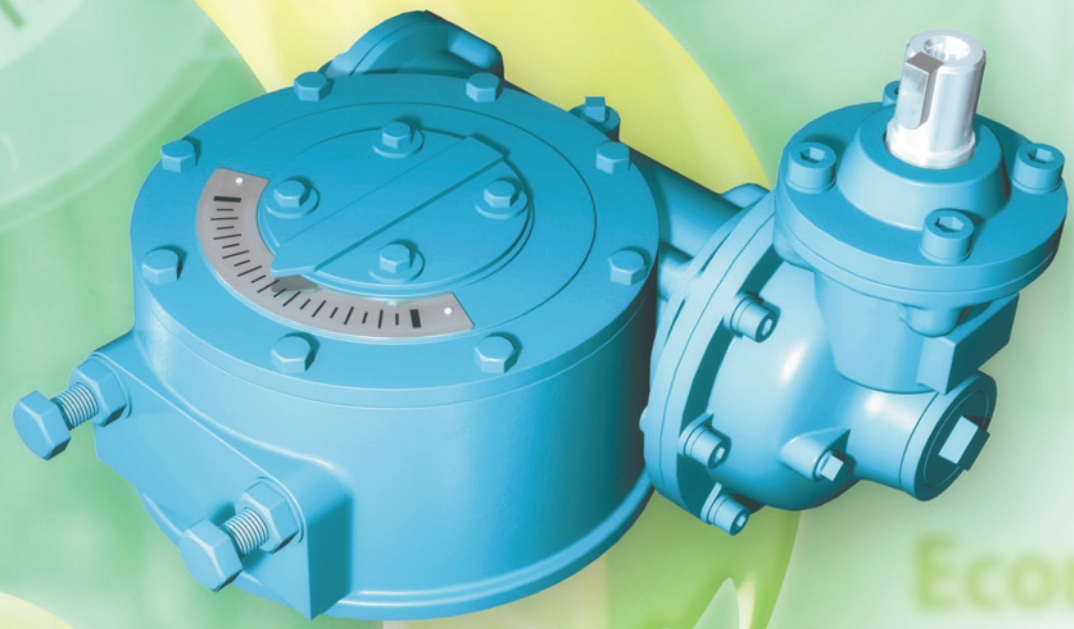


CWG Series Worm Gear Valve Actuators

CWG

S E R I E S



Economical
Compact



ISO 9001:2015



ISO 14001:2015

Only for Fujisawa Factory



Economical and Compact Worm Gear Reducer

CWVG
S E R I E S

FEATURES

Double-sleeve structure, allowing easy change of the key position to the position of the valve stem

Flexible choices regarding the position, and rotational direction of the input shaft.

IP67 rated dustproof and waterproof functions.

The stopper located on both ends of the travel allows ± 5 degrees adjustment.

The CWG series are worm gear reducers developed for manual operation of various devices, including butterfly valves and ball valves that require 90-degree rotation. They are economical worm gear reducers, having a compact design for water supply and sewage systems as well as steel and other general industries. CWG series can be electrically operated by combining it with our Motorized actuators.

