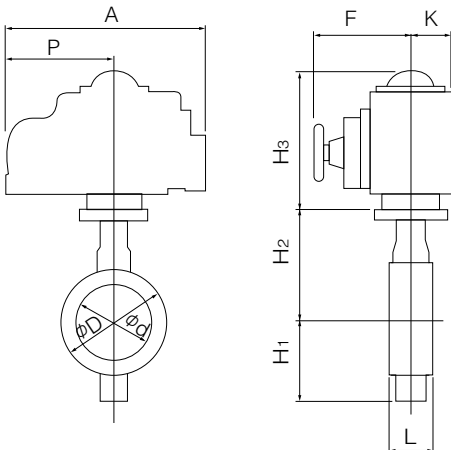
Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	56	90	43	68	138	120	161	84	58	45	4I-00	5.3
65	2 1/2	69	115	46	79	151	150	202	100	85	54	4I-0	7.7
80	3	84	126	46	86	156	150	202	100	85	54	4I-0	8.2
100	4	104	146	52	103	167	165	252	138	126	65	4I-1	13.8
125	5	130	181	56	118	191	198	310	167	154	85	4I-2	21.8
150	6	153.5	211	56	135	202	198	310	167	154	85	4I-2	25
200	8	199	256	60	177	227	198	310	167	154	85	4I-2.5	30.2
250	10	253	322	68	215	280	230	388	223	246	136	4I-3	56.8
300	12	302	367	78	253	312	230	388	223	246	136	4I-3	86.2
*	350	337	533	78	276	348	230	388	223	246	136	4I-3	93
			520				255					4I-4	
	400	394	597	102	338	383	255	388	223	246	136	4I-4	136
*	450	441	640	114	368	413	230	388	223	246	136	4I-4	161
			634										
*	500	492	730	127	403	453	230	388	223	246	136	4I-4	208
			696										

Remark: For 350mm type with the accessories below, type 4I-4 should be selected.

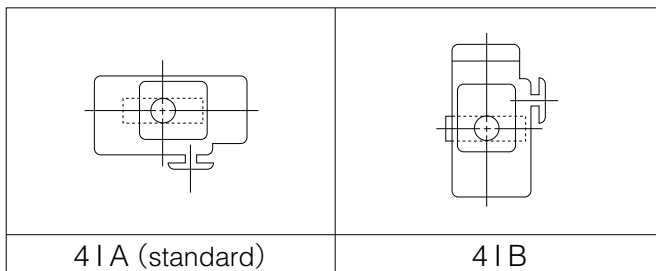
- Micom unit
- Servo unit
- Speed control unit
- Potentiometer

* Upper : DIN PN16 Lower : ANSI 150Lb

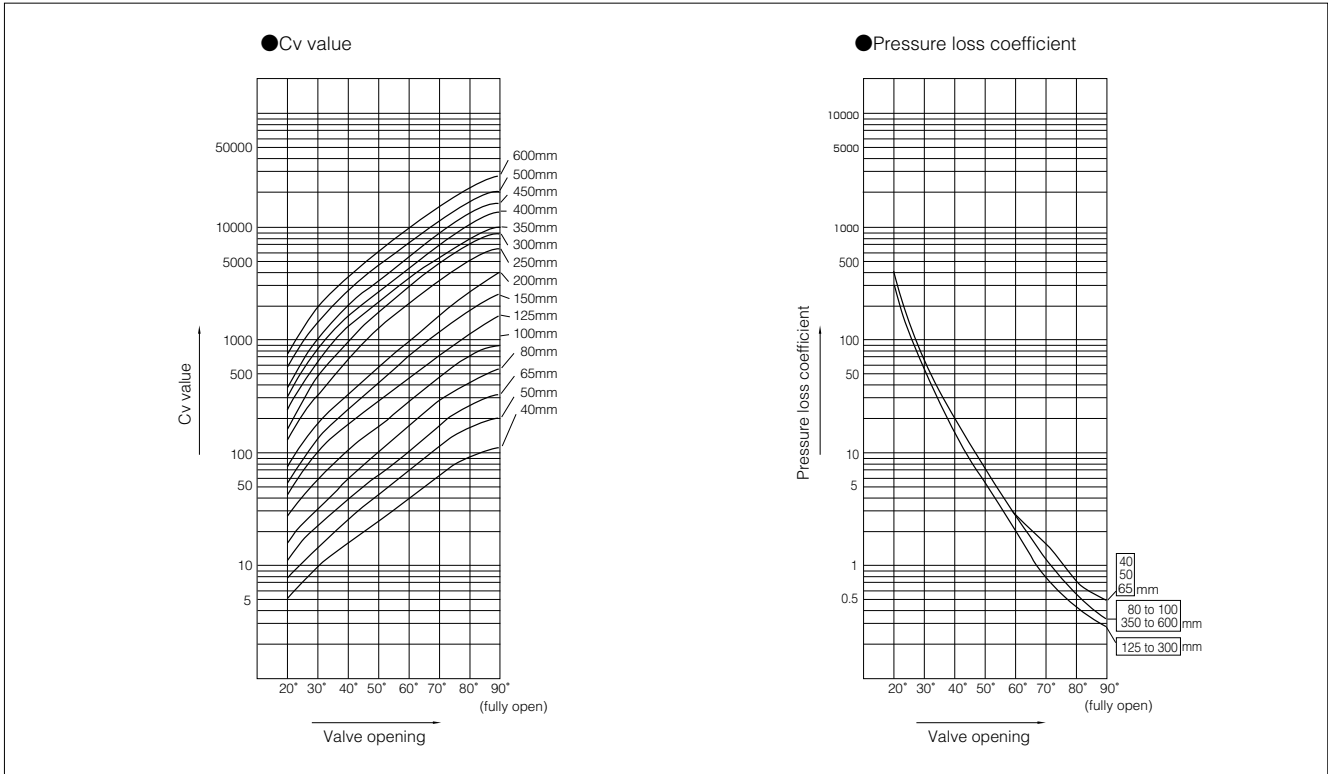
72LG-4I



4I Installation direction



700G/704G/705G Cv value/pressure loss coefficient



- Butterfly Valve
- TRITEC**
- TT2**
- 334A**
- 344Q**
- 302A/303Q**
- 304A/304Q**
- 304YA**
- 302Y/304Y**
- 304M (HLV)**
- 507V/508V**
- DTM**
- 846T/847T/847Q**
- 841T/842T**
- 700Z**
- 700G/704G/705G**
- 72WG/72SG/72LG**
- 731P/732P/732Q/752W**
- 731R**
- 700E/700K/700S**
- 704G/722F/720F**
- 227P**
- 907T/908H (MKT)**
- 903L/901C/905C (Bata-check)**

72WG / 72SG / 72LG Cv value

Nominal size		Valve opening								
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°	
40	1 1/2	5	9	16	25	39	61	95	121	
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	
125	5	45	109	189	295	453	719	1144	1590	
150	6	60	148	262	423	685	1147	1897	2800	
200	8	67	188	347	576	969	1698	2902	4300	
250	10	130	351	675	1225	2125	3375	5091	6200	
300	12	194	487	972	1764	3011	4966	7412	8900	
350	14	232	662	1350	2030	3294	5167	7832	9620	
400	16	468	964	1648	2724	4529	6815	10553	12700	
450	18	583	1202	2068	3448	5692	8384	13116	15500	
500	20	758	1555	2656	4379	7214	10845	17100	19800	
600	24	1037	2141	3681	6129	10106	14911	22827	27300	

72WG / 72SG / 72LG Pressure Loss Coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
40	1 1/2	264	72	26	10	4	2	1	0.4
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	0.3
100	4	350	78	26	10	4	1	0.4	0.3
125	5	316	53	18	7	3	1	0.4	0.2
150	6	348	57	18	7	3	1	0.35	0.2
200	8	849	106	31	11	4	1	0.3	0.2
250	10	528	72	20	6	2	1	0.35	0.25
300	12	488	78	20	6	2	1	0.35	0.25
350	14	531	65	16	7	3	1	0.4	0.3
400	16	227	54	18	7	2	1	0.4	0.3
450	18	239	56	19	7	3	1	0.4	0.3
500	20	218	52	18	7	2	1	0.4	0.3
600	24	247	58	20	7	3	1	0.4	0.3

72WG / 72SG / 72LG Applicable Flange Standard

Nominal size		ANSI	BS4504	DIN
mm	inch	150Lb	NP16	NP16
40	1 1/2	○	○	○
50	2	○	○	○
65	2 1/2	○	○	○
80	3	○	○	○
100	4	○	○	○
125	5	○	○	○
150	6	○	○	○
200	8	○	○	○
250	10	○	○	○
300	12	○	○	○
350	14	○	○	○
400	16	○	○	○
450	18	○	○	○
500	20	○	○	○
600	24	○	○	○

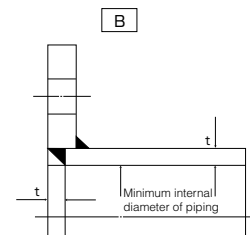
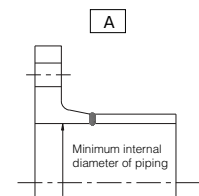
○ : Can be used without flange drilling.

72WG / 72SG / 72LG Applicable Pipe List in Case of **A**

Nominal size		SGP	Sch20	Sch40	Sch10S	Sch20S	Minimum internal diameters of piping (mm)
mm	inch						
40	1 1/2	○	—	○	○	○	26
50	2	○	○	○	○	○	31
65	2 1/2	○	○	○	○	○	48
80	3	○	○	○	○	○	67
100	4	○	○	○	○	○	87
125	5	○	○	○	○	○	115
150	6	○	○	○	○	○	140
200	8	○	○	○	○	○	188
250	10	○	○	○	○	○	243
300	12	○	○	○	○	○	292
350	14	○	○	○	—	—	324
400	16	○	○	○	—	—	375
450	18	○	○	○	—	—	421
500	20	○	○	○	—	—	471
600	24	—	○	○	—	—	557

72WG / 72SG / 72LG Applicable Pipe List in Case of **B**

Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S
mm	inch						
40	1 1/2	○	—	—	○	○	○
50	2	○	—	○	○	○	○
65	2 1/2	○	—	○	○	○	○
80	3	○	—	○	○	○	○
100	4	○	—	○	○	○	○
125	5	○	—	○	○	○	○
150	6	○	—	○	○	○	○
200	8	○	—	○	○	○	○
250	10	○	—	○	○	○	○
300	12	○	—	○	○	○	○
350	14	○	○	○	○	—	—
400	16	○	○	○	○	—	—
450	18	○	○	○	○	—	—
500	20	○	○	○	○	—	—
600	24	—	○	○	○	—	—



Remark 1: The symbols above mean the following.

○: Piping possible —: Not standardized

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.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

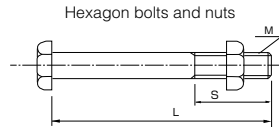
72WG Piping Bolts and Nuts Sizes

■ For Hexagon Bolts and Nuts

Nominal size		DIN PN16	GB PN16	BS PN16	ANSI 150Lb
mm	inch	Hex. bolt & nuts	Hex. bolt & nuts	Hex. bolt & nuts	Hex. bolt & nuts
40	1 1/2	4-M16× 90×30	4-M16× 90×30	4-M16× 90×30	4-1/2-13UNC× 90×38
50	2	4-M16×105×30	4-M16×105×30	4-M16×105×30	4-5/8-11UNC×105×38
65	2 1/2	4-M16×105×30	4-M16×105×30	4-M16×105×30	4-5/8-11UNC×110×38
80	3	8-M16×105×30	8-M16×105×30	8-M16×105×30	4-5/8-11UNC×120×38
100	4	8-M16×115×30	8-M16×115×30	8-M16×115×30	8-5/8-11UNC×125×38
125	5	8-M16×120×35	8-M16×120×35	8-M16×120×35	8-3/4-10UNC×130×45
150	6	8-M20×130×40	8-M20×130×40	8-M20×130×40	8-3/4-10UNC×135×45
200	8	12-M20×140×40	12-M20×140×40	12-M20×140×40	8-3/4-10UNC×145×50

Example

Hexagon bolts : 12 - M22 × 60 × 50
 | | | |
 N M L S



72SG/72LG Piping Bolts and Nuts Sizes

■ For Hexagon Bolts and Nuts (Flange Bolt Hole: Diilled Holes)

Size		DIN PN16	GB PN16	BS PN16	ANSI 150Lb
mm	inch	Hex. bolt & nuts	Hex. bolt & nuts	Hex. bolt & nuts	Hex. bolt & nuts
50	2	4-M16×105×30	4-M16×105×30	4-M16×105×30	4-5/8-11UNC×105×38
65	2 1/2	4-M16×105×30	4-M16×105×30	4-M16×105×30	4-5/8-11UNC×110×38
80	3	8-M16×105×30	8-M16×105×30	8-M16×105×30	4-5/8-11UNC×120×38
100	4	8-M16×115×35	8-M16×115×35	8-M16×115×35	8-5/8-11UNC×125×38
125	5	8-M16×120×35	8-M16×120×35	8-M16×120×35	8-3/4-10UNC×130×45
150	6	8-M20×130×40	8-M20×130×40	8-M20×130×40	8-3/4-10UNC×135×45
200	8	12-M20×140×40	12-M20×140×40	12-M20×140×40	8-3/4-10UNC×145×50
250	10	12-M20×160×45	12-M20×160×45	12-M20×160×45	12-7/8- 9UNC×155×50
300	12	12-M20×180×45	12-M20×180×45	12-M20×180×45	12-7/8- 9UNC×170×50
350	14	16-M20×180×45	16-M20×180×45	16-M20×180×45	12-1- 8UNC×180×55
400	16	16-M24×210×50	16-M24×210×50	16-M24×210×50	16-1- 8UNC×205×55
450	18	20-M24×230×55	20-M24×230×55	20-M24×230×55	16-1 1/8-8UN×225×60
500	20	20-M24×250×55	20-M24×250×55	20-M24×250×55	20-1 1/8-8UN×245×60
600	24	20-M27×290×60	20-M27×290×60	20-M27×290×60	20-1 1/4-8UN×290×65

■ For Hexagon Bolts and Nuts (Flange Bolt Hole: Tapped Holes)

Size		DIN PN16	GB PN16	BS PN16	ANSI 150Lb
mm	inch	Hex. bolt	Hex. bolt	Hex. bolt	Hex. bolt
50	2	8-M16×40×25	8-M16×40×25	8-M16×40×25	8-5/8-11UNC×35×20
65	2 1/2	8-M16×40×25	8-M16×40×25	8-M16×40×25	8-5/8-11UNC×40×25
80	3	16-M16×40×25	16-M16×40×25	16-M16×40×25	8-5/8-11UNC×40×25
100	4	16-M16×40×25	16-M16×40×25	16-M16×40×25	16-5/8-11UNC×40×25
125	5	16-M16×40×25	16-M16×40×25	16-M16×40×25	16-3/4-10UNC×45×30
150	6	16-M20×45×25	16-M20×45×25	16-M20×45×25	16-3/4-10UNC×45×30
200	8	24-M20×50×30	24-M20×50×30	24-M20×50×30	16-3/4-10UNC×50×30
250	10	24-M20×55×35	24-M20×55×35	24-M20×55×35	24-7/8- 9UNC×60×35
300	12	24-M20×60×40	24-M20×60×40	24-M20×60×40	24-7/8- 9UNC×65×35
350	14	32-M20×60×40	32-M20×60×40	32-M20×60×40	24-1- 8UNC×65×35
400	16	32-M24×65×45	32-M24×65×45	32-M24×65×45	32-1- 8UNC×70×40
450	18	40-M24×70×45	40-M24×70×45	40-M24×70×45	32-1 1/8-8UN×75×45
500	20	40-M24×75×50	40-M24×75×50	40-M24×75×50	40-1 1/8-8UN×75×45
600	24	40-M27×85×55	40-M27×85×55	40-M27×85×55	40-1 1/4-8UN×85×50

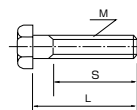
Remarks:
 Bolt/Nut material: SS400/SS400, SUS304/SUS304
 The dimensions in parenthesis show ANSI125Lb. (for 65 mm and 80 mm)
 Heavy nut shall be used for ANSI125Lb/150Lb hexagon nuts.
 A unified screw should have 8 threads per inch if its nominal diameter exceeds 1 inch.

