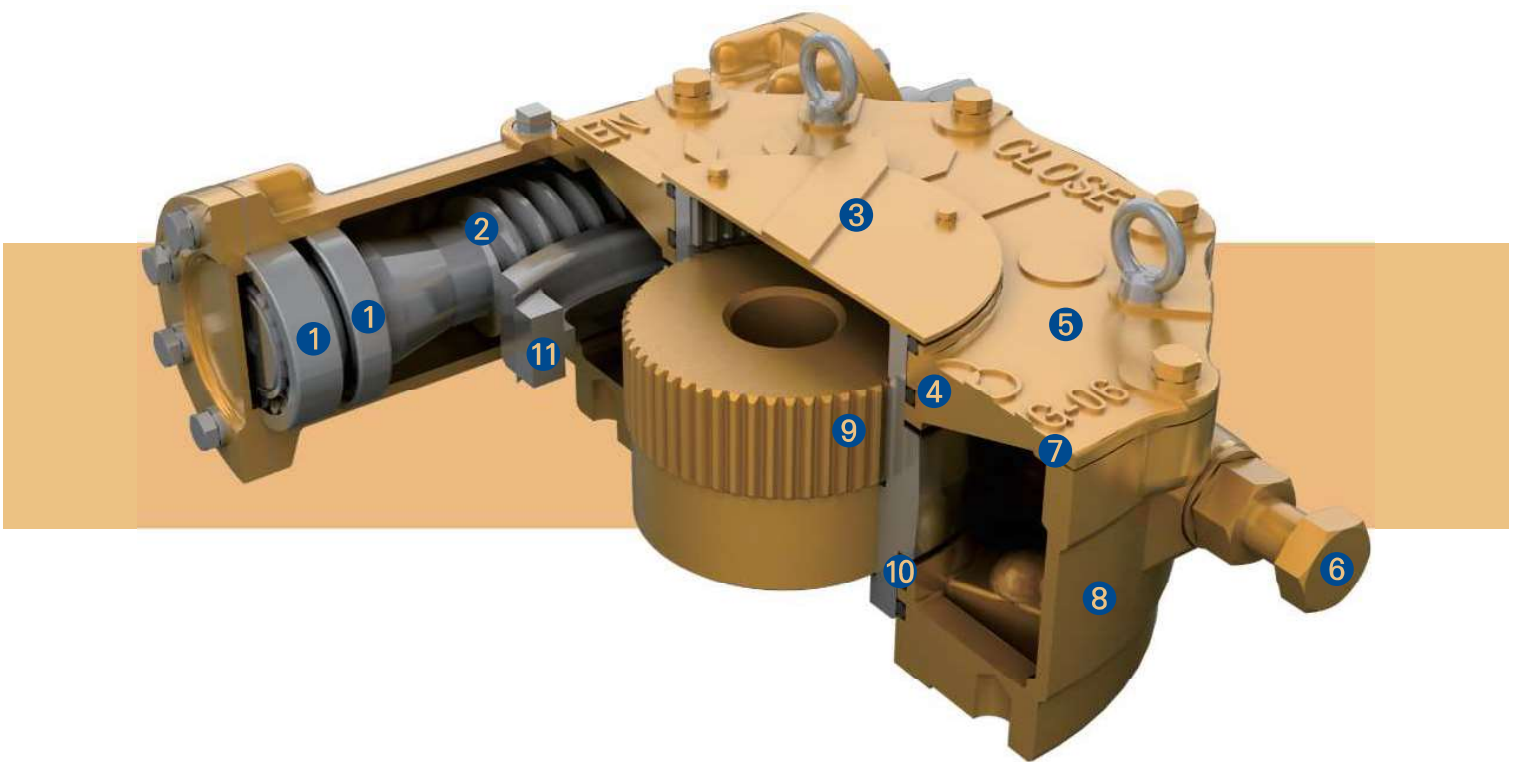


Worm Gear Actuators

Special View & Features



① Tapered Roller & Ball Bearings

The Worm is supported on tapered roller bearings which support both the axial and radial forces generated by the gearings. They have excellent load bearing capacity.

② Worm

1045 heat treated steel, with ground and polished worm threads. Precision cutting of the threads provides minimum backlash between the worm gear and worm.

③ Indicator Plate

Pointer provides positive position indication. The pointer can easily be re-positioned if required.

④ Sealing

The drive sleeve is supplied with a oil seal at the top and large cross-section o-ring at the bottom. This sealing method allows the units to be rated for submersible service to Ip67 standards.

⑤ Cover

Legends, 'Close-Open-Close' are cast directly on the cover. This permits operation in either direction with position indication.

⑥ External Adjustable Stops

The stop bolts allow for position accuracy of $\pm 5^\circ$.

Each bolt also includes Buna-N sealing washers or prevent water intrusion

⑦ Gaskets

Each end of the worm assembly is equipped with special design material(non-asbestos), which are completely water resistant.

This series of Worm Gears range from 360N.m (260ft-lbf) to 970,000N.m (710,000 ft-lbf)

Units are available with single, double and triple reduction spur gear.
Other options available are : vertical input

⑧ Housing

All external castings are Ductile Iron. Class 65-45-12, Tensile Strength of 65,000 psi

⑨ Splined Bushings

All units furnished with removable splined bushings to permit accurate position between the gear drive and the valve shaft.

⑩ Thrust Washer

The drive sleeve is furnished with hardened steel thrust washers above and below worm gear. This minimizes frictional looseness between the gear and the ductile iron castings.

