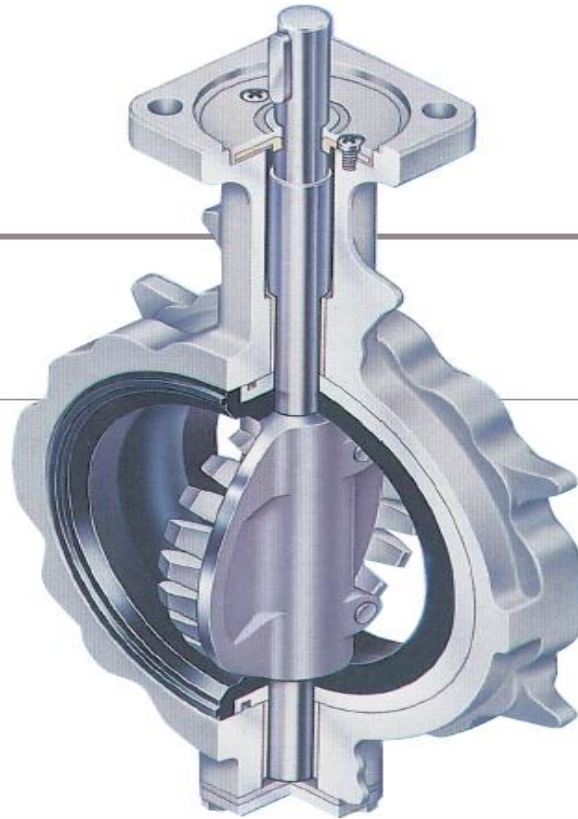


Rotary control valve with tight shut-off and high grade rubber seat

# 508V



-  Lock lever
-  Worm gear
-  Centre handle
-  Pneumatic cylinder

## Features and benefits

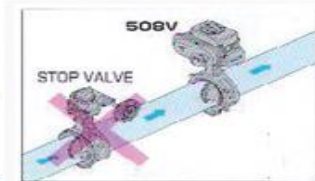
Except for the rubber seat ring, the 508V has the same design principle as the 507V. Excellent controllability is achieved by having the innovative teathed disc seating at a certain angle. The 508V has a reinforced core rubber seat ring allowing it to be used for high pressure service up to 1.6MPa with complete tight shut-off.

### Rubber seat ring with a "control cosine curve" profile

Taking into consideration the cosine curve profile rubber seat ring incorporated into our models 700G and 702Z, we developed a new type of seat ring for exclusive use in the 508V. The 508V has a reinforced core rubber seat ring incorporated with a "control cosine curve" profile for sizes between 50mm and 200mm. This seat ring design ensures a tight shut-off up to a working pressure of 1.6MPa. The 508V available in sizes between 250mm and 350mm has a similar seat ring design and profile, but the seat ring is backed up by a precisely formed metal core which is encapsulated inside the rubber. This design enables the control valve to function under severe conditions of high velocity, a large differential pressure or a high vacuum. (The maximum allowable shut-off pressure is 1.0MPa).

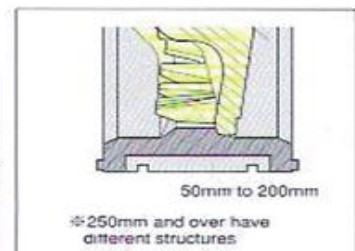
### No additional stop valve, less installation space and less cost

Because of its reliable sealing effect against a high differential pressure, the 508V does not require an additional stop valve. You save on installation space and benefit from the excellent cost effective features of our rotary control valve.



### Satisfies both JIS and ISO standards for extended applications

The 508V is available in different flange specifications. Also, its face-to-face dimension meets both JIS and ISO requirements. Therefore this model is applicable for various industrial applications worldwide.



# 508V

## General Description

With a specially designed rubber seat ring, Model 508V ensures tight shut-off and eliminates the need for any additional stop valve required by conventional control valves.

The high performance characteristics of this model originate from its unique design with a teeth and gull-wing shaped disc that touches the seat at a certain angle (Fig.1). The teeth are arranged on the circumference of the disc towards either direction of flow. The 'touch-at-an-angle' disc assists the reduction of seating and unseating torque and facilitates smooth control of the valve. Other benefits include high rangeability, low noise level and anti-cavitation.

