SAMBO SINCE 1980

ISO 9001 : 2008
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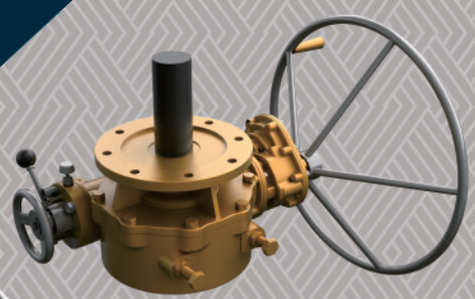
TRUST
YOUR BUSINESS WITH US

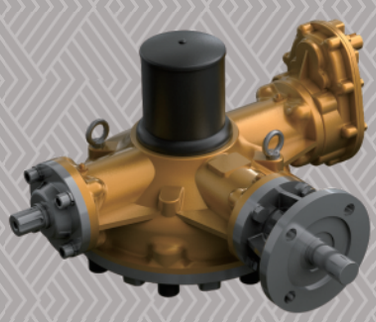
SINCE 1980

For Industrial Valves
High Quality Gear Actuators
High Performance & Efficiency











Innovation & Change for Customer

High Quality Gear Actuators · High Performance & Efficiency

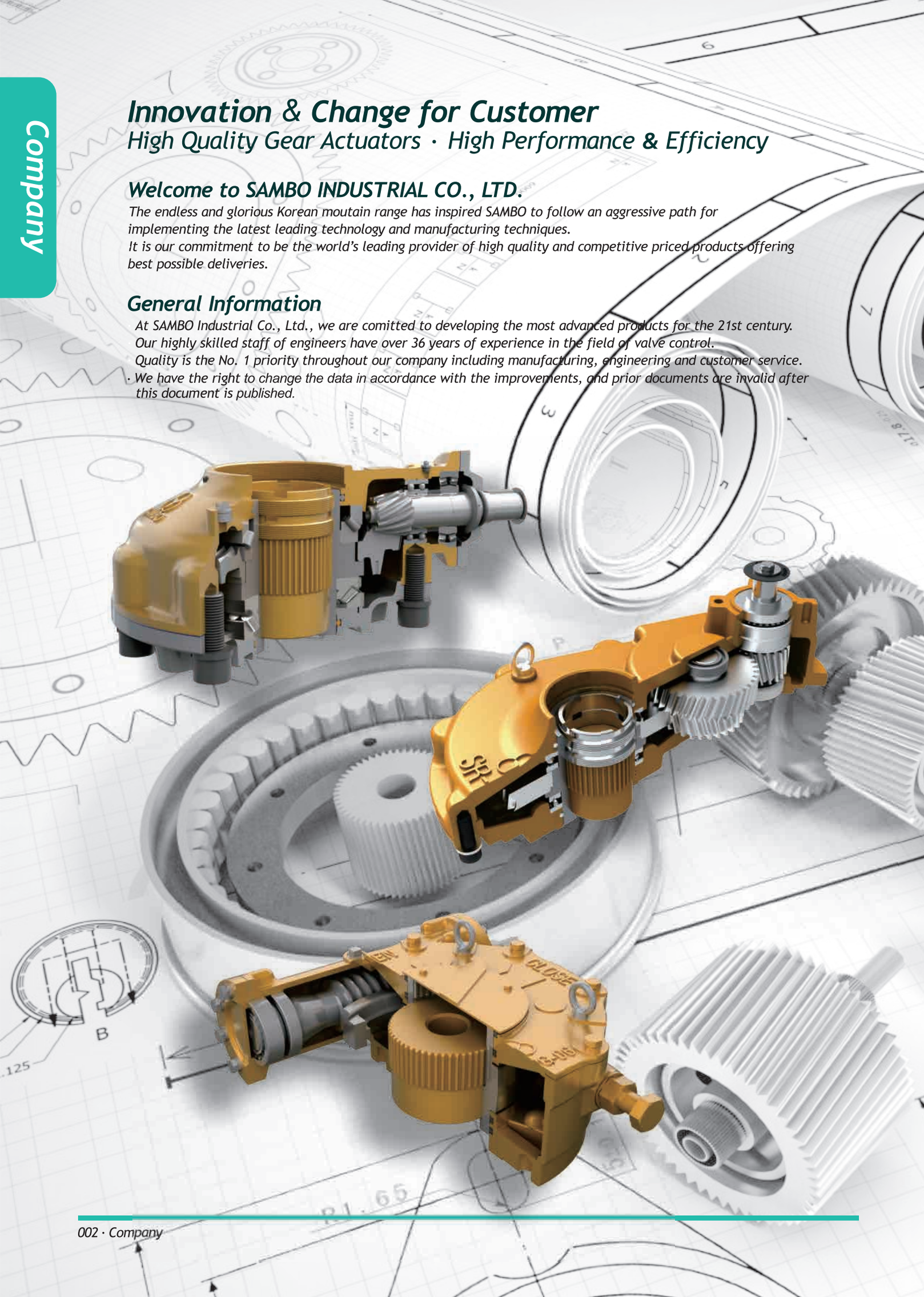
Welcome to SAMBO INDUSTRIAL CO., LTD.

The endless and glorious Korean moutain range has inspired SAMBO to follow an aggressive path for implementing the latest leading technology and manufacturing techniques.
It is our commitment to be the world's leading provider of high quality and competitive priced products offering best possible deliveries.

General Information

At SAMBO Industrial Co., Ltd., we are comitted to developing the most advanced products for the 21st century.
Our highly skilled staff of engineers have over 36 years of experience in the field of valve control.
Quality is the No. 1 priority throughout our company including manufacturing, engineering and customer service.

· *We have the right to change the data in accordance with the improvements, and prior documents are invalid after this document is published.*



Valve gear actuators and kit solutions, worldwide.

- *SAMBO IND. CO., LTD., established in 1980, specializes in the manufacture of gearboxes.*
- *Backed by decades of experience and expertise, we set the standard for quality in the Korean market.*
- *We are recognized worldwide for consistent quality and dependable service.*
- *Through continuous R&D, we develop new models, enhance quality, and deliver advanced products at competitive prices.*
- *We are committed to continuous improvement, guided by a challenging mindset, passion, and experienced leadership.*
- *Driven by innovation, quality, and customer satisfaction, we strive to become a globally respected leader in our industry.*
- *We welcome your feedback to support our continuous improvement.*

Global Leader
SAMBO
Gear Actuators



VISION and CORE VALUE

We are committed to driving progress through a challenger mindset, passion, and extensive management experience.



Quality Policy

1. Establish and maintain a robust quality management system.
2. Achieve customer satisfaction through rigorous quality control.
3. Deliver results driven by quality.

Quality Objectives

1. Achieve 100% of defined quality objectives.
2. Raise quality through continuous improvement.
3. Reduce prime cost by 10%.

HISTORY *Innovation & Change for Customer*

Since 1980

1980. 03.	Established as SAMBO COMPANY
1990. 01.	Changed company name SAMBO INDUSTRIAL
1995. 03.	Introduced Quality Controll System
1995. 09.	Obtained the membership of KITA (Korea International Trade Association)
1997. 01.	Changed company name SAMBO IND CO., LTD.
1997. 03.	Moved into Kwaebeop-dong, Sasang-gu, Busan, Korea
1999. 09.	Launched computerized operation system covering all company activities (ERP system)
2000. 08.	Enrolled the membership of KITA (Korea International Trade Association)
2001. 10.	Launched web-site service (http://www.sambo21.co.kr) Selected as a promising compony by the Busan Bank, Korea. Enrolled Utillity model (Korean Intellectual Property Office)
2002. 07.	Obtained CE Mark by Lloyd's Register
2002. 08.	Approved ISO 9001:2000 by ABS Quality Evaluations Inc.
2002. 11.	Enrolled Trademark (Diagram+SAMBO)
2003. 01.	Selected as a Military Manpower Company
2005. 11.	Selected as a Clean Factory
2006. 08.	R & D Center Organization by KOITA.
2006. 09.	Approved Venture Company by KOTEC (Korea Technology Finance Corporation)
2006. 11.	Factory extension and complete range of actuators offered any where at present SAMBO believes we offer the most extensive
2007. 03.	Enrolled the membership of Busan Machinery Cooperatives
2007. 11.	Receiving Export prize (44th Trade Day)
2008. 06.	Selected as Export Venture Company (SMBA)
2008. 08.	Established SAMBO Skill Research (KOITA)
2008. 09.	Certified INNOBIZ : Approved member of INNOBIZ (SMBA) Approved INNO-BIZ Company by SAMBO (Small & Midium Business Administration)
2008. 10.	Approved as Venture Company (KIBO)
2008. 11.	Receiving Export prize (45th Trade Day)
2009. 03.	Receiving Award of Best Taxpayer (43th Taxpayer's Day)
2010. 10.	Approved Exporter with certificate of origin by Busan Customhouse.
2011. 03.	Receiving Award of Best Taxpayer (45th Taxpayer's Day)
2011. 04.	Starting constructurion for new factory (#561-5, Kwaebeop-dong)
2011. 07.	Selected as BS Small Giant Company from Busan Bank
2012. 01.	Completion of New Factory
2012. 09.	Approved As A "A PLUS VENTURE COMPANY" by KOTEC
2012. 12.	Approved As A "LEADING ENTERPRISER" by Busan Metropolitan City
2013. 05.	Approved As A "EXELLENT EMPLOYMENT COMPANY" by Busan Metropolitan City
2014. 07.	Grand prize in Small Business Awards hosted by Busan Metropolitan City
2014. 12.	Receiving Export prize (US $ 10M)
2015. 05.	Awarded Presidential Medal for Small and Medium Scale business
2015. 12.	Approved as Leading Company by Busan Metropolitan City
2016. 09.	Completion of 2nd Factory
2017. 12.	Obtain Industrial Property Patent
2018. 04.	Build New-ERP System
2019. 12.	Receiving Export prize (US $ 20M)
2020. 11.	Selected 100 Small Companies for Materials, Parts and Equipment
2021. 12.	Innovative product designation (Public Procurement Service) Selected as Korea's top 100 innovative company
2022. 03.	Approved as local Innovation Leader
2023. 04.	Selected as a global IP star company
2023. 12.	Presidential Citation on Trade Day
2024. 03.	Selected as a "Legend 50+" Company for the Region Specialization Project
2024 .04.	Selected as a Global Leading Company 1000+
2024. 11.	Minister's Award for Excellence - Regional Specialization Project "Legend 50+
2025. 05.	Selected as an Innovative Water Company
2025..07.	Completion of the 3rd Plant
2025..12.	Busan Mayor's Commendation (Local Industry-Academic Cooperation)

Power Plant

SAMBO specializes in manufacturing actuators and related equipment for every part of the power generation industry.

Engineered for excellence, our comprehensive range of actuators meets the stringent demands of the power generation industry, delivering exceptional durability and proven reliability. We supply actuators for new projects and provide comprehensive customer support programs, including free replacement and maintenance. Our customer service is responsive and committed to meeting each customer's requirements.
Our customer service is responsive and committed to meeting each customer's requirements. SAMBO actuators are accurate, robust, and efficient.
All our actuators are engineered to perform in extreme temperature, vibration, and dust conditions.



Water Resources

SAMBO serves the global water industry with solutions developed and fine-tuned to meet the specific needs of our customers.

As a company specialized in water resources, we are committed to meeting each customer's specific requirements. SAMBO valve actuators are widely recognized as the most technically advanced, reliable, durable, waterproof, and user-friendly actuators in the valve industry.



Oil & Gas

SAMBO specializes in manufacturing actuators and related equipment for every stage of the petrochemical industry, including production, processing, distribution, and storage.

With over 40 years of experience, we are the world's most recognized independent manufacturer of heavy-duty valve actuators, and our products control thousands of valves in petrochemical plants worldwide.
Actuators govern virtually every operation in petrochemical service, delivering precise control while helping reduce costs and emissions and enhance safety.



General Industry

At SAMBO, we work behind the scenes to move, control, and protect the products our customers depend on.

As a trusted partner, our success in valve markets worldwide reflects our continued strength across diverse industries.
We manufacture actuators and related equipment for the shipbuilding sector and a broad range of general industrial applications.
SAMBO actuators are engineered to endure in all operating conditions.
All actuators are covered by free maintenance and parts replacement services for defects in materials or workmanship during the warranty period.



CONTENTS

The World's Highest Quality!
High-quality gear actuators delivering high performance and efficiency.

New Products

SE Series Quarter-Turn



Subsea Gearbox



Temperature-compensating, spring-loaded stem nut



Torque limiter



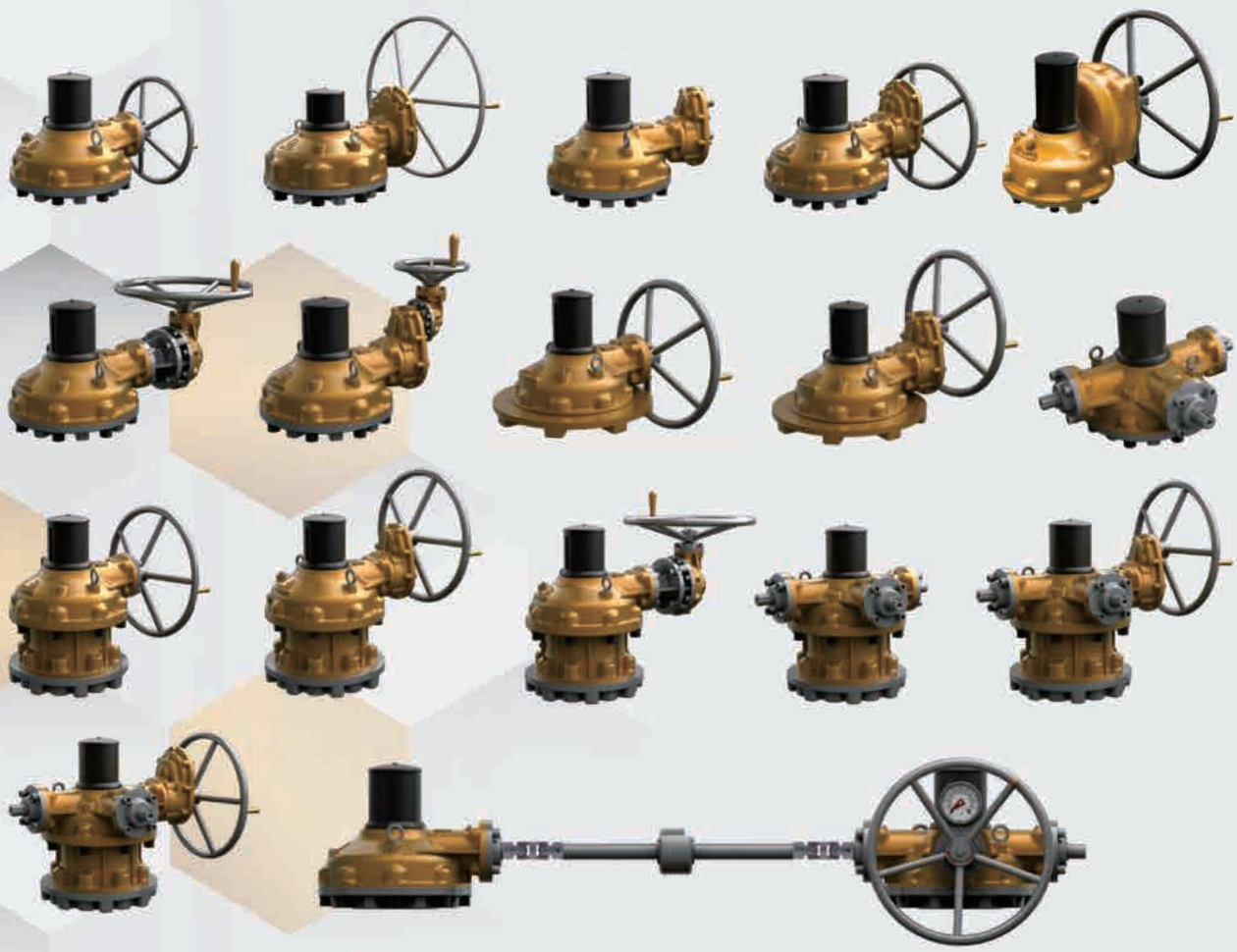
Planetary gear reducer



Hydraulic Double-Action Rotary Actuator



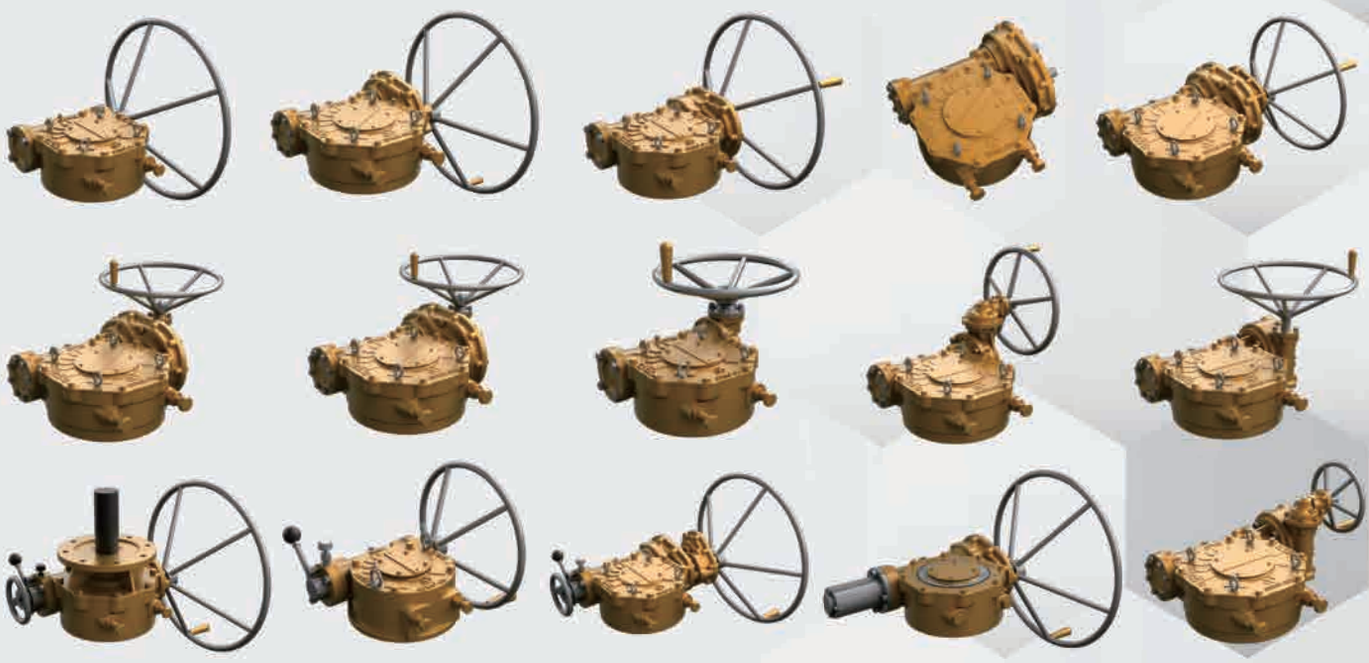
Spiral Bevel Gear Actuators



Spur Gear Actuators



Worm Gear Actuators



Planetary Gear Reducer



Air Cylinder



New Products

Index

SE Series Quarter-Turn

SE Series Quarter-Turn — 012 · 013

SBWG-SG

Subsea Gearbox — 014 · 015

Subsea High-Speed Planetary Actuator Multi-Turn — 016 · 017

Temperature-Compensating Spring-Loaded Stem Nut

Temperature-Compensating Spring-Loaded Stem Nut — 018 · 019

Torque Limiter

SB-TL Series Torque Limiter — 020 · 021

Planetary Gear Reduction

Dual-Input Speed Gearbox — 022 · 023

Hydraulic Double-Action Rotary Actuator

90º Quarter-Turn - SB-HRA1000 · SB-HRA2000 · SB-HRA4000 — 024 · 025



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SE Series Quarter-Turn

SE Series Quarter-Turn Gear Actuators

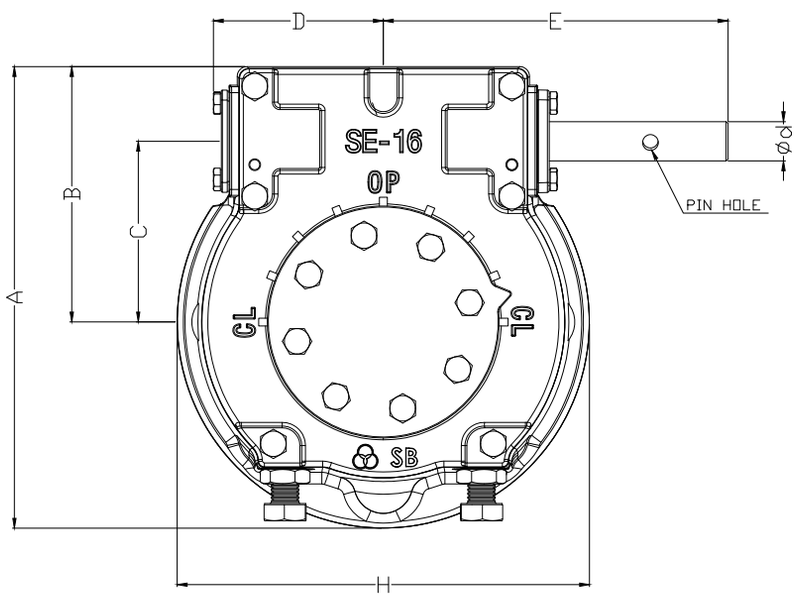
· *Engineered to meet stringent requirements, the Sambo SE Series delivers the durability and reliability demanded by industrial applications.*
· *All castings are manufactured from spheroidal graphite (ductile) iron, Class 65-45-12, for high strength and impact resistance.*
· *An integral worm shaft and high-strength bearings support both axial and radial loads.*
· *Separable and integral bushing options simplify maintenance.*
· *A double-sealing design provides excellent water and dust protection.*
· *Finished with Koynil paint.*

Application

· *The Sambo SE Series is a quarter-turn gear actuator for ball, plug, and butterfly valves, and is also suitable for general service.*

Features

· *Eight models with a torque range up to 5,500 N·m; IP67 as standard.*
· *Operating temperature from −20 to 80 degrees; compatible with ISO 5211 mounting bases.*
· *All castings use ductile iron (Class 65-45-12) for excellent strength and impact resistance.*
· *The worm is a single-piece, heat-treated high-strength carbon steel.*
· *IP67 water and dust protection achieved by a double-sealing structure.*
· *High-strength worm gear for enhanced durability.*
· *Adjustable stop bolts provide ±5 degrees of travel.*
· *Removable bushing design for easy maintenance.*
· *The Open-Close-Open marking on the cover can be changed to align with the position indicator.*



Dimensions

UNIT : mm

Model	A	B	C	D	E	F	G	H	Ød
SE-10	129	69	43.5	45	121	36	68	120	12
SE-12	155	82	55	54	129	43	77	145	14
SE-14	192.5	105	72.5	65	167	52	90	175	16
SE-16	234	129	92	86.5	175.5	58	99	210	20
SE-20	272	147	107	96.5	180	63	110	250	25
SE-20-1S					258.5				
SE-25	316	166	122.5	106.5	210	65	114	300	
SE-25-1S					268.5				

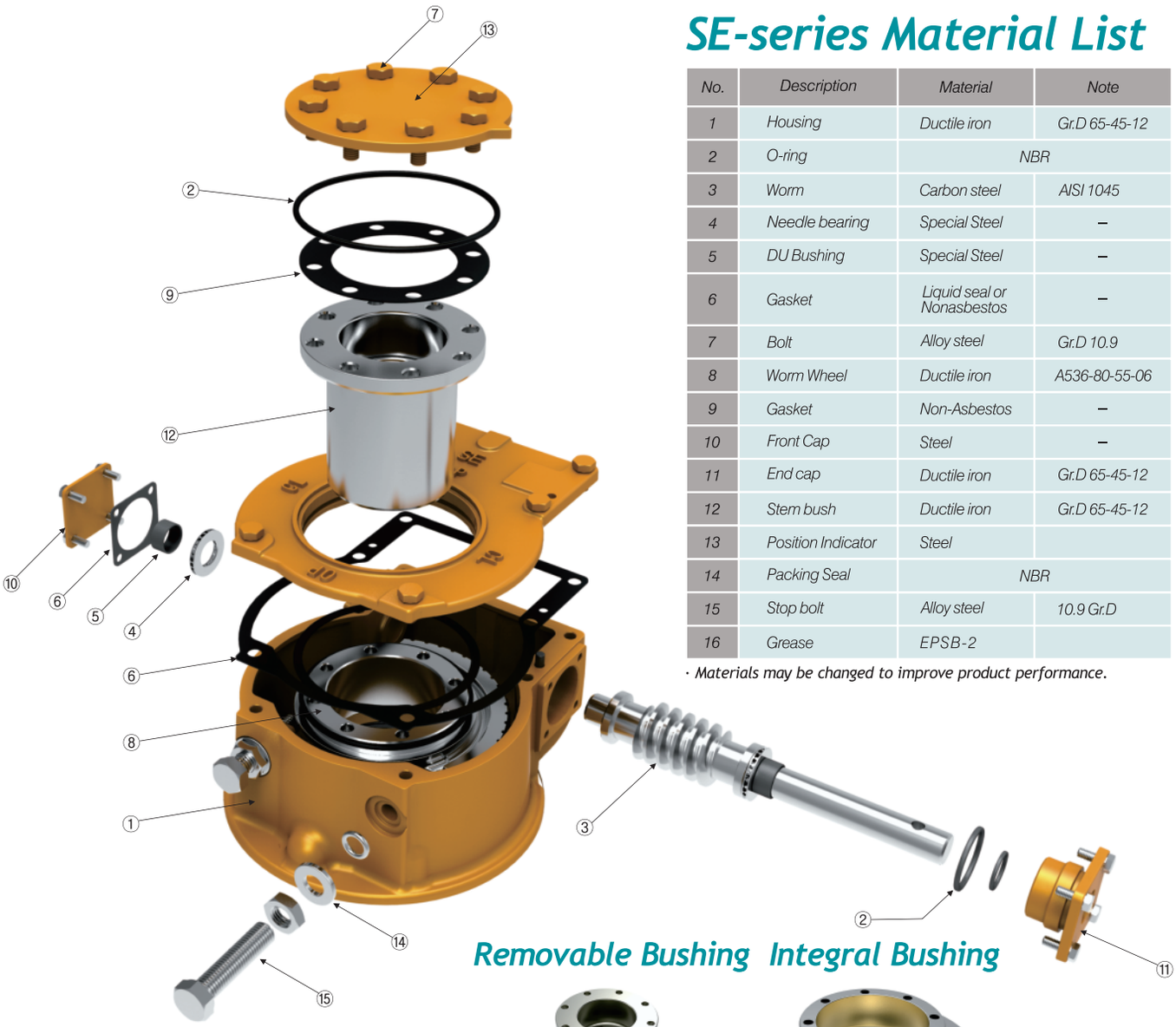
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New Products

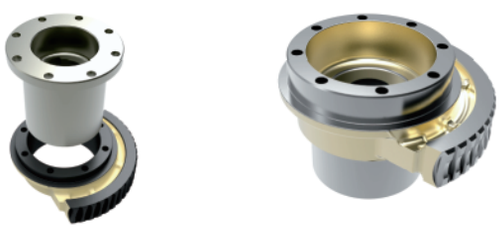
SE-series Material List

No.	Description	Material	Note
1	Housing	Ductile iron	Gr.D 65-45-12
2	O-ring	NBR	
3	Worm	Carbon steel	AISI 1045
4	Needle bearing	Special Steel	–
5	DU Bushing	Special Steel	–
6	Gasket	Liquid seal or Nonasbestos	–
7	Bolt	Alloy steel	Gr.D 10.9
8	Worm Wheel	Ductile iron	A536-80-55-06
9	Gasket	Non-Asbestos	–
10	Front Cap	Steel	–
11	End cap	Ductile iron	Gr.D 65-45-12
12	Stem bush	Ductile iron	Gr.D 65-45-12
13	Position Indicator	Steel	
14	Packing Seal	NBR	
15	Stop bolt	Alloy steel	10.9 Gr.D
16	Grease	EPSB-2	

· Materials may be changed to improve product performance.



Removable Bushing Integral Bushing



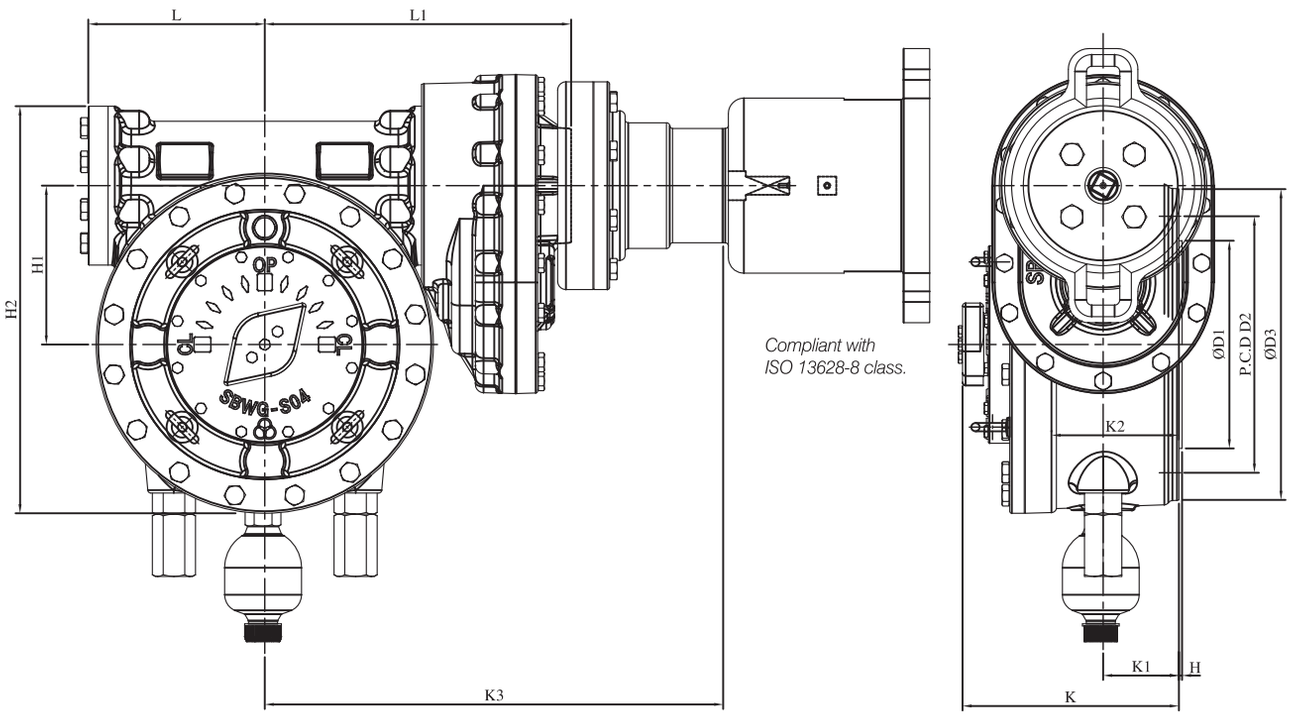
Performance Specifications

Model	Ratio	Torque (N.m)		M.A	Valve Conection (Iso5211)		Max. Stem (mm)			weight (kg)
		Output	Input	+-10%	std.	option	Bore	Square	Height	
SE-10	38:1	300	26.1	11.5	F10	F07, F05	25	20	63	3.2
SE-12	42:1	600	50.4	11.9	F12	F10, F07	35	28	72	5.5
SE-14	46:1	1400	102.2	13.7	F14	F12, F10	45	36	86	10
SE-16	50:1	2600	178.1	14.6	F16	F14, F12, F10	58	46	95	14
SE-20	54:1	3800	233.1	16.3	(F20)	F16, F14, F12	68	54	105	21
SE-20-1S	135:1		101.6	37.4						25
SE-25	58:1	5500	317.9	17.3	F25	(F20), F16, F14	80	64	108	29
SE-25-1S	145:1		138.2	39.8						33

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SBWG-SG Subsea Gear Box

Newly developed product range.
Designed for the most demanding deep-sea applications.



Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-SG-00-1SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	127	43	53.6	283	86	166	29	21	6X6	300
SBWG-SG-01-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	136	53	65	292	95	175				400
SBWG-SG-02-1SD		F-16	130	165	4-M20-30	220		97	282	160	56	75.5	345	108	190.5	34	26	8X7	500
SBWG-SG-03-1SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	166	59	87	355	118	200.5	34	26	8X7	560
SBWG-SG-35-1SD		F-25	200	254	8-M16-24	300		127	352	186	72	100	366	125	218.5				
SBWG-SG-04-1SD		F-25	200	254	8-M16-24	300		153	417.5	208	73	120	442	153	250	34	32	10X8	630
SBWG-SG-05-1SD		F-30	230	298	8-M20-30	350		180	469.5	225	78	141	452	163	260				710
SBWG-SG-55-1SD						350		202	516.5	232	80	144	463	183	280				
SBWG-SG-06-1SD		F-35	260	356	8-M30-45	415		230	621	280	109	173	523	217	349	44	38	12X8	800
SBWG-SG-07-1SD		F-40	300	406	8-M36-55	475		280.5	723	307	116	209	558	252	384				900
SBWG-SG-75-1SD	C	F-48	370	483	12-M36-55	560	5	326	860	346	120	220	701	279	485	58	50	16X10	1000
SBWG-SG-08-1SD						560		379	968	354	125	245	736	314	520				

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Feature

- Quarter-turn worm gear operators.
- Incorporates a high-load input prevention device.
- Suitable for subsea deployment beyond 3,000 m.
- Equipped with angular contact taper roller bearings.
- Dual sealing.
- Self-locking.
- Membrane-type pressure compensator.
- Permanently lubricated with eco-compatible oil.
- Available in a wide range of gear ratios.
- ROV input available for horizontal or vertical mounting, from class 1 to 7.



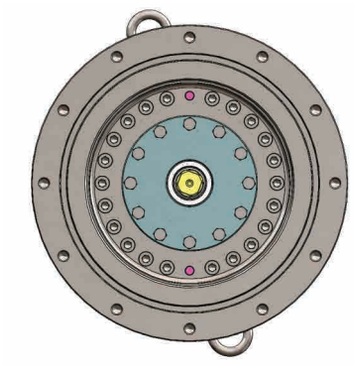
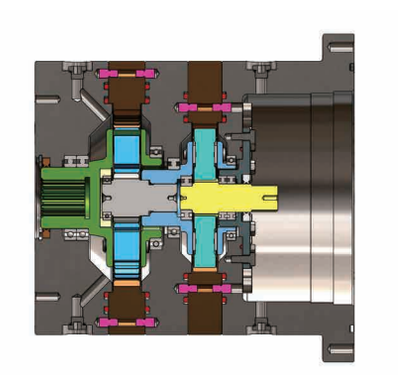
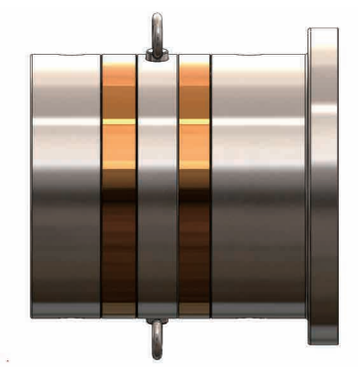
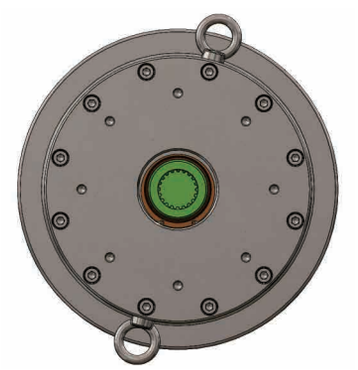
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Global Leader
SAMBO
Gear Actuators

Selection Chart for Manual Operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-SG-00-1SD	160 : 1	36 (10X8)	F-10 , F-12	1200	885	25
SBWG-SG-01-1SD	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	30
SBWG-SG-02-1SD	308 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	48
SBWG-SG-03-1SD	333.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	63
SBWG-SG-35-1SD	333.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	76
SBWG-SG-04-1SD	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	130
SBWG-SG-05-1SD	540 : 1	115 (32X18)	F-25 , F-30	15900	11727	168
SBWG-SG-55-1SD	558 : 1	125 (32X18)	F-25 , F-30	23500	17333	202
SBWG-SG-06-1SD	1024 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	338
SBWG-SG-07-1SD	1088 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	426
SBWG-SG-75-1SD	1650 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	810
SBWG-SG-08-1SD	1650 : 1	250 (56X32)	F-40 , F-48	121000	89245	1031

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SBWG-SG Subsea High-Speed Planetary Actuator
Multi-Turn

Main Data

Division	SBPA-SG-10-1SD	SBPA-SG-20-1SD
Working Torque	600 N.m	1200 N.m
Max. Input Speed	1,000 RPM	1,000 RPM
Gear Ratio	22.5625 : 1	23 : 1
Max. Operating Depth	1,000 m	1,000 m
Protection class	IP68 (Subsea rated)	IP68 (Subsea rated)
Ambient temperature	-20°C ~ +50°C	-20°C ~ +50°C
Lubrication Type	Pressure-Compensated Synthetic Oil	Pressure-Compensated Synthetic Oil
Output Shaft Type	Solid Shaft with Key	Solid Shaft with Key
Weight (Dry wt.)	127 kg	162 kg
Materials	Stainless Steel, Corrosion-Resistant Alloy	Stainless Steel, Corrosion-Resistant Alloy

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Feature

· Engineered for Extreme Deep-Sea Environments.

High Input Speed Capacity

· Planetary Gear Drive.
· High Efficiency up to 96%.
· Advanced Pressure Compensation Technology.

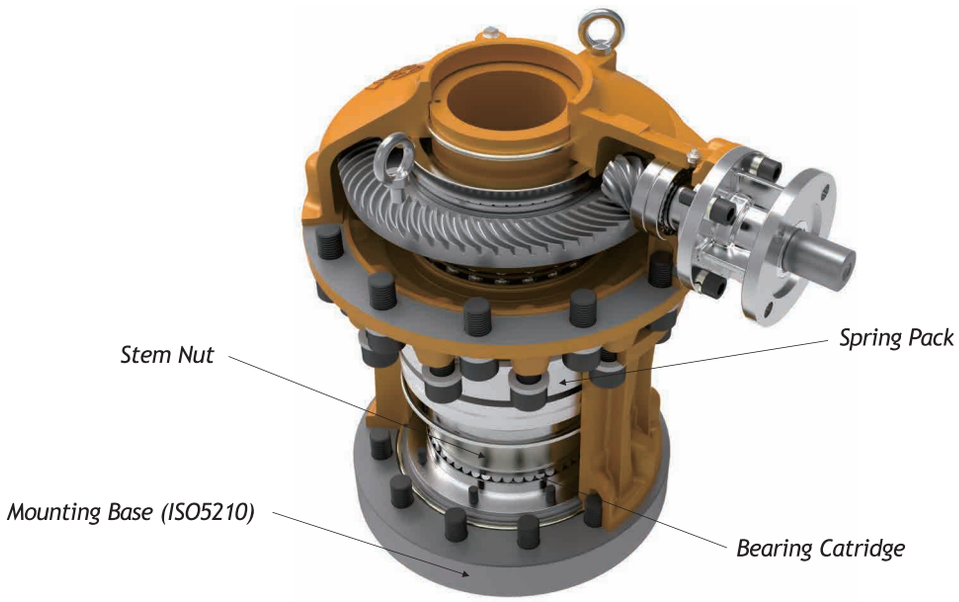
Product Information

· The SBPA-SU Series is a premium, high-performance planetary gear reducer purpose-built for demanding subsea and deep-sea applications.
· Engineered to operate flawlessly at depths up to 1,000 meters, this compact yet powerful unit manages high input speeds of 1,000 RPM while delivering a robust MAX. 1200 Nm of nominal torque.
· Equipped with advanced sealing and pressure-compensation mechanisms, it offers unmatched reliability for ROVs, subsea winches, and marine robotic systems.

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Global Leader
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Temperature-Compensating Spring-Loaded Stem Nut



Definition

- TCS allows limited axial displacement through the gearbox stem nut.
- This prevents damage to the valve and gearbox caused by excessive external loads.
- TCS can be installed independently on bevel and super gearboxes to act as a buffer.
- The internal preload is set higher than normal valve thrust, preventing unintended movement during standard operation.
- When thermal expansion increases valve stem thrust, the TCS begins to absorb and compensate for the additional load.
- Suitable for prefabricated stem nuts, offering broad applicability and reduced maintenance costs.

Structure

TCS can operate as a standalone unit or be integrated with bevel and super gearboxes.

- The standard type operates in the CLOSED direction only.
- Bidirectional versions are available on request.

Technical Data

- Refer to the data below for guidance on TCS service life and operating conditions.

MODEL	Spring Stroke	MAX. Thrust	Pre Load		Usable Stroke	MAX. Stem
	mm	KN	KN	mm	mm	mm
SB-TCS100	11.3	100	40	3.4	7.9	48
SB-TCS200	10.9	200	58	3.5	7.4	60
SB-TCS350	11.5	350	129	3.8	7.8	75
SB-TCS600	8.3	600	256	3.4	5	85
SB-TCS800	16.2	800	300	6.4	9.8	102
SB-TCS400	17	1,400	400	5	12	105
SB-TCS2000	17	2,000	700	5.7	11.3	140
SB-TCS3000	24	3,000	1300	8.4	15.6	170

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Application

Required information for application of TCS device are :

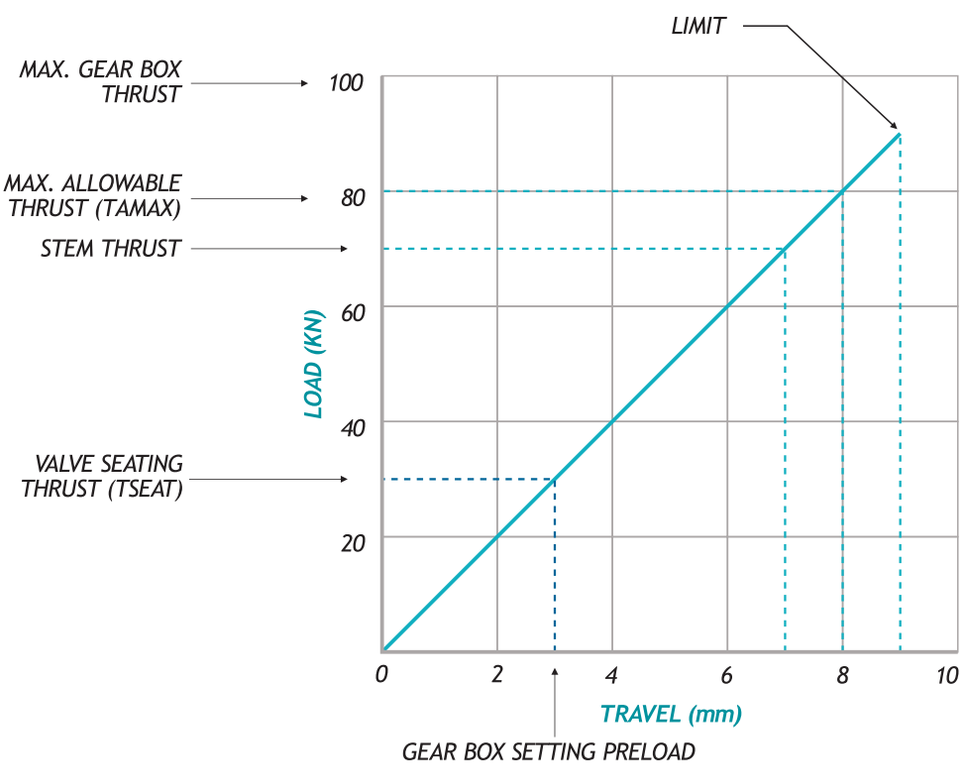
- *Valve seating thrust : T_{SEAT}*
- *Maximum allowable stem thrust : T_{AMAX}*
- *Length of stem expansion : L*

Remarks

· *Because the TCS is factory-set to a high internal pressure, any disassembly and operation must be performed with due care.*
· *Do not disassemble or reassemble the unit without consulting our company or qualified experts; specialized tools are required.*

Selection of TCS

· *The maximum allowable thrust and valve seating thrust must not exceed the gearbox maximum thrust and must remain below the maximum spring displacement (less than 60% of spring load).*



Example

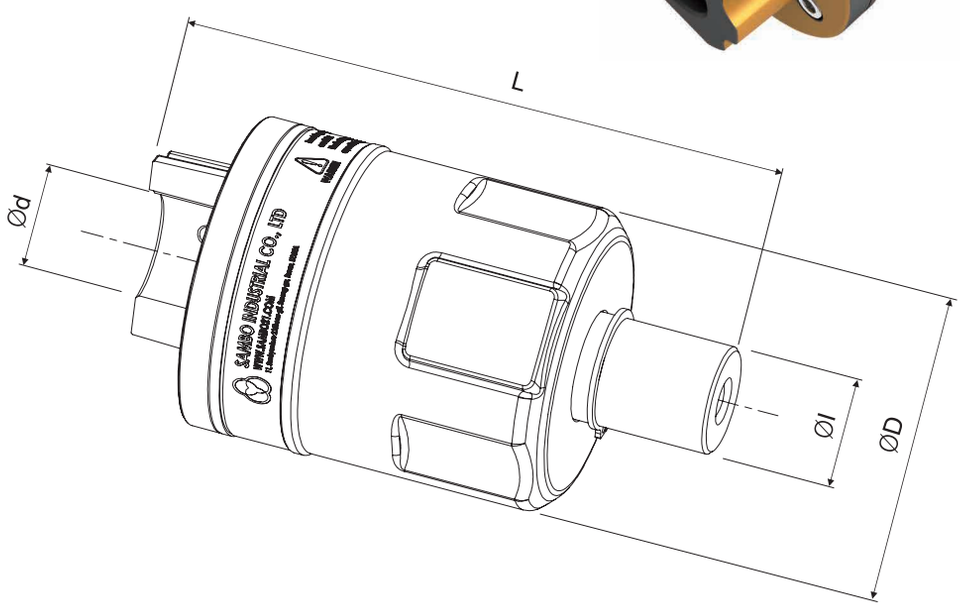
With a maximum allowable thrust of 80 kN, a valve seating thrust of 30 kN, and 4 mm of stem expansion, which TCS model should be selected?·

1. *Refer to the graph to determine the required maximum load (select a value greater than the maximum allowable thrust): 100 kN.*
2. *Confirm the spring displacement corresponding to the valve seating thrust (the gearbox preset value): 3 mm.*
3. *Confirm that stem expansion does not exceed the limit associated with the maximum allowable thrust: 70 kN.*
4. *Select the model from the graph curve that satisfies all of the above conditions.*
5. *Specify the temperature range, output RPM, and any additional options.*

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SB-TL Series *Torque Limiter*





- *A torque limiter is an automatic device that regulates actuator input torque.*
- *It protects actuators and valves from damage caused by over-torque.*
- *It can be installed directly on the gearbox as a standalone unit to prevent over-torque.*
- *In the event of over-torque, the limiter permanently disengages the drive and driven shafts.*
- *The decoupled shafts can be re-engaged manually.*
- *The installation and maintenance manual (IOM) provides instructions for installing and maintaining the SAMBO SB-TL operator, and spare parts are provided.*

Dimensions

DIM / MODEL	External Part		Input	Output
	ØD (mm)	L (mm)	ØI (mm)	Ød (mm)
SB-TL50	60	111	MAX Ø16	MAX Ø16
SB-TL100	81	157	MAX Ø26	MAX Ø26
SB-TL200	90	179	MAX Ø32	MAX Ø38
SB-TL300	102	179	MAX Ø32	MAX Ø38
SB-TL400	117	179	MAX Ø32	MAX Ø38

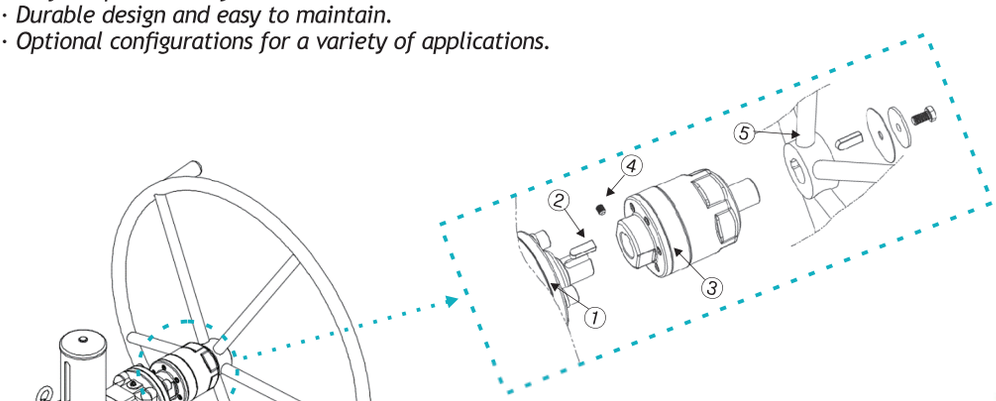
Product design and data are subject to change without notice. The product features and technical data provided do not specify or imply any warranty.
For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

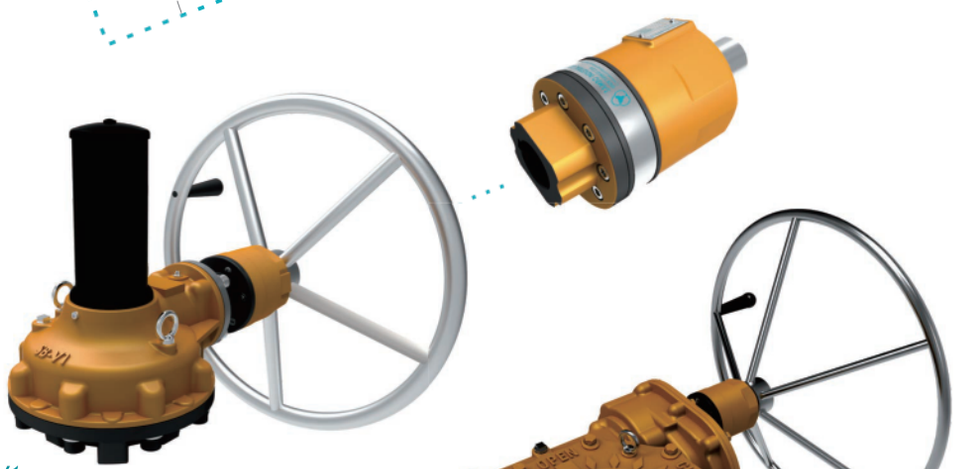
Features

- Waterproof: IP67 standard; IP68 optional.
- Available types:
  - Automatic re-engage type (standard).
  - Clockwise close, manual re-engage type.
  - Counter-clockwise close, manual re-engage type.
- Easy torque-limit adjustment.
- Durable design and easy to maintain.
- Optional configurations for a variety of applications.

Installation

- Install the key on the valve or reducer input shaft. (PCH2)
- Mount SB-TL aligned to the key orientation. (PCH3)
- Secure SB-TL with the set screw. (PCH4)
- Install the handle on the SB-TL input shaft. (PCH5)





Torque Limiter with SB-V1

Torque Limiter with SBWG-05-1SD

Performance Specifications

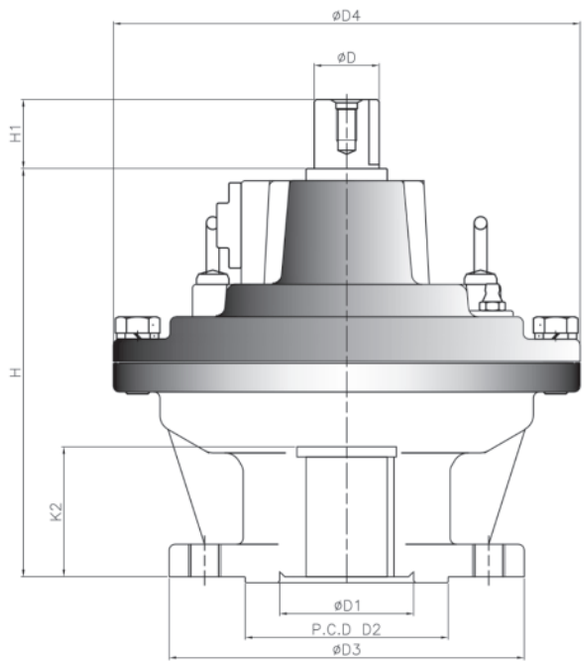
MODEL	Torque Range			Consecutive Repeated Trip Torque Fluctuations	Adjustment screw pitch (mm)	Backlash (mm)	Weight (kg)
	(N.m)	(Kgf.m)	(lbf.ft)				
SB-TL50	20~50	2.03~5.1	14.7~36.9	±10%	2.5	Almost None	3.5
SB-TL100	50~100	5.1~10.2	36.9~73.8	±10%	2.5	Almost None	4.0
SB-TL200	100~200	10.2~20.4	73.8~147.5	±10%	2.5	Almost None	4.7
SB-TL300	200~300	20.4~30.6	147.5~221.3	±10%	2.5	Almost None	5.5
SB-TL400	300~400	30.6~40.8	221.3~295.0	±10%	2.5	Almost None	6.5

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Planetary Gear Reduction

Dual-Input Speed Gearbox





Features

· Input and output shafts are coaxial.
· Input and output rotate in the same direction.
· Excellent power density.
· High capacity in a compact, lightweight design.
· Low friction losses improve transmission efficiency.
· Suitable for a wide range of valve types.

The World's highest quality.

Global Leader SAMBO Gear Actuators

Application

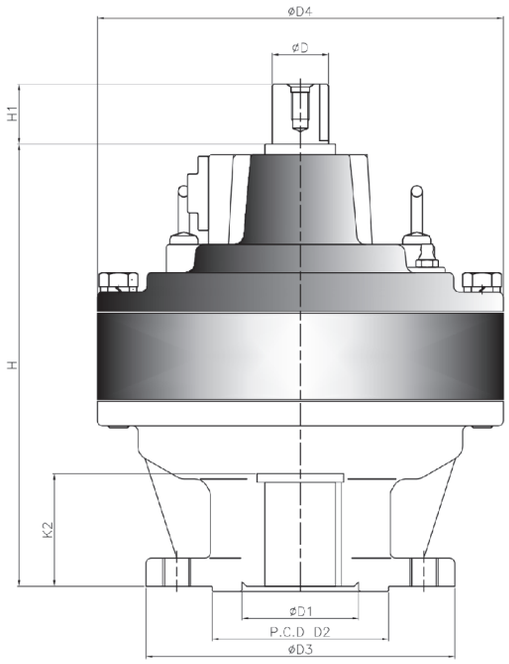
· The dual-speed input gearbox shortens actuator operating time by reducing the total number of turns.
· Ratio selection is made by simply pushing or pulling the input shaft.
· Use the high ratio during stroke segments that demand higher torque-at initial valve break-out and final seating.
· As torque demand decreases through the stroke, switch to the lower ratio to minimize the number of input turns.

Dimensions

UNIT : mm

DIM / MODEL	BASE PART						EXTERNAL PART					INPUT SHAFT PART					
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	ØD4	ØD	K2	GEAR RATIO		MAX. Stem Acceptance	MAX. Torque Capacity		WEIGHT
				ØD2	N-H-DP							PRIMARY	SECOND		N · m	ft · lbf	kg
SB-DS07	A	F07	55	70	4-Ø7-8	100	153	25	110	16	36	1 : 1	3.75 : 1	20(6x6)	150	110.6	5
SB-DS10		F-07,F-10	70	102	4-Ø10-10	125	170	35	162	26	45	1 : 1	3.6 : 1	35(10X8)	300	221	9
SB-DS12		F-10,F-12	85	125	4-Ø12-12	150	184	35	190	32	54	1 : 1	3.6 : 1	40(12X8)	600	443	13
SB-DS14		F-12,F-14	100	140	4-Ø16-16	175	201	35	230	32	64	1 : 1	3.6 : 1	50(14X9)	1200	885	18
SB-DS16		F-14,F-16	130	165	4-Ø20-18	210	227	35	250	32	70	1 : 1	4 : 1	60(18X11)	1800	2065	28
SB-DS25	B	F-16,F-25	200	254	8-Ø16-18	300	260	45	330	38	75	1 : 1	5 : 1	70(20X12)	2500	1844	42

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Features

- Input and output shafts are concentric.
- Input and output rotate in the same direction.
- Excellent power density.
- High capacity in a compact, lightweight design.
- Low friction loss for efficient power transmission.
- Suitable for a wide range of valves.

The World's highest quality.

Global Leader SAMBO Gear Actuators

Application

- The Dual Speed Input Gear Box shortens actuator operating time by reducing the total number of turns.
- Switch between two gear ratios by pushing or pulling the input shaft.
- Use the high ratio for initial breakaway or final closing when torque demand is highest.
- As torque decreases through the stroke, select the low ratio to minimize required input turns.

Dimensions

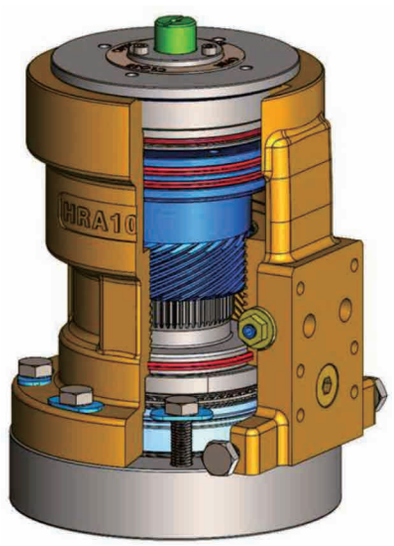
UNIT : mm

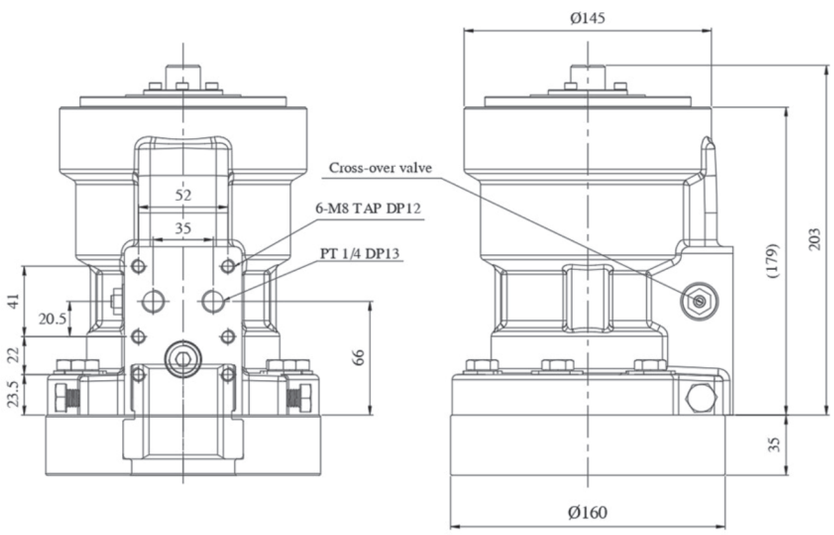
DIM / MODEL	BASE PART						EXTERNAL PART					INPUT SHAFT PART					
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	ØD4	ØD	K2	GEAR RATIO		MAX. Stem Acceptance	MAX. Torque Capacity		WEIGHT
				ØD2	N-H-DP							PRIMARY	SECOND		N · m	ft · lbf	kg
SB-DS07-1S	A	F07	55	70	4-Ø7-8	100	168	25	110	16	36	3.75 : 1	14.06 : 1	20(6x6)	150	110.6	6
SB-DS10-1S		F-07,F-10	70	102	4-Ø10-10	223	170	35	162	26	45	3.6 : 1	13 : 1	35(10X8)	300	221	10
SB-DS12-1S		F-10,F-12	85	125	4-Ø12-12	242	184	35	190	32	54	3.6 : 1	13 : 1	40(12X8)	600	443	15
SB-DS14-1S		F-12,F-14	100	140	4-Ø16-16	261	201	35	230	32	64	3.6 : 1	13 : 1	50(14X9)	1200	885	20
SB-DS16-1S		F-14,F-16	130	165	4-Ø20-18	290	227	35	250	32	70	4 : 1	16 : 1	60(18X11)	1800	2065	31
SB-DS25-1S	B	F-16,F-25	200	254	8-Ø16-18	332	260	45	330	38	75	5 : 1	25 : 1	70(20X12)	2500	1844	45

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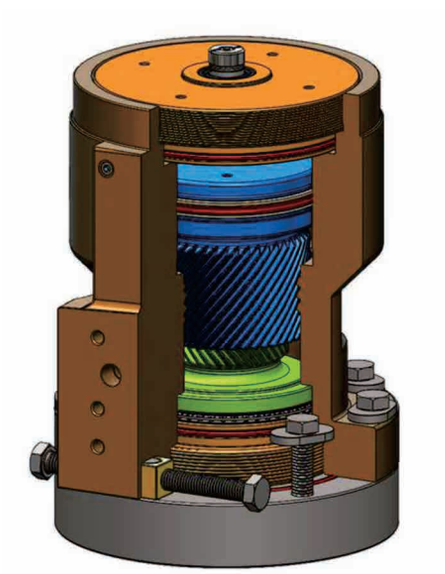
Hydraulic Double-Action Balanced Rotary Actuator - 90º Quarter-Turn

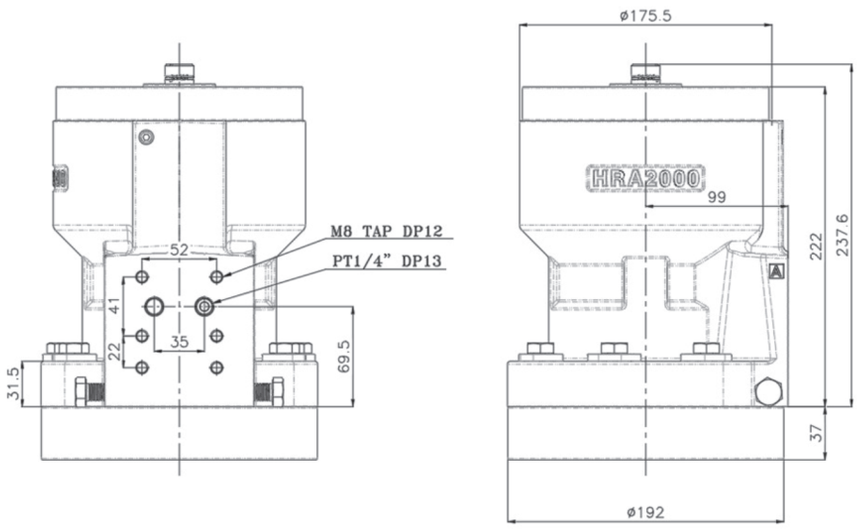
SB-HRA1000 Main Dimensions





SB-HRA2000 Main Dimensions



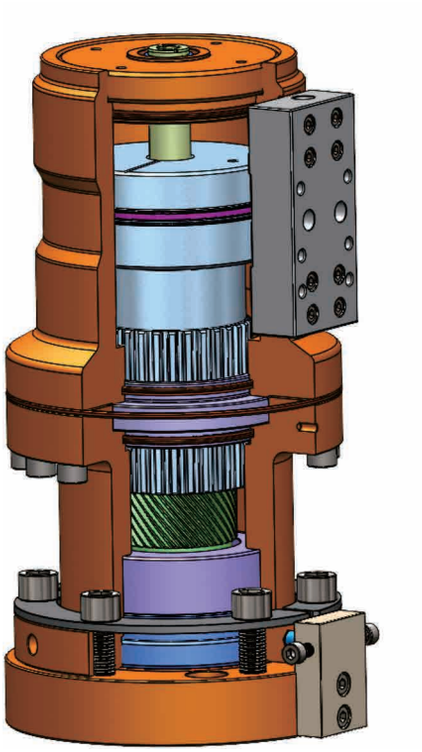


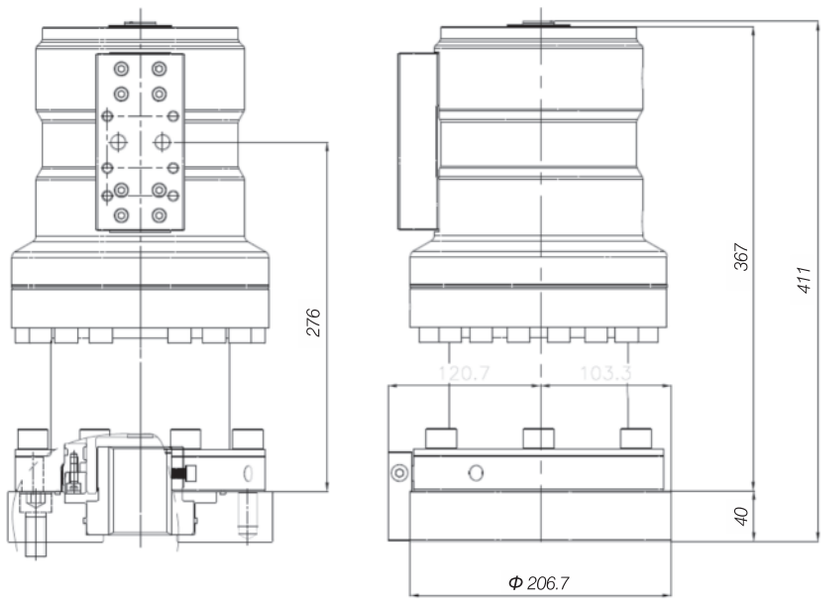
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SB-HRA4000 Main Dimensions





Main Data

Division	SB-HRA1000	SB-HRA2000	SB-HRA4000
Working Torque	1,000 N.m	2,000 N.m	4,000 N.m
Working Pressure	135bar	135bar	135bar
Max. allowable operating pressure	210bar	210bar	210bar
Min. oprating pressure required	5~10bar	5~10bar	5~10bar
Angle of rotation	Quarter turn / 90° ±1°	Quarter turn / 90° ±1°	Quarter turn / 90° ±1°
Ambient temperature	-25°C ~ +70°C	-25°C ~ +70°C	-25°C ~ +70°C
Protection class	Ip65	Ip65	Ip65
Oil displacement	0.21L	0.35L	1.1L
Valve attachment flage EN ISO 5211	F10-F12-F14	F12-F14-F16	F25-F16-F14
Hollow shaft (Key type)	Max. Φ42 H9	Max. Φ56 H9	Max. Φ56 H9
Hollow shaft (Square type)	Max. ◊36 H11	Max. ◊45 H11	Max. ◊45 H11
Weigh (Dry wt.)	25.6kg	40kg	65kg
Materials	Steel, Iron(FCD)	Steel, Iron(FCD)	Steel, Iron(FCD)

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Special View & Features

Spiral Bevel Gear Actuators



① Spiral Pinion and Spiral Bevel Gear
The pinion is manufactured from heat-treated 1045 steel and the bevel gear from 1045 steel : both are precision-cut.

② O-ring
The unit is fully O-ring sealed and suitable for temporary immersion to meet IP67.

③ Spherical Roller Bearing
The input bevel pinion is fully supported by deep-groove ball bearings for excellent radial support.

④ Gaskets
The base and end cap are sealed with non-asbestos gaskets to prevent leakage and ensure water resistance.

⑤ Thrust Ball or Self-Aligning Thrust Roller Bearing
These bearings provide low-friction performance and are designed for high-load applications.

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Grease: ZENITH EPSB 2

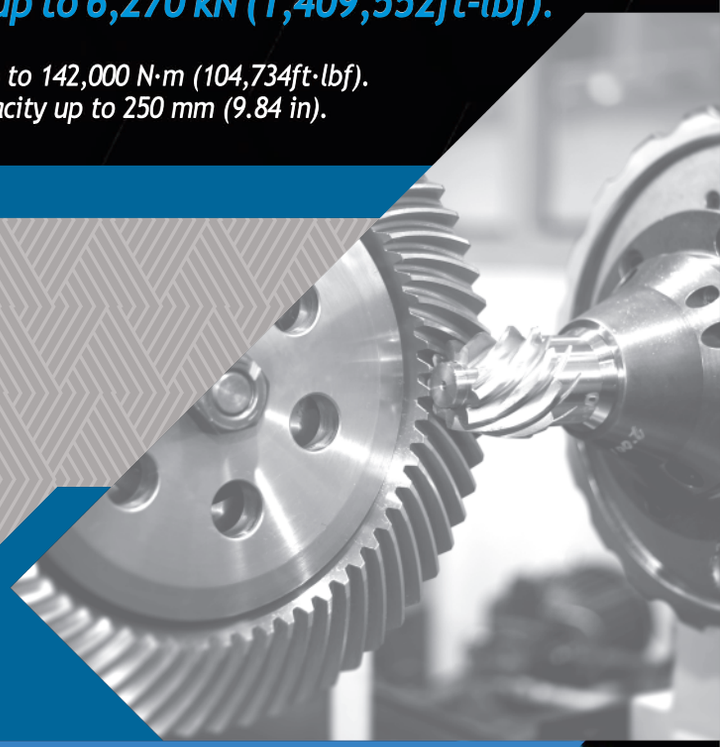
Each unit includes an Alumite grease fitting and a plug for convenient lubricant fill.

The SB-V Series spiral bevel gear actuators deliver torque capacity up to 75,000 N·m (55,317 ft·lbf). Thrust capacity up to 6,270 kN (1,409,552ft-lbf).

Stem diameter capacity up to 200mm (7.87inch).
A high-load SB-VH design is also available with torque capacity up to 142,000 N·m (104,734ft·lbf).
Thrust capacity up to 8,925kN (2,006,419lbf). Stem diameter capacity up to 250 mm (9.84 in).

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⑥ Dual Locking Nuts

This design uses dual locking nuts that create a jamming effect for positive locking.
No set screw or pinning is required.

⑦ Stem Nut

Unique top-entry, replaceable stem nut.
After years of service, it can be replaced easily without removing the gear from the valve.
Manufactured from high-tensile brass for corrosion and abrasion resistance.

⑧ Drive Sleeve

Ductile iron, Class 65-45-12, supports both axial and radial loads.

⑨ Housing and Base

All external castings are ductile iron, Class 65-45-12, with tensile strength of 65,000 psi.
This delivers high strength and excellent impact resistance.

Spiral Bevel Gear Actuators

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Spiral Bevel Gear Actuator Assembly

Standard Type A

Horizontal input for thrust and torque





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Part List and Materials

	NO	DESCRIPTION	MATERIAL			REMARK
			NAME	JIS	ASTM	
STANDARD	1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
	2	Base	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
	3	Spiral Bevel Gear	Carbon Steel	S45C	A576-1045	
	4	Spiral Pinion	Carbon Steel	S45C	A576-1045	NOTE.2
	5	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12	
	6	Dual Lock Nuts	Carbon Steel	S45C	A576-1045	
	7	End Cap	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
	8	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
	9	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
	10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
	11	Spherical Roller Bearing	Special Steel	SUJ2	A295-52100	
	12	Thrust Bearing	Special Steel	SUJ2	A295-52100	
	13	Grease Plug	Steel + Galvanizing			
	14	O-Ring	NBR			NOTE.4
	15	O-Ring	NBR			NOTE.4
	16	Collar	Steel Pipe	SGP	A53	
	17	Bearing Washer	Steel			Snap ring
	18	Bearing Nut	Steel			Snap ring
	19	Grease Fitting	Steel + Galvanizing			
	20	Set Screw	Stainless Steel			
	21	End Cap Gasket	Non-Asbestos			
	22	Base Gasket	Non-Asbestos			
	23	Eye Bolt	Steel + Galvanizing			
OPTION	OP-01	Stem Nut	Bronze	HBsc4 or Hbsc3	B505-C86300	NOTE.3
	OP-02	Hand Wheel	Steel Pipe	SGP	A53	Handle part NOTE.5
	OP-03	Key	Carbon Steel	S45C	A576-1045	
	OP-04	Name Plate	Stainless Steel			
	OP-05	Washer	Stainless Steel			
	OP-06	HEX. Bolt (S/W)	Stainless Steel			
	OP-07	Stem Cover	Steel Pipe	SGP	A53	Stem cover NOTE.6
	OP-08	Indicate Bolt	Steel + Galvanizing			
	OP-09	HEX. Nut	Steel + Galvanizing			
	OP-10	Indicator	Plastic			

Material Details: Options and Material Changes

1. All castings are ductile iron FCD-450 (ASTM 65-45-12). Stainless steel and carbon steel are available upon request.
2. For special pinion requirements, options include nickel coating, high-tensile stainless steel, and duplex materials.
3. Stem nut materials are available in ALBC3 (aluminum bronze), steel (A576-1045), 4349 GT DZZ, and others.
4. O-ring seal material: NBR; temperature range −20 C to +120 C (−4 F to +248 F).
   Standard lubricant: Zenith EPSB2; temperature range −20 C to +200 C (−4 F to +392 F).
   Optional high-temperature O-ring: Viton Grade V75 (or equivalent); temperature range −30 C to +200 C (−22 F to +392 F).
   Optional lubricant: Zenith SYN WS2; temperature range −30 C ~ 400 C (−31 F ~ 752 F).
   Low-temperature silicon O-ring; temperature range −60 C to −150 C (−76 F to −302 F).
   Low-temperature lubricant: Zenith SLB2002; temperature range −60 C ~ 120 C (−76 F ~ 248 F).
5. A wide range of handwheel options is available, including locking device, chainwheel, and square adaptor.
6. Various stem covers are available (see page 35) in materials such as stainless steel and polycarbonate.

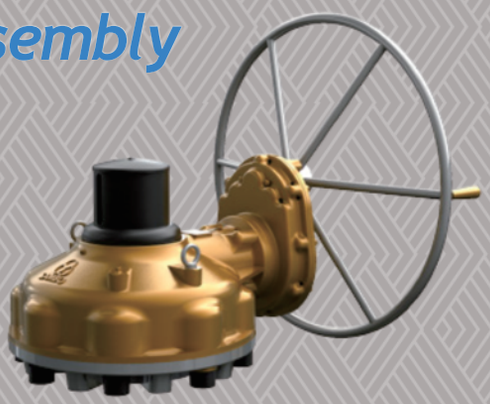
Finish : Unless otherwise specified, the gearbox is supplied with a two-component wash primer.
Finish coating is available on request.