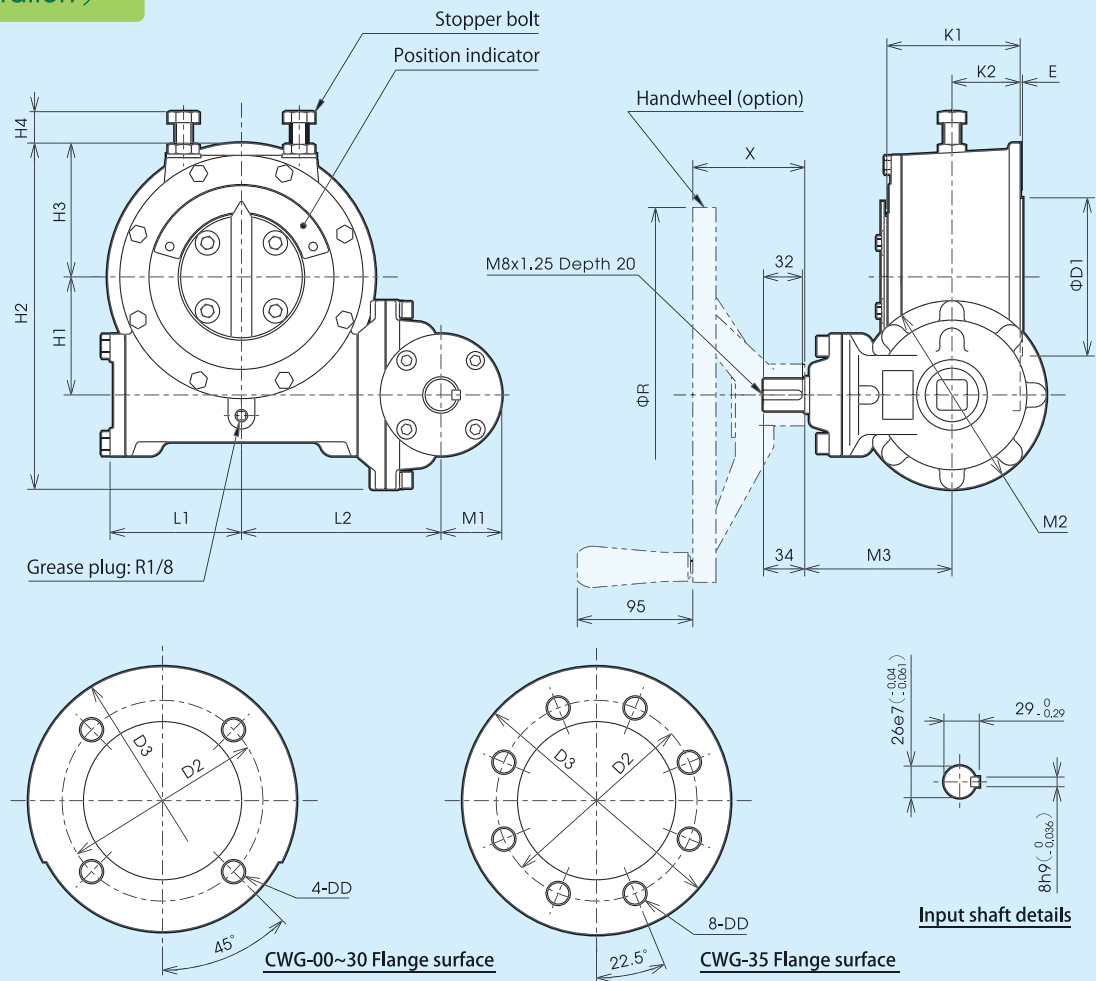
SPECIFICATION

Type/Size		Gear ratio	Max. output torque N·m	Mechanical ratio (gear ratio x efficiency)	Max. input torque N·m	Rotation speed rev	Max. valve stem diameter mm	Mounting flange (ISO 5211)
CWG-00	Motorized	40:1	1,200	13.5	88.8	10.0	36	F12
	Manual	80:1		24.3	49.3	20.0		
CWG-10	Motorized	44:1	2,000	14.5	138.2	11.0	46	F14
	Manual	88:1		26.0	76.8	22.0		
CWG-20	Motorized	48:1	2,800	15.2	184.0	12.0	60	F16
	Manual	120:1		34.2	81.9	30.0		
CWG-30	Motorized	52:1	4,300	16.2	265.9	13.0	75	F16
	Manual	130:1		36.4	118.1	32.5		
CWG-35	Motorized	52:1	6,100	16.6	366.6	13.0	80	F20
	Manual	130:1		37.4	162.9	32.5		
CWG-40	Motorized	56:1	10,400	17.4	597.2	14.0	95	F25
	Manual	420:1		102.5	101.5	105.0		
CWG-50	Motorized	60:1	15,900	18.7	852.1	15.0	115	F30
	Manual	450:1		109.8	144.8	112.5		
CWG-60	Motorized	64:1	32,800	19.3	1702.7	16.0	140	F35
	Manual	768:1		180.5	181.7	192.0		
CWG-70	Motorized	66:1	51,100	20.4	2504.9	16.5	210	F40
CWG-80	Motorized	66:1	105,000	23.0	4565.2	16.5	280	F48

OUTLINE DRAWING

CWG-00~35

(Manual Operation)



Type / Size	Mounting flange dimensions (mm)						External dimensions (mm)											Weight (kg)	Grease (kg)
	ISO	D1	D2	DD	D3	E	H1	H2	H3	H4 ^{※2}	K1	K2	L1	L2	M1	M2	M3		
CWG-00	F12	85f8	125	M12x1.75 Depth 18	165	2	69.5	214.5	82.5	21.1	86.5	43	86	126	40	125	89	15	0.5
CWG-10	F14	100f8	140	M16x2 Depth 24	190		82.5	240	95	26	96	53	95	135				18	0.7
CWG-20	F16	130f8	165	M20x2.5 Depth 30	220	3	97	284.5	110	25.8	113.5	61	108	164	50	155	121	29	1.1
CWG-30					250		112	314.5	125	26.8	121	64	118	174				37	1.5
CWG-35	F20	160f8	205	M16x2 Depth 24	245		127	342	137.5	14.5	127	63	125	192				41	2.0