Example

Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts)

Quantity Nominal size (M) Length of bolt (L) Effective screw length (S)

Setting bolts (Hexagon bolts)

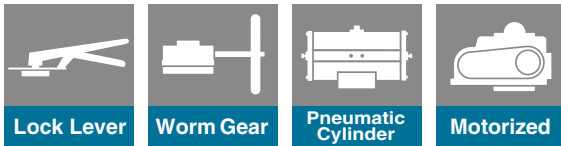
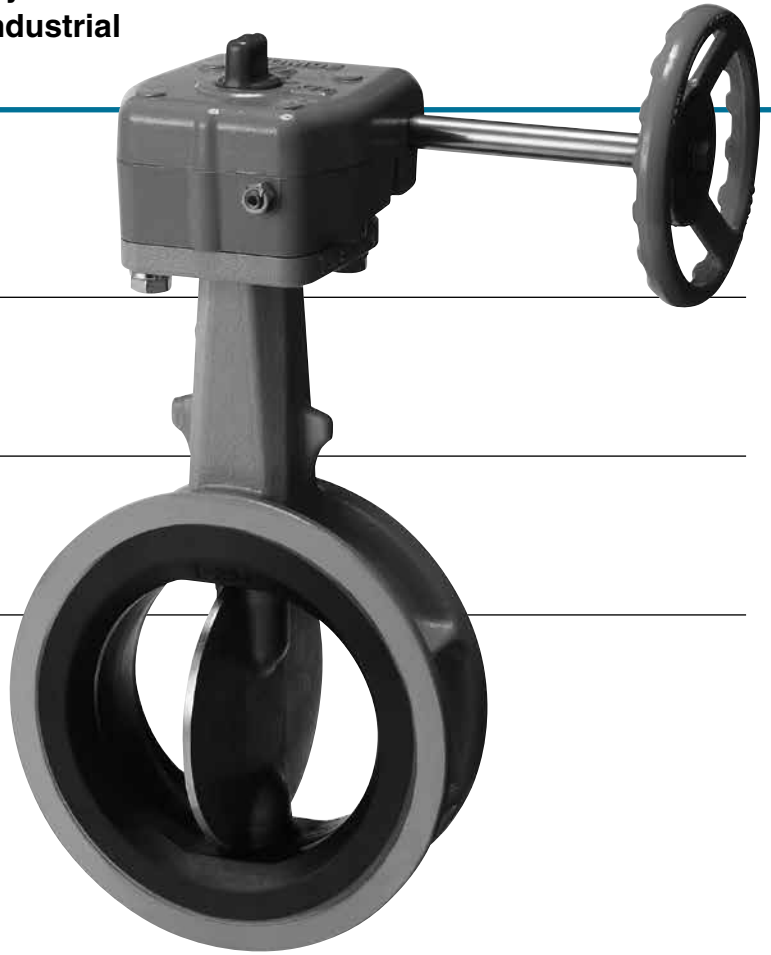


Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P Wafer

732P Wafer

732Q Lugged



Features and Benefits

Vulcanized rubber lining on the body

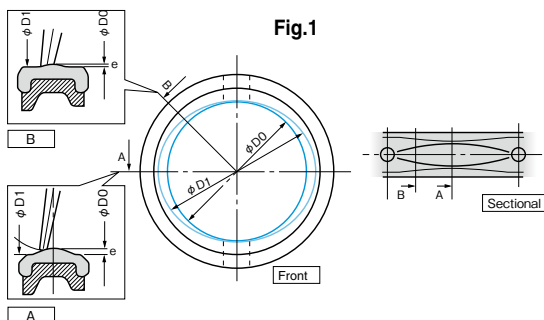
The seat is vulcanized to the body which ensures correct rubber compression and greater strength of the rubber seat. This design is much more effective in high velocity and industrial vacuum applications than soft resilient seated valves.

New cosine-curve seat

The new cosine-curve seat (patent pending) allows better performance in reducing friction, torque and wear than the previous design.

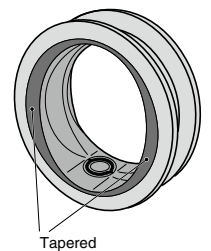
Cubical shape by lowering height

The height of the raised part of the seat in the narrow area is lower. It provides strength and sealing performance by preventing the movement of the raised portion of the seat in high pressure applications.



Tapered finish

To make the flow characteristic at small valve opening as close to linear as possible, the edge of the seat is tapered. This makes for a smoother flow and better performance in high velocity working conditions. The taper is narrow around the stem area and wide around the wing of the disc area to provide strength and sealing performance for the rubber seat.



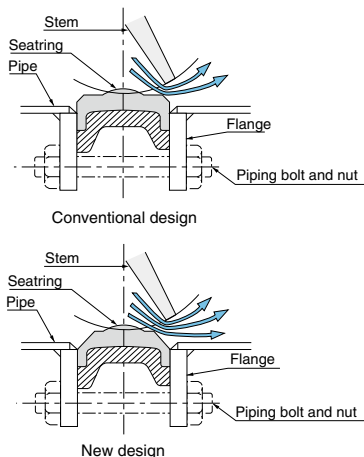
New streamlined shape around stem hole

Although the spherical disc provides good sealing performance and extended life for our rubber lined valves, it still produces relatively high forces around the stem hole area where a large contact surface exists. In order to produce greater pressure at this point of contact with less friction, we incorporate a labyrinth effect where six small raised lines are moulded around the stem hole.

Features a concentric design with tight 100% bi-directional shut-off, low torque and a maximum working pressure of 1.6MPa to 2.0MPa.

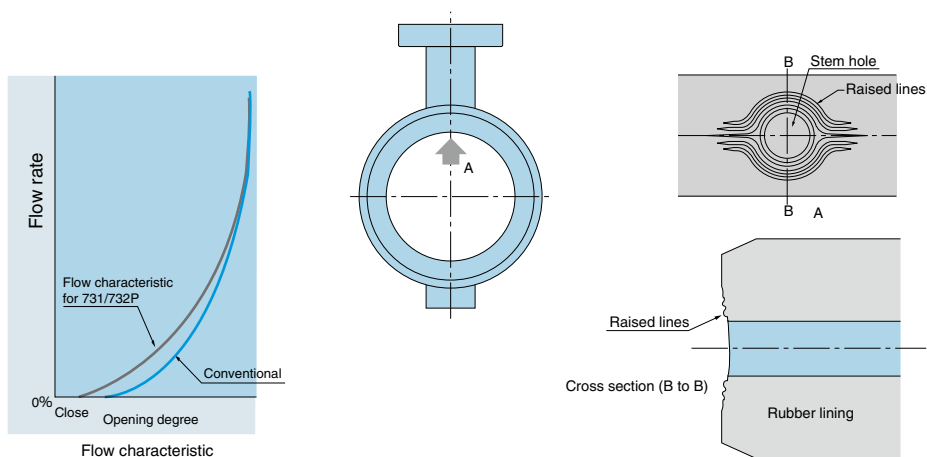
Tapered Finish

Fig. 2



New streamline shape around stem hole

Fig. 3



Standard Specifications

Valve nominal size	1.6MPa (16K) type	2.0MPa (20K) type	1.6MPa (16K) type	2.0MPa (20K) type
	731P (Wafer)	732P (Wafer)	732X (Wafer), 732Q (Lugged)	
Applicable flange standard	50mm to 300mm			
Face-to-face dimensions	JIS 10K /16K /20K ANSI 125 /150lb DIN PN 10 /16 /25 BS 4504 PN 10 /16 /25			
Max. working pressure	1.6MPa	2.0MPa	1.6MPa	2.0MPa
Body shell test (hydraulic)	2.4MPa	3.0MPa	2.4MPa	3.0MPa
Seat leak test	1.76MPa	2.2MPa	1.76MPa	2.2MPa
Velocity range	Max. 6m/sec (when fully open)			
Vacuum condition	2.0 torr or over			
Working temperature range	NBR : -10 to 80 degrees C, *EPDM : -20 to 120 degrees C			
Working temperature in continuous use ※1	NBR : 0 to 60 degrees C, *EPDM : 0 to 70 degrees C			
Standard materials	Body	FCD450		FCD450, SCPH2
	Disc	SCS14		SCS14/CAC702, CAC703
	Stem	420J2 S.S		420J2 S.S, MONEL K-500
	Seat ring	NBR, *EPDM		
Actuators	Lock lever	50mm to 200mm		100mm to 150mm
	Worm gear			
	Pneumatic Cylinder	50mm to 300mm		100mm to 300mm
	Motorised			
Coating	Epoxy primer (Munsell N7)		Lacquer primer (Munsell N7)	

※1 'Working temperature in continuous use' stands for the temperature continuously kept exceeding one hour.

A resin column for condensation free applications is available.

Disc with pin finish is also available upon request for 732P.

* Never use an EPDM rubber seat ring if the valve is being used for oil or for a fluid containing even a slight amount of oil.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

Ideal, Cost Effective Valve for Use in High Velocity, High Pressure and Industrial Vacuum Applications

731P Wafer

732P Wafer

732Q Lugged

752W Lugged



Features and Benefits

Perfect sealing against high pressure to 2.0MPa

By employing a cosine-curve design seat ring, the disc contacts simultaneously around the entire seat during closure which enables perfect sealing against pressures up to 1.96MPa. Perfect sealing is assured in high differential pressure, high velocity and vacuum applications. The operation torque for the valve is substantially reduced. Also, since the body is covered with the seat ring, it is never exposed to fluid.

No restrictions in direction of flow even for high differential pressures

With a concentric design and low operating torque, 731P/732P can perfectly seal pressures up to 2.0MPa or 1.6MPa for both directions.

Face-to-face dimensions satisfy ISO standards

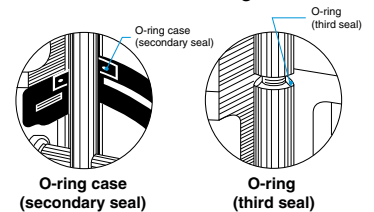
The face-to-face dimensions satisfy BS 5155 and ISO 5752. It is also adaptable to many international flange standards.

Long neck

The long neck enables insulation of up to 50mm after installation of the valve.

O-ring case with self-aligning stem seal function

The stainless steel O-ring case (utility model) counteracts any stem displacement and shaft tilt caused during the operation of the valve under fluid pressure. Because this O-ring is never exposed to the fluid, it never erodes.



The rubber seat is reinforced with a metallic core

Since this reinforced seat ring is clamped in position by the flanges, it is much more effective in high velocity and industrial vacuum applications than a soft resilient seat without a metallic core. Moreover, the seat ring can easily be replaced (350 to 600mm types). The vulcanized seat to the body is used in sizes 50 to 80mm.



Stainless steel disc as a standard material

Stainless steel disc provides excellent corrosion resistance in various applications.

General Description

With applications for high pressure service valves increasing, TOMOE have developed a new 20K type in addition to the traditional 16K type. The 20K type is designed to seal high pressures up to 2.0MPa, while the 16K type can seal up to 1.6MPa. This concentric butterfly valve incorporates a cosine-curve design seat ring reinforced with a metallic core and provides excellent cost advantages.

14" to 24" (350 to 600mm)

■ Parts List (standard)

No.	Parts	Materials
1	Body	Ductile cast Iron
2	Disc	Stainless steel casting
3	Stem	Stainless steel
4	Bush	METALOPLAST
5		
6	Mild steel / ductile cast iron	Bottom cover
8	Taper bolt	Stainless steel
10	Bolt & SP. washer	Mild steel / high carbon steel
12	Seat ring	Elastomer
13	O-ring	Elastomer
14	Packing	Asbestos
15	O-ring	Elastomer
16	Ball	Steel
17	Bolt	Carbon steel
18	Lock nut	Mild steel
22	Core	Mild steel

Standard Specifications

Valve nominal size	1.6MPa (16K) type			2.0MPa (20K) type		
	731P (Wafer) 350mm to 600mm	732Q (Lugged) 350mm to 400mm	752W (Lugged) 450mm to 600mm	732P (Wafer) 350mm to 600mm	732Q (Wafer) 350mm to 400mm	752W (Lugged) 450mm to 600mm
Applicable flange standard	JIS 10K /16K /20K ANSI 125 /150lb DIN PN 10 /16 BS 4504 PN 10 /16					
Face-to-face dimensions	JIS B 2002 (2032) 46 series / ISO 5752 (20 series) / BS1555					
Max. working pressure	1.6MPa			2.0MPa		
Body shell test (hydraulic)	2.4MPa			3.0MPa		
Seat leak test	1.76MPa			2.2MPa		
Velocity range	Max. 6m/sec (when fully open)					
Working temperature range	NBR : -10 to 80 degrees C, *EPDM : -20 to 120 degrees C					
Working temperature in continuous use ※1	NBR : 0 to 60 degrees C, *EPDM : 0 to 70 degrees C					
Standard materials	Body	FCD450 (SCPH2 as an option)	FCD450, SCPH2	FCD450 (SCPH2 as an option)	FCD450, SCPH2	
	Disc	SCS13 (SCS14 as an option)	SCS13 (SCS14 as an option), CAC702, CAC703	SCS13 (SCS14 as an option)	SCS13 (SCS14 as an option), CAC702, CAC703	
	Stem	420J2 S.S	420J2 S.S, MONEL K-500	630 S.S	420J2 S.S, MONEL K-500	
	Seat ring	NBR, *EPDM				
Actuators	Worm gear	350mm to 600mm				
	Pneumatic cylinder					
	Motorised					
Coating	Lacquer primer (Munsell N7)					

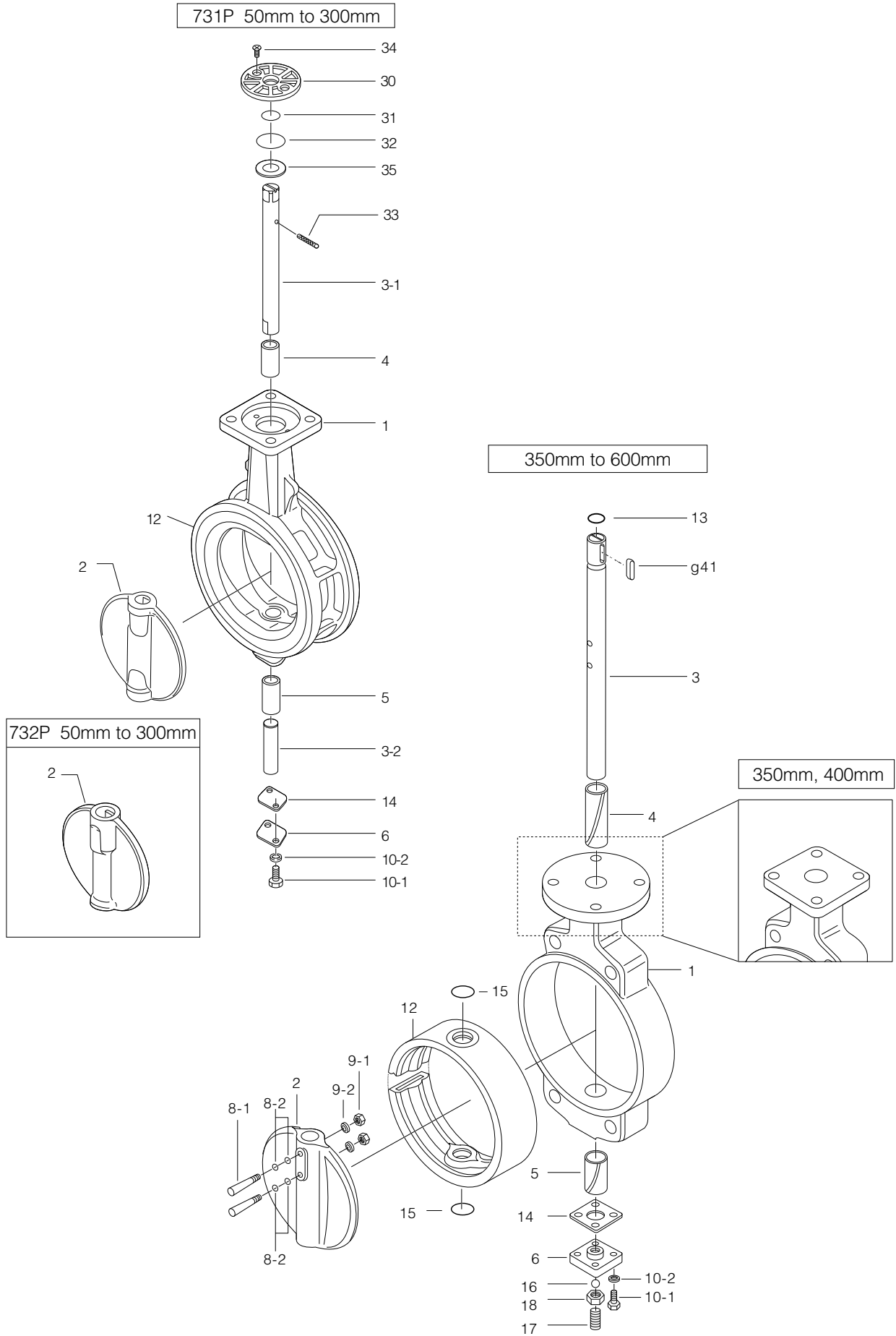
※1 'Working temperature in continuous use' stands for the temperature continuously kept exceeding one hour.

※2 Please consult us other material requisition.

* Never use an EPDM rubber seat ring if the valve is being used for oil or for a fluid containing even a slight amount of oil.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P Expanded view of components



731P/732P Parts list

■ 731P Parts list (50mm to 300mm)

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	
★ 12	Seat ring	1	Vulcanized to body
★ 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	

■ 732P Parts list (50mm to 300mm)

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	
★ 12	Seat ring	1	Vulcanized to body
★ 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	

■ 731P/732P 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	Stem key	4	
★ 12	Seat ring	1	
★ 13	O-ring	1	
14	Gasket	1	
★ 15	O-ring	2	
16	Ball	1	
17	Hollow bolt	1	
18	Lock nut	1	
g41	Key	1	

Remark: The ★ indicates recommended spare parts. They are supplied as "Seat ring set".