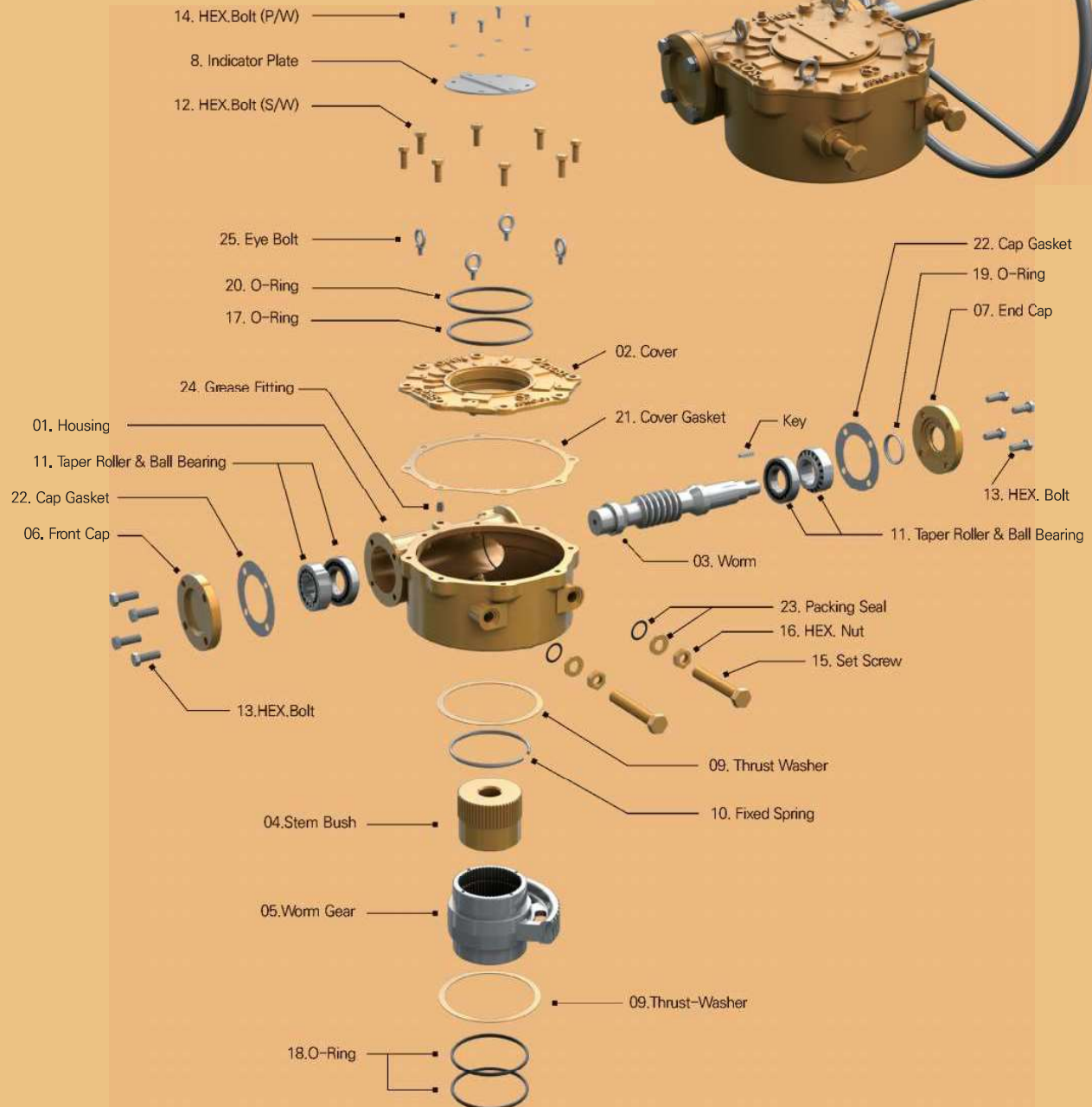
⑪ Worm Gear

Standard material is Ductile Iron, Grade 80-55-06, Suitable most industrial applications.
Option is aluminum bronze having a tensile strength of 85,000 psi.
Normally required for motorized applications involving modulating service and is also a requirement to meet the AWWA standards.

Worm Gear Actuator Assembly

STANDARD TYPE-A

Horizontal Input



❖ Part List & Material

	NO	DESCRIPTION	MATERIAL			REMARK
			NAME	JIS	ASTM	
STANDARD	1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1
	2	Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1
	3	Worm	Carbon Steel	S45C	A576-1045	NOTE. 2
	4	Stem Bush	Ductile Iron	FCD-450	A536-65-45-12	
	5	Worm Gear	Ductile Iron	FCD-600	A536-80-55-06	B148-C95800(ALBC3)
	6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12	
	7	End Cap	Ductile Iron	FCD-450	A536-65-45-12	
	8	Indicator Plate	Steel + EP			
	9	Thrust Washer	Steel			
	10	Fixed Spring	Steel			
	11	Taper Roller & Ball Bearing	Special Steel	SUJ2	A295-52100	
	12	HEX. Bolt	Alloy Steel	SCM435	A322-4135	
	13	HEX. Bolt	Alloy Steel	SCM435	A322-4135	
	14	HEX. Bolt (P/W)	Stainless Steel			
	15	Set Screw	Carbon Steel	S45c	A576-1045	
	16	HEX. Nut	Carbon Steel	S45c	A576-1045	
	17	O-Ring	Buna N	NBR		NOTE. 3
	18	O-Ring	Buna N	NBR		
	19	O-Ring	Buna N	NBR		
	20	O-Ring	Buna N	NBR		
	21	Cover Gasket	Non - Asbestos			VALQUA 6601
	22	Cap Gasket	Non - Asbestos			
	23	Packing Seal	Bunan	NBR		
	24	Grease Fitting	Steel + Galvanizing			
	25	Eye Bolt	Steel + Galvanizing			
OPTION	OP-01.	Hand Wheel	Steel Pipe	SGP	A53	HANDLE PART NOTE. 4
	OP-02.	Key	Carbon Steel	S45C	A576-1045	
	OP-03.	Name Plate	Stainless Steel			
	OP-04.	Washer	Stainless Steel			
	OP-05.	HEX.Bolt (S/W)	Stainless Steel			

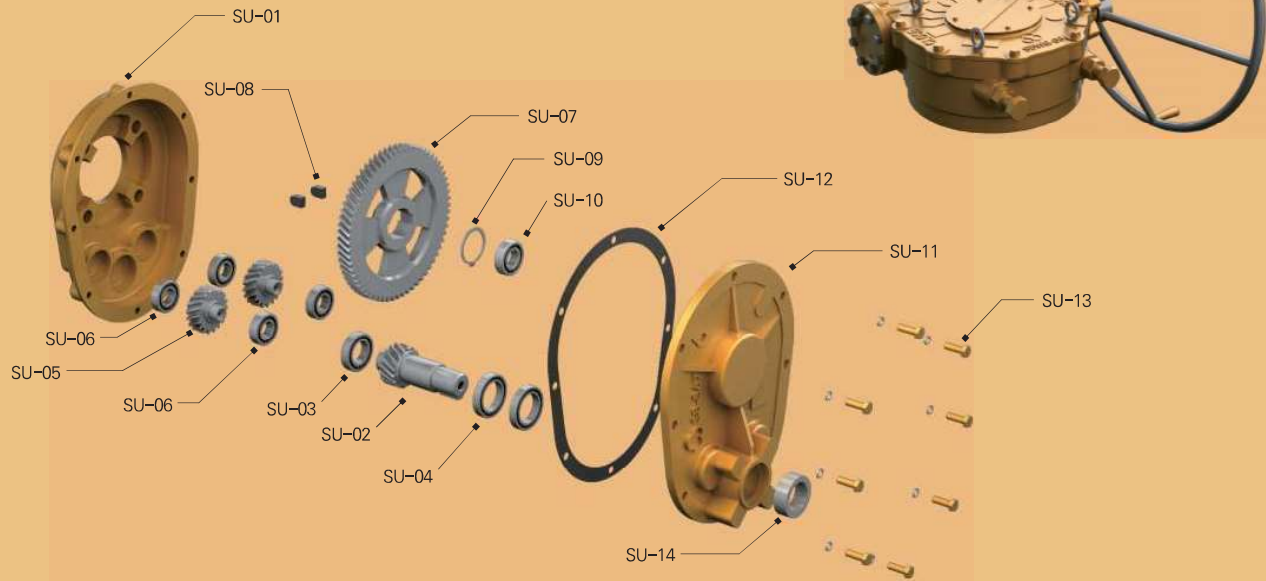
❖ Material Detail : Option and Material Changes

- All castings are Ductile Iron, FCD-450 (ASTM Class 65-45-12)
- In case of option for special request, it can be worked Nickel coating, high tensile stainless.
- Also, the material can be changed as ALBC3(Aluminium Bronze), steel(A576-1045), A439 Gr D2C (Austenitic ductile iron casting) and etc.
- O-Ring Seal & Lubricant : Standard is Buna "N", temperature range -20°C to +120°C (-4°F to +248°F).
Standard lubricant is Zenith EPSB 2, temperature Range -20°C to +200°C (-4°F to +392°F).
Other option are : High Temperature Viton O-Ring Grade V75, Temperature Range -30°C to +200°C (-22°F to +392°F)
Lubricant - Zenith SYN WS2 Temperature Range -30°C~400°C (-22°F 752°F)
Low Temperature Silicon O-Ring, Temperature Range -60°C to + 150°C(-76°F to 302°F)
Lubricant - Zenith SLP402, Temperature Range -60°C~140°C (-76°F 284°F)
- SAMBO offers a wide variety of Handwheels, Chainwheels, Input Shaft, Locking Devices and etc.
- SAMBO offers a wide variety of stem cover, stainless steel, Polycarbonate.
Paint : Unless specified, units are supplied with vp184 Red epoxy primer. SAMBO can provide finish coating upon request.