※1 Handwheel Excluded ※2 Reference Value

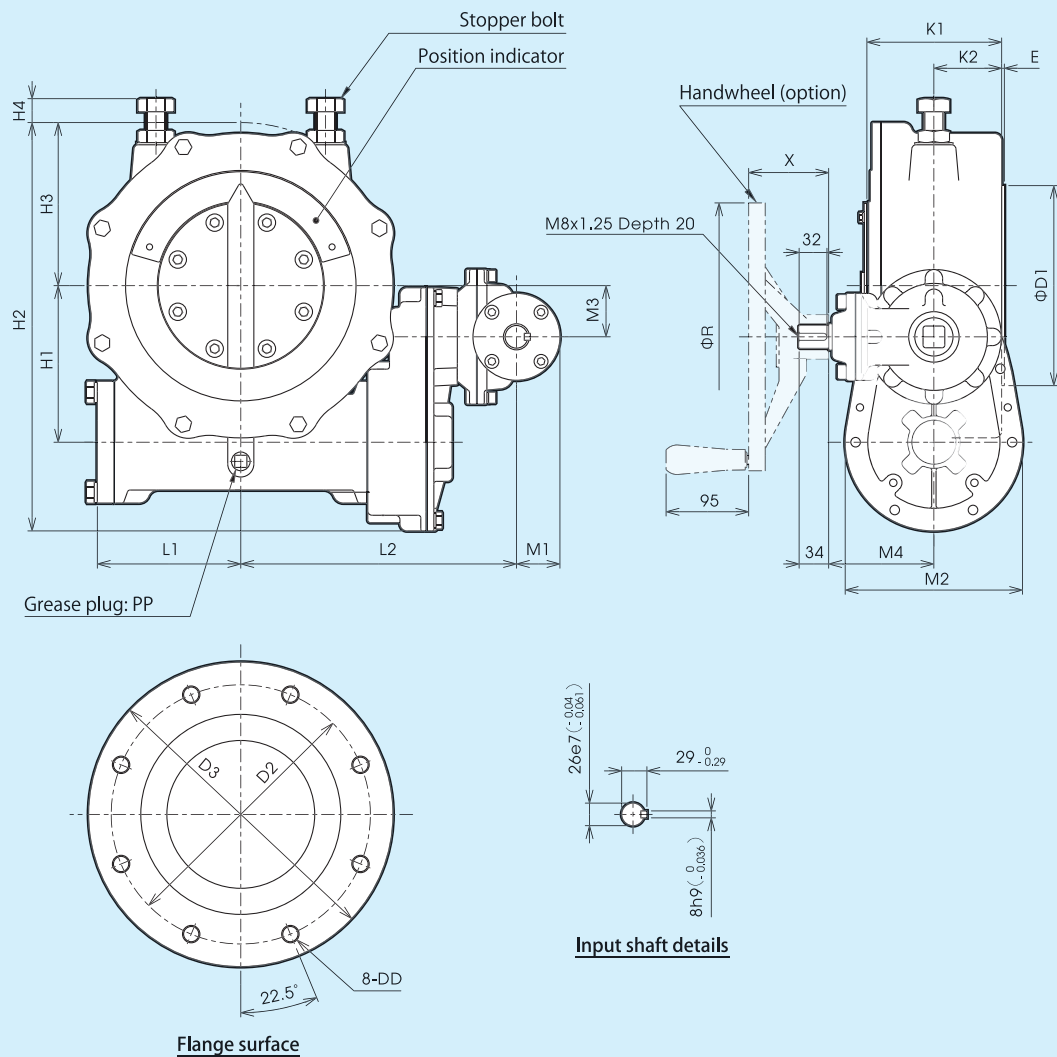
[Handwheel]

Size	Dimensions (mm)		Weight (kg)
	R	X	
12"	308	92	4
18"	460	97	10
24"	610	100	13

OUTLINE DRAWING

CWG-40~60

(Manual Operation)



Type /Size	Mounting flange dimensions(mm)						External dimensions(mm)												^{※1} Weight (kg)	Grease (kg)	Plug PP
	ISO	D1	D2	DD	D3	E	H1	H2	H3	H4 ^{※2}	K1	K2	L1	L2	M1	M2	M3	M4			
CWG-40	F25	200f8	254	M16×2Depth 24	300	3	153	417.5	162.5	20.7	146	73	155	307	50	204	31.8	121	74	3.5	R1/4
CWG-50	F30	230f8	298	M20×2.5Depth 30	350		180	469.5	187.5	27.5	154	78	165	317	50	204	58.8	121	96	4.3	R1/2
CWG-60	F35	260f8	356	M30×3.5Depth 45	420		230	621	238.5	50.8	196	107	217	410.5	50	305	60.8	131	185	9.7	R3/4

※1 Excluding handwheel ※2 Reference Value

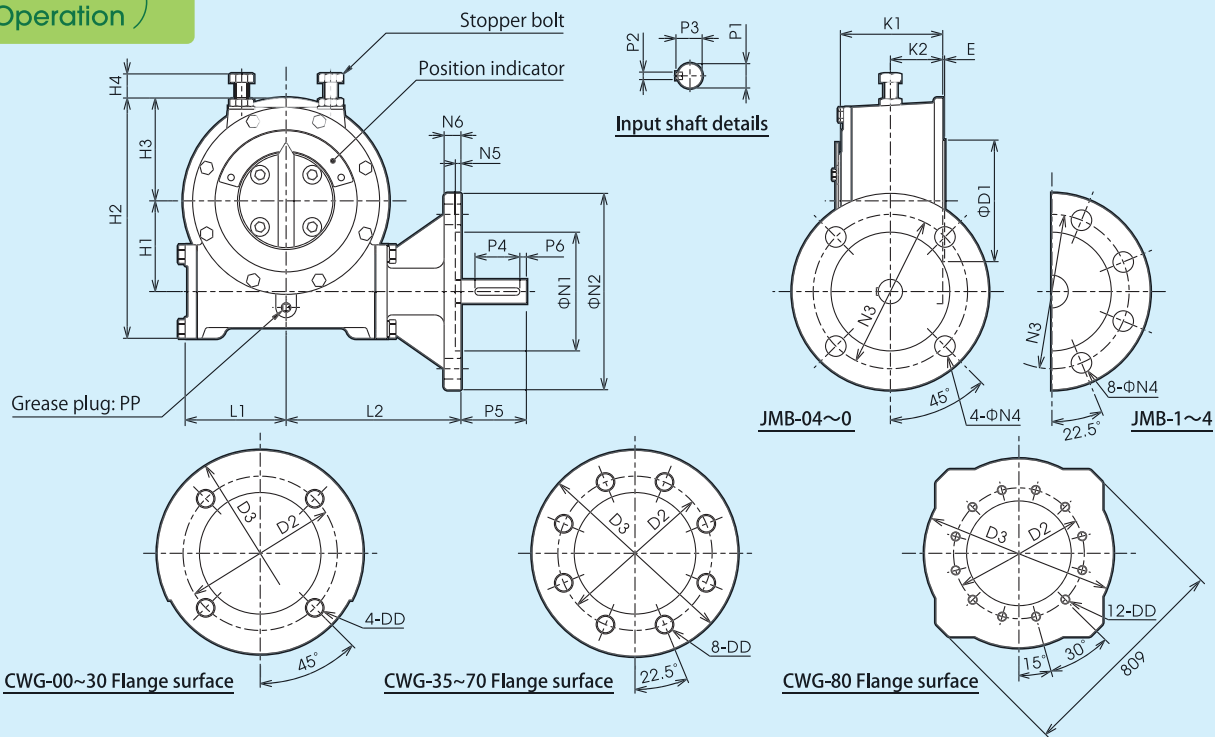
[Handwheel]