The face-to-face dimension meets both JIS and ISO standards so the 508V is applicable for various industrial fields including air conditioning systems.



## Standard Specification

Valve nominal size	50, 80, 100, 150, 200mm	250, 300, 350mm	400, 450, 500, 600mm
Face-to-face dimensions #1	JIS B 2002 Series 46 / ISO 5752 Basic Series 20 Wafer butterfly valve (short)		
Flange accommodation	JIS: 5K/10K/16K/20K, ANSI 150lb, DIN NP 10/16, BS 4504 PN 10/16, BS10 'E', 'F', JIS G 5524, 5527	JIS: 10K/16K, ANSI 150lb, DIN NP 10/16, BS 4504 PN 10/16, BS10 'E', 'F', JIS G 5524, 5527	JIS: 10K, ANSI 150lb, DIN NP 10/16, BS 4504 PN 10/16, JIS G 7.5, 5527
Service temperature #2	-20 to 120 degrees C (NBR: -10 to 80 degrees C)		-10 to 80 degrees C (*EPDM: -20 to 120 degrees C)
Max. working pressure	1.6MPa (NBR: 1.0MPa)	1.0MPa	
Body test pressure	2.4MPa (NBR: 1.5MPa)	1.5MPa	
Seat leak pressure	1.8MPa (NBR: 1.1MPa)	1.1MPa	
Flow characteristics	Nearly equal percent		
Rangeability	100:1		
Standard materials	Body	FCD450 (No fluid exposure)	
	Disc	SCS14	SCS13
	Stem	SUS420J2 (No fluid exposure)	
	Seat ring	*EPDM core-reinforced (Option – NBR core-reinforced)	NBR core-reinforced (Option - *EPDM core-reinforced)

#1 350mm only : JIS B 2002 Series 47 / ISO Basic Series 25 (Medium)

\*EPDM seat must not be used in applications which contain oil.

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	$\phi d$	$\phi D$	L	H <sub>1</sub>	H <sub>2</sub>	a <sub>1</sub>	a <sub>2</sub>	$\square S_1$	$\phi d_2$	b	t <sub>2</sub>	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

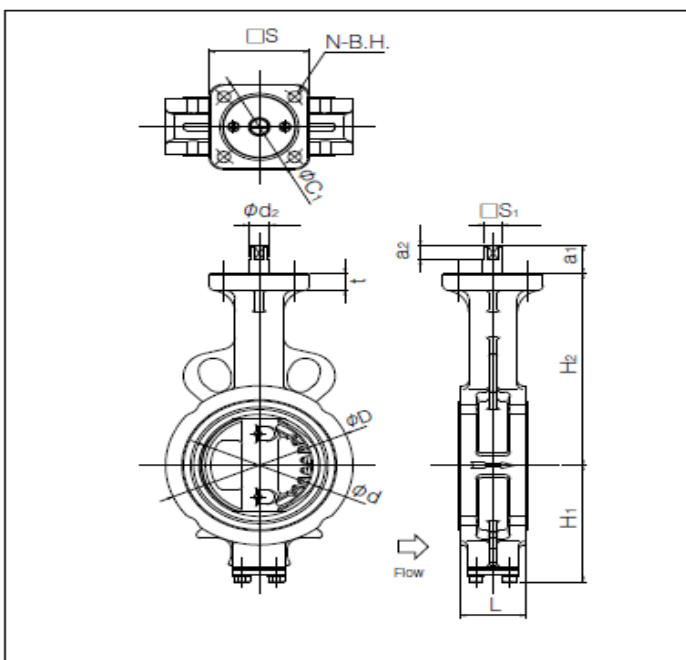
Flanges	$\square S$	$\phi C_1$	N	B.H.
F07	70	70	4	9
F10	102	102	4	11
F12	125	125	4	13
F14	140	140	4	19
F16	165	165	4	23