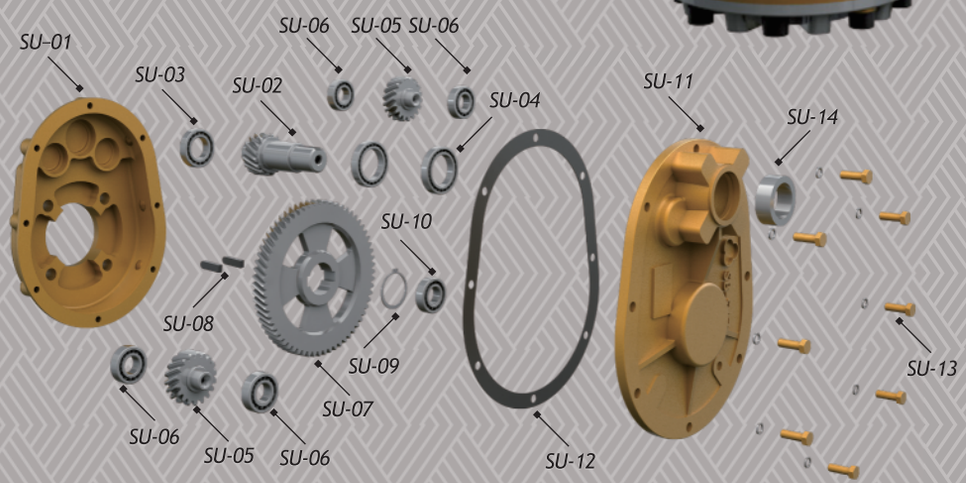
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Spiral Bevel Gear Actuator Assembly

Standard Type A

Horizontal thrust and torque input with single-reduction gear attachment





Part List and Materials

NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
2	Base	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
3	Spiral Bevel Gear	Carbon Steel	S45C	A576-1045	
4	Spiral Pinion	Carbon Steel	S45C	A576-1045	
5	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12	
6	Dual Lock Nuts	Carbon Steel	S45C	A576-1045	
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
8	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
9	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
11	Spherical Roller Bearing	Special Steel	SUJ2	A295-52100	
12	Thrust Bearing	Special Steel	SUJ2	A295-52100	
13	Grease Plug	Steel + Galvanizing			
14	O-Ring	NBR			NOTE.4
15	O-Ring	NBR			NOTE.4
16	Collar	Steel Pipe	SGP	A53	
17	Bearing Washer	Steel			
18	Bearing Nut	Steel			
19	Grease Fitting	Steel + Galvanizing			
20	Set Screw	Stainless Stell			
21	End Cap Gasket	Non-Asbestos			
22	Base Gasket	Non-Asbestos			
23	Eye Bolt	Steel + Galvanizing			

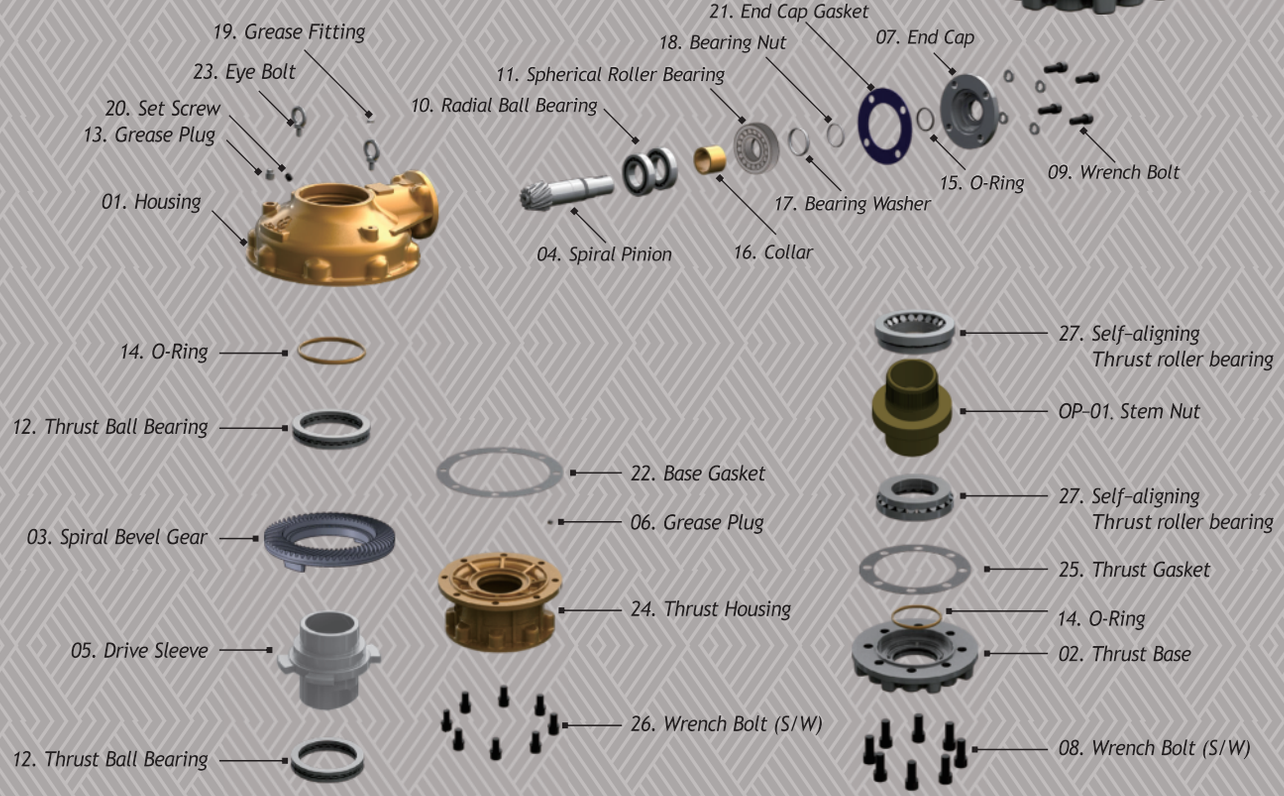
NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
SU-02	Helical Pinion	Carbon Steel	S45C	A576-1045	NOTE.2
SU-03	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
SU-04	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
SU-05	Idle Gear	Carbon Steel	S45C	A576-1045	
SU-06	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
SU-07	Helical Gear	Carbon Steel	S45C	A576-1045	
SU-08	Key(1R)	Carbon Steel	S45C	A576-1045	
SU-09	Snap ring	Steel			
SU-10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
SU-11	Support Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
SU-12	S-Cover Gasket	Nonasbestos			
SU-13	Hex.Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
SU-14	Oil-Seal	Buna N	NBR		
OP-01	Stem Nut	Bronze	HBsC4	B505-C86300	NOTE.3
OP-02	Hand Wheel	Steel Pipe	SGP	A53	NOTE.5
OP-03	Key(1R)	Carbon Steel	S45C	A576-1045	
OP-04	Name Plate	Stainless Steel			Optional handle parts
OP-05	Washer	Stainless Steel			
OP-06	HEX. Bolt(S/W)	Stainless Steel			
OP-07	Stem Cover	Steel Pipe	SGP	A53	NOTE.6
OP-08	Indicate Bolt	Steel + Galvanizing			Option stem cover
OP-09	HEX. NUT	Steel + Galvanizing			
OP-10	Indicator	Plastic			

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Standard Type A

High-load thrust and torque with horizontal input





Part List and Materials

NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
2	Thrust Base	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
3	Spiral Bevel Gear	Carbon Steel		A576-1045	
4	Spiral Pinion	Carbon Steel	S45C	A576-1045	NOTE.2
5	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12	
6	Grease Plug	Steel + Galvanizing			
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
8	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
9	Wrench Bolt	Alloy Steel	SCM435	A322-4135	
10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
11	Spherical Roller Bearing	Special Steel	SUJ2	A295-52100	
12	Thrust all Bearing	Special Steel	SUJ2	A295-52100	
13	Grease Plug	Steel + Galvanizing			
14	O-Ring	NBR			NOTE.4
15	O-Ring	NBR			NOTE.4
16	Collar	Steel Pipe	SGP	A53	
17	Bearing Washer	Steel			
18	Bearing Nut	Steel			
19	Grease Fitting	Steel + Galvanizing			

NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
20	Set Screw	Stainless Steel			
21	End Cap Gasket	Non-Asbestops			
22	Base Gasket	Non-Asbestops			
23	Eye Bolt	Steel + Galvanizing			
24	Thrust Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
25	Thrust Gasket	Non-Asbestos			
26	Wrench Bolt (S/W)	Alloy Steel	SCM435	A322-4135	
27	SR. Thrust Bearing	Special Steel	SUJ2	A295-52100	
OP-01	Stem Nut	Bronze	HBsC4	B505-C86300	NOTE.3
OP-02	Hand Wheel	Steel Pipe	SGP	A53	NOTE.5
OP-03	Key(1R)	Carbon Steel	S45C	A576-1045	
OP-04	Name Plate	Stainless Steel			OPTION HANDLE PART
OP-05	Washer	Stainless Steel			
OP-06	HEX. Bolt (S/W)	Stainless Steel			
OP-07	Stem Cover	Steel Pipe	SGP	A53	NOTE.6
OP-08	Indicate Bolt	Steel + Galvanizing			
OP-09	HEX. Nut	Steel + Galvanizing			OPTION STEM COVER
OP-10	Indicator	Plastic			

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Index

MITER GEAR Type (SB-MT Series) - Thrust and torque, horizontal input 040 · 041

SPECIAL RATIO Type (SB-SP Series) - Thrust and torque, horizontal input 042 · 043

LUG DRIVE Type (SB-CL Series) - Torque-only lug drive, horizontal input 044 · 045

LUG DRIVE Type (SB-CL Series) - Torque-only lug drive, horizontal input with single reduction gear attachment 046 · 047

Type A

Standard Type A - Thrust and torque, horizontal input 048 · 049

Standard Type A - Thrust and torque, horizontal input with single reduction gear attachment 050 · 051

Standard Type A - Thrust and torque (twin shaft), horizontal input with single reduction gear attachment 052 · 053

Standard Type A - Thrust and torque, horizontal input with double reduction gear attachment 054 · 055

Standard Type A - Thrust and torque (twin shaft), horizontal input with double reduction gear attachment 056 · 057

Type B

Standard Type B - Thrust and torque, horizontal input with single reduction gear attachment 058 · 059

Standard Type B - Thrust and torque, horizontal input with double reduction gear attachment 060 · 061

Type C

Standard Type C - Multiple input shaft, thrust and torque, horizontal input 062 · 063

Standard Type C - Multiple input shaft, thrust and torque, horizontal input with single reduction gear attachment 064 · 065

Standard Type C - Multiple input shaft, thrust and torque, horizontal input with double reduction gear attachment 066 · 067

Type D

Standard Type D - High-load thrust and torque, horizontal input 068 · 069

Standard Type D - High-load thrust and torque, horizontal input with single reduction gear attachment 070 · 071

Standard Type D - High-load thrust and torque (twin shaft), horizontal input with single reduction gear attachment 072 · 073

Standard Type D - High-load thrust and torque, horizontal input with double reduction gear attachment 074 · 075

Standard Type D - High-load thrust and torque (twin shaft), horizontal input with double reduction gear attachment 076 · 077

Standard Type D - High-load thrust and torque (twin shaft), vertical input with single reduction gear attachment 078 · 079

Type E

Standard Type E - Multiple Input Shaft, High-load thrust and torque, horizontal input 080 · 081

Standard Type E - Multiple Input Shaft, High-load thrust and torque, horizontal input with single reduction gear attachment 082 · 083

Standard Type E - Multiple Input Shaft, High-load thrust and torque, horizontal input with double reduction gear attachment 084 · 085

Standard Type E - Multiple Input Shaft, High-load thrust and torque, vertical input with single reduction gear attachment 086 · 087

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Products



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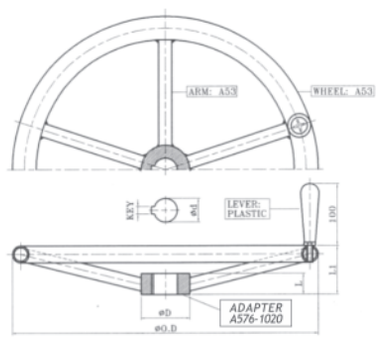
Handwheel Types

Standard Handwheel for Gate Valves

UNIT : mm

SIZE / MODEL	ΦO.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
GH-250	250	60	Φ26(8X7)	35	70	4EA
GH-300	300					
GH-400	400	70	Φ32(10X8)	35	90	5EA
GH-500	500					
GH-610	610				110	
GH-710	710					
GH-800	800	80	Φ38(12X8)	45	130	6EA
GH-900	900					
GH-1000	1000	90	Φ50(16X10)	59		

· If no specific request is provided, handwheels are supplied according to the table above.
· Optional materials are available, and handwheel sizes can be matched to all models.

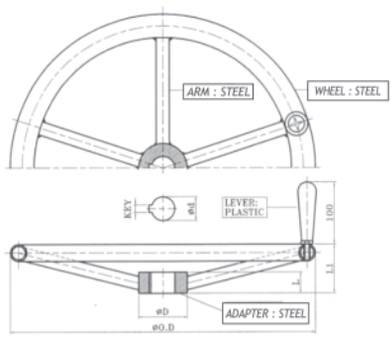


Solid Handwheel

UNIT : mm

SIZE / MODEL	ΦO.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
GSH-250	250	60	Φ26(8X7)	35	70	4EA
GSH-300	300					
GSH-400	400	70	Φ32(10X8)	35	90	5EA
GSH-500	500					
GSH-610	610				110	
GSH-710	710					
GSH-800	800	80	Φ38(12X8)	45	130	6EA
GSH-900	900					
GSH-1000	1000	90	Φ50(16X10)	59		

· If no specific request is provided, handwheels are supplied according to the table above.
· Optional materials are available, and handwheel sizes can be matched to all models.

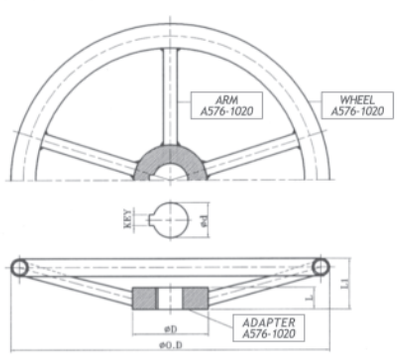


Round Bar Handwheel for Globe Valves

UNIT : mm

SIZE / MODEL	ΦO.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
GRH-250	250	80	Φ26(8X7)	35	55	4EA
GRH-300	300					
GRH-400	400	100	Φ32(10X8)	35	60	5EA
GRH-500	500					
GRH-610	610				65	
GRH-710	710					
GRH-800	800	120	Φ38(12X8)	45	70	6EA
GRH-900	900					
GRH-1000	1000	140	Φ50(16X10)	59		

· Round bar handwheels are manufactured from carbon steel and are suitable for applications requiring momentary impact on globe valves.

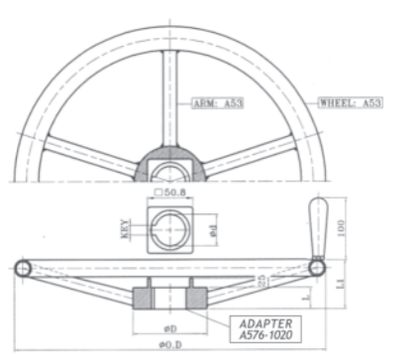


2" Square Nut Handwheel

UNIT : mm

SIZE / MODEL	ΦO.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
GDNH-250	250	90	Φ26(8X7)	35	70	4EA
GDNH-300	300					
GDNH-400	400		Φ32(10X8)		90	5EA
GDNH-500	500					
GDNH-610	610				110	
GDNH-710	710					
GDNH-800	800		Φ38(12X8)		130	6EA
GDNH-900	900					
GDNH-1000	1000		Φ50(16X10)	70		

· This handwheel is designed for use with an air impact wrench and can be customized to customer requirements.



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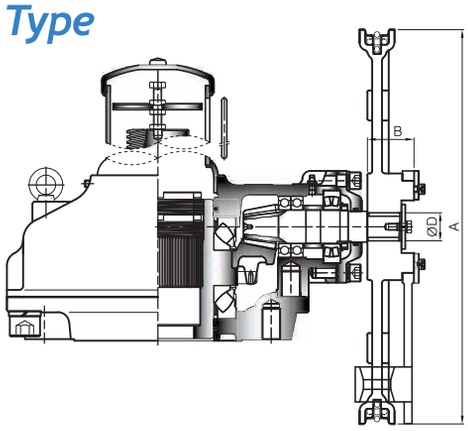
Chain Wheel Type

Spiral Bevel Standard

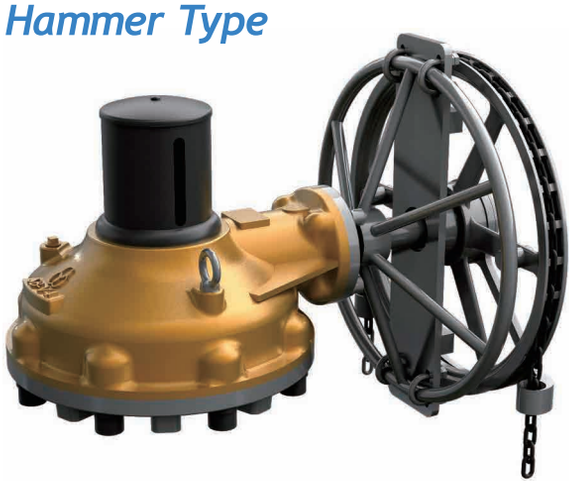
UNIT : mm

SIZE / MODEL	A	B	ΦD & KEY
CH-200	200	43	Φ16(6X6) Φ21 (6X6)
CH-250	250		
CH-300	300	43.5	Φ26 (8X7) Φ32(10X8)
CH-350	350		
CH-400	400	50	Φ38(12X8)
CH-450	450		
CH-500	500		
CH-550	550		
CH-600	600		
CH-700	700	51.5	Φ38 (12X8) Φ50(16X10)
CH-800	800	53	

Gear Type



Hammer Type



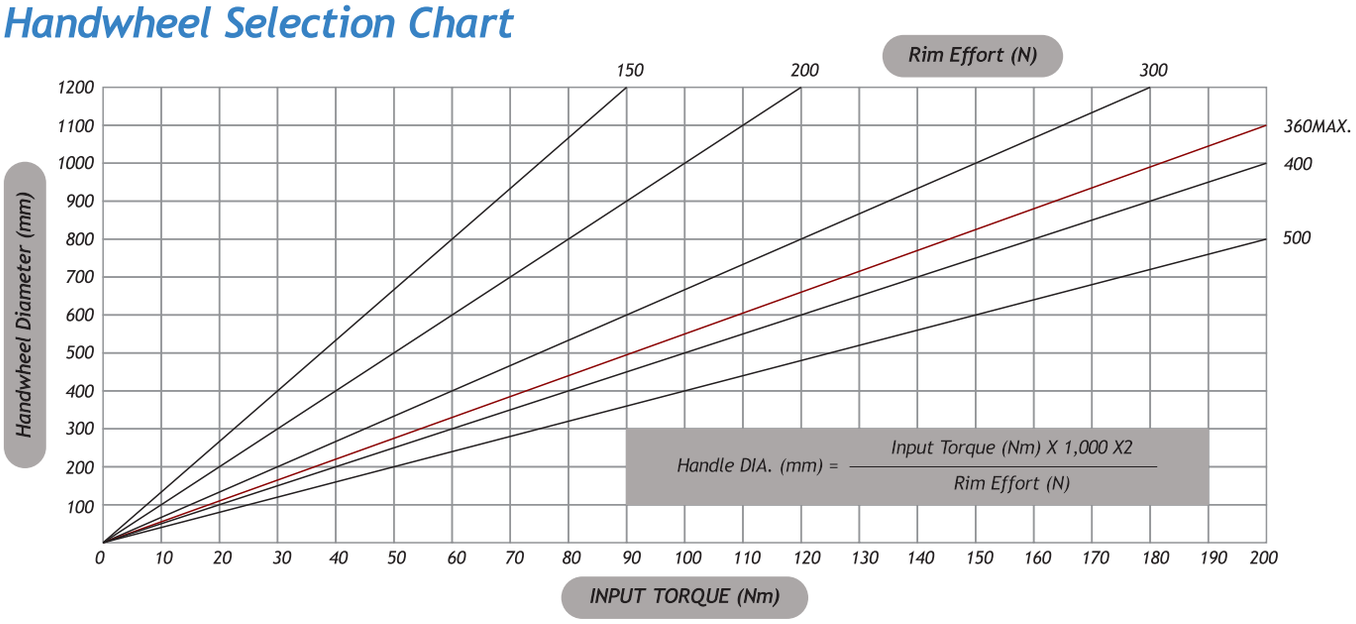
Chain wheels are available in two types.

- Gear type that mounts directly to the gear.
- Hammer type that connects to the handwheel.
- Materials: sprocket rim (FCD450), guide arm (A576-1045), chain (steel + Zn).

The World's highest quality.

Global Leader
SAMBO
Gear Actuators

Handwheel Selection Chart



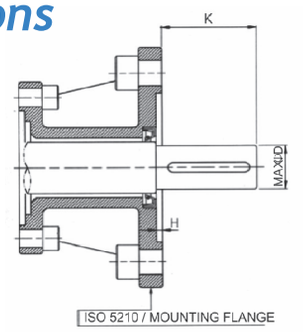
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M·O·V Type

Selection chart for electric actuator dimensions







Spiral Bevel Gear Actuator

Standard Type							
NO / MODEL	Flange Type						Max.ΦD & Key
	F-10,F-14,F-16		F-25,F-30		F-35,F-40		
	K	H	K	H	K	H	
SB-VS10	70	6	90	8	110	10	Φ30 (10X8)
SB-VS20							
SB-V0							Φ35 (10X8)
SB-V1							
SB-V2							Φ40 (12X8)
SB-V3							
SB-V35							Φ45 (14X9)
SB-V4							
SB-V5							
SB-V55							
SB-V6							Φ55 (16X10)
SB-V7							
SB-V75							Φ65 (18x12)
SB-V8							
SB-V85							Φ65 (18X11)
SB-V9							Φ 80 (22X14)
SB-V100							Φ 90 (25X14)

Support Type					
NO / MODEL	Flange Type				Max.ΦD & Key
	F-10,F-14,F-16		F-25,F-30		
	K	H	K	H	
SB-V0-1S,1SD	70	6	90	8	Φ30 (10X8)
SB-V1-1S,1SD					
SB-V2-1S,1SD					
SB-V3-1S,1SD					Φ35 (10X8)
SB-V35-1S,1SD					
SB-V4-1S,1SD					Φ40 (12X8)
SB-V5-1S,1SD					
SB-V55-1S,1SD					Φ45 (14X9)
SB-V6-1S,1SD					
SB-V7-1S,1SD					Φ55 (16X10)
SB-V75-1S,1SD					
SB-V8-1S,1SD					
SB-V85-1S,1SD					
SB-V9-1S,1SD					Φ70 (18X11)
SB-V100-1S,1SD					

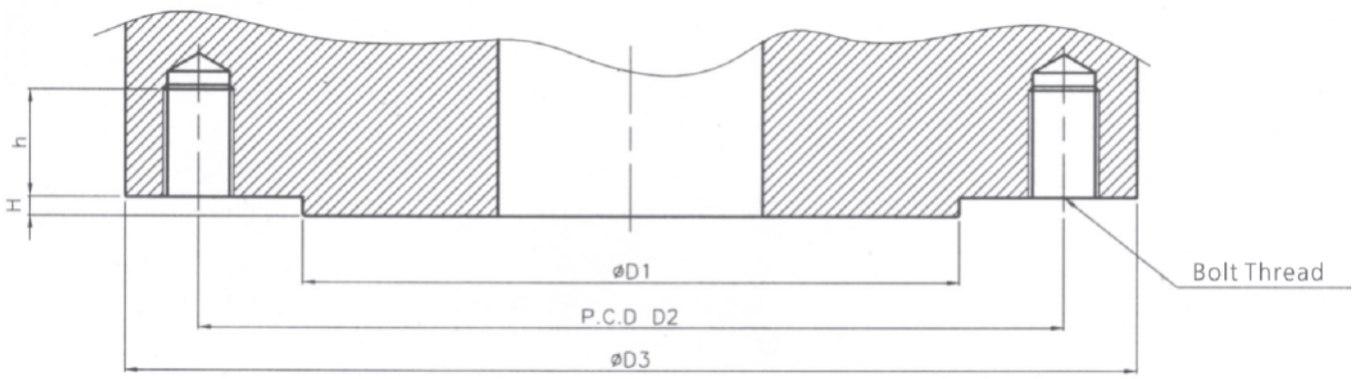
Worm Gear Actuator

Standard Type							
NO / MODEL	Flange Type						Max.ΦD & Key
	F-10,F-14,F-16		F-25,F-30		F-35,F-40		
	K	H	K	H	K	H	
SBWG-BF	70	6	90	8	110	10	Φ20 (6X6)
SBWG-0							
SBWG-00							Φ25 (8X7)
SBWG-01							
SBWG-02							Φ35 (10X8)
SBWG-03							
SBWG-35							
SBWG-04							Φ45 (14X9)
SBWG-05							
SBWG-55							
SBWG-06							Φ55 (16X10)
SBWG-07							
SBWG-75							Φ70 (18X11)
SBWG-08							
SBWG-09							
SBWG-10							Φ90 (25X14)
SBWG-105							
SBWG-11							
SBWG-12							Φ120 (32X18)
SBWG-13							
SBWG-14							Φ120 (32X18)
SBWG-15							

Support Type					
NO / MODEL	Flange Type				Max.ΦD & Key
	F-10,F-14,F-16		F-25,F-30		
	K	H	K	H	
SBWG-00-1S, 1SD	70	6	90	8	Φ25 (8X7)
SBWG-01-1S, 1SD					
SBWG-02-1S, 1SD					Φ30 (10X8)
SBWG-03-1S, 1SD					
SBWG-35-1S, 1SD					
SBWG-04-1S, 1SD					Φ35 (10X8)
SBWG-05-1S, 1SD					
SBWG-55-1S, 1SD					Φ45 (14X9)
SBWG-06-1S, 1SD					
SBWG-07-1S, 1SD					
SBWG-75-1S, 1SD					Φ55 (16X10)
SBWG-08-1S, 1SD					
SBWG-09-1S, 1SD					
SBWG-10-1S, 1SD					Φ70 (18X11)
SBW-105-1S, 1SD					
SBWG-11-1S, 1SD					
SBWG-12-1S, 1SD					Φ70 (18X11)
SBWG-13-1S, 1SD					
SBWG-14-1S, 1SD					Φ70 (18X11)
SBWG-15-1S, 1SD					

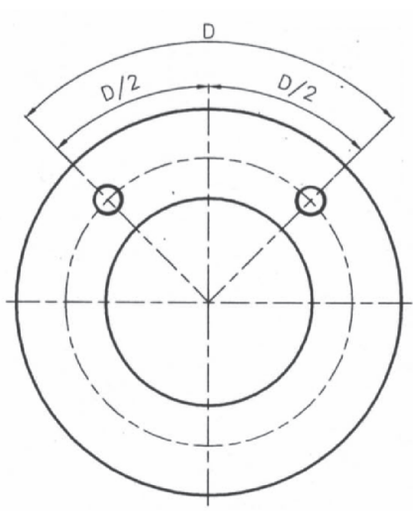
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Flange Dimensions



FLANGE TYPE	ISO 5210/1 Mounting Flange							
	ØD1	P.C.D D2	Ø D3	H MAX.	Bolt Thread		h (Tap Dp MIN.)	NO. of Screw
F-05	35	50	65	3	M6	1/4"-20UNC	9	4
F-07	55	70	90		M8	5/16"-18UNC	12	
F-10	70	102	125		M10	3/8"-16UNC	15	
F-12	85	125	150		M12	1/2"-13UNC	18	
F-14	100	140	175	4	M16	5/8"-11UNC	24	
F-16	130	165	210	5	M20	3/4"-10UNC	30	
F-25	200	254	300		M16	5/8"-11UNC	24	8
F-30	230	298	350		M20	3/4"-10UNC	30	
F-35	260	356	415		M30	1"-8UNC	45	
F-40	300	406	475	8	M36	1 1/4"-7UNC	54	
F-48	370	483	560		M36	1 1/4"-7UNC	54	12
F-60	470	603	686		M36	1 1/4"-7UNC	54	20
F-80	670	813	900	10	M42	1 1/2-6UNC	63	20
F-100	870	1042	1200		M42	1 1/2"-6UNC	63	32

Hole Positions

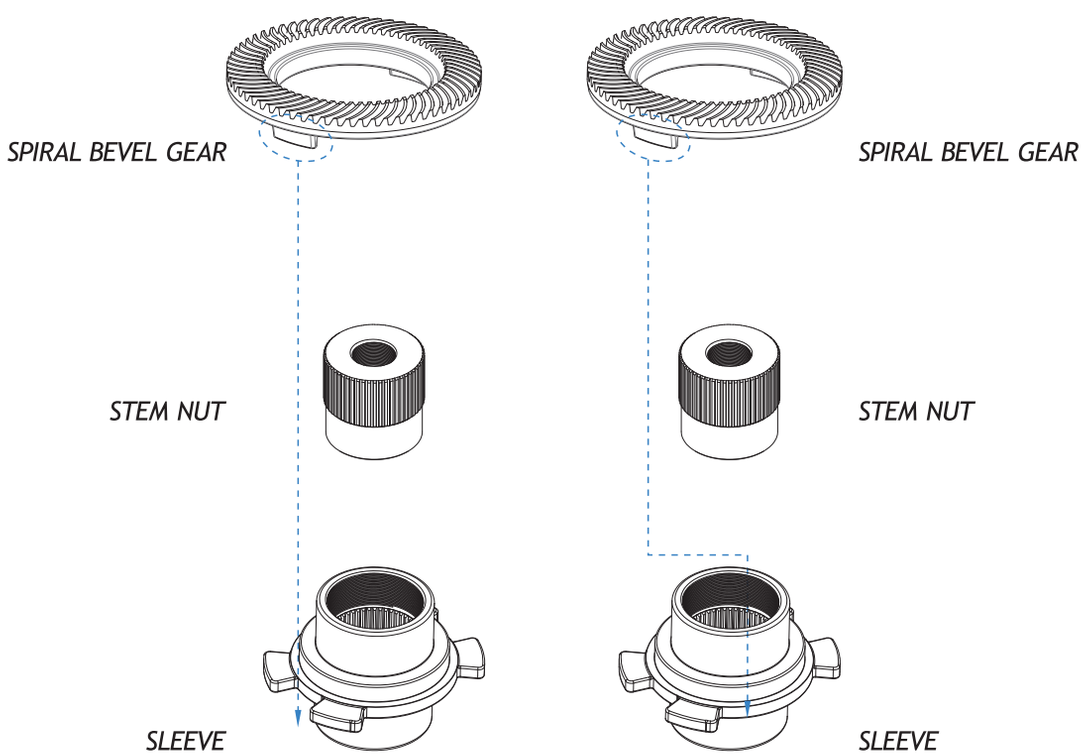


FLANGE TYPE	NO. of Screw	D/2
F-05 to F-16	4	45°
F-25 to F-40	8	22.5°
F-48	12	15°
F-60, F–80	20	9°
F-100	32	5.625°

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SB Series Spiral Bevel Gears can be configured with a Lost-Motion (Hammer Blow) or No-Lost-Motion output drive arrangement.





Fix Type (M·O·V / Dual)

No-Lost Motion

· This design eliminates the lug-drive gap between the spiral bevel gear and the drive sleeve. It is the preferred option for electric actuators with positioning control capability.m (FCD450), guide arm (A576-1045), chain (steel + Zn).

Hammer Blow Type (Handle)

No-Lost Motion

· This type eliminates the lug-drive gap between the spiral bevel gear and the drive sleeve, enabling a momentary impact. It is the preferred choice for manual operation and for electric actuators used with wedge gates and globe valves.

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ETC

Twin-Shaft Gear Actuators

This gearbox features two input shafts-one for high speed and one for low speed.



-1ST Type

Second Input Shaft (Low-Speed Input)

Delivers maximum mechanical advantage for seating and unseating valves.

Primary Input Shaft (High-Speed Input)

Allows fewer turns after the valve has been unseated.

g.

Manual at Both Ends



Manual · Motorized



This input-shaft configuration is used for gear actuators operated by two spindles.
Available options include motorized, dial, and manual types.

Valve Spindle Cover Tubes

Stem covers are available in A53, SUS304, polycarbonate, and other materials.
Stem cover and indicator sets are offered in multiple configurations.
Stem cover lengths can be customized to customer requirements.
For the F-type stem cover, water ingress into the gearbox may occur if it is not fastened as recommended by Sambo.



A TYPE	B TYPE	C TYPE	D TYPE	E TYPE	F TYPE	INDICATOR
Rising Indicators	No Hole Stem Cover	Gauge	Polycarbonate (Transparent)	Stem Cap	PF Adapter	

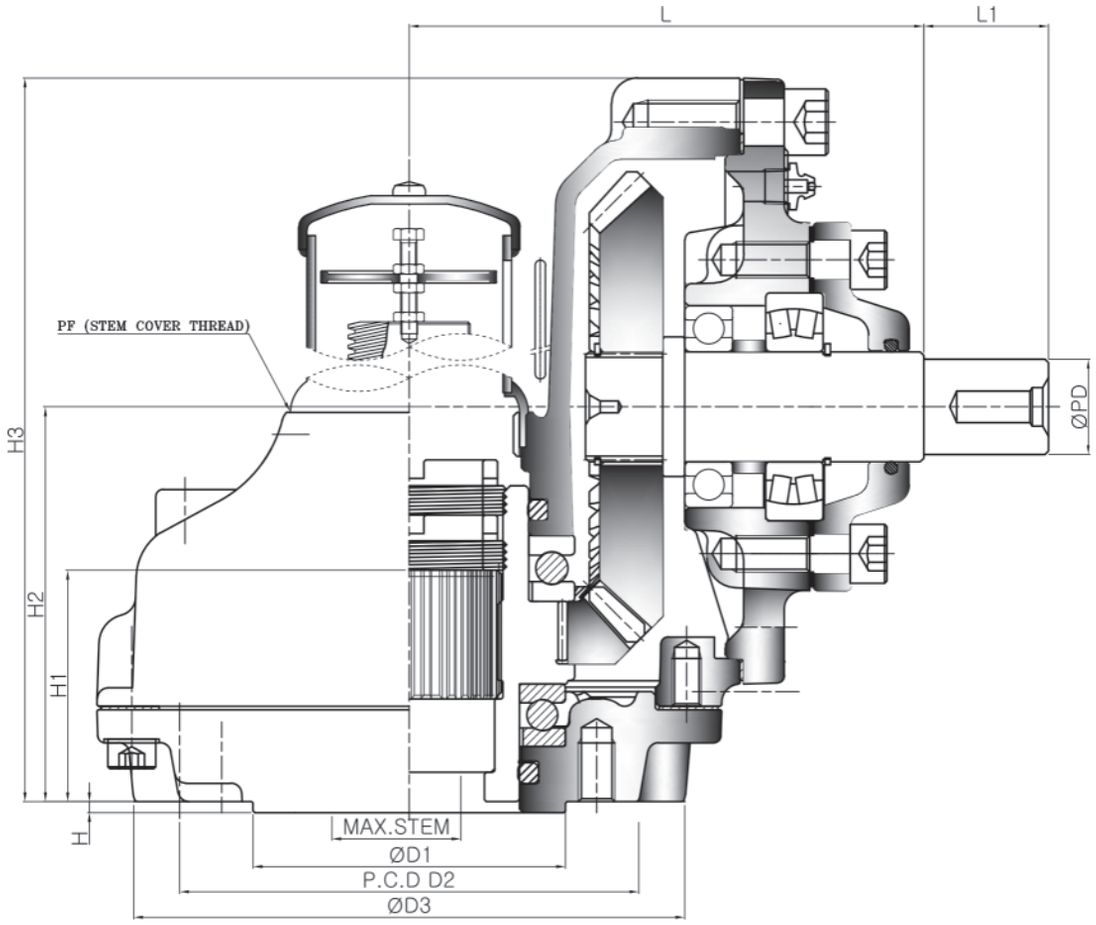
Additional Options from SAMBO

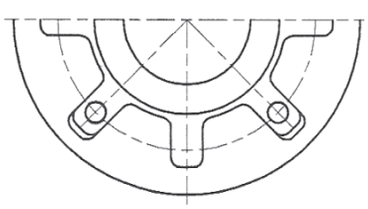
Sambo's standard input-shaft rotation is clockwise input resulting in clockwise output (Clockwise In = Clockwise Out).
Reverse rotation is available. Upon request, units can be configured for buried, submersible, marine, radiation, and high- or low-temperature service.
Gear ratios and flange specifications can also be customized.

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

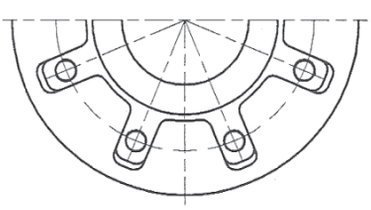
Miter Gear Type (SB-MT Series)

Horizontal input configuration for thrust and torque





Type A



Type B

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
SB-MT-VS10	A	F-10	70	102	4-M10-15	125	3	56	102	177	133	34	26	8X7	250	PF2"
SB-MT-VS20		F-12	85	125	4-M12-18	150		63	107.5	197	143				300	
SB-MT-V0		F-14	100	140	4-M16-24	175		72	130	225	164	34	32	10X8	400	PF2-1/2"
SB-MT-V1		F-16	130	165	4-M20-30	210		84	157	263	177				500	PF3"
SB-MT-V2	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	178	306	232	34	32	10X8	610	PF3-1/2"
SB-MT-V3		F-25	200	254	8-M16-24	300		102	195	339	249				710	PF4"
SB-MT-V35		F-30	230	298	8-M20-30	350		122	250	413	286	44	38	12X8	800	PF5"
SB-MT-V4		F-35	260	356	8-M30-45	410		133	285	476	313					PF6"

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

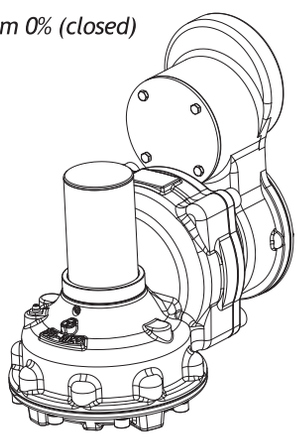
Features

- This series is designed for Gate and Globe valves, sluice gates, and other applications requiring linear motion for thrust and torque.
- A unique top-entry, replaceable stem nut is manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure smooth operation. Units are fully O-ring sealed for temporary submergence to IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.



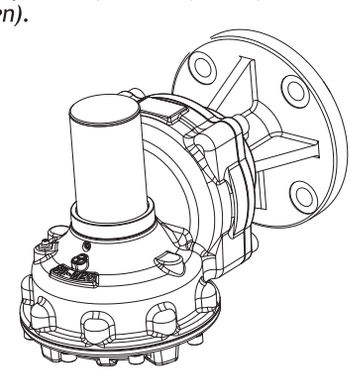
Dial Indicator

- An optional local position dial indicator is available.
- Graduated in percent from 0% (closed) to 100% (open).



M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.
- Graduated in percent from 0% (closed) to 100% (open).



Global Leader SAMBO Gear Actuators

The World's highest quality.

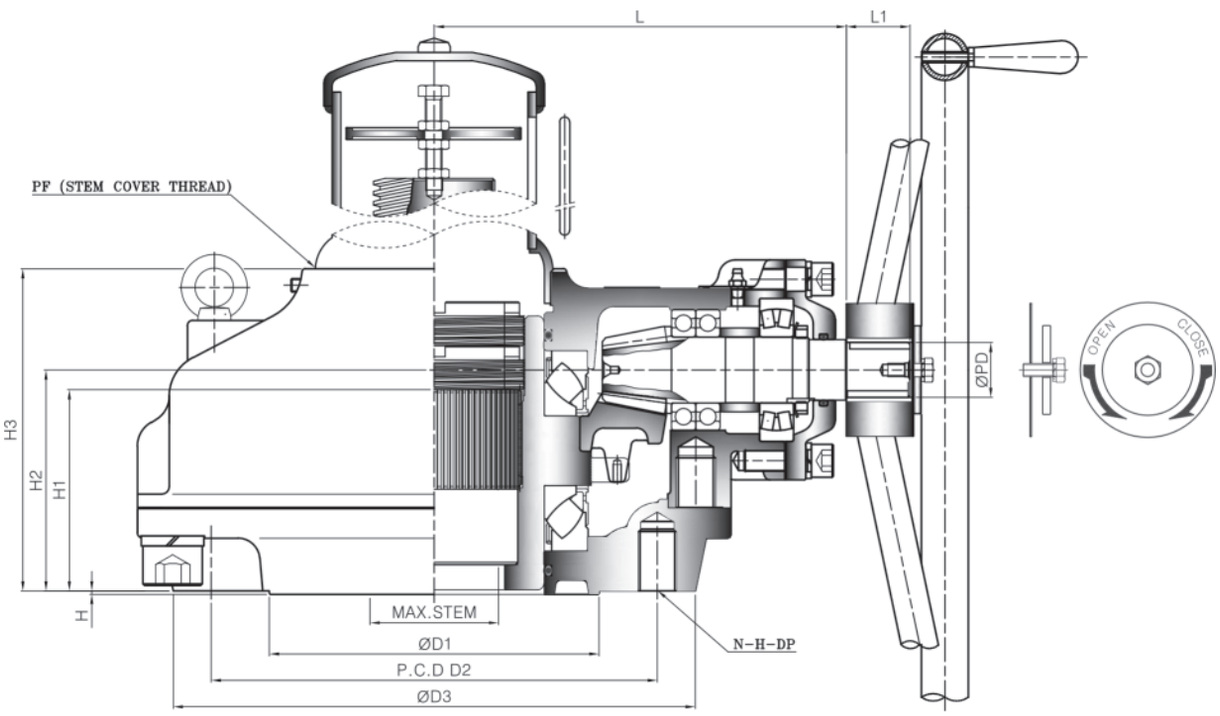
Selection chart for manual operation

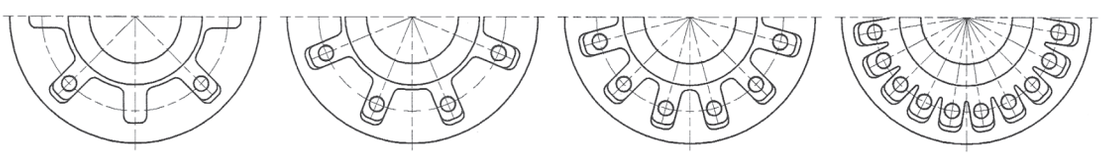
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-MT-VS10	1 : 1	30	22 (8X7)	F-07, F-10	75.5	16973	220	162	10
SB-MT-VS20	1 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	14
SB-MT-V0	1 : 1	46	38 (12X8)	F-12, F-14	127	28551	600	443	21
SB-MT-V1	1 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	29
SB-MT-V2	1 : 1	62	52 (16X10)	F-16, (F-20)	190	42714	1500	1106	45
SB-MT-V3	1 : 1	72	60 (18X11)	(F-20), F-25	288	64745	2500	1844	59
SB–MT-V35	1 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	102
SB-MT-V4	1 : 1	95	80 (22x14)	F-30, F-35	400	89924	5200	3835	129

Product design and data are subject to change without notice. The product features and technical data provided do not specify or imply any warranty. For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Special Ratio Type (SB-SP Series)

Horizontal input for thrust and torque





Type A | Type B | Type C | Type D

Dimensions

UNIT:mm

DIM / MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
SB-SP-VS10	A	F-10	70	102	4-M10-15	125	3	56	71	95	121	34	26	8X7	250	PF2"
SB-SP-VS20		F-12	85	125	4-M12-18	150		63	78,5	106	131				300	PF2-1/2"
SB-SP-V0		F-14	100	140	4-M16-24	175		72	81	121	154,5	34	32	10X8	400	
SB-SP-V1		F-16	130	165	4-M20-30	210		84	98	140	167				500	PF3"
SB-SP-V2	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	188	34	32	10X8	610	PF3-1/2"
SB-SP-V3		F-25	200	254	8-M16-24	300		102	119	166,5	208				710	PF4"
SB-SP-V35		F-30	230	298	8-M20-30	350		122	138	195	266	44	38	12X8	800	PF5"
SB-SP-V4		F-35	260	356	8-M30-45	410		133	150	209	291					PF6"
SB-SP-V5		F-40	300	406	8-M36-55	475		161	177	245	313				900	PF7"
SB-SP-V55		F-40	300	406	8-M36-55	475		171	192	261	333					
SB-SP-V6		F-40	300	406	8-M36-55	475		185	201	283	381	58	50	16X10	1000	PF8"

Product design and data are subject to change without notice. The product features and technical data provided do not specify or imply any warranty.
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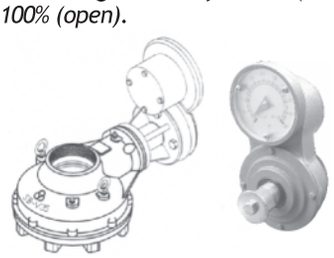
Features

- This series is designed for Gate and Globe valves. It also suits sluice gates and other applications requiring linear motion for thrust and torque.
- A unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for corrosion and abrasion resistance.
- Castings are ductile iron, class 65-45-12, providing high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Gears are machine-cut, heat-treated, and ground for optimum operation. Units are fully O-ring sealed for temporary submergence to meet IP67 class.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.



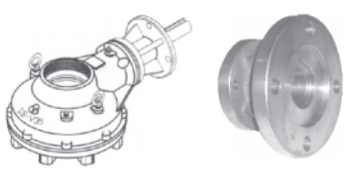
Dial Indicator

- A distinctive local position dial indicator is available.
- The scale is graduated from 0% (closed) to 100% (open).



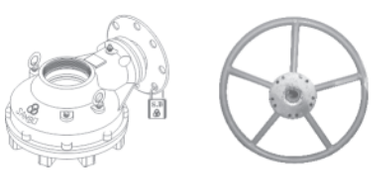
M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges to accept standard ISO mounting bases.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



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The World's highest quality.

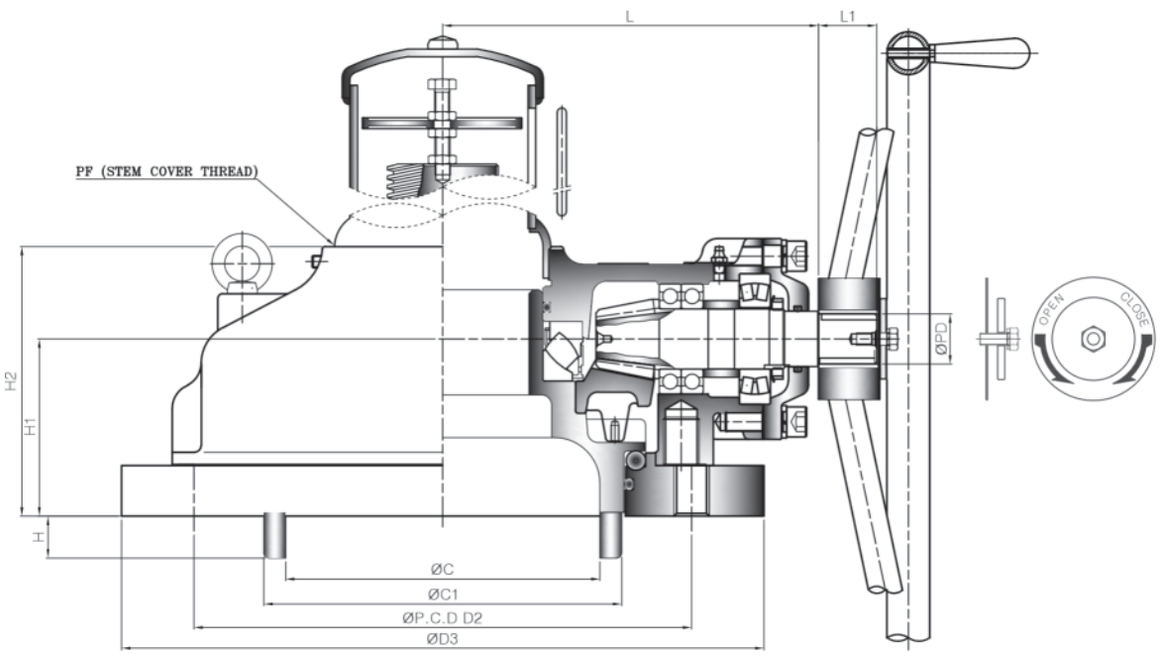
Selection chart for manual operation

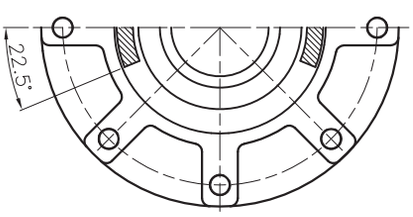
SIZE / MODEL	GEAR RATIO	MAX.STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SP-VS10	2 : 1	30	22 (8X7)	F-07, F-10	75.5	16973	220	162	8
SB-SP-VS20	2 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	11
SB-SP-V0	2 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	16
SB-SP-V1	2 & 4 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	22
SB-SP-V2	3 & 5 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	34
SB-SP-V3	4 & 6 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	45
SB-SP-V35	4 & 6 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	78
SB-SP-V4	5 & 8 : 1	95	80 (22x14)	F-25, F-30, F-35	400	89924	5200	3855	99
SB-SP-V5	5 & 8 : 1	105	90 (25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	150
SB-SP-V55	6 & 8 : 1	115	100 (28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	201
SB-SP-V6	6 & 8 : 1	125	110 (32x18)	F-30, F-35, F-40	1404	315632	13000	9588	238

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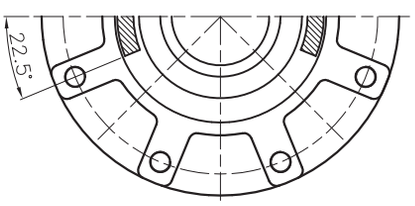
Lug Drive Type (SB-CL Series)

Horizontal input - torque only





Type A



Type B

Dimensions

UNIT : mm

DIM / MODEL	BASE PART					CLAMP PART			EXTERNAL PART			INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	P.C.D ØD2	P.C.D N-H-DP	ØD3	ØC	ØC1	H	H1	H2	L	L1	ØPD	KEY		
SB-CL-VS10	A	F-14	140	8-3/8"-16UNC	190	74	87	10	72	96	121	34	26	8X7	300	PF2"
		F-16	165	8-1/2"-13UNC												
SB-CL-VS20		F-16	165	8-1/2"-13UNC	220	91	105	11	73	100	131				300	PF2-1/2"
		(F-20)	193.8													
SB-CL-V0		F-16	165	8-1/2"-13UNC	220	110	126	14	75	115	155	34	32	10X8	400	
		(F-20)	193.8													
SB-CL-V1	B	(F-20)	193.8	8-1/2"-13UNC	300	128	146	17	90	132	167	34	32	10X8	500	PF3"
		F-25	254	8-5/8"-11UNC												
SB-CL-V2		F-25	254	8-5/8"-11UNC	350	146	166	19	107	152	188				610	PF3-1/2"
		F-30	298	8-3/4"-10UNC												
SB-CL-V3		F-30	298	8-3/4"-10UNC	415	173	197	21	110	158	209				710	PF4"
		F-35	356	8-1"-8UNC												
SB-CL-V35		F-35	356	8-1"-8UNC	475	220	247	23	122	184	266	44	38	12X8	800	PF5"
		F-40	406	8-1 1/4"-7UNC												
SB-CL-V4		F-35	356	8-1"-8UNC	475	258	292	25	145	202	291					PF6"
		F-40	406	8-1 1/4"-7UNC												
SB-CL-V5		F-35	356	8-1"-8UNC	480	266	306	27	172	242	334				900	PF7"
		F-40	406	8-1 1/4"-7UNC												

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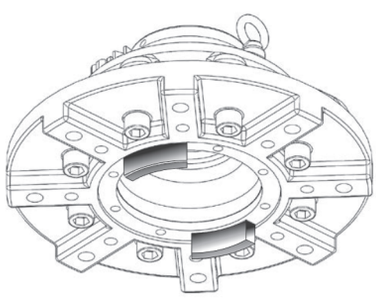
Spiral Bevel Gear Actuators

Features

- This series is suitable for Gate and Globe valves, sluice gates, and other applications requiring linear motion for thrust and torque.
- Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure smooth operation. Units are fully O-ring sealed for temporary submergence to IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.

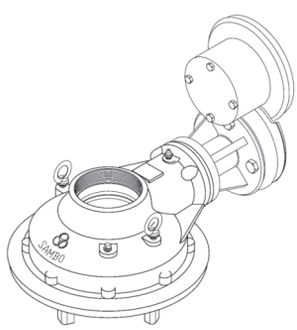


Mounting Base



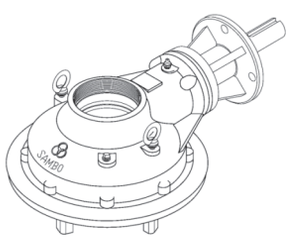
Dial Indicator

- An optional local position dial indicator is available, graduated in percent from 0% (closed) to 100% (open).



M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges to accept standard ISO mounting bases.



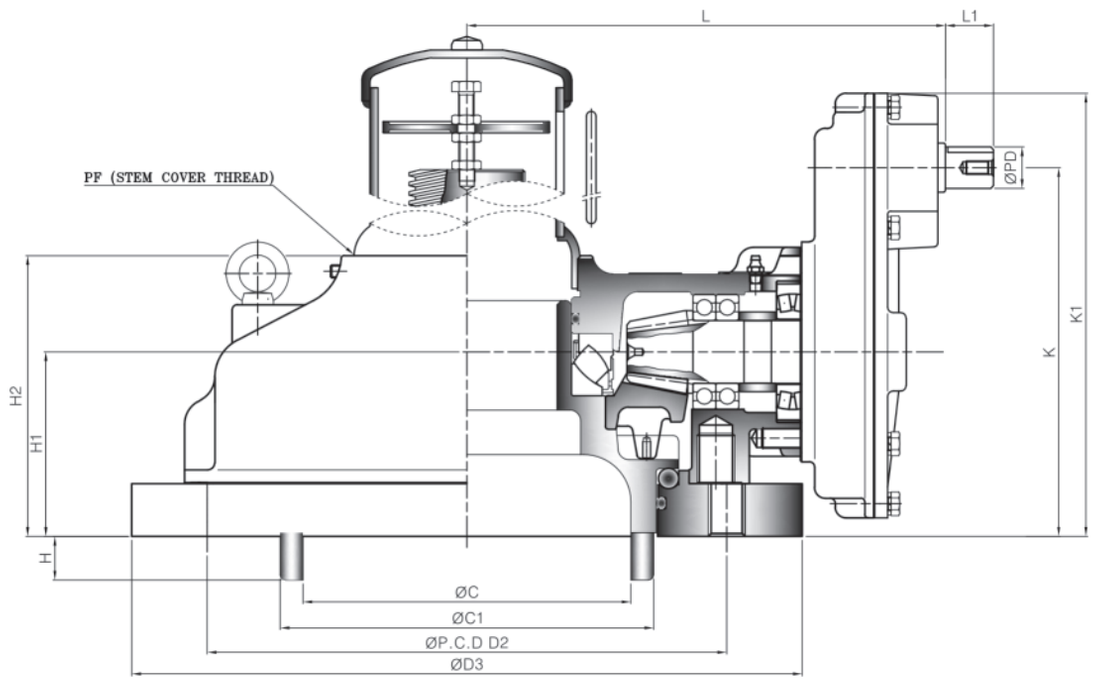
Selection chart for manual operation

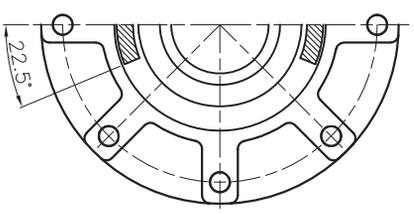
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MAX. TORQUE CAPACITY		WEIGHT
			N-m	Ft . lbf	Kg
SB-CL-VS10	2.5 : 1	42	220	162	7.5
SB-CL-VS20	3 : 1	55	370	273	10
SB-CL-V0	3.25 : 1	65	600	443	14.5
SB-CL-V1	3.5 : 1	74	980	723	21
SB-CL-V2	4 : 1	84	1500	1106	29
SB-CL-V3	5 : 1	96	2500	1844	45
SB-CL-V35	5.5 : 1	110	3500	2581	72
SB-CL-V4	6 : 1	128	5200	3835	95
SB-CL-V5	6.5 : 1	143	7800	5753	123

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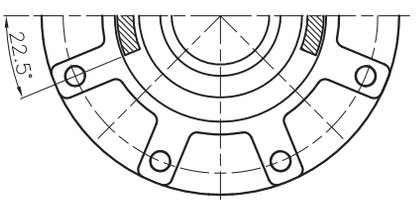
Lug Drive Type (SB-CL Series)

Horizontal input with single reduction gear attachment





TYPE-A



TYPE-B

Dimensions

UNIT : mm

DIM / MODEL	BASE PART					CLAMP PART			EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	P.C.D ØD2	P.C.D N-H-DP	ØD3	ØC	ØC1	H	H1	H2	K	K1	L	L1	ØPD	KEY		
SB-CL-VS10-1S	A	F-14	140	8-3/8"-16UNC	190	74	87	10	72	96	151	194	174	34	26	8X7	250	PF2"
		F-16	165	8-1/2"-13UNC														
SB-CL-VS20-1S		F-16	165	8-1/2"-13UNC	220	91	105	11	73	100	151	195	184					PF2-1/2"
		(F-20)	193.8															
SB-CL-V0-1S		F-16	165	8-1/2"-13UNC	220	110	126	14	75	115	154	197	202	34	26	8X7	300	
		(F-20)	193.8															
SB-CL-V1-1S	B	(F-20)	193.8	8-1/2"-13UNC	300	128	146	17	90	132	169	212	214	34	26	8X7	400	PF3"
		F-25	254	8-5/8"-11UNC														
SB-CL-V2-1S		F-25	254	8-5/8"-11UNC	350	146	166	19	107	152	200	248	237				500	PF3-1/2"
		F-30	298	8-3/4"-10UNC														
SB-CL-V3-1S		F-30	298	8-3/4"-10UNC	415	173	197	21	110	158	204	251	257				610	PF4"
		F-35	356	8-1"-8UNC														
SB-CL-V35-1S		F-35	356	8-1"-8UNC	475	220	247	23	122	184	249	305	333	34	32	10X8	710	PF5"
		F-40	406	8-1 1/4"-7UNC														
SB-CL-V4-1S		F-35	356	8-1"-8UNC	475	258	292	25	145	202	260	317	358					PF6"
		F-40	406	8-1 1/4"-7UNC														
SB-CL-V5-1S		F-35	356	8-1"-8UNC	480	266	306	27	172	242	293	350	401				800	PF7"
		F-40	406	8-1 1/4"-7UNC														

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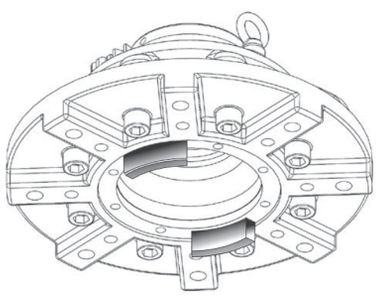
Spiral Bevel Gear Actuators

Features

- *This series is suitable for Gate and Globe valves, sluice gates, and other applications requiring linear motion for thrust and torque.*
- *Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.*
- *Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.*
- *Heavy-duty roller bearings support both radial and axial thrust loads.*
- *Machine-cut, heat-treated, and ground gears ensure smooth operation. Units are fully O-ring sealed for temporary submergence to IP67.*
- *A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.*

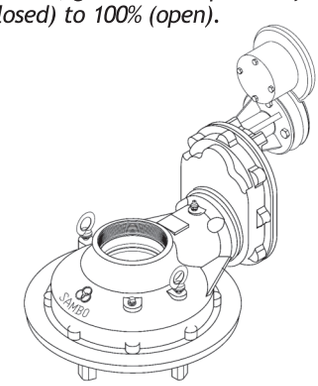


Mounting Base



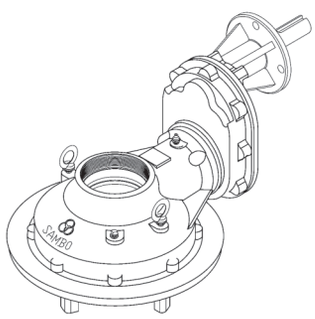
Dial Indicator

- *An optional local position dial indicator is available, graduated in percent from 0% (closed) to 100% (open).*



M.O.V Option

- *Bevel gears can be supplied with motor actuator input flanges to accept standard ISO mounting bases.*



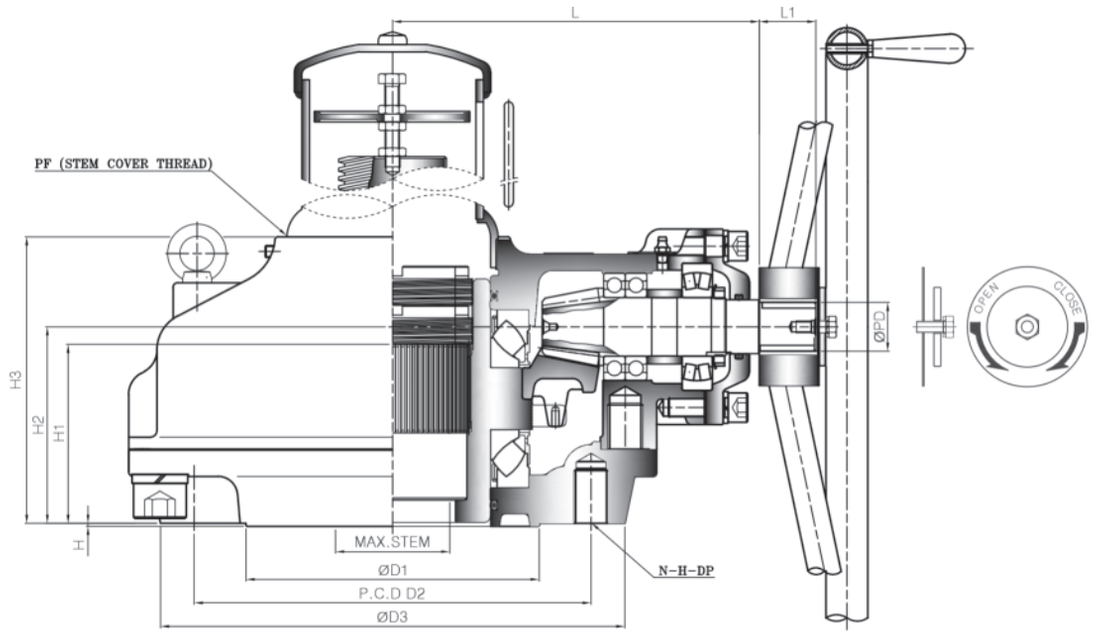
Selection chart for manual operation

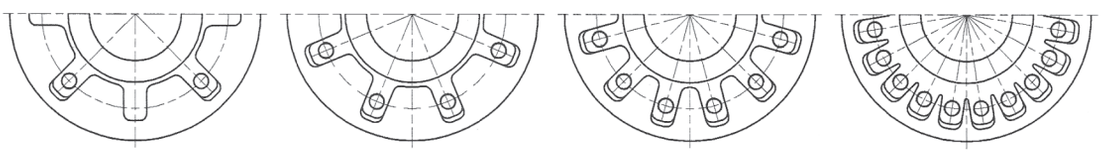
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MAX. TORQUE CAPACITY		WEIGHT
			N-m	Ft. lbf	Kg
SB-CL-VS10-1S	5 : 1	42	220	162	9.5
SB-CL-VS20-1S	6 : 1	55	370	273	12.5
SB-CL-V0-1S	6.5 : 1	65	600	443	19
SB-CL-V1-1S	7 : 1	74	980	723	25
SB-CL-V2-1S	10.13 : 1	84	1500	1106	36
SB-CL-V3-1S	12.66 : 1	96	2500	1844	54
SB-CL-V35-1S	16.5 : 1	110	3500	2581	85
SB-CL-V4-1S	18 : 1	128	5200	3835	108
SB-CL-V5-1S	19.5 : 1	143	7800	5753	141

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Standard Type A

Horizontal input configuration for thrust and torque





Type A | Type B | Type C | Type D

Dimensions

UNIT:mm

DIM / MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
SB-VS10	A	F-10	70	102	4-M10-15	125	3	56	71	95	124	34	26	8X7	250	PF2"
SB-VS20		F-12	85	125	4-M12-18	150		63	78,5	106	134				300	PF2-1/2"
SB-V0		F-14	100	140	4-M16-24	175		72	81	121	154,5	34	32	10X8	400	
SB-V1		F-16	130	165	4-M20-30	210		84	98	140	167				500	PF3"
SB-V2	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	188	34	32	10X8	610	PF3-1/2"
SB-V3		F-25	200	254	8-M16-24	300		102	119	166.5	208				710	PF4"
SB-V35		F-30	230	298	8-M20-30	350		122	138	195	266	44	38	12X8	800	PF5"
SB-V4		F-35	260	356	8-M30-45	410		133	150	209	291					PF6"
SB-V5		F-40	300	406	8-M36-55	475		161	177	245	313				900	PF7"
SB-V55		F-40	300	406	8-M36-55	475		171	192	261	333					
SB-V6		F-40	300	406	8-M36-55	475		185	201	283	375	58	50	16X10	1000	PF8"
SB-V7	C	F-48	370	483	12-M36-55	560	5	206	222	309	403	58	50	16X10	1000	PF8"
SB-V75		F-48	370	483	12-M36-55	560		221	248	340	441					
SB-V8		F-48	370	483	12-M36-55	560		233	259	352	472				1000	PF10"
SB-V85	D	F-60	470	603	20-M36-55	700	5	248	278	373	521	58	50	16X10	1000	PF12"
SB-V9		F-60	470	603	20-M36-55	700		263	295	398	591					
SB-V100		F-80	670	813	20-M42-63	900		378	375	440	664	58	50	16X10	1000	PF12"

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Spiral Bevel Gear Actuators

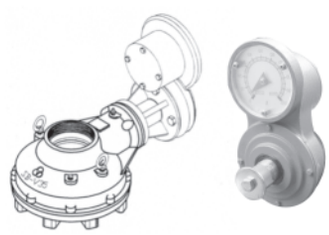
Features

- This series is designed for Gate and Globe valves, sluice gates, and other applications that require linear motion with thrust and torque.
- A unique top-entry, replaceable stem nut made from high-tensile aluminum bronze provides excellent corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure smooth operation. Units are fully O-ring sealed for temporary submergence to meet IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.



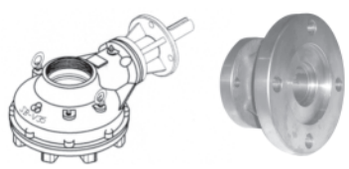
Dial Indicator

- A local position dial indicator is available.



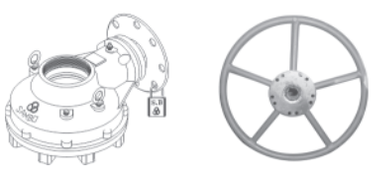
M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



Locking Device Option

- Manual units can be equipped with a handwheel locking device on the input.



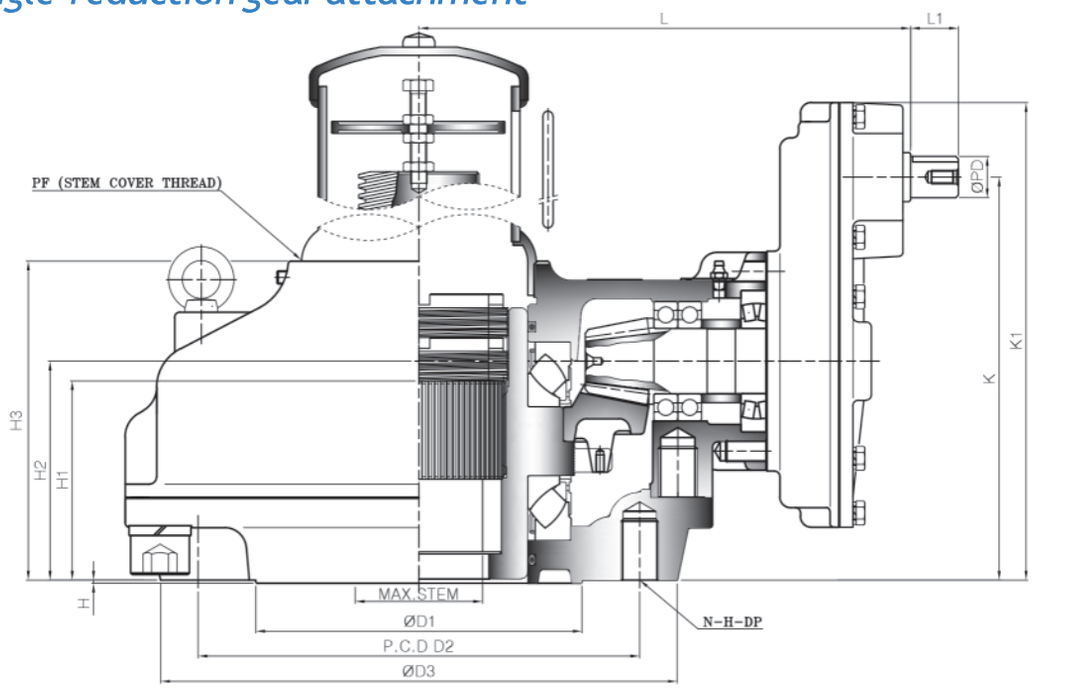
Selection chart for manual operation

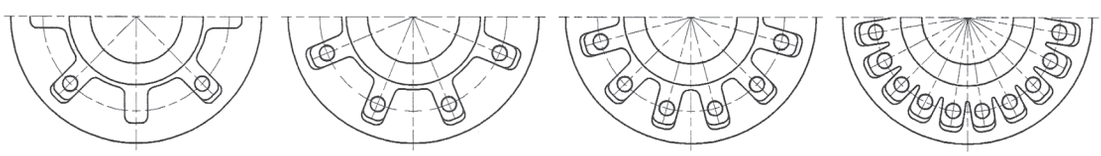
SIZE / MODEL	GEAR RATIO	MAX.STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB–VS10	2.5 : 1	30	22 (8X7)	F-07, F-10	75.5	16973	220	162	8
SB–VS20	3 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	11
SB-V0	3.25 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	16
SB-V1	3.5 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	22
SB-V2	4 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	34
SB-V3	5 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	45
SB-V35	5.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	78
SB-V4	6 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	99
SB-V5	6.56 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	150
SB-V55	7 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	201
SB-V6	7 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	238
SB-V7	7.56 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	318
SB-V75	8 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	452
SB-V8	8 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	475
SB-V85	8 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	820
SB-V9	8 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1025
SB-V100	8 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1420

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Standard Type A

Horizontal input for thrust and torque with a single-reduction gear attachment





Type A Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-VS10-1S	A	F-10	70	102	4-M10-15	125	3	56	71	95	149.8	193	174	34	26	8X7	250	PF2"
SB-VS20-1S		F-12	85	125	4-M12-18	150		63	78.5	106	157.3	200.5	184				300	PF2–1/2"
SB-V0-1S		F-14	100	140	4-M16-24	175		72	81	121	160	203	201.5	34	26	8X7	300	
SB-V1-1S		F-16	130	165	4-M20-30	210		84	98	140	177	220	214				400	PF3"
SB-V2-1S	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	208	256	236.5	34	26	8X7	500	PF3-1/2"
SB-V3-1S		F-25	200	254	8-M16-24	300		102	119	166.5	212	260	256.5				610	PF4"
SB-V35-1S		F-30	230	298	8-M20-30	350		122	138	195	259	316	333	34	32	10X8	710	PF5"
SB-V4-1S		F-35	260	356	8-M30-45	410		133	150	209	271	328	358					PF6"
SB-V5-1S		F-40	300	406	8-M36-55	475		161	177	245	322	384.5	387				800	PF7"
SB-V55-1S		F-40	300	406	8-M36-55	475		171	192	261	337	399.5	407					
SB-V6-1S		F-40	300	406	8-M36-55	475		185	201	283	370	439	472	44	38	12X8	800	PF8"
SB-V7-1S	C	F-48	370	483	12-M36-55	560	5	206	222	309	391	459	497	44	38	12X8	900	PF8"
SB-V75-1S		F-48	370	483	12-M36-55	560		221	248	340	478	564	620	58	50	16X10	900	PF10"
SB-V8-1S		F-48	370	483	12-M36-55	560		233	259	352	489	575	651					
SB-V85-1S	D	F-60	470	603	20-M36-55	700	5	248	278	373	508	594	695	58	50	16X10	900	PF12"
SB-V9-1S		F-60	470	603	20-M36-55	700		263	295	398	580	696	821	58	50	16X10	1000	PF12"
SB-V100-1S		F-80	670	813	20-M42-63	900		378	375	440	659	775	886					

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Spiral Bevel Gear Actuators

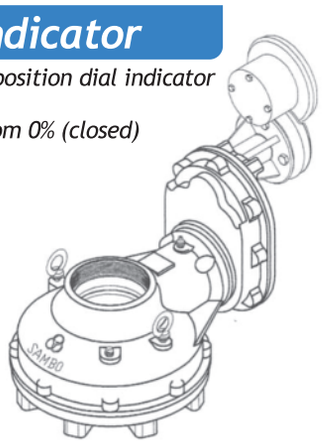
Features

- This series is suitable for Gate and Globe valves. It also serves sluice gates and other applications requiring linear motion for thrust and torque.
- Unique top-entry, replaceable stem nut. High-tensile aluminum bronze provides excellent corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimum operation. Units are fully O-ring sealed for temporary submergence to Ip67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.



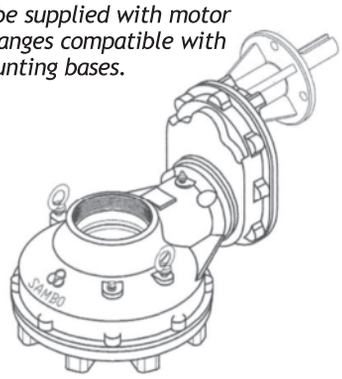
Dial Indicator

- An integral local position dial indicator is available.
- It is graduated from 0% (closed) to 100% (open)



M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



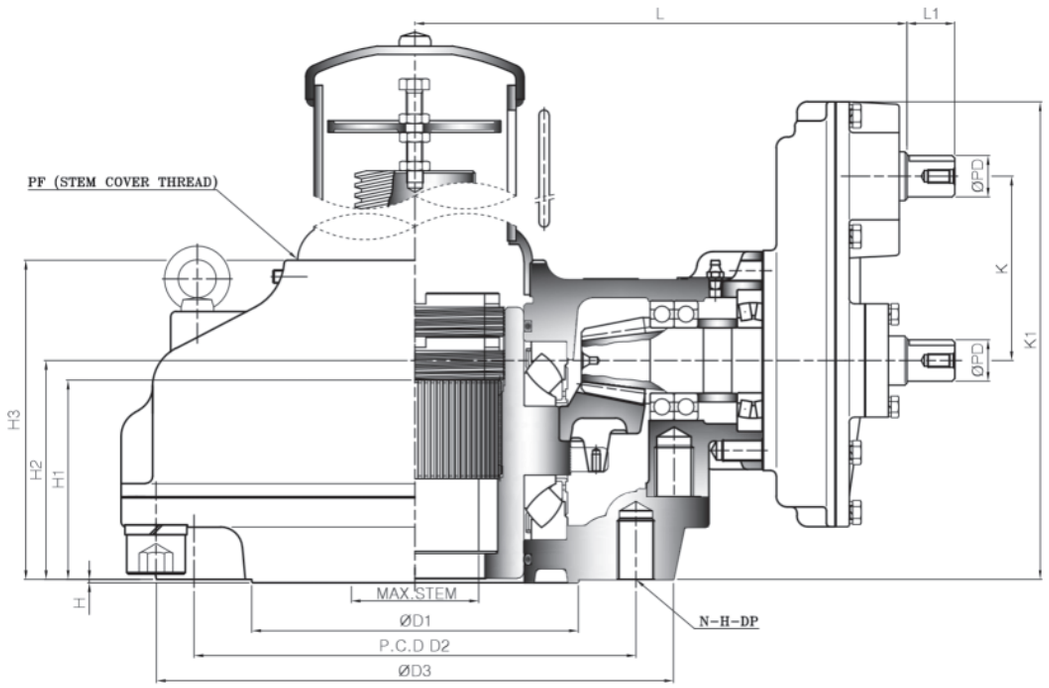
Selection chart for manual operation

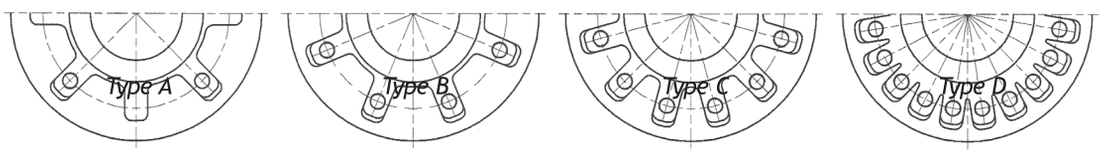
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-VS10-1S	5 : 1	30	22 (8X7)	F-07, F-10	75.5	16973	220	162	8
SB-VS20-1S	6 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	11
SB-V0-1S	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	20
SB-V1-1S	7 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	26
SB-V2-1S	10.13 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	41
SB-V3-1S	12.66 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	52
SB-V35-1S	16.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	90
SB-V4-1S	18 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	112
SB-V5-1S	22.94:1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	168
SB-V55-1S	24.5:1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	219
SB-V6-1S	28 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	266
SB-V7-1S	30.22 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	346
SB-V75-1S	40 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	519
SB-V8-1S	40 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	542
SB-V85-1S	40 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	887
SB-V9-1S	40 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1143
SB-V100-1S	40 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1538

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Standard Type A - Twin Shaft

Twin-shaft thrust and torque configuration with horizontal input and a single-reduction gear attachment





Type A Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V0-1ST	A	F-14	100	140	4-M16-24	175	3	72	81	121	79	203	201.5	34	26	8X7	300	PF2–1/2"
SB-V1-1ST		F-16	130	165	4-M20-30	210		84	98	140	79	220	214				400	PF3"
SB-V2-1ST	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	93	256	236.5	34	26	8X7	500	PF3-1/2"
SB-V3-1ST		F-25	200	254	8-M16-24	300		102	119	166.5	93	260	256.5				610	PF4"
SB-V35-1ST		F-30	230	298	8-M20-30	350		122	138	195	121	316	333	34	32	10X8	710	PF5"
SB-V4-1ST		F-35	260	356	8-M30-45	410		133	150	209	121	328	358					PF6"
SB-V5-1ST		F-40	300	406	8-M36-55	475		161	177	245	145	384.5	387				800	PF7"
SB-V55-1ST		F-40	300	406	8-M36-55	475		171	192	261	145	399.5	407					
SB-V6-1ST		F-40	300	406	8-M36-55	475		185	201	283	169	439	472	44	38	12X8	800	PF8"
SB-V7-1ST	C	F-48	370	483	12-M36-55	560	5	206	222	309	169	459	500	44	38	12X8	900	PF8"
SB-V75-1ST		F-48	370	483	12-M36-55	560		221	248	340	230	564	620	58	50	16X10	900	PF10"
SB-V8-1ST		F-48	370	483	12-M36-55	560		233	259	352	230	575	651	58	50	16X10		PF10"
SB-V85-1ST	D	F-60	470	603	20-M36-55	700	5	248	278	373	230	594	695	58	50	16X10	900	PF12"
SB-V9-1ST		F-60	470	603	20-M36-55	700		263	295	398	284	696	821	58	50	16X10	1000	PF12"
SB-V100-1ST		F-80	670	813	20-M42-63	900		378	375	440	284	775	886					

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- Designed for gate and globe valves, sluice gates, and other applications that require linear motion for thrust and torque duties.
- A unique top-entry, replaceable stem nut is manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, Class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimal operation. Units are fully O-ring sealed for temporary submergence to meet IP67.
- A wide range of options is available, including handwheels and stem covers.