Size	Dimensions (mm)		Weight (kg)
	R	X	
12"	308	92	4
18"	460	97	10
24"	610	100	13

OUTLINE DRAWING

CWG-00~80

(Motorized Operation)



Type /Size	Mounting flange dimensions(mm)						Input dimensions(mm)						External dimensions(mm)							
	ISO	D1	D2	DD	D3	E	P1	P2	P3	P4	P5	P6	H1	H2	H3	H4 ^{*2)}	K1	K2	L1	L2
CWG-00	F12	85f8	125	M12x1.75 Depth 18	165	2	20e7	6h9	22.5 ⁰ _{-0.13}	40	70	3	69.5	192	82.5	21.1	86.5	43	86	142
CWG-10	F14	100f8	140	M16x2 Depth 24	190								82.5	217.5	95	26	96	53	95	151
CWG-20	F16	130f8	165	M20x2.5 Depth 30	220								97	257	110	25.8	113.5	61	108	187
CWG-30					250	3	25e7	8h9	28 ⁰ _{-0.29}	40	80	4	112	287	125	26.8	121	64	118	197
CWG-35	F20	160f8	205	M16x2 Depth 24	245								127	319.5	137.5	14.5	127	63	125	202
CWG-40	F25	200f8	254	M16x2 Depth 24	300								153	385.5	162.5	20.7	146	73	155	251
CWG-50	F30	230f8	298	M20x2.5 Depth 30	350	3	35e7	10h9	38 ⁰ _{-0.29}	56	90	4	180	437.5	187.5	27.5	154	78	165	261
CWG-60	F35	260f8	356	M30x3.5 Depth 45	420								230	558.5	238.5	50.8	196	107	217	347
CWG-70	F40	300f8	406	M36x4 Depth 54	565								326	776	340	7	246	120	279	451
CWG-80	F48	370f8	483	M36x4 Depth 54	700	3	52e7	16h9	56 ⁰ _{-0.29}	80	105	5	448.5	1023.5	465	10	286	138	354	526

Type /Size	Weight (kg)	Motorized unit type/size	Grease (kg)	Plug PP
CWG-00	10	JMB-04~03	0.5	R1/8
CWG-10	13	JMB-04~00	0.7	
CWG-20	21	JMB-04~00	1.1	
CWG-30	29	JMB-03~0	1.5	
CWG-35	33	JMB-00~1	2.0	R1/4
CWG-40	56	JMB-00~1	3.5	
CWG-50	78	JMB-0~2	4.3	
CWG-60	147	JMB-1~3	9.7	
CWG-70	350	JMB-1~3	24	R3/4
CWG-80	830	JMB-3,4	36	

*1 Excluding Motorized unit mounting flange
*2 Reference Value

[Motorized Unit Mounting Flange]

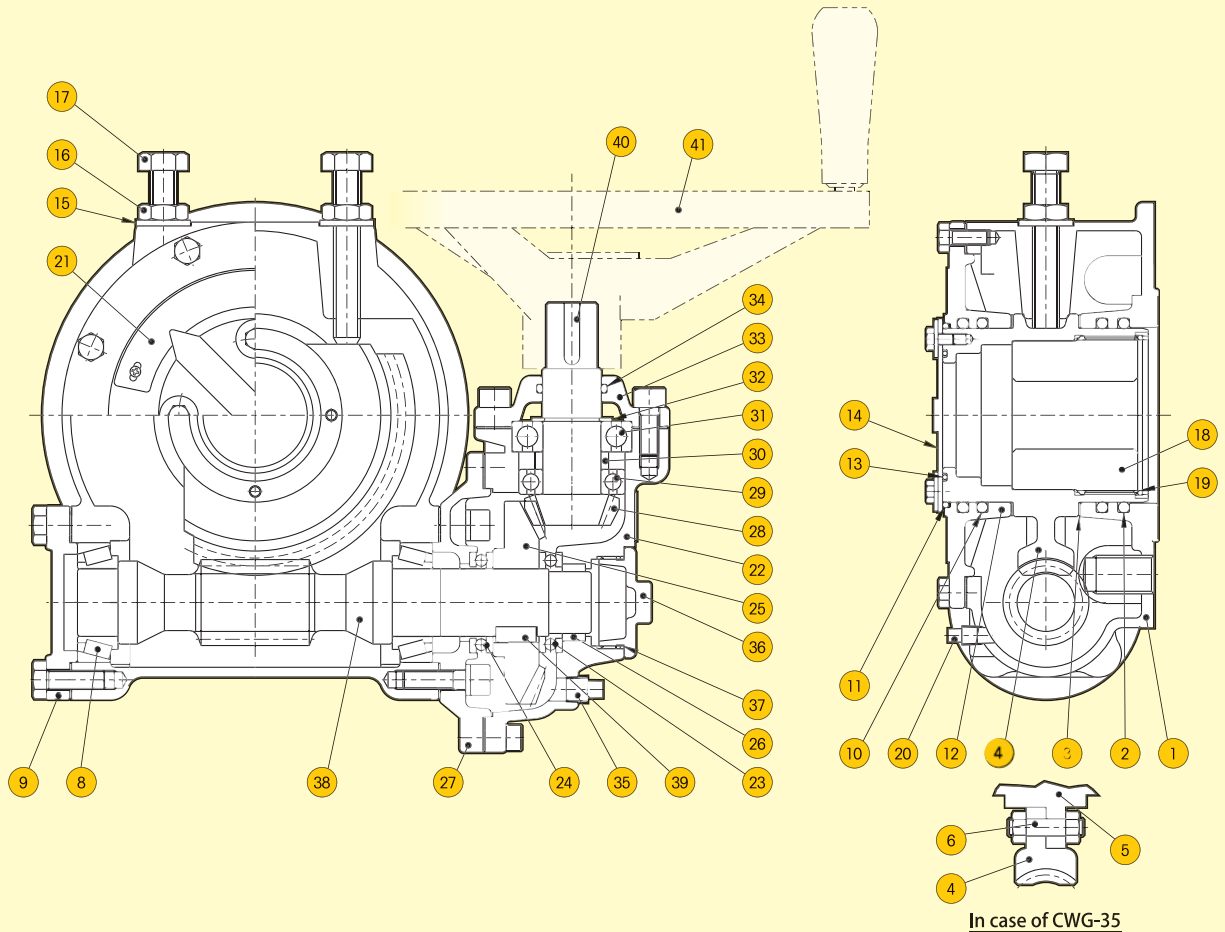
Type /Size	Flange dimensions(mm)						Weight (kg)
	N1	N2	N3	N4	N5	N6	
JMB-04	70H8	125	102	11	5	14	2
JMB-03							
JMB-00	95.2H8	175	139.7	17	6	18	5
JMB-0	127H8	210	165.1	22			7
JMB-1	152.4H8	289	254	17	6 (8)	22 (28)	15
JMB-2	177.81H8	343	298.5	22			23
JMB-3	215.91H8	406	355.6	26	12	28	29
JMB-4	228.61H8	476	406.4	33			51