Stem design	01: Square	02: Round with key

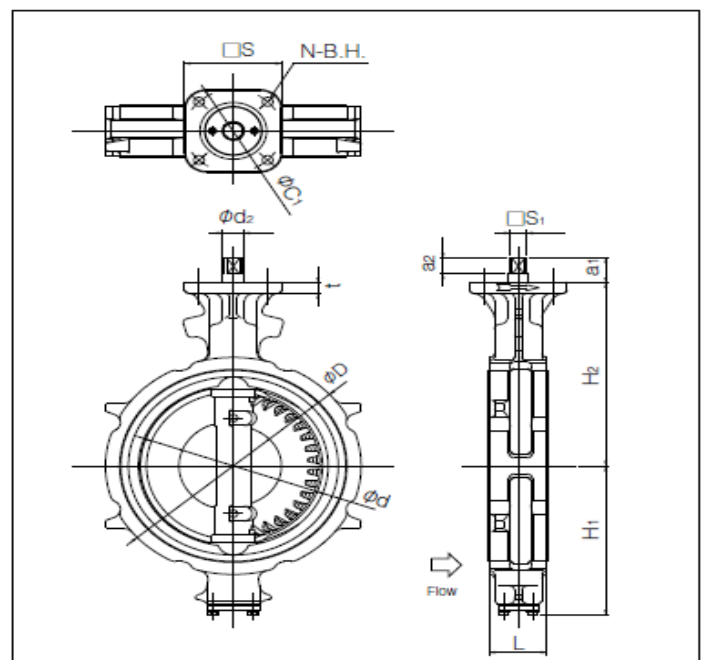
■ 508V-02 (450mm to 600mm)

Nominal size		Dimension (mm)															Approx. Mass (kg)	
mm	inch	$\phi d$	$\phi D$		L	H <sub>1</sub>	H <sub>2</sub>	a <sub>1</sub>	a <sub>2</sub>	$\phi d_2$	b	t <sub>2</sub>	t	D <sub>1</sub>	C <sub>1</sub>	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)