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P (Wafer) 732Q/752W (Lugged)

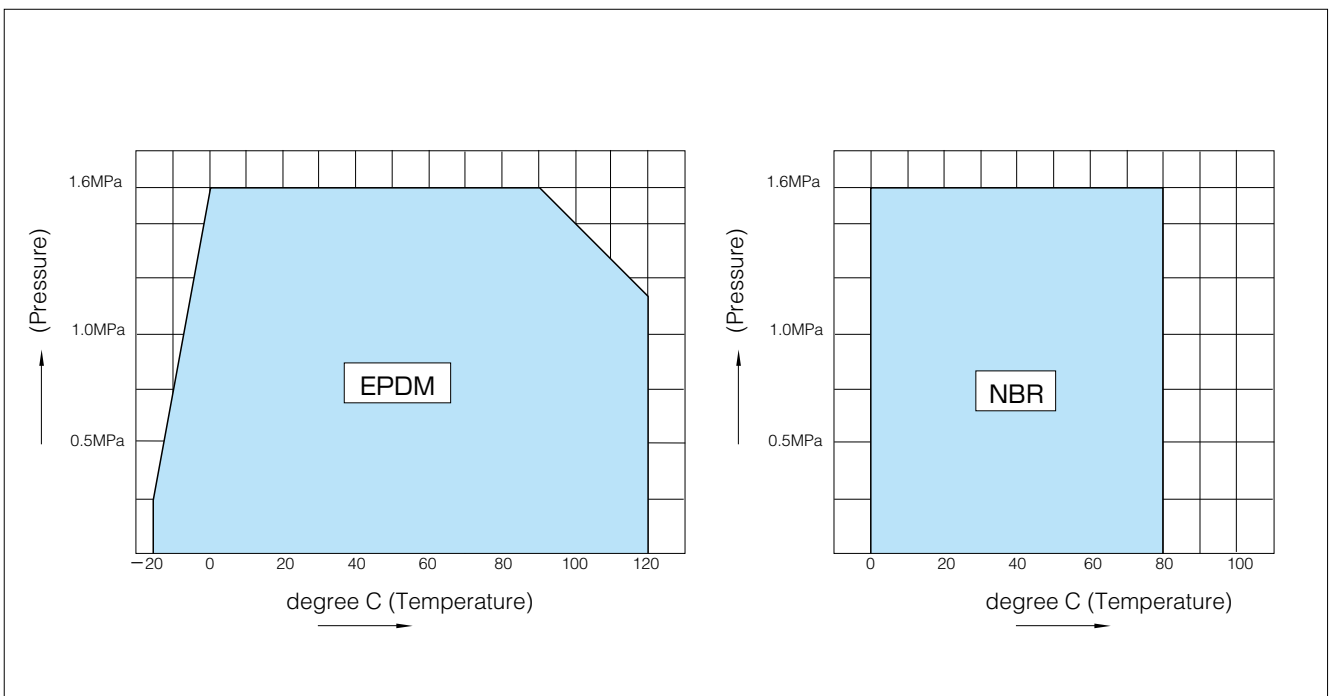
731P Actuator selection chart

731P

Model	Category	Size (mm / inch)															
		50	65	80	100	125	150	200	250	300	350	400	450	500	600		
		2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24		
1T	Standard	1T-1			1T-2			1T-3									
	Heavy duty																
2I,2U 2S	Standard	2I-0		2I-1		2I-2		2I-3		2I-4		2U-5		MGH-3		MGH-4	
	Heavy duty																
7E,3A	Standard	T35		T85		T200		T380		T750		TGA-125		TGA-140		TGA-160	TGA-200
	Heavy duty																
7G,7F 3U,3K	Standard	T85S		T200S		T380S		T750S		TG-12S		TG-14S		TG-20S			
	Heavy duty																
4I	Standard	4I-00		4I-0		4I-1		4I-2		4I-2.5		4I-3		4I-4			
	Heavy duty																
4J,4L	Standard	SRJ-010			SRJ-020			SRJ-060			LTKD-01 0.2kW /MGH-2		LTKD-01 0.4kW /MGH-3		LTKD-02 0.75kW /MGH-4		LTKD-05 0.75kW /MGH-5
	Heavy duty																

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

731P Pressure-temperature rating



732P Actuator selection chart

732P

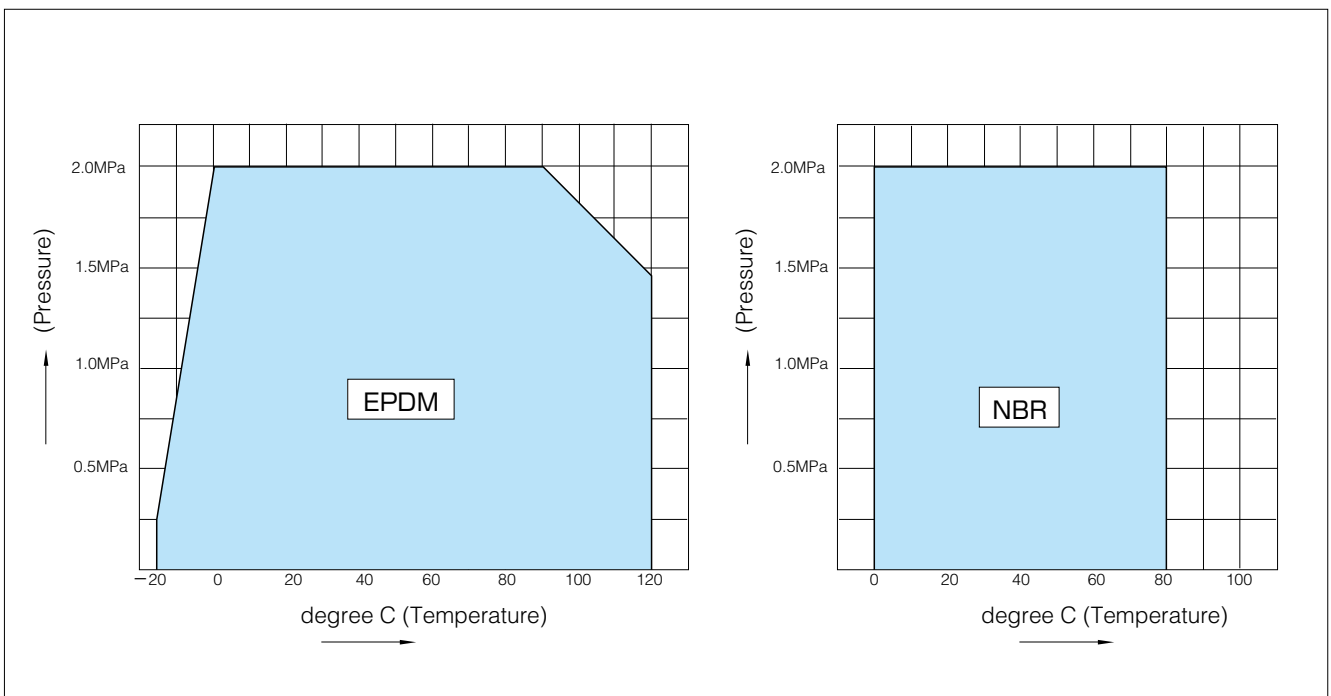
Model	Category	Size (mm / inch)													
		50	65	80	100	125	150	200	250	300	350	400	450	500	600
		2	2 1/2	3	4	5	6	8	10	12	14	16	18	20	24
1T	Standard	1T-1			1T-2			1T-3							
	Heavy duty	1T-1			1T-2			1T-3							
2I, 2U 2S	Standard	2I-0	2I-1	2I-2	2I-3	2I-4	2U-5	MGH-3	MGH-4						
	Heavy duty	2I-0	2I-1	2I-2	2I-3	2I-4	2U-5	MGH-3	MGH-4						
7E, 3A	Standard	T35	T85	T200	T380	T750									
	Heavy duty	T35	T85	T200	T380	T750	TGA-125								
7G, 7F 3U, 3K	Standard	T85S	T200S	T380S	T750S	TG-10S	TG-12S								
	Heavy duty	T85S	T200S	T380S	T750S	TG-12S	TG-14S								
4I	Standard	4I-00 4I-0	4I-0	4I-1	4I-2	4I-3									
	Heavy duty	4I-00 4I-0	4I-0	4I-1	4I-2	4I-3									
4J, 4L	Standard	SRJ-010			SRJ-020			SRJ-060	LTKD-01 0.2kW /MGH-2						
	Heavy duty	SRJ-010			SRJ-020			SRJ-060	LTKD-01 0.2kW /MGH-2						

Please consult us regarding selection of drive parts for 350mm and higher.

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

732P Pressure-temperature rating



731P/732P (Wafer) 732Q/752W (Lugged)

Bare shaft 731P-01 (50mm to 300mm) / 731P-02 (350mm, 400mm)

731P-01 (50mm to 300mm) / 731P-02 (350mm, 400mm)

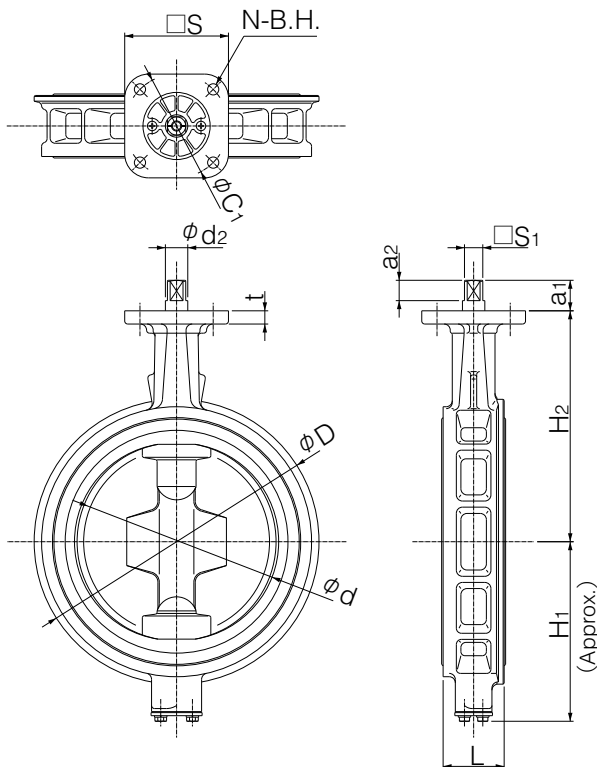
Type	Nominal size		Dimension (mm)													Approx. Mass (kg)	
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	a ₁	a ₂	□S ₁	ϕd_2	b	t ₂	t		Flan ges
				JIS10K	JIS16K												
731P	50	2	54	102	102	43	68	138	21.5	10.5	8	10	—	—	11	F07	1.8
	65	2 1/2	67	122	122	46	79	151	21.5	10.5	8	10	—	—	11	F07	2.2
	80	3	82	132	138	46	86	156	22.5	11.5	10	12	—	—	11	F07	2.8
	100	4	103	157	163	52	103	167	22.5	11.5	12	14	—	—	11	F07	3.6
	125	5	129	188	200	56	118	191	27.5	16.5	14	16	—	—	13	F10	5.8
	150	6	152	218	235	56	135	202	27.5	16.5	14	18	—	—	13	F10	7.8
	200	8	198	267	280	60	177	227	29	20	18	22	—	—	13	F10	11.5
	250	10	251	330	353	68	216	280	34	30	24	28	—	—	14	F10	20.3
	300	12	300	375	403	78	254	312	35	30	24	32	—	—	16	F12	28.9
	350	14	336	415	415	78	304	340	54	48	—	40	12	3	20	F14	71
400	16	390	477	477	102	343	380	65	59	—	46	14	3.5	20	F14	107	

Flange dimensions

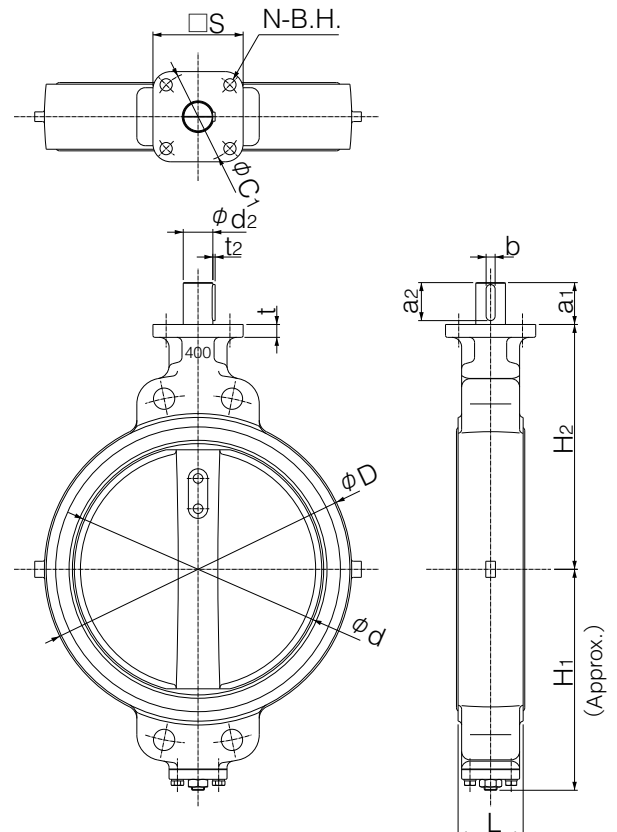
Flange	□S	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19

Stem design	01: Square
	02: Round with key

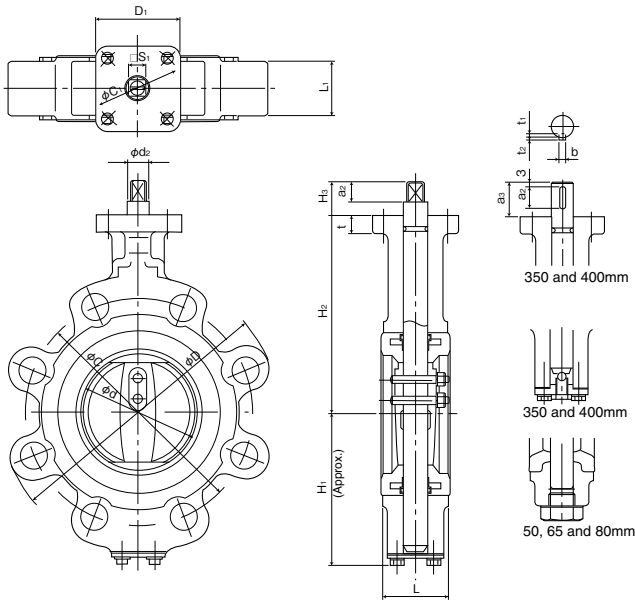
731P (16K) 50mm to 300mm



731P (16K) 350mm, 400mm



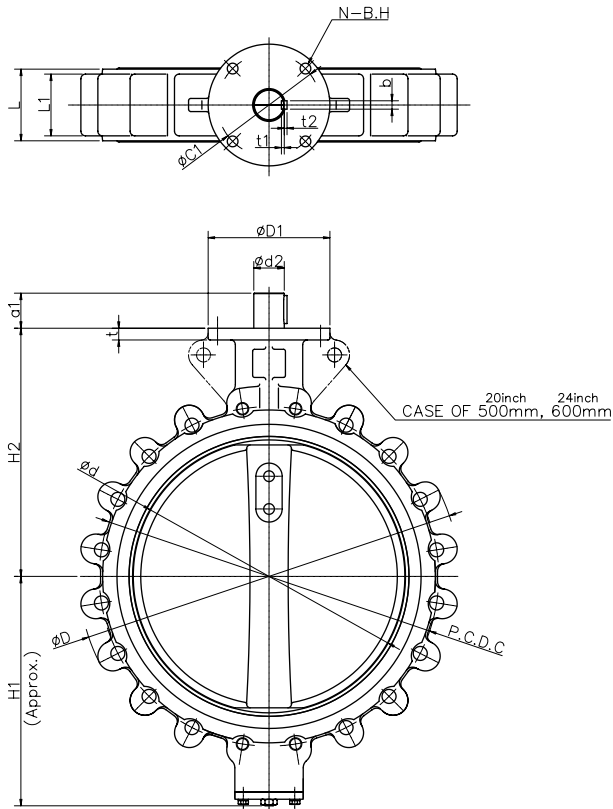
732Q Lugged type



■ Dimensions

Nominal size		Dimension (mm)															Approx. Mass (kg)	
mm	inch	φd	φD	L	L ₁	H ₁	H ₂	H ₃	φd ₂	a ₂	S ₁	b	t ₁	t ₂	D ₁	t		φC ₁
50	2	55	152	43	32	76	120	23	14	12	12	—	—	—	70	12	70	4
65	2 1/2	70	178	46	36	85	130	23	14	12	12	—	—	—	70	12	70	4.5
80	3	80	190	46	36	94	140	23	14	12	12	—	—	—	70	12	70	5.5
100	4	98	229	52	42	125	165	28	18	17	14	—	—	—	70	12	70	12
125	5	123	254	56	46	148	180	28	18	17	14	—	—	—	102	14	102	15
150	6	150	279	56	46	166	205	28	18	17	14	—	—	—	102	14	102	17
200	8	202	343	60	50	190	230	35	28	30	24	—	—	—	102	14	102	24.5
250	10	254	406	68	58	232	270	35	32	30	24	—	—	—	125	14	125	41
300	12	304	483	78	68	259	300	35	32	30	24	—	—	—	125	16	125	69.5
350	14	336	555	78	70	304	340	54	40	45	—	12	5	3	140	20	140	95
400	16	390	597	102	86	343	380	65	46	56	—	14	5.5	3.5	140	20	140	131