Worm Gear Actuator Assembly

STANDARD TYPE-A

Horizontal Input
with Single Reduction Gear Attachment



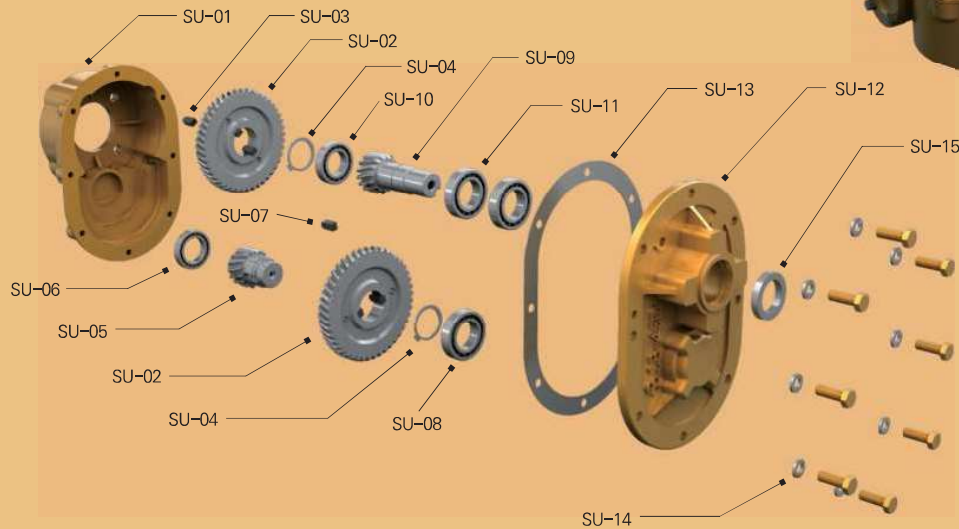
Part List & Material

NO	DESCRIPTION	MATERIAL			REMARK	NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM				NAME	JIS	ASTM	
1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	23	Packing Seal	Buna N	NBR		
2	Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	24	Grease Fitting	Steel + Galvanizing			
3	Worm	Carbon Steel	S45C	A576-1045	NOTE. 2	25	Eye Bolt	Steel + Galvanizing			
4	Stem Bush	Ductile Iron	FCD-450	A536-65-45-12		SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12	
5	Worm Gear	Ductile Iron	FCD-600	A536-80-55-06	B148-96800(ALBC3)	SU-02	Helical Pinion	Carbon Steel	S45C	A576-1045	
6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-03	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-04	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
8	Indicator Plate	Steel + EP				SU-05	Idle Gear	Carbon Steel	S45C	A576-1045	
9	Thrust Washer	Steel				SU-06	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
10	Fixed Spring	Steel				SU-07	Helical Gear	Carbon Steel	S45C	A576-1045	
11	Taper Roller Bearing	Special Steel	SUJ2	A295-52100		SU-08	Key (1R)	Carbon Steel	S45C	A576-1045	
12	HEX. Bolt (S/W)	Alloy Steel	SCM435	A322-4135		SU-09	Snap Ring	Carbon Steel	S45C	A576-1045	
13	HEX. Bolt	Alloy Steel	SCM435	A322-4135		SU-10	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
14	HEX. Bolt (P/W)	Stainless Steel				SU-11	Support Cover	Ductile Iron	FCD-450	A536-65-45-12	
15	Set Screw	Carbon Steel	S45c	A576-1045		SU-12	S-Cover Gasket	Nonasbestos		VALQUA6601	
16	HEX. Nut	Carbon Steel	S45c	A576-1045		SU-13	HEX. Bolt (S/W)	Alloy Steel	SCM435	A322-4135	
17	O-Ring	Buna N	NBR		NOTE. 3	SU-14	Oil-Seal	Buna N	NBR		
18	O-Ring	Buna N	NBR			OP-01	Hand Wheel	Steel Pipe	SGP	A53	OPTION HANDLE PART
19	O-Ring	Buna N	NBR			OP-02	Key(1R)	Carbon Steel	S45C	A576-1045	
20	O-Ring	Buna N	NBR			OP-03	Name Plate	Stainless Steel			
21	Cover Gasket	Non - Asbestos			OP-04	Washer	Stainless Steel				
22	Cap Gasket	Non - Asbestos			OP-05	HEX. Bolt (S/W)	Stainless Steel				

Worm Gear Actuator Assembly

STANDARD TYPE-A

Horizontal Input
with Double Reduction Gear Attachment



Part List & Material

NO	DESCRIPTION	MATERIAL			REMARK	NO	DESCRIPTION	MATERIAL			REMARK	
		NAME	JIS	ASTM				NAME	JIS	ASTM		
1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	23	Packing Seal	Buna N	NBR			
2	Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	24	Grease Fitting	Steel + Galvanizing				
3	Worm	Carbon Steel	S45C	A576-1045	NOTE. 2	25	Eye Bolt	Steel + Galvanizing				
4	Stem Bush	Ductile Iron	FCD-450	A536-65-45-12		SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12		
5	Worm Gear	Ductile Iron	FCD-600	A536-80-55-06	B148-95800(ALBC3)	SU-02	Helical Gear	Carbon Steel	S45C	A576-1045		
6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-03	Key (1R)	Carbon Steel	S45C	A576-1045		
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-04	Snap Ring	Carbon Steel	S45C	A576-1045		
8	Indicator Plate	Steel + EP				SU-05	Idle Gear	Carbon Steel	S45C	A576-1045		
9	Thrust Washer	Steel				SU-06	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
10	Fixed Spring	Steel				SU-07	Key (1R)	Carbon Steel	S45C	A576-1045		
11	Taper Roller Bearing	Special Steel	SUJ2	A295-52100		SU-08	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
12	HEX. Bolt (S/W)	Alloy Steel	SCM435	A322-4135		SU-09	Helical Pinion	Carbon Steel	S45C	A576-1045		
13	HEX. Bolt	Alloy Steel	SCM435	A322-4135		SU-10	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
14	HEX. Bolt (P/W)	Stainless Steel				SU-11	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
15	Set Screw	Carbon Steel	S45c	A576-1045		SU-12	Support Cover	Ductile Iron	FCD-450	A536-65-45-12		
16	HEX. Nut	Carbon Steel	S45c	A576-1045		SU-13	S-Cover Gasket	Nonasbestos			VALQUA6601	
17	O-Ring	Buna N	NBR		NOTE. 3	SU-14	HEX. Bolt (S/W)	Stainless	SCM435	A322-4135		
18	O-Ring	Buna N	NBR			SU-15	Oil-Seal	Buna N	NBR			
19	O-Ring	Buna N	NBR			OP-01	Hand Wheel	Steel Pipe	SGP	A53	OPTION HANDLE PART	
20	O-Ring	Buna N	NBR			OP-02	Key (1R)	Carbon Steel	S45C	A576-1045		
21	Cover Gasket	Non - Asbestos				OP-03	Name Plate	Stainless Steel				
22	Cap Gasket	Non - Asbestos			OP-04	Washer	Stainless Steel					
					OP-05	HEX. Bolt (S/W)	Stainless Steel					

Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

Handwheel Type(SE-Series)

TYPE	D	H
WS-200	200	70
WS-300	300	110
WS-400	400	130
WS-500	500	160
WS-600	600	190
WS-700	700	210
WS-800	800	230
WS-900	900	250
WS-1000	1000	270