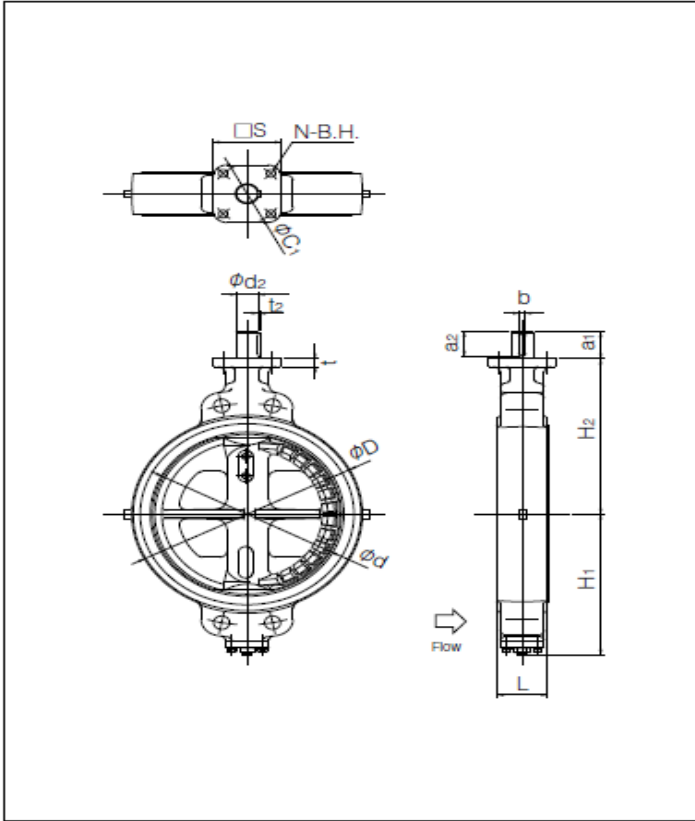
■ 508V 50mm, 80mm



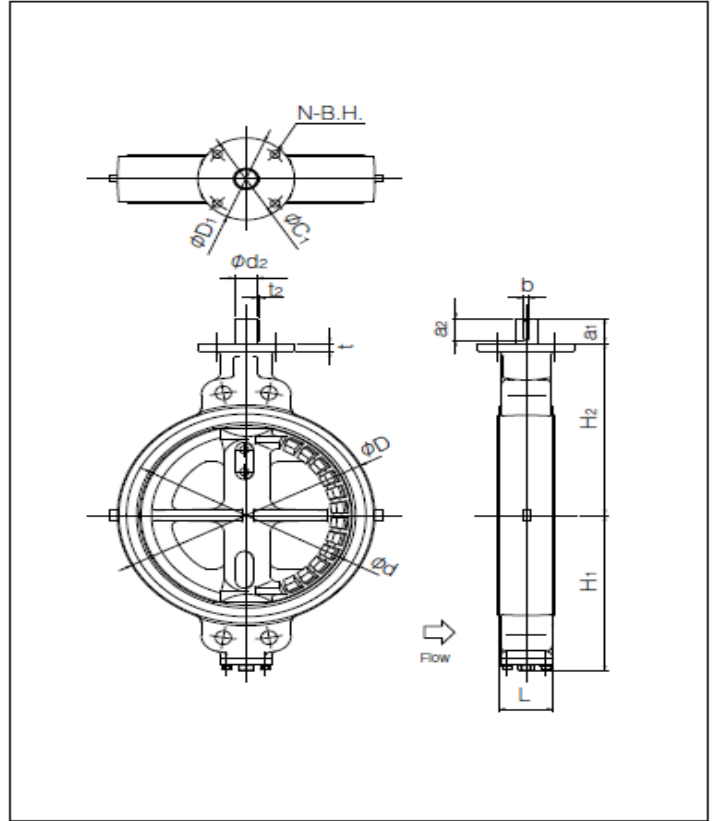
■ 508V 100mm to 350mm



■ 508V 400mm

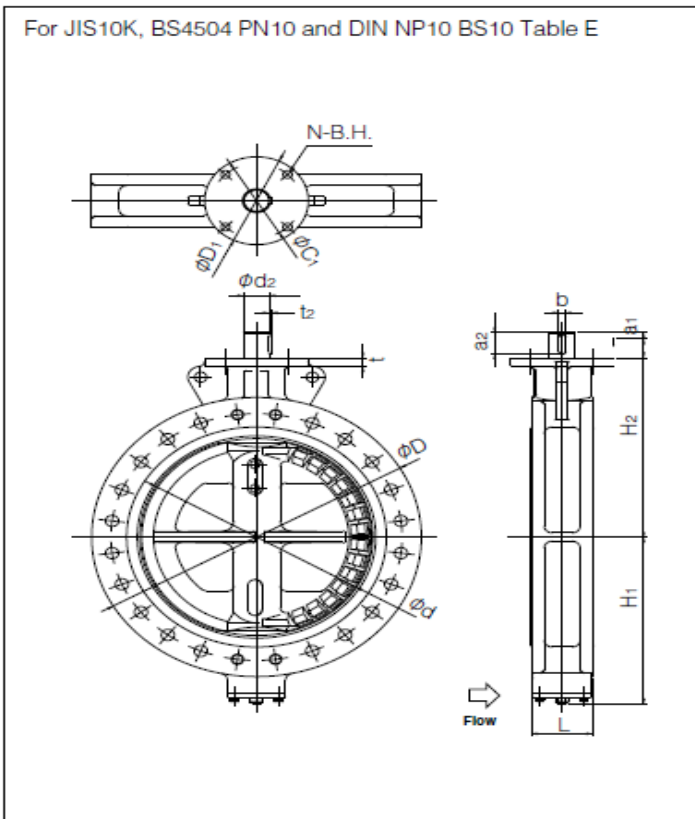


■ 508V 450mm, 500mm



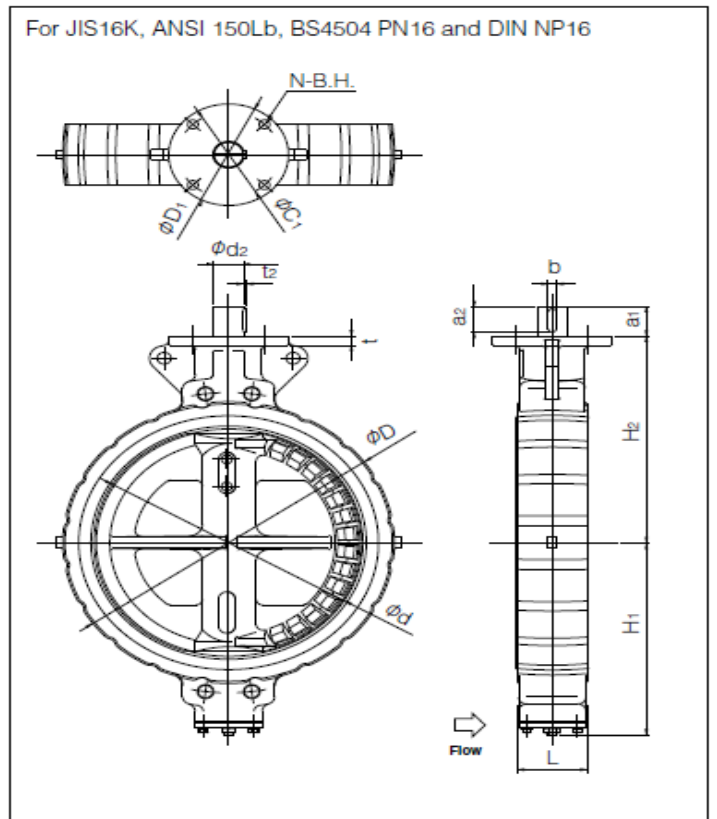
■ 508V 600mm

For JIS10K, BS4504 PN10 and DIN NP10 BS10 Table E



■ 508V 600mm

For JIS16K, ANSI 150Lb, BS4504 PN16 and DIN NP16



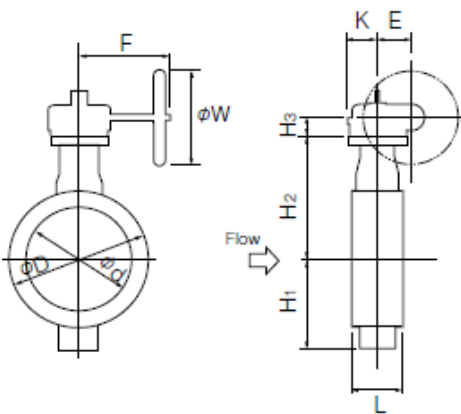
Worm gear type 508V-2U(50mm to 400mm) / 508V-2S(450mm to 600mm)

Nominal size		Dimension (mm)										Gear type	Approx. Mass (kg)
mm	inch	$\phi d$	$\phi D$	L	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	E	K	F	$\phi W$		
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)