The World's highest quality.

Global Leader SAMBO Gear Actuators

A. Primary input shaft (high speed)

: reduces the number of turns required after the valve has been unseated.

B. Secondary input shaft (low speed)

: provides maximum mechanical advantage for valve seating and unseating.

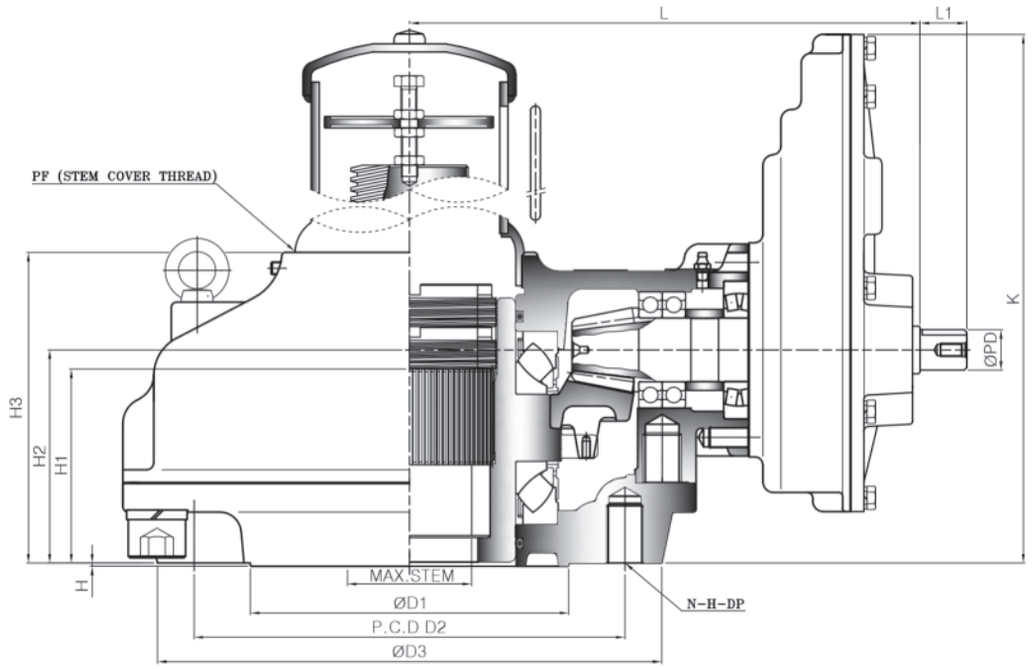
Selection chart for manual operation

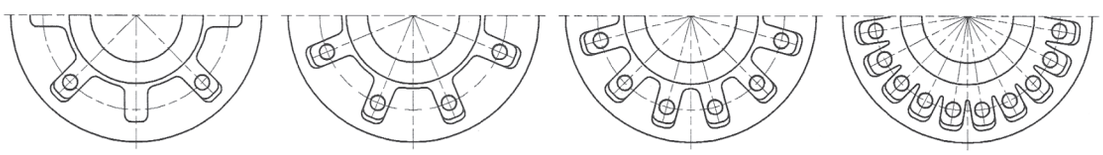
SIZE / MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & TANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0-1ST	3.25 : 1	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	20
SB-V1-1ST	3.5 : 1	7 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	26
SB-V2-1ST	4 : 1	10.13 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	41
SB-V3-1ST	5 : 1	12.66 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	52
SB-V35-1ST	5.5 : 1	16.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	90
SB-V4-1ST	6 : 1	18 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	112
SB-V5-1ST	6.56 : 1	22.94 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	168
SB-V55-1ST	7 : 1	24.5 : 1	115	100(28x16)	F–30, F-35, F-40	1083.6	243603	10400	7671	219
SB-V6-1ST	7 : 1	28 : 1	125	110(32x18)	F–30, F-35, F-40	1404	315632	13000	9588	266
SB-V7-1ST	7.56 : 1	30.22 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	346
SB-V75-1ST	8 : 1	40 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	519
SB-V8-1ST	8 : 1	40 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	542
SB-V85-1ST	8 : 1	40 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	887
SB-V9-1ST	8 : 1	40 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1143
SB-V100-1ST	8 : 1	40 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1538

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Standard Type A

Engineered for horizontal input, combining thrust and torque capability with a double-reduction gear attachment.





Type A Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	L	L1	ØPD	KEY		
SB-V0-1SD	A	F-14	100	140	4-M16-24	175	3	72	81	121	225	231	34	26	8X7	300	PF2–1/2"
SB-V1-1SD		F-16	130	165	4-M20-30	210		84	98	140	242	243.5				400	PF3"
SB-V2-1SD	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	259	260.5	34	26	8X7	500	PF3-1/2"
SB-V3-1SD		F-25	200	254	8-M16-24	300		102	119	166.5	263	280.5				610	PF4"
SB-V35-1SD		F-30	230	298	8-M20-30	350		122	138	195	333	369	34	32	10X8	710	PF5"
SB-V4-1SD		F-35	260	356	8-M30-45	410		133	150	209	345	394					PF6"
SB-V5-1SD		F-40	300	406	8-M36-55	475		166	177	246	426	426				800	PF7"
SB-V55-1SD		F-40	300	406	8-M36-55	475		171	192	262	441	446					
SB-V6-1SD		F-40	300	406	8-M36-55	475		185	201	283	498.5	498	44	38	12X8	800	PF8"
SB-V7-1SD	C	F-48	370	483	12-M36-55	560	5	206	222	309	519.5	526	44	38	12X8	900	PF8"
SB-V75-1SD		F-48	370	483	12-M36-55	560		221	248	340	628	666	58	50	16X10	900	PF10"
SB-V8-1SD		F-48	370	483	12-M36-55	560		233	259	352	638	697	58	50	16X10		PF10"
SB-V85-1SD	D	F-60	470	603	20-M36-55	700	5	248	278	373	658	741	58	50	16X10	900	PF12"
SB-V9-1SD		F-60	470	603	20-M36-55	700		263	295	398	784	876	58	50	16X10	1000	PF12"
SB-V100-1SD		F-80	670	813	20-M42-63	900		378	375	440	863	941					

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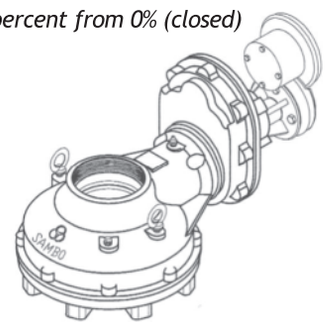
Features

- This series is designed for gate and globe valves, sluice gates, and other applications requiring linear motion for thrust and torque service.
- A unique top-entry, replaceable stem nut is manufactured from high-tensile aluminum bronze for corrosion and abrasion resistance.
- Castings are ductile iron, class 65-45-12, providing high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimum operation. Units are fully O-ring sealed, suitable for temporary submergence to IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.



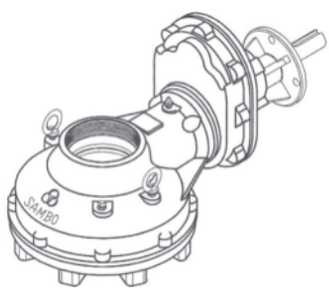
Dial Indicator

- A unique local position dial indicator is available.
- It is graduated in percent from 0% (closed) to 100% (open).



M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges to accept standard ISO mounting bases.



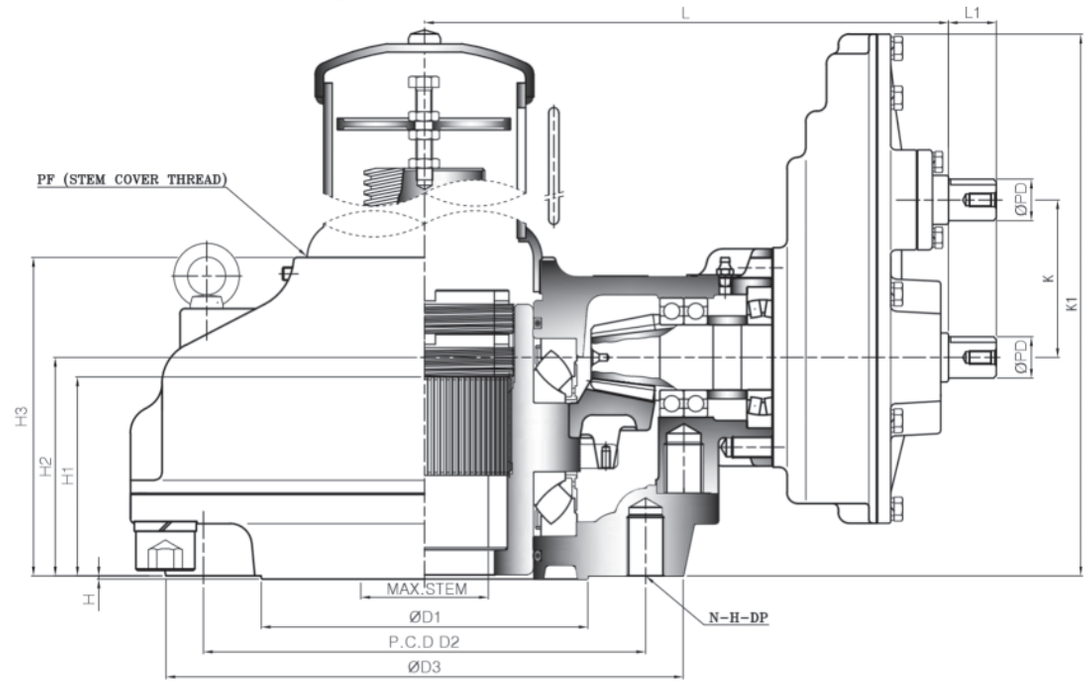
Selection chart for manual operation

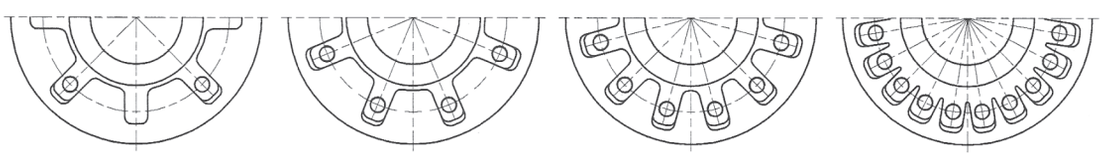
SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0-1SD	20.86: 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	24
SB-V1-1SD	22.46: 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	30
SB-V2-1SD	25.67 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	42
SB-V3-1SD	32.08 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	54
SB-V35-1SD	49.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	94
SB-V4-1SD	54 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	116
SB-V5-1SD	80.31: 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	175
SB-V55-1SD	85.75: 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	226
SB-V6-1SD	112 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	279
SB-V7-1SD	120.88 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	359
SB-V75-1SD	200 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	550
SB-V8-1SD	200 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	573
SB-V85-1SD	200 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	918
SB-V9-1SD	200 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1209
SB-V100-1SD	200 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1604

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Standard Type A - Twin Shaft

twin-shaft unit with horizontal input for thrust and torque, equipped with a double-reduction gear attachment





Type A Type B Type C Type D

Dimensions

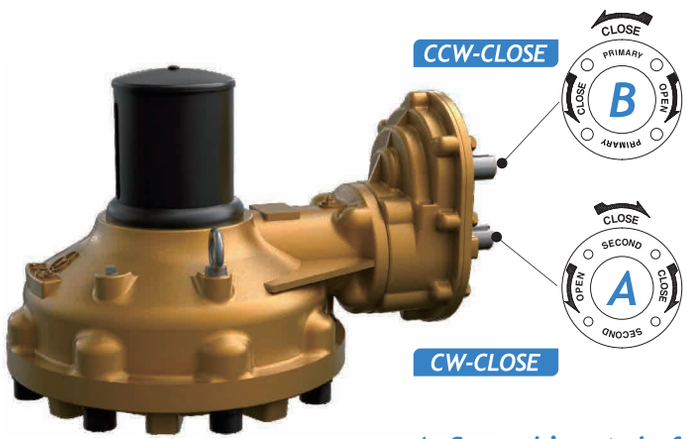
UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-V0-1SDT	A	F-14	100	140	4-M16-24	175	3	72	81	121	69	225	231	34	26	8X7	300	PF2–1/2"
SB-V1-1SDT		F-16	130	165	4-M20-30	210		84	98	140	69	242	243.5				400	PF3"
SB-V2-1SDT	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	69	259	260.5	34	26	8X7	500	PF3-1/2"
SB-V3-1SDT		F-25	200	254	8-M16-24	300		102	119	166.5	69	263	280.5				610	PF4"
SB-V35-1SDT		F-30	230	298	8-M20-30	350		122	138	195	93	333	369	34	32	10X8	710	PF5"
SB-V4-1SDT		F-35	260	356	8-M30-45	410		133	150	209	93	345	394					PF6"
SB-V5-1SDT		F-40	300	406	8-M36-55	475		161	177	245	121	426	426				800	PF7"
SB-V55-1SDT		F-40	300	406	8-M36-55	475		171	192	261	121	441	446					
SB-V6-1SDT		F-40	300	406	8-M36-55	475		185	201	283	145	498.5	498	44	38	12X8	800	PF8"
SB-V7-1SDT	C	F-48	370	483	12-M36-55	560	5	206	222	309	145	519.5	526	44	38	12X8	900	PF8"
SB-V75-1SDT		F-48	370	483	12-M36-55	560		221	248	340	186	628	666	58	50	16X10	900	PF10"
SB-V8-1SDT		F-48	370	483	12-M36-55	560		233	259	352	186	638	697	58	50	16X10		PF10"
SB-V85-1SDT	D	F-60	470	603	20-M36-55	700	5	248	278	373	186	658	741	58	50	16X10	900	PF12"
SB-V9-1SDT		F-60	470	603	20-M36-55	700		263	295	398	238	784	876	58	50	16X10	1000	PF12"
SB-V100-1SDT		F-80	670	813	20-M42-63	900		378	375	440	238	863	941					

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- This series is suitable for gate and globe valves, sluice gates, and other linear-motion applications requiring thrust and torque.
- Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Gears are machine-cut, heat-treated, and ground for optimal operation; units are fully O-ring sealed for temporary submergence to meet IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.



The World's highest quality.

Global Leader SAMBO Gear Actuators

A. Second input shaft (low-speed)

: Provides maximum mechanical advantage for seating and unseating valves.

B. Primary input shaft (high-speed)

: Reduces the number of turns required after the valve has been unseated.

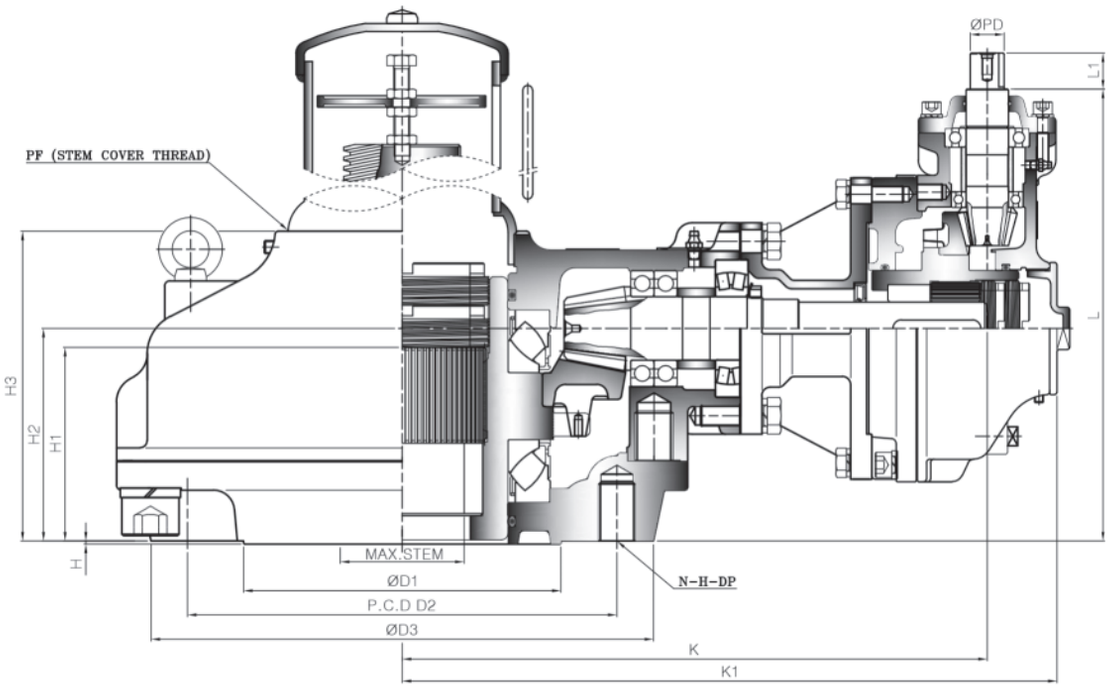
Selection chart for manual operation

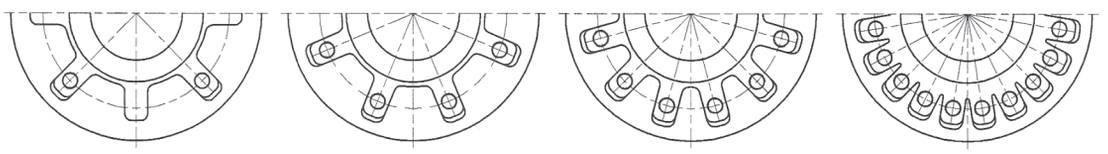
SIZE / MODEL	MAX. GEAR RATIO (Changeable)		MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0-1SDT	8.23 : 1	20.86 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	24
SB-V1-1SDT	8.86 : 1	22.46 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	30
SB-V2-1SDT	10.13 : 1	25.67 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	42
SB-V3-1SDT	12.66 : 1	32.08 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	54
SB-V35-1SDT	16.5 : 1	49.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	94
SB-V4-1SDT	18 : 1	54 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	116
SB-V5-1SDT	22.94 : 1	80.31 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	175
SB-V55-1SDT	24.5 : 1	85.75 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	226
SB-V6-1SDT	28 : 1	112 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	279
SB-V7-1SDT	30.22 : 1	120.88 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	359
SB-V75-1SDT	40 : 1	200 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	550
SB-V8-1SDT	40 : 1	200 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	573
SB-V85-1SDT	40 : 1	200 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	918
SB-V9-1SDT	40 : 1	200 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1209
SB-V100-1SDT	40 : 1	200 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1604

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Standard Type B

Vertical thrust and torque input with single-reduction gear attachment





Type A Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-V0-2B	A	F-14	100	140	4-M16-24	175	3	72	81	121	244.5	278.5	170	34	26	8X7	300	PF2–1/2"
SB-V1-2B		F-16	130	165	4-M20-30	210		84	98	140	252	286	187					PF3"
SB-V2-2B	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	299	340	236	34	26	8X7	400	PF3-1/2"
SB-V3-2B		F-25	200	254	8-M16-24	300		102	119	166.5	326.5	368	250					PF4"
SB-V35-2B		F-30	230	298	8-M20-30	350		122	138	195	415	474	292.5	34	32	10X8	500	PF5"
SB-V4-2B		F-35	260	356	8-M30-45	410		133	150	209	457	521	317					PF6"
SB-V5-2B		F-40	300	406	8-M36-55	475		161	177	245	419	488.5	365				610	PF7"
SB-V55-2B		F-40	300	406	8-M36-55	475		171	192	261	439	508.5	380					
SB-V6-2B		F-40	300	406	8-M36-55	475		185	201	283	482	557.5	409	34	32	10X8	710	PF8"
SB-V7-2B	C	F-48	370	483	12-M36-55	560	5	206	222	309	510	585.5	430	34	32	10X8	710	PF8"
SB-V75-2B		F-48	370	483	12-M36-55	560		221	248	340	567	639	514	44	38	12X8	800	PF10"
SB-V8-2B		F-48	370	483	12-M36-55	560		233	259	352	608	670	524					PF10"
SB-V85-2B	D	F-60	470	603	20-M36-55	700	5	248	278	373	654	730	569	44	38	12X8	800	PF12"
SB-V9-2B		F-60	470	603	20-M36-55	700		263	295	398	749	833	630	44	38	12X8	900	PF12"
SB-V100-2B		F-80	670	813	20-M42-63	900		378	375	440	845	938	750					

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Spiral Bevel Gear Actuators

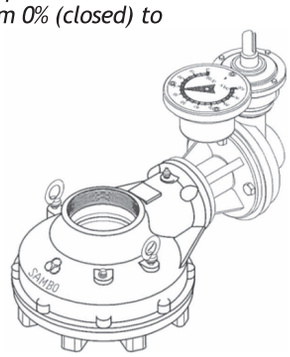
Features

- Designed for gate and globe valves, sluice gates, and other linear-motion applications requiring thrust and torque.
- Top-entry, replaceable stem nut made from high-tensile aluminum bronze for excellent corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, provide high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears deliver smooth, efficient operation. Units are fully O-ring sealed for temporary submergence to meet IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.



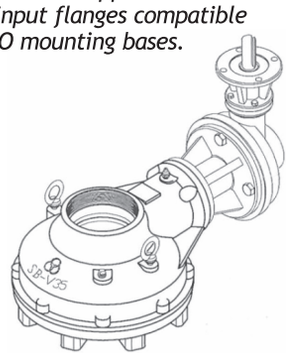
Dial Indicator

- Optional local position dial indicator graduated from 0% (closed) to 100% (open).



M.O.V Option

- Bevel gear units can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.



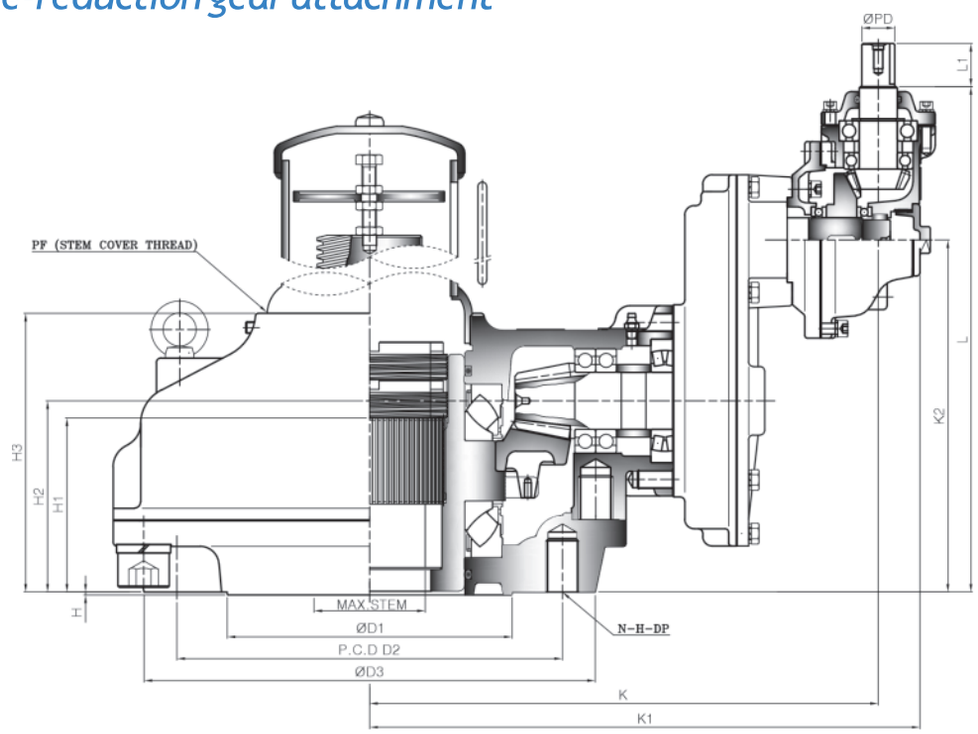
Selection chart for manual operation

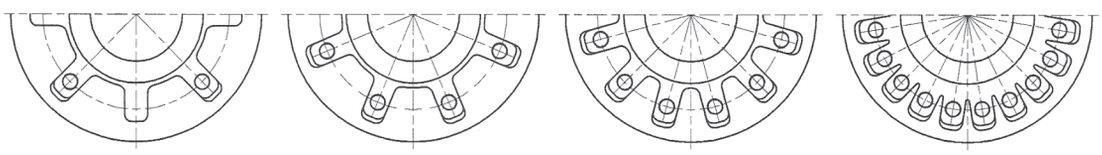
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0-2B	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	23
SB-V1-2B	7 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	29
SB-V2-2B	10 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	42
SB-V3-2B	15 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	56
SB-V35-2B	17.87 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	93
SB-V4-2B	21 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	121
SB-V5-2B	26.22 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	184
SB-V55-2B	28 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	235
SB-V6-2B	35 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	283
SB-V7-2B	37.77 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	363
SB-V75-2B	44 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	530
SB-V8-2B	44 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	553
SB-V85-2B	48 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	919
SB-V9-2B	52.44 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1175
SB-V100-2B	56 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1658

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Standard Type B

Vertical input for thrust and torque with double-reduction gear attachment





Type A | Type B | Type C | Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART							INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	K2	L	L1	ØPD	KEY		
				ØD2	N-H-DP														
SB-V0-1S2B	A	F-14	100	140	4-M16-24	175	3	72	81	121	242.5	282.5	160	249	34	26	8X7	250	PF2–1/2"
SB-V1-1S2B		F-16	130	165	4-M20-30	210		84	98	140	255	295	177	266					PF3"
SB-V2-1S2B	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	277.5	317.5	208	297	34	26	8X7	300	PF3-1/2"
SB-V3-1S2B		F-25	200	254	8-M16-24	300		102	119	166.5	297.5	337.5	212	301					PF4"
SB-V35-1S2B		F-30	230	298	8-M20-30	350		122	138	195	390	435	259	380	34	32	10X8	400	PF5"
SB-V4-1S2B		F-35	260	356	8-M30-45	410		133	150	209	416	466	271	392					PF6"
SB-V5-1S2B		F-40	300	406	8-M36-55	475		161	177	245	446	491	322	443				500	PF7"
SB-V55-1S2B		F-40	300	406	8-M36-55	475		171	192	261	466	511	337	458					
SB-V6-1S2B		F-40	300	406	8-M36-55	475		185	201	283	539.5	589.5	370	501				610	PF8"
SB-V7-1S2B	C	F-48	370	483	12-M36-55	560	5	206	222	309	567.5	617.5	391	522	34	32	10X8	610	PF8"
SB-V75-1S2B		F-48	370	483	12-M36-55	560		221	248	340	722.5	787.5	478	666	44	38	12X8	710	PF10"
SB-V8-1S2B		F-48	370	483	12-M36-55	560		233	259	352	753.5	818.5	488	676					PF10"
SB-V85-1S2B	D	F-60	470	603	20-M36-55	700	5	248	278	373	837	902	508	716	44	38	12X8	710	PF12"
SB-V9-1S2B		F-60	470	603	20-M36-55	700		263	295	398	970	1035	580	788				800	PF12"
SB-V100-1S2B		F-80	670	813	20-M42-63	900		378	375	440	1053	1135.5	659	925					

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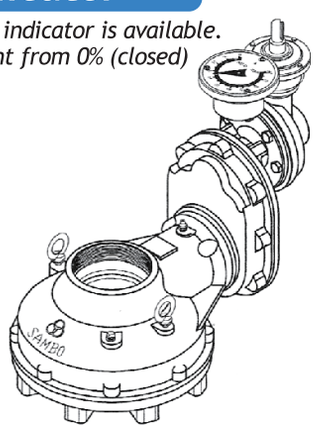
Features

- DThis series is designed for gate and globe valves, sluice gates, and other applications requiring linear motion for thrust and torque duties.
- Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and excellent impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure smooth operation. Units are fully O-ring sealed for temporary submergence to meet IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.



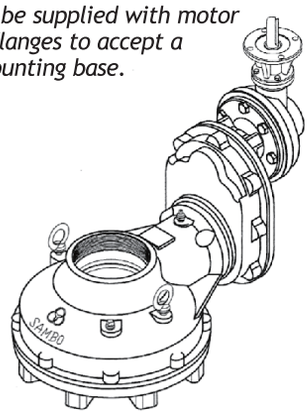
Dial Indicator

- A local position dial indicator is available.
- Graduated in percent from 0% (closed) to 100% (open).



M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



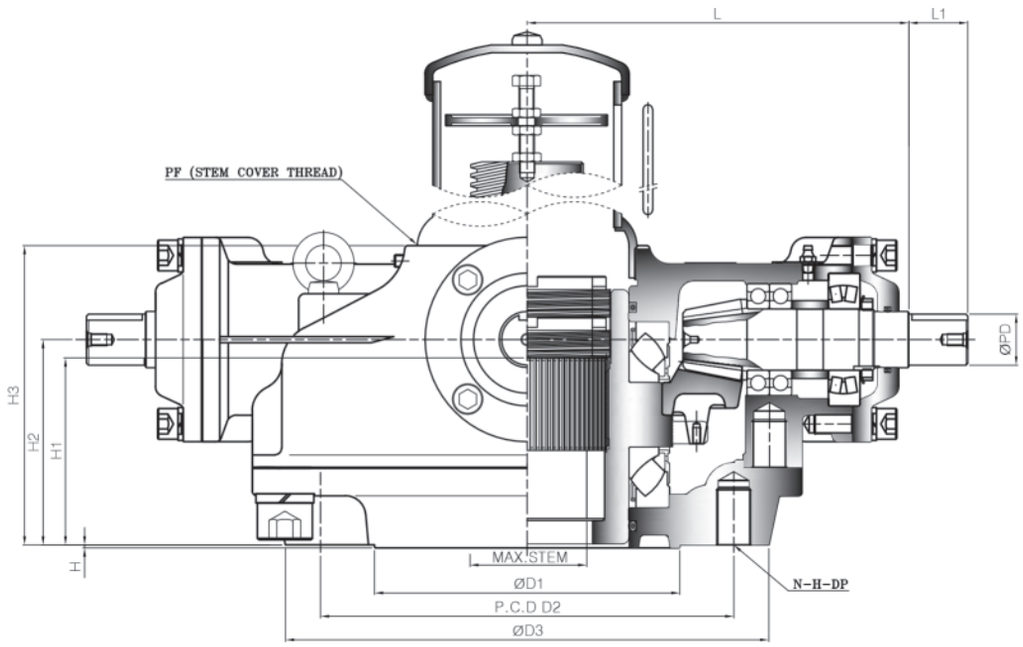
Selection chart for manual operation

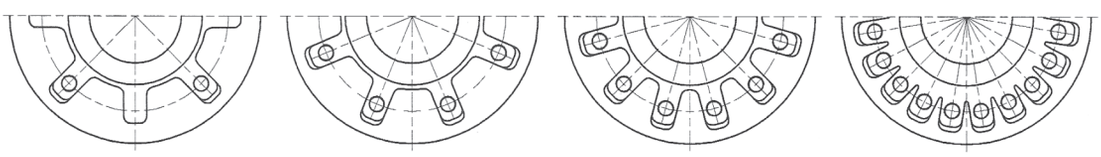
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0-1S2B	13 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	25
SB-V1-1S2B	14 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	31
SB-V2-1S2B	20.27 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	46
SB-V3-1S2B	25.33 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	57
SB-V35-1S2B	41.25 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	98
SB-V4-1S2B	45 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	118
SB-V5-1S2B	57.36 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	174
SB-V55-1S2B	61.25 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	225
SB-V6-1S2B	8.4 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	276
SB-V7-1S2B	91.67 : 1	140	120(36x20)	F-35, F-40, F-45	1836	412749	17600	12981	356
SB-V75-1S2B	160 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	541
SB-V8-1S2B	160 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	576
SB-V85-1S2B	200 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	932
SB-V9-1S2B	200 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1188
SB-V100-1S2B	220 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1616

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Standard Type C - Multiple Input Shaft

Vertical thrust and torque input





Type A | Type B | Type C | Type D

Dimensions

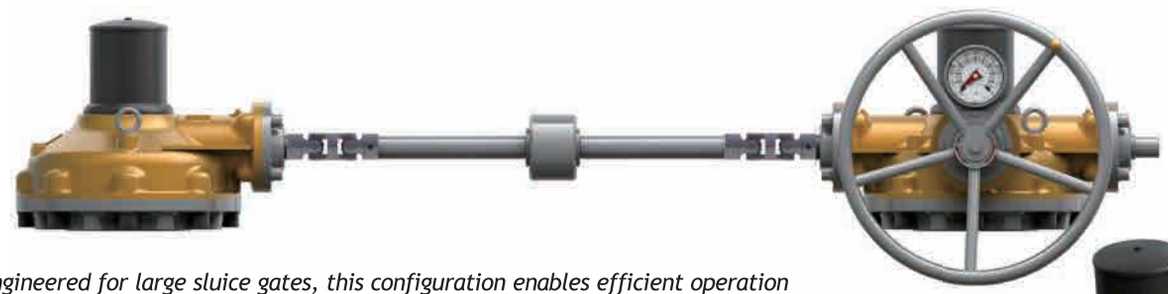
UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
SB-VS10W	A	F-10	70	102	4-M10-15	125	3	56	71	95	124	34	26	8X7	250	PF2"
SB-VS20W		F-12	85	125	4-M12-18	150		63	78,5	106	134				300	PF2-1/2"
SB-V0W		F-14	100	140	4-M16-24	175		72	81	121	154,5	34	32	10X8	400	
SB-V1W		F-16	130	165	4-M20-30	210		84	98	140	167				500	PF3"
SB-V2W	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	188	34	32	10X8	610	PF3-1/2"
SB-V3W		F-25	200	254	8-M16-24	300		102	119	166,5	208				710	PF4"
SB-V35W		F-30	230	298	8-M20-30	350		122	138	195	266	44	38	12X8	800	PF5"
SB-V4W		F-35	260	356	8-M30-45	410		133	150	209	291					PF6"
SB-V5W		F-40	300	406	8-M36-55	475		161	177	245	313				900	PF7"
SB-V55W		F-40	300	406	8-M36-55	475		171	192	261	333					
SB-V6W		F-40	300	406	8-M36-55	475		185	201	283	375	58	50	16X10	1000	PF8"
SB-V7W	C	F-48	370	483	12-M36-55	560	5	206	222	309	403	58	50	16X10	1000	PF8"
SB-V75W		F-48	370	483	12-M36-55	560		221	248	340	441					
SB-V8W		F-48	370	483	12-M36-55	560		233	259	352	472	58	50	16X10	1000	PF10"
SB-V85W	D	F-60	470	603	20-M36-55	700	5	248	278	373	521	58	50	16X10	1000	PF12"
SB-V9W		F-60	470	603	20-M36-55	700		263	295	398	591	58	50	16X10	1000	PF12"
SB-V100W		F-80	670	813	20-M42-63	900		378	375	440	664					

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Dual Gear Actuator Type (Manual Dial Indicator)

Typical arrangement for two-spindle applications.





· *Engineered for large sluice gates, this configuration enables efficient operation with two spindles.*
· *A local dial position indicator provides a clear, direct reading of gate position.*
· *Interconnecting shafts and couplings are available on request : please specify the center distance between gate stems.*

Dual Gear Actuator Type (Electric Actuators)

Typical arrangement for two-spindle applications.



· *Designed for large sluice gates, this arrangement supports efficient two-spindle operation.*
· *Interconnecting shafts and couplings can be supplied on request; specify the center distance between gate stems. : please specify the center distance between gate stems.*

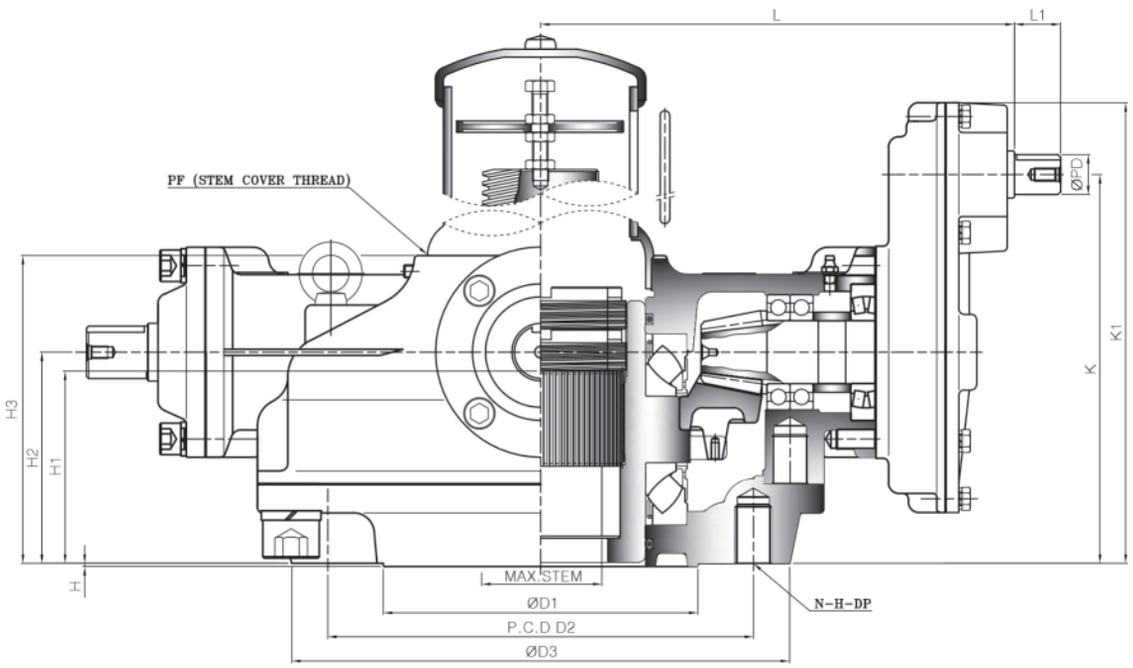
Selection chart for manual operation

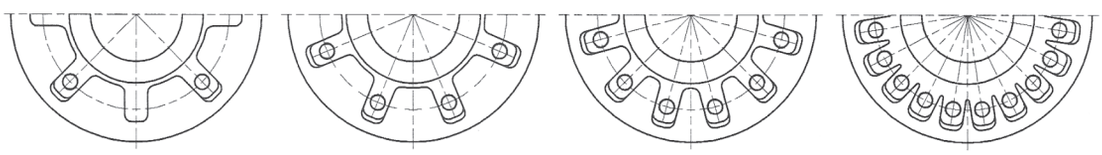
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft . lbf	Kg
SB-VS10W	2.5 : 1	30	22 (8X7)	F-07, F-10	75.5	16973	220	162	10
SB-VS20W	3 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	13
SB-V0W	3.25 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	19
SB-V1W	3.5 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	25
SB-V2W	4 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	37
SB-V3W	5 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	49
SB-V35W	5.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	84
SB-V4W	6 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	104
SB-V5W	6.56 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	158
SB-V55W	7 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	209
SB-V6W	7 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	249
SB-V7W	7.56 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	329
SB-V75W	8 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	467
SB-V8W	8 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	490
SB-V85W	8 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	840
SB-V9W	8 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1045
SB-V100W	8 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1440

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Standard Type C - Multiple Input Shaft

with a multiple input shaft, engineered for thrust and torque, featuring horizontal input and a single-reduction gear attachment





Type A | Type B | Type C | Type D

Dimensions

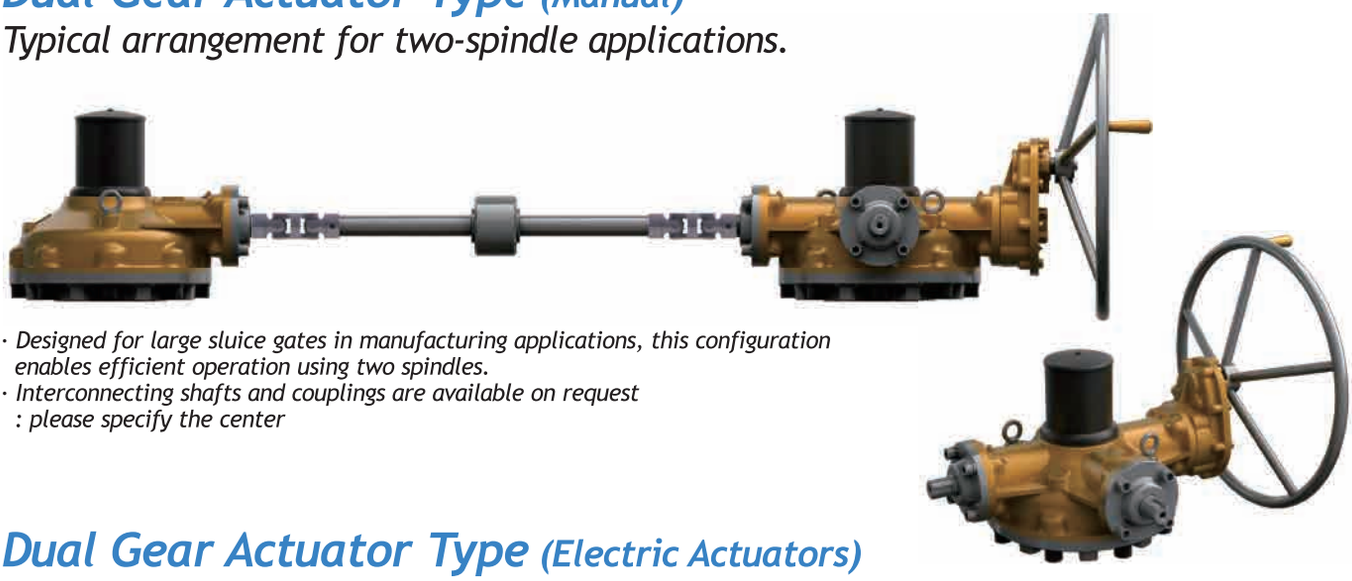
UNIT : mm

MODEL \ DIM	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-V0W-1S	A	F-14	100	140	4-M16-24	175	3	72	81	121	160	203	201.5	34	26	8X7	300	PF2–1/2"
SB-V1W-1S		F-16	130	165	4-M20-30	210		84	98	140	177	220	214				400	PF3"
SB-V2W-1S	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	208	256	236.5	34	26	8X7	500	PF3-1/2"
SB-V3W-1S		F-25	200	254	8-M16-24	300		102	119	166.5	212	260	256.5				610	PF4"
SB-V35W-1S		F-30	230	298	8-M20-30	350		122	138	195	259	316	333	34	32	10X8	710	PF5"
SB-V4W-1S		F-35	260	356	8-M30-45	410		133	150	209	271	328	358					PF6"
SB-V5W-1S		F-40	300	406	8-M36-55	475		161	177	245	322	384.5	387				800	PF7"
SB-V55W-1S		F-40	300	406	8-M36-55	475		171	192	261	337	399.5	407					
SB-V6W-1S		F-40	300	406	8-M36-55	475		185	201	283	370	439	472	44	38	12X8	800	PF8"
SB-V7W-1S	C	F-48	370	483	12-M36-55	560	5	206	222	309	391	459	497	44	38	12X8	900	PF8"
SB-V75W-1S		F-48	370	483	12-M36-55	560		221	248	340	478	564	620	58	50	16X10	900	PF10"
SB-V8W-1S		F-48	370	483	12-M36-55	560		233	259	352	489	575	651					
SB-V85W-1S	D	F-60	470	603	20-M36-55	700	5	248	278	373	508	594	695	58	50	16X10	900	PF12"
SB-V9W-1S		F-60	470	603	20-M36-55	700		263	295	398	580	696	821	58	50	16X10	1000	PF12"
SB-V100W-1S		F-80	670	813	20-M42-63	900		378	375	440	659	775	886					

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Dual Gear Actuator Type *(Manual)*

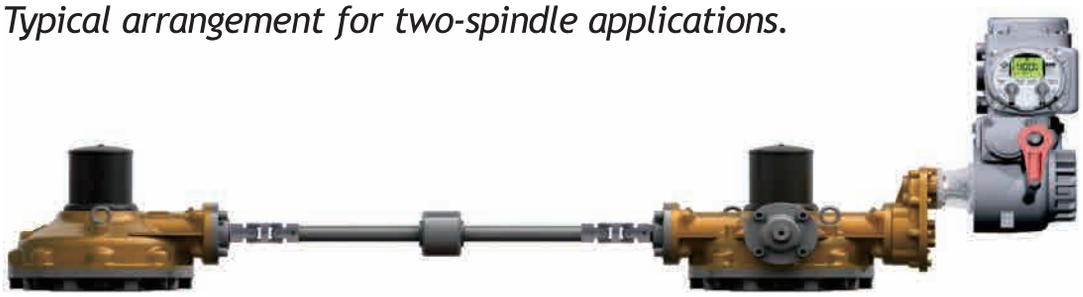
Typical arrangement for two-spindle applications.



· *Designed for large sluice gates in manufacturing applications, this configuration enables efficient operation using two spindles.*
· *Interconnecting shafts and couplings are available on request : please specify the center*

Dual Gear Actuator Type *(Electric Actuators)*

Typical arrangement for two-spindle applications.



· *Designed for large sluice gates in manufacturing applications, this configuration enables efficient operation using two spindles.*
· *Interconnecting shafts and couplings are available on request; please specify the center distance between gate stems.*

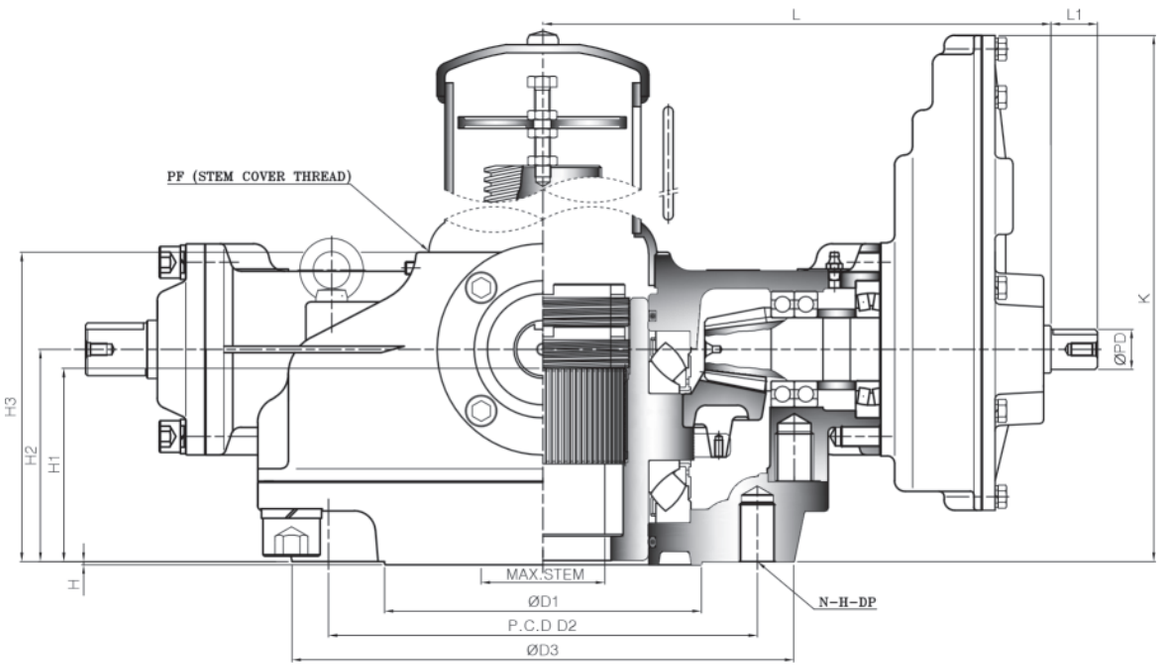
Selection chart for manual operation

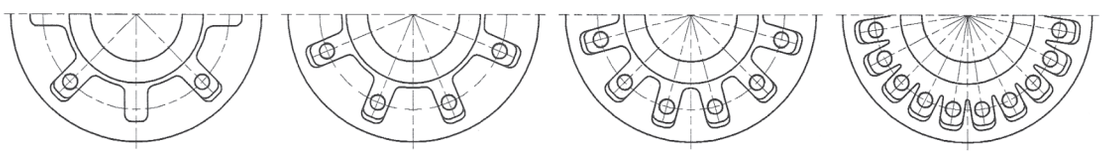
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft . lbf	Kg
SB-V0W-1S	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	23
SB-V1W-1S	7 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	29
SB-V2W-1S	10.13 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	45
SB-V3W-1S	12.66 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	57
SB-V35W-1S	16.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	97
SB-V4W-1S	18 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	117
SB-V5W-1S	22.94 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	176
SB-V55W-1S	24.5 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	227
SB-V6W-1S	28 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	277
SB-V7W-1S	30.22 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	357
SB-V75W-1S	40 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	534
SB-V8W-1S	40 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	557
SB-V85W-1S	40 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	1002
SB-V9W-1S	40 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1163
SB-V100W-1S	40 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1558

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Standard Type C - Multiple input shaft configuration

Horizontal input for thrust and torque with double-reduction gear attachment





Type A | Type B | Type C | Type D

Dimensions

UNIT : mm

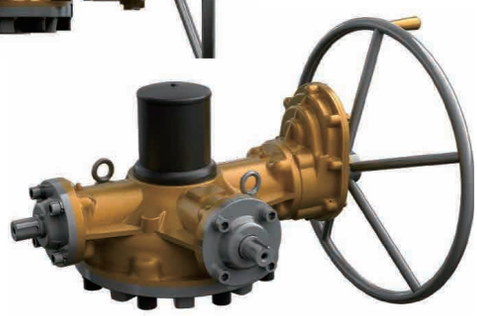
DIM / MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	L	L1	ØPD	KEY		
				ØD2	N-H-DP												
SB-V0W-1SD	A	F-14	100	140	4-M16-24	175	3	72	81	121	225	231	34	26	8X7	300	PF2–1/2"
SB-V1W-1SD		F-16	130	165	4-M20-30	210		84	98	140	242	243.5				400	PF3"
SB-V2W-1SD	B	F-16 (F-20)	140	205	8-M16-24	250	3	95	115	159.5	259	260.5	34	26	8X7	500	PF3-1/2"
SB-V3W-1SD		F-25	200	254	8-M16-24	300		102	119	166.5	263	280.5				610	PF4"
SB-V35W-1SD		F-30	230	298	8-M20-30	350		122	138	195	333	369	34	32	10X8	710	PF5"
SB-V4W-1SD		F-35	260	356	8-M30-45	410		133	150	209	345	394					PF6"
SB-V5W-1SD		F-40	300	406	8-M36-55	475		161	177	245	426	426				800	PF7"
SB-V55W-1SD		F-40	300	406	8-M36-55	475		171	192	261	441	446					
SB-V6W-1SD		F-40	300	406	8-M36-55	475		185	201	283	498.5	498	44	38	12X8	800	PF8"
SB-V7W-1SD	C	F-48	370	483	12-M36-55	560	5	206	222	309	519.5	526	44	38	12X8	900	PF8"
SB-V75W-1SD		F-48	370	483	12-M36-55	560		221	248	340	628	666	58	50	16X10	900	PF10"
SB-V8W-1SD		F-48	370	483	12-M36-55	560		233	259	352	638	697					
SB-V85W-1SD	D	F-60	470	603	20-M36-55	700	5	248	278	373	658	741	58	50	16X10	900	PF12"
SB-V9W-1SD		F-60	470	603	20-M36-55	700		263	295	398	784	876	58	50	16X10	1000	PF12"
SB-V100W-1SD		F-80	670	813	20-M42-63	900		378	375	440	863	941					

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Dual Gear Actuator Type (Manual Dial Indicator)

Typical arrangement for two-spindle applications.

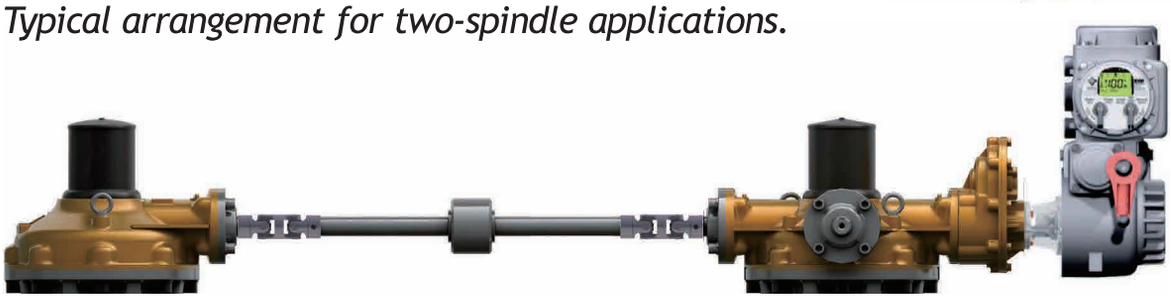




- *Designed for large sluice gates, this configuration enables efficient operation using two spindles.*
- *Sambo can supply appropriate interconnecting shafts and couplings on request. Please specify the center distance between gate stems.*

Dual Gear Actuator Type (Electric Actuators)

Typical arrangement for two-spindle applications.



- *Designed for large sluice gates, this configuration enables efficient operation using two spindles.*
- *Sambo can supply appropriate interconnecting shafts and couplings on request. Please specify the center distance between gate stems.*

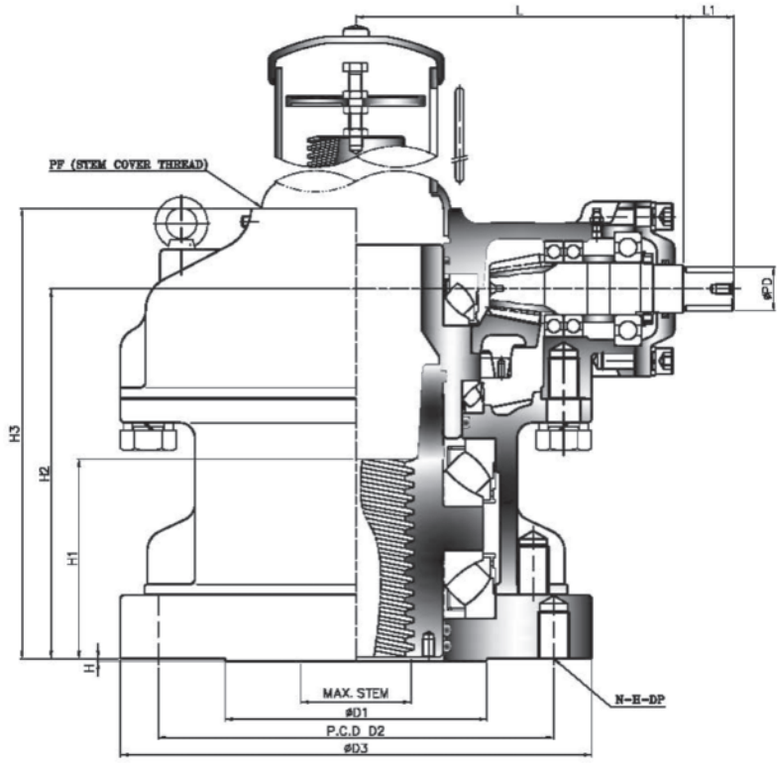
Selection chart for manual operation

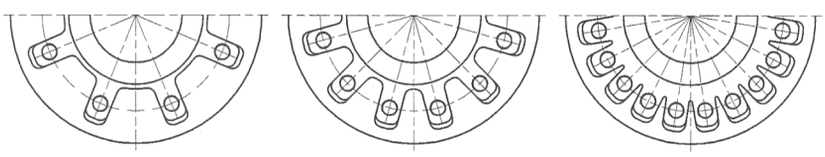
SIZE	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0W-1SD	20.86 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28551	600	443	27
SB-V1W-1SD	22.46 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	33
SB-V2W-1SD	25.67 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42714	1500	1106	46
SB-V3W-1SD	32.08 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	58
SB-V35W-1SD	49.5 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	101
SB-V4W-1SD	54 : 1	95	80(22x14)	F-25, F-30, F-35	400	89924	5200	3855	121
SB-V5W-1SD	80.31 : 1	105	90(25x14)	F-25, F-30, F-35, F-40	510	114653	7800	5753	183
SB-V55W-1SD	85.75 : 1	115	100(28x16)	F-30, F-35, F-40	1083.6	243603	10400	7671	234
SB-V6W-1SD	112 : 1	125	110(32x18)	F-30, F-35, F-40	1404	315632	13000	9588	290
SB-V7W-1SD	120.88 : 1	140	120(36x20)	F-35, F-40, F-48	1836	412749	17600	12981	370
SB-V75W-1SD	200 : 1	150	130(36x20)	F-40, F-48	2280	512564	21000	15489	565
SB-V8W-1SD	200 : 1	160	140(36x20)	F-40, F-48	3190	717140	32000	23602	588
SB-V85W-1SD	200 : 1	170	150(40x22)	F-48, F-60	3960	890243	40000	29502	933
SB-V9W-1SD	200 : 1	185	165(40X22)	F-48, F-60	4768.5	1072001	55000	40566	1229
SB-V100W-1SD	200 : 1	200	180(45x25)	F-60, F-80	6270	1409552	75000	55317	1624

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Standard Type D

High-load thrust and torque with horizontal input





Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
				ØD2	N-H-DP											
SB-V2H	B	F-25	200	254	8-M16-24	300	3	93	237	282	188	34	32	10X8	610	PF3-1/2"
SB-V3H		F-30	230	298	8-M20-30	350		113	275	322	208				710	PF4"
SB-V35H		F-35	260	356	8-M30-45	415		133	322	384	266	44	38	12X8	800	PF5"
SB-V4H								153	353	412	291					PF6"
SB-V5H		F-40	300	406	8-M36-55	475		175	376	444	313				900	PF7"
SB-V55H	C	F-48	370	483	12-M36-55	560	5	195	420	490	333	44	38	12X8	900	PF7"
SB-V6H		F-48	370	483	12-M36-55	560		205	442	524	381	58	50	16X10	1000	PF8"
SB-V7H		F-48						215	482	569	409					
SB-V75H	D	F-60	470	603	20-M36-55	700	5	235	518	610	441	58	50	16X10	1000	PF10"
SB-V8H		F-60	470	603	20-M36-55	700		255	538	631	472	58	50	16X10	1000	PF10"
SB-V85H		F-60						275	612	707	525					PF12"
SB-V9H		F-80	670	813	20-M42-63	900		305	636	739	591	58	50	16X10	1000	
SB-V100H		F-80						330	701	816	664					

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Spiral Bevel Gear Actuators

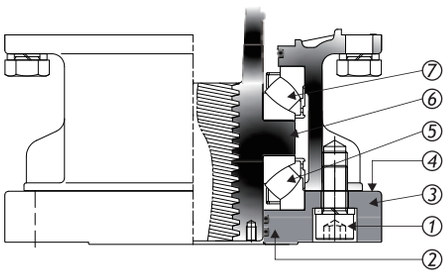
Features

- This series is engineered for extreme thrust loads in gate and globe valves, sluice gates, and other linear-motion applications that demand high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial loads.
- Machine-cut, heat-treated, and ground gears ensure optimum operation; the units are fully O-ring sealed for temporary submergence to IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.

The World's highest quality.

Global Leader SAMBO Gear Actuators



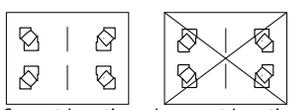


Disassembly and Assembly Procedure

1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

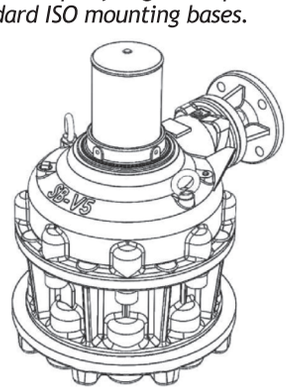
Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location

M.O.V Option

- Bevel gears can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.



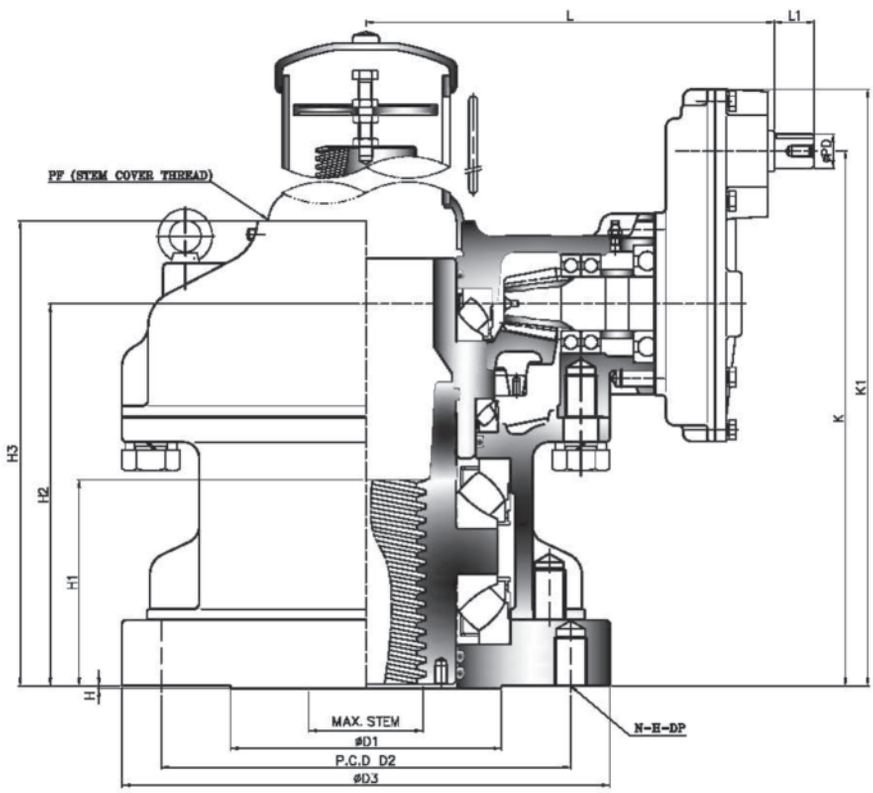
Selection chart for manual operation

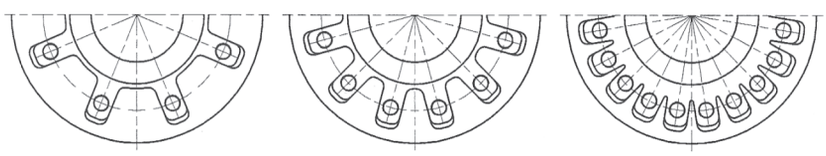
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft . lbf	Kg
SB-V2H	4 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	62
SB-V3H	5 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	93
SB-V35H	5.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	157
SB-V4H	6 : 1	105	90(25x14)		1100	247290	9800	7228	199
SB-V5H	6.56 : 1	120	105(28X16)	F-30, F-35, F—40	1500	337213	15000	11063	255
SB-V55H	7 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	382
SB-V6H	7 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	525
SB-V7H	7.56 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	595
SB-V75H	8 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	867
SB-V8H	8 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	957
SB-V85H	8 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1222
SB-V9H	8 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1748
SB-V100H	8 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	1920

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Standard Type D

High-thrust, high-torque horizontal input with single-reduction gear attachment





Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V2H-1S	B	F-25	200	254	8-M16-24	300	3	93	237	282	322	370	236.5	34	26	8X7	500	PF3-1/2"
SB-V3H-1S		F-30	230	298	8-M20-30	350		113	275	322	356	404	256.5				610	PF4"
SB-V35H-1S		F-35	260	356	8-M30-45	415		133	322	384	437	494	333	34	32	10X8	710	PF5"
SB-V4H-1S								153	353	412	463	520	358					PF6"
SB-V5H-1S		F-40	300	406	8-M36-55	475		175	376	444	521	584	387				800	PF7"
SB-V55H-1S	C	F-48	370	483	12-M36-55	560	5	195	420	490	555	617	407	34	32	10X8	800	PF7"
SB-V6H-1S		F-48	370	483	12-M36-55	560		205	442	524	598	666	472	44	38	12X8	900	PF8"
SB-V7H-1S		F-48						215	482	569	644	713	497					
SB-V75H-1S	D	F-60	470	603	20-M36-55	700	5	235	518	610	735	821	620	58	50	16X10	900	PF10"
SB-V8H-1S		F-60						255	538	631	770	856	651	58	50	16X10		PF10"
SB-V85H-1S		F-60						275	612	707	842	928	695					PF12"
SB-V9H-1S		F-80	670	813	20-M42-63	900		305	636	739	920	1036	821	58	50	16X10	1000	
SB-V100H-1S		F-80						330	701	816	985	1101	886					

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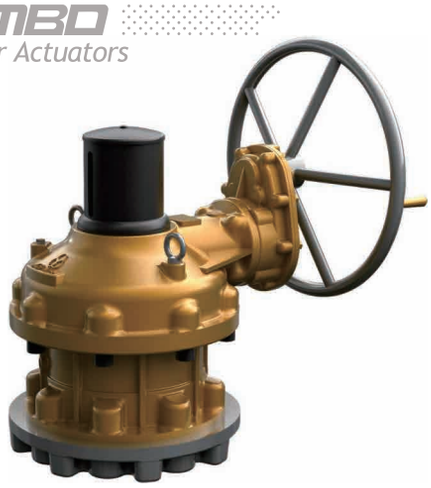
Spiral Bevel Gear Actuators

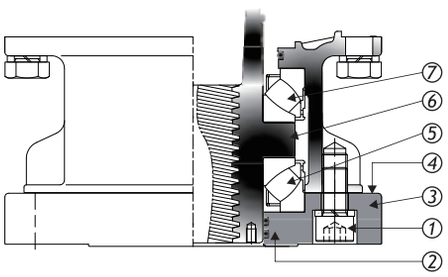
Features

- This series is engineered for extremely high thrust loads in Gate and Globe valves.
- Bottom-entry stem nut.
- High-tensile aluminum bronze provides corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimal operation. Units are fully O-ring sealed for temporary submergence to meet Ip67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.

The World's highest quality.

Global Leader SAMBO Gear Actuators



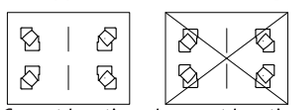


Disassembly and Assembly Procedure

1. Loosen the bolts ① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

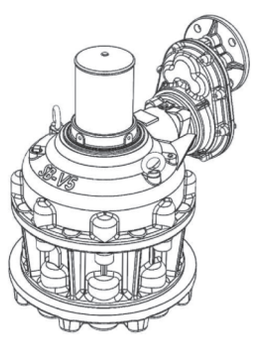
Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location

M.O.V Option

- Bevel Gear units can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



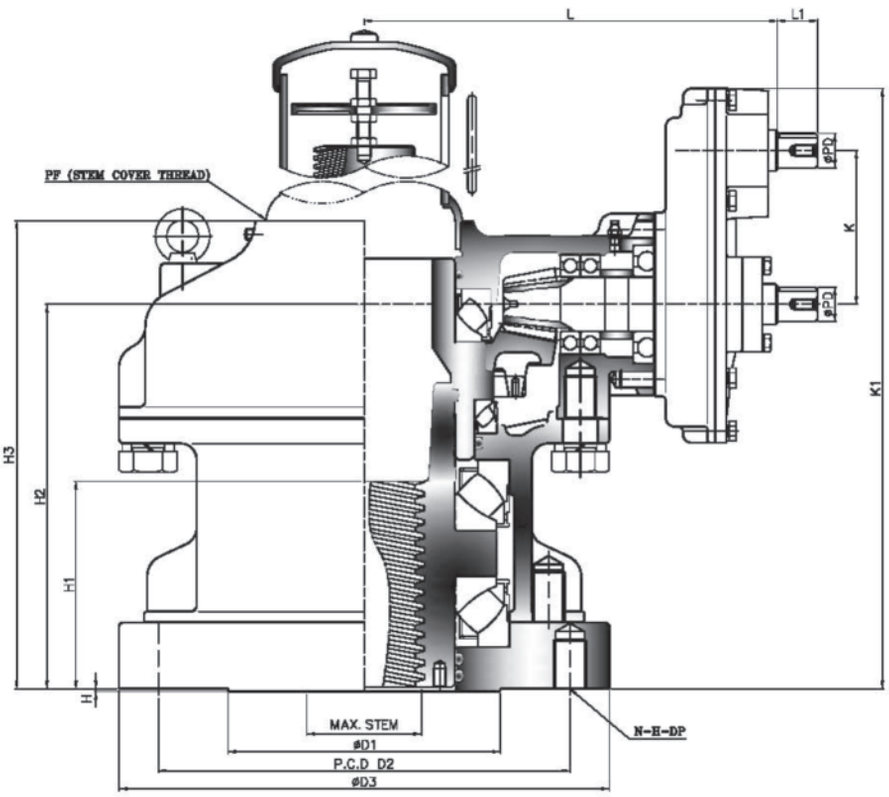
Selection chart for manual operation

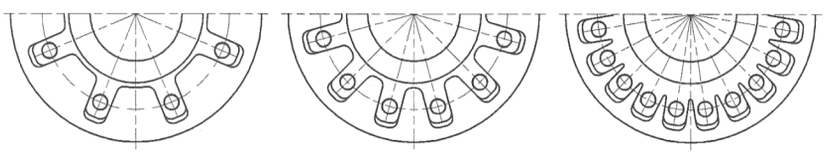
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2H-1S	10.13 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	69
SB-V3H-1S	12.66 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	100
SB-V35H-1S	16.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	170
SB-V4H-1S	18 : 1	105	90(25x14)		1100	247290	9800	7228	212
SB-V5H-1S	22.94 : 1	120	105(28X16)	F-30, F-35, F—40	1500	337213	15000	11063	273
SB-V55H-1S	24.5 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	400
SB-V6H-1S	28 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	553
SB-V7H-1S	30.22 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	623
SB-V75H-1S	40 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	934
SB-V8H-1S	40 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1024
SB-V85H-1S	40 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1289
SB-V9H-1S	40 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1866
SB-V100H-1S	40 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2038

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Standard Type D - Twin Shaft

Engineered for high thrust and torque in twin-shaft configurations, featuring horizontal input with a single-reduction gear attachment





Type B Type C Type D

Dimensions

UNIT : mm

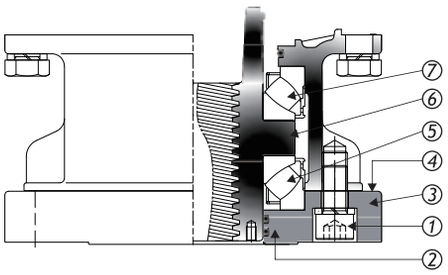
DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V2H-1ST	B	F-25	200	254	8-M16-24	300	3	93	237	282	93	370	236.5	34	26	8X7	500	PF3-1/2"
SB-V3H-1ST		F-30	230	298	8-M20-30	350		113	275	322		404	256.5				610	PF4"
SB-V35H-1ST		F-35	260	356	8-M30-45	415		133	322	384	121	494	333	34	32	10X8	710	PF5"
SB-V4H-1ST								153	353	412		520	358					PF6"
SB-V5H-1ST		F-40	300	406	8-M36-55	475		175	376	444	145	584	387				800	PF7"
SB-V55H-1ST	C	F-48	370	483	12-M36-55	560	5	195	420	490	145	617	407	34	32	10X8	800	PF7"
SB-V6H-1ST		F-48	370	483	12-M36-55	560		205	442	524	169	666	472	44	38	12X8	900	PF8"
SB-V7H-1ST		F-48						215	482	569		713	497					
SB-V75H-1ST	D	F-60	470	603	20-M36-55	700	5	235	518	610	230	821	620	58	50	16X10	900	PF10"
SB-V8H-1ST		F-60	470	603	20-M36-55	700		255	538	631		856	651	58	50	16X10		
SB-V85H-1ST		F-60						275	612	707		928	695					PF12"
SB-V9H-1ST		F-80	670	813	20-M42-63	900		305	636	739	284	1036	821	58	50	16X10	1000	
SB-V100H-1ST		F-80						330	701	816		1101	886					

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Spiral Bevel Gear Actuators

Features

- This series is engineered for extremely high thrust loads with gate and globe valves, sluice gates, and other linear-motion applications requiring high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Gears are precision-machined, heat-treated, and ground for optimal performance. The unit is fully O-ring sealed for temporary submergence to IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.

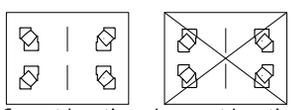


Disassembly and Assembly Procedure

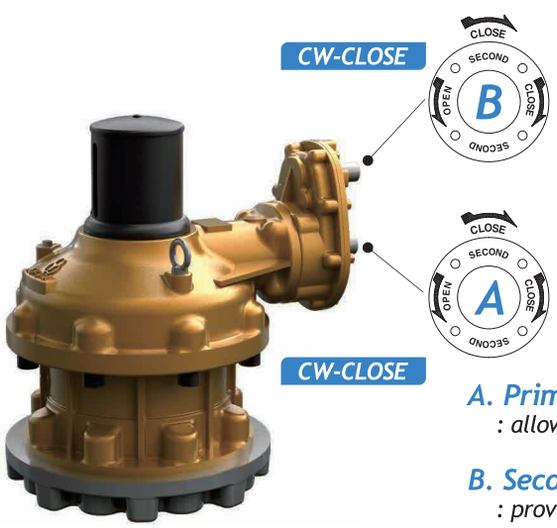
1. Loosen the bolts ① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location



The World's highest quality.

Global Leader SAMBO Gear Actuators

A. Primary input shaft (high speed)

: allows fewer turns after the valve has unseated.

B. Secondary input shaft (low speed)

: provides maximum mechanical advantage for seating and unseating valves.