The dimensions in () are for CWG-70 only.

STRUCTURAL DRAWING

CWG-00~35

(Manual Operation)



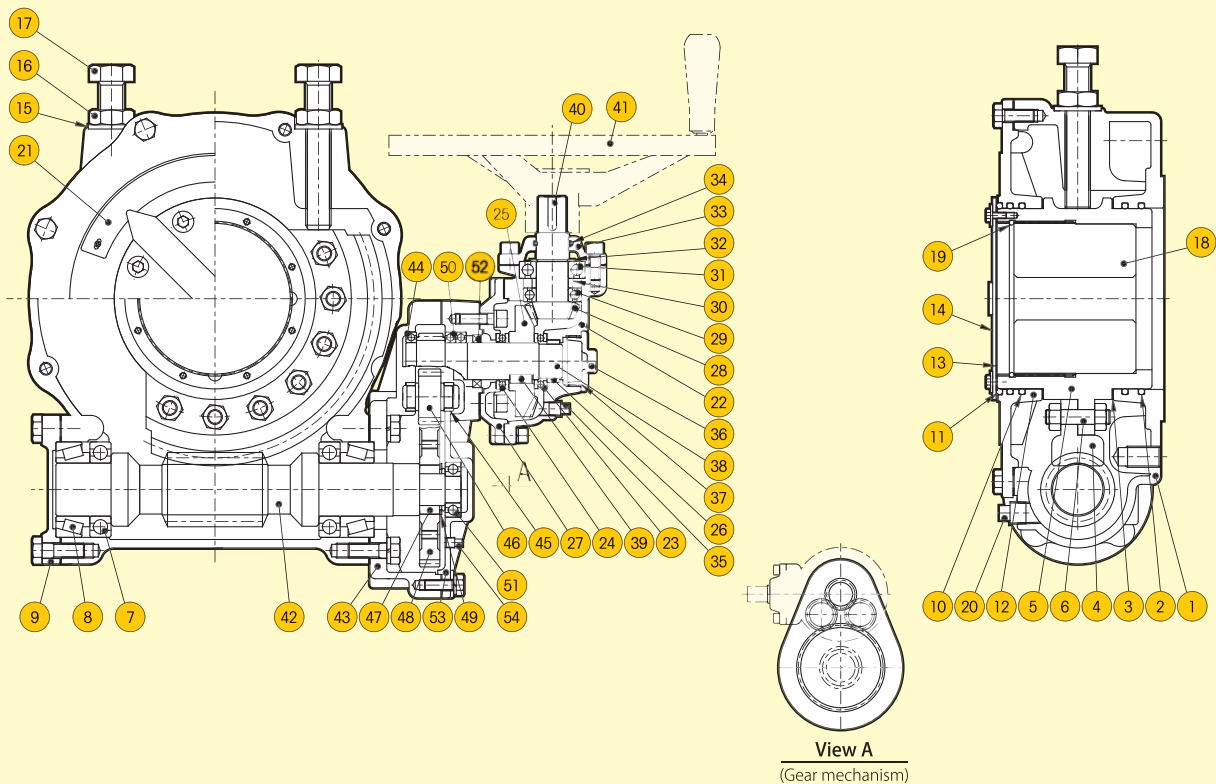
No.	Part name	No. of pcs	Remarks
1	Housing	1	
2	O-ring	2	
3	Thrust washer	2	
4	Worm wheel	1	
5	Worm body	1	CWG-35 only
6	Reamer bolt	7	CWG-35 only
7			
8	Taper roller bearing	2	
9	Front cap	1	
10	O-ring	2	
11	O-ring	1	
12	Cover	1	
13	O-ring	1	
14	Indicator plate	1	