Certificate No. :37314 1S161207-SIQW61 1S160913-SITQ13

Global Leader
SAMBO
 WORM GEAR ACTUATORS

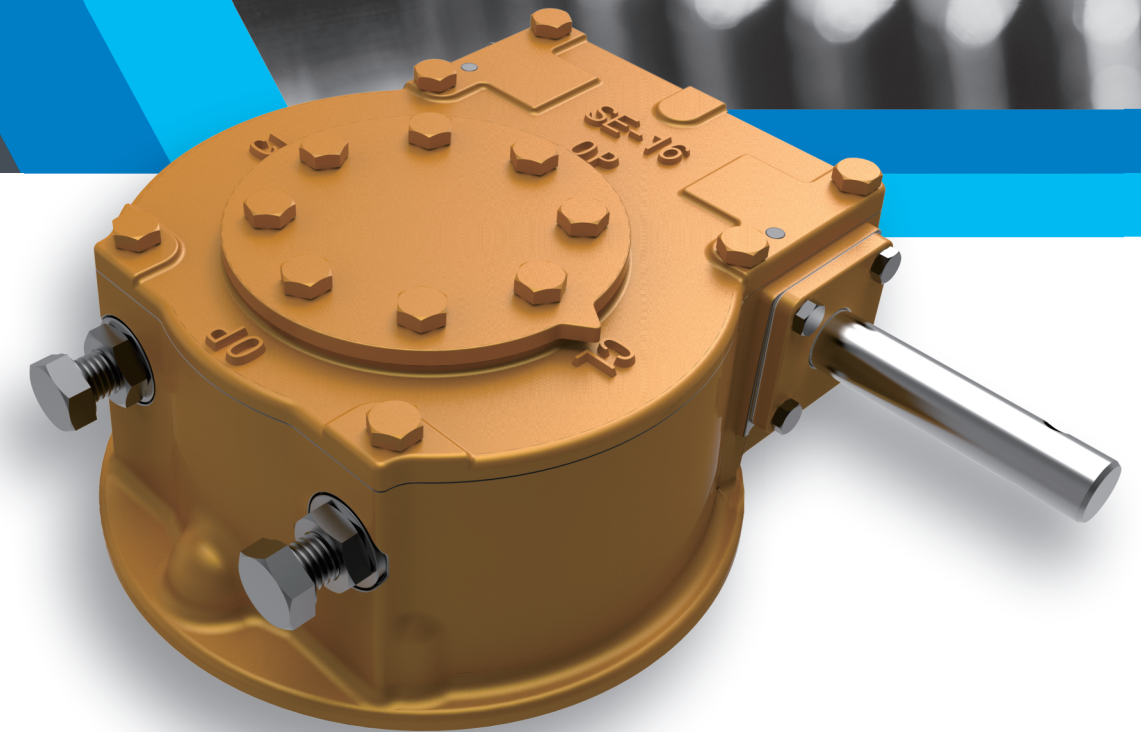
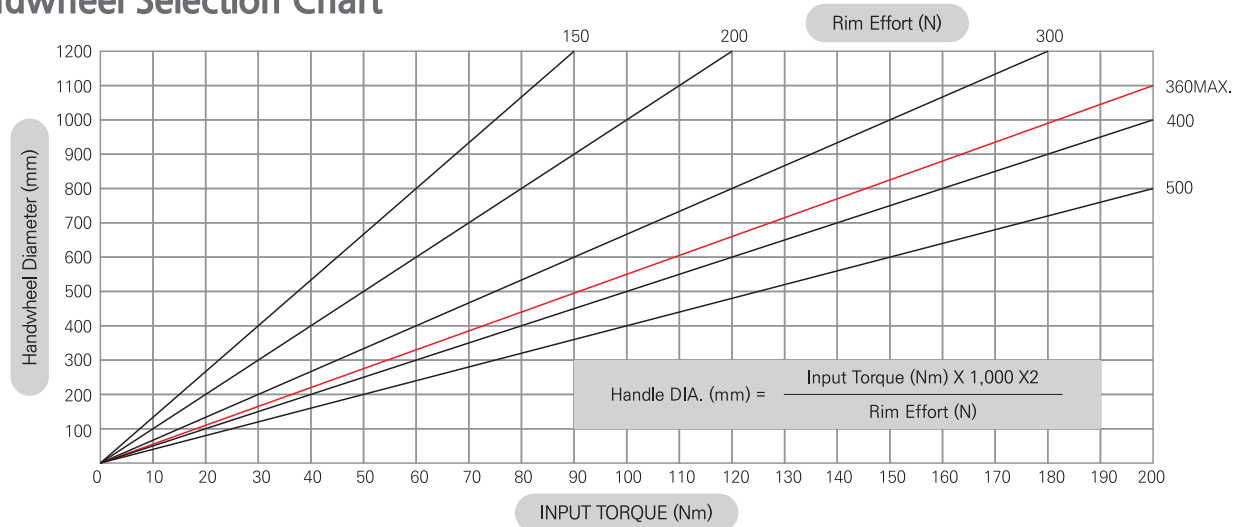
SE series Quarter-Turn >>>

Innovation & Change for Customer
SAMBO GEAR ACTUATORS

High Quality Gear Actuators
 High Performance & Efficiency

We promise to make development through challenge mind, young passion and long experience of management.
 We will do our best to make No. 1 priority company all over the world.
 In the future, we would be highly appreciated if you supply any advice for our improvement.

Handwheel Selection Chart



SE Series Quarter-turn Gear Actuators

- The Sambo SE series is designed to meet stringent requirements and provide the necessary durability and reliability.
- All castings are spheroidal graphite cast iron, and CLASS 65-45-12 has high strength and impact resistance.
- All products use integral worm shafts and high strength bearings to support axial and radial loads.
- Two types of separable bushing and integral type make maintenance easy.
- It has double sealing structure and excellent waterproof and dust proof capability.
- Finish painting is Kovinyl wash primer.

Application

- The Sambo SE series is a 1/4 turn gear actuator with ball, plug, can be applied to butterfly valves, it can also be used for general devices.