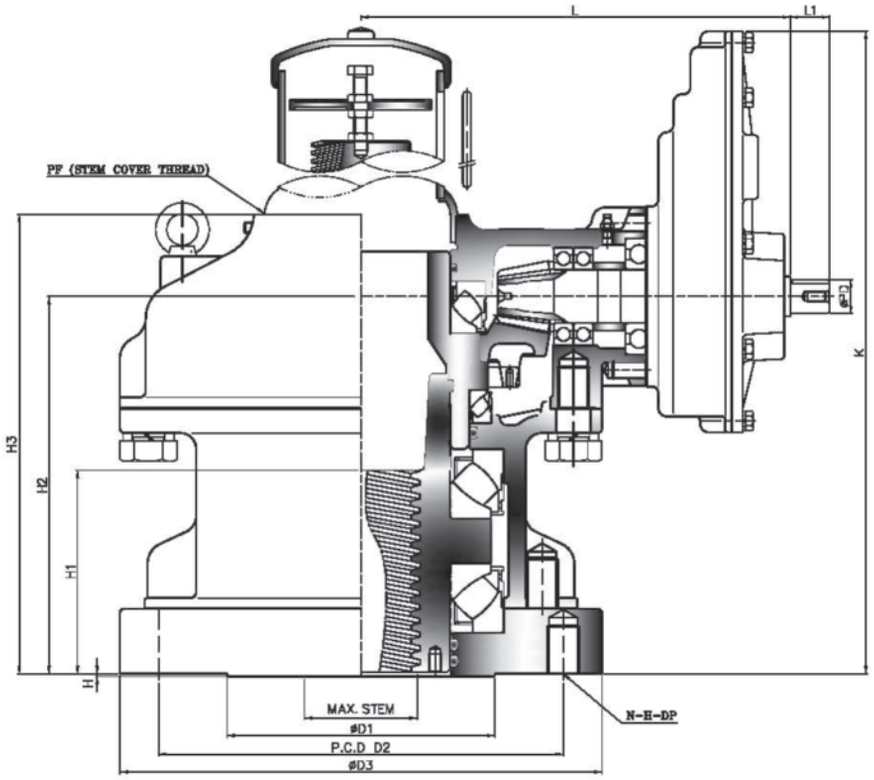
Selection chart for manual operation

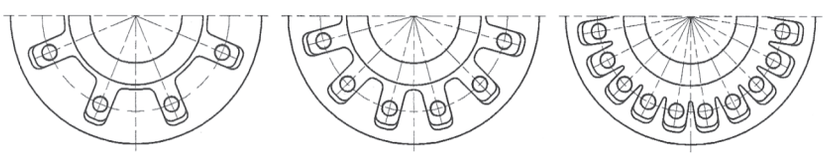
SIZE / MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2H-1ST	4 : 1	10.13 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	69
SB-V3H-1ST	5 : 1	12.66 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	100
SB-V35H-1ST	5.5 : 1	16.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	170
SB-V4H-1ST	6 : 1	18 : 1	105	90(25x14)		1100	247290	9800	7228	212
SB-V5H-1ST	6.56:1	22.94 : 1	120	105(28X16)	F-30, F-35, F–40	1500	337213	15000	11063	273
SB-V55H-1ST	7 : 1	24.5 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	400
SB-V6H-1ST	7 : 1	28 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	553
SB-V7H-1ST	7.56 : 1	30.22 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	623
SB-V75H-1ST	8 : 1	40 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	934
SB-V8H-1ST	8 : 1	40 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1024
SB-V85H-1ST	8 : 1	40 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1289
SB-V9H-1ST	8 : 1	40 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1866
SB-V100H-1ST	8 : 1	40 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2038

Product design and data are subject to change without notice. The product features and technical data provided do not specify or imply any warranty. For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Standard Type D

High-thrust, high-torque horizontal input with a double-reduction gear attachment





Type B Type C Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	L	L1	ØPD	KEY		
SB-V2H-1SD	B	F-25	200	254	8-M16-24	300	3	93	237	282	373	260,5	34	26	8X7	500	PF3-1/2"
SB-V3H-1SD		F-30	230	298	8-M20-30	350		113	275	322	407	280,5				610	PF4"
SB-V35H-1SD		F-35	260	356	8-M30-45	415		133	322	384	511	369	34	32	10X8	710	PF5"
SB-V4H-1SD								153	353	412	537	394					PF6"
SB-V5H-1SD		F-40	300	406	8-M36-55	475		175	376	444	625	426				800	PF7"
SB-V55H-1SD	C	F-48	370	483	12-M36-55	560	5	195	420	490	659	446	34	32	10X8	800	PF7"
SB-V6H-1SD		F-48	370	483	12-M36-55	560		205	442	524	726,5	498	44	38	12X8	900	PF8"
SB-V7H-1SD		F-48						215	482	569	772,5	526					
SB-V75H-1SD	D	F-60	470	603	20-M36-55	700	5	235	518	610	885	666	58	50	16X10	900	PF10"
SB-V8H-1SD		F-60	470	603	20-M36-55	700		255	538	631	920	697	58	50	16X10		
SB-V85H-1SD		F-60						275	612	707	992	741					PF12"
SB-V9H-1SD		F-80	670	813	20-M42-63	900		305	636	739	1124	876	58	50	16X10	1000	
SB-V100H-1SD		F-80						330	701	816	1189	941					

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Spiral Bevel Gear Actuators

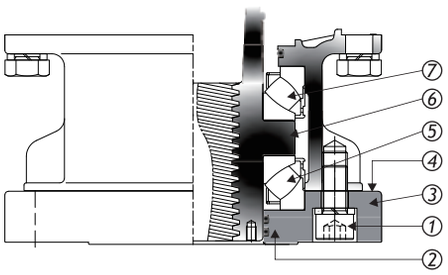
Features

- This series is engineered for extreme thrust loads on gate and globe valves, sluice gates, and other linear-motion applications requiring high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for superior corrosion and wear resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and excellent impact resistance.
- Heavy-duty roller bearings support both radial and axial loads.
- Machine-cut, heat-treated, and ground gears ensure optimal operation. Units are fully O-ring sealed for temporary submergence to IP67 class.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.

The World's highest quality.

Global Leader SAMBO Gear Actuators



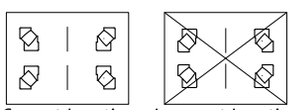


Disassembly and Assembly Procedure

1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

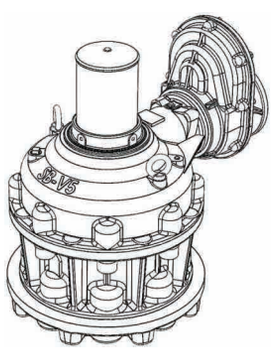
Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location

M.O.V Option

- Bevel gears can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.



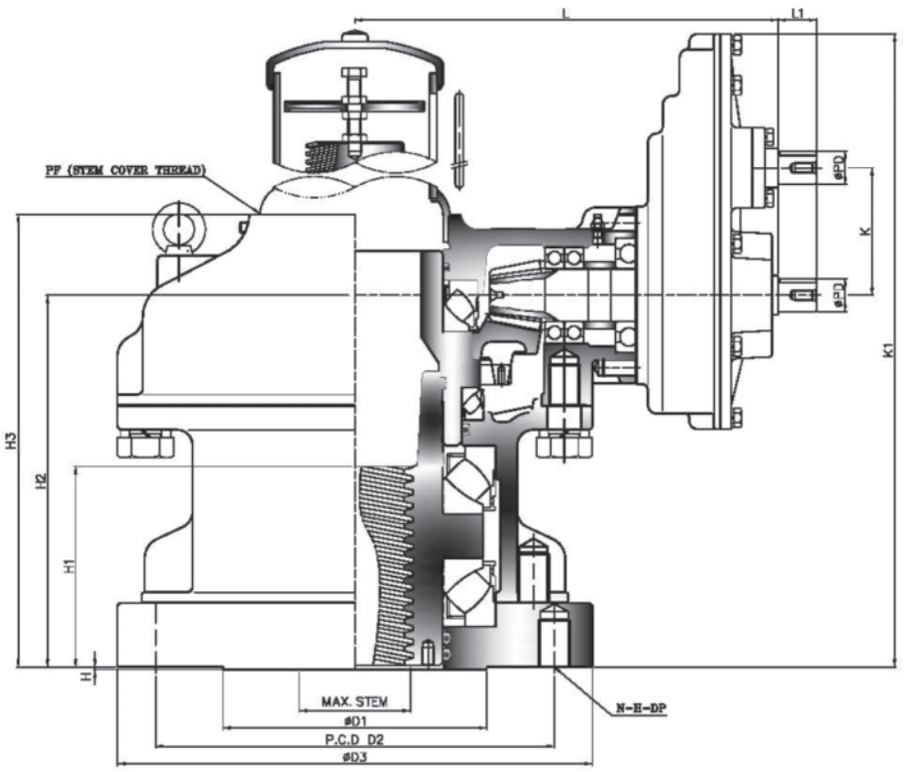
Selection chart for manual operation

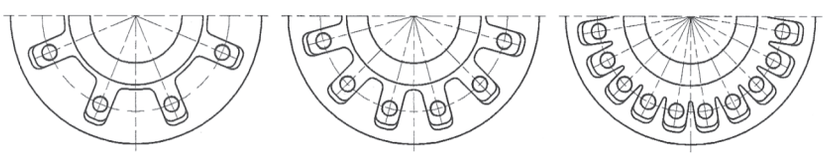
SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2H-1SD	25.67 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	71
SB-V3H-1SD	32.08 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	102
SB-V35H-1SD	49.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	174
SB-V4H-1SD	54 : 1	105	90(25x14)		1100	247290	9800	7228	216
SB-V5H-1SD	80.31 : 1	120	105(28X16)	F-30, F-35, F–40	1500	337213	15000	11063	280
SB-V55H-1SD	85.75 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	407
SB-V6H-1SD	112 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	566
SB-V7H-1SD	120.88 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	636
SB-V75H-1SD	200 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	965
SB-V8H-1SD	200 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1055
SB-V85H-1SD	200 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1320
SB-V9H-1SD	200 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1932
SB-V100H-1SD	200 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2104

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Standard Type D - Twin Shaft

High-thrust, high-torque twin-shaft design with horizontal input and a double-reduction gear attachment





Type B Type C Type D

Dimensions

UNIT : mm

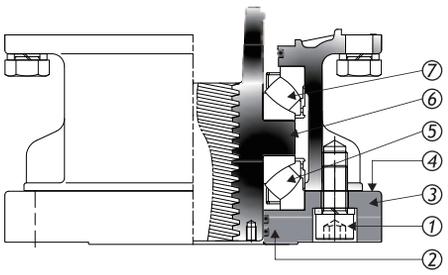
DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V2H-1SDT	B	F-25	200	254	8-M16-24	300	3	93	237	282	69	373	260.5	34	26	8X7	500	PF3-1/2"
SB-V3H-1SDT		F-30	230	298	8-M20-30	350		113	275	322		407	280.5				610	PF4"
SB-V35H-1SDT		F-35	260	356	8-M30-45	415		133	322	384	93	511	369	34	32	10X8	710	PF5"
SB-V4H-1SDT								153	353	412		537	394					PF6"
SB-V5H-1SDT		F-40	300	406	8-M36-55	475		175	376	444	121	625	426				800	PF7"
SB-V55H-1SDT	C	F-48	370	483	12-M36-55	560	5	195	420	490	121	659	446	34	32	10X8	800	PF7"
SB-V6H-1SDT		F-48	370	483	12-M36-55	560		205	442	524	145	726.5	498	44	38	12X8	900	PF8"
SB-V7H-1SDT		F-48						215	482	569		772.5	526					
SB-V75H-1SDT	D	F-60	470	603	20-M36-55	700	5	235	518	610	186	885	666	58	50	16X10	900	PF10"
SB-V8H-1SDT		F-60	470	603	20-M36-55	700		255	538	631		920	697	58	50	16X10		
SB-V85H-1SDT		F-60						275	612	707		992	741					PF12"
SB-V9H-1SDT		F-80	670	813	20-M42-63	900		305	636	739	238	1124	876	58	50	16X10	1000	
SB-V100H-1SDT		F-80						330	701	816		1189	941					

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Spiral Bevel Gear Actuators

Features

- This series is engineered for extremely high thrust loads in gate and globe valves, sluice gates, and other applications requiring linear motion under high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimum operation. Units are fully O-ring sealed for temporary submergence to IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.

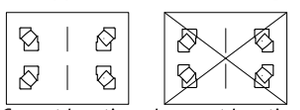


Disassembly and Assembly Procedure

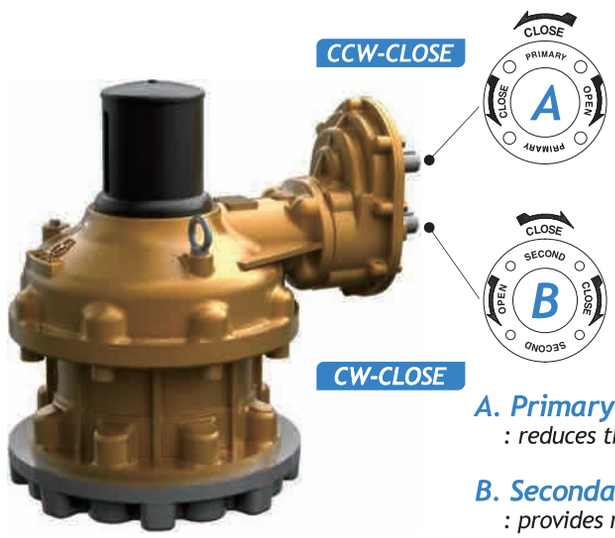
1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location



The World's highest quality.

Global Leader SAMBO Gear Actuators

A. Primary input shaft (high speed)

: reduces the number of turns required after the valve unseats.

B. Secondary input shaft (low speed)

: provides maximum mechanical advantage for valve seating and unseating.

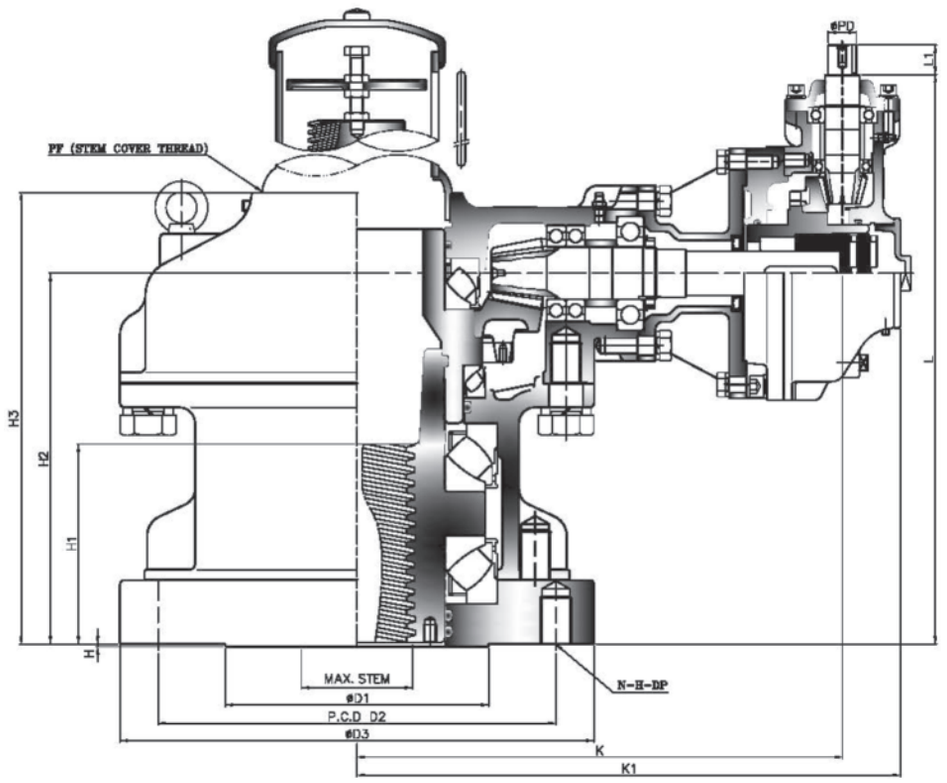
Selection chart for manual operation

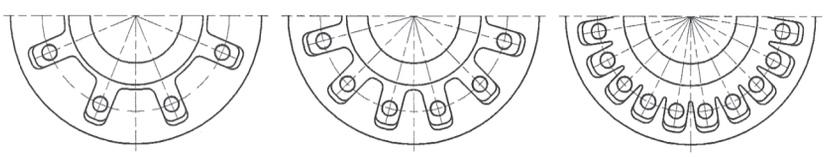
SIZE / MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft . lbf	Kg
SB-V2H-1SDT	10.13 : 1	25.67 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	71
SB-V3H-1SDT	12.66 : 1	32.08 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	102
SB-V35H-1SDT	16.5 : 1	49.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	174
SB-V4H-1SDT	18 : 1	54 : 1	105	90(25x14)		1100	247290	9800	7228	216
SB-V5H-1SDT	22.94 : 1	80.31 : 1	120	105(28X16)	F-30, F-35, F—40	1500	337213	15000	11063	280
SB-V55H-1SDT	24.5 : 1	85.75 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	407
SB-V6H-1SDT	28 : 1	112 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	566
SB-V7H-1SDT	30.22 : 1	120.88 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	636
SB-V75H-1SDT	40 : 1	200 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	965
SB-V8H-1SDT	40 : 1	200 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1055
SB-V85H-1SDT	40 : 1	200 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1320
SB-V9H-1SDT	40 : 1	200 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1932
SB-V100H-1SDT	40 : 1	200 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2104

Product design and data are subject to change without notice. The product features and technical data provided do not specify or imply any warranty. For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Standard Type E

Engineered for high-thrust, high-torque vertical input with a single-reduction gear attachment





Type B　　Type C　　Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V2H-2B	B	F-25	200	254	8-M16-24	300	3	93	237	282	299	340	350	34	26	8X7	400	PF3-1/2"
SB-V3H-2B		F-30	230	298	8-M20-30	350		113	275	322	326.5	368	394					PF4"
SB-V35H-2B		F-35	260	356	8-M30-45	415		133	322	384	415	474	470.5	34	32	10X8	500	PF5"
SB-V4H-2B								153	353	412	457	521	509					PF6"
SB-V5H-2B		F-40	300	406	8-M36-55	475		175	376	444	419	488.5	564				610	PF7"
SB-V55H-2B	C	F-48	370	483	12-M36-55	560	5	195	420	490	439	508.5	598	34	32	10X8	610	PF7"
SB-V6H-2B		F-48	370	483	12-M36-55	560		205	442	524	482	557.5	637				710	PF8"
SB-V7H-2B		F-48						215	482	569	510	585.5	683					
SB-V75H-2B	D	F-60	470	603	20-M36-55	700	5	235	518	610	567	639	771	44	38	12X8	800	PF10"
SB-V8H-2B		F-60	470	603	20-M36-55	700		255	538	631	608	670	806					
SB-V85H-2B		F-60						275	612	707	654	730	903					PF12"
SB-V9H-2B		F-80	670	813	20-M42-63	900		305	636	739	749	833	970				900	
SB-V100H-2B		F-80						330	701	816	845	938	1076					

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Spiral Bevel Gear Actuators

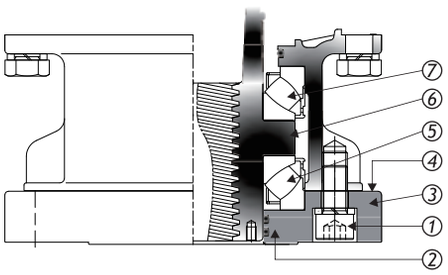
Features

- Designed for very high thrust duties with gate and globe valves, sluice gates, and other linear-motion applications that demand high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for superior corrosion and wear resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and excellent impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Precision-cut, heat-treated, and ground gears ensure smooth operation. Units are fully O-ring sealed for temporary submergence to IP67.
- Options include handwheels, chain wheels, stem covers, and position dial indicators.

The World's highest quality.

Global Leader SAMBO Gear Actuators



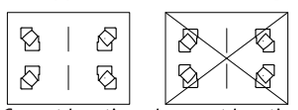


Disassembly and Assembly Procedure

1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

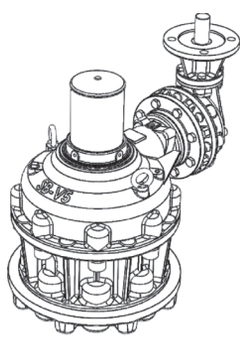
Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location

M.O.V Option

- Bevel gears can be supplied with motor actuator input flanges to suit standard ISO mounting bases.



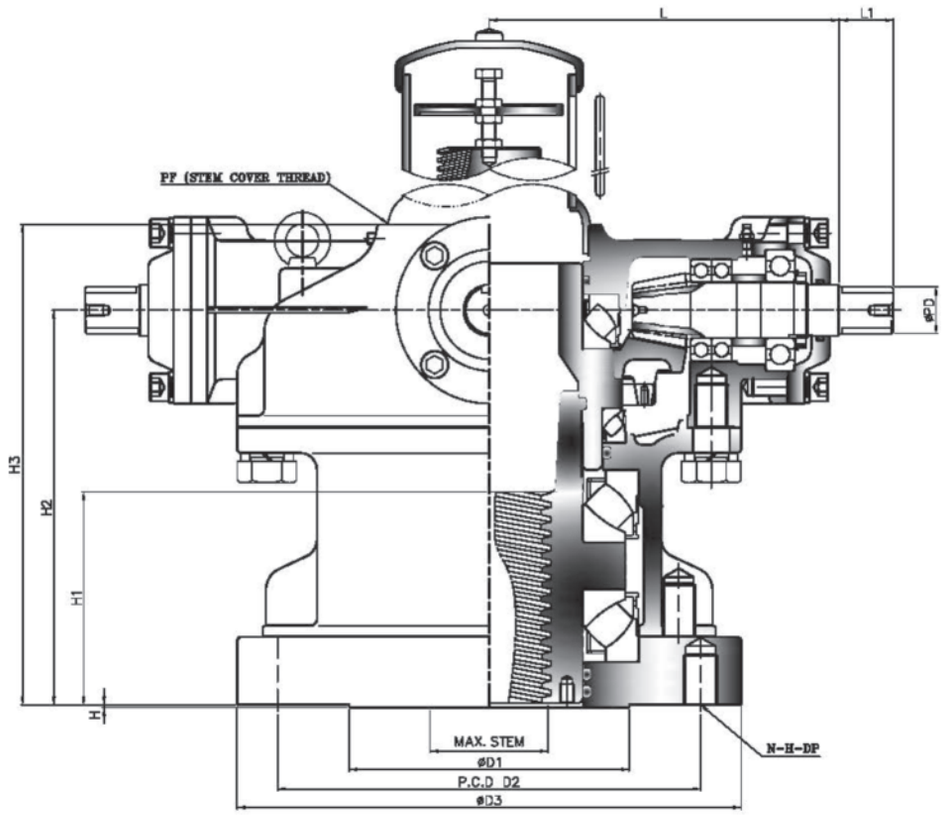
Selection chart for manual operation

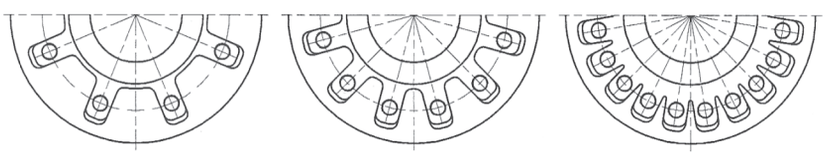
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2H-2B	10 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	68
SB-V3H-2B	15 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	103
SB-V35H-2B	17.87 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	173
SB-V4H-2B	21 : 1	105	90(25x14)		1100	247290	9800	7228	221
SB-V5H-2B	26.22 : 1	120	105(28X16)	F-30, F-35, F—40	1500	337213	15000	11063	289
SB-V55H-2B	28 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	416
SB-V6H-2B	35 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	570
SB-V7H-2B	37.77 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	640
SB-V75H-2B	44 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	945
SB-V8H-2B	44 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1035
SB-V85H-2B	48 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1321
SB-V9H-2B	52.44 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1898
SB-V100H-2B	56 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2158

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Standard Type E - Multiple input shaft

Multiple input shaft configuration





Type B　　Type C　　Type D

Dimensions

UNIT : mm

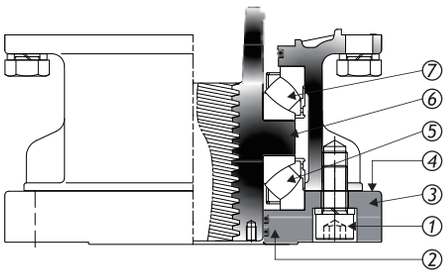
DIM / MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
				ØD2	N-H-DP											
SB-V2HW	B	F-25	200	254	8-M16-24	300	3	93	237	282	188	34	32	10X8	610	PF3-1/2"
SB-V3HW		F-30	230	298	8-M20-30	350		113	275	322	208				710	PF4"
SB-V35HW		F-35	260	356	8-M30-45	415		133	322	384	266	44	38	12X8	800	PF5"
SB-V4HW								153	353	412	291					PF6"
SB-V5HW		F-40	300	406	8-M36-55	475		175	376	444	313				900	PF7"
SB-V55HW	C	F-48	370	483	12-M36-55	560	5	195	420	490	333	44	38	12X8	900	PF7"
SB-V6HW		F-48	370	483	12-M36-55	560		205	442	524	381	58	50	16X10	1000	PF8"
SB-V7HW		F-48						215	482	569	409					
SB-V75HW	D	F-60	470	603	20-M36-55	700	5	235	518	610	441	58	50	16X10	1000	PF10"
SB-V8HW		F-60	470	603	20-M36-55	700		255	538	631	472					
SB-V85HW		F-60						275	612	707	525					PF12"
SB-V9HW		F-80	670	813	20-M42-63	900		305	636	739	591					
SB-V100HW		F-80						330	701	816	664					

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Spiral Bevel Gear Actuators

Features

- This series is engineered for extremely high thrust loads on gate and globe valves, sluice gates, and other linear-motion applications demanding high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for excellent corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimum operation. Units are fully O-ring sealed for temporary submergence to meet IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.

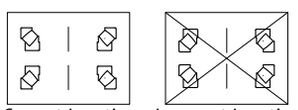


Disassembly and Assembly Procedure

1. Loosen the bolts ① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.

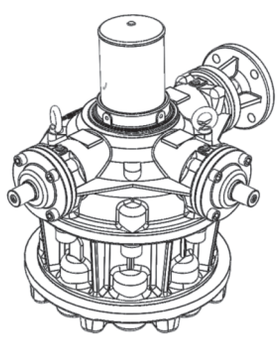


Correct Location | Incorrect Location



M.O.V Option

- Bevel gears can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.



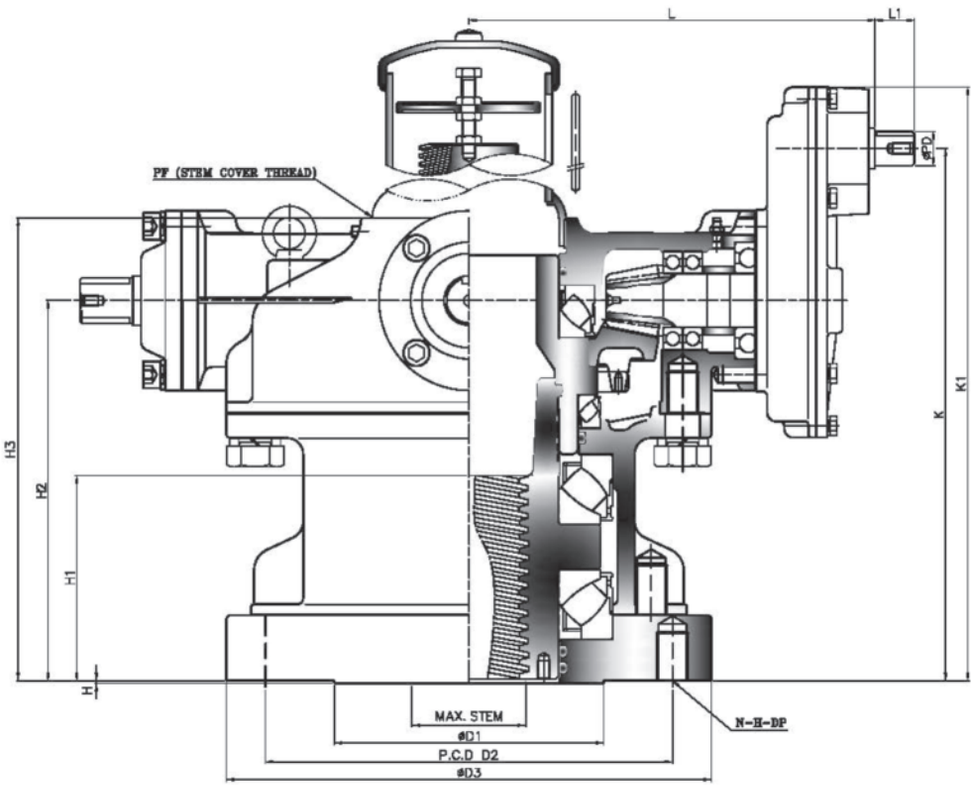
Selection chart for manual operation

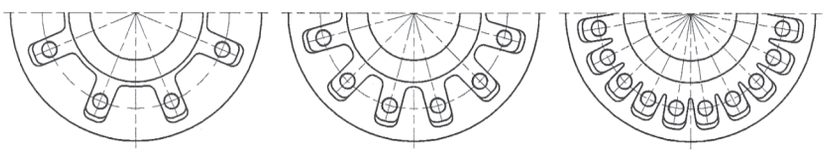
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2HW	4 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	65
SB-V3HW	5 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	96
SB-V35HW	5.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	160
SB-V4HW	6 : 1	105	90(25x14)		1100	247290	9800	7228	204
SB-V5HW	6.56 : 1	120	105(28X16)	F-30, F-35, F—40	1500	337213	15000	11063	263
SB-V55HW	7 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	390
SB-V6HW	7 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	536
SB-V7HW	7.56 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	606
SB-V75HW	8 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	882
SB-V8HW	8 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	972
SB-V85HW	8 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1237
SB-V9HW	8 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1768
SB-V100HW	8 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	1940

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Standard Type E - Multiple input shaft

Engineered for high thrust and torque with a horizontal input and a single-reduction gear attachment





Type B　　Type C　　Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V2HW-1S	B	F-25	200	254	8-M16-24	300	3	93	237	282	322	370	236.5	34	26	8X7	500	PF3-1/2"
SB-V3HW-1S		F-30	230	298	8-M20-30	350		113	275	322	356	404	256.5				610	PF4"
SB-V35HW-1S		F-35	260	356	8-M30-45	415		133	322	384	437	494	333	34	32	10X8	710	PF5"
SB-V4HW-1S								153	353	412	463	520	358					PF6"
SB-V5HW-1S		F-40	300	406	8-M36-55	475		175	376	444	521	584	387				800	PF7"
SB-V55HW-1S	C	F-48	370	483	12-M36-55	560	5	195	420	490	555	617	407	34	32	10X8	800	PF7"
SB-V6HW-1S		F-48	370	483	12-M36-55	560		205	442	524	598	666	472	44	38	12X8	900	PF8"
SB-V7HW-1S		F-48						215	482	569	644	713	497					
SB-V75HW-1S	D	F-60	470	603	20-M36-55	700	5	235	518	610	735	821	620	58	50	16X10	900	PF10"
SB-V8HW-1S								255	538	631	770	856	651					
SB-V85HW-1S		F-60						275	612	707	842	928	695					PF12"
SB-V9HW-1S		F-80	670	813	20-M42-63	900		305	636	739	920	1036	821				1000	
SB-V100HW-1S		F-80						330	701	816	985	1101	886					

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Spiral Bevel Gear Actuators

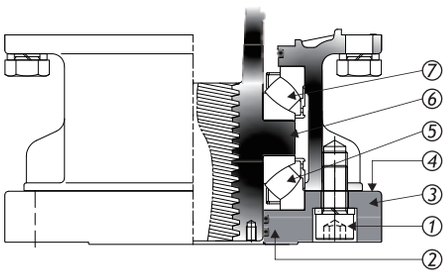
Features

- This series is engineered for extreme thrust loads in gate and globe valves, sluice gates, and other linear-motion applications requiring high thrust and torque.
- Bottom-entry stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings (class 65-45-12) deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial loads.
- Precision-machined, heat-treated, and ground gears ensure optimal operation. Units are fully O-ring sealed for temporary submergence to IP67.
- Available options include handwheels, chain wheels, stem covers, and position dial indicators.

The World's highest quality.

Global Leader
SAMBO
Gear Actuators



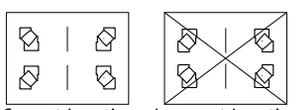


Disassembly and Assembly Procedure

1. Loosen the bolts ① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

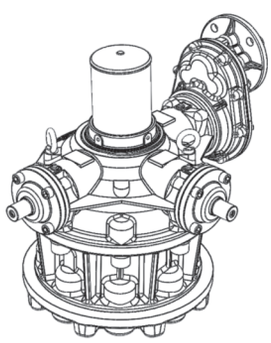
Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location

M.O.V Option

- Bevel gear units can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.



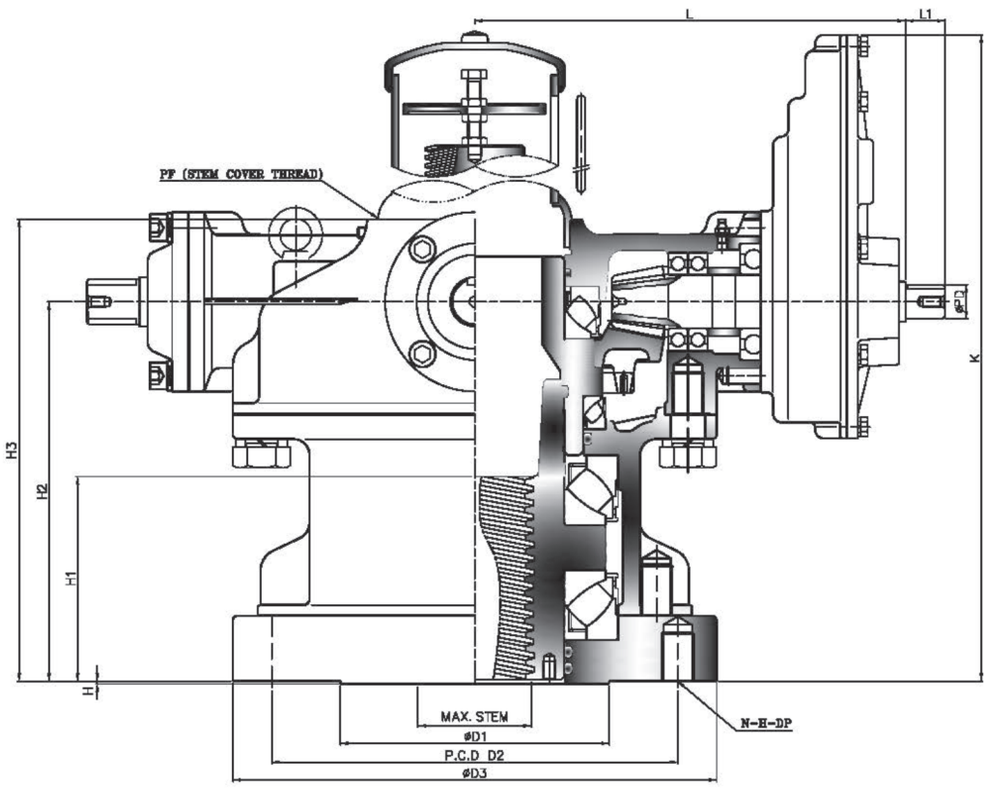
Selection chart for manual operation

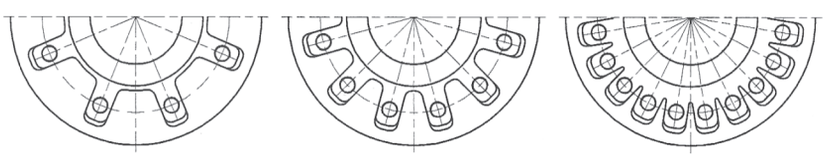
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2HW-1S	10.13 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	72
SB-V3HW-1S	12.66 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	103
SB-V35HW-1S	16.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	173
SB-V4HW-1S	18 : 1	105	90(25x14)		1100	247290	9800	7228	217
SB-V5HW-1S	22.94 : 1	120	105(28X16)	F-30, F-35, F–40	1500	337213	15000	11063	281
SB-V55HW-1S	24.5 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	408
SB-V6HW-1S	28 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	564
SB-V7HW-1S	30.22 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	634
SB-V75HW-1S	40 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	949
SB-V8HW-1S	40 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1039
SB-V85HW-1S	40 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1399
SB-V9HW-1S	40 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1886
SB-V100HW-1S	40 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2058

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Standard Type E - Multiple input shaft

Engineered for high thrust and torque with a horizontal input and a double-reduction gear attachment





Type B　　Type C　　Type D

Dimensions

UNIT : mm

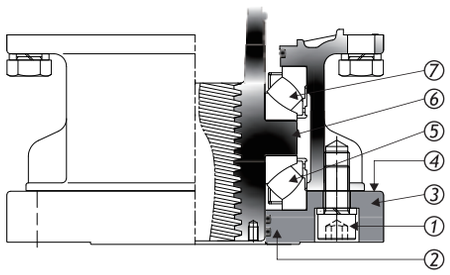
DIM / MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	L	L1	ØPD	KEY		
SB-V2HW-1SD	B	F-25	200	254	8-M16-24	300	3	93	237	282	373	260,5	34	26	8X7	500	PF3-1/2"
SB-V3HW-1SD		F-30	230	298	8-M20-30	350		113	275	322	407	280,5				610	PF4"
SB-V35HW-1SD		F-35	260	356	8-M30-45	415		133	322	384	511	369	34	32	10X8	710	PF5"
SB-V4HW-1SD								153	353	412	537	394					PF6"
SB-V5HW-1SD		F-40	300	406	8-M36-55	475		175	376	444	625	426				800	PF7"
SB-V55HW-1SD	C	F-48	370	483	12-M36-55	560	5	195	420	490	659	446	34	32	10X8	800	PF7"
SB-V6HW-1SD		F-48	370	483	12-M36-55	560		205	442	524	726,5	498	44	38	12X8	900	PF8"
SB-V7HW-1SD		F-48						215	482	569	772,5	526					
SB-V75HW-1SD	D	F-60	470	603	20-M36-55	700	5	235	518	610	885	666	58	50	16X10	900	PF10"
SB-V8HW-1SD		F-60						255	538	631	920	697					
SB-V85HW-1SD		F-60						275	612	707	992	741					PF12"
SB-V9HW-1SD		F-80	670	813	20-M42-63	900		305	636	739	1124	876				1000	
SB-V100HW-1SD		F-80						330	701	816	1189	941					

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Spiral Bevel Gear Actuators

Features

- TThis series is engineered for extremely high thrust loads in gate and globe valves.
- It also suits sluice gates and other linear-motion applications requiring high thrust and torque.
- Bottom-entry stem nut.
- High-tensile aluminum bronze provides superior corrosion and abrasion resistance.
- Castings are ductile iron, class 65-45-12, delivering high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimal operation.
- Units are fully O-ring sealed for temporary submergence to IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.

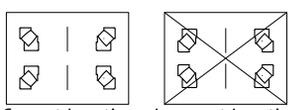


Disassembly and Assembly Procedure

1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

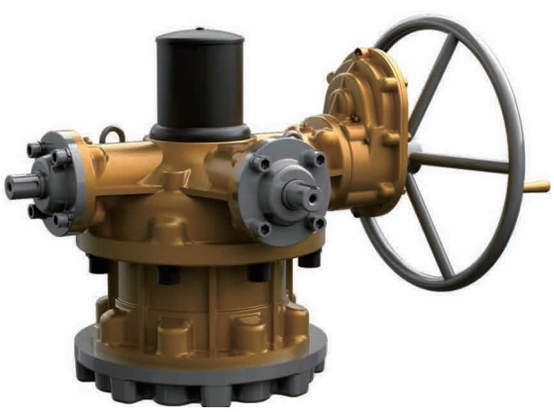
Verify the exact positions of the upper and lower bearings.

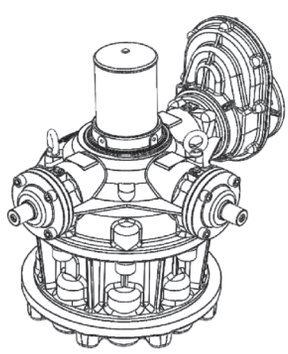


Correct Location　　Incorrect Location

M.O.V Option

- Bevel gear units can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.





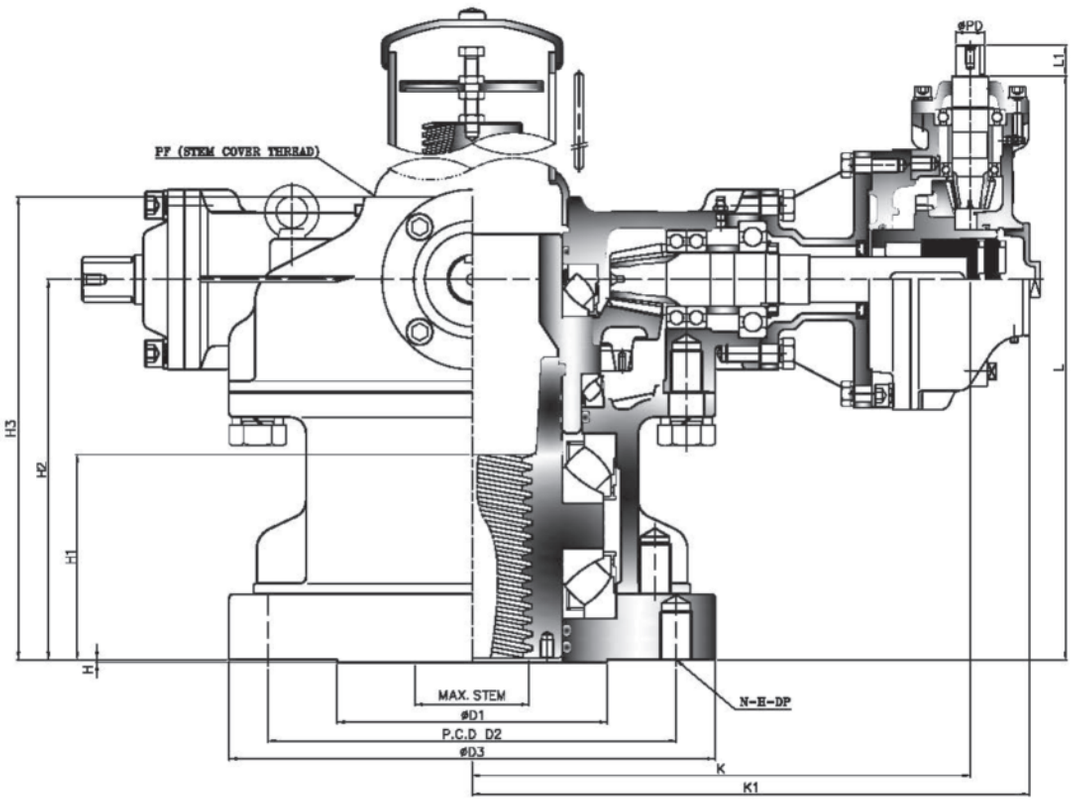
Selection chart for manual operation

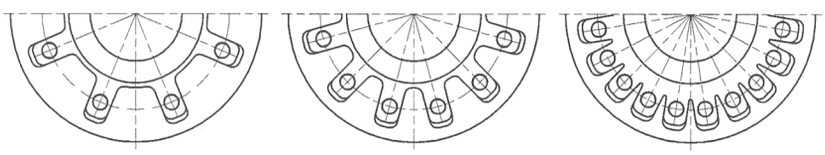
SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2HW-1SD	25.67 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	74
SB-V3HW-1SD	32.08 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	105
SB-V35HW-1SD	49.5 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	177
SB-V4HW-1SD	54 : 1	105	90(25x14)		1100	247290	9800	7228	221
SB-V5HW-1SD	80.31 : 1	120	105(28X16)	F-30, F-35, F–40	1500	337213	15000	11063	288
SB-V55HW-1SD	85.75 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	415
SB-V6HW-1SD	112 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	577
SB-V7HW-1SD	120.88 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	647
SB-V75HW-1SD	200 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	980
SB-V8HW-1SD	200 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1070
SB-V85HW-1SD	200 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1330
SB-V9HW-1SD	200 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1952
SB-V100HW-1SD	200 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2124

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Standard Type E - Multiple input shaft

Handles high thrust and torque with vertical input, featuring a single-reduction gear attachment





Type B Type C Type D

Dimensions

UNIT : mm

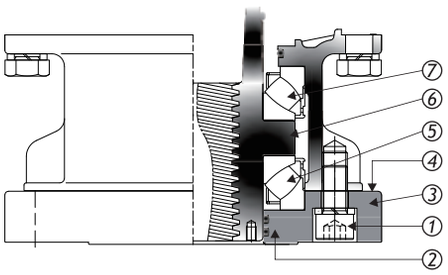
DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
SB-V2HW-2B	B	F-25	200	254	8-M16-24	300	3	93	237	282	299	340	350	34	26	8X7	400	PF3-1/2"
SB-V3HW-2B		F-30	230	298	8-M20-30	350		113	275	322	326.5	368	394					PF4"
SB-V35HW-2B		F-35	260	356	8-M30-45	415		133	322	384	415	474	470.5	34	32	10X8	500	PF5"
SB-V4HW-2B								153	353	412	457	521	509					PF6"
SB-V5HW-2B		F-40	300	406	8-M36-55	475		175	376	444	419	488.5	564				610	PF7"
SB-V55HW-2B	C	F-48	370	483	12-M36-55	560	5	195	420	490	439	508.5	598	34	32	10X8	610	PF7"
SB-V6HW-2B		F-48	370	483	12-M36-55	560		205	442	524	482	557.5	637				710	PF8"
SB-V7HW-2B		F-48						215	482	569	510	585.5	683					
SB-V75HW-2B	D	F-60	470	603	20-M36-55	700	5	235	518	610	567	639	771	44	38	12X8	800	PF10"
SB-V8HW-2B		F-60	470	603	20-M36-55	700		255	538	631	608	670	806					
SB-V85HW-2B		F-60						275	612	707	654	730	903					PF12"
SB-V9HW-2B		F-80	670	813	20-M42-63	900		305	636	739	749	833	970				900	
SB-V100HW-2B		F-80						330	701	816	845	938	1076					

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Spiral Bevel Gear Actuators

Features

- TThis series is engineered for extremely high thrust loads in gate and globe valves.
- It also suits sluice gates and other linear-motion applications requiring high thrust and torque.
- Bottom-entry stem nut.
- High-tensile aluminum bronze provides superior corrosion and abrasion resistance.
- Castings are ductile iron, class 65-45-12, delivering high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimal operation.
- Units are fully O-ring sealed for temporary submergence to IP67.
- A wide range of options is available, including handwheels, chain wheels, stem covers, and position dial indicators.

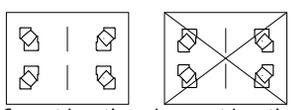


Disassembly and Assembly Procedure

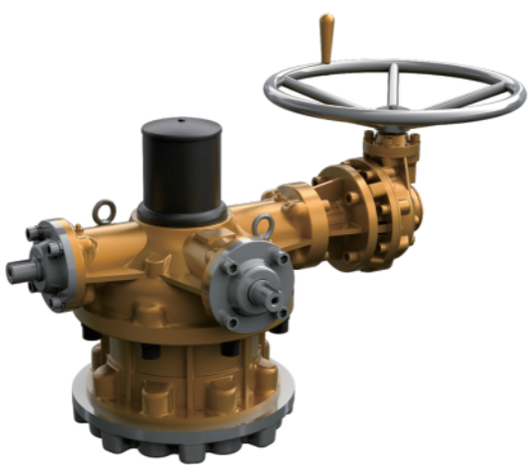
1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.

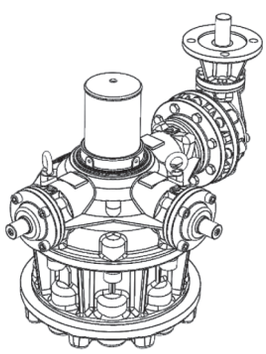


Correct Location　　Incorrect Location



M.O.V Option

- Bevel gear units can be supplied with motor-actuator input flanges compatible with standard ISO mounting bases.

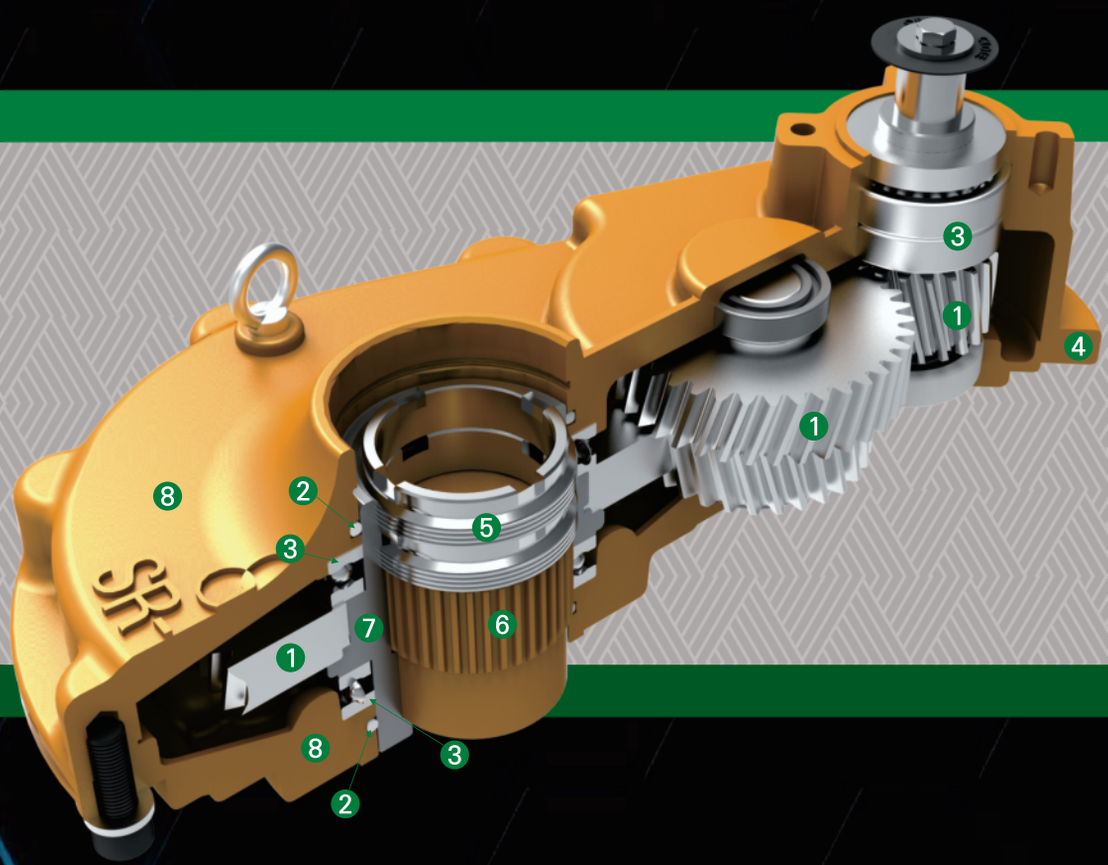


Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V2HW-2B	10 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	71
SB-V3HW-2B	15 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	106
SB-V35HW-2B	17.87 : 1	90	80(22X14)	F-25, F-30, F-35	800	179847	7000	5163	176
SB-V4HW-2B	21 : 1	105	90(25x14)		1100	247290	9800	7228	226
SB-V5HW-2B	26.22 : 1	120	105(28X16)	F-30, F-35, F–40	1500	337213	15000	11063	297
SB-V55HW-2B	35 : 1	135	115(32X18)	F-35, F-40, F-48	2052	461308	19000	14014	424
SB-V6HW-2B	35 : 1	150	130 (36X20)	F-35, F-40, F-48	2484	558425	23000	16964	581
SB-V7HW-2B	37.77 : 1	160	140(36x20)	F-48	3421	769071	37000	27290	651
SB-V75HW-2B	44 : 1	175	155(40X22)	F-48, F-60	4554	1023780	46000	33928	960
SB-V8HW-2B	44 : 1	190	160(40X22)	F-48, F-60	5200	1169006	58000	42779	1050
SB-V85HW-2B	48 : 1	210	180(45X25)	F-48, F-60	6090	1369086	74000	54580	1336
SB-V9HW-2B	52.44 : 1	230	205(50X28)	F-60, F-80	7245	1628740	104000	76706	1918
SB-V100HW-2B	56 : 1	250	220(56X32)	F-60, F-80	8925	2006419	142000	104734	2178

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Spur Gear Actuators



① Helical gears, idle gears, and helical pinions

All gears are manufactured from heat-treated 1045 steel.
All gears are precision-cut.

② O-ring

Fully O-ring sealed for temporary submersion to meet IP67.

③ Thrust ball and deep groove ball bearings

Provide excellent load-carrying capacity.

④ Gaskets

The base and housing are sealed with a non-asbestos gasket to prevent leakage and provide waterproof protection.

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Grease: ZENITH EPSB 2

Each unit includes an Alumite grease fitting and a grease plug for easy lubrication.

32,000N.m (23,602ft-lbf)
Torque and thrust capacities up to 3190KN (717,140lbf).

Stem capacities up to 160mm (6.3inch).
A high-load SB-SRB design is also available, rated up to 58,000 N·m (42,779ft·lbf).
Thrust capacities up to 5,200 KN (1,,69,000lbf); stem capacities up to 160 mm (6.3 inch).

The World's highest quality.

Global Leader
SAMBO
Gear Actuators



⑤ Dual Locking Nuts

The design incorporates dual locking nuts that create a jam effect for positive locking.
No set screw or pinning is required.

⑥ Stem Nut

A unique, top-entry replaceable stem nut.
After years of service, it can be replaced easily without removing the gear from the valve.
Manufactured from high-tensile brass for both corrosion and abrasion resistance.

⑥ Drive Sleeve

Ductile iron, Class 65-45-12, supports both axial and radial loads.

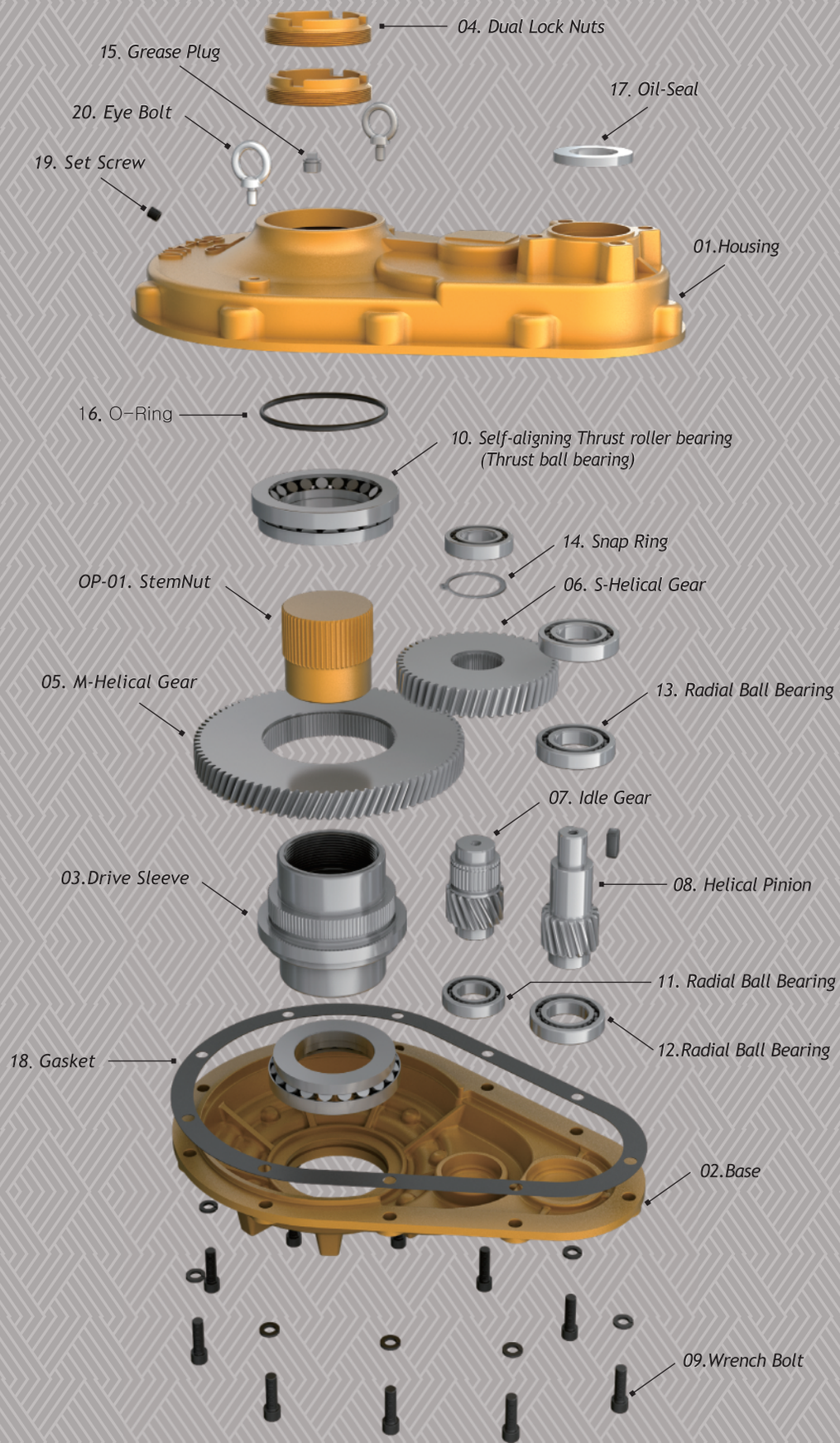
⑥ Housing and Base

All external castings are ductile iron, Class 65-45-12, with a tensile strength of 65,000 psi.
This delivers high strength and excellent impact resistance.

Spur Gear Actuators

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Spur Gear Actuator Assembly



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Part List and Materials

	NO	DESCRIPTION	MATERIAL			REMARK
			NAME	JIS	ASTM	
STANDARD	1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
	2	Base	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1
	3	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12	
	4	Dual Lock Nuts	Carbon Steel	S45C	A576-1045	
	5	M-Helical Gear	Carbon Steel	S45C	A576-1045	
	6	S-Helical Gear	Carbon Steel	S45C	A576-1045	
	7	Idle Gear	Carbon Steel	S45C	A576-1045	
	8	Helical Pinion	Carbon Steel	S45C	A576-1045	NOTE.2
	9	Wrench Bolt (S/W)	Alloy Steel	SCM435	A322-4135	
	10	Thrust Bearing	Special Steel	SUJ2	A295-52100	
	11	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
	12	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
	13	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
	14	Snap Ring	Steel			
	15	Grease Plug	Steel + Galvanizing			
	16	O-Ring	NBR			NOTE.4
	17	Oil-Seal	NBR			NOTE.4
	18	Gasket	Non Asbestos			
	19	Set Screw	Stainless Steel			
	20	Eye Bolt	Steel + Galvanizing			
OPTION	OP-01	Stem Nut	Bronze	HBsc4 or Hbsc3	B505-C86300	NOTE. 3
	OP-02	Hand Wheel	Steel Pipe	SGP	A53	HANDLE PART NOTE. 5
	OP-03	Key	Carbon Steel	S45C	A576-1045	
	OP-04	Name Plate	Stainless Steel			
	OP-05	Washer	Stainless Steel			
	OP-06	HEX. Bolt (S/W)	Stainless Steel			
	OP-07	Stem Cover	Steel Pipe	SGP	A53	STEM COVER NOTE. 6
	OP-08	Indicate Bolt	Steel + Galvanizing			
	OP-09	HEX. Nut	Steel + Galvanizing			
	OP-10	Indicator	Plastic			

Material Details: Options and Material Changes

1. All castings are manufactured from ductile iron FCD-450 (ASTM 65-45-12).
   Stainless steel and carbon steel options are available on request.
2. For pinion options, nickel plating, high-tensile stainless steel, and duplex materials are available upon request.
3. Stem nuts can be supplied in ALBC3 (aluminum bronze), steel (A576-1045), A439 Gr D2z, and other materials.
4. O-ring and lubricant: Standard O-ring is NBR, rated for −20°C to +120°C (−4°F to +248°F).
   Standard lubricant is Zenith EPSB2, suitable for −20°C to +200°C (−4°F to +392°F).
   Optional high-temperature Viton O-ring (Grade V75 or equivalent) covers −30°C to +200°C (−22°F to +392°F).
   Optional lubricant: Zenith SYN WS2, rated for −30°C to +400°C (−13°F to +752°F).
   Low-temperature silicone O-ring option rated for −60°C to −150°C (−76°F to −130°F).
   Optional lubricant: Zenith SBLT600, rated for −60°C to +120°C (−76°F to +248°F).
5. Handwheel options include locking devices, chainwheels, and square adapters.
6. Stem covers are available in multiple designs (see page 35) and materials including stainless steel and polycarbonate.
   Finish: Unless otherwise specified, gearboxes are coated with a two-component wash primer.
   Custom finish coatings are available on request.

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Index

Type A

Standard Type A - Vertical input — 094 · 095

Standard Type A - Thrust and torque (twin shaft) Vertical input with single-reduction gear attachment — 096 · 097

Type B

Standard Type B - Horizontal Input — 098 · 099

Type C

Standard Type C - High-load thrust and torque, vertical input — 100 · 101

Standard Type C - High-load thrust and torque (twin shaft), vertical input with single reduction gear attachment — 102 · 103

Standard Type D - High-load thrust and torque, horizontal input — 104 · 105



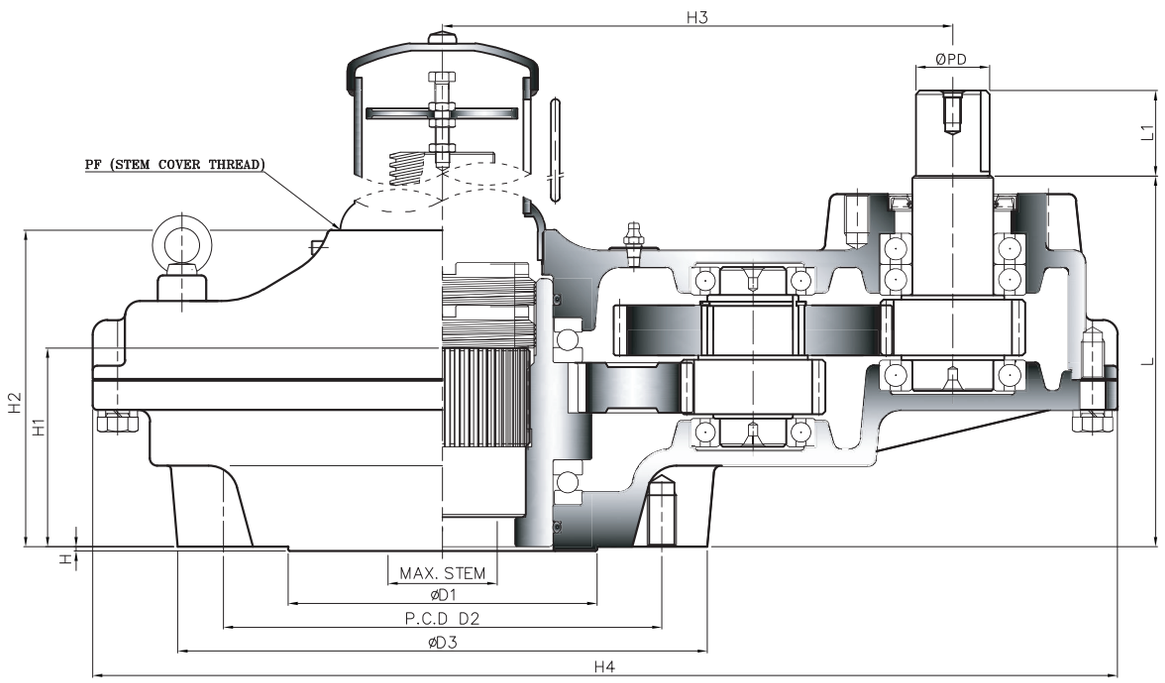
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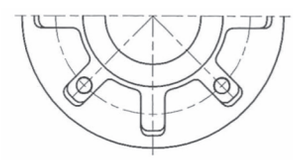
Products

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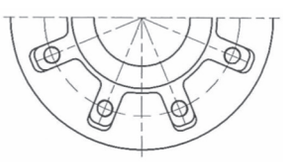
Standard Type A

Vertical input configuration

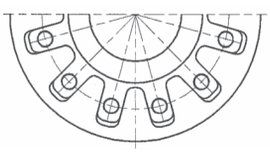




Type A



Type B



Type C

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	L	L1	ØPD	KEY		
				ØD2	N-H-DP												
SB-SR50	A	F-12	85	125	4-M12-18	150	3	63	106	161	335	128	34	26	8X7	200	PF2-1/2"
SB-SR100		F-16	130	165	4-M20-30	210		87	143	191.5	400	164				250	PF3"
SB-SR200	B	F-16 (F-20)	140	205	8-M16-24	250	3	91	160	230	480	180	34	32	10X8	300	PF3-1/2"
SB-SR300		F-25	200	254	8-M16-24	300		99	168	279	570	197				400	PF4"
SB-SR350		F-30	230	298	8-M20–30	350		121	196	299	630	224	44	38	12X8	400	PF5"
SB-SR400		F-30	230	298	8-M20-30	350		133	215	346	691	239	44	38	12X8	500	PF6"
SB-SR500		F-35	260	356	8-M30-45	415		165	252	398	790	278	58	50	16X10	500	PF7"
SB-SR600		F-40	300	406	8-M36-55	475		182	279	437.5	890	320				500	PF8"
SB-SR700	C	F-48	370	483	12-M36-55	560	5	206	309	503	1030	353	58	50	16X10	610	PF8"
SB-SR800		F-48	370	483	12-M36-55	630		233	354	559	1160	406				710	PF10"

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- This series is suitable for Gate and Globe valves, sluice gates, and other applications requiring linear motion for thrust and torque.
- Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for excellent corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Precision-cut gears are heat-treated and ground for optimal performance. Units are fully O-ring sealed for temporary submergence to meet IP67.
- Available options include handwheels, chain wheels, stem covers, and position dial indicators.



Extension Dial Type



Global leader in gear actuators delivering the world's highest quality.

Global Leader SAMBO Gear Actuators

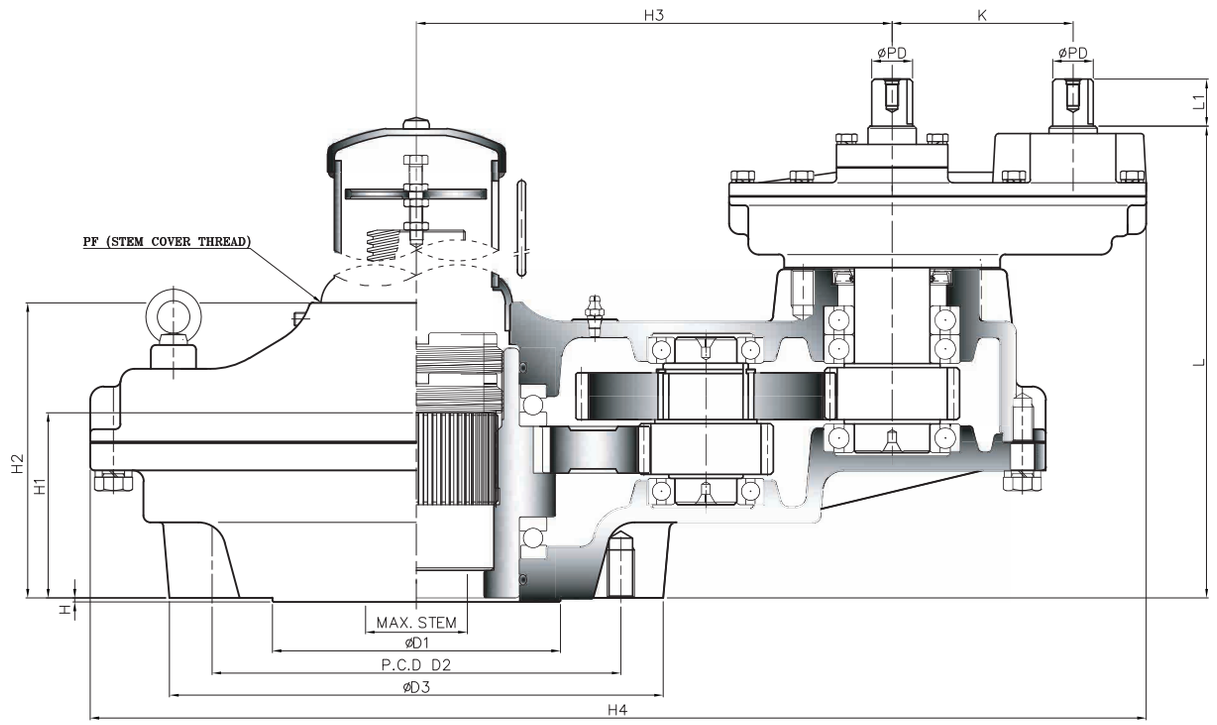
Selection chart for manual operation

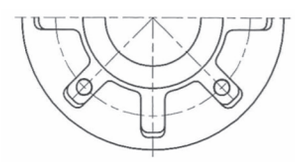
SIZE / MODEL	GEAR RATIO (Standard)	GEAR RATIO (Option) Changeable	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SR50	10 : 1	2~9 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	16
SB-SR100	12 : 1	2.5~11 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	35
SB-SR200	12 : 1	3~11 : 1	62	52 (16X10)	F–14, F-16, (F-20)	190	42714	1500	1106	48
SB-SR300	13 : 1	3~12 : 1	72	60 (18X11)	F–16, (F-20), F-25	288	64745	2500	1844	70
SB-SR350	13 : 1	4~12 : 1	85	72 (20X12)	F-25, F–30	350	78683	3500	2581	101
SB-SR400	14 : 1	4~13 : 1	95	80 (22x14)	F-25, F-30	400	89924	5200	3835	132
SB-SR500	15 : 1	4~14 : 1	105	90 (25x14)	F-30, F-35	510	114653	7800	5753	220
SB-SR600	16 : 1	5~15 : 1	125	110 (32x18)	F-35, F-40	1404	315632	13000	9588	325
SB-SR700	17 : 1	5~16 : 1	140	120 (36x20)	F-40, F-48	1836	412749	17600	12981	448
SB-SR800	17 : 1	5~16 : 1	160	140 (36x20)	F-48	3190	717140	32000	23602	630

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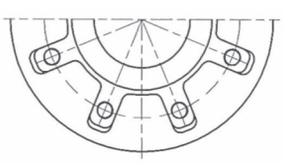
Standard Type A - Twin Shaft

Vertical input for thrust and torque with a single-reduction gear attachment

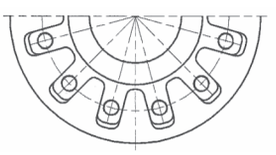




Type A



Type B



Type C

Dimensions

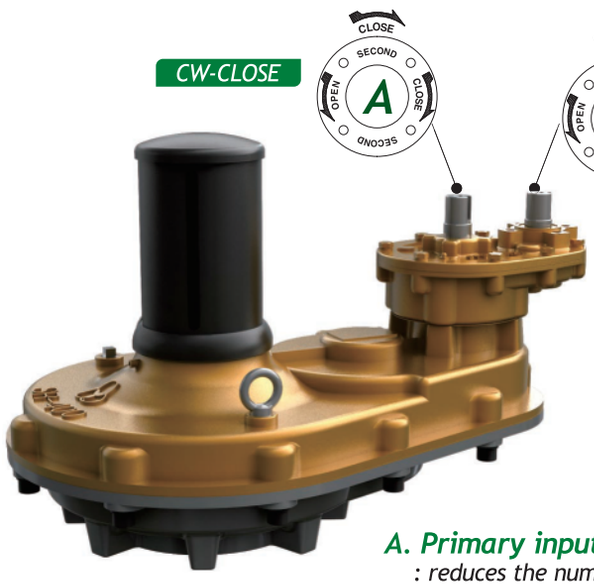
UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-SR50-1ST	A	F-12	85	125	4-M12-18	150	3	63	106	161	393	79	205	34	26	8X7	200	PF2-1/2"
SB-SR100-1ST		F-16	130	165	4-M20-30	210		87	143	191.5	453.5		238				250	PF3"
SB-SR200-1ST	B	F-16 (F-20)	140	205	8-M16-24	250	3	91	160	230	531	93	258.5	34	26	8X7	300	PF3-1/2"
SB-SR300-1ST		F-25	200	254	8-M16-24	300		99	168	279	615		276.5				400	PF4"
SB-SR350-1ST		F-30	230	298	8-M20-30	319		121	196	299	705	121	321	34	32	10X8	400	PF5"
SB-SR400-1ST		F-30	230	298	8-M20-30	350		133	215	346	756		341				500	PF6"
SB-SR500-1ST		F-35	260	356	8-M30-45	415		165	252	398	841	145	382				500	PF7"
SB-SR600-1ST		F-40	300	406	8-M36-55	475		182	279	437.5	987	169	455	44	38	12X8	500	PF8"
SB-SR700-1ST	C	F-48	370	483	12-M36-55	560	5	206	309	503	1101	169	486	44	38	12X8	610	PF8"
SB-SR800-1ST		F-48	370	483	12-M36-55	630		233	354	559	1295	230	628	58	50	16X10	710	PF10"

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Features

- This series is designed for gate and globe valves, sluice gates, and other applications requiring linear motion for thrust and torque.
- Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Precision-cut, heat-treated, and ground gears ensure smooth operation. The units are fully O-ring sealed for temporary submergence to IP67.
- A wide range of options is available, including handwheels and stem covers.



The World's highest quality.

Global Leader SAMBO Gear Actuators

A. Primary input shaft (high speed)
: reduces the number of turns required after the valve is unseated.

B. Secondary input shaft (low speed)
: provides maximum mechanical advantage for seating and unseating.

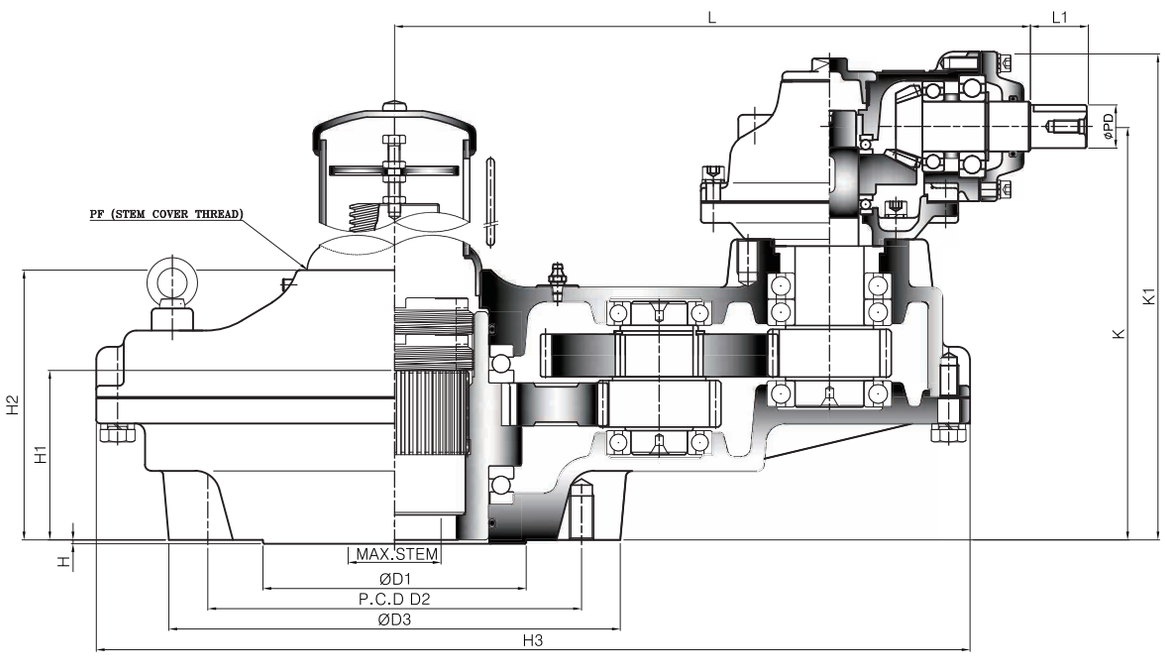
Selection chart for manual operation

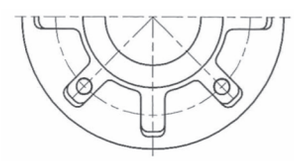
SIZE / MODEL	MAX. GEAR RATIO (Changeable)		MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SR50-1ST	10 : 1	20 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	20
SB-SR100-1ST	12 : 1	24 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	39
SB-SR200-1ST	12 : 1	30 : 1	62	52 (16X10)	F–14, F-16, (F-20)	190	42714	1500	1106	56
SB-SR300-1ST	13 : 1	32.5: 1	72	60 (18X11)	F–16, (F-20), F-25	288	64745	2500	1844	78
SB-SR350-1ST	13 : 1	39 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	111
SB-SR400-1ST	14 : 1	42 : 1	95	80 (22x14)	F-25, F-30	400	89924	5200	3835	144
SB-SR500-1ST	15 : 1	52.5 : 1	105	90 (25x14)	F-30, F-35	510	114653	7800	5753	232
SB-SR600-1ST	16 : 1	64 : 1	125	110 (32x18)	F-35, F-40	1404	315632	13000	9588	353
SB-SR700-1ST	17 : 1	68 : 1	140	120 (36x20)	F-40, F-48	1836	412749	17600	12981	476
SB-SR800-1ST	17 : 1	85 : 1	160	140 (36x20)	F-48	3190	717140	32000	23602	702

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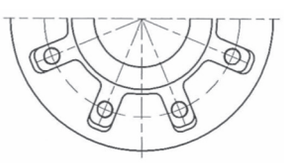
Standard Type B

Horizontal input configuration

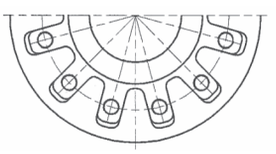




Type A



Type B



Type C

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-SR50-2B	A	F-12	85	125	4-M12-18	150	3	63	106	335	174	214	250	34	26	8X7	250	PF2-1/2"
SB-SR100-2B		F-16	130	165	4-M20-30	210		87	143	400	204	244	280,5				250	PF3"
SB-SR200-2B	B	F-16 (F-20)	140	205	8-M16-24	250	3	91	160	480	239	289	351	34	26	8X7	300	PF3-1/2"
SB-SR300-2B		F-25	200	254	8-M16-24	300		99	168	570	249	299	400				400	PF4"
SB-SR350-2B		F-30	230	298	8-M20-30	319		121	196	630	289	339	446				400	PF5"
SB-SR400-2B		F-30	230	298	8-M20-30	350		133	215	691	298.5	348,5	477				500	PF6"
SB-SR500-2B		F-35	260	356	8-M30-45	415		165	252	790	383	448	586	34	32	10X8	610	PF7"
SB-SR600-2B		F-40	300	406	8-M36-55	475		182	279	890	424,5	489.5	625,5					PF8"
SB-SR700-2B	C	F-48	370	483	12-M36-55	560	5	206	309	1030	508	573	711	34	32	10X8	610	PF8"
SB-SR800-2B		F-48	370	483	12-M36-55	630		236	354	1160	575	657	825	44	38	12X8	710	PF10"

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Features

- This series is designed for gate and globe valves, sluice gates, and other applications requiring linear motion for thrust and torque.
- A unique top-entry, replaceable stem nut made from high-tensile aluminum bronze provides corrosion and abrasion resistance.
- Ductile iron class 65-45-12 castings deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Gears are machine-cut, heat-treated, and ground for optimal operation.
- Units are fully O-ring sealed for temporary submergence to meet Ip67.
- A wide range of options is available, including handwheels and stem covers.