752W Lugged type



■ Dimensions (ANSI 125/150Lb)

Nominal size		Dimension (mm)																	Approx. Mass (kg)	
mm	inch	φd	φD	L	L ₁	H ₁	H ₂	φd ₂	a ₁	a ₂	a ₃	b	t ₁	t ₂	t	φD ₁	φC ₁	N		B.H.
450	18	439	635	113	94	379	420	47	60	50	3	12	4.5	3.5	20	200	170	4	19	120
500	20	490	698	126	109	422	450	47	60	50	3	12	4.5	3.5	20	200	170	4	19	170
600	24	583	813	153	132	494	530	65	75	60	5	12	6	6	25	260	220	4	23	255

Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M

(HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

**731P/732P/
732Q/752W**

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H

(MKT)

**903L/901C/
905C (Bata-check)**

731P/732P (Wafer) 732Q/752W (Lugged)

Bare shaft 731P-02 (450mm to 600mm)

731P-02 (450mm to 600mm)

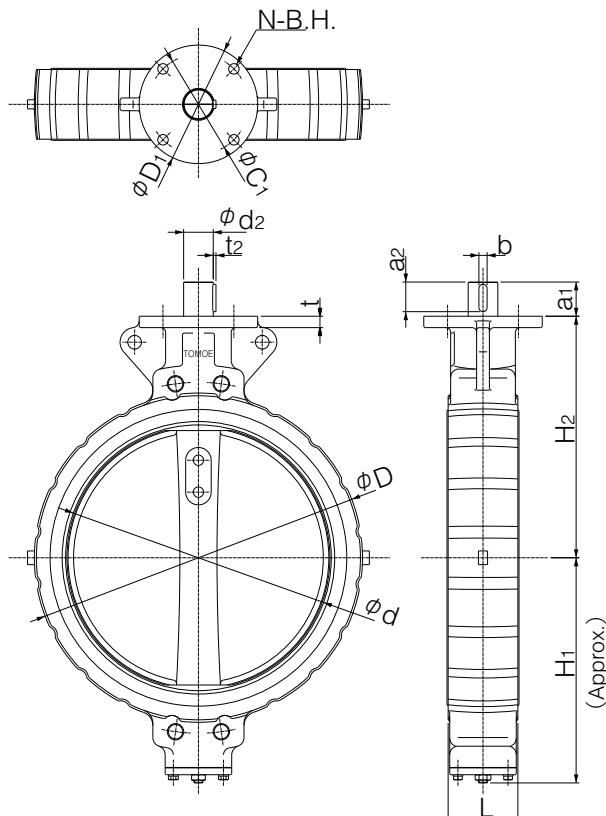
Type	Nominal size		Dimension (mm)															Approx. Mass (kg)	
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	a ₁	a ₂	ϕd_2	b	t ₂	t	D ₁	C ₁	N		B.H.
				JIS10K	JIS16K														
731P	450	18	439	532	532	114	379	420	60	53	47	12	3.5	20	200	170	4	19	137
	500	20	490	610	610	127	422	450	60	53	47	12	3.5	20	200	170	4	19	188
	600	24	583	826	720	154	494	530	75	65	65	18	6	25	260	220	4	23	318(348)

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

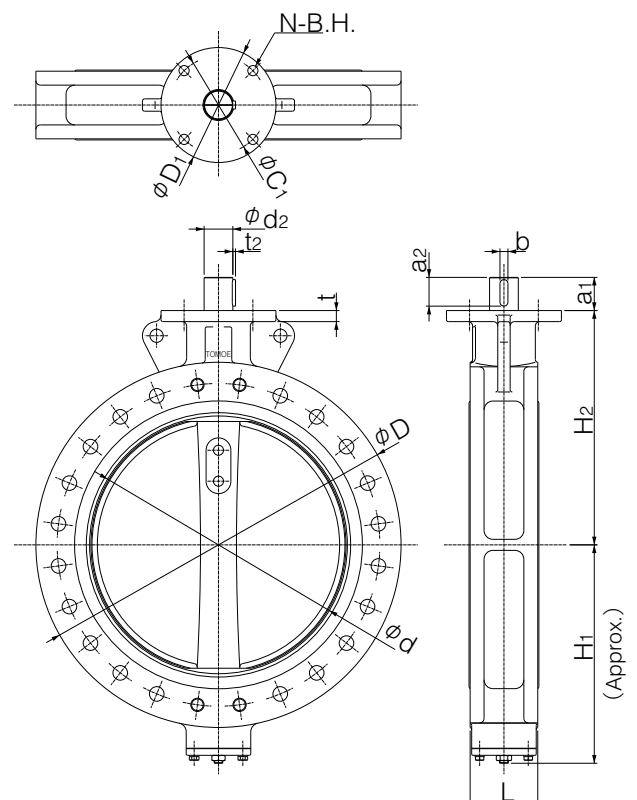
Flange dimensions

Flange	□S	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19

731P (16K) 450mm to 600mm



731P (10K) 600mm



Bare shaft 732P-01 (50mm to 300mm) / 732P-02 (350mm, 400mm) / 732P-02 (450mm to 600mm)

■ 732P-01 (50mm to 300mm) / 732P-02 (350mm, 400mm)

Type	Nominal size		Dimension (mm)													Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	□S ₁	ϕd_2	b	t ₂	t	Flange	
732P	50	2	54	102	43	68	138	21.5	10.5	8	10	—	—	11	F07	1.9
	65	2 1/2	67	122	46	79	151	21.5	10.5	8	10	—	—	11	F07	2.3
	80	3	82	138	46	86	156	22.5	11.5	10	12	—	—	11	F07	3
	100	4	103	163	52	103	167	22.5	11.5	12	14	—	—	11	F07	3.8
	125	5	129	200	56	118	191	27.5	16.5	14	16	—	—	13	F10	6.1
	150	6	152	235	56	135	202	27.5	16.5	14	18	—	—	13	F10	7.7
	200	8	198	280	60	177	227	29	20	18	22	—	—	13	F10	12.1
	250	10	251	353	68	216	280	34	30	24	28	—	—	14	F10	21
	300	12	300	403	78	254	312	35	30	24	32	—	—	16	F12	29
	400	16	390	477	102	343	380	65	59	—	46	14	3.5	20	F14	107

■ Flange dimensions

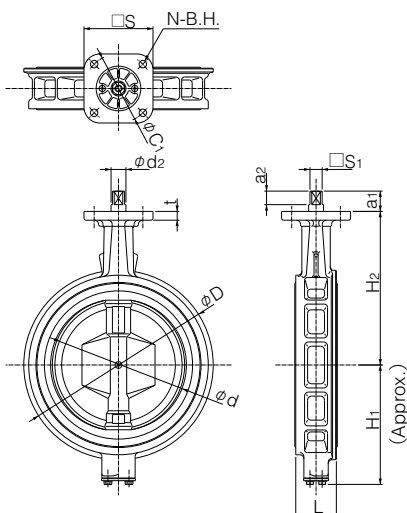
Flange	□S	ϕC_1	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19

Stem design
 01: Square
 02: Round with key

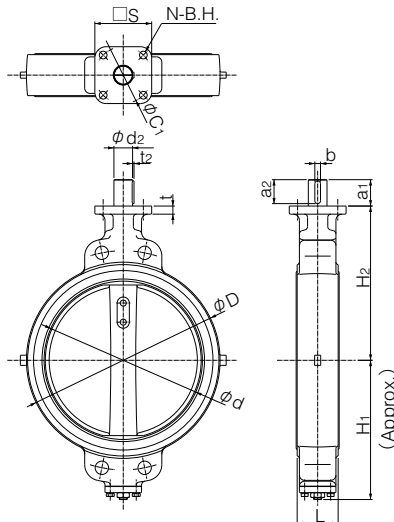
■ 732P-02 (450mm to 600mm)

Type	Nominal size		Dimension (mm)														Approx. Mass (kg)	
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	a ₁	a ₂	ϕd_2	b	t ₂	t	D ₁	C ₁	N		B.H.
732P	450	18	439	532	114	379	420	60	53	47	12	3.5	20	200	170	4	19	137
	500	20	490	610	127	422	450	60	53	47	12	3.5	20	200	170	4	19	188
	600	24	583	720	154	494	530	75	65	65	18	6	25	260	220	4	23	318

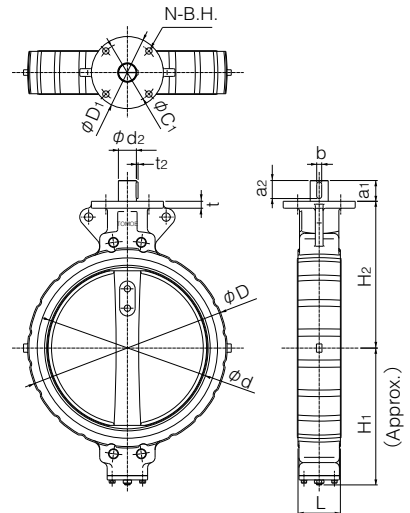
■ 732P (20K)
50mm to 300mm



■ 732P (20K)
350mm, 400mm



■ 732P (20K)
450mm to 600mm



Butterfly Valve

TRITEC

TT2

334A

344Q

302A/303Q

304A/304Q

304YA

302Y/304Y

304M (HLV)

507V/508V

DTM

846T/847T/847Q

841T/842T

700Z

700G/704G/705G

72WG/72SG/72LG

731P/732P/732Q/752W

731R

700E/700K/700S

704G/722F/720F

227P

907T/908H (MKT)

903L/901C/905C (Beta-check)

731P/732P (Wafer) 732Q/752W (Lugged)

Lock lever type 732P-1T (50mm to 200mm)

732P-1T

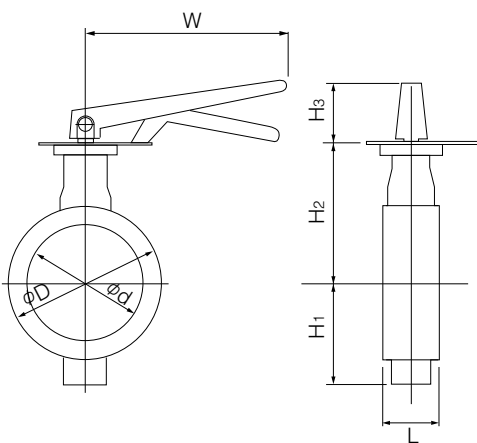
Nominal size		Dimension (mm)							Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	W		
50	2	54	102	43	68	138	66	200	1T-1	2.5
65	2 1/2	67	122	46	79	151	66	200	1T-1	2.9
80	3	82	138	46	86	156	66	200	1T-1	3.6
100	4	103	163	52	103	167	66	200	1T-1	4.4
125	5	129	200	56	118	191	92	300	1T-2	7.4
150	6	152	235	56	135	202	92	300	1T-2	9
200	8	198	280	60	177	227	97	350	1T-3	13.8

Lock lever type 731P-1T (50mm to 200mm)

731P-1T

Nominal size		Dimension (mm)								Lever type	Approx. Mass (kg)
mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	W		
			JIS10K	JIS16K							
50	2	54	102	102	43	68	138	66	200	1T-1	2.4
65	2 1/2	67	122	122	46	79	151	66	200	1T-1	2.8
80	3	82	132	138	46	86	156	66	200	1T-1	3.4
100	4	103	157	163	52	103	167	66	200	1T-1	4.2
125	5	129	188	200	56	118	191	92	300	1T-2	7.1
150	6	152	218	235	56	135	202	92	300	1T-2	9.1
200	8	198	267	280	60	177	227	97	350	1T-3	13.2

732P/731P-1T

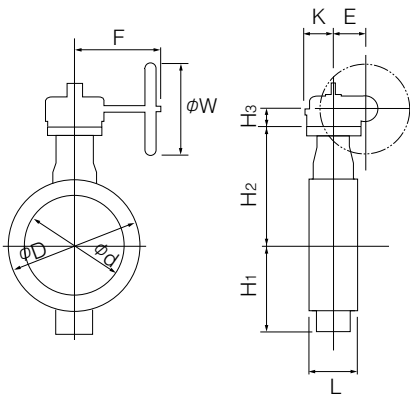


Worm gear type 732P-2I(50mm to 300mm) / 732P-2U(350mm, 400mm) / 732P-2S(450mm to 600mm)

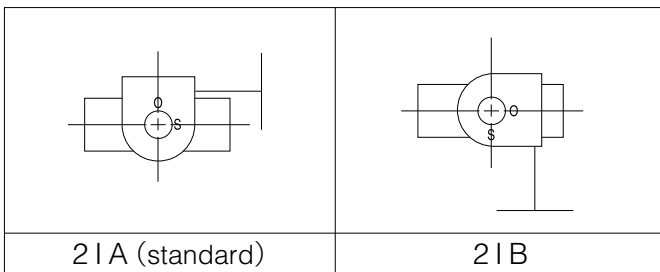
■ 732P

Type	Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
732P	50	2	54	102	43	68	138	24	28	35	83	70	2I-0	2.4
	65	2 1/2	67	122	46	79	151	24	28	35	83	70	2I-0	2.9
	80	3	82	138	46	86	156	27	46	48	145	100	2I-1	4.2
	100	4	103	163	52	103	167	27	46	48	145	100	2I-1	5
	125	5	129	200	56	118	191	30	53	51	160	125	2I-2	8
	150	6	152	235	56	135	202	30	53	51	160	125	2I-2	9.6
	200	8	198	280	60	177	227	36	71	65	208	200	2I-3	16
	250	10	251	353	68	216	280	36	71	65	193	200	2I-3	25
	300	12	300	403	78	254	312	38.5	71	65	193	200	2I-4	34
	350	14	336	415	78	304	340	50	90	105	266	280	2U-5	90
	400	16	390	477	102	343	380	50	90	105	266	280	2U-5	126
	450	18	439	532	114	379	420	55	117	164	335	355	MGH-3	172
	500	20	490	610	127	422	450	55	117	164	335	355	MGH-3	222
600	24	583	720	154	494	530	65	140	198	400	450	MGH-4	378	

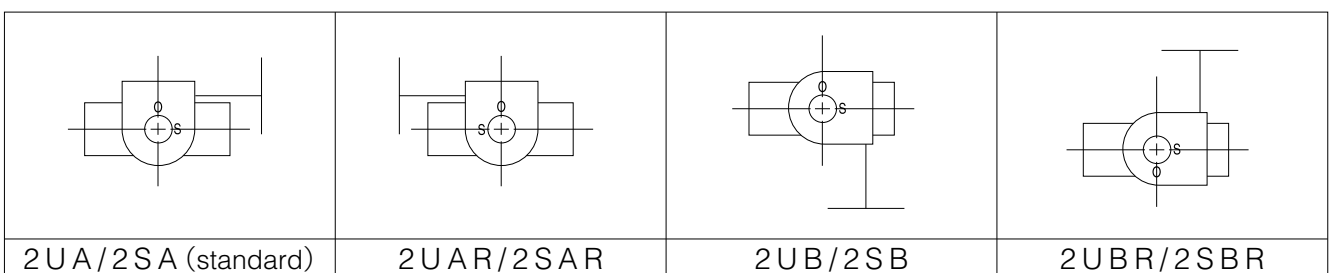
■ 732P-2 I/2U/2S



■ 2I Installation direction



■ 2U/2S Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P (Wafer) 732Q/752W (Lugged)

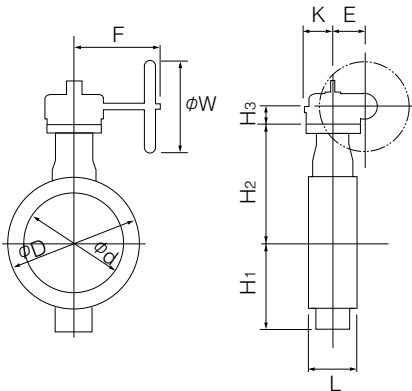
Worm gear type 731P-2I(50mm to 300mm)/731P-2U(350mm, 400mm)/731P-2S(450mm to 600mm)

732P

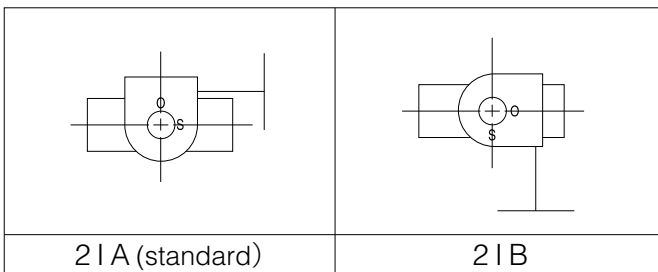
Type	Nominal size		Dimension (mm)											Gear type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	E	K	F	W		
				JIS10K	JIS16K										
731P	50	2	54	102	102	43	68	138	24	28	35	83	70	2I-0	2.4
	65	2 1/2	67	122	122	46	79	151	24	28	35	83	70	2I-0	2.8
	80	3	82	132	138	46	86	156	27	46	48	145	100	2I-1	4.1
	100	4	103	157	163	52	103	167	27	46	48	145	100	2I-1	4.8
	125	5	129	188	200	56	118	191	30	53	51	160	125	2I-2	7.7
	150	6	152	218	235	56	135	202	30	53	51	160	125	2I-2	9.7
	200	8	198	267	280	60	177	227	36	71	65	208	200	2I-3	15.5
	250	10	251	330	353	68	216	280	36	71	65	193	200	2I-3	24.3
	300	12	300	375	403	78	254	312	38.5	71	65	193	200	2I-4	34.1
	350	14	336	415	415	78	304	340	50	90	105	266	280	2U-5	90
	400	16	390	477	477	102	343	380	50	90	105	266	280	2U-5	126
	450	18	439	532	532	114	379	420	55	117	164	335	355	MGH-3	172
	500	20	490	610	610	127	422	450	55	117	164	335	355	MGH-3	222
600	24	583	826	720	154	494	530	65	140	198	400	450	MGH-4	378(408)	