No.	Part name	No. of pcs	Remarks
15	Seal washer	2	
16	Hexagonal nut	2	
17	Stop bolt	2	
18	Stem bush	1	
19	Fixed spring	1	
20	Plug	1	
21	Dial	1	
22	Housing	1	
23	Thrust ball bearing	1	
24	Thrust ball bearing	1	
25	Bevel gear	1	
26	Sleeve	1	
27	Base	1	
28	Bevel pinion	1	

No.	Part name	No. of pcs	Remarks
29	Ball bearing	1	
30	Collar	1	
31	Ball bearing	1	
32	Snap ring	1	
33	End cap	1	
34	O-ring	1	
35	Plug	1	
36	Stem cap	1	
37	O-ring	1	
38	Worm shaft	1	
39	Key	1	
40	Key	1	
41	Handwheel	1	Option

STRUCTURAL DRAWING

CWG-40~60 (Manual Operation)



No.	Part name	No. of pcs	Note
1	Housing	1	
2	O-ring	2	CWG-40,50
		3	CWG-60
3	Thrust washer	2	
4	Worm wheel	1	
5	Worm body	1	
6	Reamer bolt	7	
7	Ball bearing	2	
8	Taper roller bearing	2	
9	Front cap	1	
10	O-ring	2	
11	O-ring	1	
12	Cover	1	
13	Gasket	1	
14	Indicator plate	1	
15	Seal washer	2	
16	Hexagonal nut	2	
17	Stop bolt	2	
18	Stem bush	1	

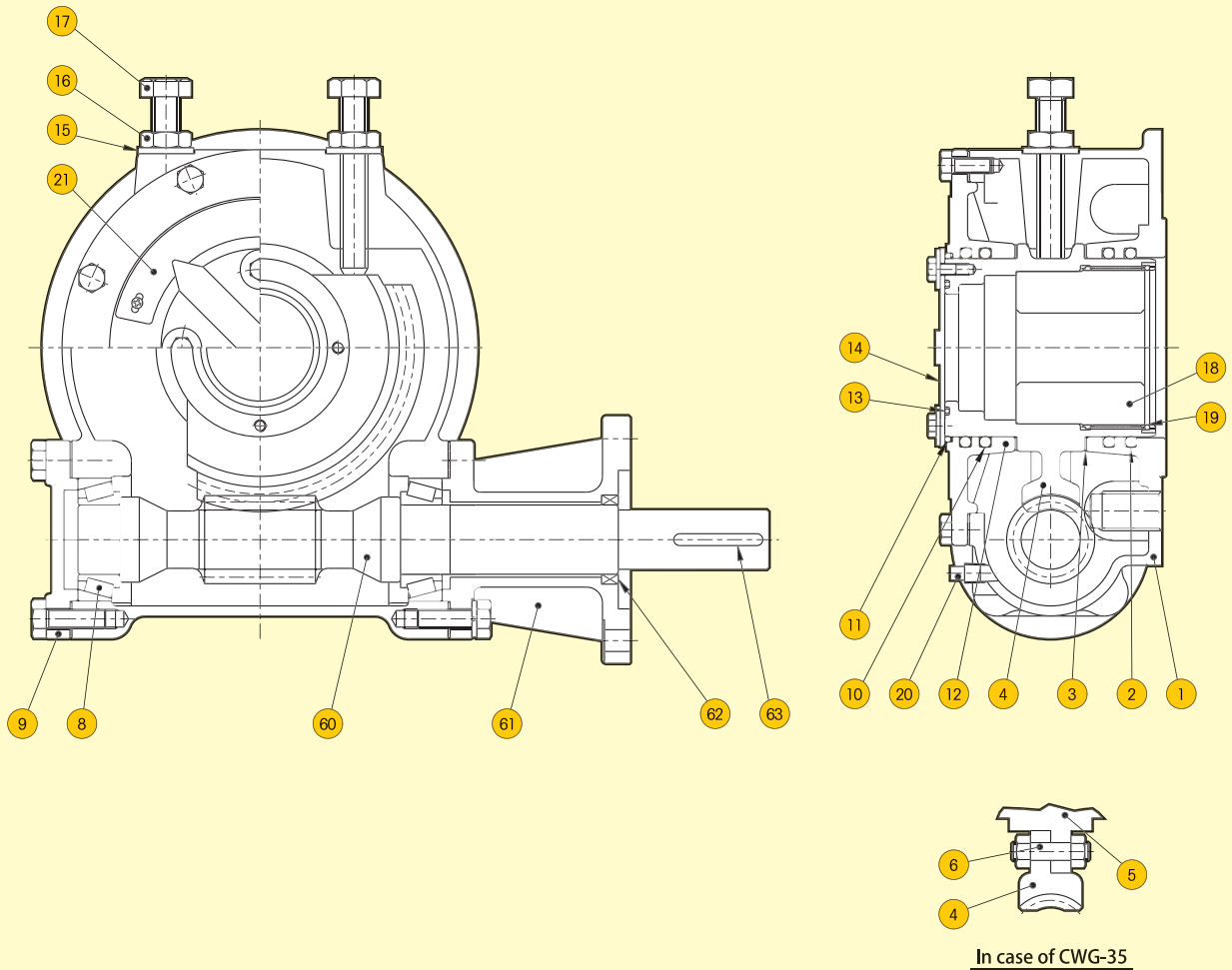
No.	Part name	No. of pcs	Note
19	Fixed spring	1	
20	Plug	1	
21	Dial	1	
22	Housing	1	
23	Thrust ball bearing	1	
24	Thrust ball bearing	1	
25	Bevel gear	1	
26	Sleeve	1	
27	Base	1	
28	Bevel pinion	1	
29	Ball bearing	1	
30	Collar	1	
31	Ball bearing	1	
32	Snap ring	1	
33	End cap	1	
34	O-ring	1	
35	Plug	1	
36	Stem cap	1	
37	O-ring	1	