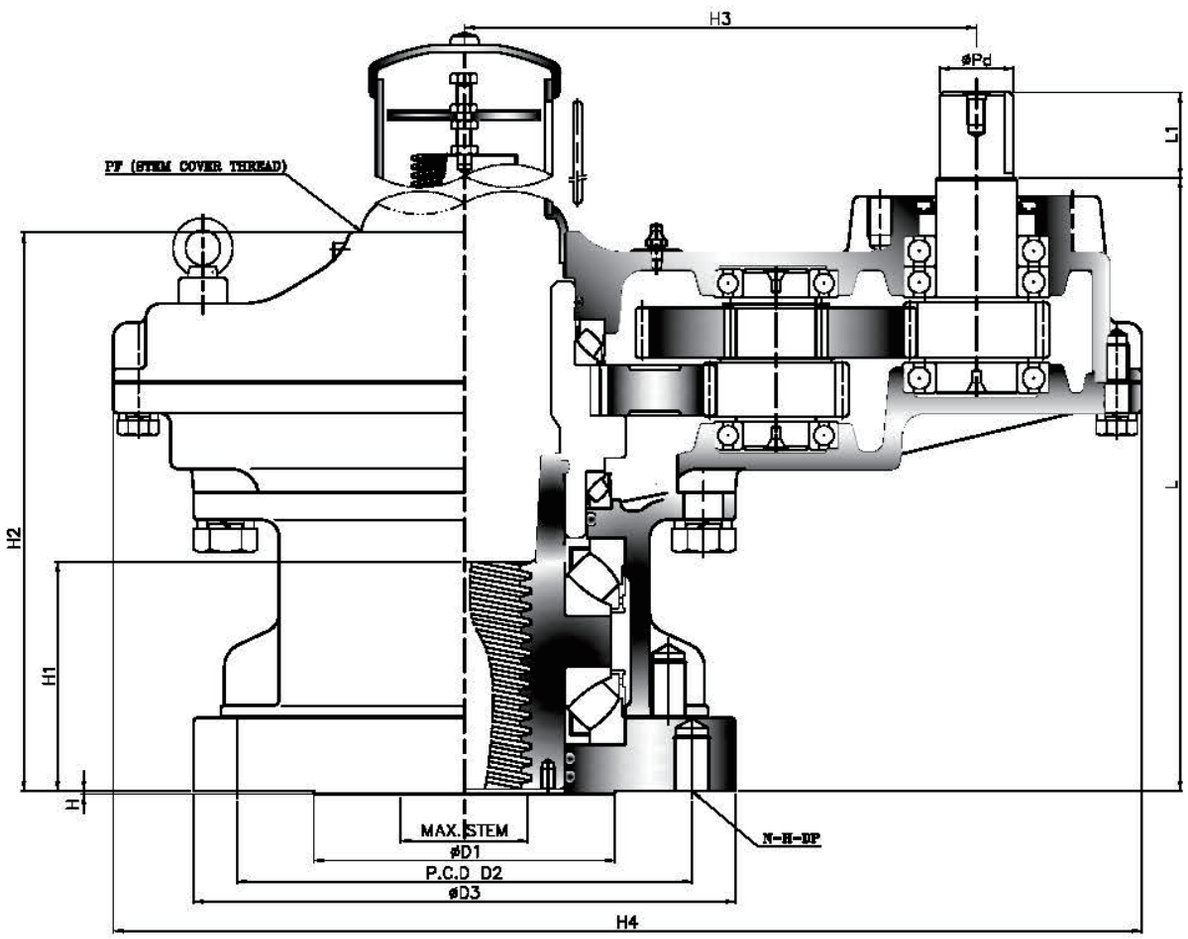
Selection chart for manual operation

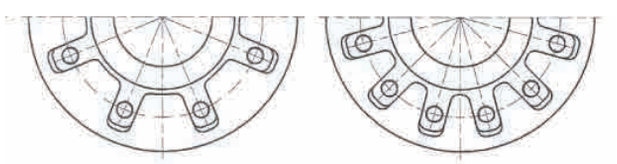
SIZE / MODEL	GEAR RATIO (Standard)	GEAR RATIO (Option) Changeable	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SR50-2B	20 : 1	4~19 : 1	40	32 (10X8)	F-10, F-12	113	25403	370	273	21
SB-SR100-2B	24 : 1	5~23 : 1	55	45 (14X9)	F-14, F-16	141	31698	980	723	40
SB-SR200-2B	30 : 1	7.5~29 : 1	62	52 (16X10)	F–14, F-16, (F-20)	190	42714	1500	1106	56
SB-SR300-2B	32 : 1	7.5~31 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64745	2500	1844	78
SB-SR350-2B	39 : 1	12~38 : 1	85	72 (20X12)	F-25, F-30	350	78683	3500	2581	110
SB-SR400-2B	42 : 1	12~41 : 1	95	80 (22x14)	F-25, F-30	400	89924	5200	3835	142
SB-SR500-2B	60 : 1	16~59 : 1	105	90 (25x14)	F-30, F-35	510	114653	7800	5753	253
SB-SR600-2B	64 : 1	20~63 : 1	125	110 (32x18)	F-35, F-40	1404	315632	13000	9588	358
SB-SR700-2B	85 : 1	25~84 : 1	140	120 (36x20)	F-40, F-48	1836	412749	17600	12981	492
SB-SR800-2B	93.5 : 1	27.5~93 : 1	160	140 (36x20)	F-48	3190	717140	32000	23602	707

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Standard Type C - High Load

Vertical input for thrust and torque





Type B Type C

Dimensions

UNIT:mm

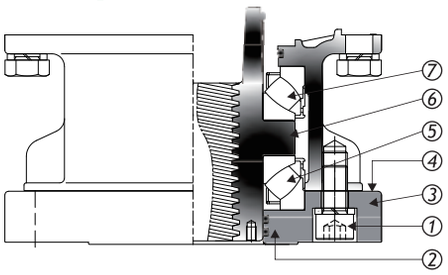
DIM / MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	L	L1	ØPD	KEY		
SB-SR200H	B	F-25	200	254	8-M16-24	300	3	93	317	230	480	337	34	32	10X8	300	PF3-1/2"
SB-SR300H		F-30	230	298	8-M20-30	350		113	351	279	570	380				400	PF4"
SB-SR350H		F-30	230	298	8-M20-30	350		133	388	299	630	387	44	38	12X8	400	PF5"
SB-SR400H		F-35	260	356	8-M30-45	415		153	412	346	691	436	44	38	12X8	500	PF6"
SB-SR500H		F-35	260	356	8-M30-45	415		175	473	398	790	499	58	50	16X10	500	PF7"
SB-SR600H		F-40	300	406	8-M36-55	475		205	520	437.5	890	563				500	PF8"
SB-SR700H	C	F-48	370	483	12-M36-55	560	5	215	613	503	1030	657	58	50	16X10	610	PF8"
SB-SR800H		F-48	370	483	12-M36-55	560		255	689	559	1160	746				710	PF10"

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Spur Gear Actuators

Features

- This series is suitable for gate and globe valves.
- Also ideal for sluice gates and other applications requiring linear motion for thrust and torque.
- Unique top-entry replaceable stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, deliver high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure smooth, efficient operation. Units are fully O-ring sealed for temporary submergence to meet Ip67.
- A wide range of options is available, including handwheels and stem covers.

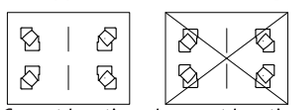


Disassembly and Assembly Procedure

1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.

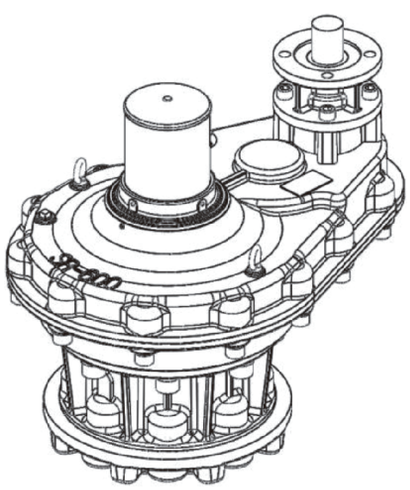


Correct Location　　Incorrect Location



M.O.V Option

- Spur gears can be supplied with motor-actuator input flanges to fit a standard ISO mounting base.



Selection chart for manual operation

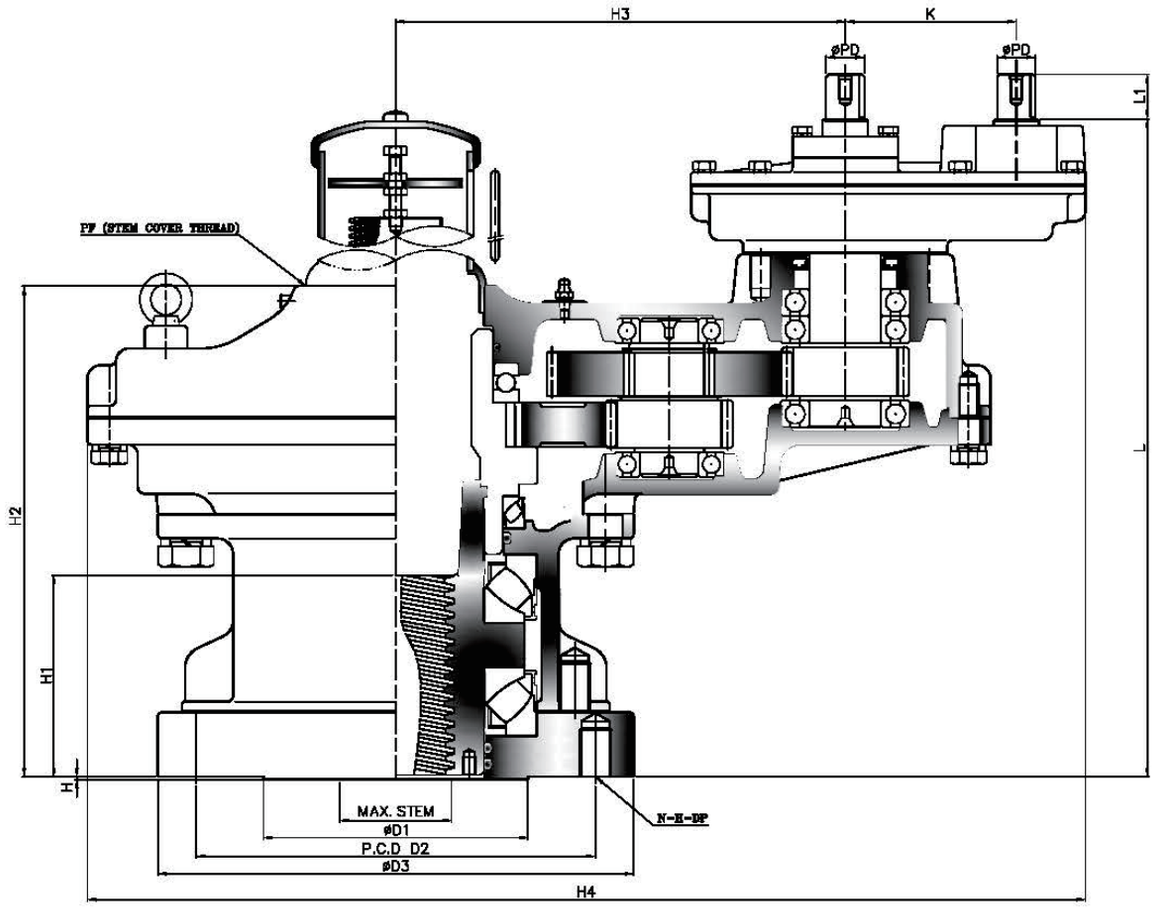
SIZE / MODEL	GEAR RATIO (Standard)	GEAR RATIO (Option) Changeable	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SR200H	12 : 1	3~11 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	78
SB-SR300H	13 : 1	3~12 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	126
SB-SR350H	13 : 1	4~12 : 1	78	70 (20X12)	F-25, F-30	800	179847	7000	5163	157
SB-SR400H	14 : 1	4~13 : 1	90	80 (22x14)	F-25, F-30, F-35	1100	247290	9800	7228	188
SB-SR500H	15 : 1	4~14 : 1	105	90 (25x14)	F-25, F-30, F-35	1500	337213	15000	11063	330
SB-SR600H	16 : 1	5~15 : 1	120	105 (28X16)	F-30, F-35, F-40	2484	558425	23000	16964	474
SB-SR700H	17 : 1	5~16 : 1	150	130 (36X20)	F-35, F-40, F-48	3421	769071	37000	27290	710
SB-SR800H	17 : 1	5~16 : 1	160	140 (36x20)	F-48	5200	1169006	58000	42779	994

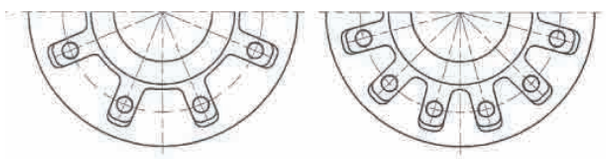
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Standard Type C - High Load

Spur Gear Actuators

delivers high-load thrust and torque with a twin-shaft, vertical input and a single-reduction gear attachment





Type B *Type C*

Dimensions

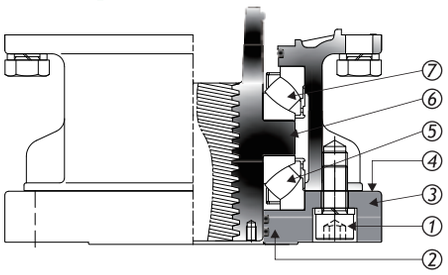
UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-SR200H-1ST	B	F-25	200	254	8-M16-24	300	3	93	317	230	531	93	416	34	26	8X7	300	PF3-1/2"
SB-SR300H-1ST		F-30	230	298	8-M20-30	350		113	351	279	615		459				400	PF4"
SB-SR350H-1ST		F-30	230	298	8-M20-30	350		133	388	299	705	121	513	34	32	10X8	500	PF6"
SB-SR400H-1ST		F-35	260	356	8-M30-45	415		153	412	346	756		538				500	PF6"
SB-SR500H-1ST		F-35	260	356	8-M30-45	415		175	473	398	841	145	603				500	PF7"
SB-SR600H-1ST		F-40	300	406	8-M36-55	475		205	520	437.5	987	169	696	44	38	12X8	500	PF8"
SB-SR700H-1ST	C	F-48	370	483	12-M36-55	560	5	215	613	503	1101	169	790	44	38	12X8	610	PF8"
SB-SR800H-1ST		F-48	370	483	12-M36-55	560		255	689	559	1295	230	963	58	50	16X10	710	PF10"

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Features

- This series is suitable for gate and globe valves.
- Also fits sluice gates and other linear-motion applications requiring thrust and torque.
- A unique top-entry, replaceable stem nut is manufactured from high-tensile aluminum bronze for corrosion and abrasion resistance.
- Ductile iron castings, class 65-45-12, provide high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Machine-cut, heat-treated, and ground gears ensure optimal operation.
- A wide range of options is available, including handwheels and stem covers.

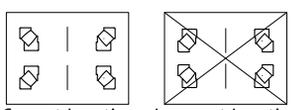


Disassembly and Assembly Procedure

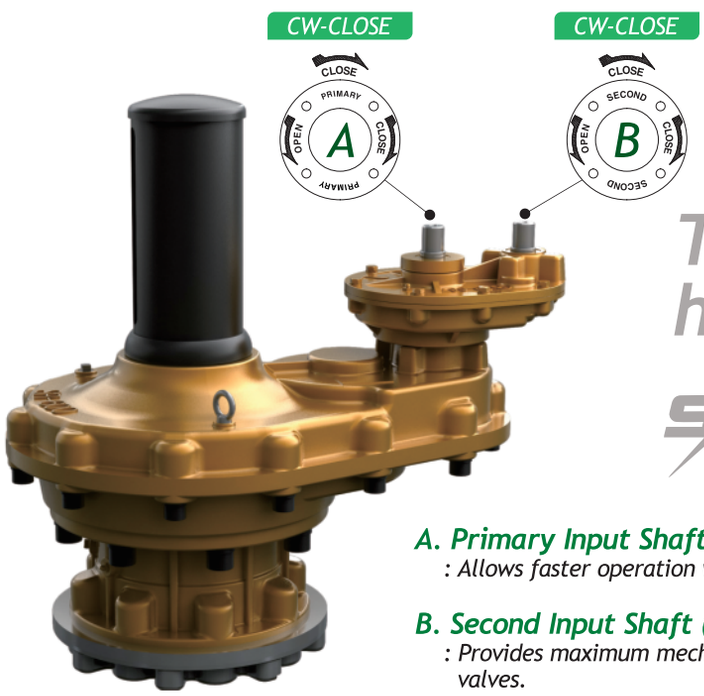
1. Loosen the bolts① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.



Correct Location Incorrect Location



The World's highest quality.

Global Leader SAMBO Gear Actuators

A. Primary Input Shaft (High-Speed Input Shaft)

: Allows faster operation with fewer turns once the valve is unseated.

B. Second Input Shaft (Low-Speed Input Shaft)

: Provides maximum mechanical advantage for seating and unseating valves.

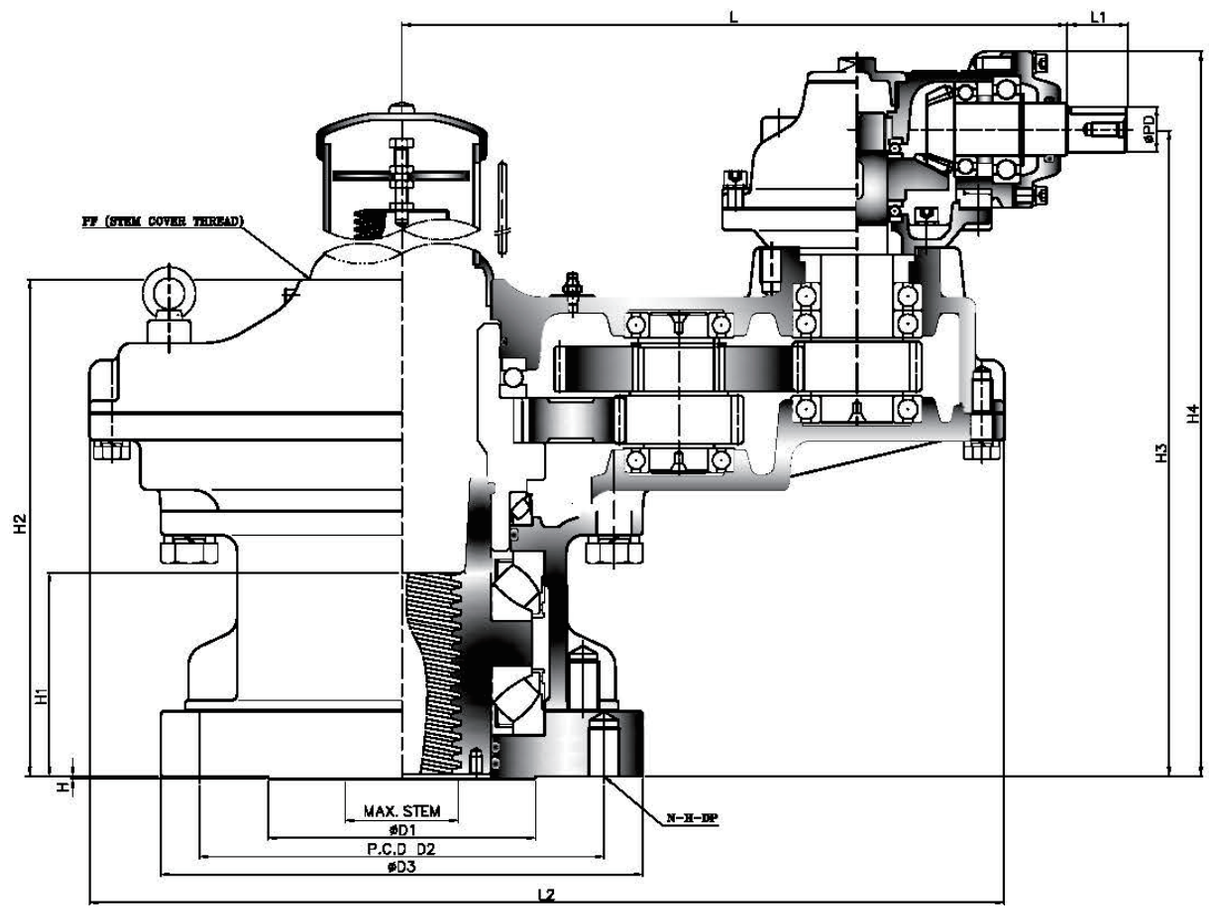
Selection chart for manual operation

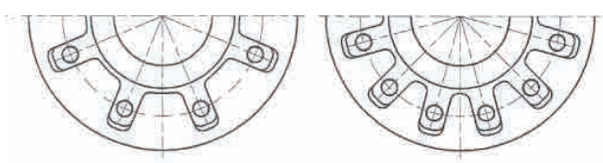
SIZE / MODEL	MAX. GEAR RATIO (Changeable)		MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SR200H-1ST	12 : 1	30 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	86
SB-SR300H-1ST	13 : 1	32.5 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	134
SB-SR350H-1ST	13 : 1	39 : 1	78	70 (20X12)	F-25, F-30	800	179847	7000	5163	167
SB-SR400H-1ST	14 : 1	42 : 1	90	80 (22x14)	F-25,F-30,F-35	1100	247290	9800	7228	200
SB-SR500H-1ST	15 : 1	52.5 : 1	105	90 (25x14)	F-25,F-30,F-35	1500	337213	15000	11063	342
SB-SR600H-1ST	16 : 1	64 : 1	120	105 (28X16)	F-30,F-35,F-40	2484	558425	23000	16964	422
SB-SR700H-1ST	17 : 1	68 : 1	150	130 (36X20)	F-35,F-40,F-48	3421	769071	37000	27290	738
SB-SR800H-1ST	17 : 1	85 : 1	160	140 (36x20)	F-48	5200	1169006	58000	42779	1066

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Standard Type C - High Load

engineered for high-load thrust and torque with horizontal input





Type B Type C

Dimensions

UNIT : mm

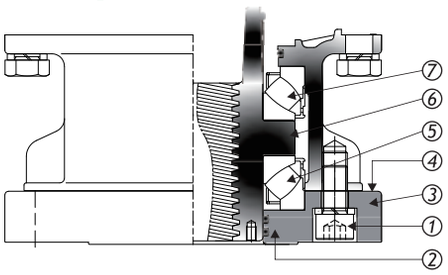
DIM / MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	L2	L	L1	ØPD	KEY		
				ØD2	N-H-DP													
SB-SR200H-2B	B	F-25	200	254	8-M16-24	300	3	93	317	396	446	480	351	34	26	8X7	300	PF3-1/2"
SB-SR300H-2B		F-30	230	298	8-M20-30	350		113	351	432	482	570	400				400	PF4"
SB-SR350H-2B		F-30	230	298	8-M20-30	350		133	388	452	502	630	446				400	PF6"
SB-SR400H-2B		F-35	260	356	8-M30-45	415		153	412	495.5	545.5	691	477	34	32	10X8	500	PF6"
SB-SR500H-2B		F-35	260	356	8-M30-45	415		175	473	603.5	668.5	790	586				500	PF7"
SB-SR600H-2B		F-40	300	406	8-M36-55	475		205	520	665.5	730	890	625.5				500	PF8"
SB-SR700H-2B	C	F-48	370	483	12-M36-55	560	5	215	613	781	846	1030	711	34	32	10X8	610	PF8"
SB-SR800H-2B		F-48	370	483	12-M36-55	560		255	689	910	993	1160	825	44	38	12X8	710	PF10"

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Spur Gear Actuators

Features

- This series is suitable for gate and globe valves.
- Also compatible with sluice gates and other linear-motion applications requiring thrust and torque.
- Unique top-entry, replaceable stem nut manufactured from high-tensile aluminum bronze for superior corrosion and abrasion resistance.
- Castings are ductile iron, class 65-45-12, providing high strength and impact resistance.
- Heavy-duty roller bearings support both radial and axial thrust loads.
- Gears are machine-cut, heat-treated, and ground for optimal operation.
- A range of options is available, including handwheels and stem covers.

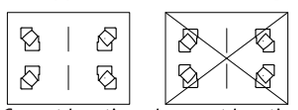


Disassembly and Assembly Procedure

1. Loosen the bolts ① and remove the TH-Base③.
   - Inspect the O-ring②.
2. Remove the TH-Base gasket④.
3. Remove the lower thrust roller bearing⑤.
4. Remove the stem bush⑥.
5. Remove the upper thrust roller bearing⑦.
6. Reassemble in the reverse order.

⚠CAUTION

Verify the exact positions of the upper and lower bearings.

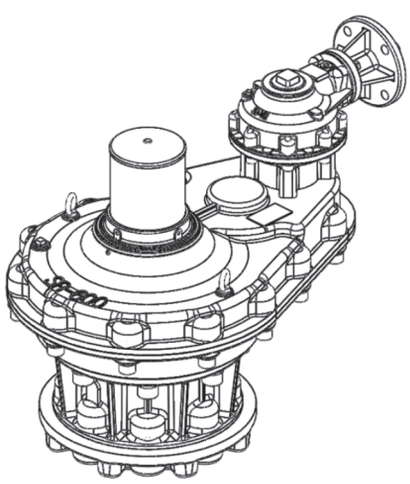


Correct Location | Incorrect Location



M.O.V Option

- Spur Gear units can be supplied with motor-actuator input flanges to suit standard ISO mounting bases.



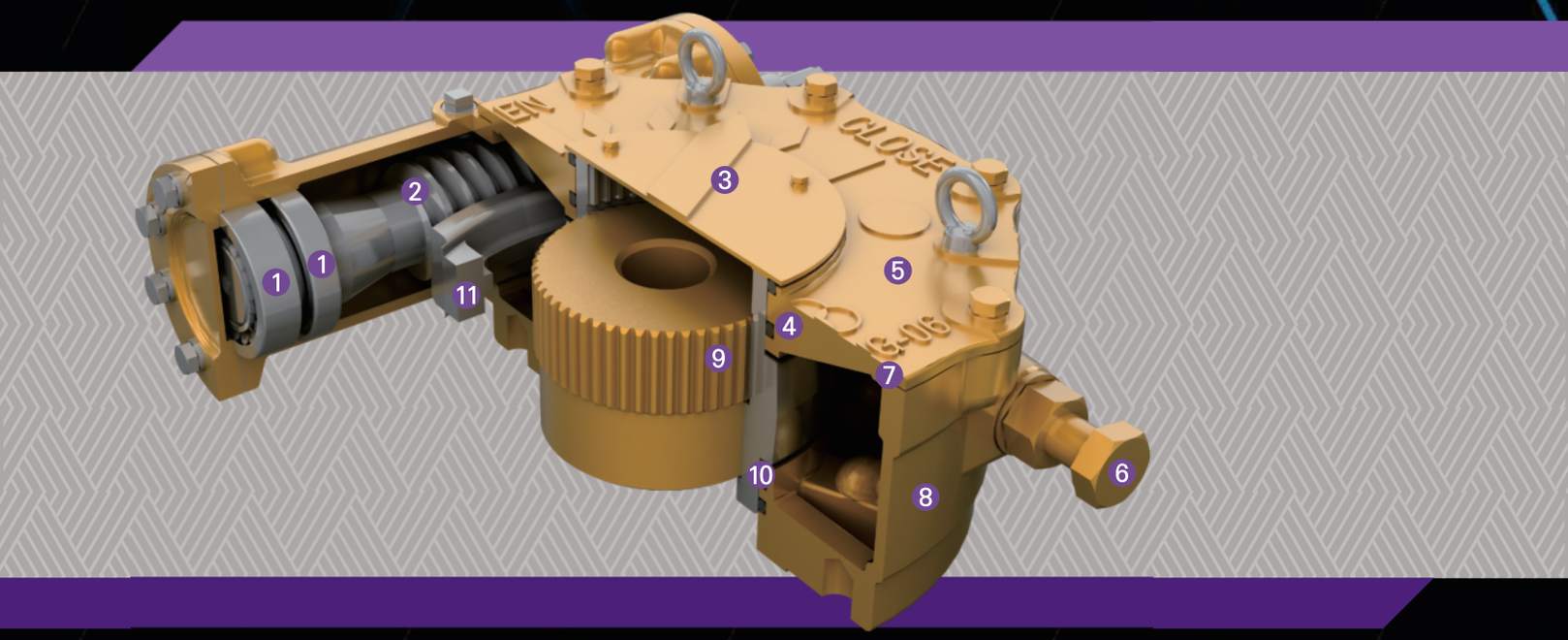
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO (Standard)	GEAR RATIO (Option) Changeable	MAX. STEM ACCEPTANCE		BASE MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-SR200H-2B	30 : 1	7.5~29 : 1	65	55 (16X10)	(F-20), F-25	350	78683	2900	2139	86
SB-SR300H-2B	32 : 1	7.5~31 : 1	78	70 (20X12)	F-25, F-30	510	114653	4500	3319	134
SB-SR350H-2B	39 : 1	12~38 : 1	78	70 (20X12)	F-25, F-30	800	179847	7000	5163	166
SB-SR400H-2B	42 : 1	12~41 : 1	90	80 (22x14)	F-25, F-30, F-35	1100	247290	9800	7228	198
SB-SR500H-2B	60 : 1	16~59 : 1	105	90 (25x14)	F-25, F-30, F-35	1500	337213	15000	11063	363
SB-SR600H-2B	64 : 1	20~63 : 1	120	105 (28X16)	F-30, F-35, F-40	2484	558425	23000	16964	507
SB-SR700H-2B	85 : 1	25~84 : 1	150	130 (36X20)	F-35, F-40, F-48	3421	769071	37000	27290	754
SB-SR800H-2B	93.5 : 1	27.5~93 : 1	160	140 (36x20)	F-48	5200	1169006	58000	42779	1071

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Special View & Features

Worm Gear Actuators



Worm Gear

①Tapered Roller and Ball Bearings

The worm shaft is supported by tapered roller bearings that carry both axial and radial loads generated by the gearing.

② Worm

Manufactured from heat-treated 1045 steel with ground and polished threads. Precision machining minimizes backlash between the worm and the worm gear.

③ Indicator Plate

The pointer provides clear, positive position indication. The pointer can be easily repositioned when required.

④ Sealing

The drive sleeve includes an oil seal at the top and a large cross-section O-ring at the bottom. This sealing design enables a submersible service rating to Ip67.

⑤ Cover

'Close-Open-Close' legends are cast directly into the cover. This allows operation in either direction with clear position indication.

⑥ External Adjustable Stops

Stop bolts provide ±5° position accuracy. Each bolt includes Buna-N sealing washers to prevent water intrusion.

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The worm gear series ranges from 360 N·m (260 ft·lbf) to 2,000,000 N·m (1,475,124 ft·lbf).

Units are available with single-, double-, or triple-reduction spur gears.
Vertical input configuration available.



The World's highest quality.

Global Leader
SAMBO
Gear Actuators

⑦ Gaskets
Each end of the worm assembly uses a specially designed non-asbestos gasket that is fully water-resistant.

⑧ Housing
All external castings are ductile iron, Class 65-45-12, with a tensile strength of 65,000 psi.

⑨ Splined Bushings
All units are supplied with removable splined bushings to ensure precise alignment between the gear drive and the valve shaft.

⑩ Thrust Washer
The drive sleeve is fitted with hardened steel thrust washers above and below the worm gear.

⑪ Worm Gear
The standard material is ductile iron, Grade 80-55-06, suitable for most industrial applications. Aluminum bronze is available as an option, with a tensile strength of 85,000 psi. It is typically specified for motorized applications involving modulating service and is also required to meet AWWA standards.

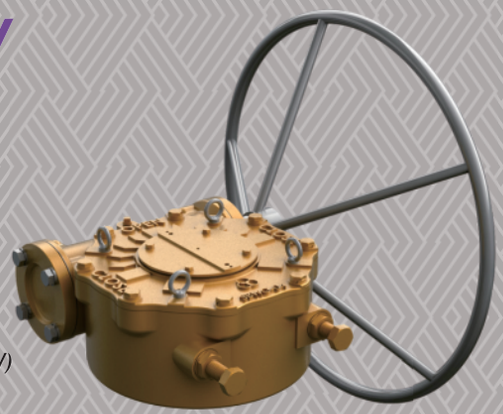
Worm Gear Actuators

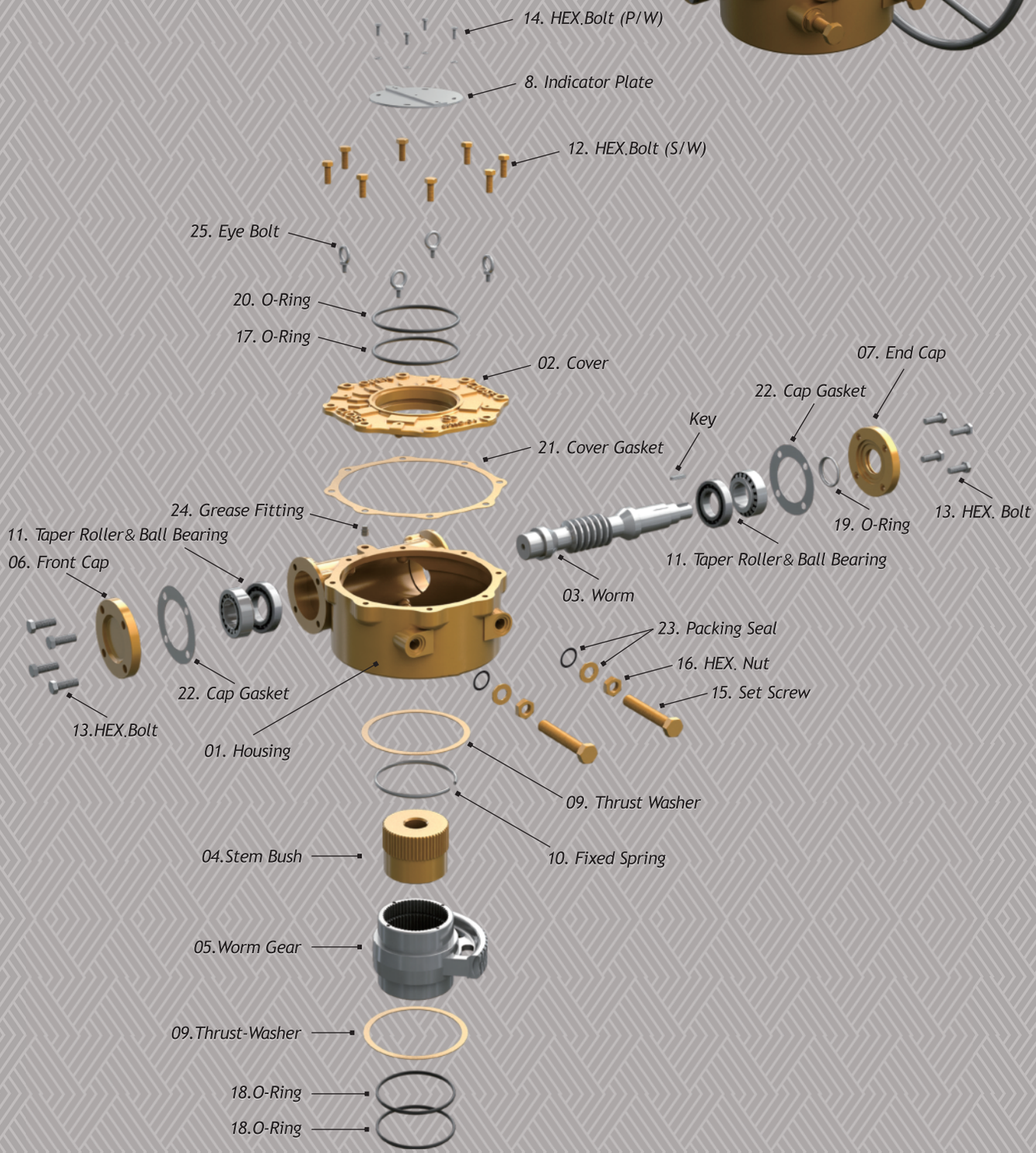
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Worm Gear Actuator Assembly

Standard Type A

Horizontal input





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Part List and Materials

	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	NOTE.3
	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	NBR			NOTE. 4
	18	O-Ring	NBR			
	19	O-Ring	NBR			
	20	O-Ring	NBR			
	21	Cover Gasket	Non - Asbestos			
	22	Cap Gasket	Non - Asbestos			
	23	Packing Seal	NBR			
	24	Grease Fitting	Steel + Galvanizing			
	25	Eye Bolt	Steel + Galvanizing			
OPTION	OP-01	Hand Wheel	Steel Pipe	SGP	A53	Handle part NOTE.5
	OP-02	Key	Carbon Steel	S45C	A576-1045	
	OP-03	Name Plate	Stainless Steel			
	OP-04	Washer	Stainless Steel			
	OP-05	HEX.olt (S/W)	Stainless Steel			

Material Details: Options and Material Changes

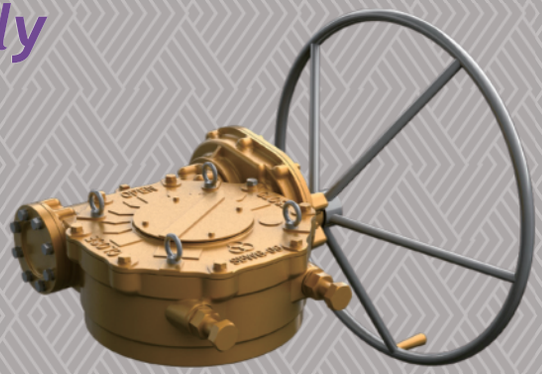
1. All castings are ductile iron FCD-450 (ASTM 65-45-12). SAMBO can also supply stainless steel or carbon steel to meet customer requirements.
2. For special pinion requests, options include nickel plating, high-tensile stainless steel, and duplex stainless steel.
3. Stem nut material is available in ALBC3 (aluminum bronze).
4. Standard O-ring material is NBR, rated for −20˚C to +120˚C (−4˚F to +248˚F).
   The standard lubricant is Zenith EP582, rated for −20˚C to +200˚C (−4˚F to +392˚F).
   High-temperature option: Viton O-ring (VF750 equivalent), −30˚C to +200˚C (−22˚F to +392˚F), with Zenith SYN VSB2 lubricant rated for −30˚C to +400˚C (−22˚F to +752˚F).
   Low-temperature option: silicone O-ring, −60˚C to +150˚C (−76˚F to +302˚F), with Zenith SBLT600 lubricant rated for −60˚C to +200˚C (−76˚F to +248˚F).
5. Handwheel options include locking device, chainwheel, and square adapter.
   Finish : Unless otherwise specified, the gearbox is coated with a two-component wash primer.
   Final finish coating is available on request.

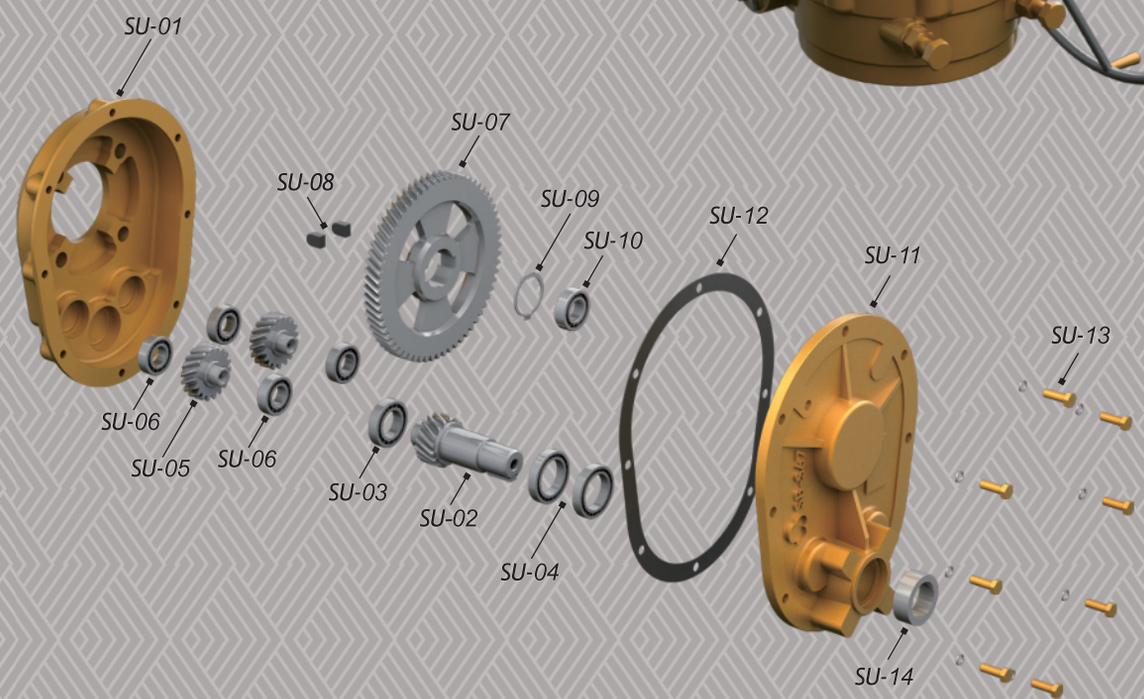
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Worm Gear Actuator Assembly

Standard Type A

Horizontal input
with single-reduction gear attachment





Worm Gear

Part List and Materials

NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
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	NOTE.3
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 Bearing	Special Steel	SUJ2	A295-52100	
12	HEX. Bolt (S/W)	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	NBR			NOTE.4
18	O-Ring	NBR			
19	O-Ring	NBR			
20	O-Ring	NBR			
21	Cover Gasket	Non - Asbestos			
22	Cap Gasket	Non - Asbestos			

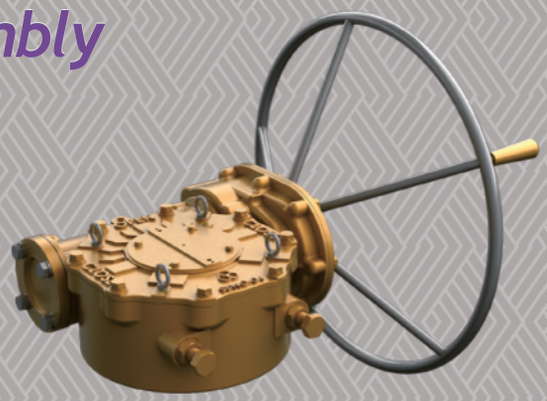
NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
23	Packing Seal	NBR			
24	Grease Fitting	Steel + Galvanizing			
25	Eye Bolt	Steel + Galvanizing			
SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12	
SU-02	Helical Pinion	Carbon Steel	S45C	A576-1045	NOTE.2
SU-03	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-04	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-05	Idle Gear	Carbon Steel	S45C	A576-1045	
SU-06	Radial Ball B/R	Speciial Steel	SUJ2	A295-52100	
SU-07	Helical Gear	Carbon Steel	S45C	A576-1045	
SU-08	Key (1R)	Carbon Steel	S45C	A576-1045	
SU-09	Snap Ring	Carbon Steel	S45C	A576-1045	
SU-10	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-11	Support Cover	Ductile Iron	FCD-450	A536-65-45-12	
SU-12	S-Cover Gasket	Nonasbestos			
SU-13	HEX. Bolt (S/W)	Alloy Steel	SCM435	A322-4135	
SU-14	Oil-Seal	Buna N	NBR		
OP-01	Hand Wheel	Steel Pipe	SGP	A53	NOTE.5
OP-02	Key(1R)	Carbon Steel	S45C	A576-1045	
OP-03	Name Plate	Stainless Steel			Optional handle parts
OP-04	Washer	Stainless Steel			
OP-05	HEX. Bolt (S/W)	Stainless Steel			

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Worm Gear Actuator Assembly

Standard Type A

Horizontal input
with double-reduction gear attachment





Part List and Materials

NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
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	
6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12	NOTE.3
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 Bearing	Special Steel	SUJ2	A295-52100	
12	HEX. Bolt (S/W)	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	NBR			NOTE.4
18	O-Ring	NBR			
19	O-Ring	NBR			
20	O-Ring	NBR			
21	Cover Gasket	Non - Asbestos			
22	Cap Gasket	Non - Asbestos			

NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM	
23	Packing Seal	NBR			
24	Grease Fitting	Steel + Galvanizing			
25	Eye Bolt	Steel + Galvanizing			
SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12	
SU-02	Helical Gear	Carbon Steel	S45C	A576-1045	
SU-03	Key (1R)	Carbon Steel	S45C	A576-1045	
SU-04	Snap Ring	Carbon Steel	S45C	A576-1045	
SU-05	Idle Gear	Carbon Steel	S45C	A576-1045	
SU-06	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-07	Key (1R)	Carbon Steel	S45C	A576-1045	
SU-08	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-09	Helical Pinion	Carbon Steel	S45C	A576-1045	NOTE.2
SU-10	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-11	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
SU-12	Support Cover	Ductile Iron	FCD-450	A536-65-45-12	
SU-13	S-Cover Gasket	Nonasbestos			
SU-14	HEX. Bolt (S/W)	Stainless	SCM435	A322-4135	
SU-15	Oil-Seal	Buna N	NBR		
OP-01	Hand Wheel	Steel Pipe	SGP	A53	NOTE.5
OP-02	Key (1R)	Carbon Steel	S45C	A576-1045	Optional handle parts
OP-03	Name Plate	Stainless Steel			
OP-04	Washer	Stainless Steel			
OP-05	HEX. Bolt (S/W)	Stainless Steel			

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Index

Type A

Standard Type A - horizontal input 118 · 119

Standard Type A - horizontal input with single reduction gear attachment 120 · 121

Standard Type A - twin shaft, horizontal input with single reduction gear Attachment 122 · 123

Standard Type A - horizontal input with double reduction gear Attachment 124 · 125

Standard Type A - twin shaft, horizontal input with double reduction gear Attachment 126 · 127

Standard Type A - horizontal input with tripl reduction gear Attachment 128 · 129

Type B

Standard Type B - vertical input with double reduction gear attachment 130 · 131

Standard Type B - vertical input with tripl reduction gear Attachment 132 · 133

Standard Type B - vertical input with single reduction gear Attachment 134 · 135

Type C

Standard Type C - horizontal input with double reduction gear attachment 136 · 137

Type E

Standard Type E - vertical input with single reduction gear Attachment 138 · 139

Standard Type E - vertical input with double reduction gear attachment 140 · 141

Part-Turn

Part-Turn 135° - horizontal input 142 · 143

Part-Turn 135° - horizontal input with single reduction gear attachment 144 · 145

Part-Turn 135° - horizontal input with double reduction gear attachment 146 · 147

Part-Turn 180° - horizontal input 148 · 149

Part-Turn 180° - horizontal input with single reduction gear attachment 150 · 151

Part-Turn 180° - horizontal input with double reduction gear attachment 152 · 153

Part-Turn 45°, 90°, 135°, 180°, 225°, 270°, 315°, 360° - Traveling Nut Stop Horizontal Input 154 · 155

Part-Turn 45°, 90°, 135°, 180°, 225°, 270°, 315°, 360° - Traveling Nut Stop Horizontal Input with single reduction gear attachment 156 · 157

Part-Turn 45°, 90°, 135°, 180°, 225°, 270°, 315°, 360° - Traveling Nut Stop Horizontal Input with double reduction gear attachment 158 · 159

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Products

Multi-Turn

Multi-turn 360° with horizontal input 160 · 161

Multi-turn 360° with horizontal input and single reduction gear attachment 162 · 163

Multi-turn 360° with horizontal input and double reduction gear attachment 164 · 165

Declutch Gear

Declutch gear witrh horizontal input 166 · 167

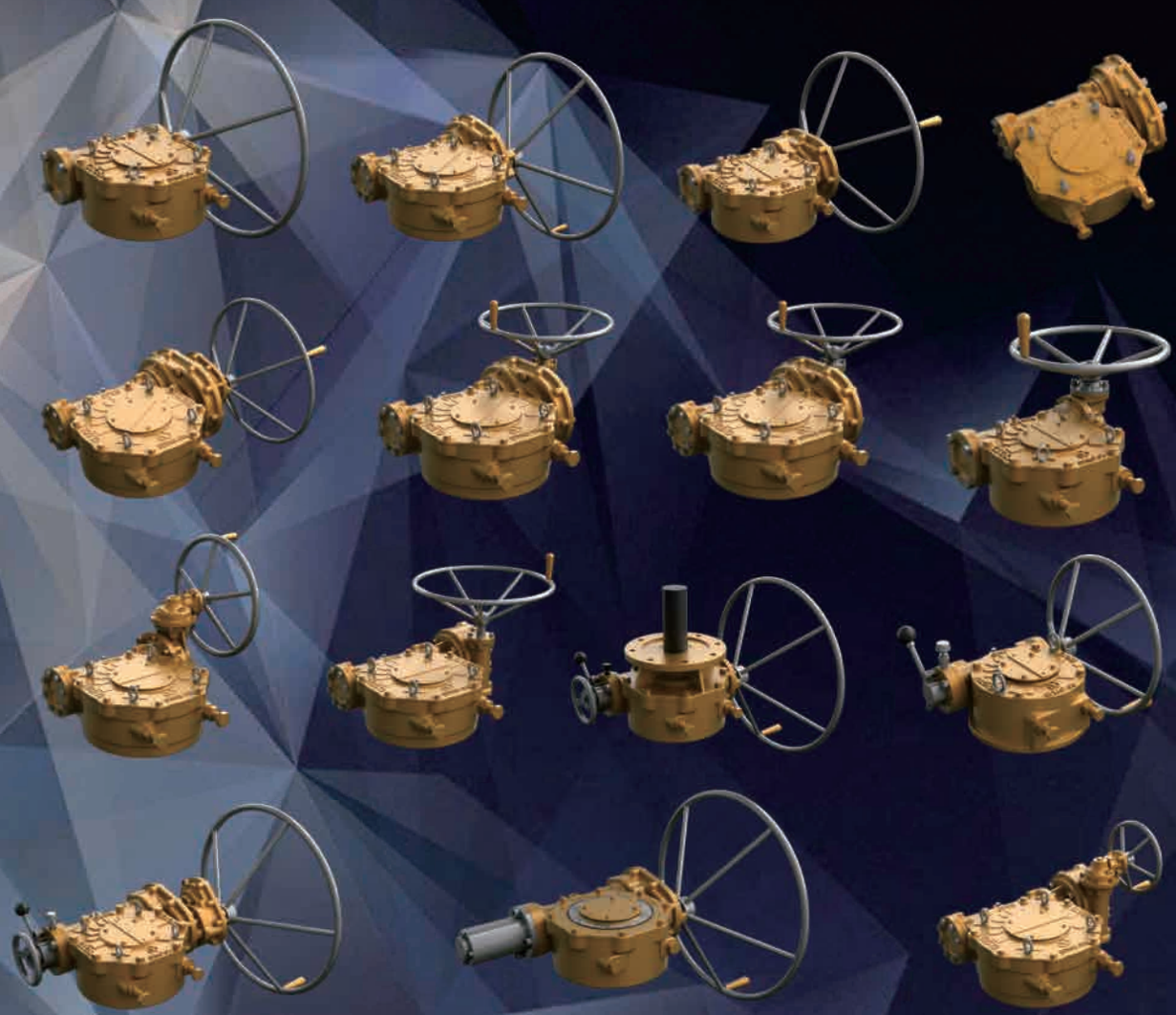
Declutch gear with horizontal input and single reduction gear attachment 168 · 169

Declutch gear with horizontal input and triple reduction gear attachment 170 · 171

Declutch gear for pneumatic actuators with horizontal input 172 · 173

Declutch gear for pneumatic actuators with horizontal input and single-reduction gear attachment 174 · 175

Declutch gear for pneumatic actuators with horizontal input and double-reduction gear attachment 176 · 177



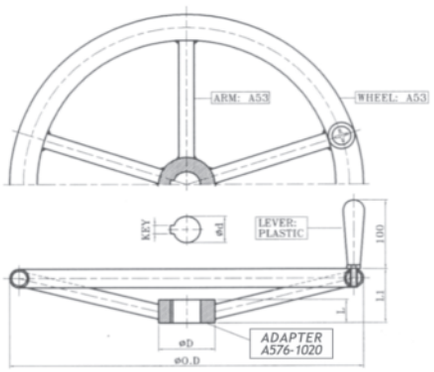
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Handwheel Types

Worm Standard Handwheel

UNIT : mm

SIZE / MODEL	Φ0.D	ΦD	Φd & KEY	L	L1	ARM Q'TY
GH-200	200	40	Ø16 (6X6)	25	70	3
GH-250	250				80	
GH-300	300	50	Ø21 (6X6)	30	90	4
GH-400	400				110	5
GH-500	500	60	Ø26 (8X7)	35	130	
GH-610	610	70	Ø32 (10X8)	35	150	
GH-710	710					
GH-800	800	80	Ø38 (12X8)	45		
GH-900	900					6
GH-1000	1000	90	Ø50 (16X10)	59		

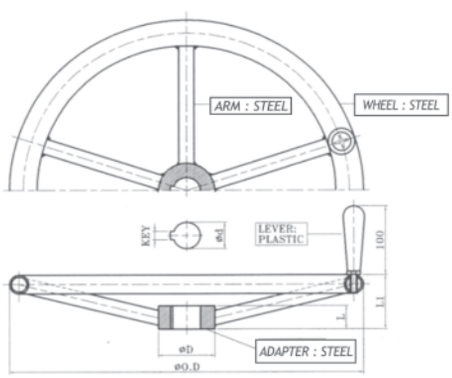


· Unless otherwise specified, handwheels are manufactured to the dimensions shown above.
· Optional materials are available, and handwheel sizes can be configured for any model.

Worm Solid Handwheel

UNIT : mm

SIZE / MODEL	Φ0.D	ΦD	Φd & KEY	L	L1	ARM Q'TY
GSH-200	200	40	Ø16 (6X6)	25	70	3
GSH-250	250				80	
GSH-300	300	50	Ø21 (6X6)	30	90	4
GSH-400	400				110	5
GSH-500	500	60	Ø26 (8X7)	35	130	
GSH-610	610	70	Ø32 (10X8)	35	150	
GSH-710	710					
GSH-800	800	80	Ø38 (12X8)	45		
GSH-900	900					6
GSH-1000	1000	90	Ø50 (16X10)	59		

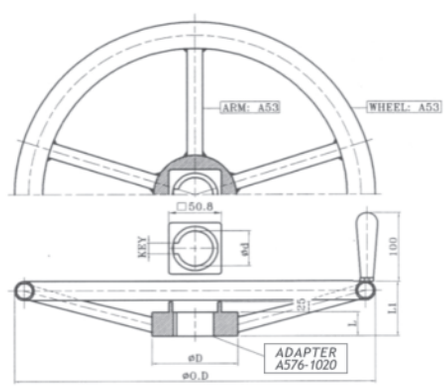


· If there is no request from customers, we will make handwheel as per the above table.
· As option, the material can be changed and Handwheel size can be suitable for all model.

2" Square Nut Handwheel

UNIT : mm

SIZE / MODEL	Φ0.D	ΦD	Φd & KEY	L	L1	ARM Q'TY
GDNH-200	200	40	Ø16 (6X6)	25	70	3
GDNH-250	250				80	
GDNH-300	300	50	Ø21 (6X6)	30	90	4
GDNH-400	400				110	5
GDNH-500	500	60	Ø26 (8X7)	35	130	
GDNH-610	610	70	Ø32 (10X8)	35	150	
GDNH-710	710					
GDNH-800	800	80	Ø38 (12X8)	45		
GDNH-900	900					6
GDNH-1000	1000	90	Ø50 (16X10)	59		



· This handwheel is designed for use with an air impact wrench and can be manufactured to meet customer requirements.

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

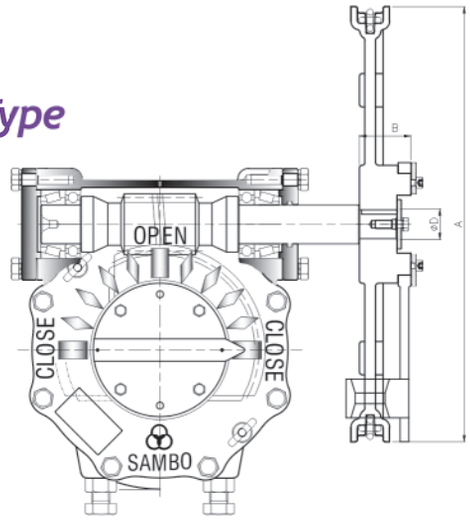
Chain Wheel Type

Worm Standard

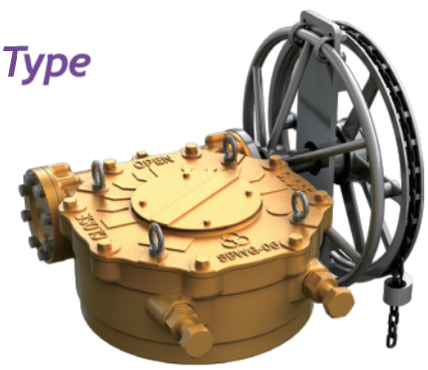
UNIT:mm

SIZE / MODEL	A	B	ΦD & KEY
CH-200	200	43	Φ16 (6X6) Φ21 (6X6)
CH-250	250		
CH-300	300	43.5	Φ26 (8X7) Φ32 (10X8)
CH-350	350		
CH-400	400	50	Φ38 (12X8)
CH-450	450		
CH-500	500		
CH-550	550		
CH-600	600		
CH-700	700	51.5	Φ38 (12X8) Φ50 (16X10)
CH-800	800	53	

Gear Type



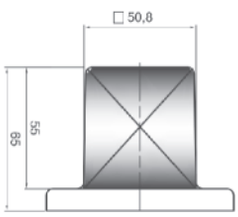
Hammer Type



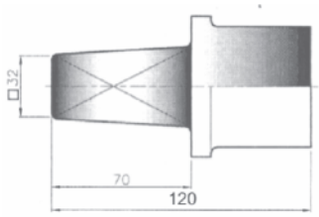
Two chainwheel configurations are available.

- Gear type mounts directly to the gear.
- Hammer type couples to the handwheel.
- Materials: sprocket rim (FCD450), guide arm (FCD450), and chain (steel + Zn).

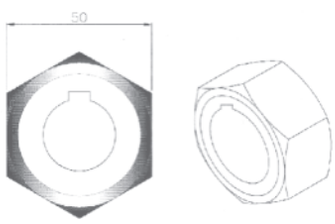
Square Adapter



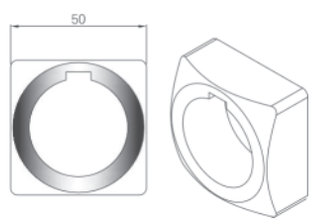
2" Square Nut Adapter



32 Square Nut Adapter

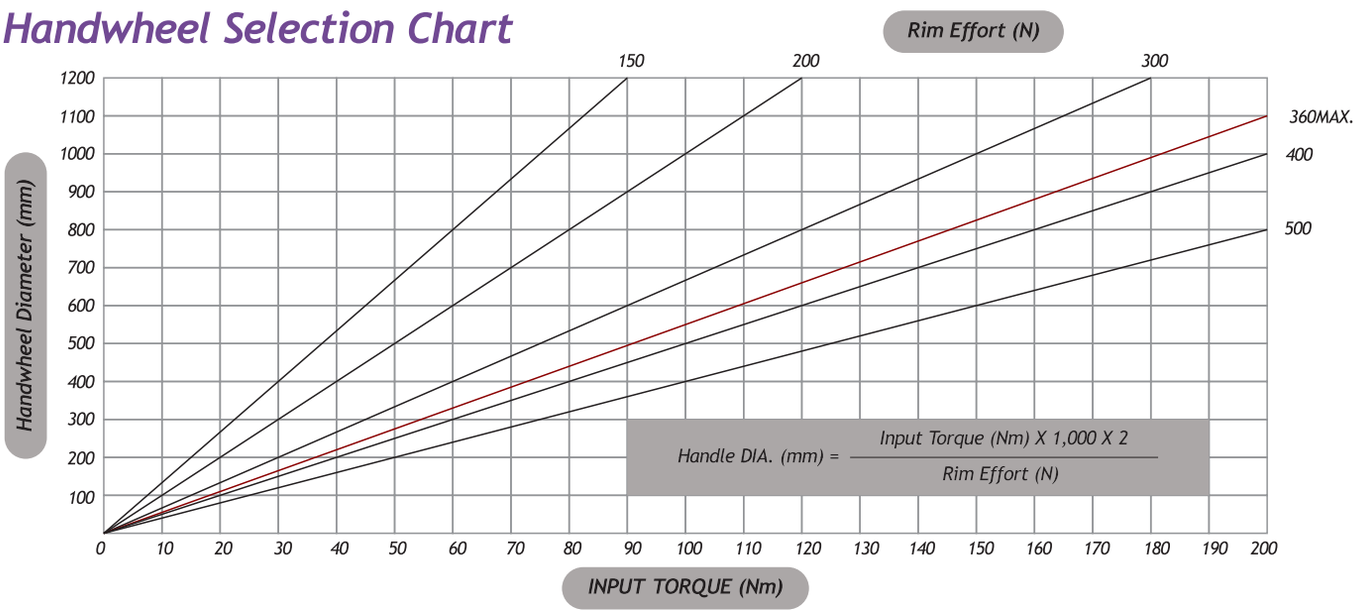


Hexagon Adapter



2" Square Nut

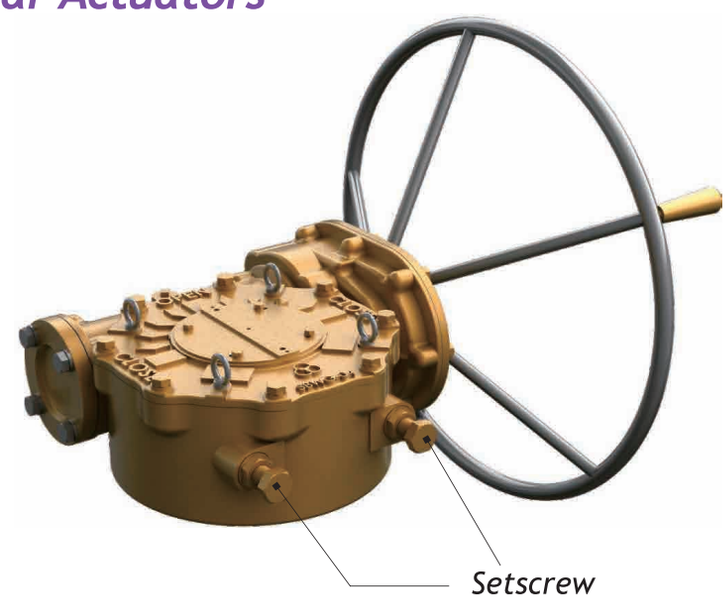
Handwheel Selection Chart



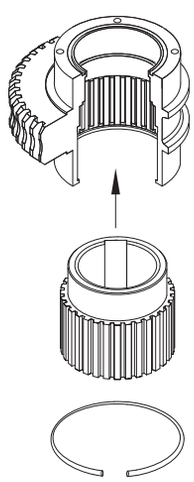
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Follow these instructions to mount the gear to the valve

Twin-Shaft Gear Actuators

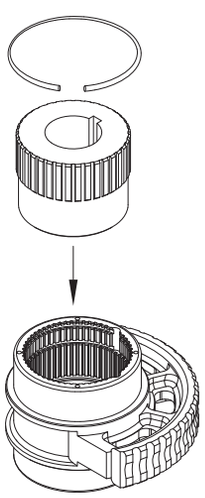


Bottom Entry



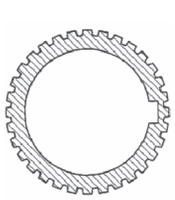
SBWG-0~35 Series

Upper Entry

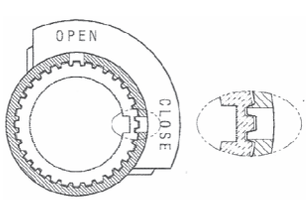


SBWG-04~13 Series

Stem Bush



Worm Gear



• *If it does not match, the position may not be proper.*

Adjustment of Setscrew

1. *Ensure the valve and actuator are correctly set.*
2. *After completing the setup, make the final adjustment using the worm gearbox setscrews.*

Warning

- *SAMBO worm gearboxes are not factory set to exactly 90 degrees.*
- *After installing the valve and actuator, accurately adjust and tighten the setscrews.*
- *Improper setscrew adjustment may cause damage : the user is responsible for correct setting.*

Bush Insert

Assembly

1. *Turn the gearbox to expose the bottom side.*
2. *Insert the bush into the worm gear, aligning the bushing key with the gear groove in a straight line. The bottom of the worm gear has two grooves : one for OPEN and one for CLOSE.*
3. *Install the retaining spring.*

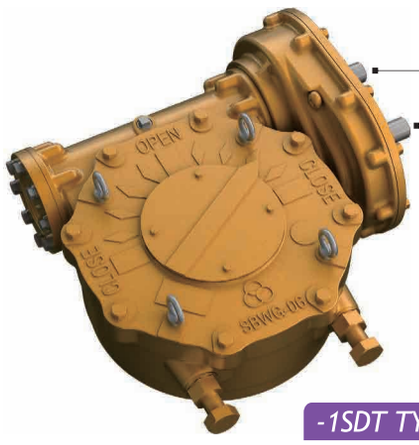
Caution

- *When inserting the bushing, align the worm gear groove with the bushing key.*
- *The groove is marked to indicate the OPEN or CLOSE position.*
- *If alignment is incorrect, the position may be improper.*
- *Apply grease to the bush and the surrounding area during insertion.*
- *This helps prevent corrosion and extends service life.*
- *If alignment is incorrect, the position may be improper.*

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Twin-Shaft Gear Actuators

This actuator features two input shafts.
One is for high speed and the other for low speed.



-1SDT TYPE

Secondary input shaft (low speed)

Provides maximum mechanical advantage for seating and unseating valves.

Primary input shaft (high speed)

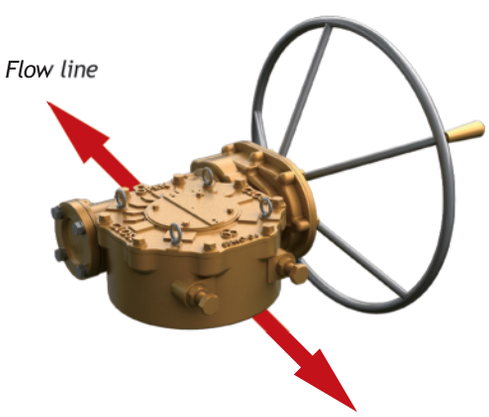
Reduces the number of turns required once the valve has been unseated.

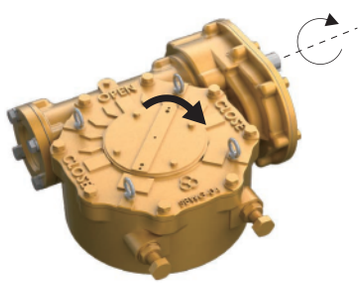
The World's highest quality.

Global Leader SAMBO Gear Actuators

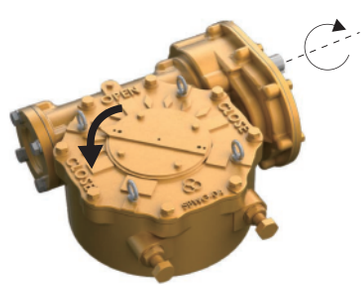
Input/Output Shaft Rotation Options

Right-hand input



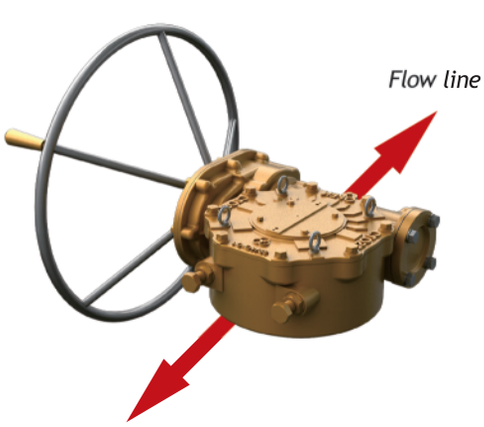


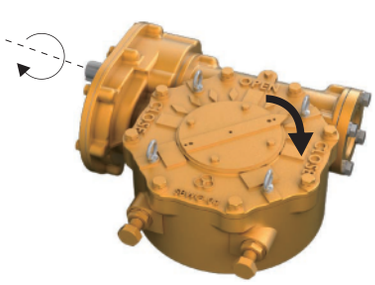
Right-hand input
: CW in - CW out (standard), assembly position A.



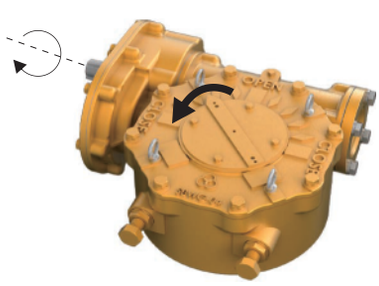
Right-hand input
: CW in - CCW out, assembly position B.

Left-hand input





Left-hand input
: CW in - CW out (standard), assembly position C.

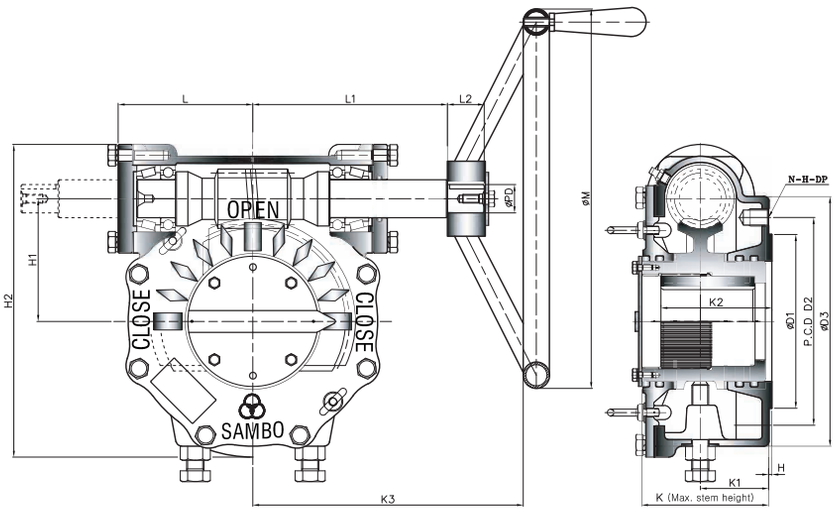


Left-hand input
: CW in - CCW out, assembly position D.

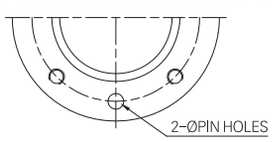
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Standard Type A

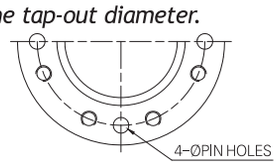
Horizontal input configuration for thrust and torque



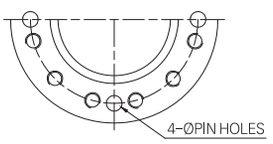
·Pin hole size is identical to the tap-out diameter.



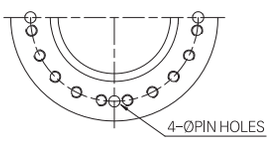
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							'New' EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWB-BF	A	F-07	55	70	4-M8-12	110	2	42	132	76	38	38.6	150	64	97	24	16	6X6	200
SBWG-0		F-10	70	102	4-M10-15	135		57	159.5	77	38	43.6	167	71.5	104.5				250
SBWG-00		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	211	86	138	29	21	6X6	300
SBWG-01		F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	240	95	147				400
SBWG-02		F-16	130	165	4-M20-30	220		97	257	111.5	58	75.5	274	108	166	34	26	8X7	500
SBWG-03	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	287	118	61	87	294	118	176	34	26	8X7	560
SBWG-35		F-25	200	254	8-M16-24	300		127	327	135	72	100	312	136	194				
SBWG-04		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	330	153	207	34	32	10X8	610
SBWG-05		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	340	163	217				710
SBWG-55						350		202	484.5	162	80	144	360	183	237				
SBWG-06		F-35	260	356	8-M30-45	415		230	558.5	200	109	173	409	217	286	44	38	12X8	800
SBWG-07		F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	443	252	320				
SBWG-75	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	497	279	381	58	50	16X10	900
SBWG-08						560		379	884	254	125	245	532	314	416				
SBWG-09	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	572	354	456	58	50	16X10	900
SBWG-10						800		513	1191	352	164	330	730	426	614				1000
'New' SBWB-105						800		564	1294	370	167	330	736	436	620				
SBWG-11		F-80	670	813	20-M42-63	900		616.5	1399.5	394	181	370	773	468.5	657				
SBWG-12						1000		711	1621	482	265	415	818	554	702				
SBWG-13						1000		809	1814	546	301	515	868	609	752				
'New' SBWB-14	E	F-100	870	1042	32-M42-65	1600	5	992	2257	565	285	530	1351	812	1235	58	50	16X10	1000
'New' SBWB-15								1157	2582	597	305	555	1366	827	1250				

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Worm Gear Actuators

Features

- All mounting bases conform to ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, providing excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is made from 1045 heat-treated carbon steel.
- A removable splined bushing ensures precise alignment between the gear drive and the valve stem.
- Options include handwheels, chain, and more.

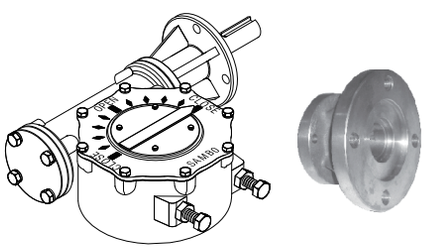


Bushing Type

- Splines provide accurate alignment of the valve stem key.