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

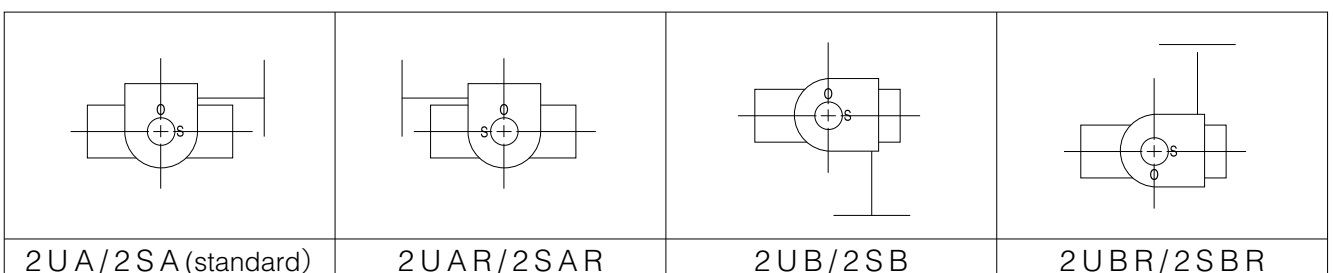
731P-2I/2U/2S



2I Installation direction



2U/2S Installation direction



Double-acting pneumatic cylinder type 731P-7E (50mm to 300mm)

Standard

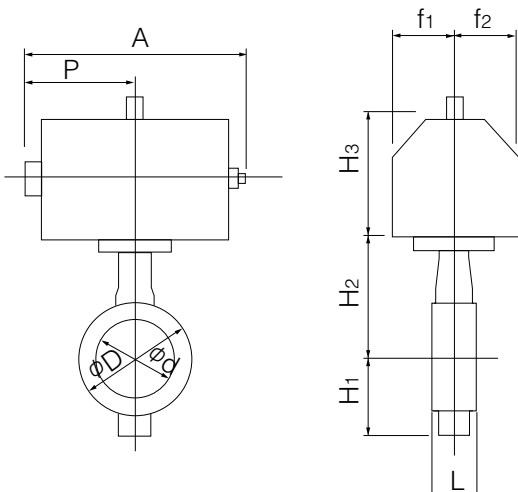
Type	Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
				JIS10K	JIS16K										
731P	50	2	54	102	102	43	68	138	125	228	116	57	29	T35	4
	65	2 1/2	67	122	122	46	79	151	125	228	116	57	29	T35	4
	80	3	82	132	138	46	86	156	125	228	116	57	29	T35	5
	100	4	103	157	163	52	103	167	168	276	142	75	47	T85	9
	125	5	129	188	200	56	118	191	203	346	176	79	57	T200	14
	150	6	152	218	235	56	135	202	203	346	176	79	57	T200	16
	200	8	198	267	280	60	177	227	231	423	214	91	69	T380	26
	250	10	251	360	353	68	216	280	231	423	214	91	69	T380	35
300	12	300	375	403	78	254	312	269	546	270	118	85	T750	53	

Heavy duty

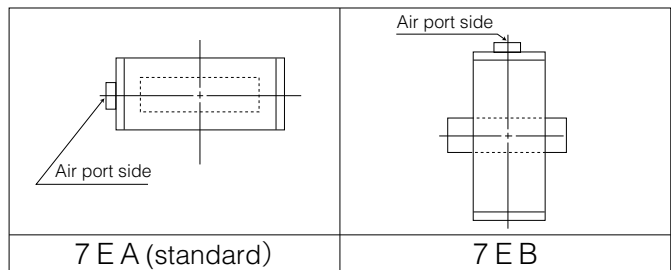
Type	Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
				JIS10K	JIS16K										
731P	50	2	54	102	102	43	68	138	125	228	116	57	29	T35	4
	65	2 1/2	67	122	122	46	79	151	168	276	142	75	47	T85	7
	80	3	82	132	138	46	86	156	168	276	142	75	47	T85	8
	100	4	103	157	163	52	103	167	168	276	142	75	47	T85	9
	125	5	129	188	200	56	118	191	203	346	176	79	57	T200	14
	150	6	152	218	235	56	135	202	231	423	214	91	69	T380	22
	200	8	198	267	280	60	177	227	231	423	214	91	69	T380	26
	250	10	251	330	353	68	216	280	269	546	270	118	85	T750	45

Selection criteria	Standard	Heavy duty
	Select when none of the following heavy duty items apply.	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

731P-7E



7E Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P (Wafer) 732Q/752W (Lugged)

Double-acting pneumatic cylinder type 731P-3A (300mm to 600mm)

Standard

Type	Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
				JIS10K	JIS16K										
731P	350	14	336	415	415	78	304	340	364	743	362	100	164	TGA-125	177
	400	16	390	477	477	102	343	380	364	743	362	100	164	TGA-125	228
	450	18	439	532	532	114	379	420	407	810	417	100	180	TGA-140	194
	500	20	490	610	610	127	422	450	435	939	483	130	202	TGA-160	294
	600	24	583	826	720	154	494	530	570	1163	599	160	253	TGA-200	537(567)

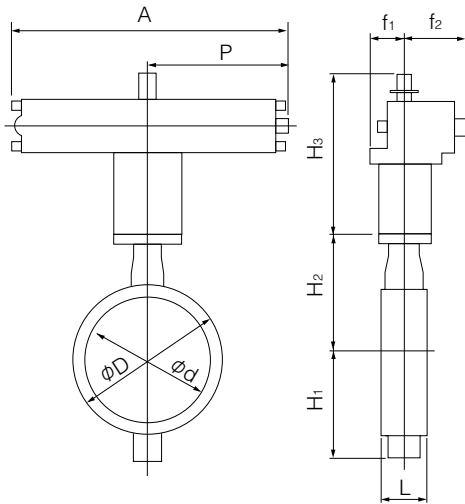
Remark: Value in brackets is for JIS 10K flanges.

Heavy duty

Type	Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
				JIS10K	JIS16K										
731P	300	12	300	375	403	78	254	312	359	743	362	100	164	TGA-125	74
	350	14	336	415	415	78	304	340	412	810	393	100	180	TGA-140	128
	400	16	390	477	477	102	343	380	465	939	456	130	202	TGA-160	208
	450	18	439	532	532	114	379	420	478	1053	543	130	218	TGA-180	289
	500	20	490	610	610	127	422	450	570	1163	599	160	253	TGA-200	402
	600	24	583	826	720	154	494	530	633	1381	707	160	299	TGA-250	635(665)

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

731P-3A



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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

3A Installation direction

3 A A (standard)	3 A B

Single-acting pneumatic cylinder type 731P-7G (Air to open: 50mm to 200mm) / 731P-7F (Air to close: 50mm to 200mm)

■ Standard

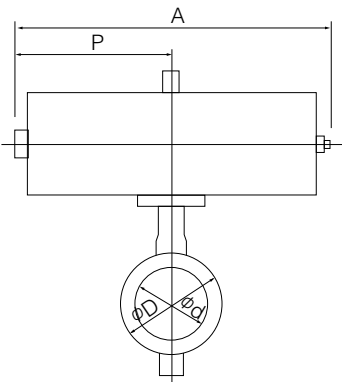
Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	φd	φD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS10K	JIS16K										
50	2	54	102	102	43	68	138	168	364	183	75	47	T85S	8
65	2 1/2	67	122	122	46	79	151	168	364	183	75	47	T85S	9
80	3	82	132	138	46	86	156	168	364	183	75	47	T85S	9
100	4	103	157	163	52	103	167	203	449	226	79	57	T200S	15
125	5	129	188	200	56	118	191	231	550	276	91	69	T380S	25
150	6	152	218	235	56	135	202	269	723	360	118	85	T750S	41
200	8	198	267	280	60	177	227	269	723	360	118	85	T750S	44

■ Heavy duty

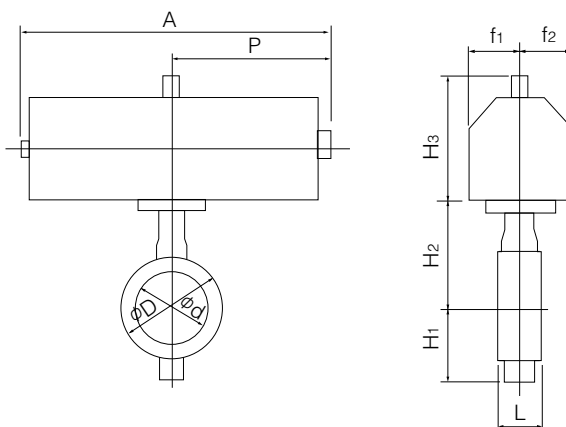
Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
mm	inch	φd	φD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
			JIS10K	JIS16K										
50	2	54	102	102	43	68	138	168	364	183	75	47	T85S	8
65	2 1/2	67	122	122	46	79	151	203	449	226	79	57	T200S	13
80	3	82	132	138	46	86	156	203	449	226	79	57	T200S	14
100	4	103	157	163	52	103	167	231	550	276	91	69	T380S	23
125	5	129	188	200	56	118	191	269	723	360	118	85	T750S	39
150	6	152	218	235	56	135	202	269	723	360	118	85	T750S	41

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

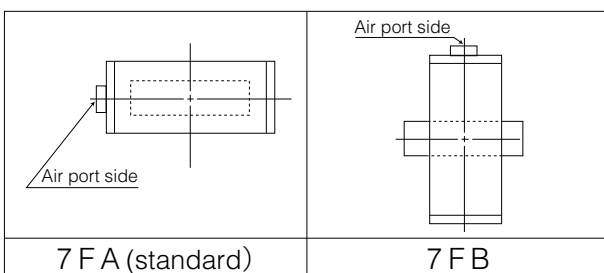
■ 731P-7F



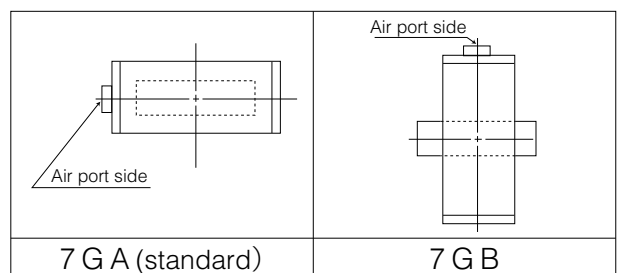
■ 731P-7G



■ 7F Installation direction



■ 7G Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P (Wafer) 732Q/752W (Lugged)

Single-acting pneumatic cylinder type 731P-3U (Air to open: 200mm to 600mm) / 731P-3K (Air to close: 200mm to 600mm)

Standard

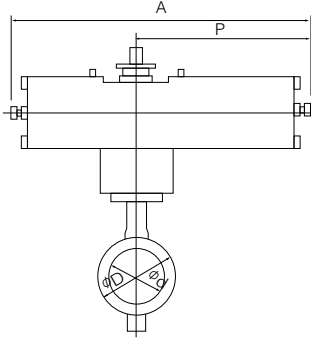
Type	Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
				JIS10K	JIS16K										
731P	200	8	198	267	280	60	177	227	307	945	585	70	165	TG-10S	62
	250	10	251	330	353	68	216	280	307	1080	720	94	206	TG-12S	121
	300	12	300	375	403	78	254	312	307	1080	720	94	206	TG-12S	130
	350	14	336	415	415	78	304	340	340	1255	865	131	257	TG-14S	269
	400	16	390	477	477	102	343	380	340	1255	865	131	257	TG-14S	305
	450	18	439	532	532	114	379	420	474	1655	1095	164	348	TG-20S	555
	500	20	490	610	610	127	422	450	474	1655	1095	164	348	TG-20S	606
600	24	583	826	720	154	494	530	474	1655	1095	164	348	TG-20S	736 (766)	

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

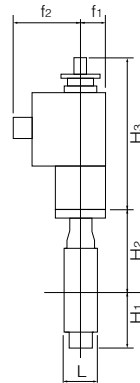
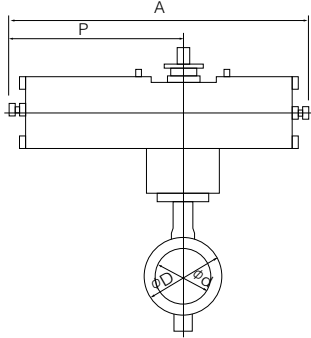
Heavy duty

Type	Nominal size		Dimension (mm)											Cylinder type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
				JIS10K	JIS16K										
731P	200	8	198	267	280	60	177	227	307	1080	720	94	206	TG-12S	107
	250	10	251	330	353	68	216	280	307	1080	720	94	206	TG-12S	116
	300	12	300	375	403	78	254	312	340	1255	865	131	257	TG-14S	226
	350	14	336	415	415	78	304	340	340	1255	865	131	257	TG-14S	269
	400	16	390	477	477	102	343	380	474	1655	1095	164	348	TG-20S	519
	450	18	439	532	532	114	379	420	474	1655	1095	164	348	TG-20S	555
	500	20	490	610	610	127	422	450	474	1655	1095	164	348	TG-20S	606

731P-3U

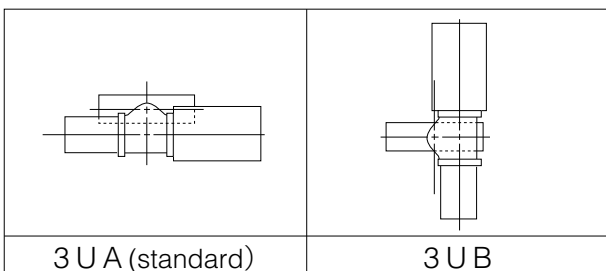


731P-3K

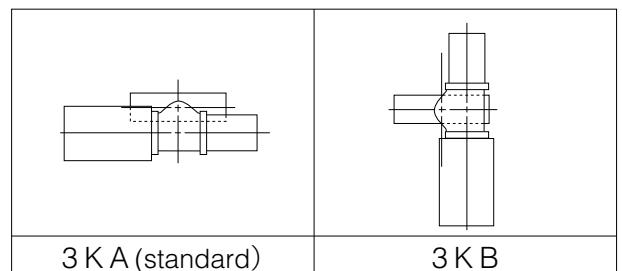


Selection criteria	Standard	Select when none of the following heavy duty items apply.
	Heavy duty	Select when any of the following items apply. ① Powder or high viscosity fluid (crude oil, etc.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

3U Installation direction



3K Installation direction



Single-acting pneumatic cylinder type 732P-3U (Air to open: 200mm to 300mm) / 732P-3K (Air to close: 200mm to 300mm)

■ Standard

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	198	280	60	177	227	307	945	585	70	165	TG-10S	68
250	10	251	353	68	216	280	307	1080	720	94	206	TG-12S	122
300	12	300	403	78	254	312	307	1080	720	94	206	TG-12S	130

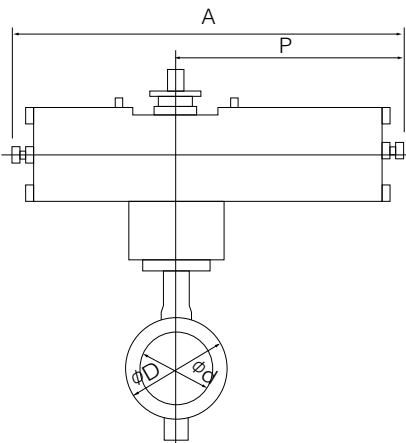
■ Heavy duty

Nominal size		Dimension (mm)										Cylinder type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	f ₁	f ₂		
200	8	198	280	60	177	227	307	1080	720	94	206	TG-12S	112
250	10	251	353	68	216	280	340	1255	865	131	257	TG-14S	218
300	12	300	403	78	254	312	340	1255	865	131	257	TG-14S	226

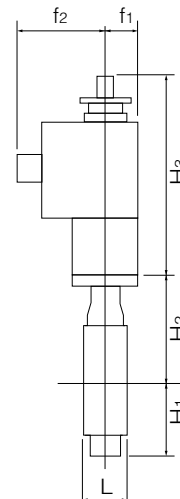
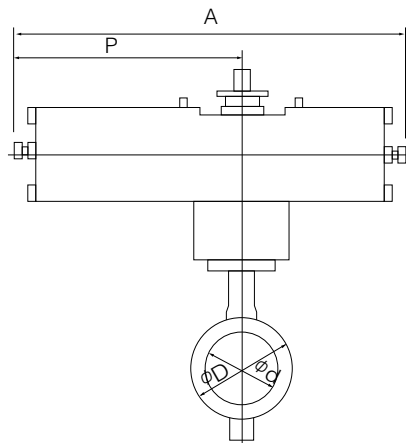
Please consult us regarding selection of drive parts for 350mm and higher.