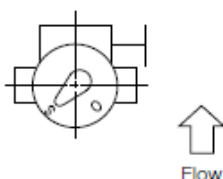
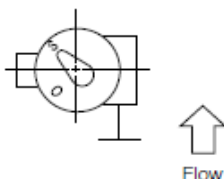
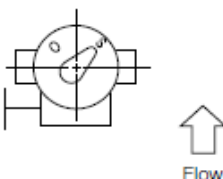
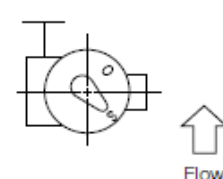
\*A handle lock is attached for manual gear.

\* ( ) shows the data for JIS 16K 600mm.

■ 508V-2U/2S



■ 2U/2S Installation direction

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

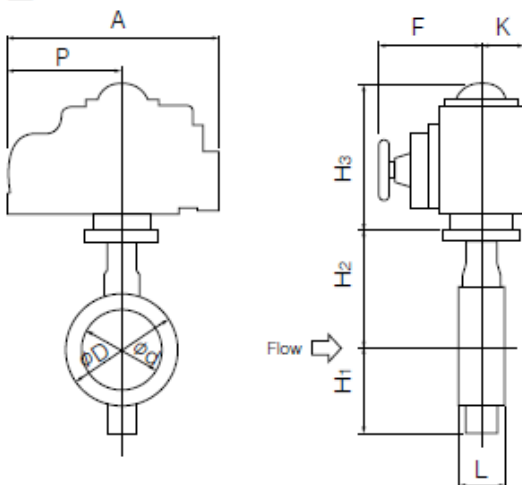
Single phase electric motor type 508V-4 I (50mm to 400mm)

Nominal size		Dimension (mm)										Motor type	Approx. Mass (kg)
mm	inch	$\phi d$	$\phi D$	L	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	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