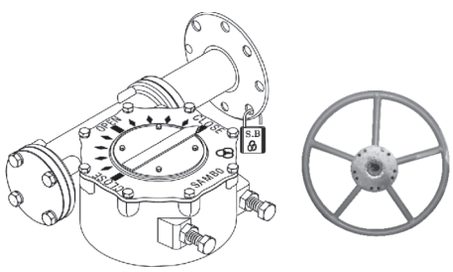
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



Locking Device Option

- The input can be fitted with a handwheel locking device for manually operated units.



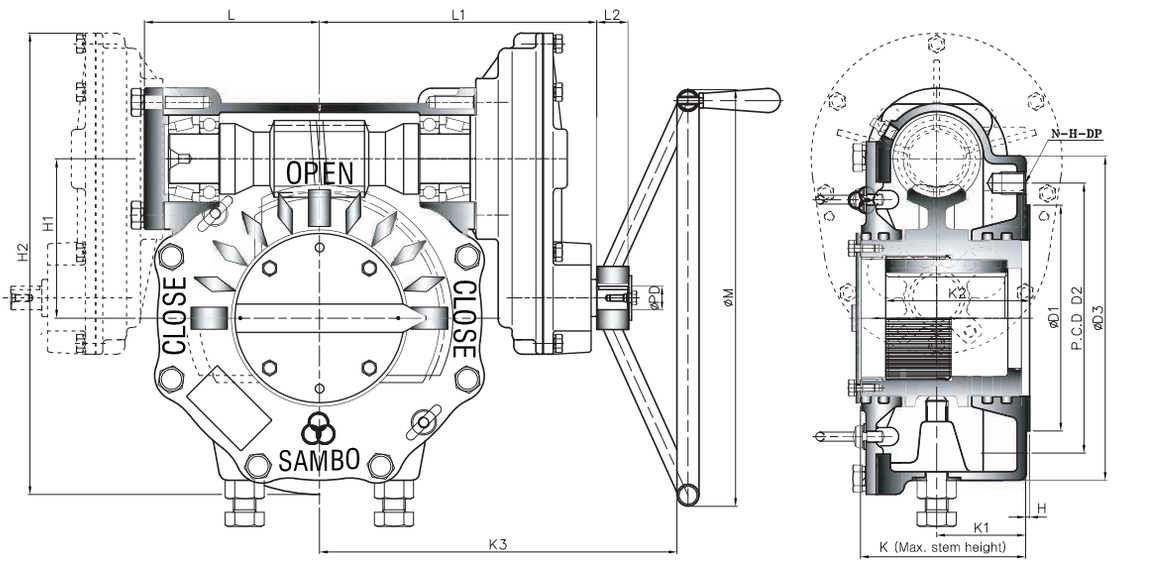
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWB-BF	32 : 1	20 (6X6)	F-05, F-07	360	266	4
SBWG-0	36 : 1	28 (8X7)	F-07 , F-10	780	575	6
SBWG-00	40 : 1	36 (10X8)	F-10 , F-12	1200	885	10
SBWG-01	44 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	13
SBWG-02	48 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	21
SBWG-03	52 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	29
SBWG-35	52 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	43
SBWG-04	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	56
SBWG-05	60 : 1	115 (32X18)	(F–20), F-25 , F-30	15900	11727	78
SBWG-55	62 : 1	125 (32X18)	F-25 , F-30	23500	17333	97
SBWG-06	64 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	147
SBWG-07	68 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	243
SBWG-75	66 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	350
SBWG-08	66 : 1	250 (56X32)	F-40 , F-48	121000	89245	473
SBWG-09	66 : 1	280 (63X32)	F-48 , F-60	192500	141981	830
SBWG-10	64 : 1	320 (70X36)	F-60	275000	202830	1330
'New' SBWB-105	66 : 1	320 (70x36)	F60	358500	264416	1580
SBWG-11	68 : 1	360 (80X40)	F-60, F-80	442000	326002	2085
SBWG-12	70 : 1	400 (90X45)	F-60 , F-80	610000	449913	2900
SBWG-13	72 : 1	420 (100X50)	F-60 , F-80	970000	715435	3800
'New' SBWB-14	74 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7500
'New' SBWB-15	80 : 1	500 (100x50)	F-80, F-100	2000000	1475124	10800

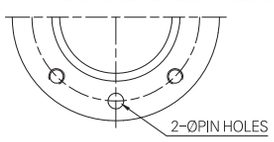
Product design and data are subject to change without notice. The product features and technical data provided do not specify or imply any warranty. For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Standard Type A

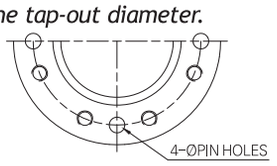
Horizontal input with single reduction gear attachment



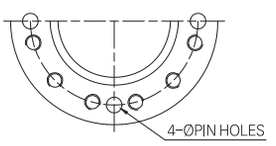
· *Pin hole size is identical to the tap-out diameter.*



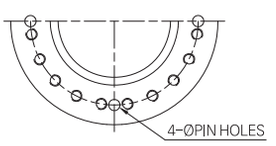
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

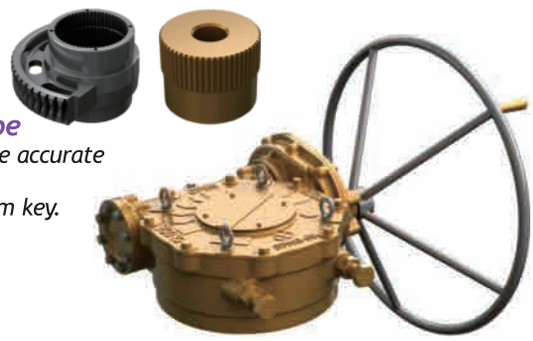
DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-00-1S	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	239	86	166	29	21	6X6	300
SBWG-01-1S		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	268	95	175				400
SBWG-02-1S		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	299	108	190.5	34	26	8X7	500
SBWG-03-1S	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	319	118	200.5	34	26	8X7	560
SBWG-35-1S		F-25	200	254	8-M16-24	300		127	352	135	72	100	337	125	218.5				
SBWG-04-1S		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	373	153	250	34	32	10X8	610
SBWG-05-1S		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	383	163	260				710
SBWG-55-1S						350		202	516.5	162	80	144	403	183	280				
SBWG-06-1S		F-35	260	356	8-M30-45	415		230	621	200	109	173	472	217	349	44	38	12X8	800
SBWG-07-1S		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	507	252	384				
SBWG-75-1S	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	601	279	485	58	50	16X10	900
SBWG-08-1S						560		379	968	254	125	245	636	314	520				
SBWG-09-1S	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	676	354	560	58	50	16X10	900
SBWG-10-1S						800		513	1291	352	164	330	807	426	691				1000
'New' SBWB-105-1S								564	1294	370	167	330	817	436	701				
SBWG-11-1S		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	850	468.5	733.5				
SBWG-12-1S						1000		711	1751	482	265	415	1021	554	905				
SBWG-13-1S								809	1944	546	301	515	1071	609	955				
'New' SBWB-14-1S	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15-1S								1157	2582	597	305	555	1650	827	1534				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Worm Gear Actuators

Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, providing excellent strength and impact resistance.
- Worm gears are available in two material options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and valve stem.
- Options include handwheels, chain operation, and more.

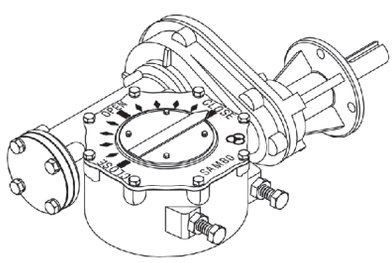


Bushing Type

- Splines ensure accurate alignment of the valve stem key.

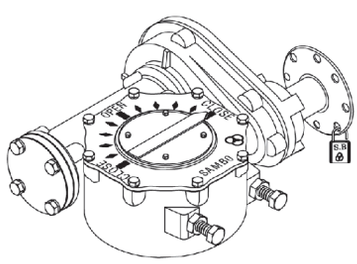
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be fitted with a handwheel locking device for manually operated units.



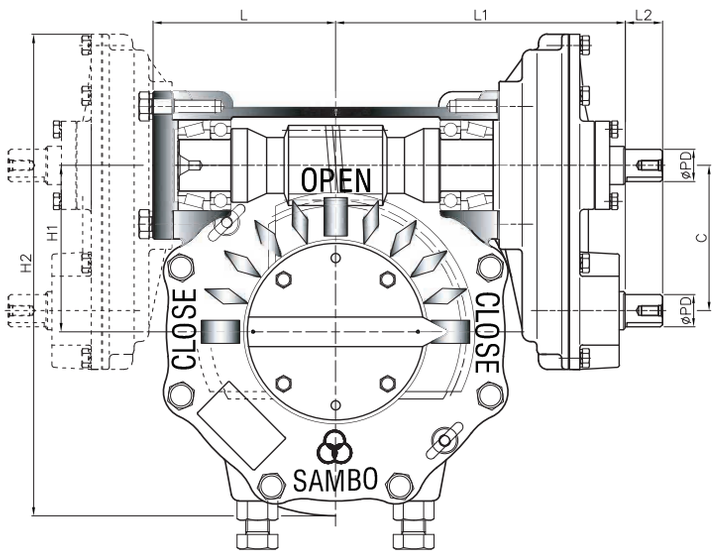
Selection chart for manual operation

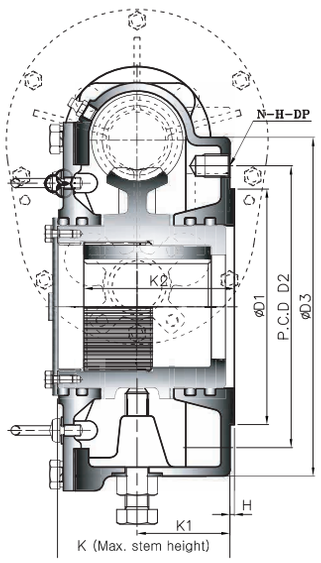
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-1S	80 : 1	36 (10X8)	F-10 , F-12	1200	885	12
SBWG-01-1S	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	15
SBWG-02-1S	121.6 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	25
SBWG-03-1S	131.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	33
SBWG-35-1S	131.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	50
SBWG-04-1S	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	66
SBWG-05-1S	180 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	88
SBWG-55-1S	186 : 1	125 (32X18)	F-25 , F-30	23500	17333	107
SBWG-06-1S	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	175
SBWG-07-1S	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	271
SBWG-75-1S	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	422
SBWG-08-1S	330 : 1	250 (56X32)	F-40 , F-48	121000	89245	545
SBWG-09-1S	330 : 1	280 (63X32)	F-48 , F-60	192500	141981	902
SBWG-10-1S	320 : 1	320 (70X36)	F-60	275000	202830	1426
'New' SBWB-105-1S	330 : 1	320 (70x36)	F60	358500	264416	1698
SBWG-11-1S	340 : 1	360 (80X40)	F-60, F-80	442000	326002	2182
SBWG-12-1S	350 : 1	400 (90X45)	F-60 , F-80	610000	449913	3081
SBWG-13-1S	360 : 1	420 (100X50)	F-60 , F-80	970000	715435	3980
'New' SBWB-14-1S	370 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1S	400 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

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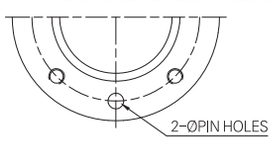
Standard Type A - Twin Shaft

horizontal input with single reduction gear attachment

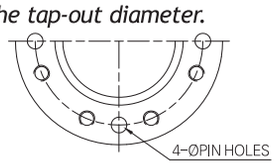




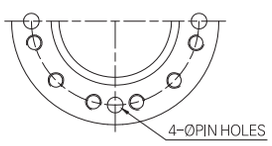
· *Pin hole size is identical to the tap-out diameter.*



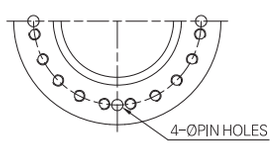
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	C	L	L1	L2	ØPD	KEY	
SBWG-00-1ST	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	55.9	86	183	29	21	6X6	300
SBWG-01-1ST		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65		95	192				400
SBWG-02-1ST		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	68.6	108	214.5	34	26	8X7	500
SBWG-03-1ST	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	68.6	118	224.5	34	26	8X7	560
SBWG-35-1ST		F-25	200	254	8-M16-24	300		127	352	135	72	100		125	218.5				
SBWG-04-1ST		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	121.2	153	286	34	32	10X8	610
SBWG-05-1ST		F-30	230	298	8-M20-30	350		180	469.5	155	78	141		163	296				710
SBWG-55-1ST						350		202	516.5	162	80	144		183	316				
SBWG-06-1ST		F-35	260	356	8-M30-45	415		230	621	200	109	173	169	217	376	44	38	12X8	800
SBWG-07-1ST		F-40	300	406	8-M36-55	475		280.5	723	227	116	209		252	411				
SBWG-75-1ST	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	230	279	531	58	50	16X10	900
SBWG-08-1ST						560		379	968	254	125	245		314	566				
SBWG-09-1ST	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	230	354	606	58	50	16X10	900
SBWG-10-1ST						800		513	1291	352	164	330	284.3	426	746				1000
'New' SBWB-105-1ST								564	1294	370	167	330	284.3	436	756				
SBWG-11-1ST		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	284.3	468.5	788.5				
SBWG-12-1ST						1000		711	1751	482	265	415	334	554	969				
SBWG-13-1ST								809	1944	546	301	515	334	609	1009				
'New' SBWB-14-1ST	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	461.3	812	1519	58	50	16X10	1000
'New' SBWB-15-1ST								1157	2582	597	305	555	461.3	827	1534				

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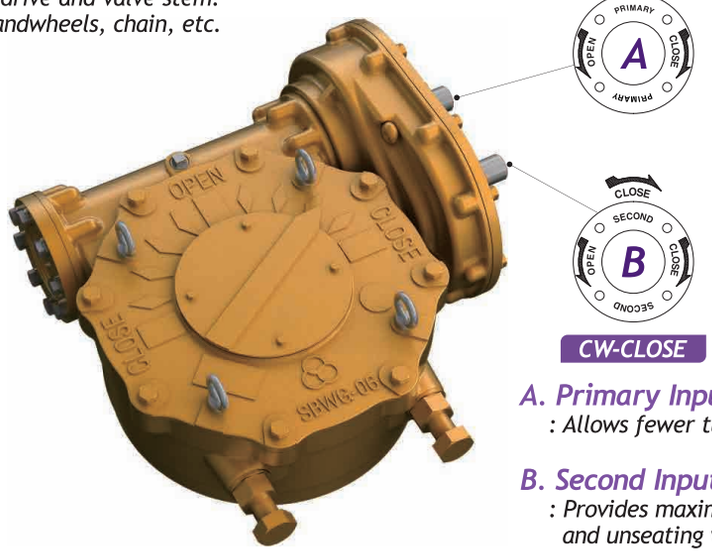
Features

- All mounting bases conform to ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, delivering excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from 1045 heat-treated carbon steel.
- Removable splined bushings enable precise positioning between the gear drive and valve stem.
- Options include handwheels, chain, etc.



Bushing Type

- Splines ensure accurate alignment of the valve stem key.



The World's highest quality.

Global Leader
SAMBO
Gear Actuators

A. Primary Input Shaft (High-Speed Input Shaft)

: Allows fewer turns after the valve has been unseated.

B. Second Input Shaft (Low-Speed Input Shaft)

: Provides maximum mechanical advantage for seating and unseating valves.

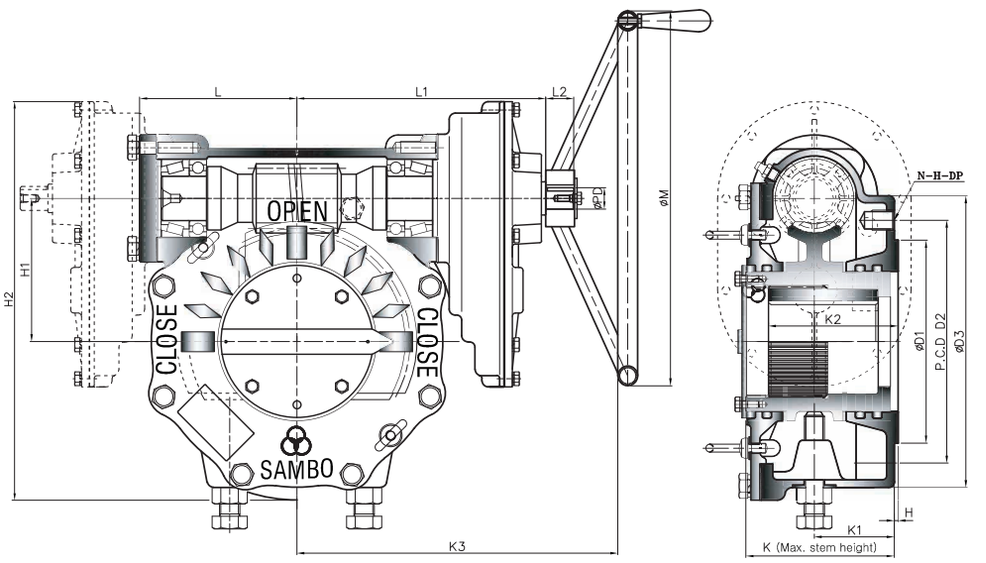
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND			N-m	Ft. lbf	Kg
SBWG-00-1ST	40 : 1	80 : 1	36 (10X8)	F-10 , F-12	1200	885	12
SBWG-01-1ST	44 : 1	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	15
SBWG-02-1ST	48 : 1	121.6 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	25
SBWG-03-1ST	52 : 1	131.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	33
SBWG-35-1ST	52 : 1	131.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	50
SBWG-04-1ST	56 : 1	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	66
SBWG-05-1ST	60 : 1	180 : 1	115 (32X18)	(F–20), F-25 , F-30	15900	11727	88
SBWG-55-1ST	62 : 1	186 : 1	125 (32X18)	F-25 , F-30	23500	17333	107
SBWG-06-1ST	64 : 1	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	175
SBWG-07-1ST	68 : 1	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	271
SBWG-75-1ST	66 : 1	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	422
SBWG-08-1ST	66 : 1	330 : 1	250 (56X32)	F-40 , F-48	121000	89245	545
SBWG-09-1ST	66 : 1	330 : 1	280 (63X32)	F-48 , F-60	192500	141981	902
SBWG-10-1ST	64 : 1	320 : 1	320 (70X36)	F-60	275000	202830	1426
'New' SBWB-105-1ST	66 : 1	330 :1	320 (70x36)	F60	358500	264416	1698
SBWG-11-1ST	68 : 1	340 : 1	360 (80X40)	F-60, F-80	442000	326002	2182
SBWG-12-1ST	70 : 1	350 : 1	400 (90X45)	F-60 , F-80	610000	449913	3081
SBWG-13-1ST	72 : 1	360 : 1	420 (100X50)	F-60 , F-80	970000	715435	3980
'New' SBWB-14-1ST	74 : 1	370:1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1ST	80 : 1	400:1	500 (100x50)	F-80, F-100	2000000	1475124	11500

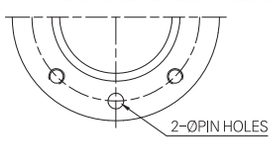
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Standard Type A

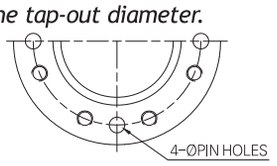
Horizontal input with double reduction gear attachment.



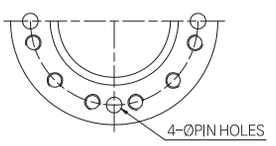
· *Pin hole size is identical to the tap-out diameter.*



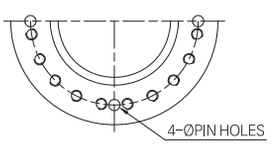
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

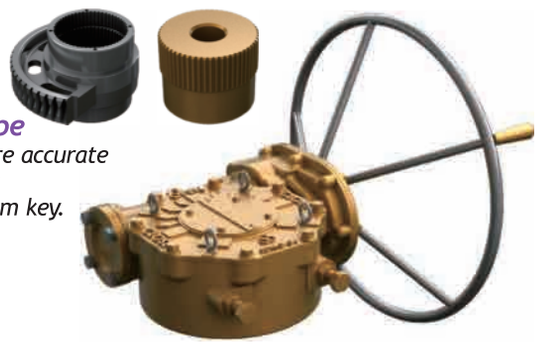
DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-00-1SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	256	86	183	29	21	6X6	300
SBWG-01-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	285	95	192				400
SBWG-02-1SD		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	323	108	214.5	34	26	8X7	500
SBWG-03-1SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	343	118	224.5	34	26	8X7	560
SBWG-35-1SD		F-25	200	254	8-M16-24	300		127	352	135	72	100	361	125	242.5				
SBWG-04-1SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	409	153	286	34	32	10X8	610
SBWG-05-1SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	419	163	296				710
SBWG-55-1SD						350		202	516.5	162	80	144	439	183	316				
SBWG-06-1SD		F-35	260	356	8-M30-45	415		230	621	200	109	173	499	217	376	44	38	12X8	800
SBWG-07-1SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	534	252	411				
SBWG-75-1SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	647	279	531	58	50	16X10	900
SBWG-08-1SD						560		379	968	254	125	245	682	314	566				
SBWG-09-1SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	722	354	606	58	50	16X10	900
SBWG-10-1SD						800		513	1291	352	164	330	862	426	746				1000
'New' SBWB-105-1SD								564	1294	370	167	330	872	436	756				
SBWG-11-1SD		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	905	468.5	788.5				
SBWG-12-1SD						1000		711	1751	482	265	415	1085	554	969				
SBWG-13-1SD								809	1944	546	301	515	1125	609	1009				
'New' SBWB-14-1SD	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15-1SD								1157	2582	597	305	555	1650	827	1534				

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Worm Gear Actuators

Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gears are available in two material options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing ensures precise positioning between the gear drive and valve stem.
- Options include handwheels, chain operation, and other accessories.

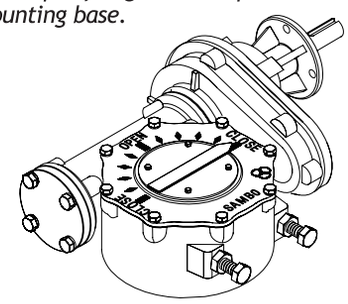


Bushing Type

- Splines ensure accurate alignment of the valve stem key.

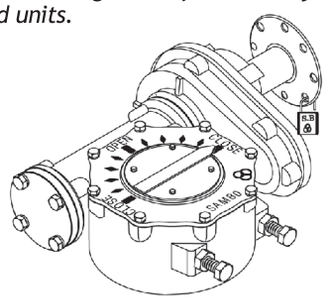
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be fitted with a handwheel locking device for manually operated units.



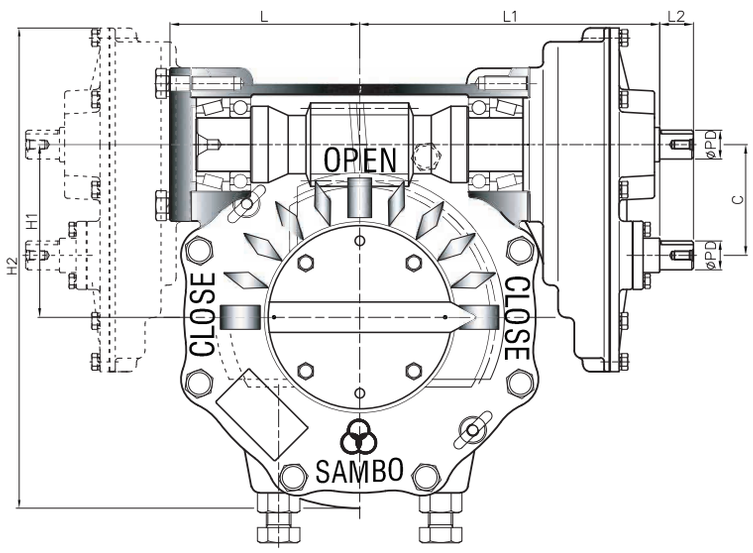
Selection chart for manual operation

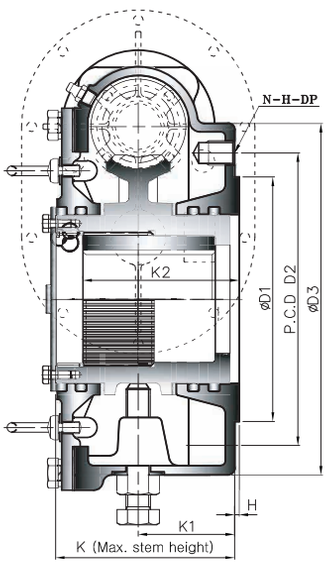
SIZE / MODEL	MAX.GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	Kg
SBWG-00-1SD	160 : 1	36 (10X8)	F-10 , F-12	1200	885	14
SBWG-01-1SD	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	17
SBWG-02-1SD	308 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	27
SBWG-03-1SD	333.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	35
SBWG-35-1SD	333.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	52
SBWG-04-1SD	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	71
SBWG-05-1SD	540 : 1	115 (32X18)	(F-20), F-25 , F-30	15900	11727	93
SBWG-55-1SD	558 : 1	125 (32X18)	F-25 , F-30	23500	17333	112
SBWG-06-1SD	1024 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	188
SBWG-07-1SD	1088 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	284
SBWG-75-1SD	1650 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	450
SBWG-08-1SD	1650 : 1	250 (56X32)	F-40 , F-48	121000	89245	573
SBWG-09-1SD	1650 : 1	280 (63X32)	F-48 , F-60	192500	141981	930
SBWG-10-1SD	1600 : 1	320 (70X36)	F-60	275000	202830	1464
'New' SBWB-105-1SD	1650 : 1	320 (70x36)	F60	358500	264416	1764
SBWG-11-1SD	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2220
SBWG-12-1SD	1750 : 1	400 (90X45)	F-60 , F-80	610000	449913	3081
SBWG-13-1SD	1800 : 1	420 (100X50)	F-60 , F-80	970000	715435	3980
'New' SBWB-14-1SD	1850 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1SD	2000 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

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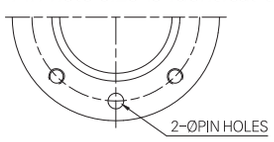
Standard Type A - Twin Shaft

horizontal input with double reduction gear attachment.

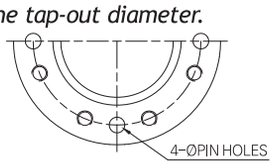




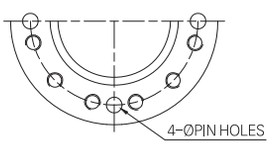
· *Pin hole size is identical to the tap-out diameter.*



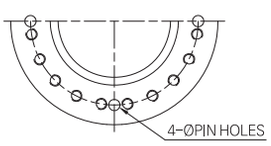
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	C	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00-1SDT	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	55.9	86	183	29	21	6X6	300
SBWG-01-1SDT		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65		95	192				400
SBWG-02-1SDT		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	68.6	108	214.5	34	26	8X7	500
SBWG-03-1SDT	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	68.6	118	224.5	34	26	8X7	560
SBWG-35-1SDT		F-25	200	254	8-M16-24	300		127	352	135	72	100		125	236,5				
SBWG-04-1SDT		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	93.2	153	286	34	32	10X8	610
SBWG-05-1SDT		F-30	230	298	8-M20-30	350		180	469.5	155	78	141		163	296				710
SBWG-55-1SDT						350		202	516.5	162	80	144		183	316				
SBWG-06-1SDT		F-35	260	356	8-M30-45	415		230	621	200	109	173	145	217	376	44	38	12X8	800
SBWG-07-1SDT		F-40	300	406	8-M36-55	475		280.5	723	227	116	209		252	411				
SBWG-75-1SDT	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	186.4	279	531	58	50	16X10	900
SBWG-08-1SDT						560		379	968	254	125	245		314	566				
SBWG-09-1SDT	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	186.4	354	606	58	50	16X10	900
'New' SBWB-105-1SDT						800		564	1294	370	167	330	237.6	436	756				1000
SBWG-10-1SDT								513	1291	352	164	330	237.6	426	746				
SBWG-11-1SDT		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	237.6	468.5	788.5				
SBWG-12-1SDT						1000		711	1751	482	265	415	298.5	554	969				
SBWG-13-1SDT								809	1944	546	301	515	298.5	609	1009				
'New' SBWB-14-1SDT	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	461.3	812	1519	58	50	16X10	1000
'New' SBWB-15-1SDT								1157	2582	597	305	555	461.3	827	1534				

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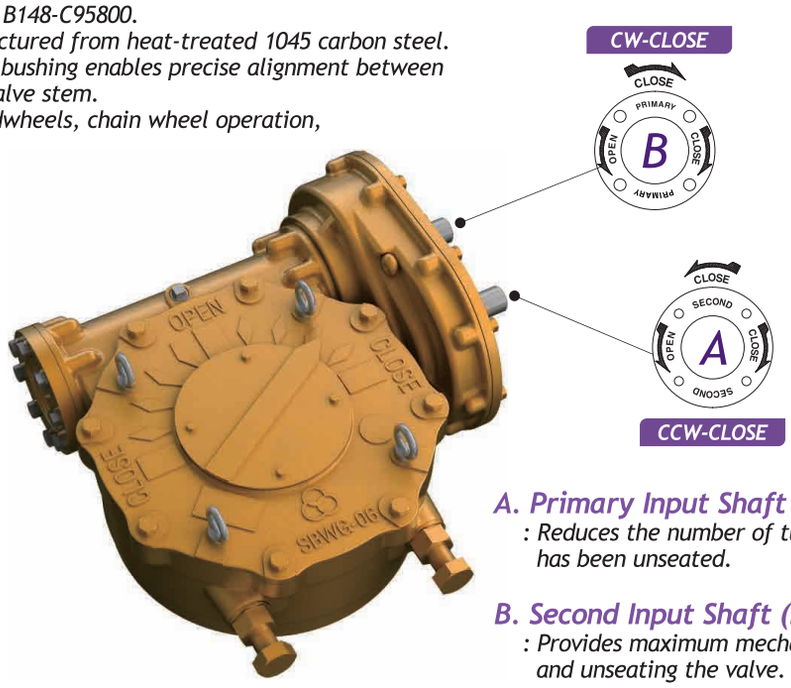
Features

- All mounting bases conform to ISO 5210/1.
- All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Options include handwheels, chain wheel operation, and more.



Bushing Type

- Splines ensure accurate alignment of the valve stem key.



A. Primary Input Shaft (High-Speed Input Shaft)

: Reduces the number of turns required after the valve has been unseated.

B. Second Input Shaft (Low-Speed Input Shaft)

: Provides maximum mechanical advantage for seating and unseating the valve.

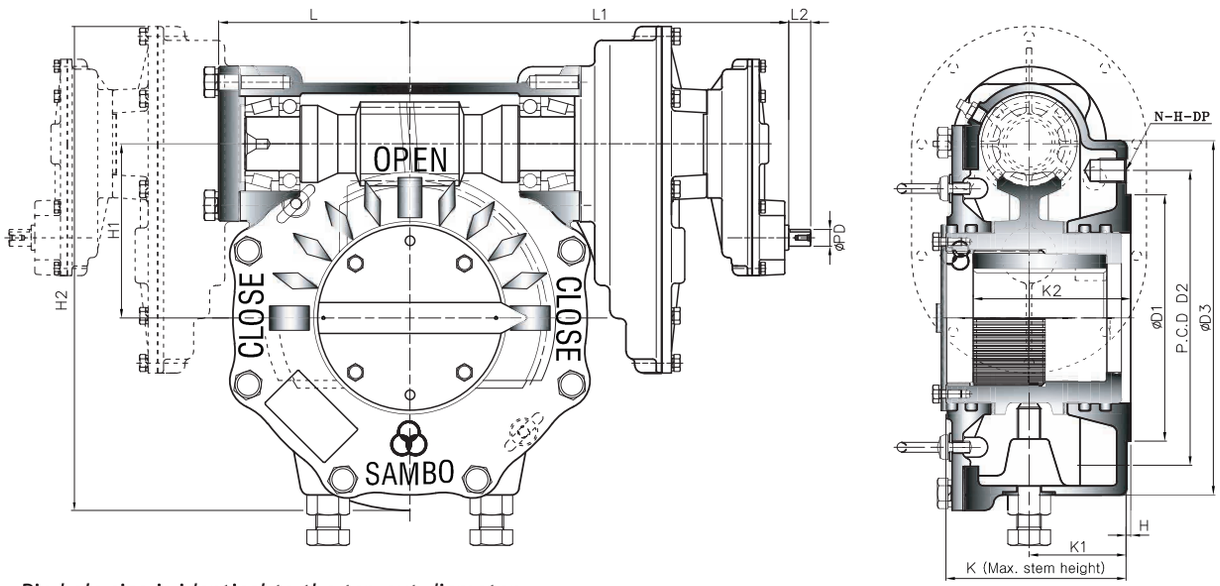
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND			N-m	Ft. lbf	Kg
SBWG-00-1SDT	80 : 1	160 : 1	36 (10X8)	F-10 , F-12	1200	885	14
SBWG-01-1SDT	88 : 1	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	17
SBWG-02-1SDT	121.6 : 1	308 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	27
SBWG-03-1SDT	131.7 : 1	333.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	35
SBWG-35-1SDT	131.7 : 1	333.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	52
SBWG-04-1SDT	168 : 1	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	71
SBWG-05-1SDT	180 : 1	540 : 1	115 (32X18)	(F–20), F-25 , F-30	15900	11727	93
SBWG-55-1SDT	186 : 1	558 : 1	125 (32X18)	F-25 , F-30	23500	17333	112
SBWG-06-1SDT	256 : 1	1024 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	188
SBWG-07-1SDT	272 : 1	1088 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	284
SBWG-75-1SDT	330 : 1	1650 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	450
SBWG-08-1SDT	330 : 1	1650 : 1	250 (56X32)	F-40 , F-48	121000	89245	573
SBWG-09-1SDT	330 : 1	1650 : 1	280 (63X32)	F-48 , F-60	192500	141981	930
'New' SBWB-105-1SDT	320 : 1	1600 : 1	320 (70X36)	F-60	275000	202830	1464
SBWG-10-1SDT	330 : 1	1650:1	320 (70x36)	F60	358500	264416	1764
SBWG-11-1SDT	340 : 1	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2220
SBWG-12-1SDT	350 : 1	1750 : 1	400 (90X45)	F-60 , F-80	610000	449913	3081
SBWG-13-1SDT	360 : 1	1800 : 1	420 (100X50)	F-60 , F-80	970000	715435	3980
'New' SBWB-14-1SDT	370 : 1	1850:1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1SDT	400 : 1	2000:1	500 (100x50)	F-80, F-100	2000000	1475124	11500

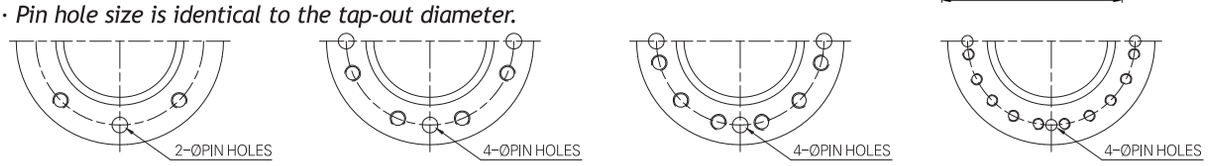
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Standard Type A

Horizontal input with triple reduction gear attachment.



· *Pin hole size is identical to the tap-out diameter.*



Type A *Type B* *Type C* *Type D*

Dimensions

UNIT : mm

MODEL \ DIM	BASE PART							EXTERNAL PART							INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP													
SBWG-00-2SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	86	261	29	21	6X6	250
SBWG-01-2SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	95	270				
SBWG-02-2SD		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	108	295.5				300
SBWG-03-2SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	118	305.5	29	21	6X6	400
SBWG-35-2SD		F-25	200	254	8-M16-24	300		127	352	135	72	100	125	317.5				
SBWG-04-2SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	153	364.5	34	26	8X7	500
SBWG-05 2SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	163	374.5				560
SBWG-55-2SD						350		202	516.5	162	80	144	183	394.5				
SBWG-06-2SD		F-35	260	356	8-M30-45	415		230	621	200	109	173	217	471	34	32	10X8	610
SBWG-07-2SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	252	506				
SBWG-75-2SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	279	662	44	38	12X8	710
SBWG-08-2SD						560		379	968	254	125	245	314	697				
SBWG-09-2SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	354	737	44	38	12X8	710
SBWG-10-2SD						800		513	1291	352	164	330	426	959	58	50	16X10	800
'New' SBWB-105-2SD								564	1394	370	167	330	436	976				
SBWG-11-2SD		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	468.5	1001.5				
SBWG-12-2SD						1000		711	1751	482	265	415	554	1255				900
SBWG-13-2SD								809	1944	546	301	515	609	1295				
'New' SBWB-14-2SD	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	812	1802	58	50	16X10	1000
'New' SBWB-15-2SD								1157	2807	597	305	555	827	1817				

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Features

- All mounting bases conform to ISO 5210-1 standards.
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- Worm gears are available in two material options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and the valve stem.
- Options include handwheels, chain drives, and additional accessories.

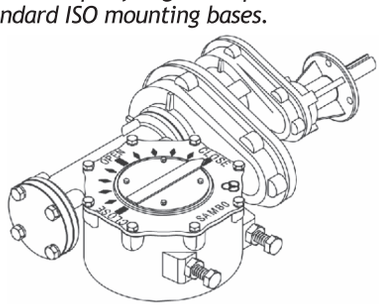


Bushing Type

- Splines ensure accurate alignment of the valve stem key.

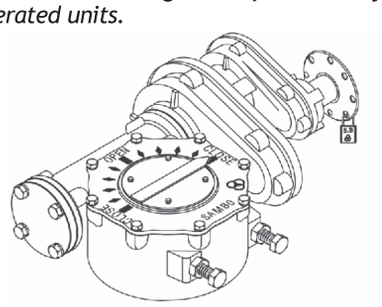
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



Locking Device Option

- Input shafts can be equipped with a handwheel locking device for manually operated units.



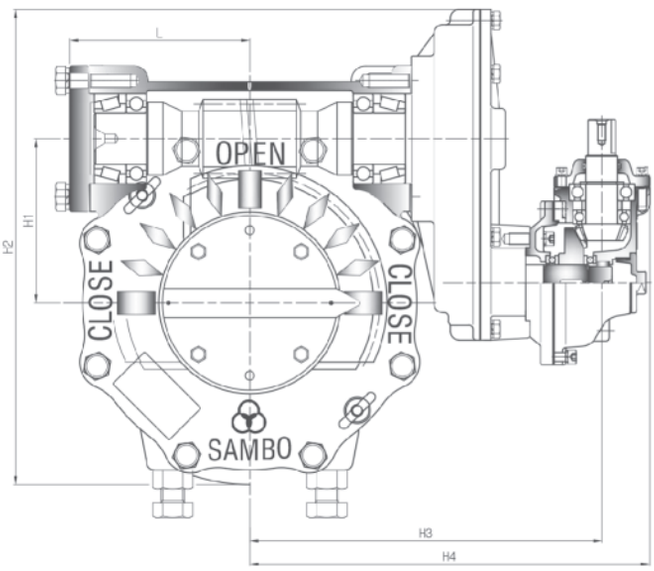
Selection chart for manual operation

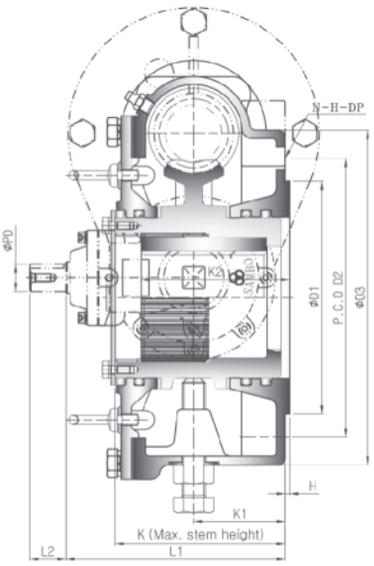
SIZE / MODEL	GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-2SD	320 : 1	36 (10X8)	F-10 , F-12	1200	885	16
SBWG-01-2SD	352 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	19
SBWG-02-2SD	616 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	29
SBWG-03-2SD	667.4 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	38
SBWG-35-2SD	667.4 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	60
SBWG-04-2SD	1275 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	75
SBWG-05 2SD	1368 : 1	115 (32X18)	(F-20) , F-25 , F-30	15900	11727	97
SBWG-55-2SD	1413.6 : 1	125 (32X18)	F-25 , F-30	23500	17333	116
SBWG-06-2SD	3072 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	198
SBWG-07-2SD	3264 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	294
SBWG-75-2SD	6600 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	478
SBWG-08-2SD	6600 : 1	250 (56X32)	F-40 , F-48	121000	89245	601
SBWG-09-2SD	6600 : 1	280 (63X32)	F-48 , F-60	192500	141981	957
SBWG-10-2SD	8000 : 1	320 (70X36)	F-60	275000	202830	1536
'New' SBWB-105-2SD	8250 : 1	320 (70x36)	F60	358500	264416	1882
SBWG-11-2SD	8500 : 1	360 (80X40)	F-60, F-80	442000	326002	2292
SBWG-12-2SD	8750 : 1	400 (90X45)	F-60 , F-80	610000	449913	3178
SBWG-13-2SD	9000 : 1	420 (100X50)	F-60 , F-80	970000	715435	4077
'New' SBWB-14-2SD	9250 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8900
'New' SBWB-15-2SD	10000 : 1	500 (100x50)	F-80, F-100	2000000	1475124	12200

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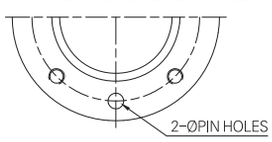
Standard Type B

Vertical input with double reduction gear attachment

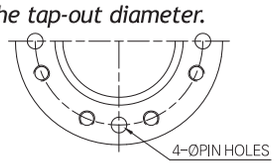




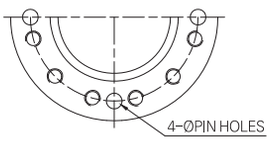
· *Pin hole size is identical to the tap-out diameter.*



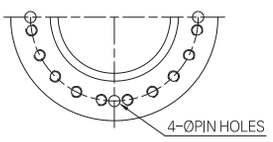
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00-1S2B	A	F-12	85	125	4-M12-18	165	2	69.5	210	204	244	86.5	43	53.6	86	132	34	26	8X7	250
SBWG-01-1S2B		F-14	100	140	4-M16-24	190		82.5	235.5	213	253	96	53	65	95	142				
SBWG-02-1S2B		F-16	130	165	4-M20-30	220		97	282	231.5	271.5	111.5	58	75.5	108	145				300
SBWG-03-1S2B	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	241.5	281.5	118	61	87	118	148	34	26	8X7	400
SBWG-35-1S2B		F-25	200	254	8-M16-24	300		127	352	259.5	299.5	135	72	100	125	161				
SBWG-04-1S2B		F-25	200	254	8-M16-24	300		153	417.5	308	358	147	73	120	153	194				500
SBWG-05-1S2B		F-30	230	298	8-M20-30	350		180	469.5	318	368	155	78	141	163	199				560
SBWG-55-1S2B						350		202	516.5	338	388	162	80	144	183	201				
SBWG-06-1S2B		F-35	260	356	8-M30-45	415		230	621	411.5	461.5	200	109	173	217	240				610
SBWG-07-1S2B		F-40	300	406	8-M36-55	475		280.5	723	446.5	496.5	227	116	209	252	246				
SBWG-75-1S2B	C	F-48	370	483	12-M36-55	560	5	326	860	558.5	623	246	120	220	279	308	34	32	10X8	800
SBWG-08-1S2B						560		379	968	593	658	254	125	245	314	313				
SBWG-09-1S2B	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	633	698	284	138	270	354	326	34	32	10X8	800
SBWG-10-1S2B						800		513	1291	839	904	352	164	330	426	384.5				800
'New' SBWB-105-1S2B								564	1394	854	919	370	167	330	436	390				
SBWG-11-1S2B		F-80	670	813	20-M42-63	900		616.5	1499.5	881.5	946.5	394	181	370	468.5	401.5				
SBWG-12-1S2B						1000		711	1751	1070	1153	482	265	415	554	536	44	38	12X8	900
SBWG-13-1S2B								809	1944	1132	1203	546	301	515	609	592				
'New' SBWB-14-1S2B	E	F-100	870	1042	32-M42-65	1600	5	992	2482	1782	1882	565	285	530	812	691	44	38	16X10	1000
'New' SBWB-15-1S2B								1157	2582	1797	1897	597	305	555	827	711				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases conform to ISO 5210/1.
- All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from 1045 heat-treated carbon steel.
- A removable splined bushing enables accurate positioning between the gear drive and valve stem.
- Options include handwheels, chain operation, etc.



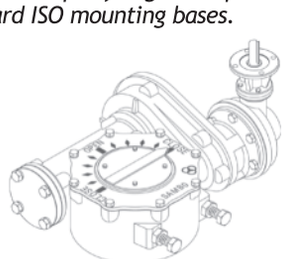
Bushing Type

- Splines ensure accurate alignment of the valve stem key.



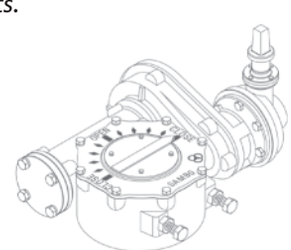
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



Square Nut Option

- The input can be fitted with a handwheel locking device for manually operated units.



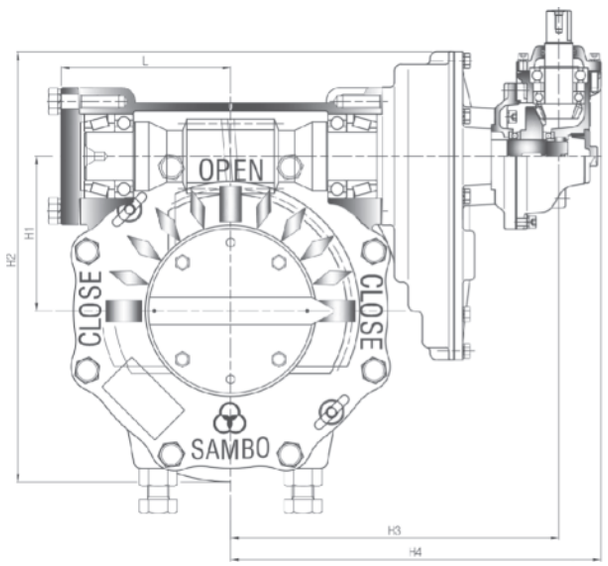
Selection chart for manual operation

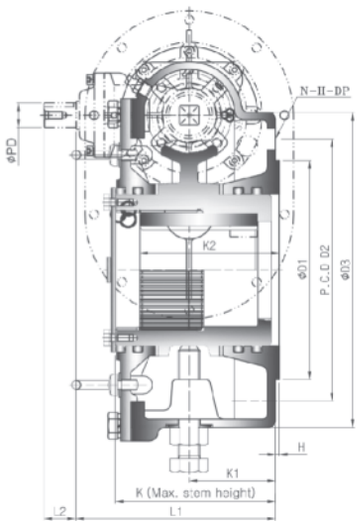
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-1S2B	160 : 1	36 (10X8)	F-10 , F-12	1200	885	17
SBWG-01-1S2B	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	20
SBWG-02-1S2B	243.2 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	30
SBWG-03-1S2B	263.5 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	38
SBWG-35-1S2B	263.5 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	55
SBWG-04-1S2B	420 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	74
SBWG-05-1S2B	450 : 1	115 (32X18)	(F-20) , F-25	15900	11727	96
SBWG-55-1S2B	465 : 1	125 (32X18)	F-25 , F-30, , F-30	23500	17333	115
SBWG-06-1S2B	768 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	185
SBWG-07-1S2B	816 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	281
SBWG-75-1S2B	1072.5 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	450
SBWG-08-1S2B	1155 : 1	250 (56X32)	F-40 , F-48	121000	89245	573
SBWG-09-1S2B	1155 : 1	280 (63X32)	F-48 , F-60	192500	141981	930
SBWG-10-1S2B	1280 : 1	320 (70X36)	F-60	275000	202830	1470
'New' SBWB-105-1S2B	1320 : 1	320 (70x36)	F60	358500	264416	1743
SBWG-11-1S2B	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2260
SBWG-12-1S2B	2100 : 1	400 (90X45)	F-60 , F-80	610000	449913	3158
SBWG-13-1S2B	2160 : 1	420 (100X50)	F-60 , F-80	970000	715435	4079
'New' SBWB-14-1S2B	2220 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8350
'New' SBWB-15-1S2B	2622.2 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11701

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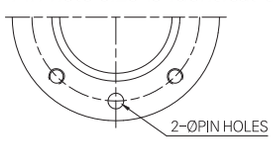
Standard Type B

Vertical input with triple reduction gear attachment

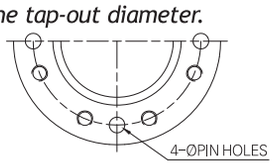




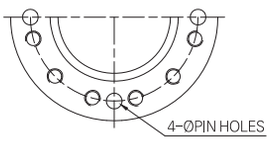
· *Pin hole size is identical to the tap-out diameter.*



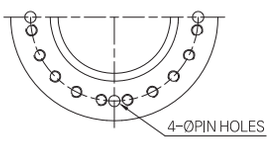
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00-1SD2B	A	F-12	85	125	4-M12-18	165	2	69.5	210	221	261	86.5	43	53.6	86	132	34	26	8X7	250
SBWG-01-1SD2B		F-14	100	140	4-M16-24	190		82.5	235.5	230	270	96	53	65	95	142				
SBWG-02-1SD2B		F-16	130	165	4-M20-30	220		97	282	255.5	295.5	111.5	58	75.5	108	145				300
SBWG-03-1SD2B	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	265.5	305.5	118	61	87	118	148	34	26	8X7	400
SBWG-35-1SD2B		F-25	200	254	8-M16-24	300		127	352	277.5	317.5	135	72	100	125	161				
SBWG-04-1SD2B		F-25	200	254	8-M16-24	300		153	417.5	344	394	147	73	120	153	194				500
SBWG-05-1SD2B		F-30	230	298	8-M20-30	350		180	469.5	354	404	155	78	141	163	199				560
SBWG-55-1SD2B						350		202	516.5	374	424	162	80	144	183	201				
SBWG-06-1SD2B		F-35	260	356	8-M30-45	415		230	621	438.5	488.5	200	109	173	217	240				610
SBWG-07-1SD2B		F-40	300	406	8-M36-55	475		280.5	723	473.5	523.5	227	116	209	252	246				
SBWG-75-1SD2B	C	F-48	370	483	12-M36-55	560	5	326	860	618.5	683.5	246	120	220	279	308	34	32	10X8	800
SBWG-08-1SD2B						560		379	968	653.5	718.5	254	125	245	314	313				
SBWG-09-1SD2B	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	693.5	758.5	284	138	270	354	326	34	32	10X8	800
SBWG-10-1SD2B						800		513	1291	893	958	352	164	330	426	384.5				800
'New' SBWB-105-1SD2B								564	1394	910	975	370	167	330	436	375				
SBWG-11-1SD2B		F-80	670	813	20-M42-63	900		616.5	1499.5	935.5	1000.5	394	181	370	468.5	401.5				
SBWG-12-1SD2B						1000		711	1751	1135	1217.5	482	265	415	554	536	44	38	12X8	900
SBWG-13-1SD2B								809	1944	1187	1269.5	546	301	515	609	592				
'New' SBWB-14-1SD2B	E	F-100	870	1042	32-M42-65	1600	5	992	2482	1782	1882	565	285	530	812	691	44	38	16X10	1000
'New' SBWB-15-1SD2B								1157	2582	1797	1897	597	305	555	827	711				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Worm Gear Actuators

Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, delivering excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Options include handwheels, chain operation, and more.

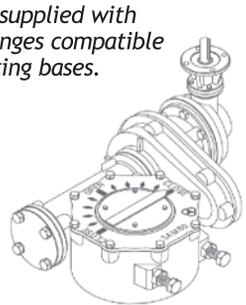


Bushing Type

- Spline design ensures precise alignment with the valve stem key.

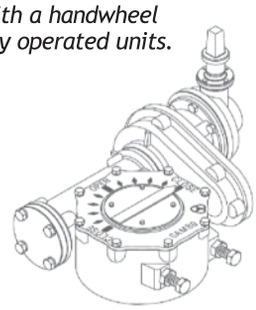
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



Square Nut Option

- The input can be fitted with a handwheel locking device for manually operated units.



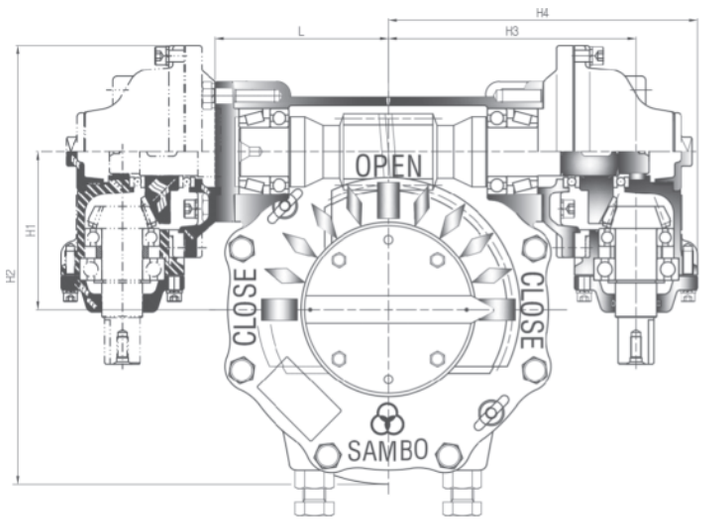
Selection chart for manual operation

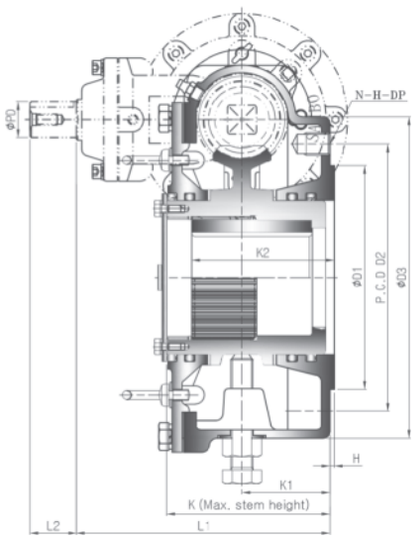
SIZE / MODEL	MAX.GEAR RATIO (Change Able)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	Kg
SBWG-00-1SD2B	320 : 1	36 (10X8)	F-10 , F-12	1200	885	19
SBWG-01-1SD2B	352 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	22
SBWG-02-1SD2B	616 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	32
SBWG-03-1SD2B	667 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	40
SBWG-35-1SD2B	667 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	57
SBWG-04-1SD2B	1260 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	79
SBWG-05-1SD2B	1350 : 1	115 (32X18)	(F-20) , F-25 , F-30	15900	11727	101
SBWG-55-1SD2B	1395 : 1	125 (32X18)	F-25 , F-30	23500	17333	120
SBWG-06-1SD2B	3072 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	198
SBWG-07-1SD2B	3264 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	294
SBWG-75-1SD2B	5775 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	478
SBWG-08-1SD2B	5775 : 1	250 (56X32)	F-40 , F-48	121000	89245	602
SBWG-09-1SD2B	5775 : 1	280 (63X32)	F-48 , F-60	192500	141981	958
SBWG-10-1SD2B	6400 : 1	320 (70X36)	F-60	275000	202830	1508
'New' SBWB-105-1SD2B	6600 : 1	320 (70x36)	F60	358500	264416	1809
SBWG-11-1SD2B	8500 : 1	360 (80X40)	F-60, F-80	442000	326002	2264
SBWG-12-1SD2B	10500 : 1	400 (90X45)	F-60 , F-80	610000	449913	3158
SBWG-13-1SD2B	10800 : 1	420 (100X50)	F-60 , F-80	970000	715435	4079
'New' SBWB-14-1SD2B	11100 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8350
'New' SBWB-15-1SD2B	13111.1 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11701

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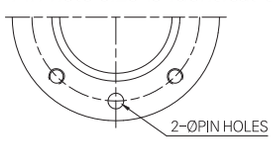
Standard Type B

Vertical input with single reduction gear attachment

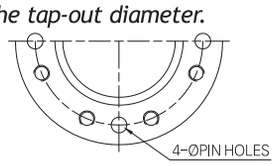




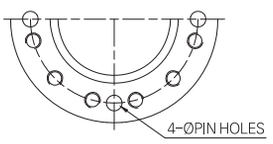
· *Pin hole size is identical to the tap-out diameter.*



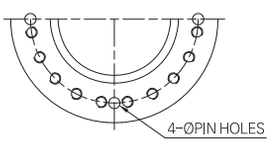
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00-2B	A	F-12	85	125	4-M12-18	165	2	69.5	214.5	126	166	86.5	43	53.6	86	132	34	26	8X7	300
SBWG-01-2B		F-14	100	140	4-M16-24	190		82.5	240	135	175	96	53	65	95	142				400
SBWG-02-2B		F-16	130	165	4-M20-30	220		97	284.5	164	214	111.5	58	75.5	108	177				500
SBWG-03-2B	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	314.5	174	224	118	61	87	118	180	34	26	8X7	560
SBWG-35-2B		F-25	200	254	8-M16-24	300		127	354.5	192	242	135	72	100	125	193				
SBWG-04-2B		F-25	200	254	8-M16-24	300		153	406.5	212.5	262.5	147	73	120	153	204				610
SBWG-05-2B		F-30	230	298	8-M20-30	350		180	458.5	222.5	272.5	155	78	141	163	209				710
SBWG-55-2B						350		202	505.5	242.5	292.5	162	80	144	183	211				
SBWG-06-2B		F-35	260	356	8-M30-45	415		230	598.5	312	377	200	109	173	217	297	34	32	10X8	800
SBWG-07-2B		F-40	300	406	8-M36-55	475		280.5	700.5	347	412	227	116	209	252	303				
SBWG-75-2B	C	F-48	370	483	12-M36-55	560	5	326	818.5	414	479	246	120	220	279	328	34	32	10X8	900
SBWG-08-2B						560		379	954	498	580.5	254	125	245	314	391	44	38	12X8	
SBWG-09-2B	D	F-60	470	603	20-M36-55	700	5	448.5	1118.5	550	632.5	284	138	270	354	429	44	38	12X8	900
SBWG-10-2B						800		513	1281	742	824.5	352	164	330	426	477				1000
'New' SBWB-105-2B								564	1374	738	821	370	167	330	436	524				
SBWG-11-2B		F-80	670	813	20-M42-63	900		616.5	1489.5	784.5	867	394	181	370	468.5	494				
SBWG-12-2B						1000		711	1711	886	986	482	265	415	554	651				
SBWG-13-2B								809	1941.5	947	1047	546	301	515	609	710	58	50	16X10	1000
'New' SBWB-14-2B	E	F-100	870	1042	32-M42-65	1600	5	992	2382	1165	1275	565	285	530	812	757	58	50	16X10	1000
'New' SBWB-15-2B								1157	2742	1199	1319	597	305	555	827	826				

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Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Options include handwheels, chain operation, and more.

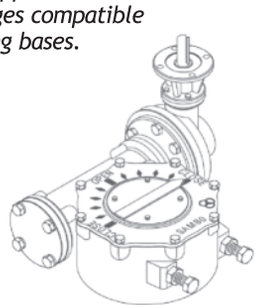


Bushing Type

- Splines ensure accurate alignment with the valve stem key.

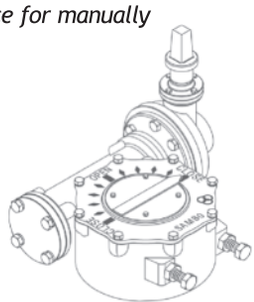
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.



Square Nut Option

- The input can be fitted with a handwheel locking device for manually operated units.



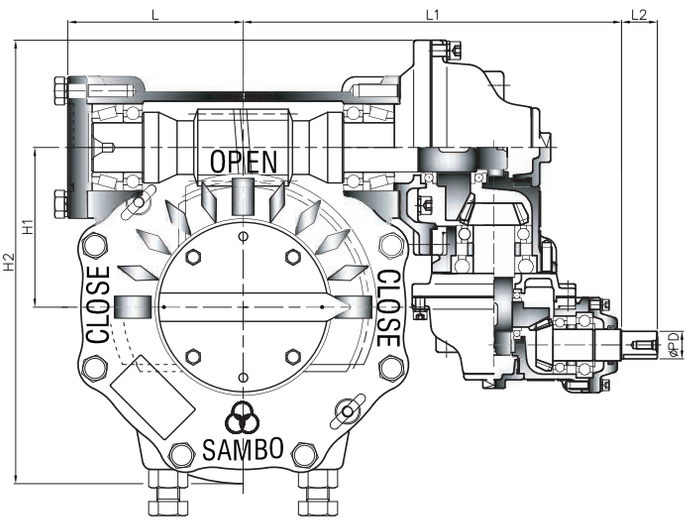
Selection chart for manual operation

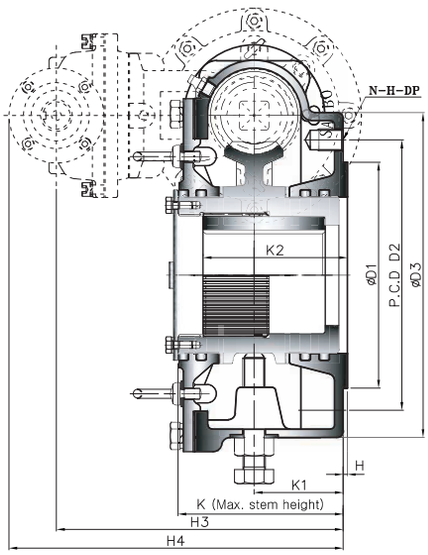
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-2B	80 : 1	36 (10X8)	F-10 , F-12	1200	885	15
SBWG-01-2B	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	18
SBWG-02-2B	120 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	29
SBWG-03-2B	130 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	37
SBWG-35-2B	130 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	48
SBWG-04-2B	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	66
SBWG-05-2B	180 : 1	115 (32X18)	F-20) , F-25, F-30	15900	11727	88
SBWG-55-2B	186 : 1	125 (32X18)	F-25 , F-30	23500	17333	107
SBWG-06-2B	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	175
SBWG-07-2B	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	271
SBWG-75-2B	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	390
SBWG-08-2B	363 : 1	250 (56X32)	F-40 , F-48	121000	89245	544
SBWG-09-2B	396 : 1	280 (63X32)	F-48 , F-60	192500	141981	920
SBWG-10-2B	416 : 1	320 (70X36)	F-60	275000	202830	1483
'New' SBWB-105-2B	429 : 1	320 (70x36)	F60	358500	264416	1730
SBWG-11-2B	442 : 1	360 (80X40)	F-60, F-80	442000	326002	2239
SBWG-12-2B	490 : 1	400 (90X45)	F-60 , F-80	610000	449913	3116
SBWG-13-2B	544 : 1	420 (100X50)	F-60 , F-80	970000	715435	4118
'New' SBWB-14-2B	592 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7975
'New' SBWB-15-2B	640 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11620

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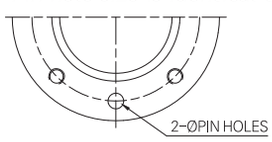
Standard Type C

Vertical input with double reduction gear attachment

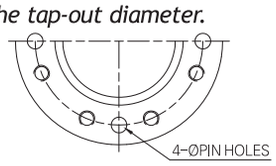




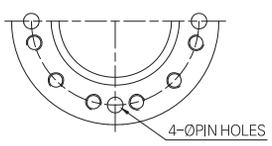
· *Pin hole size is identical to the tap-out diameter.*



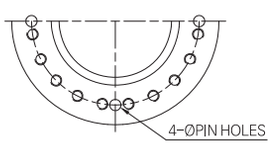
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00-2BD	A	F-12	85	125	4-M12-18	165	2	69.5	214.5	162	202	86.5	43	53.6	86	215	34	26	8X7	300
SBWG-01-2BD		F-14	100	140	4-M16-24	190		82.5	240	172	212	96	53	65	95	224				400
SBWG-02-2BD		F-16	130	165	4-M20-30	220		97	284.5	202	242	111.5	58	75.5	108	253				500
SBWG-03-2BD	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	314.5	205	245	118	61	87	118	263	34	26	8X7	560
SBWG-35-2BD		F-25	200	254	8-M16-24	300		127	354.5	222	262	135	72	100	125	281				
SBWG-04-2BD		F-25	200	254	8-M16-24	300		153	406.5	242	292	147	73	120	153	333.5				610
SBWG-05-2BD		F-30	230	298	8-M20-30	350		180	458.5	247	297	155	78	141	163	343.5				710
SBWG-55-2BD						350		202	505.5	249	299	162	80	144	183	363.5				
SBWG-06-2BD		F-35	260	356	8-M30-45	415		230	598.5	332.5	382.5	200	109	173	217	442.5				800
SBWG-07-2BD		F-40	300	406	8-M36-55	475		280.5	700.5	338.5	388.5	227	116	209	252	503.5				
SBWG-75-2BD	C	F-48	370	483	12-M36-55	560	5	326	818.5	446.5	496.5	246	120	220	279	566	34	32	10X8	900
SBWG-08-2BD						560		379	954	475	530	254	125	245	314	678				
SBWG-09-2BD	D	F-60	470	603	20-M36-55	700	5	448.5	1118.5	496.5	561.5	284	138	270	354	738	44	38	12X8	900
SBWG-10-2BD						800		513	1281	563	628	352	164	330	426	922				1000
'New' SBWB-105-2BD								564	1383	669	766	370	167	330	436	286				
SBWG-11-2BD		F-80	670	813	20-M42-63	900		616.5	1489.5	580	645	394	181	370	468.5	965.5				
SBWG-12-2BD						1000		711	1711	771	853.5	482	265	415	554	1152				1000
SBWG-13-2BD								809	1941.5	842	924.5	546	301	515	609	1238				
'New' SBWB-14-2BD	F-100	870	870	1042	32-M42-65	1600	5	992	2443	1026	1152	565	285	530	812	420	44	38	12X8	1000
'New' SBWB-15-2BD								1157	2821	1046	1175	597	305	555	827	455				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases conform to ISO 5210-1 standards.
- All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, 8148: C95800.
- The worm is manufactured from 1045 heat-treated carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and valve stem.
- Options include handwheels, chain operation, and more.

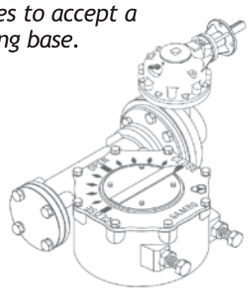
Bushing Type

- Splines ensure accurate alignment of the valve stem key.



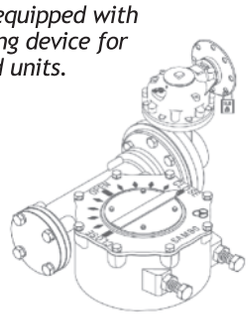
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



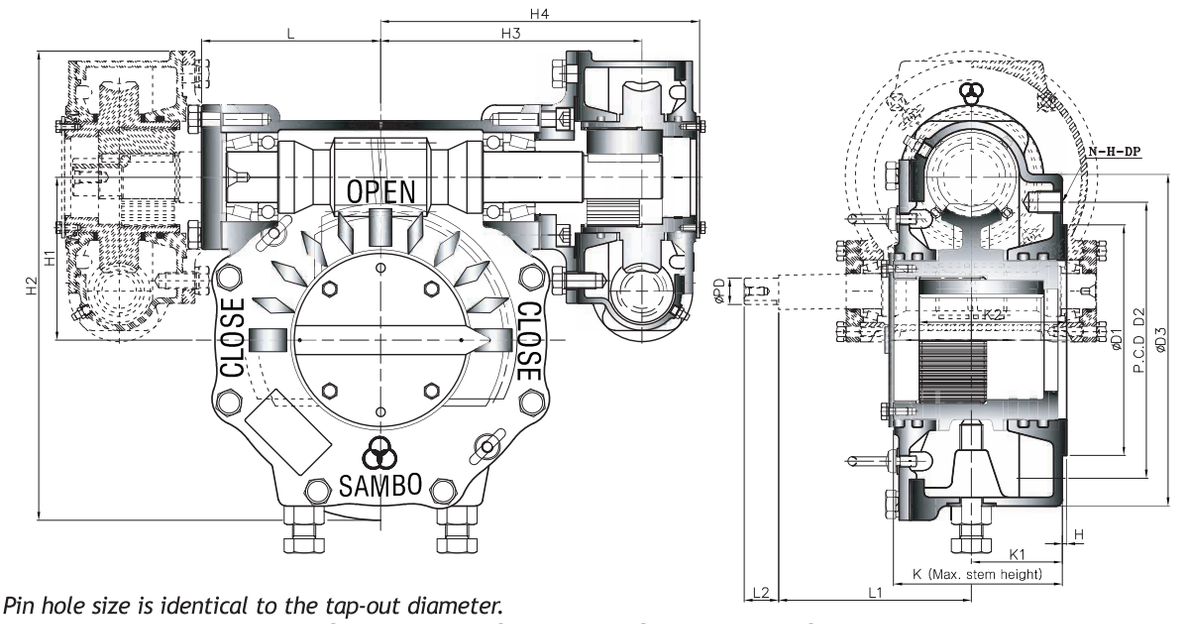
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-2BD	160 : 1	36 (10X8)	F-10 , F-12	1200	885	20
SBWG-01-2BD	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	23
SBWG-02-2BD	240 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	34
SBWG-03-2BD	260 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	42
SBWG-35-2BD	260 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	53
SBWG-04-2BD	420 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	74
SBWG-05-2BD	450 : 1	115 (32X18)	(F-20) , F–25, F-30	15900	11727	96
SBWG-55-2BD	465 : 1	125 (32X18)	F-25 , F-30	23500	17333	115
SBWG-06-2BD	768 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	185
SBWG-07-2BD	816 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	281
SBWG-75-2BD	970 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	404
SBWG-08-2BD	1270.5 : 1	250 (56X32)	F-40 , F-48	121000	89245	564
SBWG-09-2BD	1584 : 1	280 (63X32)	F-48 , F-60	192500	141981	950
SBWG-10-2BD	2080 : 1	320 (70X36)	F-60	275000	202830	1523
'New' SBWB-105-2BD	1716 : 1	320 (70x36)	F60	358500	264416	1775
SBWG-11-2BD	2210 : 1	360 (80X40)	F-60, F-80	442000	326002	2279
SBWG-12-2BD	2695 : 1	400 (90X45)	F-60 , F-80	610000	449913	3187
SBWG-13-2BD	2992 : 1	420 (100X50)	F-60 , F-80	970000	715435	4217
'New' SBWB-14-2BD	3553 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8125
'New' SBWB-15-2BD	4195.6 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11821

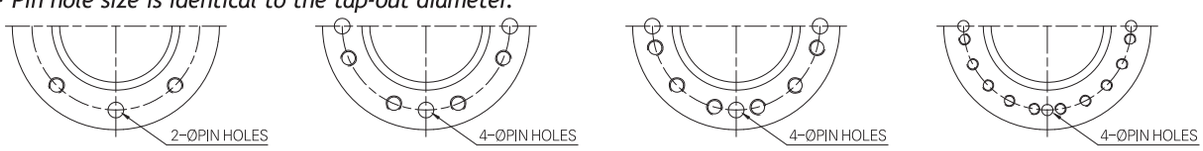
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Standard Type E

Vertical input with single reduction gear attachment



· *Pin hole size is identical to the tap-out diameter.*



Type A *Type B* *Type C* *Type D*

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00-3W	A	F-12	85	125	4-M12-18	165	2	69.5	219.5	133	174	86.5	43	53.6	86	104.5	24	16	6X6	200
SBWG-01-3W		F-14	100	140	4-M16-24	190		82.5	245	142	183	96	53	65	95	104.5				
SBWG-02-3W		F-16	130	165	4-M20-30	220		97	289.5	173	219	111.5	58	75.5	108	138	29	21	6X6	300
SBWG-03-3W	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	319.5	183	229	118	61	87	118	138	29	21	6X6	300
SBWG-35-3W		F-25	200	254	8-M16-24	300		127	359.5	203	248	126	63	91	125	147				
SBWG-04-3W		F-25	200	254	8-M16-24	300		153	425.5	235	291	147	73	120	153	166	34	26	8X7	500
SBWG-05-3W		F-30	230	298	8-M20-30	350		180	477.5	245	301	155	78	141	163	166				
SBWG-55-3W						350		202	539.5	273	332	162	80	144	183	176				
SBWG-06-3W		F-35	260	356	8-M30-45	415		230	606	375	442	200	109	173	217	181				560
SBWG-07-3W		F-40	300	406	8-M36-55	475		280.5	708	410	477	227	116	209	252	181				
SBWG-75-3W	C	F-48	370	483	12-M36-55	560	5	326	828.5	393	470	246	120	220	279	207	34	32	10X8	610
SBWG-08-3W						560		379	961.5	438	518	254	125	245	314	217				
SBWG-09-3W	D	F-60	470	603	20-M36-55	700	5	448.5	1126	480	568	284	138	270	354	237	34	32	10X8	710
SBWG-10-3W						800		513	1279.5	674	769.5	352	164	330	426	286				800
'New' SBWB-105-3W								564	1383	669	766	370	167	330	436	286				
SBWG-11-3W		F-80	670	813	20-M42-63	900		616.5	1539.5	722.5	843.5	400	181	370	468.5	341	44	38	12X8	800
SBWG-12-3W						1000		711	1781	805	935.5	484	265	455	554	381				
SBWG-13-3W								809	2034	850	985.5	546	301	515	609	416	58	50	16X10	900
'New' SBWB-14-3W	E	F-100	870	1042	32-M42-65	1600	5	992	2443	1026	1152	565	285	530	812	420	58	50	16X10	1000
'New' SBWB-15-3W								1157	2821	1046	1175	597	305	555	827	455				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases comply with ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, delivering excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from 1045 heat-treated carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Options include handwheels, chain, etc.



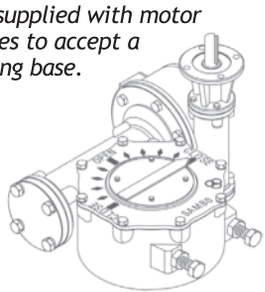
Bushing Type

- Splines ensure precise alignment of the valve stem key.