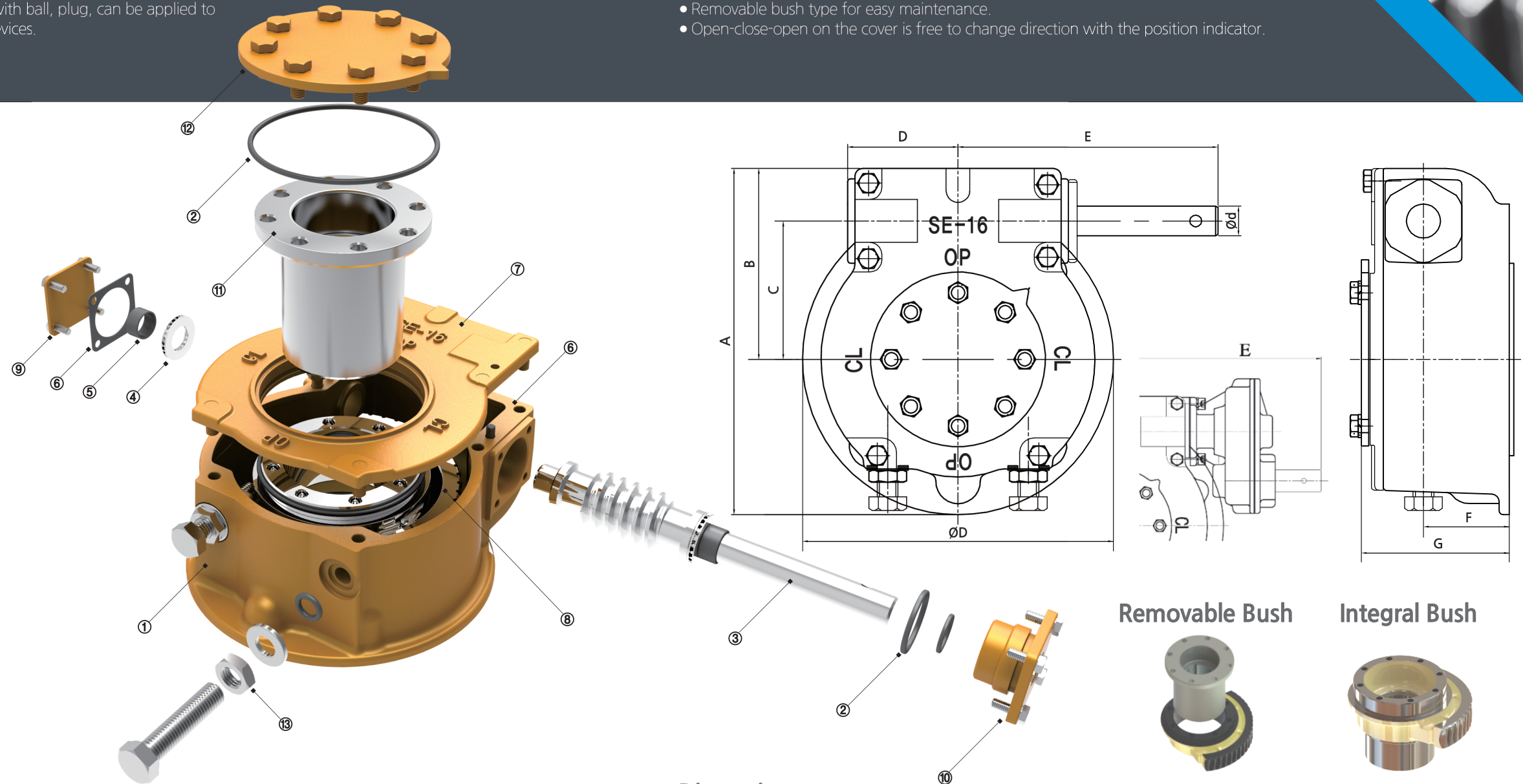
Features

- 8 model products. • 4800 N.m Torque Range. • ip67 STANDARD.
- -20 degrees to 80 degrees.
- According to all mounting bases iso5211.
- All castings ductile iron, Class 65-45-12 excellent strength and impact resistance.
- The worm is a single-body, heat-treated high-strength carbon steel.
- Waterproof and dust proof thanks to double sealing structure IP67 STANDARD.
- Application of high strength worm gear, Class 80-55-06.
- Use adjustable stop bolts ± 5 degrees.
- Removable bush type for easy maintenance.
- Open-close-open on the cover is free to change direction with the position indicator.

Material List SE-series

No.	Description	Material	Note
1	Housing	Ductile iron	65-45-12
2	O-ring	NBR	
3	Worm	Carbon steel	S45C
4	Needle bearing	Special Steel	
5	DU Bushing	Special Steel	
6	Gasket	Liquid seal / Nonasbestos	
7	Cover	Ductile iron	65-45-12
8	Worm Wheel	Ductile iron	80-55-06
9	Front Cap	Steel	
10	End cap	Steel	
11	Stem bush	Ductile iron	FCD450
12	Position Indicator	Steel	
13	Stop bolt	Alloy steel	10.9 Gr.D

• Material may be changed to improve product performance.



Performance Specifications

Model	Ratio	Torque (N.m)		M.A +10%	Valve Connection (Iso5211)		Max. Stem (mm)			weight (kg)
		Output	Input		std.	option	Bore	Square	Height	
SE-10	38:1	300	27.0	11.1	F10	F07,F05	25	20	62	
SE-12	42:1	600	52.6	11.4	F12	F10,F07	35	28	72	
SE-14	46:1	1400	106.1	13.2	F14	F12,F10	43	35	85	
SE-16	50:1	2400	161.1	14.9	F16	F14,F12,F10	58	46	95	
SE-20	54:1	3500	224.4	15.6	F20	F16 F14,F12	68	54	105	
SE-20-1S	135:1		97.2	36						
SE-25	58:1	4800	289.2	16.6	F25	F20,F16 F14	80	62	108	
SE-25-1S	145:1		125.7	38.2						

• Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

Dimension

Model	A	B	C	D	E	F	G	ØD	Ød
SE-10	129	69	43.5	52.5	121	36	69.5	12	12
SE-12	155	82	55	61.5	129	43	80.5	14	14
SE-14	192.5	105	72.5	73	167	52	93	16	16
SE-16	234	129	92	86.5	176	58	102	20	20
SE-20	272	147	107	95.5	180	63	115.5	25	25
SE-20-1S					242.5			25	25
SE-25	316	166	122.5	105.5	190	65	120	25	25
SE-25-1S					252.5			25	25

• Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

unit: mm

Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-BF	32 :1	360	266	11.6	30.9	8	20 (6x6)	F-07				
SBWG-BFTN						32						
SBWG-BFMT						32						
SBWG-BFDC	29 :1	320	236	10.9	29.4	8	20 (6x6)	F-07				
SBWG-BFDCM						8						
SBWG-0	36:1	780	575	13.4	58.1	9	28 (8x7)	F-10 F-07 (OPTION)				
SBWG-0TN						9						
SBWG-0MT						9						
SBWG-0DC	34 :1	680	502	13.3	51.1	8.5	28 (8x7)	F-10 F-07 (OPTION)				
SBWG-0DCM						8.5						
SBWG-00	40 :1	1200	885	14.1	85.0	10	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00TN						10						
SBWG-00MT						40						
SBWG-00-1S	80 :1	1200	885	26.0	46.2	20	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00TN-1S						20						
SBWG-00MT-1S						80						
SBWG-00-1ST	P-40:1	1200	885	14.1	85.0	10	36 (10x8)	F-12 F-10 (OPTION)				
	S-80:1					20						
						20						
SBWG-00-1SD	160 :1	1200	885	47.8	25.1	40	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00TN-1SD						40						
SBWG-00MT-1SD						160						
SBWG-00-1SDT	P-80:1	1200	885	26.0	46.2	20	36 (10x8)	F-12 F-10 (OPTION)				
	S-160:1					40						
						40						
SBWG-00-2SD	320 :1	1200	885	87.9	13.7	80	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00-1S2B	160 :1					40						
SBWG-00-1SD2B	320 :1					80						
SBWG-00-2B	80 :1	1200	885	26.8	44.8	20	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00-2BD	160 :1					40						
SBWG-00-3W	1440 :1					360						
SBWG-00-3W2B	1440 :1	1200	885	176.1	6.8	360	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00DC	38 :1					980			723	14.1	69.3	9.5
SBWG-00DCM												9.5
SBWG-00DC-1S	67 :1	980	723	22.8	43.1	16.6	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00DCM-1S						16.6						
SBWG-00DC-2SD	266 :1	980	723	77.0	12.7	66.5	36 (10x8)	F-12 F-10 (OPTION)				
SBWG-00DCM-2SD						66.5						
Remark	• Ratio & Base specification to be changeable.											
	• Max Output Torque includes safety factor.											
	• If any request requirement, please contact us any time.											

Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)		
		(N·m)	(Ft·lbf)							
SBWG-01	44 :1	2000	1475	15.1	132.2	11	46 (14x9)	F-14 F-12, F-10 (OPTION)		
SBWG-01TN						44				
SBWG-01MT						44				
SBWG-01-1S	88 :1			27.8	71.8	22				
SBWG-01TN-1S						22				
SBWG-01MT-1S						88				
SBWG-01-1ST	P-44:1			15.1	132.2	11				
	S-88:1					27.8			71.8	22
SBWG-01-1SD	176 :1					51.2			39.0	44
SBWG-01TN-1SD				44						
SBWG-01MT-1SD				176						
SBWG-01-1SDT	P-88:1			27.8	71.8	22				
	S-176:1	51.2	39.0			44				
SBWG-01-2SD	352 :1	94.3	21.2			88				
SBWG-01-1S2B	176 :1	52.9	37.8	44						
SBWG-01-1SD2B	352 :1			97.3	20.5	88				
SBWG-01-2B	88 :1			28.8	69.6	22				
SBWG-01-2BD	176 :1	54.6	36.6	44						
SBWG-01-3W	1584 :1			203.0	9.9	396				
SBWG-01-3W2B	1584 :1			188.8	10.6	396				
SBWG-01DC	43 :1	1600	1180	15.0	106.8	10.8	60 (18x11)	F-16 F-14, F-12 (OPTION)		
SBWG-01DCM										
SBWG-01DC-1S									75 :1	26.1
SBWG-01DCM-1S										
SBWG-01DC-2SD	298:1			87.9	18.2	74.5				
SBWG-01DCM-2SD										
SBWG-02		48 :1	2800				2065	15.9	176.1	12
SBWG-02TN	48									
SBWG-02MT	48									
SBWG-02-1S	121.6 :1	37.1		75.6	30.4					
SBWG-02TN-1S					30.4					
SBWG-02TM-1S					121.6					
SBWG-02-1ST	P-48:1	15.9		176.1	12					
	S-121.6:1				37.1	75.6		30.4		
SBWG-02-1SD	308.1 :1				86.4	32.4		77		
SBWG-02TN-1SD		77								
SBWG-02MT-1SD		308.1								
SBWG-02-1SDT	P-121.6:1	37.1		75.6	30.4					
	S-308.1:1		86.4		32.4	77				
SBWG-02-2SD	616.1 :1		158.9		17.6	154				
SBWG-02-1S2B	243.2 :1	70.4	39.8	60.8						
SBWG-02-1SD2B	616.1 :1			164.1	17.1	154				
SBWG-02-2B	120 :1			37.8	74.1	30				
SBWG-02-2BD	240 :1	71.7	39.0	60						
SBWG-02-3W	1920 :1			224.4	12.5	480				
SBWG-02-3W2B	1920 :1			208.7	13.4	480				
SBWG-02DC	46 :1	2500	1844	15.9	157.4	11.5	60 (18x11)	F-16 F-14, F-12 (OPTION)		
SBWG-02DCM										
SBWG-02DC-1S									107 :1	34.0
SBWG-02DCM-1S										
SBWG-02DC-2SD	429 :1			115.4	21.7	107.3				
SBWG-02DCM-2SD										
Remark	<ul style="list-style-type: none"> Ratio & Base specification to be changeable. Max Output Torque includes safety factor. If any request requirement, please contact us any time. 									