No.	Part name	No. of pcs	Note
38	Helical pinion	1	
39	Key	1	
40	Key	1	
41	Handwheel	1	Option
42	Worm shaft	1	
43	Support housing	1	
44	Ball bearing	1	
45	Bush	4	CWG-40,50
	Ball bearing	4	CWG-60
46	Idle gear	2	
47	Key	2	
48	Helical gear	1	
49	Snap ring	1	
50	Ball bearing	2	
51	Ball bearing	1	
52	Oil seal	1	
53	Support cover	1	
54	Plug	1	

STRUCTURAL DRAWING

CWG-00~35

(Motorized
Operation)



In case of CWG-35

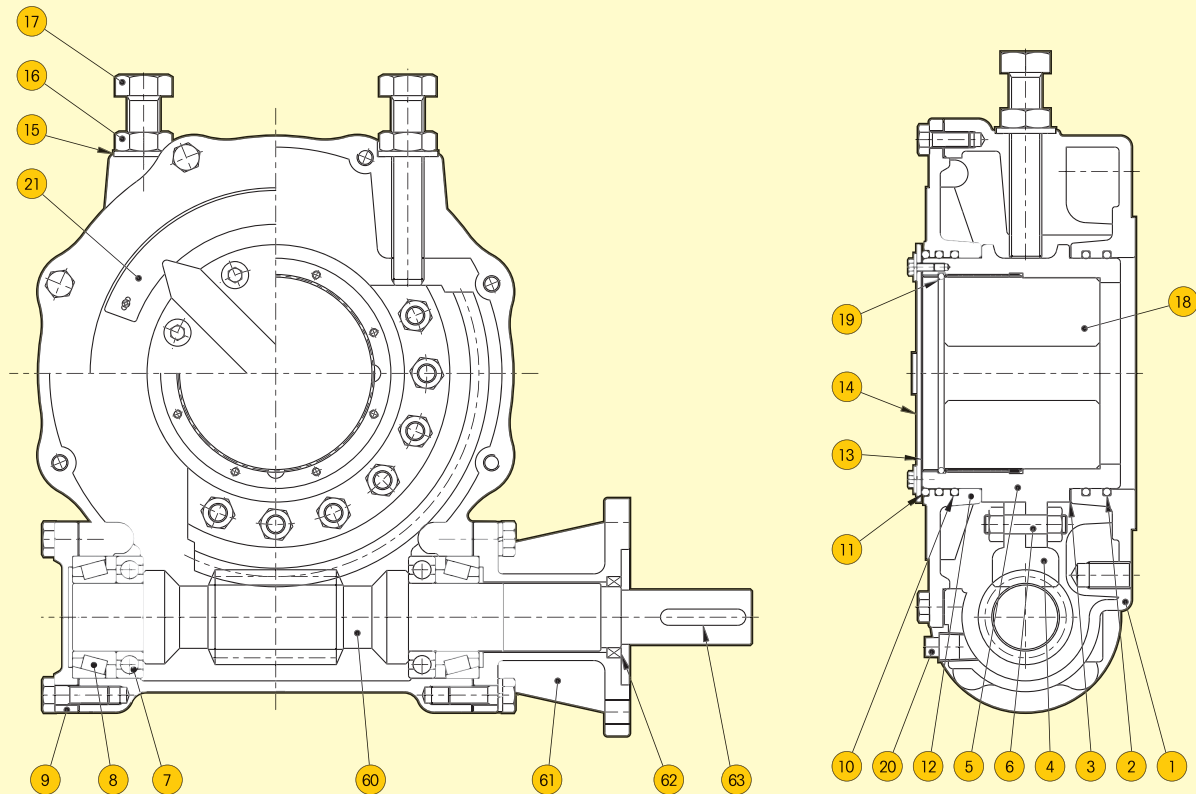
No.	Part name	No. of pcs	Note
1	Housing	1	
2	O-ring	2	
3	Thrust washer	2	
4	Worm wheel	1	
5	Worm body	1	CWG-35 only
6	Reamer bolt	7	CWG-35 only
7			
8	Taper roller bearing	2	
9	Front cap	1	

No.	Part name	No. of pcs	Note
10	O-ring	2	
11	O-ring	1	
12	Cover	1	
13	O-ring	1	
14	Indicator plate	1	
15	Seal washer	2	
16	Hexagonal nut	2	
17	Stop bolt	2	
18	Stem bush	1	

No.	Part name	No. of pcs	Note
19	Fixed spring	1	
20	Plug	1	
21	Dial	1	
60	Worm shaft	1	
61	Mounting adapter	1	
62	Oil seal	1	
63	Key	1	

CWG-40~80

(Motorized Operation)