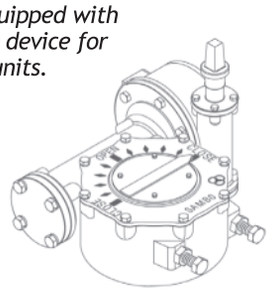
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



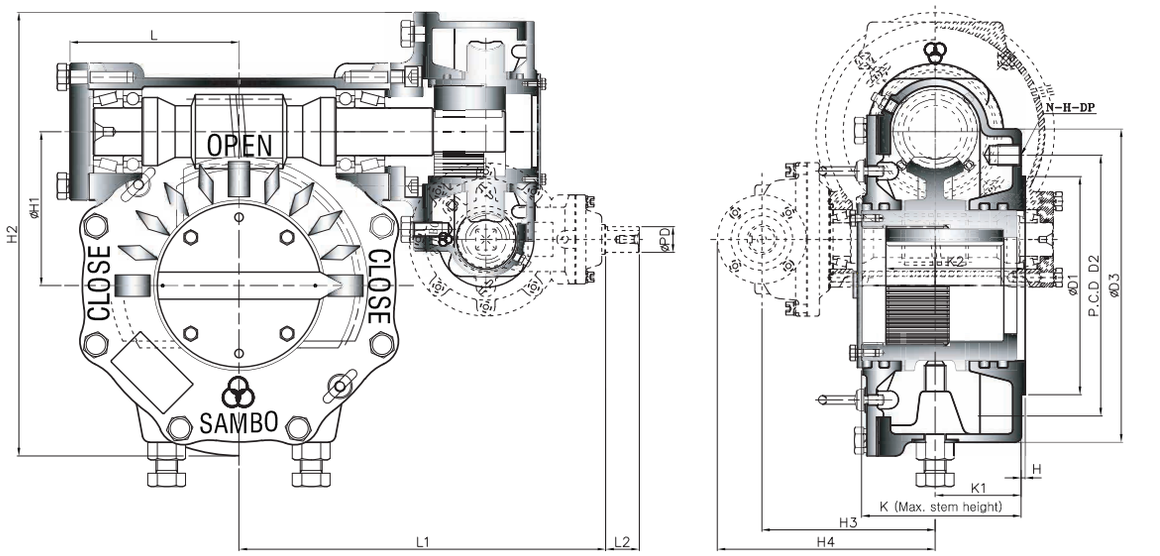
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-3W	1440 : 1	36 (10X8)	F-10 , F-12	1200	885	15
SBWG-01-3W	1584 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	18
SBWG-02-3W	1920 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	30
SBWG-03-3W	2080 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	38
SBWG-35-3W	2288 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	56
SBWG-04-3W	2688 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	77
SBWG-05-3W	2880 : 1	115 (32X18)	(F-20) , F-25 , F-30	15900	11727	99
SBWG-55-3W	3224 : 1	125 (32X18)	F-25 , F-30	23500	17333	126
SBWG-06-3W	3328 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	179
SBWG-07-3W	3536 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	275
SBWG-75-3W	3696 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	406
SBWG-08-3W	3960 : 1	250 (56X32)	F-40 , F-48	121000	89245	551
SBWG-09-3W	4092 : 1	280 (63X32)	F-48 , F-60	192500	141981	926
SBWG-10-3W	4096 : 1	320 (70X36)	F-60	275000	202830	1476
'New' SBWB-105-3W	4092 : 1	320 (70x36)	F60	358500	264416	1677
SBWG-11-3W	4624 : 1	360 (80X40)	F-60, F-80	442000	326002	2328
SBWG-12-3W	4620 : 1	400 (90X45)	F-60 , F-80	610000	449913	3251
SBWG-13-3W	4752 : 1	420 (100X50)	F-60 , F-80	970000	715435	4273
'New' SBWB-14-3W	4884 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7850
'New' SBWB-15-3W	5280 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11273

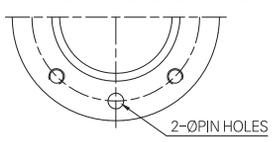
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Standard Type E

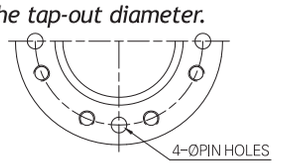
Vertical input with double reduction gear attachment



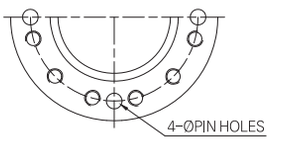
· *Pin hole size is identical to the tap-out diameter.*



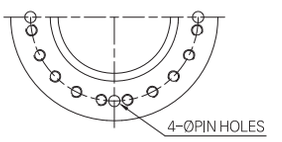
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

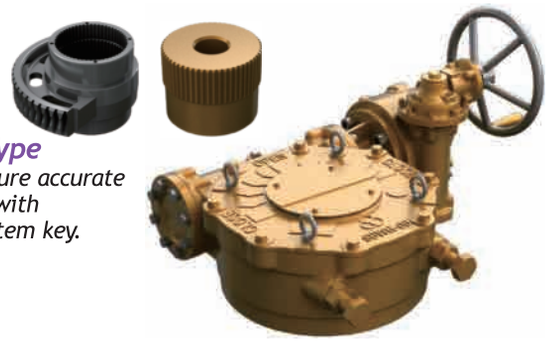
DIM / MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00-3W2B	A	F-12	85	125	4-M12-18	165	2	69.5	219.5	113.5	153.5	86.5	43	53.6	86	222	34	26	8X7	200
SBWG-01-3W2B		F-14	100	140	4-M16-24	190		82.5	245	113.5	153.5	96	53	65	95	231				
SBWG-02-3W2B		F-16	130	165	4-M20-30	220		97	289.5	126	166	111.5	58	75.5	108	262	34	26	8X7	300
SBWG-03-3W2B	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	319.5	126	166	118	61	87	118	272	34	26	8X7	300
SBWG-35-3W2B		F-25	200	254	8-M16-24	300		127	359.5	135	175	126	63	91	125	292				
SBWG-04-3W2B		F-25	200	254	8-M16-24	300		153	425.5	164	214	147	73	120	153	356				400
SBWG-05-3W2B		F-30	230	298	8-M20-30	350		180	477.5	164	214	155	78	141	163	366				
SBWG-55-3W2B						350		202	539.5	174	224	162	80	144	183	394				
SBWG-06-3W2B		F-35	260	356	8-M30-45	415		230	606	192	232	200	109	173	217	496				500
SBWG-07-3W2B		F-40	300	406	8-M36-55	475		280.5	708	192	232	227	116	209	252	531				
SBWG-75-3W2B	C	F-48	370	483	12-M36-55	560	5	326	828.5	212.5	262.5	246	120	220	279	524	34	26	8X7	560
SBWG-08-3W2B						560		379	961.5	222.5	272.5	254	125	245	314	569				
SBWG-09-3W2B	D	F-60	470	603	20-M36-55	700	5	448.5	1126	242.5	292.5	284	138	270	354	611	34	26	8X7	560
SBWG-10-3W2B						800		513	1279.5	312	377	352	164	330	426	862	34	32	10X8	610
'New' SBWB-105-3W2B								564	1383	312	377	370	167	330	436	857				
SBWG-11-3W2B		F-80	670	813	20-M42-63	900		616.5	1539.5	347	412	400	181	370	468.5	910.5				710
SBWG-12-3W2B						1000		711	1781	380	445	484	265	455	554	1013	34	32	10X8	800
SBWG-13-3W2B								809	2033	466	548,5	546	301	515	609	1116	44	38	12X8	
'New' SBWB-14-3W2B	E	F-100	870	1042	32-M42-65	1600		992	2443	447	530	565	285	530	812	1292	58	50	16x10	900
'New' SBWB-15-3W2B								1157	2821	494	577	597	305	555	827	1337				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Worm Gear Actuators

Features

- All mounting bases comply with ISO 5210/1 standards.
- All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from 1045 heat-treated carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and the valve stem.
- Options include handwheels, chain operation, and more.

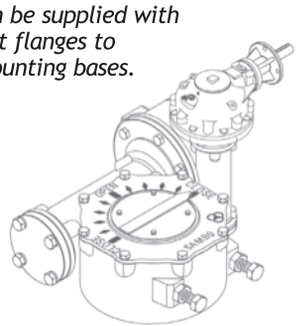


Bushing Type

- Splines ensure accurate alignment with the valve stem key.

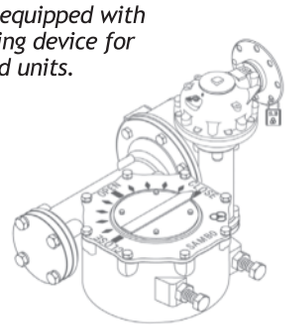
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges to suit standard ISO mounting bases.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



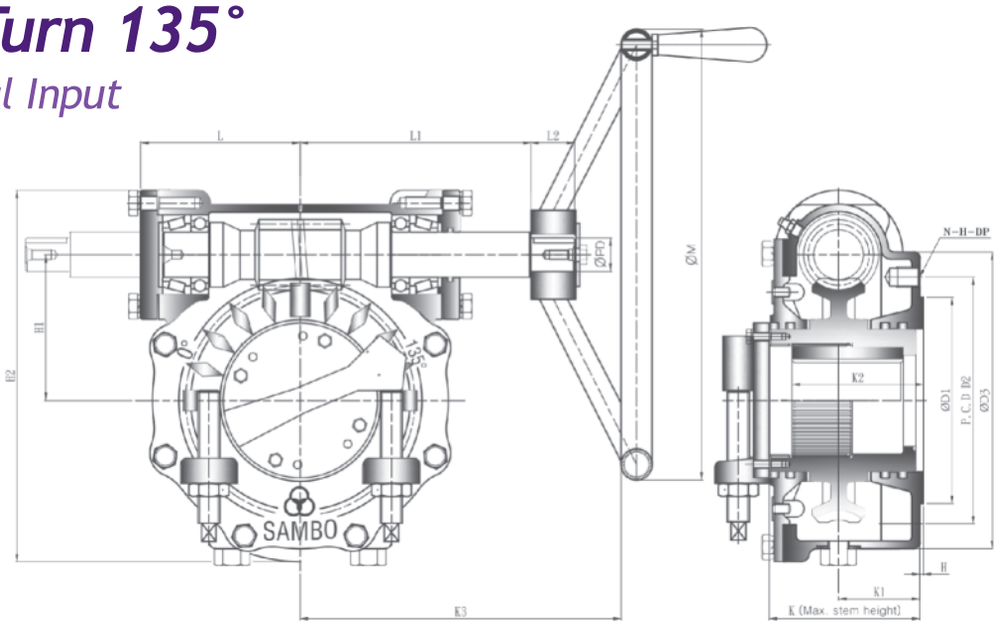
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-3W2B	1440 : 1	36 (10X8)	F-10 , F-12	1200	885	20
SBWG-01-3W2B	1584 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	23
SBWG-02-3W2B	1920 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	35
SBWG-03-3W2B	2080 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	43
SBWG-35-3W2B	2288 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	60
SBWG-04-3W2B	3360 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	85
SBWG-05-3W2B	3600 : 1	115 (32X18)	, (F-20) , F-25 , F-30	15900	11727	107
SBWG-55-3W2B	4030 : 1	125 (32X18)	F-25 , F-30	23500	17333	134
SBWG-06-3W2B	4160 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	187
SBWG-07-3W2B	4420 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	283
SBWG-75-3W2B	5544 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	416
SBWG-08-3W2B	5940 : 1	250 (56X32)	F-40 , F-48	121000	89245	561
SBWG-09-3W2B	6138 : 1	280 (63X32)	F-48 , F-60	192500	141981	936
SBWG-10-3W2B	8192 : 1	320 (70X36)	F-60	275000	202830	1506
'New' SBWB-105-3W2B	6138 : 1	320 (70x36)	F60	358500	264416	1711
SBWG-11-3W2B	9248 : 1	360 (80X40)	F-60, F-80	442000	326002	2358
SBWG-12-3W2B	11550 : 1	400 (90X45)	F-60 , F-80	610000	449913	3291
SBWG-13-3W2B	13068 : 1	420 (100X50)	F-60 , F-80	970000	715435	4313
'New' SBWB-14-3W2B	13431 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7949
'New' SBWB-15-3W2B	15840 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11372

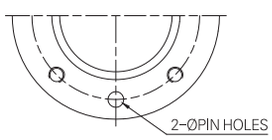
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Part-Turn 135°

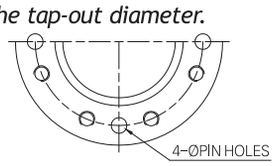
Horizontal Input



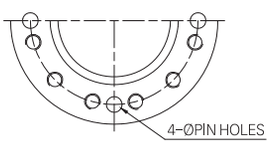
· *Pin hole size is identical to the tap-out diameter.*



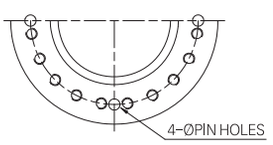
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-BF-135	A	F-07	55	70	4-M8-12	110	2	42	132	76	38	38.6	150	64	97	24	16	6X6	200
SBWG-0-135		F-10	70	102	4-M10-15	135		57	159.5	77	38	43.6	167	71.5	104.5				250
SBWG-00-135		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	211	86	138	29	21	6X6	300
SBWG-01-135		F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	240	95	147				400
SBWG-02-135		F-16	130	165	4-M20-30	220		97	257	111.5	58	75.5	274	108	166	34	26	8X7	500
SBWG-03-135	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	287	118	61	87	294	118	176	34	26	8X7	560
SBWG-35-135		F-25	200	254	8-M16-24	300		127	327	135	72	100	312	136	194				
SBWG-04-135		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	330	153	207	34	32	10X8	610
SBWG-05-135		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	340	163	217				710
SBWG-55-135						350		202	484.5	162	80	144	360	183	237				
SBWG-06-135		F-35	260	356	8-M30-45	415		230	558.5	200	109	173	409	217	286	44	38	12X8	800
SBWG-07-135		F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	443	252	320				
SBWG-75-135	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	497	279	381	58	50	16X10	900
SBWG-08-135						560		379	884	254	125	245	532	314	416				
SBWG-09-135	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	572	354	456	58	50	16X10	900
SBWG-10-135						800		513	1191	352	164	330	730	426	614				1000
'New' SBWB-105-135								564	1294	370	167	330	736	436	620				
SBWG-11-135		F-80	670	813	20-M42-63	900		616.5	1399.5	394	181	370	773	468.5	657				
SBWG-12-135						1000		711	1621	482	265	415	818	554	702				
SBWG-13-135								809	1814	546	301	515	868	609	752				
'New' SBWB-14-135	E	F-100	870	1042	32-M42-65	1600	5	992	2257	565	285	530	1351	812	1235	58	50	16X10	1000
'New' SBWB-15-135								1157	2582	597	305	555	1366	827	1250				

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Features

- All mounting bases conform to ISO 5210-1 standards.
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- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Available options include handwheels, chain wheel, and more.

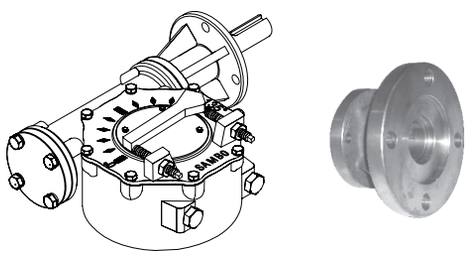


Bushing Type

- Splines ensure precise alignment of the valve stem key.

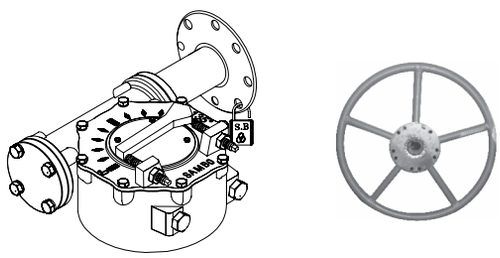
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



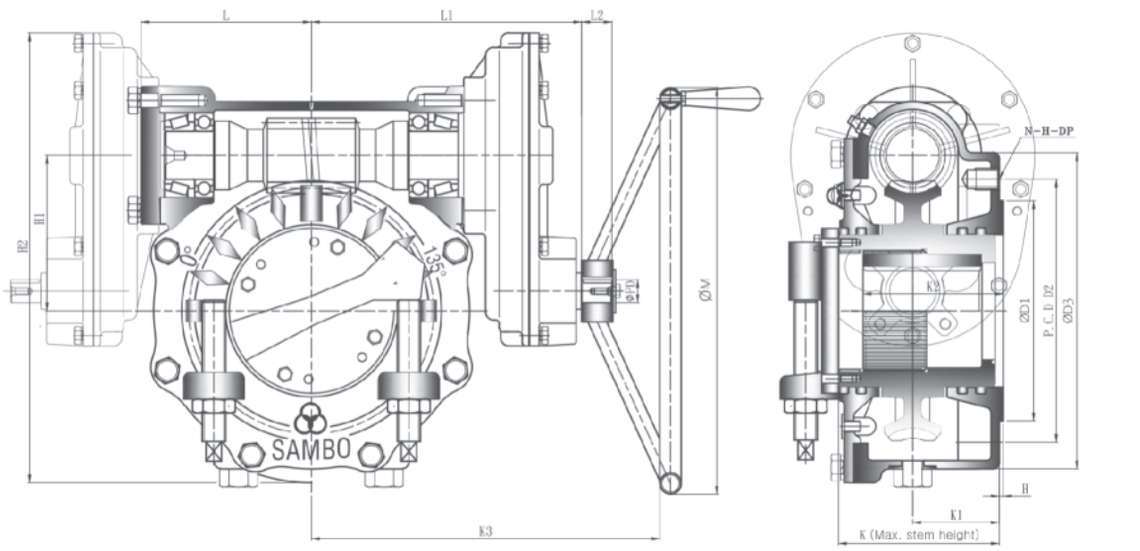
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-BF-135	32 : 1	20 (6X6)	F–05, F–07	360	266	5
SBWG-0-135	36 : 1	28 (8X7)	F-07 , F-10	780	575	8
SBWG-00 -135	40 : 1	36 (10X8)	F-10 , F-12	1200	885	13
SBWG-01-135	44 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	16
SBWG-02-135	48 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	24
SBWG-03-135	52 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	43
SBWG-35-135	52 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	37
SBWG-04-135	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	62
SBWG-05-135	60 : 1	115 (32X18)	(F-20) , F-25 , F-30	15900	11727	84
SBWG-55-135	62 : 1	125 (32X18)	F-25 , F-30	23500	17333	105
SBWG-06-135	64 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	157
SBWG-07-135	68 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	255
SBWG-75-135	66 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	364
SBWG-08-135	66 : 1	250 (56X32)	F-40 , F-48	121000	89245	489
SBWG-09-135	66 : 1	280 (63X32)	F-48 , F-60	192500	141981	847
SBWG-10-135	64 : 1	320 (70X36)	F-60	275000	202830	1347
'New' SBWB-105-135	66 : 1	320 (70x36)	F60	358500	264416	1580
SBWG-11-135	68 : 1	360 (80X40)	F-60, F-80	442000	326002	2105
SBWG-12-135	70 : 1	400 (90X45)	F-60 , F-80	610000	449913	2923
SBWG-13-135	72 : 1	420 (100X50)	F-60 , F-80	970000	715435	3825
'New' SBWB-14-135	74 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7500
'New' SBWB-15-135	80 : 1	500 (100x50)	F-80, F-100	2000000	1475124	10800

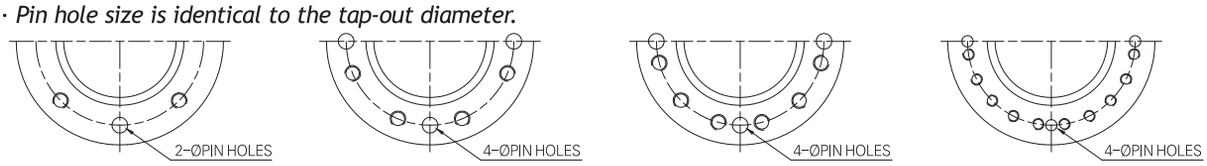
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Part-Turn 135°

Horizontal input with single reduction gear attachment



· *Pin hole size is identical to the tap-out diameter.*



Type A *Type B* *Type C* *Type D*

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-00-1S-135	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	239	86	166	29	21	6X6	300
SBWG-01-1S-135		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	268	95	175				400
SBWG-02-1S-135		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	299	108	190.5	34	26	8X7	500
SBWG-03-1S-135	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	319	118	200.5	34	26	8X7	560
SBWG-35-1S-135		F-25	200	254	8-M16-24	300		127	352	135	72	100	337	125	218.5				
SBWG-04-1S-135		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	373	153	250	34	32	10X8	610
SBWG-05-1S-135		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	383	163	260				710
SBWG-55-1S-135						350		202	516.5	162	80	144	403	183	280				
SBWG-06-1S-135		F-35	260	356	8-M30-45	415		230	621	200	109	173	472	217	349	44	38	12X8	800
SBWG-07-1S-135		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	507	252	384				
SBWG-75-1S-135	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	601	279	485	58	50	16X10	900
SBWG-08-1S-135						560		379	968	254	125	245	636	314	520				
SBWG-09-1S-135	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	676	354	560	58	50	16X10	900
SBWG-10-1S-135						800		513	1291	352	164	330	807	426	691				1000
'New' SBWB-105-1S-135								564	1294	370	167	330	817	436	701				
SBWG-11-1S-135		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	850	468.5	733.5				
SBWG-12-1S-135						1000		711	1751	482	265	415	1021	554	905				
SBWG-13-1S-135								809	1944	546	301	515	1071	609	955				
'New' SBWB-14-1S-135	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15-1S-135								1157	2582	597	305	555	1650	827	1534				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and valve stem.
- Options include handwheels, chain, and other accessories.

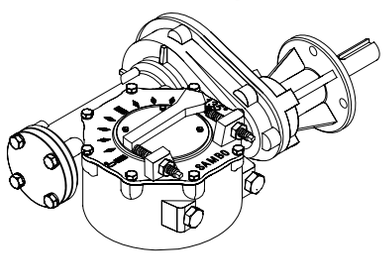


Bushing Type

- Splines allow precise alignment of the valve stem key.

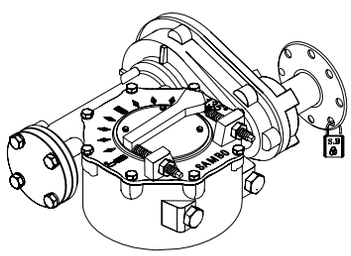
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



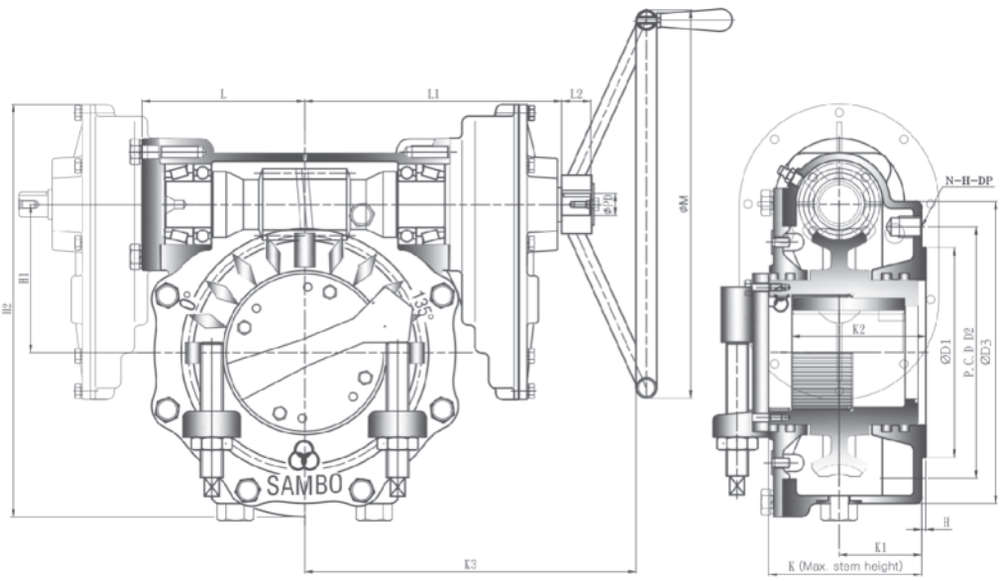
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-1S-135	80 : 1	36 (10X8)	F-10 , F-12	1200	885	15
SBWG-01-1S-135	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	18
SBWG-02-1S-135	121.6 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	27
SBWG-03-1S-135	131.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	37
SBWG-35-1S-135	131.7 : 1	80 (22X14)	F-16 , (F-20), F--25	6100	4499	51
SBWG-04-1S-135	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	71
SBWG-05-1S-135	180 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	94
SBWG-55-1S-135	186 : 1	125 (32X18)	F-25 , F-30	23500	17333	115
SBWG-06-1S-135	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	185
SBWG-07-1S-135	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	282
SBWG-75-1S-135	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	436
SBWG-08-1S-135	330 : 1	250 (56X32)	F-40 , F-48	121000	89245	561
SBWG-09-1S-135	330 : 1	280 (63X32)	F-48 , F-60	192500	141981	920
SBWG-10-1S-135	320 : 1	320 (70X36)	F-60	275000	202830	1444
'New' SBWB-105-1S-135	330 : 1	320 (70x36)	F60	358500	264416	1698
SBWG-11-1S-135	340 : 1	360 (80X40)	F-60, F-80	442000	326002	2202
SBWG-12-1S-135	350 : 1	400 (90X45)	F-60 , F-80	610000	449913	3103
SBWG-13-1S-135	360 : 1	420 (100X50)	F-60 , F-80	970000	715435	4005
'New' SBWB-14-1S-135	370 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1S-135	400 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

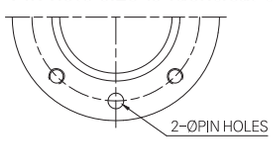
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Part-Turn 135°

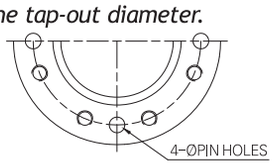
Horizontal input with double reduction gear attachment



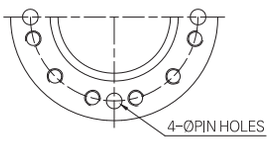
· Pin hole size is identical to the tap-out diameter.



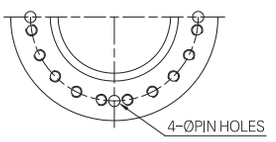
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-00-1SD-135	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	256	86	183	29	21	6X6	300
SBWG-01-1SD-135		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	285	95	192				400
SBWG-02-1SD-135		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	323	108	214.5	34	26	8X7	500
SBWG-03-1SD-135	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	343	118	224.5	34	26	8X7	560
SBWG-35-1SD-135		F-25	200	254	8-M16-24	300		127	352	135	72	100	361	125	242.5				
SBWG-04-1SD-135		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	409	153	286	34	32	10X8	610
SBWG-05-1SD -135		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	419	163	296				710
SBWG-55-1SD-135						350		202	516.5	162	80	144	439	183	316				
SBWG-06-1SD-135		F-35	260	356	8-M30-45	415		230	621	200	109	173	499	217	376	44	38	12X8	800
SBWG-07-1SD-135		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	534	252	411				
SBWG-75-1SD-135	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	647	279	531	58	50	16X10	900
SBWG-08-1SD-135						560		379	968	254	125	245	682	314	566				
SBWG-09-1SD-135	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	722	354	606	58	50	16X10	900
SBWG-10-1SD-135						800		513	1291	352	164	330	862	426	746				1000
'New' SBWB-105-1SD-135								564	1294	370	167	330	872	436	756				
SBWG-11-1SD-135		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	905	468.5	788.5				
SBWG-12-1SD-135						1000		711	1751	482	265	415	1085	554	969				
SBWG-13-1SD-135								809	1944	546	301	515	1125	609	1009				
'New' SBWB-14-1SD-135	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15-1SD-135								1157	2582	597	305	555	1650	827	1534				

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Worm Gear Actuators

Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, providing excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is 1045 heat-treated carbon steel.
- A removable splined bushing permits accurate positioning between the gear drive and the valve stem.
- Options include handwheels, chain wheels, and more.



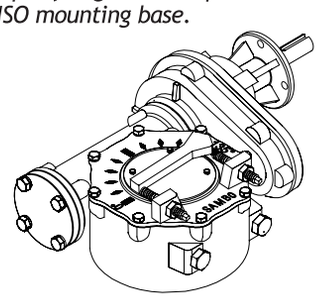
Bushing Type

- Splines provide precise alignment of the valve stem key.



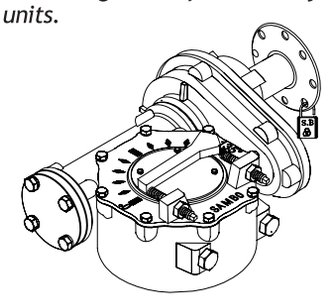
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



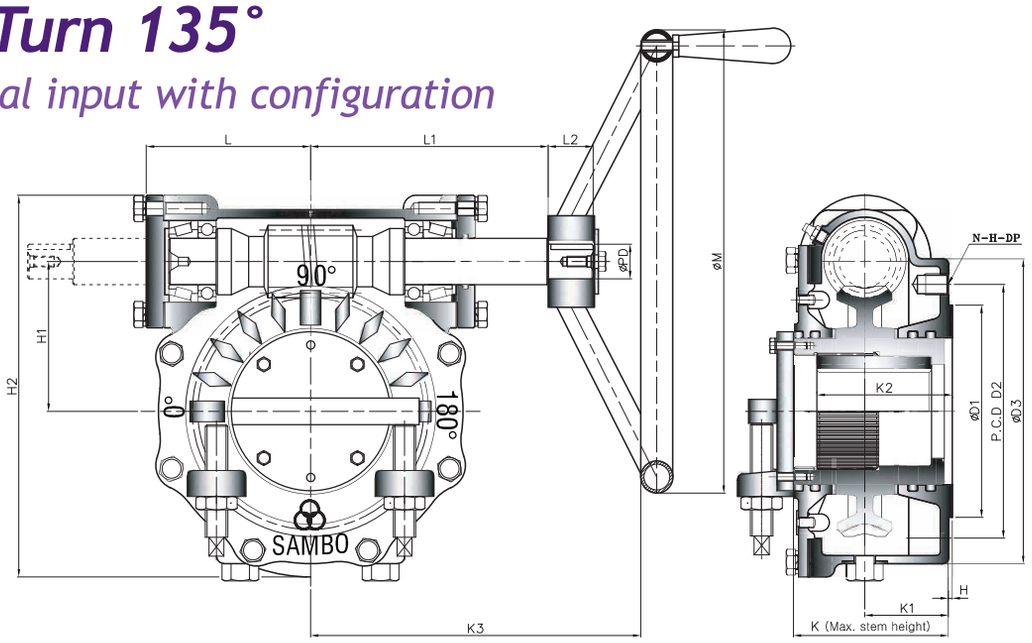
Selection chart for manual operation

SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-1SD-135	160 : 1	36 (10X8)	F-10, F-12	1200	885	17
SBWG-01-1SD-135	176 : 1	46 (14X9)	F-10, F-12, F-14	2000	1475	20
SBWG-02-1SD-135	308 : 1	60 (18X11)	F-12, F-14, F-16	2800	2065	30
SBWG-03-1SD-135	333.7 : 1	75 (20X12)	F-14, F-16, (F-20)	4300	3172	39
SBWG-35-1SD-135	333.7 : 1	80 (22X14)	F-16, (F-20) , F–25	6100	4499	53
SBWG-04-1SD-135	504 : 1	95 (25X14)	F-16, (F-20), F-25	10400	7671	76
SBWG-05-1SD -135	540 : 1	115 (32X18)	(F-20), F-25, F-30	15900	11727	99
SBWG-55-1SD-135	558 : 1	125 (32X18)	F-25, F-30	23500	17333	120
SBWG-06-1SD-135	1024 : 1	140 (36X20)	F-25, F-30, F-35	32800	24192	198
SBWG-07-1SD-135	1088 : 1	180 (45X25)	F-30, F-35, F-40	51100	37689	296
SBWG-75-1SD-135	1650 : 1	210 (50X28)	F-35, F-40, F-48	81500	60111	464
SBWG-08-1SD-135	1650 : 1	250 (56X32)	F-40, F-48	121000	89245	589
SBWG-09-1SD-135	1650 : 1	280 (63X32)	F-48, F-60	192500	141981	947
SBWG-10-1SD-135	1600 : 1	320 (70X36)	F-60	275000	202830	1482
'New' SBWB-105-1SD-135	1650 : 1	320 (70x36)	F60	358500	264416	1764
SBWG-11-1SD-135	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2240
SBWG-12-1SD-135	1750 : 1	400 (90X45)	F-60, F-80	610000	449913	3103
SBWG-13-1SD-135	1800 : 1	420 (100X50)	F-60, F-80	970000	715435	4005
'New' SBWB-14-1SD-135	1850 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1SD-135	2000 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

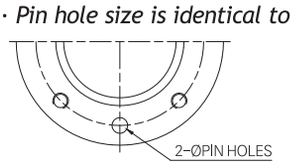
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Part-Turn 135°

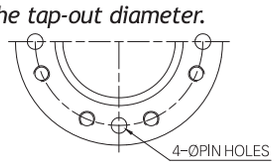
Horizontal input with configuration



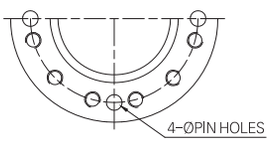
· *Pin hole size is identical to the tap-out diameter.*



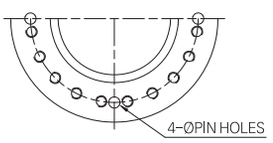
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-BF-180	A	F-07	55	70	4-M8-12	110	2	42	132	76	38	38.6	150	64	97	24	16	6X6	200
SBWG-0-180		F-10	70	102	4-M10-15	135		57	159.5	77	38	43.6	167	71.5	104.5				250
SBWG-00-180		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	211	86	138	29	21	6X6	300
SBWG-01-180		F-14	100	140	4-M16-24	190		82.5	217.5	96	53		240	95	147				400
SBWG-02-180		F-16	130	165	4-M20-30	220		97	257	111.5	58	75.5	274	108	166	34	26	8X7	500
SBWG-03-180	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	287	118	61		294	118	176	34	26	8X7	560
SBWG-35-180		F-25	200	254	8-M16-24	300		127	327	135	72	100	312	136	194				
SBWG-04-180		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	330	153	207	34	32	10X8	610
SBWG-05-180		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	340	163	217				710
SBWG-55-180						350		202	484.5	162	80	144	360	183	237				
SBWG-06-180		F-35	260	356	8-M30-45	415		230	558.5	200	109	173	409	217	286	44	38	12X8	800
SBWG-07-180		F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	443	252	320				
SBWG-75-180	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	497	279	381	58	50	16X10	900
SBWG-08-180						560		379	884	254	125	245	532	314	416				
SBWG-09-180	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	572	354	456	58	50	16X10	900
SBWG-10-180						800		513	1191	352	164	330	730	426	614				1000
'New' SBWB-105-180								564	1294	370	167	330	736	436	620				
SBWG-11-180		F-80	670	813	20-M42–63	900		616.5	1399.5	394	181	370	773	468.5	657				
SBWG-12-180						1000		711	1621	482	265	415	818	554	702				
SBWG-13-180								809	1814	546	301	515	868	609	752				
'New' SBWB-14-180	E	F-100	870	1042	32-M42-65	1600	5	992	2257	565	285	530	1351	812	1235	58	50	16X10	1000
'New' SBWB-15-180								1157	2582	597	305	555	1366	827	1250				

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Features

- All mounting bases conform to ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, providing excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is 1045 heat-treated carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and valve stem.
- Optional accessories include handwheels and chain drives.



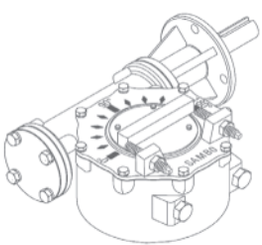


Bushing Type

- Splines ensure precise alignment with the valve stem key.

M.O.V Option

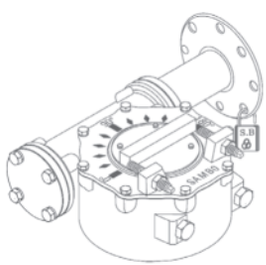
- Worm gear units can be supplied with motor actuator input flanges compatible with standard ISO mounting bases.





Locking Device Option

- Manual units can be equipped with a handwheel locking device at the input.





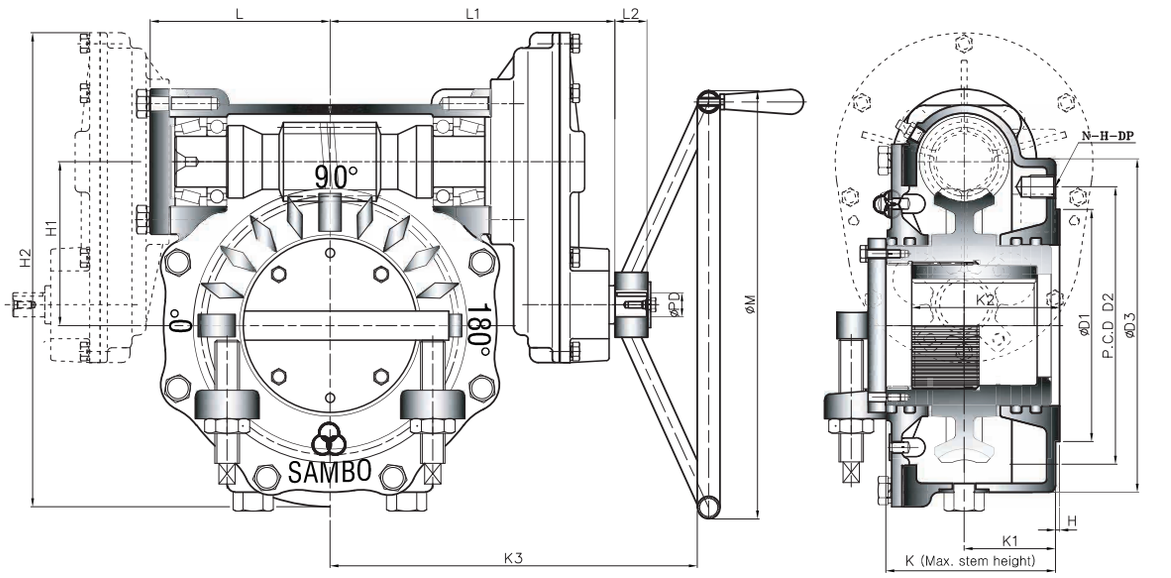
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-BF-180	32 : 1	20 (6X6)	F–05, F–07	360	266	5
SBWG-0-180	36 : 1	28 (8X7)	F-07 , F-10	780	575	8
SBWG-00-180	40 : 1	36 (10X8)	F-10 , F-12	1200	885	13
SBWG-01-180	44 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	16
SBWG-02-180	48 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	24
SBWG-03-180	52 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	43
SBWG-35-180	52 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	37
SBWG-04-180	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	62
SBWG-05-180	60 : 1	115 (32X18)	(F-20) , F-25 , F-30	15900	11727	84
SBWG-55-180	62 : 1	125 (32X18)	F-25 , F-30	23500	17333	105
SBWG-06-180	64 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	157
SBWG-07-180	68 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	255
SBWG-75-180	66 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	364
SBWG-08-180	66 : 1	250 (56X32)	F-40 , F-48	121000	89245	489
SBWG-09-180	66 : 1	280 (63X32)	F-48 , F-60	192500	141981	847
SBWG-10-180	64 : 1	320 (70X36)	F-60	275000	202830	1347
'New' SBWB-105-180	66 : 1	320 (70x36)	F60	358500	264416	1580
SBWG-11-180	68 : 1	360 (80X40)	F-60, F-80	442000	326002	2105
SBWG-12-180	66 : 1	400 (90X45)	F-60 , F-80	610000	449913	2923
SBWG-13-180	72 : 1	420 (100X50)	F-60 , F-80	970000	715435	3825
'New' SBWB-14-180	74 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7500
'New' SBWB-15-180	80 : 1	500 (100x50)	F-80, F-100	2000000	1475124	10800

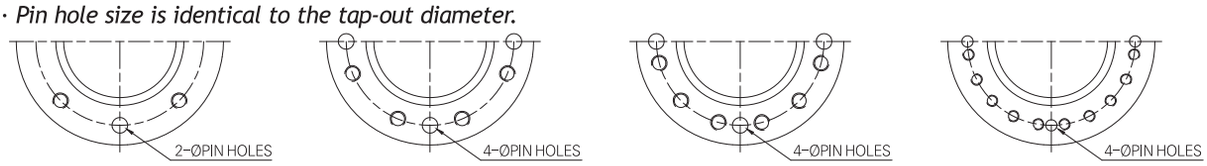
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Part-Turn 135°

Horizontal input with configuration



· *Pin hole size is identical to the tap-out diameter.*



Type A *Type B* *Type C* *Type D*

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00-1S-180	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	239	86	166	29	21	6X6	300
SBWG-01-1S-180		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	268	95	175				400
SBWG-02-1S-180		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	299	108	190.5	34	26	8X7	500
SBWG-03-1S-180	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	319	118	200.5	34	26	8X7	560
SBWG-35-1S-180		F-25	200	254	8-M16-24	300		127	352	135	72	100	337	125	218.5				
SBWG-04-1S-180		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	373	153	250	34	32	10X8	610
SBWG-05-1S-180		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	383	163	260				710
SBWG-55-1S-180						350		202	516.5	162	80	144	403	183	280				
SBWG-06-1S-180		F-35	260	356	8-M30-45	415		230	621	200	109	173	472	217	349	44	38	12X8	800
SBWG-07-1S-180		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	507	252	384				
SBWG-75-1S-180	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	601	279	485	58	50	16X10	900
SBWG-08-1S-180						560		379	968	254	125	245	636	314	520				
SBWG-09-1S-180	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	676	354	560	58	50	16X10	900
SBWG-10-1S-180						800		513	1291	352	164	330	807	426	691				1000
'New' SBWB-105-1S-180								564	1294	370	167	330	817	436	701				
SBWG-11-1S-180		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	850	468.5	733.5				
SBWG-12-1S-180						1000		711	1751	482	265	415	1021	554	905				
SBWG-13-1S-180								809	1944	546	301	515	1071	609	955				
'New' SBWB-14-1S-180	E	F-100	870	1042	32-M42-65	1600	5	992	2482	568	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15-1S-180								1157	2582	597	305	555	1650	827	1534				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases comply with ISO 5210/1.
- All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and the valve stem.
- Options include handwheels and chain operation.

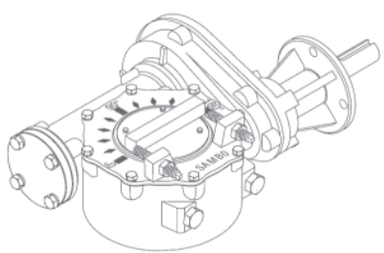


Bushing Type

- Splines ensure precise alignment with the valve stem key.

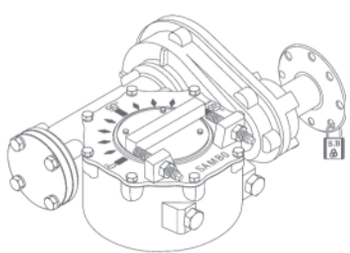
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges to fit standard ISO mounting bases.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



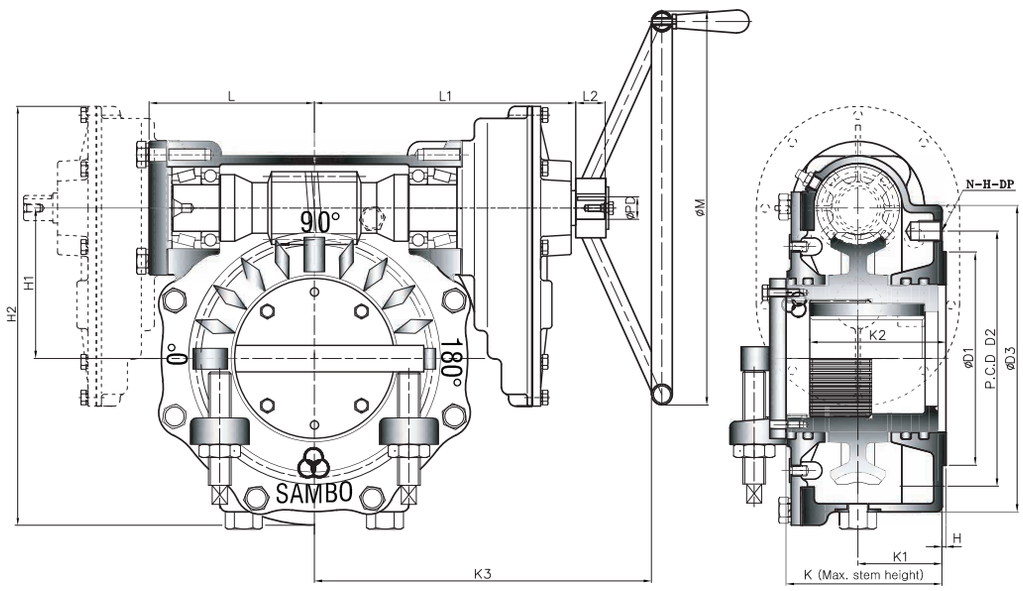
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-1S -180	80 : 1	36 (10X8)	F-10 , F-12	1200	885	15
SBWG-01-1S -180	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	18
SBWG-02-1S -180	121.6 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	27
SBWG-03-1S -180	131.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	37
SBWG-35-1S -180	131.7 : 1	80 (22X14)	F-16 , (F-20), F–25	6100	4499	51
SBWG-04-1S -180	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	71
SBWG-05-1S -180	180 : 1	115 (32X18)	(F-20) , F-25	15900	11727	94
SBWG-55-1S -180	186 : 1	125 (32X18)	F-25 , F-30, F-35	23500	17333	115
SBWG-06-1S -180	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	185
SBWG-07-1S -180	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	282
SBWG-75-1S -180	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	436
SBWG-08-1S -180	330 : 1	250 (56X32)	F-40 , F-48	121000	89245	561
SBWG-09-1S -180	330 : 1	280 (63X32)	F-48 , F-60	192500	141981	920
SBWG-10-1S -180	320 : 1	320 (70X36)	F-60	275000	202830	1444
'New' SBWB-105-1S-180	330 : 1	320 (70x36)	F60	358500	264416	1698
SBWG-11-1S -180	340 : 1	360 (80X40)	F-60, F-80	442000	326002	2202
SBWG-12-1S -180	350 : 1	400 (90X45)	F-60 , F-80	610000	449913	3103
SBWG-13-1S -180	360 : 1	420 (100X50)	F-60 , F-80	970000	715435	4005
'New' SBWB-14-1S-180	370 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1S-180	400 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

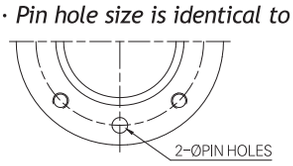
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Part-Turn 135°

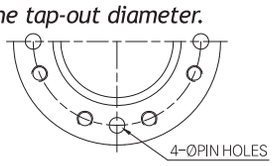
HHorizontal input with double reduction gear attachment



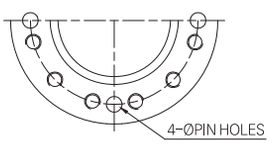
· *Pin hole size is identical to the tap-out diameter.*



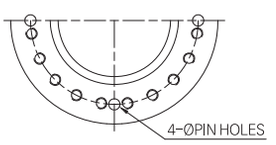
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00-1SD-180	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	256	86	183	29	21	6X6	300
SBWG-01-1SD-180		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	285	95	192				400
SBWG-02-1SD-180		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	323	108	214.5	34	26	8X7	500
SBWG-03-1SD-180	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	343	118	224.5	34	26	8X7	560
SBWG-35-1SD-180		F-25	200	254	8-M16-24	300		127	352	135	72	100	361	125	242.5				
SBWG-04-1SD-180		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	409	153	286	34	32	10X8	610
SBWG-05-1SD-180		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	419	163	296				710
SBWG-55-1SD-180						350		202	516.5	162	80	144	439	183	316				
SBWG-06-1SD-180		F-35	260	356	8-M30-45	415		230	621	200	109	173	499	217	376	44	38	12X8	800
SBWG-07-1SD-180		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	534	252	411				
SBWG-75-1SD-180	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	647	279	531	58	50	16X10	900
SBWG-08-1SD-180						560		379	968	254	125	245	682	314	566				
SBWG-09-1SD-180	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	722	354	606	58	50	16X10	900
SBWG-10-1SD-180						800		513	1291	352	164	330	862	426	746				1000
'New' SBWB-105-1SD-180								564	1294	370	167	330	872	436	756				
SBWG-11-1SD-180		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	905	468.5	788.5				
SBWG-12-1SD-180						1000		711	1751	482	265	415	1085	554	969				
SBWG-13-1SD-180								809	1944	546	301	515	1125	609	1009				
'New' SBWB-14-1SD-180	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15-1SD-180								1157	2582	597	305	555	1650	827	1534				

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Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, delivering excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables accurate positioning between the gear drive and valve stem.
- Options include handwheels, chain operation, etc.

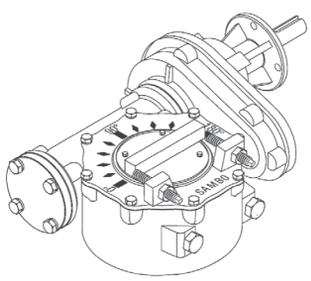


Bushing Type

- Splines ensure precise alignment with the valve stem key.

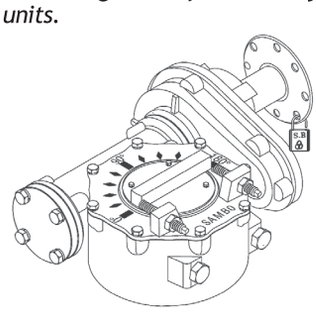
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges to mate with standard ISO mounting bases.



Locking Device Option

- The input can be fitted with a handwheel locking device for manually operated units.



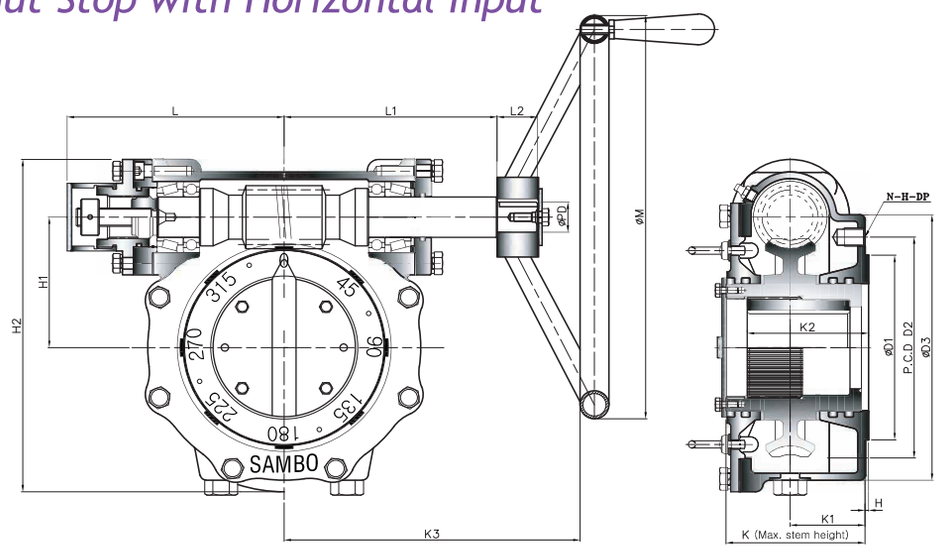
Selection chart for manual operation

SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00-1SD-180	160 : 1	36 (10X8)	F-10 , F-12	1200	885	17
SBWG-01-1SD-180	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	20
SBWG-02-1SD-180	308 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	30
SBWG-03-1SD-180	333.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	39
SBWG-35-1SD-180	333.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	53
SBWG-04-1SD-180	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	76
SBWG-05-1SD-180	540 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	99
SBWG-55-1SD-180	558 : 1	125 (32X18)	F-25 , F-30	23500	17333	120
SBWG-06-1SD-180	1024 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	198
SBWG-07-1SD-180	1088 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	296
SBWG-75-1SD-180	1650 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	464
SBWG-08-1SD-180	1650 : 1	250 (56X32)	F-40 , F-48	121000	89245	589
SBWG-09-1SD-180	1650 : 1	280 (63X32)	F-48 , F-60	192500	141981	947
SBWG-10-1SD-180	1600 : 1	320 (70X36)	F-60	275000	202830	1482
'New' SBWB-105-1SD-180	1650 : 1	320 (70x36)	F60	358500	264416	1764
SBWG-11-1SD-180	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2240
SBWG-12-1SD-180	1750 : 1	400 (90X45)	F-60 , F-80	610000	449913	3103
SBWG-13-1SD-180	1800 : 1	420 (100X50)	F-60 , F-80	970000	715435	4005
'New' SBWB-14-1SD-180	1850 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15-1SD-180	2000 :1	500 (100x50)	F-80, F-100	2000000	1475124	11500

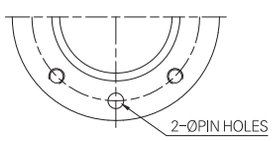
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Part-Turn 45°, 90°, 135°, 180°, 225°, 270°, 315°, 360°

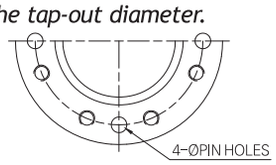
Traveling Nut Stop with Horizontal Input



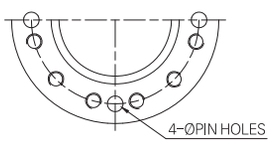
· Pin hole size is identical to the tap-out diameter.



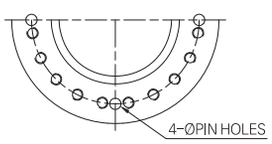
Type A



Type B



Type C



Type D

Dimensions

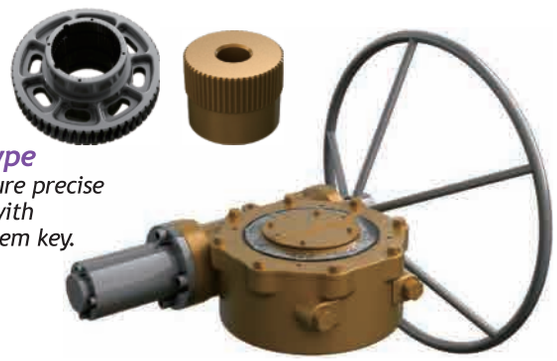
UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-BFTN	A	F-07	55	70	4-M8-12	110	2	42	132	76	38	38.6	150	145	97	24	16	6X6	200
SBWG-0TN		F-10	70	102	4-M10-15	135		57	159.5	77	38	43.6	167	152.5	104.5				250
SBWG-00TN		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	211	181	138	29	21	6X6	300
SBWG-01TN		F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	240	190	147				400
SBWG-02TN		F-16	130	165	4-M20-30	220		97	257		58	75.5	274	228	166	34	26	8X7	500
SBWG-03TN	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	287	118	61	87	294	238	176	34	26	8X7	560
SBWG-35TN		F-25	200	254	8-M16-24	300		127	319.5	126	63	91	312	243	194				
SBWG-04TN		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	330	352	207	34	32	10X8	610
SBWG-05TN		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	340	362	217				710
SBWG-55TN						350		202	484.5	162	80	144	360	382	237				
SBWG-06TN		F-35	260	356	8-M30-45	415		230	558.5	200	109	175	409	497	286	44	38	12X8	800
SBWG-07TN		F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	443	532	320				
SBWG-75TN	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	497	621	381	58	50	16X10	900
SBWG-08TN						560		379	884	254	125	245	532	656	416				
SBWG-09TN	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	572	696	456	58	50	16X10	900
SBWG-10TN						800		513	1191	352	164	330	730	845	614				1000
'New' SBWB-105TN								564	1294	370	167	330	736	860	620				
SBWG-11TN		F-80	670	813	20-M42–63	900		616.5	1399.5	400	181	370	773	886.5	657				
SBWG-12TN						1000		711	1621	484	265	455	818	1056	702				
SBWG-13TN								809	1814	546	301	515	868	1096	752				
'New' SBWB-14TN	E	F-100	870	1042	32-M42-65	1600	5	992	2257	565	285	530	1351	1200	1235	58	50	16X10	1000
'New' SBWB-15TN								1157	2582	597	305	555	1366	1450	1250				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases comply with ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable bushing enables precise alignment between the gear drive and valve stem.
- Optional accessories include handwheels, chain, and more.

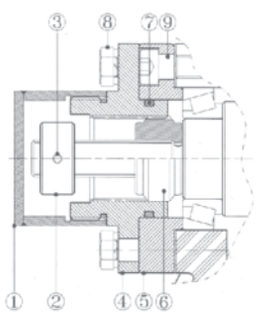


Bushing Type

- Splines ensure precise alignment with the valve stem key.

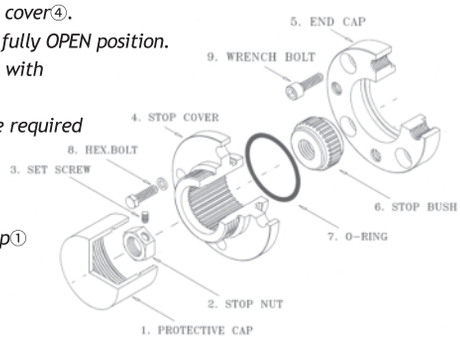
Travel Nut Stop

- When actuators are supplied mounted to a valve, the end stops are factory set.
- If end-stop adjustment is required, set the OPEN position first. If the exact valve position cannot be verified from the shaft markings, adjustment may need to be performed with the valve removed.



Setting Procedure

- Remove all bolts⑧ from the stop cover④.
- Manually rotate the valve to the fully OPEN position.
- If the stop cover④ does not align with the housing threads, remove it and reposition it to the required location.
- Install the bolts⑧ with washers and tighten them evenly.
- Finally, remove the protective cap① and turn the stop nut② to set the CLOSED end position.



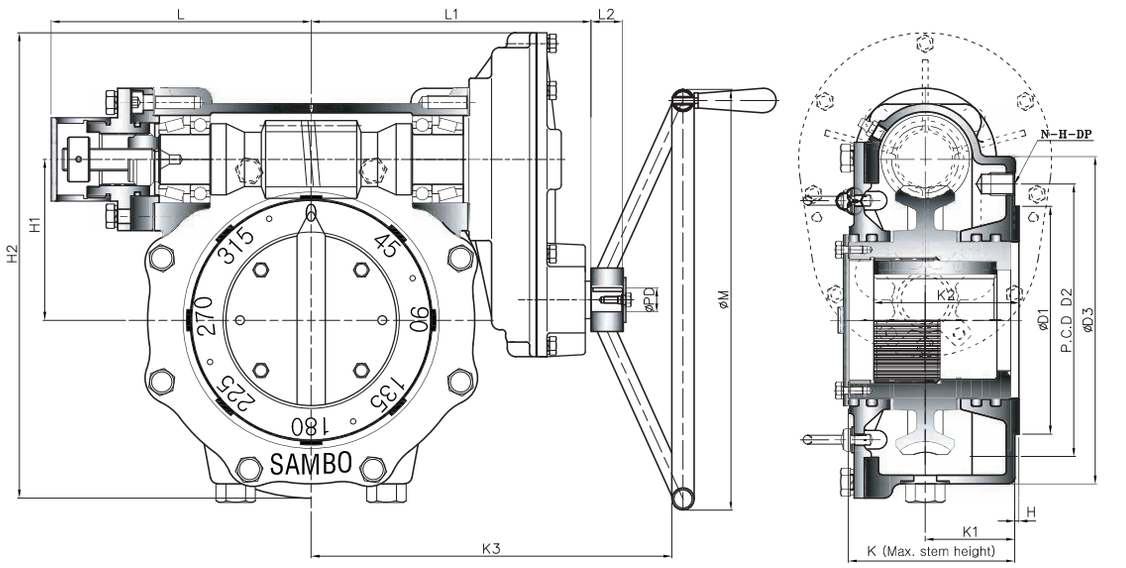
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-BFTN	32 : 1	20 (6X6)	F–05, F–07	360	266	6
SBWG-0TN	36 : 1	28 (8X7)	F-07 , F-10	780	575	9
SBWG-00TN	40 : 1	36 (10X8)	F-10 , F-12	1200	885	13
SBWG-01TN	44 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	16
SBWG-02TN	48 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	25
SBWG-03TN	52 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	34
SBWG-35TN	52 : 1	80 (22X14)	F-16 , (F-20), F–25	6100	4499	39
SBWG-04TN	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	63
SBWG-05TN	60 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	85
SBWG-55TN	62 : 1	125 (32X18)	F-25 , F-30	23500	17333	105
SBWG-06TN	64 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	155
SBWG-07TN	68 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	254
SBWG-75TN	66 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	364
SBWG-08TN	66 : 1	250 (56X32)	F-40 , F-48	121000	89245	489
SBWG-09TN	66 : 1	280 (63X32)	F-48 , F-60	192500	141981	848
SBWG-10TN	64 : 1	320 (70X36)	F-60	275000	202830	1352
'New' SBWB-105TN	66 : 1	320 (70x36)	F60	358500	264416	1580
SBWG-11TN	68 : 1	360 (80X40)	F-60, F-80	442000	326002	2113
SBWG-12TN	70 : 1	400 (90X45)	F-60 , F-80	610000	449913	2931
SBWG-13TN	72 : 1	420 (100X50)	F-60 , F-80	970000	715435	3835
'New' SBWB-14TN	74 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7500
'New' SBWB-15TN	80 : 1	500 (100x50)	F-80, F-100	2000000	1475124	10800

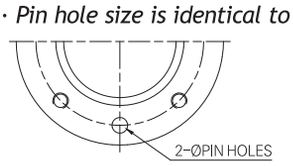
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Part-Turn 45° , 90° , 135° , 180° , 225° , 270° , 315° , 360°

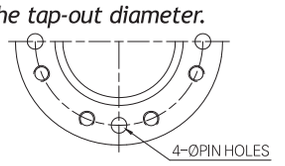
Traveling nut stop with horizontal input and single reduction gear attachment



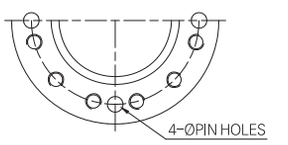
· *Pin hole size is identical to the tap-out diameter.*



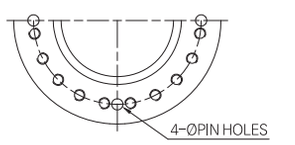
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00TN-1S	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	239	181	166	29	21	6X6	300
SBWG-01TN-1S		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	268	190	175				400
SBWG-02TN-1S		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	299	228	190.5	34	26	8X7	500
SBWG-03TN-1S	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	319	238	200.5	34	26	8X7	560
SBWG-35TN-1S		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	337	243	218.5				
SBWG-04TN-1S		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	373	352	250	34	32	10X8	610
SBWG-05TN-1S		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	383	362	260				710
SBWG-55TN-1S						350		202	516.5	162	80	144	403	382	280				
SBWG-06TN-1S		F-35	260	356	8-M30-45	415		230	621	200	109	175	472	497	349	44	38	12X8	800
SBWG-07TN-1S		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	507	532	384				
SBWG-75TN-1S	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	601	621	485	58	50	16X10	900
SBWG-08TN-1S						560		379	968	254	125	245	636	656	520				
SBWG-09TN-1S	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	676	696	560	58	50	16X10	900
SBWG-10TN-1S						800		513	1291	352	164	330	807	845	691				1000
'New' SBWB-105TN-1S								564	1294	370	167	330	817	860	701				
SBWG-11TN-1S		F-80	670	813	20-M42–63	900		616.5	1499.5	400	181	370	850	886.5	733.5				
SBWG-12TN-1S						1000		711	1751	484	265	455	1021	1056	905				
SBWG-13TN-1S								809	1944	546	301	515	1071	1096	955				
'New' SBWB-14TN-1S	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	1200	1519	58	50	16X10	1000
'New' SBWB-15TN-1S								1157	2582	597	305	555	1650	1450	1534				

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Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable bushing enables precise alignment between the gear drive and valve stem.
- Optional accessories include handwheels, chain, and more.

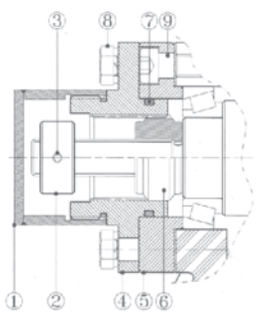


Bushing Type

- Splines ensure precise alignment with the valve stem key.

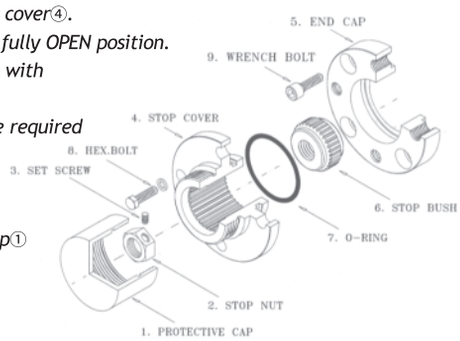
Travel Nut Stop

- When actuators are supplied mounted to a valve, the end stops are factory set.
- If end-stop adjustment is required, set the OPEN position first. If the exact valve position cannot be verified from the shaft markings, adjustment may need to be performed with the valve removed.



Setting Procedure

- Remove all bolts⑧ from the stop cover④.
- Manually rotate the valve to the fully OPEN position.
- If the stop cover④ does not align with the housing threads, remove it and reposition it to the required location.
- Install the bolts⑧ with washers and tighten them evenly.
- Finally, remove the protective cap① and turn the stop nut② to set the CLOSED end position.



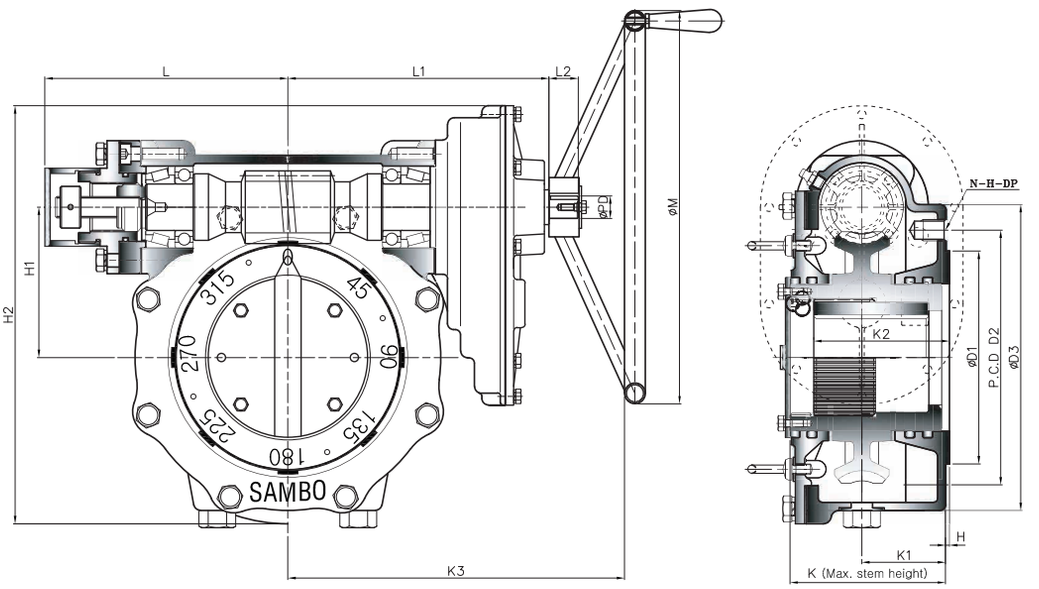
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00TN-1S	80 : 1	36 (10X8)	F-10 , F-12	1200	885	15
SBWG-01TN-1S	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	18
SBWG-02TN-1S	121.6 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	29
SBWG-03TN-1S	131.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	38
SBWG-35TN-1S	131.7 : 1	80 (22X14)	F-16 , (F-20) , F–25	6100	4499	43
SBWG-04TN-1S	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	73
SBWG-05TN-1S	180 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	95
SBWG-55TN-1S	186 : 1	125 (32X18)	F-25 , F-30	23500	17333	115
SBWG-06TN-1S	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	183
SBWG-07TN-1S	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	283
SBWG-75TN-1S	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	436
SBWG-08TN-1S	330 : 1	250 (56X32)	F-40 , F-48	121000	89245	561
SBWG-09TN-1S	330 : 1	280 (63X32)	F-48 , F-60	192500	141981	920
SBWG-10TN-1S	320 : 1	320 (70X36)	F-60	275000	202830	1449
'New' SBWB-105TN-1S	330 : 1	320 (70x36)	F60	358500	264416	1698
SBWG-11TN-1S	340 : 1	360 (80X40)	F-60, F-80	442000	326002	2210
SBWG-12TN-1S	350 : 1	400 (90X45)	F-60 , F-80	610000	449913	3110
SBWG-13TN-1S	360 : 1	420 (100X50)	F-60 , F-80	970000	715435	4015
'New' SBWB-14TN-1S	370 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15TN-1S	400 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

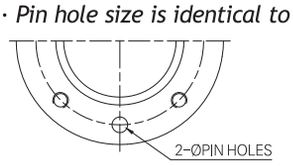
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Part-Turn 45° , 90° , 135° , 180° , 225° , 270° , 315° , 360°

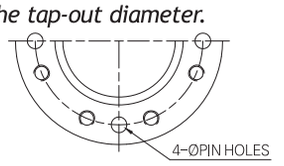
Traveling nut stop with horizontal input and double reduction gear attachment



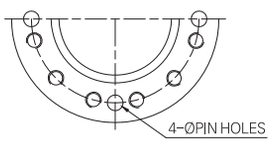
· *Pin hole size is identical to the tap-out diameter.*



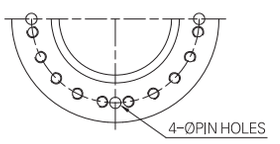
Type A



Type B



Type C



Type D

Dimensions

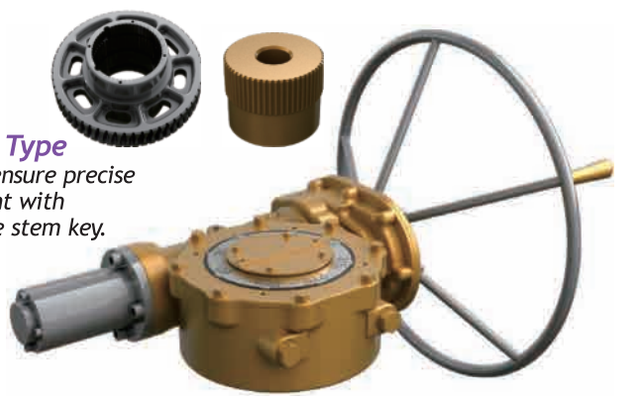
UNIT : mm

MODEL \ DIM	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-00TN-1SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	256	181	183	29	21	6X6	300
SBWG-01TN-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	285	190	192				400
SBWG-02TN-1SD		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	323	228	214.5	34	26	8X7	500
SBWG-03TN-1SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	343	238	224.5	34	26	8X7	560
SBWG-35TN-1SD		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	361	243	242.5				
SBWG-04TN-1SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	409	352	286	34	32	10X8	610
SBWG-05TN-1SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	419	362	296				710
SBWG-55TN-1SD						350		202	516.5	162	80	144	439	382	316				
SBWG-06TN-1SD		F-35	260	356	8-M30-45	415		230	621	200	109	175	499	497	376	44	38	12X8	800
SBWG-07TN-1SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	534	532	411				
SBWG-75TN-1SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	647	621	531	58	50	16X10	900
SBWG-08TN-1SD						560		379	968	254	125	245	682	656	566				
SBWG-09TN-1SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	722	696	606	58	50	16X10	900
SBWG-10TN-1SD						800		513	1291	352	164	330	862	845	746				1000
'New' SBWB-105TN-1SD								564	1294	370	167	330	872	860	756				
SBWG-11TN-1SD		F-80	670	813	20-M42-63	900		616.5	1499.5	400	181	370	905	886.5	788.5				
SBWG-12TN-1SD						1000		711	1751	484	265	455	1085	1056	969				
SBWG-13TN-1SD								809	1944	546	301	515	1125	1096	1009				
'New' SBWB-14TN-1SD	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	1200	1519	58	50	16X10	1000
'New' SBWB-15TN-1SD								1157	2582	597	305	555	1650	1450	1534				

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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

Features

- All mounting bases conform to ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable bushing enables precise alignment between the gear drive and valve stem.
- Optional accessories include handwheels, chain, and more.

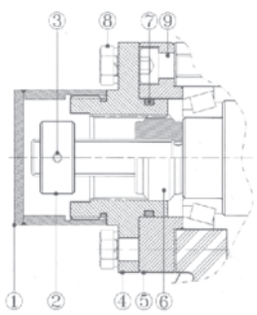


Bushing Type

- Splines ensure precise alignment with the valve stem key.

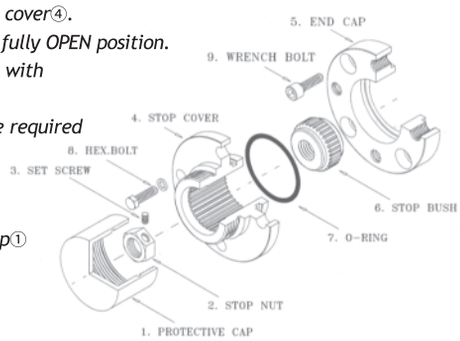
Travel Nut Stop

- When actuators are supplied mounted to a valve, the end stops are factory set.
- If end-stop adjustment is required, set the OPEN position first. If the exact valve position cannot be verified from the shaft markings, adjustment may need to be performed with the valve removed.



Setting Procedure

- Remove all bolts⑧ from the stop cover④.
- Manually rotate the valve to the fully OPEN position.
- If the stop cover④ does not align with the housing threads, remove it and reposition it to the required location.
- Install the bolts⑧ with washers and tighten them evenly.
- Finally, remove the protective cap① and turn the stop nut② to set the CLOSED end position.



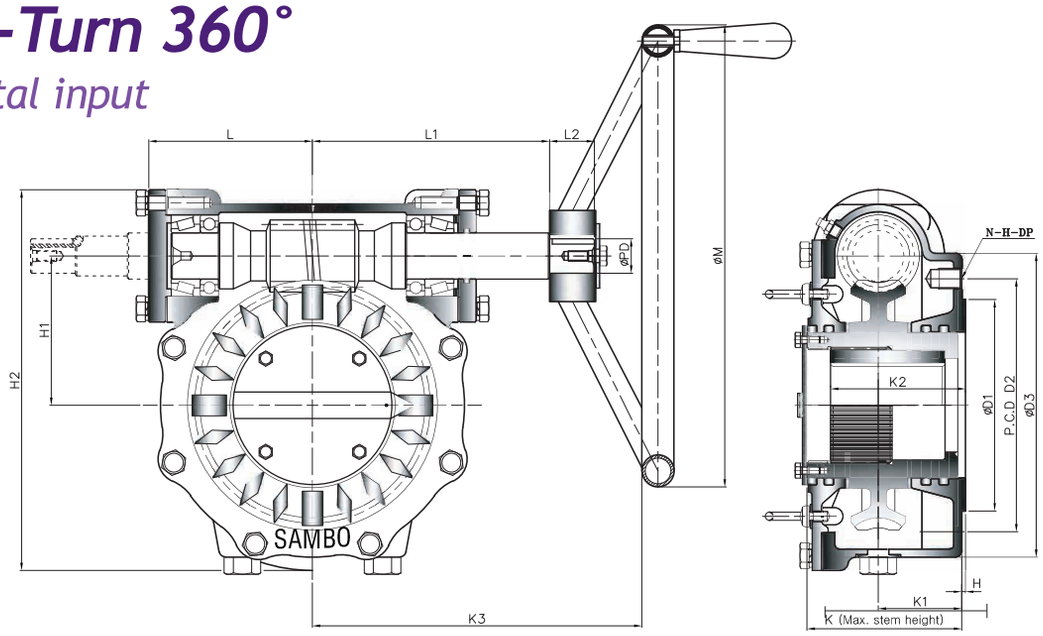
Selection chart for manual operation

SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00TN-1SD	160 : 1	36 (10X8)	F-10 , F-12	1200	885	17
SBWG-01TN-1SD	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	20
SBWG-02TN-1SD	308 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	31
SBWG-03TN-1SD	333.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	40
SBWG-35TN-1SD	333.7 : 1	80 (22X14)	F-16 , (F-20), F--25	6100	4499	45
SBWG-04TN-1SD	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	78
SBWG-05TN-1SD	540 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	100
SBWG-55TN-1SD	558 : 1	125 (32X18)	F-25 , F-30	23500	17333	120
SBWG-06TN-1SD	1024 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	196
SBWG-07TN-1SD	1088 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	296
SBWG-75TN-1SD	1650 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	464
SBWG-08TN-1SD	1650 : 1	250 (56X32)	F-40 , F-48	121000	89245	589
SBWG-09TN-1SD	1650 : 1	280 (63X32)	F-48 , F-60	192500	141981	948
SBWG-10TN-1SD	1600 : 1	320 (70X36)	F-60	275000	202830	1487
'New' SBWB-105TN-1SD	1650 : 1	320 (70x36)	F60	358500	264416	1764
SBWG-11TN-1SD	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2248
SBWG-12TN-1SD	1750 : 1	400 (90X45)	F-60 , F-80	610000	449913	3111
SBWG-13TN-1SD	1800 : 1	420 (100X50)	F-60 , F-80	970000	715435	4015
'New' SBWB-14TN-1SD	1850 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15TN-1SD	2000 :1	500 (100x50)	F-80, F-100	2000000	1475124	11500

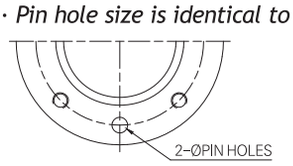
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Multi-Turn 360°

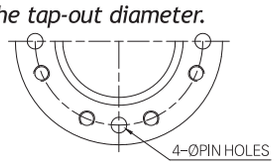
Horizontal input



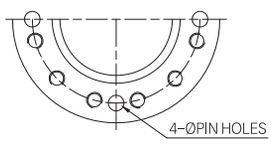
· *Pin hole size is identical to the tap-out diameter.*



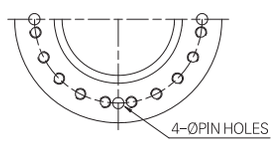
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-BFMT	A	F-07	55	70	4-M8-12	110	2	42	132	76	38	38.6	150	64	97	24	16	6X6	200
SBWG-0MT		F-10	70	102	4-M10-15	135		57	159.5	77	38	43.6	167	71.5	104.5				250
SBWG-00MT		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	211	86	138	29	21	6X6	300
SBWG-01MT		F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	240	95	147				400
SBWG-02MT		F-16	130	165	4-M20-30	220		97	257	111.5	58	75.5	274	108	166	34	26	8X7	500
SBWG-03MT	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	287	118	61	87	294	118	176	34	26	8X7	560
SBWG-35MT		F-25	200	254	8-M16-24	300		127	327	135	72	100	312	125	194				
SBWG-04MT		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	330	153	207	34	32	10X8	610
SBWG-05MT		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	340	163	217				710
SBWG-55MT						350		202	484.5	162	80	144	360	183	237				
SBWG-06MT		F-35	260	356	8-M30-45	415		230	558.5	200	109	173	409	217	286	44	38	12X8	800
SBWG-07MT		F-40	300	406	8-M36-55	475			660.5	227	116	209	443	252	320				
SBWG-75MT	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	497	279	381	58	50	16X10	900
SBWG-08MT						560		379	884	254	125	245	532	314	416				
SBWG-09MT	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	572	354	456	58	50	16X10	900
SBWG-10MT						800		513	1191	352	164	330	730	426	614				1000
'New' SBWB-105MT								564	1294	370	167	330	736	436	620				
SBWG-11MT		F-80	670	813	20-M42-63	900		616.5	1399.5	394	181	370	773	468.5	657				
SBWG-12MT						1000		711	1621	482	265	415	818	554	702				
SBWG-13MT								809	1814	546	301	515	868	609	752				
'New' SBWB-14MT	E	F-100	870	1042	32-M42-65	1600	5	992	2257	565	285	530	1351	812	1235	58	50	16X10	1000
'New' SBWB-15MT								1157	2582	597	305	555	1366	827	1250				

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Features

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- Worm gear materials are available in two options :
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- A removable splined bushing enables precise positioning between the gear drive and the valve stem.
- Available options include handwheels, chains, and more.