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.) ② Control specification (with positioner) ③ Emergency open valve or pipe dead end valve ④ Air or Gas

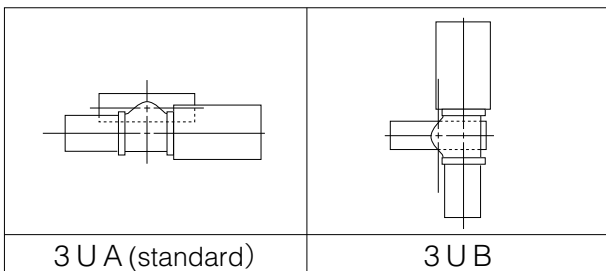
■ 732P-3U



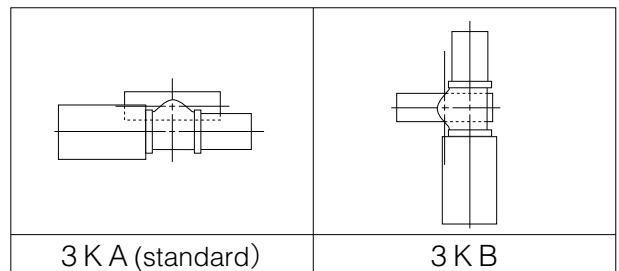
■ 732P-3K



■ 3U Installation direction



■ 3K Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

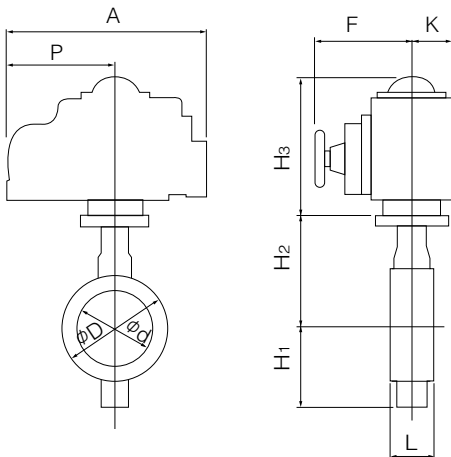
731P/732P (Wafer) 732Q/752W (Lugged)

Single phase electric motor type 731P-4I (50mm to 400mm)

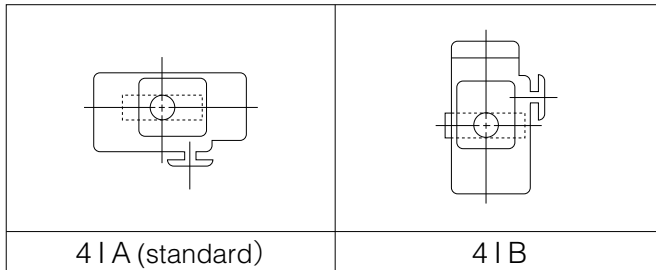
Type	Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	A	P	F	K		
				JIS10K	JIS16K										
731P	50	2	54	102	102	43	68	138	120	161	84	58	45	4I-00	4.3
									150	202	100	85	54	4I-0	6
	65	2 1/2	67	122	122	46	79	151	150	202	100	85	54	4I-0	6.4
	80	3	82	132	138	46	86	156	150	202	100	85	54	4I-0	7
	100	4	103	157	163	52	103	167	165	252	138	126	65	4I-1	10
	125	5	129	188	200	56	118	191	198	310	167	154	85	4I-2	17
	150	6	152	218	235	56	135	202	198	310	167	154	85	4I-2	19
	200	8	198	267	280	60	177	227	198	310	167	154	85	4I-2.5	24.3
	250	10	251	330	353	68	216	280	230	388	223	246	136	4I-3	43.5
	300	12	300	375	403	78	254	312	230	388	223	246	136	4I-3	52.1
350	14	336	415	415	78	304	340	230	388	223	246	136	4I-4	100	
400	16	390	477	477	102	343	380	230	388	223	246	136	4I-4	136	

Note 1: For nominal size 50 mm type (for control), the 4I-0 type should be selected. (The 4I-00 type is only designed for ON-OFF operation.)

731P-4I



4I Installation direction



4I A (standard)

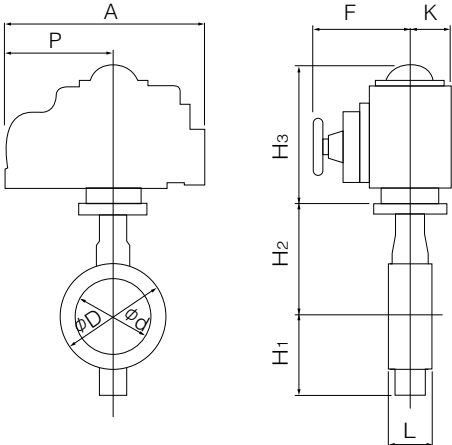
4I B

Single phase electric motor type 732P-4I(50mm to 300mm)

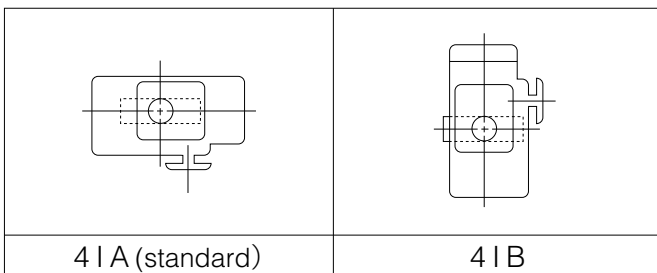
Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	A	P	F	K		
50	2	54	102	43	68	138	120	161	84	58	45	4I-00	4.4
							150	202	100	85	54	4I-0	6.1
65	2 1/2	67	122	46	79	151	150	202	100	85	54	4I-0	6.5
80	3	82	138	46	86	156	150	202	100	85	54	4I-0	7.2
100	4	103	163	52	103	167	165	252	138	126	65	4I-1	10.2
125	5	129	200	56	118	191	198	310	167	154	85	4I-2	17.3
150	6	152	235	56	135	202	198	310	167	154	85	4I-2	19.1
200	8	198	280	60	177	227	230	388	223	246	136	4I-3	35.3
250	10	251	353	68	216	280	230	388	223	246	136	4I-3	44.2
300	12	300	403	78	254	312	230	388	223	246	136	4I-3	52.2

Note 1: For nominal size 50 mm type (for control), the 4I-0 type should be selected. (The 4I-00 type is only designed for ON-OFF operation.)
Please consult us regarding selection of drive parts for 350mm and higher.

732P-4I



4I Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

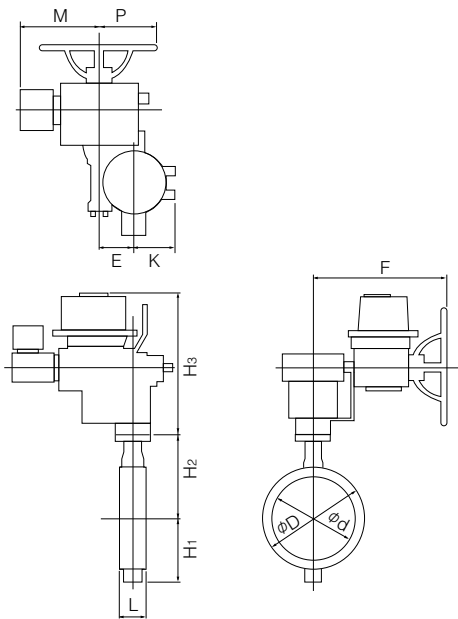
731P/732P (Wafer) 732Q/752W (Lugged)

Three phase motor actuator type 731P-4L (300mm to 600mm)

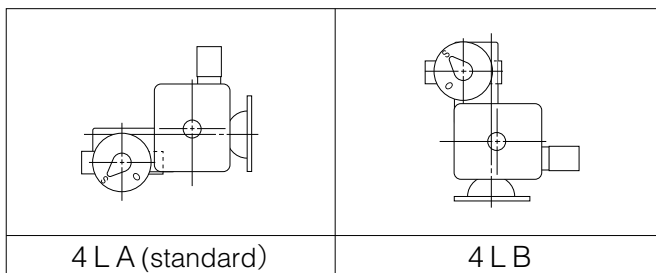
Type	Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)	
	mm	inch	ϕd	ϕD		L	H ₁	H ₂	H ₃	E	K	F	M			P
				JIS10K	JIS16K											
731P	300	12	300	375	403	78	254	312	435	85	126	498	357	230	LTKD-01 0.2kW /MGH-2	112
	350	14	336	415	415	78	304	340	487	117	164	533	373	230	LTKD-01 0.4kW /MGH-3	178
	400	16	390	477	477	102	343	380	487	117	164	533	373	230	LTKD-01 0.4kW /MGH-3	215
	450	18	439	532	532	114	379	420	538	140	198	594	400	230	LTKD-02 0.75kW /MGH-4	297
	500	20	490	610	610	127	422	450	538	140	198	594	400	230	LTKD-02 0.75kW /MGH-4	348
	600	24	583	826	720	154	494	530	604	210	293	748	440	360	LTKD-05 0.75kW /MGH-5	645 (675)

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

731P-4L



4L Installation direction

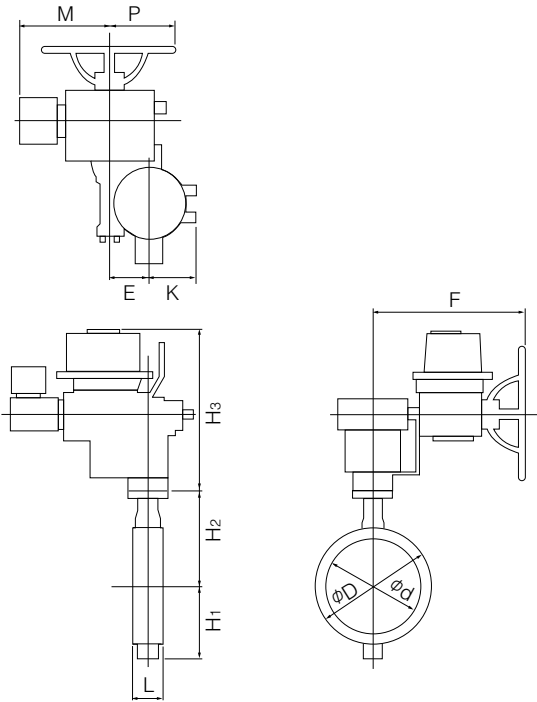


Three phase motor actuator type 732P-4L (250mm, 300mm)

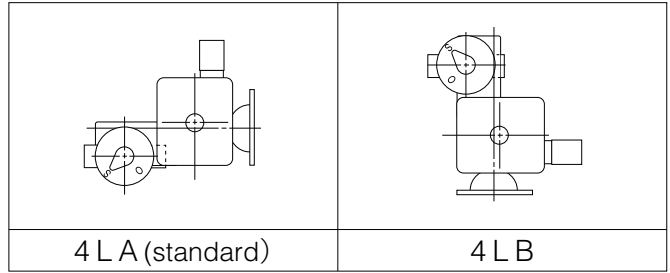
Nominal size		Dimension (mm)											Motor type	Approx. Mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	M	P		
250	10	251	353	68	216	280	435	85	126	498	357	230	LTKD-01 0.2kW /MGH-2	99
300	12	300	403	78	254	312	435	85	126	498	357	230	LTKD-01 0.2kW /MGH-2	110

Please consult us regarding selection of drive parts for 350mm and higher.

■ 732P-4L



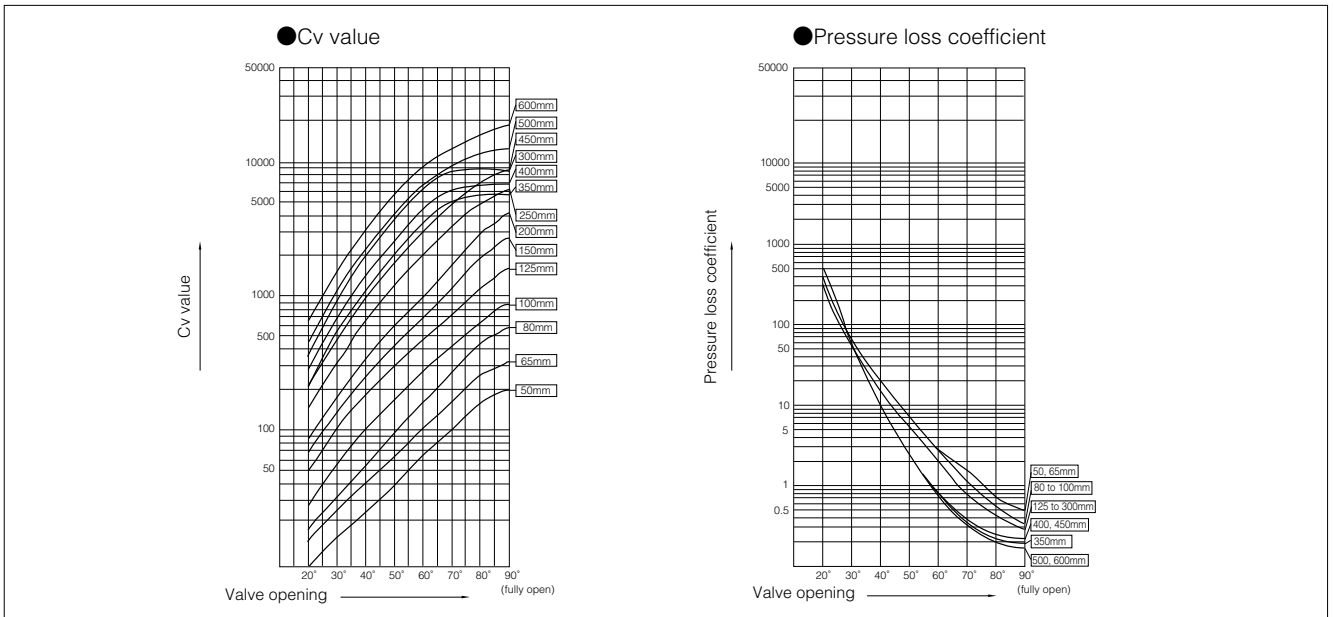
■ 4L Installation direction



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P (Wafer) 732Q/752W (Lugged)

731P Cv value/Pressure loss coefficient



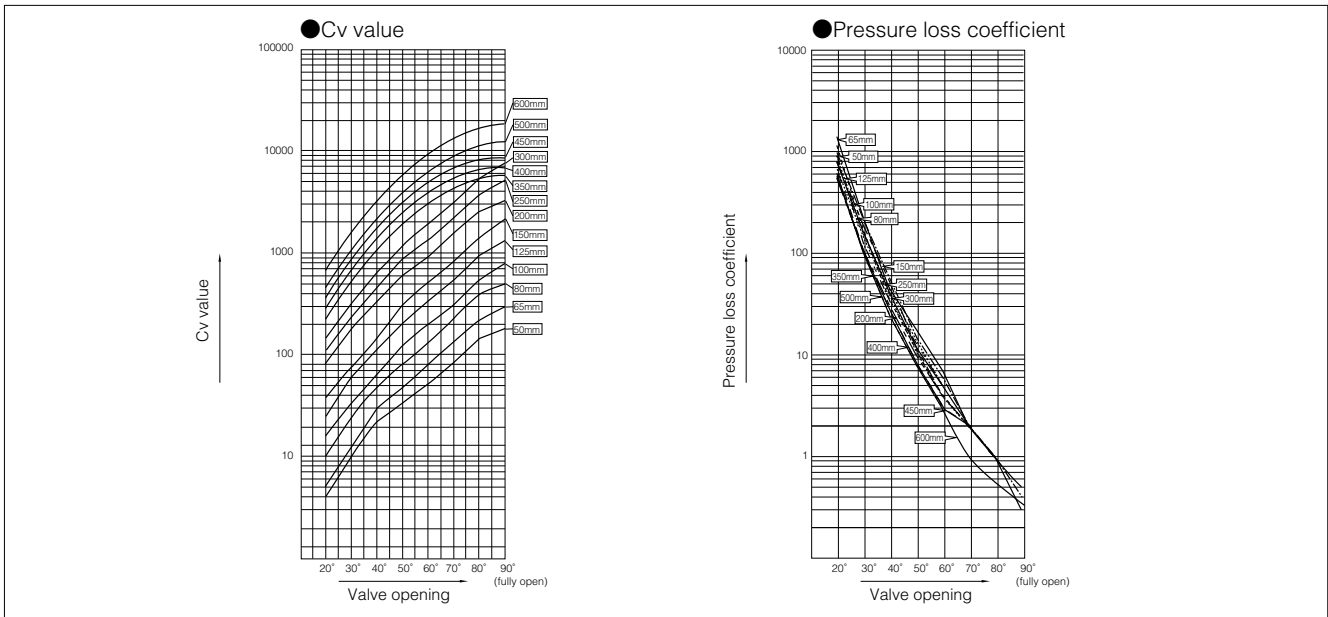
731P (50mm~600mm) Cv value

Type	Nominal size		Valve opening							
	mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
731P	50	2	10	17	25	37	66	102	159	200
	65	2 1/2	16	27	41	64	103	162	260	320
	80	3	20	35	57	97	162	272	450	580
	100	4	32	62	103	164	276	431	628	880
	125	5	55	107	193	297	450	727	1150	1590
	150	6	71	145	264	439	671	1170	1910	2800
	200	8	96	189	344	606	957	1730	2940	4300
	250	10	174	340	707	1240	2160	3330	4880	6200
	300	12	254	491	1000	1780	3020	4910	7180	8900
	350	14	222	548	1101	1930	3080	4431	5451	5770
	400	16	289	717	1429	2515	3924	5482	6586	6920
	450	18	365	911	1807	3182	4953	6896	8262	8670
	500	20	457	1123	2265	3975	6395	9311	11571	12300
600	24	664	1614	3307	5797	9328	13698	17243	18400	