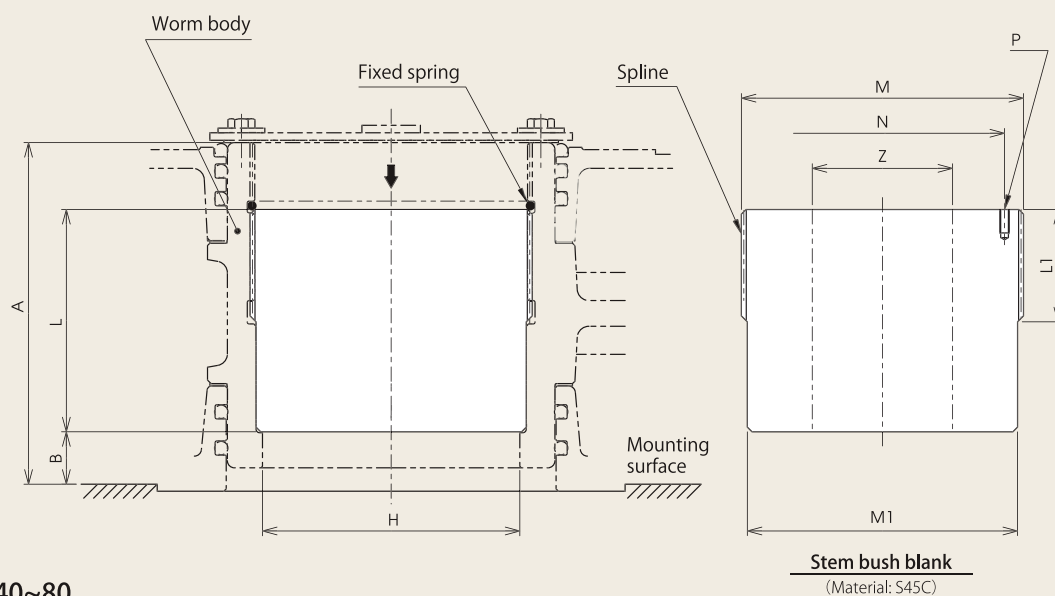
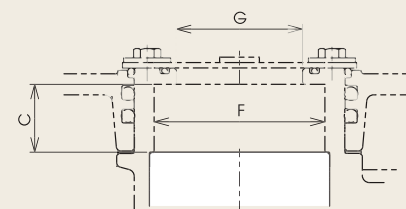
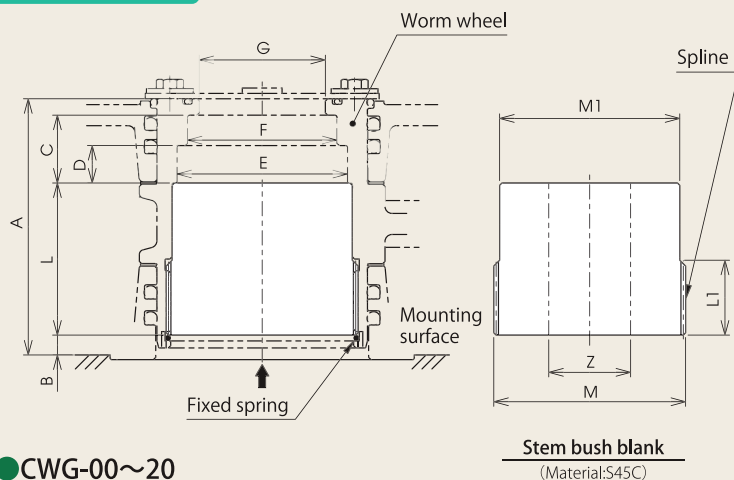


No.	Part name	No. of pcs	Note
1	Housing	1	
2	O-ring	2 CWG-40,50 3 CWG-60,70,80	
3	Thrust washer	2	
4	Worm wheel	1	
5	Worm body	1	
6	Reamer bolt	7 CWG-40~60 13 CWG-70, 80	
7	Ball bearing	2	

No.	Part name	No. of pcs	Note
8	Taper roller bearing	2	
9	Front cap	1	
10	O-ring	2	
11	O-ring	1	
12	Cover	1	
13	Gasket	1	
14	Indicator plate	1	
15	Seal washer	2	
16	Hexagonal nut	2	

No.	Part name	No. of pcs	Note
17	Stop bolt	2	
18	Stem bush	1	
19	Fixed spring	1	
20	Plug	1	
21	Dial	1	
60	Worm shaft	1	
61	Mounting adapter	1	
62	Oil seal	1	
63	Key	1	

DIMENSIONAL DRAWING OF STEM END



● Arrows (↑, ↓) indicate the stem bush inserting directions. ● After inserting the stem bush, make sure to attach the fixed spring.

Type /Size	A	B	C	D	ΦE	ΦF	ΦG	ΦH	Stem bush						Max. stem diameter ΦZ(key size)
									L	L1	ΦM	ΦM1	ΦN	P	
CWG-00	86.5	6.6	28.9	16.9	44	41	30	-	45	22	52.9	48	-	-	36 (10×8)
CWG-10	96	8	27	15	57	54	42	-	55	27	66	61	-	-	46 (14×9)
CWG-20	113.5	8.5	34	21	73	64	54	-	65	32	82	77	-	-	60 (18×11)
CWG-30	121	9	30	-	-	86	74	-	75	37	98	93	-	-	75 (20×12)
CWG-35	127	8	33	-	-	95	86	-	80	35	106	100	-	-	80 (22×14)
CWG-40	146	22	-	-	-	-	-	110	95	48	120.6	115.5	-	-	95 (25×14)
CWG-50	154	23	-	-	-	-	-	134	115	58	146	141	-	-	115 (32×18)
CWG-60	196	30	-	-	-	-	-	162	140	70	178	173	152	2-M8x1.25 Depth 15	140 (36×20)
CWG-70	245	25	-	-	-	-	-	245	190	95	272.5	265	240	2-M10x1.5 Depth 23	210 (50×28)
CWG-80	286	25	-	-	-	-	-	322	240	120	351	342	309	2-M12x1.75 Depth 24	280 (63×32)



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