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Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-03	52 :1	4300	3172	16.9	253.7	13	75 (20x12)	(F-20) F-16, F-14 (OPTION)				
SBWG-03TN						52						
SBWG-03MT	131.7 :1			39.5	108.9	32.9						
SBWG-03-1S				131.7								
SBWG-03TN-1S	P-52:1			16.9	253.7	13						
SBWG-03MT-1S				S-131.7:1	39.5	108.9			32.9			
SBWG-03-1ST	333.7 :1			92.1	46.7	83.4						
SBWG-03-1SD				333.7								
SBWG-03TN-1SD	P-131.7:1			39.5	108.9	32.9						
SBWG-03MT-1SD				S-333.7:1	92.1	46.7			83.4			
SBWG-03-1SDT	667.4 :1			169.4	25.4	166.9						
SBWG-03-2SD				667.4								
SBWG-03-1S2B	263.5 :1			75.0	57.3	65.9						
SBWG-03-1SD2B				174.9								
SBWG-03-2B	130 :1			40.2	106.8	32.5						
SBWG-03-2BD				76.5								
SBWG-03-3W	2080 :1			233.1	18.4	520						
SBWG-03-3W2B				216.8								
SBWG-03DC	50 :1			3800	2803	16.9			224.6	12.5	80 (22x14)	F-25, (F-20) F-16 (OPTION)
SBWG-03DCM						117 :1			36.4	104.3		
SBWG-03DC-1S	467 :1	123.0	30.9				116.8					
SBWG-03DCM-1S		117										
SBWG-03DC-2SD	6100	4499	17.4			350.5	13					
SBWG-03DCM-2SD							52					
SBWG-35	52 :1	6100	4499	17.4	350.5	13	80 (22x14)	F-25, (F-20) F-16 (OPTION)				
SBWG-35TN						52						
SBWG-35MT	131.7 :1			40.6	150.4	32.9						
SBWG-35-1S				131.7								
SBWG-35TN-1S	P-52:1			17.4	350.5	13						
SBWG-35MT-1S				S-131.7:1	40.6	150.4			32.9			
SBWG-35-1ST	333.7 :1			94.5	64.5	83.4						
SBWG-35-1SD				333.7								
SBWG-35TN-1SD	P-131.7:1			40.6	150.4	32.9						
SBWG-35MT-1SD				S-333.7:1	94.5	64.5			83.4			
SBWG-35-1SDT	667.4 :1			173.9	35.1	166.9						
SBWG-35-2SD				667.4								
SBWG-35-1S2B	263.5 :1			77.1	79.2	65.9						
SBWG-35-1SD2B				179.6								
SBWG-35-2B	130 :1			41.3	147.6	32.5						
SBWG-35-2BD				78.5								
SBWG-35-3W	2288 :1			263.3	23.2	572						
SBWG-35-3W2B				244.9								
SBWG-35DC	52 :1			5600	4130	20.1			278.6	13	80 (22x14)	F-25, (F-20) F-16 (OPTION)
SBWG-35DCM						118 :1			41.9	133.6		
SBWG-35DC-1S	471 :1	141.9	39.5				117.9					
SBWG-35DCM-1S		118										
SBWG-35DC-2SD	6100	4499	17.4			350.5	13					
SBWG-35DCM-2SD							52					

Remark

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Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)						
		(N·m)	(Ft·lbf)											
SBWG-04	56 :1	10400	7671	18.3	569.8	14	95 (25x14)	F-25 (F-20), F-16 (OPTION)						
SBWG-04TN						56								
SBWG-04MT						42								
SBWG-04-1S	168 :1			206.5	168									
SBWG-04TN-1S				18.3	569.8	14								
SBWG-04MT-1S				50.4	206.5	42								
SBWG-04-1ST	P-56:1			10400	7671	18.3			569.8	14	95 (25x14)	F-25 (F-20), F-16 (OPTION)		
SBWG-04-1SD	S-168:1									50.4			206.5	42
	504 :1									139.0			74.8	126
SBWG-04-1SDT	P-168:1					50.4			206.5	42				
SBWG-04-2SD	S-504:1					139.0			74.8	126				
	1276.8 :1					324.0			32.1	319.2				
SBWG-04-1S2B	420 :1	119.6	86.9			105								
SBWG-04-1SD2B	1260 :1	330.2	31.5			315								
SBWG-04-2B	168 :1	52.0	199.9			42								
SBWG-04-2BD	420 :1	123.5	84.2			105								
SBWG-04-3W	2688 :1	290.2	35.8			672								
SBWG-04-3W2B	3360 :1	337.3	30.8			840								
SBWG-04DC	56 :1	9600	7081	21.2	452.7	14	115 (32x18)	F-30 F-25 (OPTION)						
SBWG-04DCM						149.3 :1			52.0	184.5	37.3			
SBWG-04DC-1S												958 :1	282.5	34.0
SBWG-04DCM-1S														
SBWG-04DC-2SD														
SBWG-04DCM-2SD														
SBWG-05	60:1	15900	11727	19.6	813.1	15	115 (32x18)	F-30 F-25 (OPTION)						
SBWG-05TN						60								
SBWG-05MT						45								
SBWG-05-1S	180:1			294.6	180									
SBWG-05TN-1S				19.6	813.1	15								
SBWG-05MT-1S				54.0	294.6	45								
SBWG-05-1ST	P-60:1			15900	11727	19.6			813.1	15	115 (32x18)	F-30 F-25 (OPTION)		
SBWG-05-1SD	S-180:1									54.0			294.6	45
	540 :1									149.0			106.7	135
SBWG-05-1SDT	P-180:1					54.0			294.6	45				
SBWG-05-2SD	S-540:1					149.0			106.7	135				
	1368:1					347.2			45.8	342				
SBWG-05-1S2B	450:1	128.2	124.0			112.5								
SBWG-05-1SD2B	1350:1	353.8	44.9			337.5								
SBWG-05-2B	180:1	55.7	285.3			45								
SBWG-05-2BD	450:1	132.4	120.1			112.5								
SBWG-05-3W	2880:1	305.9	52.0			720								
SBWG-05-3W2B	3600:1	355.6	44.7			900								
SBWG-05DC	60:1	14400	10621	22.4	644.0	15	115 (32x18)	F-30 F-25 (OPTION)						
SBWG-05DCM						160:1			54.9	262.5	40			
SBWG-05DC-1S												1026:1	297.9	48.3
SBWG-05DCM-1S														
SBWG-05DC-2SD														
SBWG-05DCM-2SD														
Remark	<ul style="list-style-type: none"> • Ratio & Base specification to be changeable. • Max Output Torque includes safety factor. • If any request requirement, please contact us any time. 													