731P (50mm~600mm) Pressure loss coefficient

Type	Nominal size		Valve opening							
	mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
731P	50	2	165	61	26	13	4	2	1	0.4
	65	2 1/2	162	58	24	10	4	2	1	0.4
	80	3	196	67	25	9	3	1	0.4	0.2
	100	4	233	61	22	9	3	1	0.6	0.3
	125	5	181	48	15	6	3	1	0.4	0.2
	150	6	222	53	16	6	2	1	0.3	0.1
	200	8	373	96	29	9	4	1	0.4	0.2
	250	10	270	71	16	5	2	1	0.3	0.2
	300	12	262	70	17	5	2	1	0.3	0.2
	350	14	579	95	24	8	3	1	1	1
	400	16	596	97	24	8	3	2	1	1
	450	18	609	98	25	8	3	2	1	1
	500	20	600	99	24	8	3	1	1	1
600	24	603	102	24	8	3	1	1	1	

732P Cv value/Pressure loss coefficient



- Butterfly Valve
- TRITEC**
- TT2**
- 334A**
- 344Q**
- 302A/303Q**
- 304A/304Q**
- 304YA**
- 302Y/304Y**
- 304M (HLV)**
- 507V/508V**
- DTM**
- 846T/847T/847Q**
- 841T/842T**
- 700Z**
- 700G/704G/705G**
- 72WG/72SG/72LG**
- 731P/732P/732Q/752W**
- 731R**
- 700E/700K/700S**
- 704G/722F/720F**
- 227P**
- 907T/908H (MKT)**
- 903L/901C/905C (Bata-check)**

732P (50mm~600mm) Cv value

Type	Nominal size		Valve opening							
	mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
731P	50	2	4	10	22	33	51	85	145	179
	65	2 1/2	5	13	30	48	79	129	220	293
	80	3	10	25	49	80	130	225	396	500
	100	4	16	33	65	125	200	311	539	772
	125	5	25	60	112	201	338	535	951	1295
	150	6	37	77	145	303	517	807	1400	2166
	200	8	79	178	335	592	906	1557	2573	3248
	250	10	110	238	460	876	1359	2217	3763	5153
	300	12	146	321	640	1192	1910	3147	5379	7546
	350	14	222	548	1101	1930	3080	4431	5451	5770
	400	16	289	717	1429	2515	3924	5482	6586	6920
	450	18	365	911	1807	3182	4953	6896	8262	8670
	500	20	457	1123	2265	3975	6395	9311	11571	12300
600	24	664	1614	3307	5797	9328	13698	17243	18400	

732P (50mm~600mm) Pressure loss coefficient

Type	Nominal size		Valve opening							
	mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
731P	50	2	1132	170	35	15	6	2	1	0.5
	65	2 1/2	1389	225	45	18	7	2	1	0.5
	80	3	896	124	33	13	5	2	1	0.3
	100	4	971	214	56	15	6	2	1	0.4
	125	5	887	154	44	14	5	2	1	0.3
	150	6	801	189	53	12	4	2	1	0.3
	200	8	549	108	31	10	4	2	1	0.3
	250	10	675	145	39	11	4	2	1	0.3
	300	12	790	164	41	12	5	2	1	0.3
	350	14	579	95	24	8	3	1	1	1
	400	16	596	97	24	8	3	2	1	1
	450	18	609	98	25	8	3	2	1	1
	500	20	600	99	24	8	3	1	1	1
600	24	603	102	24	8	3	1	1	1	

731P/732P (Wafer) 732Q/752W (Lugged)

731P Applicable flange standard

Type	Nominal size		JIS		ANSI 150Lb	BS4504		DIN	
	mm	inch	10K	16K		PN10	PN16	NP10	NP16
731P	50	2	○	○	○	○	○	○	○
	65	2 1/2	○	○	○	○	○	○	○
	80	3	△	○	△	○	○	○	○
	100	4	△	○	○	○	○	○	○
	125	5	△	○	△	△	△	△	△
	150	6	△	○	△	△	△	△	△
	200	8	△	○	△	△	△	△	△
	250	10	△	○	△	△	△	△	△
	300	12	△	○	○	△	△	△	△
	350	14	D	D	D	D	D	D	D
	400	16	D	D	D	D	D	D	D
	450	18	D	D	D	D	D	D	D
	500	20	D	D	D	D	D	D	D
600	24	T	T	T	D	T	D	T	

○ : Can be used without flange drilling.
 △ : With additional flange drilling.
 D : With flange drilling.
 T : With flange tapping.

732P Applicable flange standard

Type	Nominal size		JIS 20K	DIN NP25
	mm	inch		
732P	50	2	○	○
	65	2 1/2	○	○
	80	3	○	○
	100	4	○	○
	125	5	○	○
	150	6	○	△
	200	8	○	○
	250	10	○	△
	300	12	○	△
	350	14	D	D
	400	16	D	D
	450	18	D	D
	500	20	D	D
600	24	T	T	

○ : Can be used without flange drilling.
 △ : With additional flange drilling.
 D : With flange drilling.
 T : With flange tapping.

731P Applicable pipe list in case of **A**

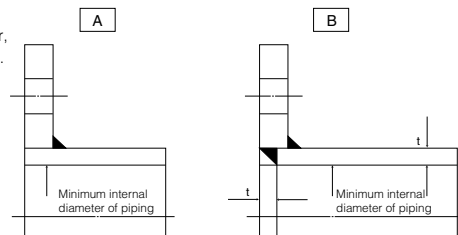
Type	Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
	mm	inch							
731P	50	2	○	—	○	○	○	○	34
	65	2 1/2	○	—	○	○	○	○	51
	80	3	○	—	○	○	○	○	70
	100	4	○	—	○	○	○	○	91
	125	5	○	—	○	○	○	○	118
	150	6	○	—	○	○	○	○	144
	200	8	○	—	○	○	○	○	194
	250	10	○	—	○	○	○	○	246
	300	12	○	—	○	○	○	○	294
	350	14	○	○	○	○	—	—	332
	400	16	○	○	○	○	—	—	379
	450	18	○	○	○	○	—	—	428
	500	20	○	○	○	○	—	—	477
	600	24	—	○	○	○	—	—	569

731P Applicable pipe list in case of **B**

Type	Nominal size		SGP	STPY	Sch20	Sch40	Sch10S	Sch20S
	mm	inch						
731P	50	2	○	—	○	○	○	○
	65	2 1/2	○	—	○	○	○	○
	80	3	○	—	○	○	○	○
	100	4	○	—	○	○	○	○
	125	5	○	—	○	○	○	○
	150	6	○	—	○	○	○	○
	200	8	○	—	○	○	○	○
	250	10	○	—	○	○	○	○
	300	12	○	—	○	○	○	○
	350	14	○	○	○	○	—	—
	400	16	○	○	○	○	—	—
	450	18	○	○	○	○	—	—
	500	20	○	○	○	○	—	—
	600	24	—	○	○	○	—	—

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.



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731P/732P (Wafer) 732Q/752W (Lugged)

732P Applicable pipe list in case of **A**

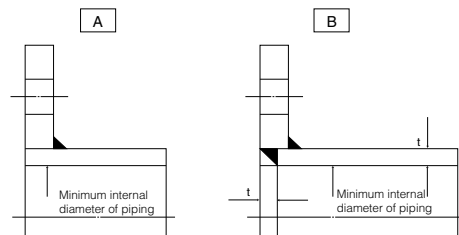
Type	Nominal size		SGP	STPY	Sch20	Sch40	Sch20S	Minimum internal diameter of piping (mm)
	mm	inch						
732P	50	2	○	—	○	○	○	34
	65	2 1/2	○	—	○	○	○	51
	80	3	○	—	○	○	○	70
	100	4	○	—	○	○	○	91
	125	5	○	—	○	○	○	118
	150	6	○	—	○	○	○	144
	200	8	○	—	○	○	○	194
	250	10	○	—	○	○	○	246
	300	12	○	—	○	○	○	294
	350	14	○	○	○	○	—	332
	400	16	○	○	○	○	—	379
	450	18	○	○	○	○	—	428
	500	20	○	○	○	○	—	477
	600	24	—	○	○	○	—	569

732P Applicable pipe list in case of **B**

Type	Nominal size		SGP	STPY	Sch20	Sch40	Sch20S
	mm	inch					
732P	50	2	○	—	○	○	○
	65	2 1/2	○	—	○	○	○
	80	3	○	—	○	○	○
	100	4	○	—	○	○	○
	125	5	○	—	○	○	○
	150	6	○	—	○	○	○
	200	8	○	—	○	○	○
	250	10	○	—	○	○	○
	300	12	○	—	○	○	○
	350	14	○	○	○	○	—
	400	16	○	○	○	○	—
	450	18	○	○	○	○	—
	500	20	○	○	○	○	—
	600	24	—	○	○	○	—

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.



731P Piping bolt and nut sizes

Hexagon bolt & nut

Type	Nominal size		JIS 10K		JIS 16K	
	mm	inch	Hexagon bolts	Setting bolts	Hexagon bolts	Setting bolts
731P	50	2	4-M16×105×40	—	8-M16× 95×35	—
	65	2 1/2	4-M16×105×40	—	8-M16×105×35	—
	80	3	8-M16×110×40	—	8-M20×110×35	—
	100	4	8-M16×110×40	—	8-M20×120×35	—
	125	5	8-M20×120×50	—	8-M22×130×40	—
	150	6	8-M20×130×50	—	12-M22×130×40	—
	200	8	12-M20×135×50	—	12-M22×140×40	—
	250	10	12-M22×150×60	—	12-M24×155×50	—
	300	12	16-M22×160×60	—	16-M24×170×50	—
	350	14	16-M22×160×60	—	16-M30 (P3)×180×55	—
	400	16	16-M24×190×45	—	16-M30 (P3)×215×55	—
	450	18	20-M24×205×45	—	20-M30 (P3)×230×55	—
	500	20	20-M24×215×45	—	20-M30 (P3)×245×55	—
600	24	20-M30×260×50	8-M30× 70×60	20-M36 (P3)×285×65	8-M36 (P3)×85	

Long bolt & nut

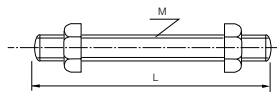
Type	Nominal size		JIS 10K		JIS 16K	
	mm	inch	Long bolts and nuts	Setting bolts	Long bolts and nuts	Setting bolts
731P	50	2	4-M16×120×30	—	8-M16×125	—
	65	2 1/2	4-M16×125×30	—	8-M16×125	—
	80	3	8-M16×125×30	—	8-M20×135	—
	100	4	8-M16×130×30	—	8-M20×150	—
	125	5	8-M20×150×40	—	8-M22×165	—
	150	6	8-M20×150×40	—	12-M22×165	—
	200	8	12-M20×160×40	—	12-M22×170	—
	250	10	12-M22×170×45	—	12-M24×190	—
	300	12	16-M22×185×45	—	16-M24×210	—
	350	14	16-M22×185×45	—	16-M30 (P3)×225	—
	400	16	16-M24×220×50	—	16-M30 (P3)×260	—
	450	18	20-M24×235×50	—	20-M30 (P3)×280	—
	500	20	20-M24×250×50	—	20-M30 (P3)×295	—
600	24	20-M30×300×60	8-M30×70×65	20-M36 (P3)×340	8-M36 (P3)×85	

Example

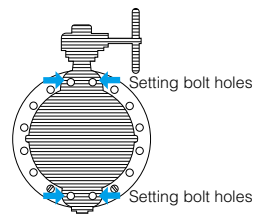
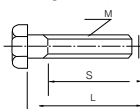
Long bolts: 12 - M22 × 185 × 45
 | | | |
 N M L S

Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) | | | |
 N M L S

Long bolts and nuts (full thread)



Setting bolts (Hexagon bolts)



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

732P Piping bolt and nut sizes

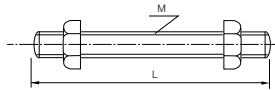
Type	Nominal size		JIS 20K	
	mm	inch	Long bolts and nuts	Setting bolts
732P	50	2	8-M16×125	—
	65	2 1/2	8-M16×125	—
	80	3	8-M20×135	—
	100	4	8-M20×150	—
	125	5	8-M22×165	—
	150	6	12-M22×165	—
	200	8	12-M22×170	—
	250	10	12-M24×190	—
	300	12	16-M24×210	—
	350	14	16-M30(P3)×225	—
	400	16	16-M30(P3)×260	—
	450	18	20-M30(P3)×280	—
	500	20	20-M30(P3)×295	—
	600	24	20-M36(P3)×340	8-M36(P3)×90

Example

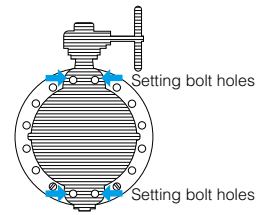
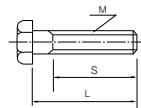
Long bolts: 12 - M22 × 185
 | | |
 M L S

Setting bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) | | | |
 N M L S

Long bolts and nuts (full thread)



Setting bolts (Hexagon bolts)

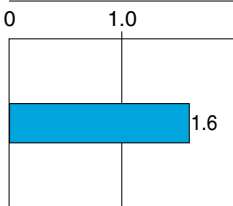


731R

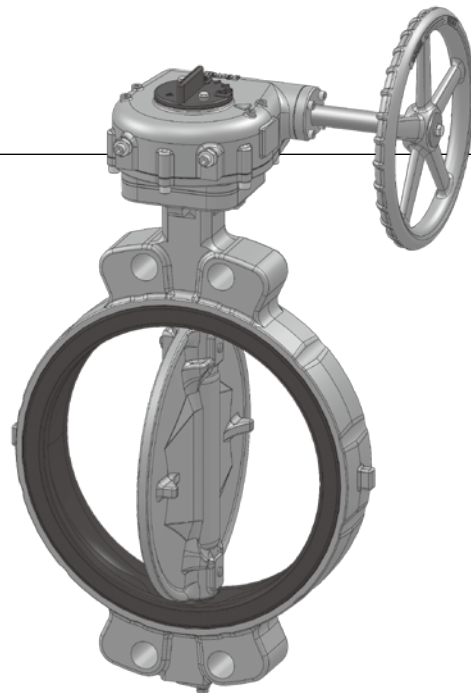
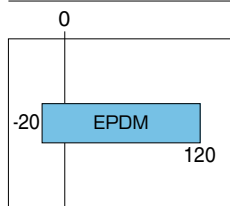
Valve nominal size

350 to 600mm

Max. working pressure MPa



Working temperature range °C



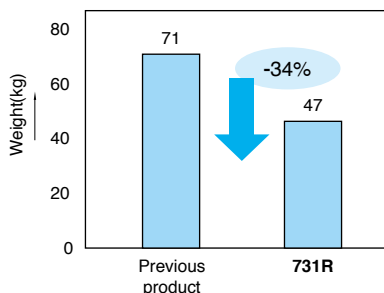
Features and Benefits

Adaptable for Building Services for Super High-rise Buildings and High-pressure Lines for Utilities Facilities.
Concentric Butterfly Valve for High Pressure Service with Excellent Cost Performance.

- New lineup of models from 350 mm to 600 mm (1.6 Mpa)
- In compliance with JIS and ISO face-to-face dimensions
- Globally-patented cosine curve seat ring
- Significantly improved durability thanks to spherical disc
- Self-aligning stem seal through backup ring

Light and compact

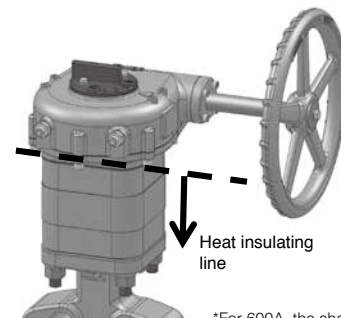
Weight reduced by 34% compared to the previous product*1



*1 In comparison with the previous 350 mm bore-size product Model 731P

Condensation protection measures *Optional

No condensation in the gear at ambient temperature 34°C and humidity 75% with cold water at 5°C.



*For 600A, the shape is different.

Standard Specifications

Valve model	731R	
Body type (centering method)	Concentric design, wafer type	
Valve nominal size	350mm to 600mm	
Face-to-face dimensions	JIS B 2032 46 series / ISO5752 wafer butterfly valve (short)	
Applicable flange standard	JIS 16K, ANSI 150Lb	
Max. working pressure *3	1.6 MPa	
Allowable valve seat leakage standard	Tight shut-off	
Pressure application direction (flow direction)	Bi-direction	
Test pressure	Body shell test	JIS 16K, ANSI 150Lb: 2.4 Mpa
	Seat leakage	JIS 16K, ANSI 150Lb: 1.76 Mpa Hydraulic
Working temperature range	EPDM: -20 to 120°C (Please consult us when using the product in the temperature range -20°C to 0°C.)	
Working temperature in continuous use *2	EPDM: 0 - 70°C	
Allowable average pipe flow velocity (limit value)	3 m/s or less (At full valve open, continuous operation)	
Standard materials	Body	FCD450
	Disc	SCS13
	Stem	SUS420J2
	Seat ring **1	EPDM
Top flange	In compliance with ISO5211/1	
Condensation prevention structure	Optional (Condensation prevention resin column)	
Piping gasket	Not necessary	
Coating	Epoxy primer (Munsell N7)	
Actuator	Worm gear type (Automatic valves are not supported.)	

Note) If the following specifications are required, please consult our sales office.

- (1) High durability required because the number of opening/closing times exceeds 100,000.
 (2) Continuous operation required with a valve opening angle of 30 degrees or less.
 (3) Control operation which requires 3% or lower hysteresis accuracy of the valve itself.

*1 If the fluid contains chlorine, the seat ring may deteriorate early due to combined factors including concentration and temperature. For details consult our sales office.

*2 "Working temperature in continuous use" is the temperature range when the valve is operated continuously over one hour. If the valve is operated continuously at a temperature above 70°C and there is no problem, we advise that the valve can be used in that environment.

*3 Negative pressure range is not allowable.

Standard Specifications

Material Name	EPDM	
Temperature range	Allowable (°C)	-20~120
	Continuous (°C)	0~70
Max. working pressure(Mpa)	1.6	
Color	Black	
Features	Corrosion resistance	○
	Heat resistance	○
	Grease resistance	×
	Abrasion resistance	△

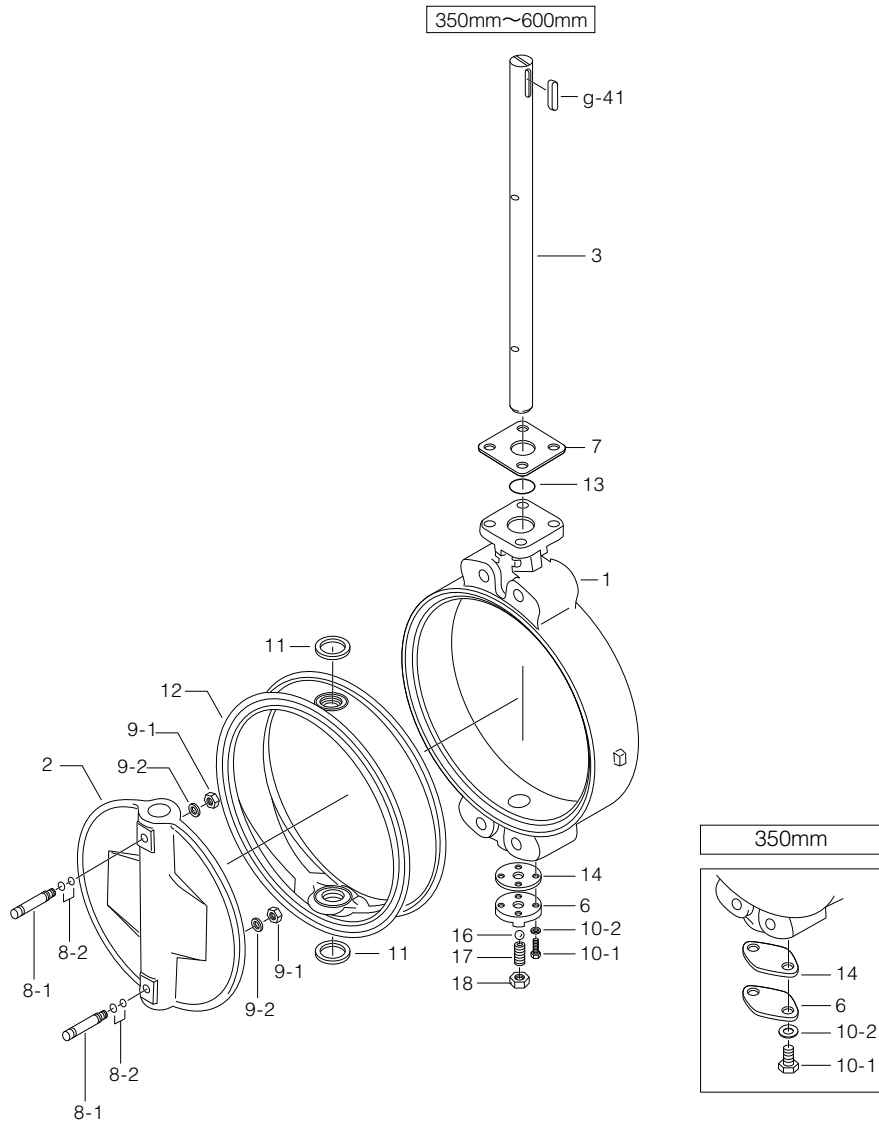
Key to symbols ○………… Good - Fit for use
 △………… Acceptable for use
 ×………… Not fit for use

Note 1) If the fluid contains oil, never use EPDM.

Note 2) ○,△ and × in the above features show typical characteristics.
 The characteristics depend on fluid and temperature conditions.
 Please consult us.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731R Expanded view of components / 731R Parts list



731R Parts list (350mm – 600mm)

No.	Description	Q'ty	Remarks
1	Body	1	
2	Disc	1	
3	Stem	1	
6	Bottom cover	1	
7	Retainer plate	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	2	350mm
		4	400mm to 600mm
10-2	Spring washer	2	350mm
		4	400mm to 600mm
★ 11	Secondary seal ring	2	350mm to 600mm
★ 12	Seat ring	1	
★ 13	O-ring	1	
★ 14	Gasket	1	
16	Ball	1	400mm to 600mm
17	Hollow bolt	1	400mm to 600mm
18	Lock nut	1	400mm to 600mm
g41	Key	1	

Note) The ★ indicates recommended spare parts. They are supplied as a "Seat ring set".

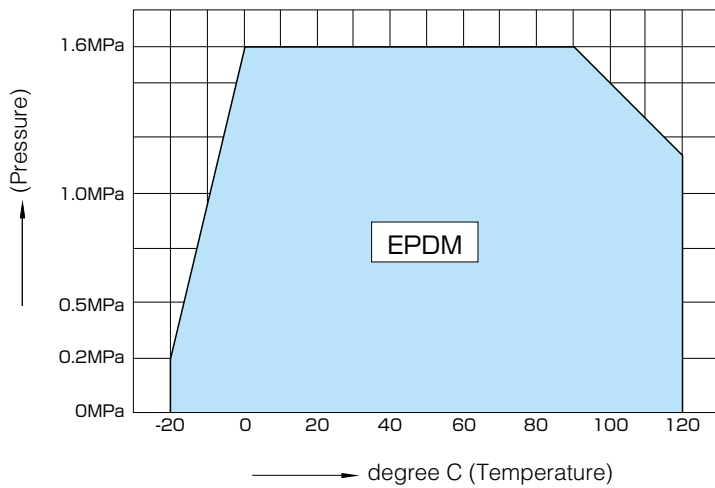
731R Actuator selection chart

Type	Model	Category	Size <small>(mm / inch)</small>				
			350	400	450	500	600
			14	16	18	20	24
Worm Gear	2U, 2H	Standard	2 U-5	2H *			

* The gear size of 400 and 450 is different from that of 500 and 600.

Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

731R Pressure – temperature rating

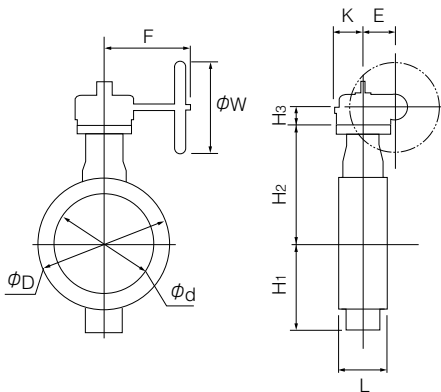


731R

Worm gear type 731R-2U, 2H (350mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. mass (kg)
mm	inch	ϕd	ϕD	L	H ₁	H ₂	H ₃	E	K	F	W		
350	14	337	410	78	276	348	50	90	105	266	280	2U-5	66
400	16	394	467	102	338	383	48	105	110	311	300	2H	98
450	18	441	525	114	368	413	48	105	110	316	350	2H	124
500	20	492	580	127	403	453	56	53	111	328	400	2H	158
600	24	584	682	154	458	528	56	53	111	328	400	2H	222

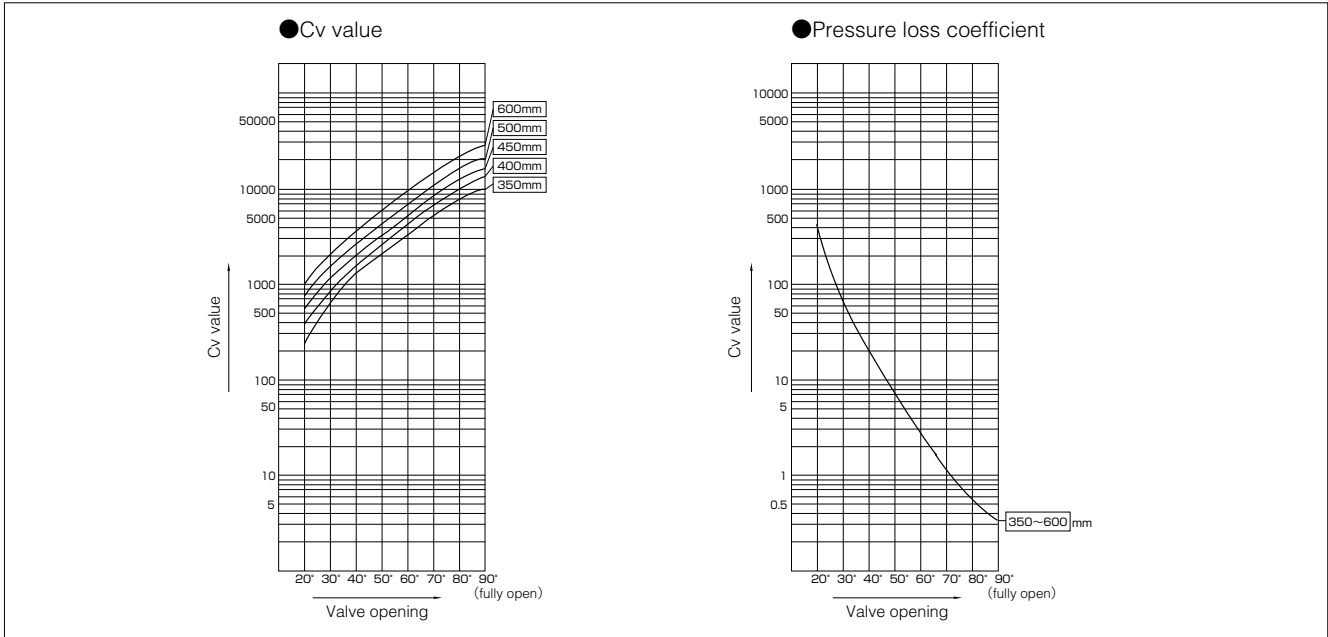
731R-2U • 2H



2U/2H Installation direction

2UA/2HA (standard)	2UAR/2HAR
2UB	2UBR
2HB	2HBR

731R Cv value/Pressure loss coefficient



Butterfly Valve

- TRITEC**
- TT2**
- 334A**
- 344Q**
- 302A/303Q**
- 304A/304Q**
- 304YA**
- 302Y/304Y**
- 304M (HLV)**
- 507V/508V**
- DTM**
- 846T/847T/847Q**
- 841T/842T**
- 700Z**
- 700G/704G/705G**
- 72WG/72SG/72LG**
- 731P/732P/732Q/752W**
- 731R**
- 700E/700K/700S**
- 704G/722F/720F**
- 227P**
- 907T/908H (MKT)**
- 903L/901C/905C (Bata-check)**

731R Cv value

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
350	14	232	662	1350	2030	3294	5167	7832	9620
400	16	468	964	1648	2724	4529	6815	10553	12700
450	18	583	1202	2068	3448	5692	8384	13116	15500
500	20	758	1555	2656	4379	7214	10845	17100	19800
600	24	1037	2141	3681	6129	10106	14911	22827	27300

731R Pressure loss coefficient

Nominal size		Valve opening							
mm	inch	20°	30°	40°	50°	60°	70°	80°	90°
350	14	531	65	16	7	3	1	0.4	0.3
400	16	227	54	18	7	2	1	0.4	0.3
450	18	239	56	19	7	3	1	0.4	0.3
500	20	218	52	18	7	2	1	0.4	0.3
600	24	247	58	20	7	3	1	1	0.3

731R

731R Applicable flange standard

Nominal size		JIS	ANSI
mm	inch	16K	150Lb
350	14	D	D
400	16	D	D
450	18	D	D
500	20	D	D
600	24	T	T

D: With flange drilling
T: With flange tapping

731R Applicable pipe list in case of A

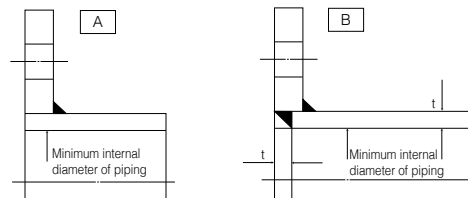
Nominal size		SGP	STPY	Sch20	150Lb	Sch10S	Sch20S	Minimum internal diameter of piping (mm)
mm	inch							
350	14	○	○	○	○	—	—	330
400	16	○	○	○	○	—	—	381
450	18	○	○	○	○	—	—	427
500	20	○	○	○	○	—	—	477
600	24	—	○	○	○	—	—	567

731R Applicable pipe list in case of B

Nominal size		SGP	STPY	Sch20	150Lb	Sch10S	Sch20S
mm	inch						
350	14	○	○	○	○	—	—
400	16	○	○	○	○	—	—
450	18	○	○	○	○	—	—
500	20	○	○	○	○	—	—
600	24	—	○	○	○	—	—

Note 1) ○ = Applicable, - = No standard

Note 2) Butterfly valves are inserted into a pipe that has been fitted with the disc fully open. It is still possible to use a pipe or a flange that is less than the minimum inner pipe diameter, with extra adaptation, such as insertion of a spacer between the valve and the flange. For details, please consult our sales office.



731R Piping bolt and nut sizes

Hexagon bolts and nuts

Nominal size		JIS 16K	
mm	inch	Hexagon bolt and nuts	Setting bolts
350	14	16-M30(P3)×180	—
400	16	16-M30(P3)×215	—
450	18	20-M30(P3)×230	—
500	20	20-M30(P3)×245	—
600	24	20-M36(P3)×285	8-M36(P3)×85

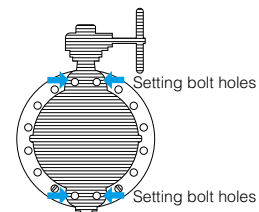
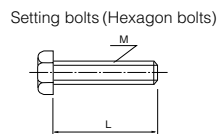
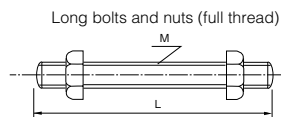
Long bolts and nuts

Nominal size		JIS 16K	
mm	inch	Long bolt and nuts	Setting bolts
350	14	16-M30(P3)×225	—
400	16	16-M30(P3)×260	—
450	18	20-M30(P3)×280	—
500	20	20-M30(P3)×295	—
600	24	20-M36(P3)×340	8-M36(P3)×85

Examples

Setting bolts: 12 - M22 × 185 × 45
 | | | |
 N M L S

Long bolts: 4 - M30 × 95 × 65
 (Hexagon bolts) | | | |
 N M L S



Butterfly Valve
TRITEC
TT2
334A
344Q
302A/303Q
304A/304Q
304YA
302Y/304Y
304M (HLV)
507V/508V
DTM
846T/847T/847Q
841T/842T
700Z
700G/704G/705G
72WG/72SG/72LG
731P/732P/732Q/752W
731R
700E/700K/700S
704G/722F/720F
227P
907T/908H (MKT)
903L/901C/905C (Bata-check)

700E Wafer with support lugs

700K Wafer with support lugs

700S Wafer with support lugs



Features and Benefits

Simple structure and low cost. Many years of proven reliable performance in various industries.

Concentric design raised center seat

Figure 1 shows the TOMOE sealing design between the disc and seat. The raised section of the seat reduces and minimises the operating torque while ensuring a tight seal between disc and seat.

Rounded dove-tail design

Figure 2 shows the self-gripping seat ring design firmly in place inside the body. This design ensures the seat cannot be displaced during the bolting up of the adjoining flange. The seat also acts as the gasket between the valve and the pipe flange.

Triple-sealing system

Figure 3 shows the triple stem seal. The primary seal is created from the initial compression between the flat surface of the seat and the flat hub of the disc. When the valve is subject to normal operating conditions this seals the shaft and body from any contact with the flowing medium. The secondary seal is accomplished by an O-ring fitted into a stainless steel cartridge which is moulded into the seat ring. There is a secondary seal at each end of the stem where it penetrates the seat. The third seal is to prevent dirt and other foreign materials within the environment from getting into any of the working valve parts.