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Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-55	62:1	23500	17333	20.8	1129.8	15.5	125 (32x18)	F-30 F-25 (OPTION)				
SBWG-55TN						62						
SBWG-55MT						62						
SBWG-55-1S	186:1			57.4	409.3	46.5						
SBWG-55TN-1S						186						
SBWG-55MT-1S						186						
SBWG-55-1ST	P-62:1			20.8	1129.8	15.5						
SBWG-55-1SD	S-186:1					57.4			409.3	46.5		
	558:1					158.5			148.3	139.5		
SBWG-55-1SDT	P-186:1			57.4	409.3	46.5						
SBWG-55-2SD	S-558:1					158.5			148.3	139.5		
	1413.6:1					369.3			63.6	353.4		
SBWG-55-1S2B	465:1	136.3	172.4	116.3								
SBWG-55-1SD2B	1395:1			376.3	62.4	348.8						
SBWG-55-2B	186:1			59.3	396.4	46.5						
SBWG-55-2BD	465:1	140.8	166.9	116.3								
SBWG-55-3W	3224:1			352.5	66.7	806						
SBWG-55-3W2B	4030:1			409.8	57.3	1007.5						
SBWG-55DC	62:1	21150	15599	23.6	897.5	15.5	140 (36x20)	F-35 F-30, F-25 (OPTION)				
SBWG-55DCM				165:1	57.8	365.8			41.3			
SBWG-55DC-1S										1061:1	313.9	67.4
SBWG-55DCM-1S												
SBWG-55DC-2SD												
SBWG-55DCM-2SD												
SBWG-06	64:1	32800	24192	20.2	1627.5	16	140 (36x20)	F-35 F-30, F-25 (OPTION)				
SBWG-06TN						64						
SBWG-06MT						64						
SBWG-06-1S	256:1			74.2	442.2	64						
SBWG-06TN-1S						256						
SBWG-06MT-1S						256						
SBWG-06-1ST	P-64:1			20.2	1627.5	16						
SBWG-06-1SD	S-256:1					74.2			442.2	64		
	1024:1					272.9			120.2	256		
SBWG-06-1SDT	P-256:1			74.2	442.2	64						
SBWG-06-2SD	S-1024:1					272.9			120.2	256		
	3072:1					753.3			43.5	768		
SBWG-06-1S2B	768:1	211.4	155.2	192								
SBWG-06-1SD2B	3072:1			777.9	42.2	768						
SBWG-06-2B	256:1			76.6	428.3	64						
SBWG-06-2BD	768:1	218.3	150.3	192								
SBWG-06-3W	3328:1			350.7	93.5	832						
SBWG-06-3W2B	4160:1			407.7	80.4	1040						
SBWG-06DC	64:1	29520	21773	23.3	1267.2	16	140 (36x20)	F-35 F-30, F-25 (OPTION)				
SBWG-06DCM				232:1	77.7	380.0			58			
SBWG-06DC-1S										2088:1	591.8	49.9
SBWG-06DCM-1S												
SBWG-06DC-2SD												
SBWG-06DCM-2SD												
Remark	<ul style="list-style-type: none"> Ratio & Base specification to be changeable. Max Output Torque includes safety factor. If any request requirement, please contact us any time. 											

Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
		(N·m)	(Ft·lbf)					
SBWG-07	68:1	51100	37689	22.0	2323.0	17	180 (45x25)	F-40 F-35, F-30 (OPTION)
SBWG-07TN						68		
SBWG-07MT						68		
SBWG-07-1S	272:1			80.9	631.3	68		
SBWG-07TN-1S				272				
SBWG-07MT-1S				17				
SBWG-07-1ST	P-68:1			22.0	2323.0	68		
	S-272:1			80.9	631.3	272		
SBWG-07-1SD	1088:1			297.9	171.5	1088		
SBWG-07TN-1SD				80.9	631.3	68		
SBWG-07MT-1SD				297.9	171.5	272		
SBWG-07-1SDT	P-272:1			80.9	631.3	68		
	S-1088:1	297.9	171.5	272				
SBWG-07-2SD	3264:1	822.2	62.2	816				
SBWG-07-1S2B	816:1	230.7	221.5	204				
SBWG-07-1SD2B	3264:1	849.0	60.2	816				
SBWG-07-2B	272:1	83.6	611.3	68				
SBWG-07-2BD	816:1	238.2	214.5	204				
SBWG-07-3W	3536:1	382.8	133.5	884				
SBWG-07-3W2B	4420:1	445.0	114.8	1105				
SBWG-07DC	68:1	45000	33190	25.0	1802.9	17	210 (50x28)	F-48 F-40, F-35 (OPTION)
SBWG-07DCM						61.6		
SBWG-07DC-1S						61.6		
SBWG-07DCM-1S	247:1			83.2	540.6	61.6		
SBWG-07DC-2SD	2218:1			633.9	71.0	554.5		
SBWG-07DCM-2SD				16.5				
SBWG-75	66:1	81500	60111	23.1	3532.3	16.5	210 (50x28)	F-48 F-40, F-35 (OPTION)
SBWG-75TN						66		
SBWG-75MT						66		
SBWG-75-1S	330:1			106.1	767.9	82.5		
SBWG-75TN-1S				330				
SBWG-75MT-1S				82.5				
SBWG-75-1ST	P-66:1			23.1	3532.3	16.5		
	S-330:1			106.1	767.9	82.5		
SBWG-75-1SD	1650:1			488.2	166.9	412.5		
SBWG-75TN-1SD				1650				
SBWG-75MT-1SD				82.5				
SBWG-75-1SDT	P-330:1			106.1	767.9	82.5		
	S-1650:1	488.2	166.9	412.5				
SBWG-75-2SD	6600:1	1796.7	45.4	1650				
SBWG-75-1S2B	1320:1	403.3	202.1	330				
SBWG-75-1SD2B	6600:1	1855.3	43.9	1650				
SBWG-75-2B	330:1	109.6	743.6	82.5				
SBWG-75-2BD	1072.5:1	338.4	240.9	268.1				
SBWG-75-3W	3696:1	421.1	193.5	924				
SBWG-75-3W2B	5544:1	587.4	138.7	1386				
SBWG-75DC	65:1	73350	54100	25.7	2856.0	16.3	210 (50x28)	F-48 F-40, F-35 (OPTION)
SBWG-75DCM						72.6		
SBWG-75DC-1S						72.6		
SBWG-75DCM-1S	290:1			105.5	695.0	72.6		
SBWG-75DC-2SD	4645:1			1429.3	51.3	1161.3		
SBWG-75DCM-2SD				1161.3				
Remark	<ul style="list-style-type: none"> Ratio & Base specification to be changeable. Max Output Torque includes safety factor. If any request requirement, please contact us any time. 							

Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)							
		(N·m)	(Ft·lbf)												
SBWG-08	66:1	121000	89245	24.3	4978.0	16.5	250 (56x32)	F-48 F-40 (OPTION)							
SBWG-08TN						66									
SBWG-08MT						82.5									
SBWG-08-1S	330:1			111.8	1082.2	330									
SBWG-08TN-1S				24.3	4978.0	16.5									
SBWG-08MT-1S				111.8	1082.2	82.5									
SBWG-08-1ST	P-66:1			121000	89245	24.3			4978.0	16.5	250 (56x32)	F-48 F-40 (OPTION)			
SBWG-08-1SD	S-330:1									111.8			1082.2	82.5	
	1650:1									514.3			235.3	412.5	
SBWG-08TN-1SD	P-330:1					111.8			1082.2	82.5					
SBWG-08MT-1SD						S-1650:1			514.3	235.3			412.5		
SBWG-08-1SDT	6600:1					1892.8			63.9	1650					
SBWG-08-2SD	1320:1	424.9	284.8			330									
SBWG-08-1S2B	6600:1	1954.5	61.9			1650									
SBWG-08-1SD2B	363:1	127.0	952.7			90.8									
SBWG-08-2B	1270.5:1	422.3	286.5			317.6									
SBWG-08-2BD	3960:1	475.3	254.6			990									
SBWG-08-3W	5940:1	663.1	182.5			1485									
SBWG-08-3W2B	65:1	108900		26.4	4120.7	16.3	250 (56x32)	F-48 F-40 (OPTION)							
SBWG-08DC									290:1	108.6	1002.8	72.6			
SBWG-08DCM										4645:1	1470.7	74.0	1161.3		
SBWG-08DC-1S				108900	1470.7	74.0					1161.3				
SBWG-08DCM-1S															
SBWG-08DC-2SD															
SBWG-08DCM-2SD															
SBWG-09	66:1	192500	141981	25.9	7429.6	16.5	280 (63x32)	F-60 F-48 (OPTION)							
SBWG-09TN						66									
SBWG-09MT						82.5									
SBWG-09-1S	330:1			119.2	1615.1	330									
SBWG-09TN-1S				25.9	7429.6	16.5									
SBWG-09MT-1S				119.2	1615.1	82.5									
SBWG-09-1ST	P-66:1			192500	141981	25.9			7429.6	16.5	280 (63x32)	F-60 F-48 (OPTION)			
SBWG-09-1SD	S-330:1												119.2	1615.1	82.5
	1650:1												548.3	351.1	412.5
SBWG-09TN-1SD	P-330:1					119.2			1615.1	82.5					
SBWG-09MT-1SD						S-1650:1			548.3	351.1			412.5		
SBWG-09-1SDT	6600:1					2017.6			95.4	1650					
SBWG-09-2SD	1320:1	452.9	425.0			330									
SBWG-09-1S2B	6600:1	2083.4	92.4			1650									
SBWG-09-1SD2B	396:1	147.7	1303.4			99									
SBWG-09-2B	1584:1	561.2	343.0			396									
SBWG-09-2BD	4092:1	538.9	357.2			1023									
SBWG-09-3W	6138:1	751.8	256.0			1534.5									
SBWG-09-3W2B	64:1	178000	131286	27.0	6604.5	16	280 (63x32)	F-60 F-48 (OPTION)							
SBWG-09DC									286:1	110.8	1607.2	71.5			
SBWG-09DCM										4574:1	1499.9	118.7	1143.5		
SBWG-09DC-1S															
SBWG-09DCM-1S															
SBWG-09DC-2SD															
SBWG-09DCM-2SD															
Remark	<ul style="list-style-type: none"> Ratio & Base specification to be changeable. Max Output Torque includes safety factor. If any request requirement, please contact us any time. 														

Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-10	64:1	275000	202830	24.3	11313.4	16	320 (70x36)	F-60				
SBWG-10TN						64						
SBWG-10MT						80						
SBWG-10-1S	320:1			111.8	2459.4	320						
SBWG-10TN-1S				80								
SBWG-10MT-1S				16								
SBWG-10-1ST	P-64:1			24.3	11313.4	16						
	S-320:1			111.8	2459.4	80						
SBWG-10-1SD	1600:1			514.3	534.7	400						
SBWG-10TN-1SD				1600								
SBWG-10MT-1SD				80								
SBWG-10-1SDT	P-320:1			111.8	2459.4	400						
	S-1600:1			514.3	534.7	1600						
SBWG-10-2SD	8000:1			2366.0	116.2	2000						
SBWG-10-1S2B	1600:1			531.1	517.8	400						
SBWG-10-1SD2B	8000:1			2443.1	112.6	2000						
SBWG-10-2B	416:1			150.1	1832.1	104						
SBWG-10-2BD	2080:1			713.0	385.7	520						
SBWG-10-3W	4096:1	489.9	561.3	1024								
SBWG-10-3W2B	8192:1	911.2	301.8	2048								
SBWG-10DC	62:1	253000	186600	25.1	10075.7	15.5	360 (80x40)	F-60				
SBWG-10DCM						66.5						
SBWG-10DC-1S						66.5						
SBWG-10DCM-1S						1662.5						
SBWG-10DC-2SD						1662.5						
SBWG-10DCM-2SD						1662.5						
SBWG-11	68:1	442000	326002	26.2	16882.0	17	360 (80x40)	F-60				
SBWG-11TN						68						
SBWG-11MT						85						
SBWG-11-1S	340:1			120.4	3670.0	340						
SBWG-11TN-1S				85								
SBWG-11MT-1S				17								
SBWG-11-1ST	P-68:1			26.2	16882.0	17						
	S-340:1			120.4	3670.0	85						
SBWG-11-1SD	1700:1			554.0	797.8	425						
SBWG-11TN-1SD				1700								
SBWG-11MT-1SD				85								
SBWG-11-1SDT	P-340:1			120.4	3670.0	425						
	S-1700:1			554.0	797.8	1700						
SBWG-11-2SD	8500:1			2548.4	173.4	2125						
SBWG-11-1S2B	1700:1			572.1	772.6	425						
SBWG-11-1SD2B	8500:1			2631.5	168.0	2125						
SBWG-11-2B	442:1			161.7	2733.9	110.5						
SBWG-11-2BD	2210:1			767.9	575.6	552.5						
SBWG-11-3W	4624:1			575.9	767.5	1156						
SBWG-11-3W2B	9248:1			1071.2	412.6	2312						
Remark	● Ratio & Base specification to be changeable.											
	● Max Output Torque includes safety factor.											
	● If any request requirement, please contact us any time.											

Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

Worm Gear Actuators Technical Data



Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
		(N·m)	(Ft·lbf)					
SBWG-12	70 :1	610000	449913	27.1	22546.0	17.5	400 (90x45)	F-80 F-60 (OPTION)
SBWG-12TN						70		
SBWG-12MT						70		
SBWG-12-1S	350 :1			124.5	4901.3	87.5		
SBWG-12TN-1S				124.5	4901.3	350		
SBWG-12MT-1S				124.5	4901.3	350		
SBWG-12-1ST	P-70:1			27.1	22546.0	17.5		
	S-350:1			124.5	4901.3	87.5		
SBWG-12-1SD	1750 :1			572.5	1065.5	437.5		
SBWG-12TN-1SD				572.5	1065.5	1750		
SBWG-12MT-1SD				572.5	1065.5	1750		
SBWG-12-1SDT	P-350:1			124.5	4901.3	87.5		
	S-1750:1			572.5	1065.5	437.5		
SBWG-12-2SD	8750 :1			2633.5	231.6	2187.5		
SBWG-12-1S2B	1925 :1			650.3	938.0	481.3		
SBWG-12-1SD2B	9625 :1	2991.3	203.9	2406.3				
SBWG-12-2B	490 :1	179.9	3390.4	122.5				
SBWG-12-2BD	2695 :1	940.1	648.9	673.8				
SBWG-12-3W	4620 :1	624.3	977.2	1155				
SBWG-12-3W2B	11550 :1	1451.4	420.3	2887.5				
SBWG-13	72 :1	970000	715435	28.0	34640.7	18	450 (100x50)	F-80 F-60 (OPTION)
SBWG-13TN						72		
SBWG-13MT						72		
SBWG-13-1S	360 :1			128.8	7530.6	90		
SBWG-13TN-1S				128.8	7530.6	360		
SBWG-13MT-1S				128.8	7530.6	360		
SBWG-13-1ST	P-72:1			28.0	34640.7	18		
	S-360:1			128.8	7530.6	90		
SBWG-13-1SD	1800 :1			592.5	1637.1	450		
SBWG-13TN-1SD				592.5	1637.1	1800		
SBWG-13MT-1SD				592.5	1637.1	1800		
SBWG-13-1SDT	P-360:1			128.8	7530.6	90		
	S-1800:1			592.5	1637.1	450		
SBWG-13-2SD	9000 :1			2725.6	355.9	2250		
SBWG-13-1S2B	2160 :1			734.2	1321.2	540		
SBWG-13-1SD2B	10800 :1			3377.3	287.2	2700		
SBWG-13-2B	544 :1			201.0	4826.1	136		
SBWG-13-2BD	3264 :1			1145.6	846.7	816		
SBWG-13-3W	4752 :1			680.6	1425.1	1188		
SBWG-13-3W2B	13068 :1			1740.7	557.2	3267		
Remark	● Ratio & Base specification to be changeable.							
	● Max Output Torque includes safety factor.							
	● If any request requirement, please contact us any time.							