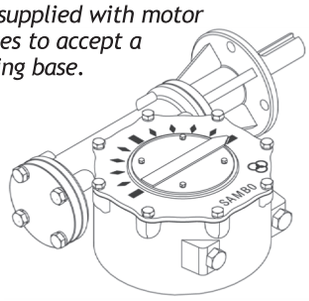
Bushing Type

- Splines ensure precise alignment with the valve stem key.



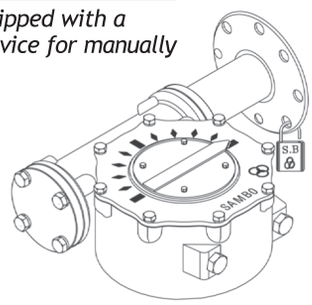
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to accept a standard ISO mounting base.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



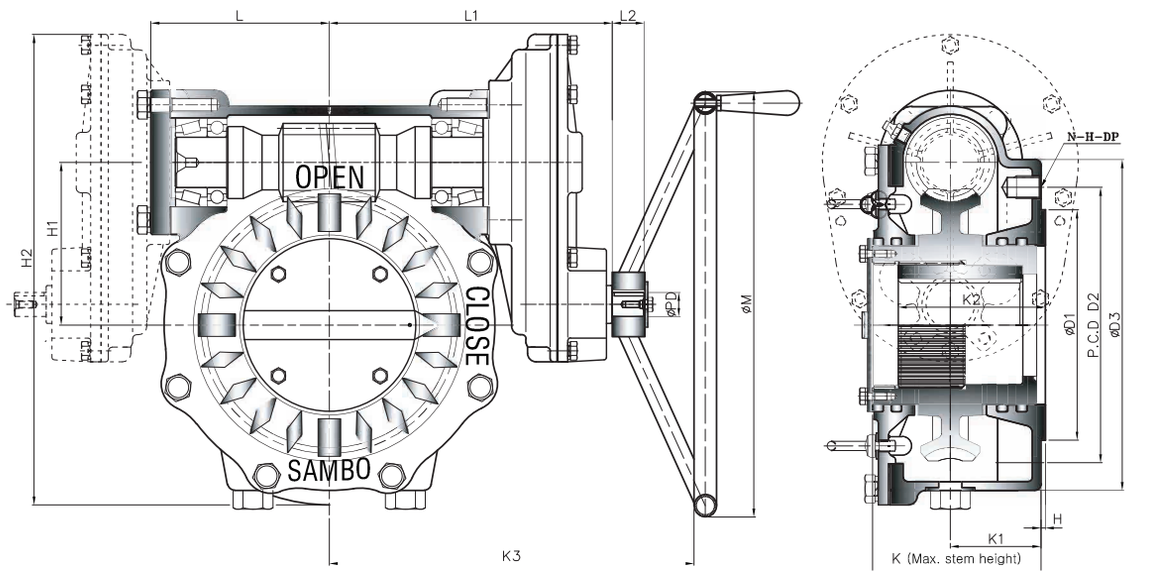
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-BFMT	32 : 1	20 (6X6)	F–05, F–07	360	266	6
SBWG-0MT	36 : 1	28 (8X7)	F-07 , F-10	780	575	9
SBWG-00MT	40 : 1	36 (10X8)	F-10 , F-12	1200	885	13
SBWG-01MT	44 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	16
SBWG-02MT	48 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	25
SBWG-03MT	52 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	34
SBWG-35MT	52 : 1	80 (22X14)	F-16 , (F-20) , F-25	6100	4499	49
SBWG-04MT	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	63
SBWG-05MT	60 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	85
SBWG-55MT	62 : 1	125 (32X18)	F-25 , F-30	23500	17333	105
SBWG-06MT	64 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	155
SBWG-07MT	68 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	254
SBWG-75MT	66 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	364
SBWG-08MT	66 : 1	250 (56X32)	F-40 , F-48	121000	89245	489
SBWG-09MT	66 : 1	280 (63X32)	F-48 , F-60	192500	141981	848
SBWG-10MT	64 : 1	320 (70X36)	F-60	275000	202830	1352
'New' SBWB-105MT	66 : 1	320 (70x36)	F60	358500	264416	1580
SBWG-11MT	68 : 1	360 (80X40)	F-60, F-80	442000	326002	2113
SBWG-12MT	70 : 1	400 (90X45)	F-60 , F-80	610000	449913	2931
SBWG-13MT	72 : 1	420 (100X50)	F-60 , F-80	970000	715435	3835
'New' SBWB-14MT	74 : 1	450 (100x50)	F-80, F-100	1500000	1106343	7500
'New' SBWB-15MT	80 : 1	500 (100x50)	F-80, F-100	2000000	1475124	10800

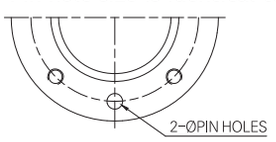
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Multi-Turn 360°

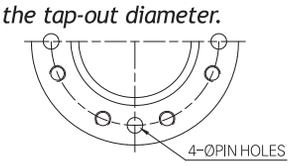
Horizontal input with single reduction gear attachment



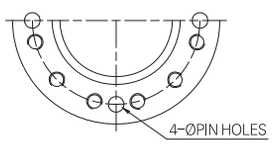
· *Pin hole size is identical to the tap-out diameter.*



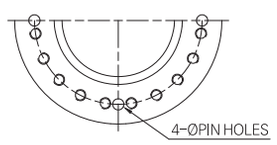
Type A



Type B



Type C



Type D

Dimensions

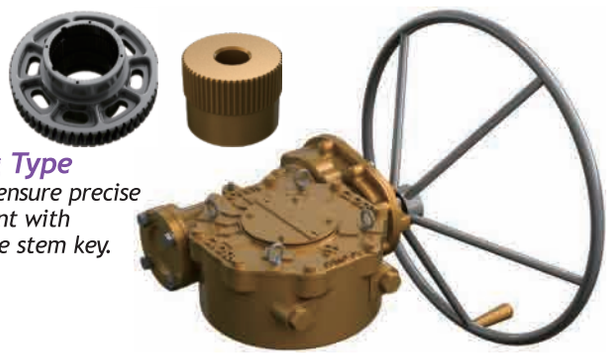
UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00MT-1S	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	239	86	166	29	21	6X6	300
SBWG-01MT-1S		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	268	95	175				400
SBWG-02MT-1S		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	299	108	190.5	34	26	8X7	500
SBWG-03MT-1S	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	319	118	200.5	34	26	8X7	560
SBWG-35MT-1S		F-25	200	254	8-M16-24	300		127	352	135	72	100	337	136	218.5				
SBWG-04MT-1S		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	373	153	250	34	32	10X8	610
SBWG-05MT-1S		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	383	163	260				710
SBWG-55MT-1S						350		202	516.5	162	80	144	403	183	280				
SBWG-06MT-1S		F-35	260	356	8-M30-45	415		230	621	200	109	173	472	217	349	44	38	12X8	800
SBWG-07MT-1S		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	507	252	384				
SBWG-75MT-1S	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	601	279	485	58	50	16X10	900
SBWG-08MT-1S						560		379	968	254	125	245	636	314	520				
SBWG-09MT-1S	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	676	354	560	58	50	16X10	900
SBWG-10MT-1S						800		513	1291	352	164	330	807	426	691				1000
'New' SBWB-105MT-1S								564	1294	370	167	330	817	436	701				
SBWG-11MT-1S		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	850	468.5	733.5				
SBWG-12MT-1S						1000		711	1751	482	265	415	1021	554	905				
SBWG-13MT-1S								809	1944	546	301	515	1071	609	955				
'New' SBWB-14MT-1S	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15MT-1S								1157	2582	597	305	555	1650	827	1534				

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Features

- All mounting bases conform to ISO 5210/1 standards.
- All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and the valve stem.
- Options include handwheels and chain.

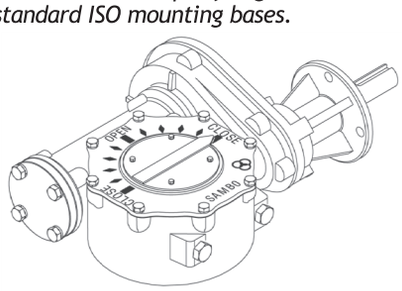


Bushing Type

- Splines ensure precise alignment with the valve stem key.

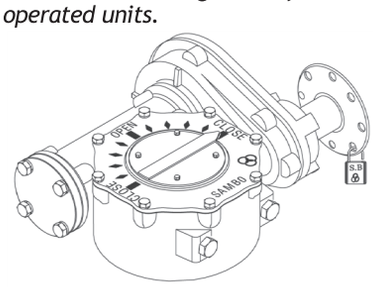
M.O.V Option

- Worm gear units can be supplied with motor actuator input flanges to suit standard ISO mounting bases.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



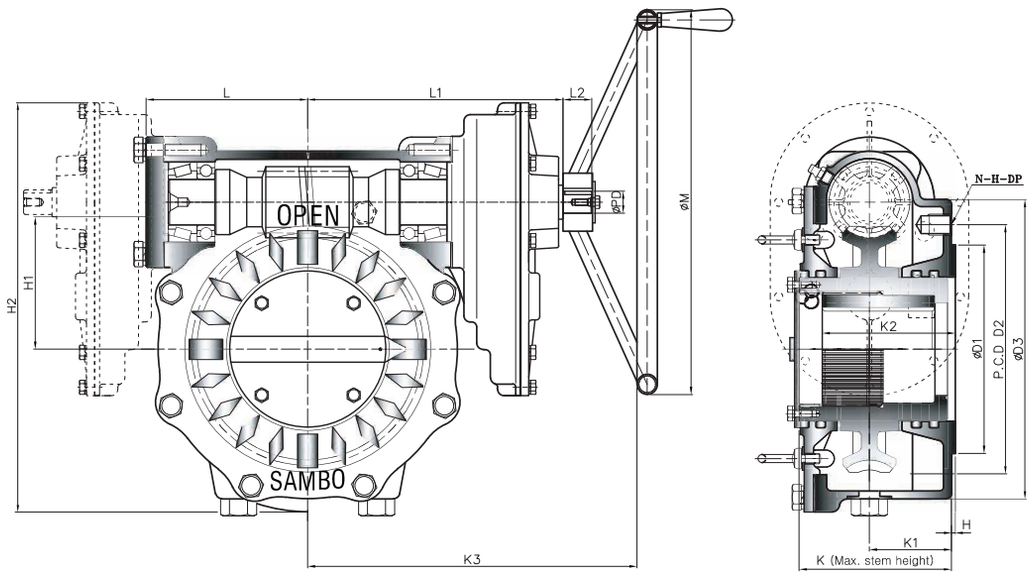
Selection chart for manual operation

MODEL / SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00MT-1S	80 : 1	36 (10X8)	F-10 , F-12	1200	885	15
SBWG-01MT-1S	88 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	18
SBWG-02MT-1S	121.6 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	29
SBWG-03MT-1S	131.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	38
SBWG-35MT-1S	131.7 : 1	80 (22X14)	F-16 , (F-20) , F-25	6100	4499	53
SBWG-04MT-1S	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	73
SBWG-05MT-1S	180 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	95
SBWG-55MT-1S	186 : 1	125 (32X18)	F-25 , F-30	23500	17333	115
SBWG-06MT-1S	256 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	183
SBWG-07MT-1S	272 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	283
SBWG-75MT-1S	330 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	436
SBWG-08MT-1S	330 : 1	250 (56X32)	F-40 , F-48	121000	89245	561
SBWG-09MT-1S	330 : 1	280 (63X32)	F-48 , F-60	192500	141981	920
SBWG-10MT-1S	320 : 1	320 (70X36)	F-60	275000	202830	1449
'New' SBWB-105MT-1S	330 : 1	320 (70x36)	F60	358500	264416	1698
SBWG-11MT-1S	340 : 1	360 (80X40)	F-60, F-80	442000	326002	2210
SBWG-12MT-1S	350 : 1	400 (90X45)	F-60 , F-80	610000	449913	3110
SBWG-13MT-1S	360 : 1	420 (100X50)	F-60 , F-80	970000	715435	4015
'New' SBWB-14MT-1S	370 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15MT-1S	400 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

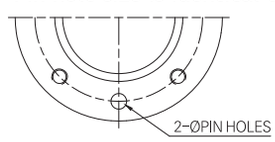
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Multi-Turn 360°

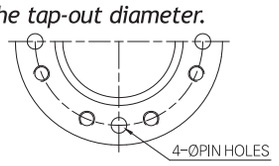
Horizontal input with double reduction gear attachment



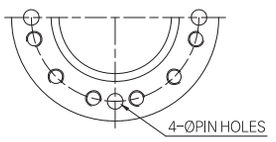
· *Pin hole size is identical to the tap-out diameter.*



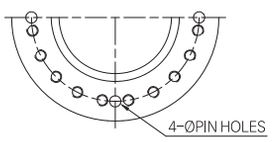
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

MODEL \ DIM	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00MT-1SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	256	86	183	29	21	6X6	300
SBWG-01MT-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	285	95	192				400
SBWG-02MT-1SD		F-16	130	165	4-M20-30	220		97	282	111.5	58	75.5	323	108	214.5	34	26	8X7	
SBWG-03MT-1SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	112	312	118	61	87	343	118	224.5	34	26	8X7	560
SBWG-35MT-1SD		F-25	200	254	8-M16-24	300		127	352	135	72	100	361	125	242.5				
SBWG-04MT-1SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	409	153	286	34	32	10X8	610
SBWG-05MT-1SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	419	163	296				710
SBWG-55MT-1SD						350		202	516.5	162	80	144	439	183	316				
SBWG-06MT-1SD		F-35	260	356	8-M30-45	415		230	621	200	109	173	499	217	376	44	38	12X8	800
SBWG-07MT-1SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	534	252	411				
SBWG-75MT-1SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	647	279	531	58	50	16X10	900
SBWG-08MT-1SD						560		379	968	254	125	245	682	314	566				
SBWG-09MT-1SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	722	354	606	58	50	16X10	900
SBWG-10MT-1SD						800		513	1291	352	164	330	862	426	746				1000
'New' SBWB-105MT-1SD								564	1294	370	167	330	872	436	756				
SBWG-11MT-1SD		F-80	670	813	20-M42-63	900		616.5	1499.5	394	181	370	905	468.5	788.5				
SBWG-12MT-1SD						1000		711	1751	482	265	415	1085	554	969				
SBWG-13MT-1SD								809	1944	546	301	515	1125	609	1009				
'New' SBWB-14MT-1SD	E	F-100	870	1042	32-M42-65	1600	5	992	2482	565	285	530	1635	812	1519	58	50	16X10	1000
'New' SBWB-15MT-1SD								1157	2582	597	305	555	1650	827	1534				

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Features

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- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise positioning between the gear drive and the valve stem.
- Options include handwheels, chain wheels, and more.



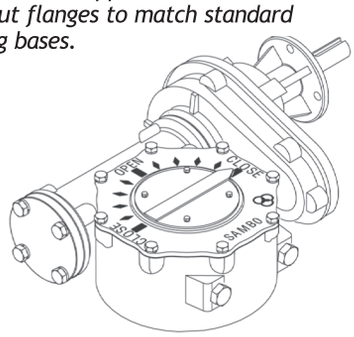
Bushing Type

- Splines ensure precise alignment with the valve stem key.



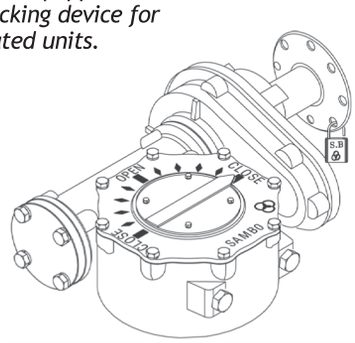
M.O.V Option

- Worm gears can be supplied with motor actuator input flanges to match standard ISO mounting bases.



Locking Device Option

- The input can be equipped with a handwheel locking device for manually operated units.



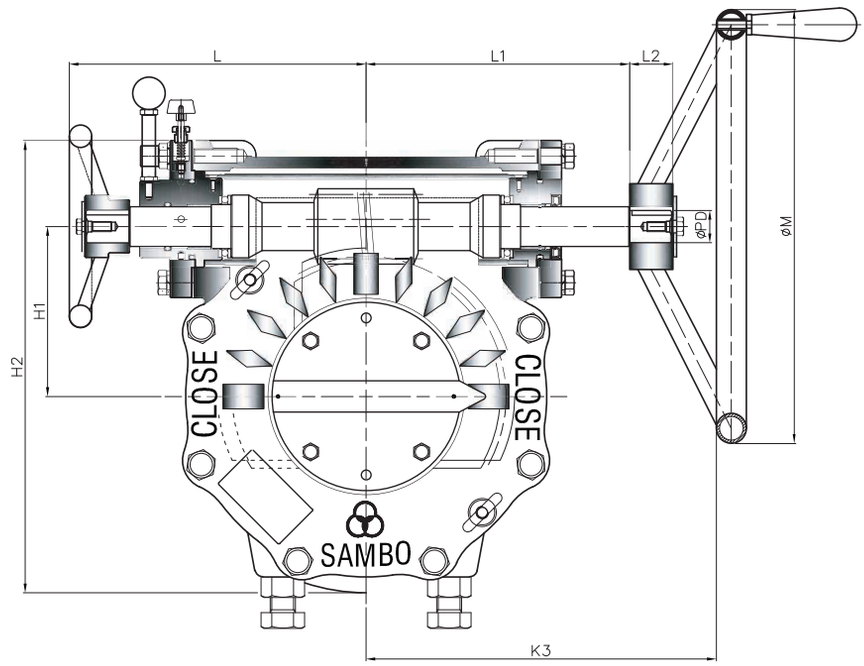
Selection chart for manual operation

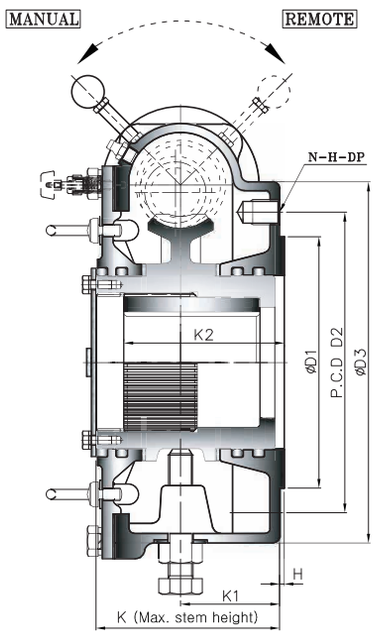
SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00MT-1SD	160 : 1	36 (10X8)	F-10 , F-12	1200	885	17
SBWG-01MT-1SD	176 : 1	46 (14X9)	F-10 , F-12 , F-14	2000	1475	20
SBWG-02MT-1SD	308 : 1	60 (18X11)	F-12 , F-14 , F-16	2800	2065	31
SBWG-03MT-1SD	333.7 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	40
SBWG-35MT-1SD	333.7 : 1	80 (22X14)	F-16 , (F-20) , F-25	6100	4499	55
SBWG-04MT-1SD	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	78
SBWG-05MT-1SD	540 : 1	115 (32X18)	(F-20) , F-25, F-30	15900	11727	100
SBWG-55MT-1SD	558 : 1	125 (32X18)	F-25 , F-30	23500	17333	120
SBWG-06MT-1SD	1024 : 1	140 (36X20)	F-25 , F-30 , F-35	32800	24192	196
SBWG-07MT-1SD	1088 : 1	180 (45X25)	F-30 , F-35 , F-40	51100	37689	296
SBWG-75MT-1SD	1650 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	464
SBWG-08MT-1SD	1650 : 1	250 (56X32)	F-40 , F-48	121000	89245	589
SBWG-09MT-1SD	1650 : 1	280 (63X32)	F-48 , F-60	192500	141981	948
SBWG-10MT-1SD	1600 : 1	320 (70X36)	F-60	275000	202830	1487
'New' SBWB-105MT-1SD	1650 : 1	320 (70x36)	F60	358500	264416	1764
SBWG-11MT-1SD	1700 : 1	360 (80X40)	F-60, F-80	442000	326002	2248
SBWG-12MT-1SD	1750 : 1	400 (90X45)	F-60 , F-80	610000	449913	3111
SBWG-13MT-1SD	1800 : 1	420 (100X50)	F-60 , F-80	970000	715435	4015
'New' SBWB-14MT-1SD	1850 : 1	450 (100x50)	F-80, F-100	1500000	1106343	8200
'New' SBWB-15MT-1SD	2000 : 1	500 (100x50)	F-80, F-100	2000000	1475124	11500

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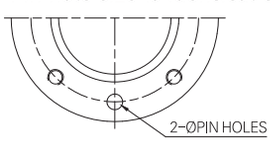
Declutch Gear

Horizontal input

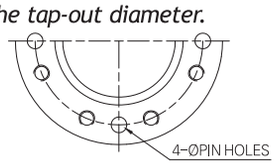




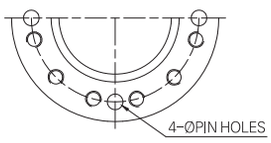
· *Pin hole size is identical to the tap-out diameter.*



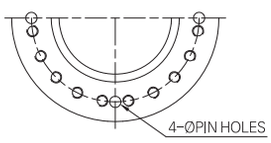
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-BFDC	A	F-07	55	70	4-M8-12	110	2	38.5	132	76	38	38.6	150	104	97	24	16	6X6	200
SBWG-0DC		F-10	70	102	4-M10-15	135		53.5	159.5	77	38	43.6	167	111.5	104.5				250
SBWG-00DC		F-12	85	125	4-M12-18	165		69.5	198.5	90.5	43	53.6	211	122	138	29	21	6X6	300
SBWG-01DC		F-14	100	140	4-M16-24	190		83	224.5	100	53	65	240	131	147				400
SBWG-02DC		F-16	130	165	4-M20-30	220		95.5	262.5	112.5	56	75.5	274	148	166	34	26	8X7	500
SBWG-03DC	B	F-16 (F-20)	160	205	8-M16-24	250	3	109	291	118	59	87	294	158	176	34	26	8X7	560
SBWG-35DC		F-25	200	254	8-M16-24	300		127.5	340	136	72	100	312	178	194				
SBWG-04DC		F-25	200	254	8-M16-24	300		147	385.5	147	73	120	330	247	207	34	32	10X8	610
SBWG-05DC		F-30	230	298	8-M20-30	350		174	437.5	155	78	141	340	257	217				710
SBWG-55DC						350		196	484.5	162	80	144	360	277	237				
SBWG-06DC		F-35	260	356	8-M30-45	415		222	558.5	200	109	175	409	316	286	44	38	12X8	800
SBWG-07DC		F-40	300	406	8-M36-55	475		272.5	660.5	227	116	209	443	350.5	320				
SBWG-75DC	C	F-48	370	483	12-M36-55	560	5	313	776	246	120	220	497	389.5	381	58	50	16X10	900
SBWG-08DC						560		366	884	254	125	245	532	424.5	416				
SBWG-09DC	D	F-60	470	603	20-M36-55	700	5	435.5	1023.5	284	138	270	572	465	456	58	50	16X10	900
SBWG-10DC						800		498	1191	352	164	330	730	550	614				1000

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Worm Gear Actuators

Features

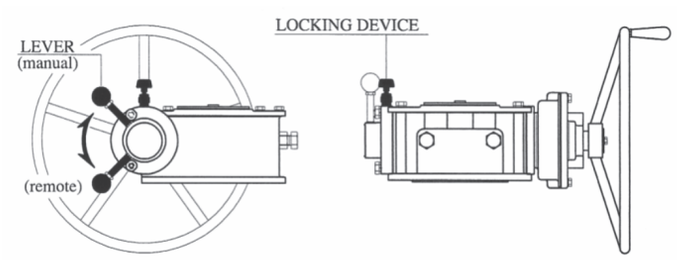
- *All mounting bases conform to ISO 5210/1 standards.*
- *All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.*
- *Worm gear materials are available in two options :*
  - *Ductile iron, Class 80-55-06.*
  - *Aluminum bronze, B148-C95800.*
- *The worm is manufactured from heat-treated 1045 carbon steel.*
- *A removable splined bushing enables precise positioning between the gear drive and the valve stem.*
- *Options include handwheels, chain wheels, and more.*

Bushing Type

- *Splines ensure precise alignment with the valve stem key.*



Manual Override Operation



- *These units are specifically developed for use with pneumatic and hydraulic actuators, providing a positive mechanical means of manual operation.*

1. *Pull up the locking-device knob.*
2. *Rotate the lever to the Manual position.*
3. *Operate the handwheel.*
   ***Note:** The pneumatic actuator is now fully disengaged.*
4. *Return the lever to the Remote position for pneumatic operation.*

Caution

- *Verify the Manual/Remote position before operation.*
- *When switching to Manual, ensure the worm shaft is correctly positioned before operating the worm gear.*

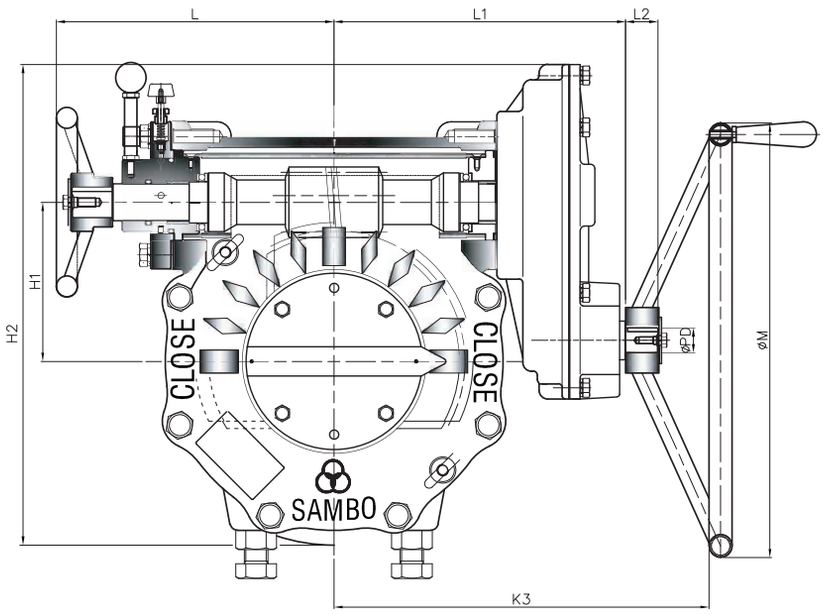
Selection chart for manual operation

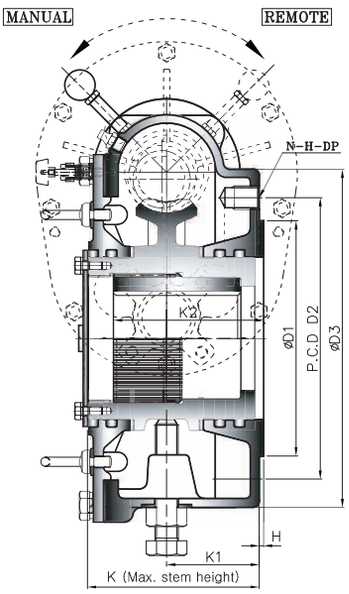
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-BFDC	32 : 1	20 (6X6)	F–05, F–07	320	236	4
SBWG-0DC	36 : 1	28 (8X7)	F-07 , F-10	680	502	6
SBWG-00DC	38 : 1	36 (10X8)	F-10 , F-12	980	723	10
SBWG-01DC	43 : 1	46 (14X9)	F-10 , F-12 , F-14	1600	1180	13
SBWG-02DC	46 : 1	60 (18X11)	F-12 , F-14 , F-16	2500	1844	21
SBWG-03DC	50 : 1	75 (20X12)	F-14 , F-16 , (F-20)	3800	2803	29
SBWG-35DC	52 : 1	80 (22X14)	F-16 , (F-20) , F–25	5600	4130	43
SBWG-04DC	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	9600	7081	56
SBWG-05DC	60 : 1	115 (32X18)	(F-20) , F-25, F-30	14400	10621	78
SBWG-55DC	62 : 1	125 (32X18)	F-25 , F-30	21150	15599	97
SBWG-06DC	64 : 1	140 (36X20)	F-25 , F-30 , F-35	29520	21773	147
SBWG-07DC	68 : 1	180 (45X25)	F-30 , F-35 , F-40	45000	33190	243
SBWG-75DC	65 : 1	210 (50X28)	F-35 , F-40 , F-48	73350	54100	350
SBWG-08DC	65 : 1	250 (56X32)	F-40 , F-48	108900	80321	473
SBWG-09DC	64 : 1	280 (63X32)	F-48 , F-60	178000	131286	829
SBWG-10DC	62 : 1	320 (70X36)	F–60	253000	186600	1330

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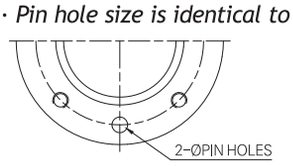
Declutch Gear

Horizontal input with single reduction gear attachment

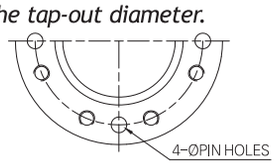




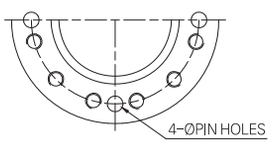
· *Pin hole size is identical to the tap-out diameter.*



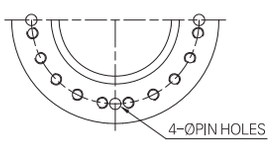
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
SBWG-00DC-1S	A	F-12	85	125	4-M12-18	165	2	69.5	214	86.5	43	53.6	239	154	166	29	21	6X6	300
SBWG-01DC-1S		F-14	100	140	4-M16-24	190		83	240	96	53	65	268	163	175				400
SBWG-02DC-1S		F-16	130	165	4-M20-30	220		95.5	285	111.5	58	75.5	299	184	190.5	34	26	8X7	500
SBWG-03DC-1S	B	F-16 (F-20)	160	205	8-M16-24	250	3	109	313.5	118	61	87	319	194	200.5	34	26	8X7	560
SBWG-35DC-1S		F-25	200	254	8-M16-24	300		127.5	357.5	135	72	100	337	210	218.5				
SBWG-04DC-1S		F-25	200	254	8-M16-24	300		147	417.5	147	73	120	373	247	250	34	32	10X8	610
SBWG-05DC-1S		F-30	230	298	8-M20-30	350		174	469.5	155	78	141	383	257	260				710
SBWG-55DC-1S						350		196	516.5	162	80	144	403	277	280				
SBWG-06DC-1S		F-35	260	356	8-M30-45	415		222	621	200	109	173	472	316	349	44	38	12X8	800
SBWG-07DC-1S		F-40	300	406	8-M36-55	475		272.5	723	227	116	209	507	350.5	384				
SBWG-75DC-1S	C	F-48	370	483	12-M36-55	560	5	313	860	246	120	220	601	389.5	485	58	50	16X10	900
SBWG-08DC-1S						560		366	968	254	125	245	636	424.5	520				
SBWG-09DC-1S	D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	284	138	270	676	465	560	58	50	16X10	900
SBWG-10DC-1S						800		498	1191	352	164	330	807	550	691				1000

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Worm Gear Actuators

Features

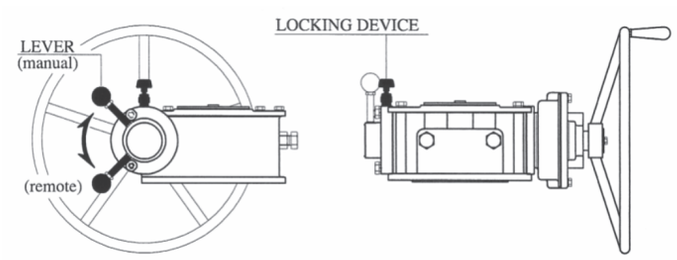
- *All mounting bases conform to ISO 5210/1 standards.*
- *All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.*
- *Worm gear materials are available in two options :*
  - *Ductile iron, Class 80-55-06.*
  - *Aluminum bronze, B148-C95800.*
- *The worm is manufactured from heat-treated 1045 carbon steel.*
- *A removable splined bushing enables precise positioning between the gear drive and the valve stem.*
- *Available options include handwheels and chain operation.*

Bushing Type

- *Splines ensure precise alignment with the valve stem key.*



Manual Override Operation



- *These units are specifically developed for use with pneumatic and hydraulic actuators, providing a positive mechanical means of manual operation.*

1. *Pull up the locking-device knob.*
2. *Rotate the lever to the Manual position.*
3. *Operate the handwheel.*
   ***Note:** The pneumatic actuator is now fully disengaged.*
4. *Return the lever to the Remote position for pneumatic operation.*

Caution

- *Verify the Manual/Remote position before operation.*
- *When switching to Manual, ensure the worm shaft is correctly positioned before operating the worm gear.*

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Global Leader SAMBO Gear Actuators

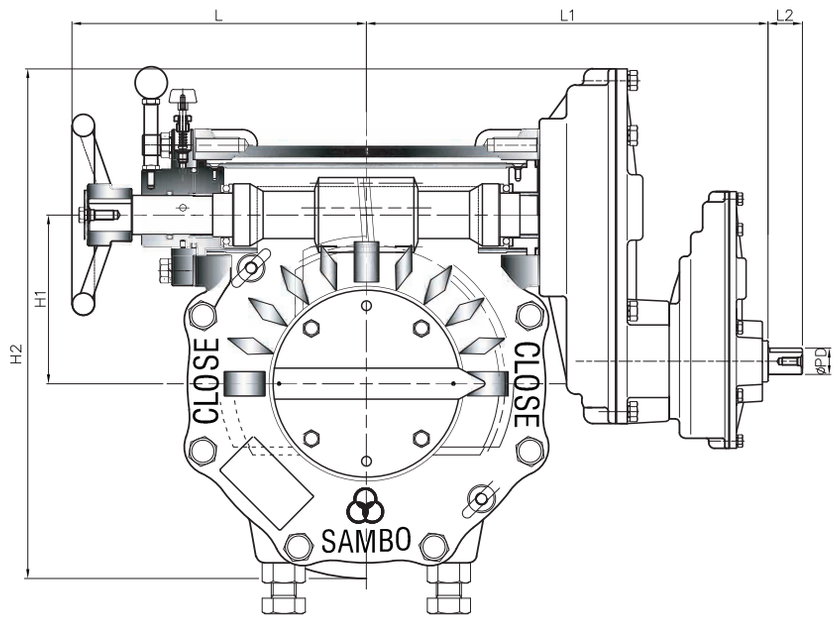
Selection chart for manual operation

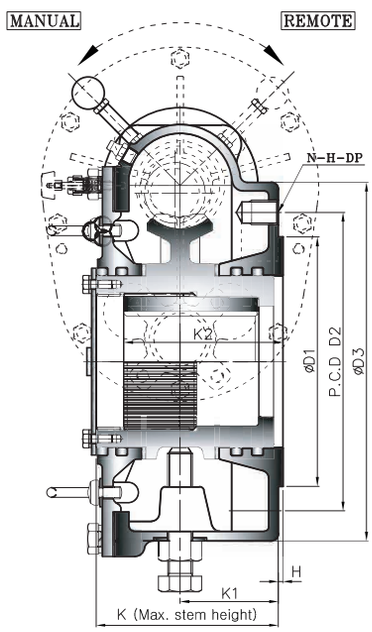
SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & TANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00DC-1S	67 : 1	36 (10X8)	F-10 , F-12	980	723	12
SBWG-01DC-1S	75 : 1	46 (14X9)	F-10 , F-12 , F-14	1600	1180	15
SBWG-02DC-1S	107 : 1	60 (18X11)	F-12 , F-14 , F-16	2500	1844	25
SBWG-03DC-1S	117 : 1	75 (20X12)	F-14 , F-16 , (F-20)	3800	2803	33
SBWG-35DC-1S	118 : 1	80 (22X14)	F-16 , (F-20) , F–25	5600	4130	50
SBWG-04DC-1S	149.3 : 1	95 (25X14)	F-16 , (F-20) , F-25	9600	7081	66
SBWG-05DC-1S	160 : 1	115 (32X18)	(F-20) , F-25, F-30	14400	10621	88
SBWG-55DC-1S	165 : 1	125(32X18)	F-25 , F-30	21150	15599	107
SBWG-06DC-1S	232 : 1	140 (36X20)	F-25 , F-30 , F-35	29520	21773	175
SBWG-07DC-1S	247 : 1	180 (45X25)	F-30 , F-35 , F-40	45000	33190	271
SBWG-75DC-1S	290 : 1	210 (50X28)	F-35 , F-40 , F-48	73350	54100	422
SBWG-08DC-1S	290 : 1	250 (56X32)	F-40 , F-48	108900	80321	545
SBWG-09DC-1S	286 : 1	280 (63X32)	F-48 , F-60	178000	131286	902
SBWG-10DC-1S	277 : 1	320 (70X36)	F–60	253000	186600	1426

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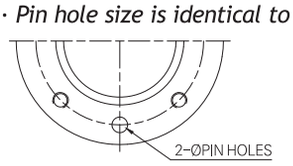
Declutch Gear

Horizontal input with triple reduction gear attachment

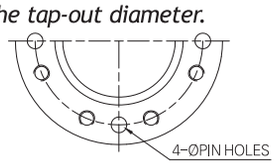




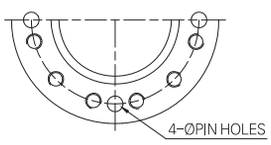
· *Pin hole size is identical to the tap-out diameter.*



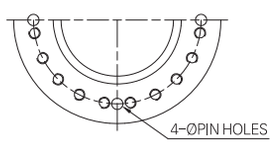
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART							INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K	K1	K2	L	L1	L2	ØPD	KEY	
SBWG-00DC-2SD	A	F-12	85	125	4-M12-18	165	2	69.5	214	86.5	43	53.6	154	261	29	21	6X6	250
SBWG-01DC-2SD		F-14	100	140	4-M16-24	190		83	240	96	53	65	163	270				
SBWG-02DC-2SD		F-16	130	165	4-M20-30	220		95.5	285	111.5	58	75.5	184	288.5				300
SBWG-03DC-2SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	109	313.5	118	61	87	194	298.5	29	21	6X6	400
SBWG-35DC-2SD		F-25	200	254	8-M16-24	300		127.5	357.5	135	72	100	210	316.5				
SBWG-04DC-2SD		F-25	200	254	8-M16-24	300		147	417.5	147	73	120	247	352.5	34	26	8X7	500
SBWG-05DC-2SD		F-30	230	298	8-M20-30	350		174	469.5	155	78	141	257	362.5				560
SBWG-55DC-2SD						350		196	516.5	162	80	144	277	382.5				
SBWG-06DC-2SD		F-35	260	356	8-M30-45	415		222	621	200	109	173	316	509	34	32	10X8	610
SBWG-07DC-2SD		F-40	300	406	8-M36-55	475		272.5	723	227	116	209	350.5	524				
SBWG-75DC-2SD	C	F-48	370	483	12-M36-55	560	5	313	860	246	120	220	389.5	640	44	38	12X8	710
SBWG-08DC-2SD						560		366	968	254	125	245	424.5	676				
SBWG-09DC-2SD	D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	284	138	270	465	716	44	38	12X8	710
SBWG-10DC-2SD						800		498	1191	352	164	330	550	860	58	50	16X10	800

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Worm Gear Actuators

Features

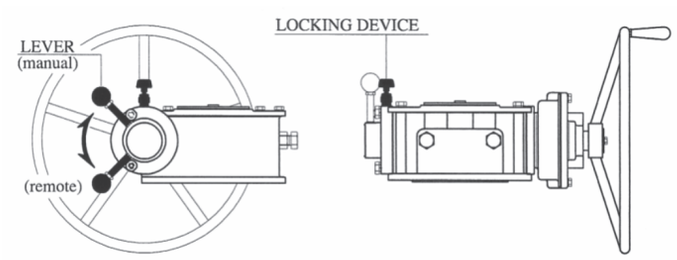
- *All mounting bases conform to ISO 5210/1.*
- *All castings are manufactured from ductile iron, Class 65-45-12, for excellent strength and impact resistance.*
- *Worm gear materials are available in two options :*
  - *Ductile iron, Class 80-55-06.*
  - *Aluminum bronze, B148-C95800.*
- *The worm is manufactured from heat-treated 1045 carbon steel.*
- *A removable splined bushing enables precise alignment between the gear drive and the valve stem.*
- *Options include handwheels, chain operation, and more.*



Bushing Type

- *Splines ensure precise alignment with the valve stem key.*

Manual Override Operation



- *These units are specifically developed for use with pneumatic and hydraulic actuators, providing a positive mechanical means of manual operation.*

1. *Pull up the locking-device knob.*
2. *Rotate the lever to the Manual position.*
3. *Operate the handwheel.*
   ***Note:** The pneumatic actuator is now fully disengaged.*
4. *Return the lever to the Remote position for pneumatic operation.*

Caution

- *Verify the Manual/Remote position before operation.*
- *When switching to Manual, ensure the worm shaft is correctly positioned before operating the worm gear.*

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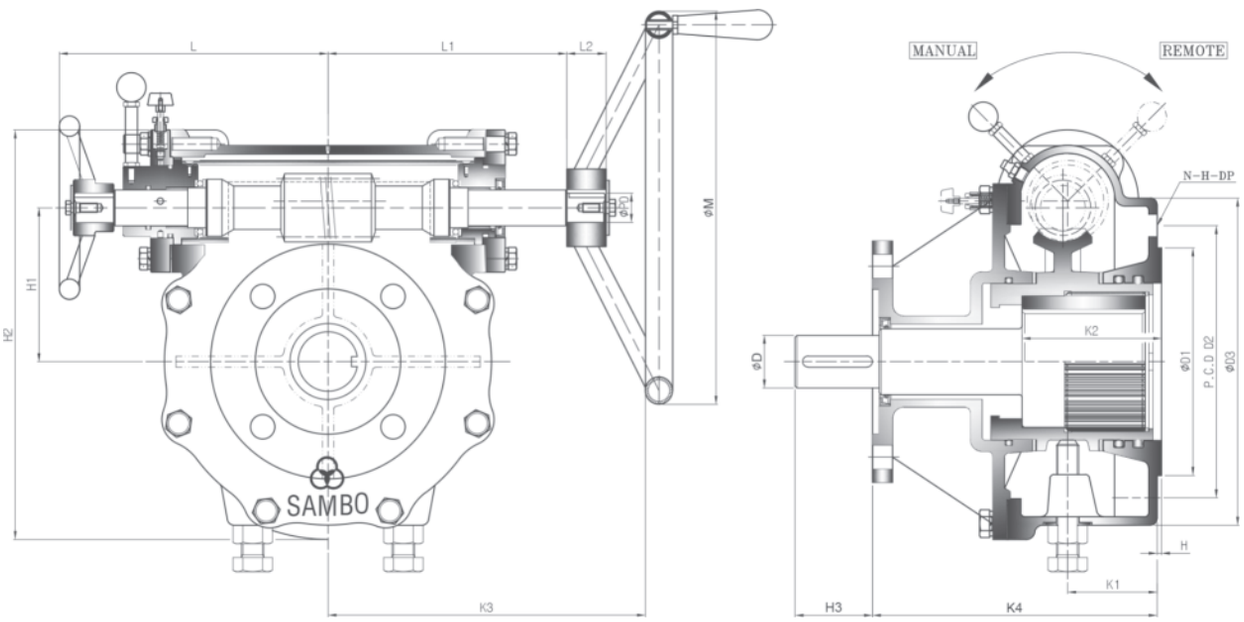
Selection chart for manual operation

SIZE / MODEL	MAX. GEAR RATIO (Changrable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-00DC-2SD	266 : 1	36 (10X8)	F-10 , F-12	980	723	14
SBWG-01DC-2SD	298 : 1	46 (14X9)	F-10 , F-12 , F-14	1600	1180	17
SBWG-02DC-2SD	429 : 1	60 (18X11)	F-12 , F-14 , F-16	2500	1844	27
SBWG-03DC-2SD	467 : 1	75 (20X12)	F-14 , F-16 , (F-20)	3800	2803	35
SBWG-35DC-2SD	471 : 1	80 (22X14)	F-16 , (F-20) , F–25	5600	4130	56
SBWG-04DC-2SD	958 : 1	95 (25X14)	F-16 , (F-20) , F-25	9600	7081	71
SBWG-05DC-2SD	1026 : 1	115 (32X18)	(F-20) , F-25, F-30	14400	10621	93
SBWG-55DC-2SD	1061 : 1	125 (32X18)	F-25 , F-30	21150	15599	112
SBWG-06DC-2SD	2088 : 1	140 (36X20)	F-25 , F-30 , F-35	29520	21773	188
SBWG-07DC-2SD	2218 : 1	180 (45X25)	F-30 , F-35 , F-40	45000	33190	284
SBWG-75DC-2SD	4645 : 1	210 (50X28)	F-35 , F-40 , F-48	73350	54100	450
SBWG-08DC-2SD	4645 : 1	250 (56X32)	F-40 , F-48	108900	80321	573
SBWG-09DC-2SD	4574 : 1	280 (63X32)	F-48 , F-60	178000	131286	929
SBWG-10DC-2SD	6929.4: 1	320 (70X36)	F–60	253000	186600	1464

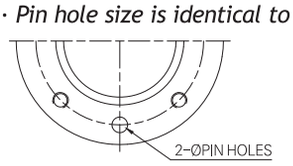
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Declutch Gear - Pneumatic Actuator

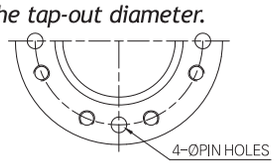
Horizontal input



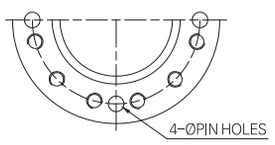
· *Pin hole size is identical to the tap-out diameter.*



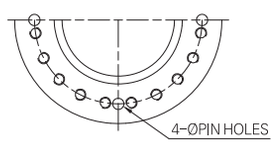
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K1	K2 MAX	K3	K4	L	L1	L2	ØPD	KEY	
SBWG-BFDCM	A	F-07	55	70	4-M8-12	110	2	38.5	132	38	39	150	131	104	97	24	16	6X6	200
SBWG-0DCM		F-10	70	102	4-M10-15	135		53.5	159.5	38	50	167	133	111.5	104.5				250
SBWG-00DCM		F-12	85	125	4-M12-18	165		69.5	198.5	43	60	211	149.5	122	138	29	21	6X6	300
SBWG-01DCM		F-14	100	140	4-M16-24	190		83	224.5	53	70	240	174	131	147				400
SBWG-02DCM		F-16	130	165	4-M20-30	220		95.5	262.5	58	80	274	191.5	148	166	34	26	8X7	500
SBWG-03DCM	B	F-16 (F-20)	160	205	8-M16-24	250	3	109	291	61	90	294	206	158	176	29	21	6X6	560
SBWG-35DCM		F-25	200	254	8-M16-24	300		127.5	340	72	110	312	225	178	194				
SBWG-04DCM		F-25	200	254	8-M16-24	300		147	385.5	73	120	330	242	247	207	34	26	8X7	610
SBWG-05DCM		F-30	230	298	8-M20-30	350		174	437.5	78	130	340	247.5	257	217				710
SBWG-55DCM						350		196	484.5	80	140	360	256	277	237				
SBWG-06DCM		F-35	260	356	8-M30-45	415		222	558.5	109	170	409	302	316	286	44	38	12X8	800
SBWG-07DCM		F-40	300	406	8-M36-55	475		272.5	660.5	116	190	443	349	350.5	320				
SBWG-75DCM	C	F-48	370	483	12-M36-55	560	5	313	776	120	200	497	430	389.5	381	58	50	16X10	900
SBWG-08DCM						560		366	884	125	210	532	439	424.5	416				
SBWG-09DCM	D	F-60	470	603	20-M36-55	700	5	435.5	1023.5	138	230	572	467	465	456	58	50	16X10	900
SBWG-10DCM						800		498	1191	352	240	730	562	550	614				1000

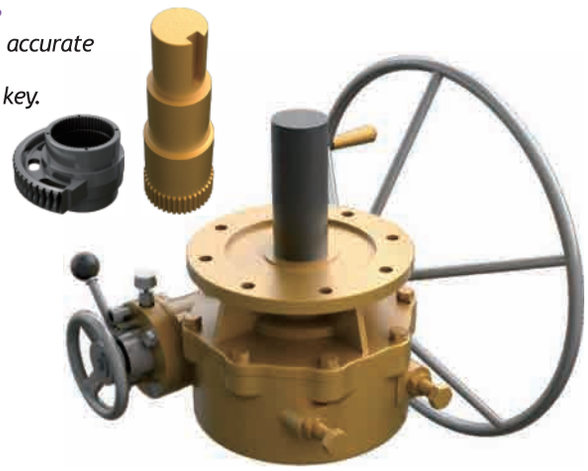
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Features

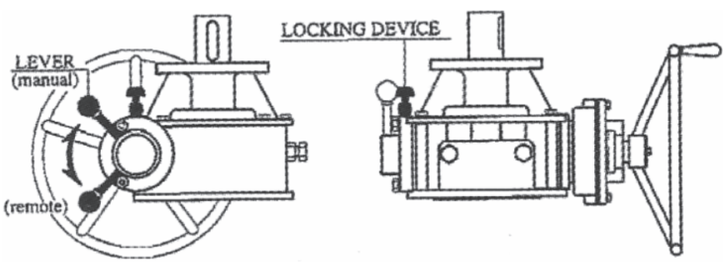
- All mounting bases conform to ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Options include handwheels, chain, and more.

Bushing Type

- Splines provide accurate alignment of the valve stem key.



Manual Override Operation



- These units are specifically developed for use with pneumatic and hydraulic actuators, providing a positive mechanical means of manual operation.

1. Pull up the locking device knob.
2. Rotate the lever to the Manual position.
3. Operate the handwheel.
   Note: The pneumatic actuator is now fully disengaged.
4. Return the lever to the Remote position for pneumatic operation.

Caution

- Check whether the selector is in Manual or Remote before operation.
- When switching to Manual, ensure the worm shaft position is correctly set before operating to engage with the worm gear.

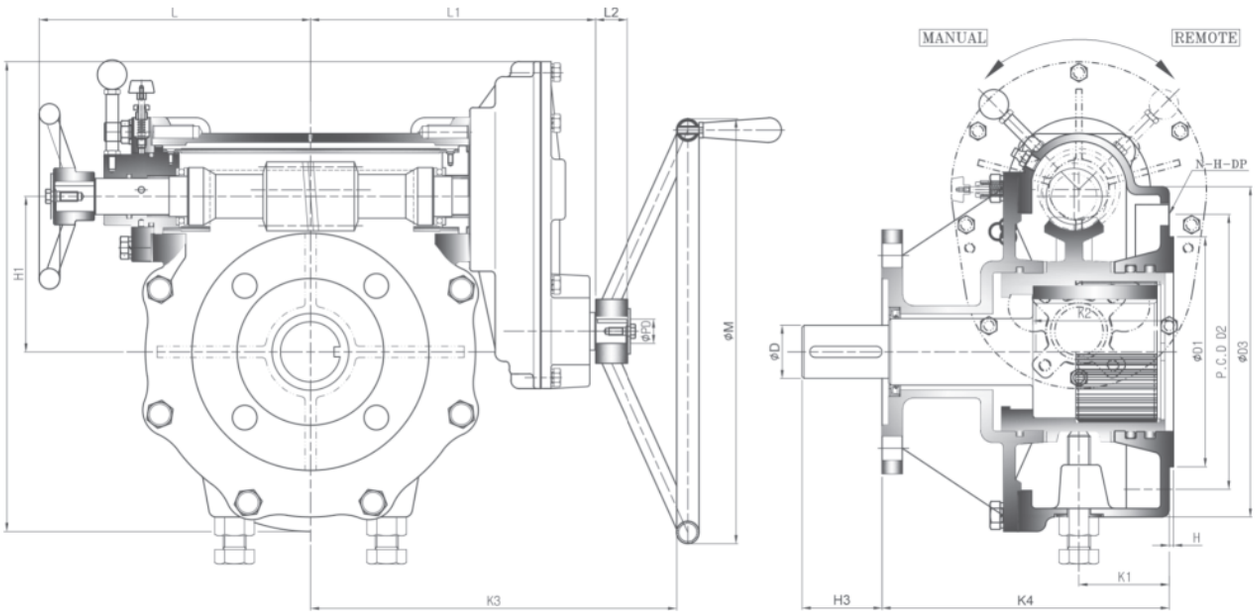
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	PNEUMATIC PART			MAX. TORQUE CAPACITY		WEIGHT
				ØD	H3	MOUNTING OPTION	N-m	Ft. lbf	Kg
SBWG-BFDCM	32 : 1	20 (6X6)	F–05, F–07	Ø22	50	F–05, F–07	320	236	5
SBWG-0DCM	36 : 1	28 (8X7)	F-07 , F-10	Ø35	50	F–10, F-07	680	502	7
SBWG-00DCM	38 : 1	36 (10X8)	F-10 , F-12	Ø45	60	F–12, F-10	980	723	11
SBWG-01DCM	43 : 1	46 (14X9)	F-10 , F-12 , F-14	Ø55	75	F-14, F-12, F-10	1600	1180	18
SBWG-02DCM	46 : 1	60 (18X11)	F-12 , F-14 , F-16	Ø65	90	F-16, F-14, F-12	2500	1844	29
SBWG-03DCM	50 : 1	75 (20X12)	F-14 , F-16 , (F-20)	Ø70	90	F-16, F-14, F-12	3800	2803	45
SBWG-35DCM	52 : 1	80 (22X14)	F-16 , (F-20) , F–25	Ø80	90	F-25, (F-20), F-16, F-14	5600	4130	63
SBWG-04DCM	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	Ø90	90	F-25, (F-20), F-16	9600	7081	86
SBWG-05DCM	60 : 1	115 (32X18)	(F-20) , F-25, F-30	Ø110	145	F-30, F-25, (F-20)	14400	10621	120
SBWG-55DCM	62 : 1	125 (32X18)	F-25 , F-30	Ø140	145	F-30, F-25, (F-20)	21150	15599	169
SBWG-06DCM	64 : 1	140 (36X20)	F-25 , F-30 , F-35	Ø160	150	F-35, F-30, F-25	29520	21773	250
SBWG-07DCM	68 : 1	180 (45X25)	F-30 , F-35 , F-40	Ø180	180	F-40, F-35, F-30, F-25	45000	33190	365
SBWG-75DCM	65 : 1	210 (50X28)	F-35 , F-40 , F-48	Ø240	250	F-48, F-40, F-35	73350	54100	558
SBWG-08DCM	65 : 1	250 (56X32)	F-40 , F-48	Ø250	280	F-48, F-40, F-35	108900	80321	681
SBWG-09DCM	64 : 1	280 (63X32)	F-48 , F-60	Ø260	300	F-60, F-48	178000	131286	1038
SBWG-10DCM	62 : 1	320 (70X36)	F-60	Ø320	340	F-60	253000	186600	1665

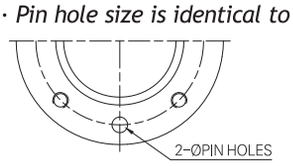
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Declutch Gear - Pneumatic Actuator

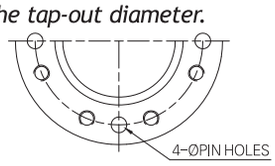
Horizontal input with single reduction gear attachment



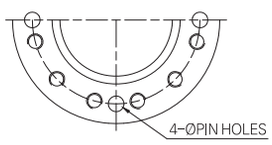
· Pin hole size is identical to the tap-out diameter.



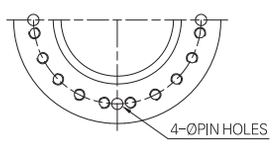
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K1	K2 MAX	K3	K4	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-00DCM-1S	A	F-12	85	125	4-M12-18	165	2	69.5	210	43	60	239	149.5	154	166	29	21	6X6	300
SBWG-01DCM-1S		F-14	100	140	4-M16-24	190		87	235.5	53	70	268	174	163	175				400
SBWG-02DCM-1S		F-16	130	165	4-M20-30	220		95.5	282	58	80	299	191.5	184	190.5	34	26	8X7	500
SBWG-03DCM-1S	B	F-16 (F-20)	160	205	8-M16-24	250	3	109	312	61	90	319	206	194	200.5	29	21	6X6	560
SBWG-35DCM-1S		F-25	200	254	8-M16-24	300		127.5	339.5	72	110	337	225	210	218.5				
SBWG-04DCM-1S		F-25	200	254	8-M16-24	300		147	417.5	73	120	373	242	247	250	34	26	8X7	610
SBWG-05DCM-1S		F-30	230	298	8-M20-30	350		174	469.5	78	130	383	247.5	257	260				710
SBWG-55DCM-1S						350		196	516.5	80	140	403	256	277	280				
SBWG-06DCM-1S		F-35	260	356	8-M30-45	415		222	621	109	170	472	302	316	349	44	38	12X8	800
SBWG-07DCM-1S		F-40	300	406	8-M36-55	475		272.5	723	116	190	507	349	349	384				
SBWG-75DCM-1S	C	F-48	370	483	12-M36-55	560	5	313	860	120	200	601	430	389.5	485	58	50	16X10	900
SBWG-08DCM-1S						560		366	968	125	210	636	439	424.5	520				
SBWG-09DCM-1S	D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	138	230	676	467	465	560	58	50	16X10	900
SBWG-10DCM-1S						800		498	1191	352	240	807	562	550	691				1000

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Features

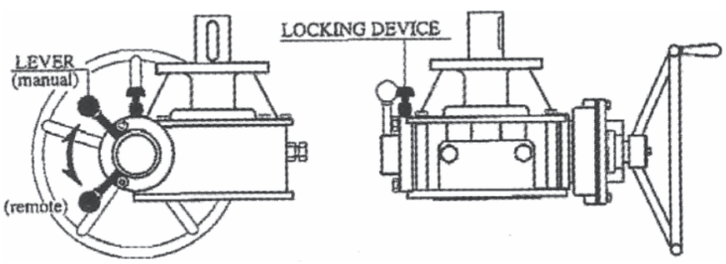
- All mounting bases conform to ISO 5210-1 standards.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing permits accurate positioning between the gear drive and the valve stem.
- Options include handwheels, chain, and other accessories.

Bushing Type

- Splines provide accurate alignment of the valve stem key.



Manual Override Operation



1. Pull up the locking device knob.
2. Rotate the lever to the Manual position.
3. Operate the handwheel.
   Note: The pneumatic actuator is now fully disengaged.
4. For pneumatic operation, return the lever to the Remote position.

Caution

- Before operating, verify the Manual and Remote positions.
- When switching to Manual, set the worm shaft to the correct position, then operate in accordance with the worm gear.

- These units are specifically developed for use with pneumatic and hydraulic actuators, providing a positive mechanical means of manual operation.

Global leader in gear actuators delivering the world's highest quality.

Global Leader SAMBO Gear Actuators

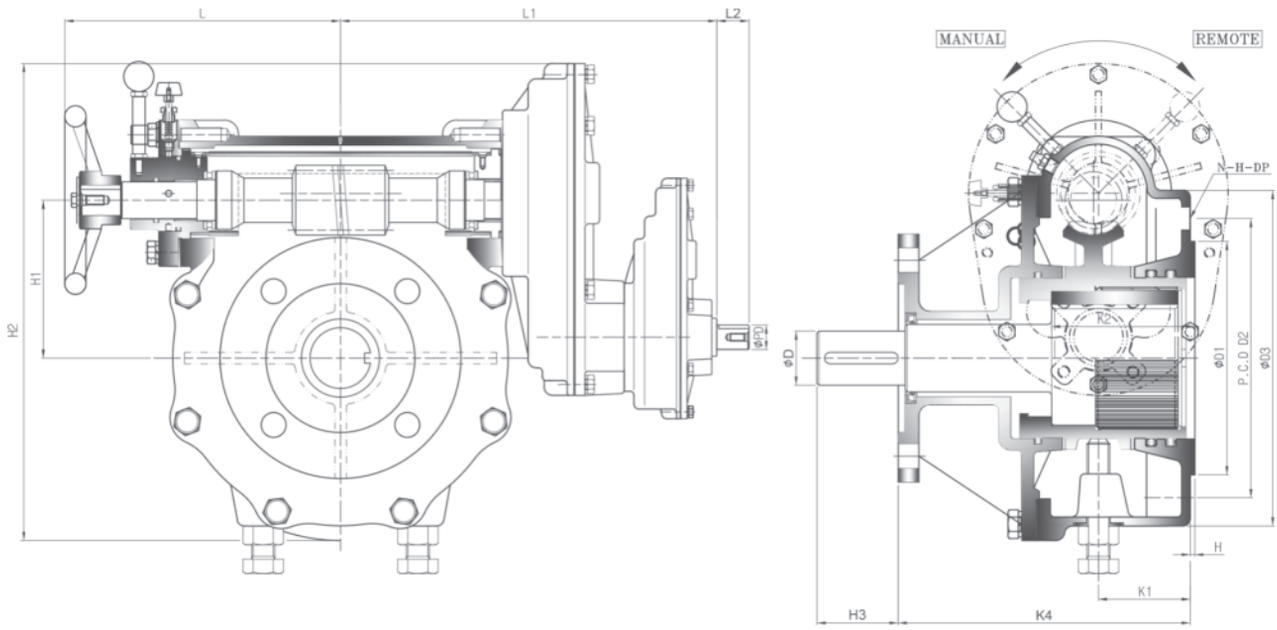
Selection chart for manual operation

SIZE / MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	PNEUMATIC PART			MAX. TORQUE CAPACITY		WEIGHT
				ØD	H3	MOUNTING OPTION	N-m	Ft. lbf	Kg
SBWG-00DCM-1S	67 : 1	36 (10X8)	F-10 , F-12	Ø45	60	F-12, F-10	980	723	13
SBWG-01DCM-1S	75 : 1	46 (14X9)	F-10 , F-12 , F-14	Ø55	75	F-14, F-12, F-10	1600	1180	21
SBWG-02DCM-1S	107 : 1	60 (18X11)	F-12 , F-14 , F-16	Ø65	90	F-16, F-14, F-12	2500	1844	32
SBWG-03DCM-1S	117 : 1	75 (20X12)	F-14 , F-16 , (F-20)	Ø70	90	F-16, F-14, F-12	3800	2803	47
SBWG-35DCM-1S	118 : 1	80 (22X14)	F-16 , (F-20) , F-25	Ø80	90	F-25, (F-20), F-16, F-14	5600	4130	66
SBWG-04DCM-1S	149.3 : 1	95 (25X14)	F-16 , (F-20) , F-25	Ø90	90	F-25, (F-20), F-16	9600	7081	95
SBWG-05DCM-1S	160 : 1	115 (32X18)	(F-20) , F-25, F-30	Ø110	145	F-30, F-25, (F-20)	14400	10621	124
SBWG-55DCM-1S	165 : 1	125 (32X18)	F-25 , F-30	Ø140	145	F-30, F-25, (F-20)	21150	15599	173
SBWG-06DCM-1S	232 : 1	140 (36X20)	F-25 , F-30 , F-35	Ø160	150	F-35, F-30, F-25	29520	21773	260
SBWG-07DCM-1S	247 : 1	180 (45X25)	F-30 , F-35 , F-40	Ø180	180	F-40, F-35, F-30, F-25	45000	33190	375
SBWG-75DCM-1S	290 : 1	210 (50X28)	F-35 , F-40 , F-48	Ø240	250	F-48, F-40, F-35	73350	54100	586
SBWG-08DCM-1S	290 : 1	250 (56X32)	F-40 , F-48	Ø250	280	F-48, F-40, F-35	108900	80321	709
SBWG-09DCM-1S	286 : 1	280 (63X32)	F-48 , F-60	Ø260	300	F-60, F-48	178000	131286	1110
SBWG-10DCM-1S	277 : 1	320 (70X36)	F-60	Ø320	340	F-60	253000	186600	1782

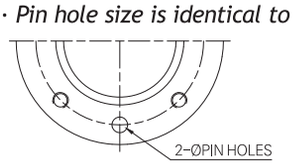
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Declutch Gear - Pneumatic Actuator

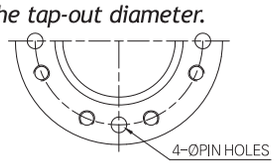
Horizontal input with double reduction gear attachment



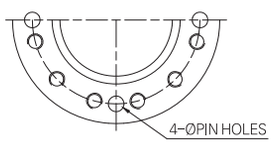
· Pin hole size is identical to the tap-out diameter.



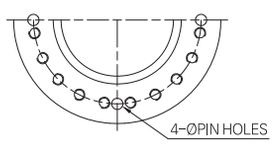
Type A



Type B



Type C



Type D

Dimensions

UNIT : mm

DIM / MODEL	BASE PART							EXTERNAL PART							INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D ØD2	P.C.D N-H-DP	ØD3	H	H1	H2	K1	K2	K4	L	L1	L2	ØPD	KEY	
SBWG-00DCM-2SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	43	60	149.5	154	261	29	21	6X6	250
SBWG-01DCM-2SD		F-14	100	140	4-M16-24	190		87	235.5	53	70	174	163	270				
SBWG-02DCM-2SD		F-16	130	165	4-M20-30	220		95.5	282	58	80	191.5	184	288.5				300
SBWG-03DCM-2SD	B	F-16 (F-20)	160	205	8-M16-24	250	3	109	312	61	90	206	194	298.5	29	21	6X6	400
SBWG-35DCM-2SD		F-25	200	254	8-M16-24	300		127.5	339.5	72	110	225	210	316.5				
SBWG-04DCM-2SD		F-25	200	254	8-M16-24	300		147	417.5	73	120	242	247	352.5	34	26	8X7	500
SBWG-05DCM-2SD		F-30	230	298	8-M20-30	350		174	469.5	78	130	247.5	257	362.5				560
SBWG-55DCM-2SD						350		196	516.5	80	140	256	277	382.5				
SBWG-06DCM-2SD		F-35	260	356	8-M30-45	415		222	621	109	170	302	316	509	34	32	10X8	610
SBWG-07DCM-2SD		F-40	300	406	8-M36-55	475		272.5	723	116	190	349	350.5	524				
SBWG-75DCM-2SD	C	F-48	370	483	12-M36-55	560	5	313	860	120	200	430	389.5	640	44	38	12X8	710
SBWG-08DCM-2SD						560		366	968	125	210	439	424.5	676				
SBWG-09DCM-2SD	D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	138	230	467	465	716	44	38	12X8	710
SBWG-10DCM-2SD						800		498	1191	352	240	562	550	860	58	50	16X10	800

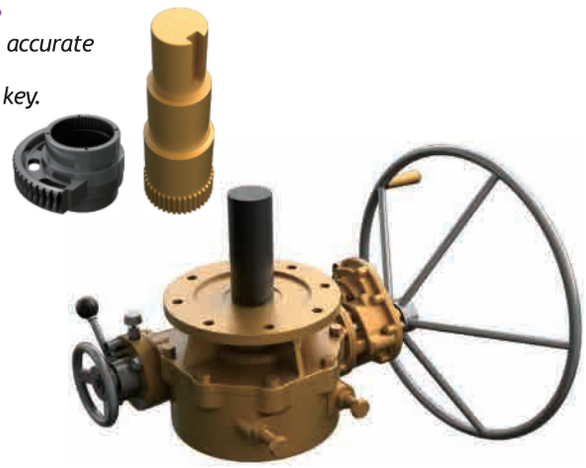
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Features

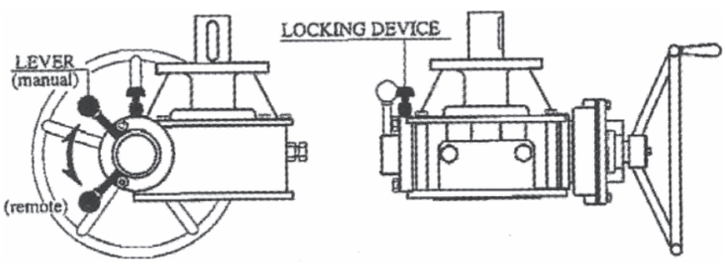
- All mounting bases conform to ISO 5210/1.
- All castings are ductile iron, Class 65-45-12, for excellent strength and impact resistance.
- Worm gear materials are available in two options :
  - Ductile iron, Class 80-55-06.
  - Aluminum bronze, B148-C95800.
- The worm is manufactured from heat-treated 1045 carbon steel.
- A removable splined bushing enables precise alignment between the gear drive and valve stem.
- Options include handwheels, chain operation, and other accessories.

Bushing Type

- Splines provide accurate alignment of the valve stem key.



Manual Override Operation



- These units are specifically developed for use with pneumatic and hydraulic actuators, providing a positive mechanical means of manual operation.

1. Pull up the locking device knob.
2. Rotate the lever to the Manual position.
3. Operate the handwheel.
   Note: The pneumatic actuator is now fully disengaged.
4. Return the lever to the Remote position for pneumatic operation.

Caution

- Verify the selector position for Manual or Remote before operation.
- When switching to Manual, ensure the worm shaft is correctly positioned before operating the worm gear.

Global leader in gear actuators delivering the world's highest quality.

Global Leader SAMBO Gear Actuators

Selection chart for manual operation

SIZE / MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	BASE MOUNTING OPTION & STANDARD	PNEUMATIC PART			MAX. TORQUE CAPACITY		WEIGHT
				ØD	H3	MOUNTING OPTION	N-m	Ft. lbf	Kg
SBWG-00DCM-2SD	266 : 1	36 (10X8)	F-10 , F-12	Ø45	60	F—12, F-10	980	723	16
SBWG-01DCM-2SD	298 : 1	46 (14X9)	F-10 , F-12 , F-14	Ø55	75	F-14, F-12, F-10	1600	1180	24
SBWG-02DCM-2SD	429 : 1	60 (18X11)	F-12 , F-14 , F-16	Ø65	90	F-16, F-14, F-12	2500	1844	36
SBWG-03DCM-2SD	467 : 1	75 (20X12)	F-14 , F-16 , (F-20)	Ø70	90	F-16, F-14, F-12	3800	2803	51
SBWG-35DCM-2SD	471 : 1	80 (22X14)	F-16 , (F-20) , F—25	Ø80	90	F-25, (F-20), F-16, F-14	5600	4130	70
SBWG-04DCM-2SD	958 : 1	95 (25X14)	F-16 , (F-20) , F-25	Ø90	90	F-25, (F-20), F-16	9600	7081	101
SBWG-05DCM-2SD	1026 : 1	115 (32X18)	(F-20) , F-25, F-30	Ø110	145	F-30, F-25, (F-20)	14400	10621	130
SBWG-55DCM-2SD	1061 : 1	125 (32X18)	F-25 , F-30	Ø140	145	F-30, F-25, (F-20)	21150	15599	179
SBWG-06DCM-2SD	2088 : 1	140 (36X20)	F-25 , F-30 , F-35	Ø160	150	F-35, F-30, F-25	29520	21773	275
SBWG-07DCM-2SD	2218 : 1	180 (45X25)	F-30 , F-35 , F-40	Ø180	180	F-40, F-35, F-30, F-25	45000	33190	390
SBWG-75DCM-2SD	4645 : 1	210 (50X28)	F-35 , F-40 , F-48	Ø240	250	F-48, F-40, F-35	73350	54100	627
SBWG-08DCM-2SD	4645 : 1	250 (56X32)	F-40 , F-48	Ø250	280	F-48, F-40, F-35	108900	80321	750
SBWG-09DCM-2SD	4574 : 1	280 (63X32)	F-48 , F-60	Ø260	300	F-60, F-48	178000	131286	1152
SBWG-10DCM-2SD	6929.4 : 1	320 (70X36)	F—60	Ø320	340	F-60	253000	186600	2164

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Index

Planetary Gear Reduction

Planetary Gear Reduction - Vertical Input 180 · 181

Air Cylinder

135° Air Cylinder - Rack-and-Pinion Typee 182 · 183

90° Air Cylinder - Scotch Yoke Type 184 · 185

User's Manual

User's Manual - SAMBO Standard for All Gear Products 186 · 187

User's Manual

SAMBO Service: SBWG Worm Gears - Recommended Installation and Maintenance 188 · 189

Technical Data

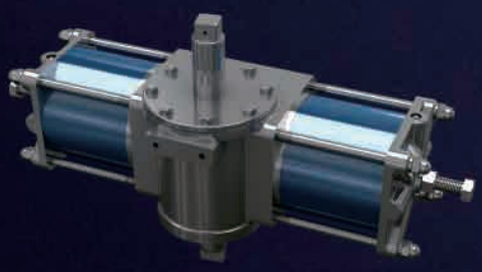
Technical Data: Spiral Bevel Gear Actuators 190 ~ 197

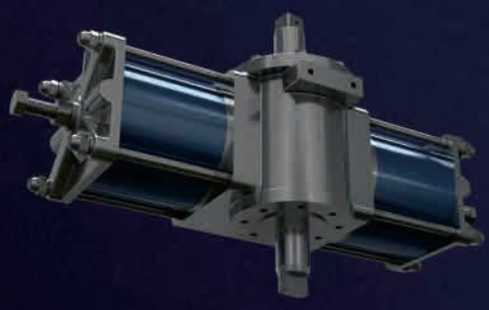
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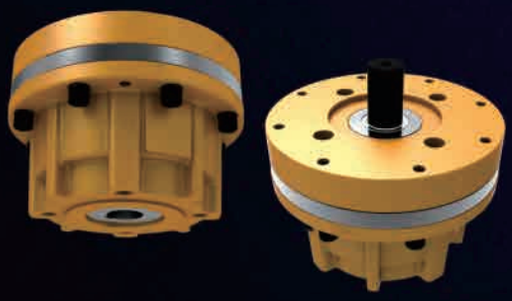
Technical Data: Worm Gear Actuators 200 ~ 209

Warranty & Epilogue

210



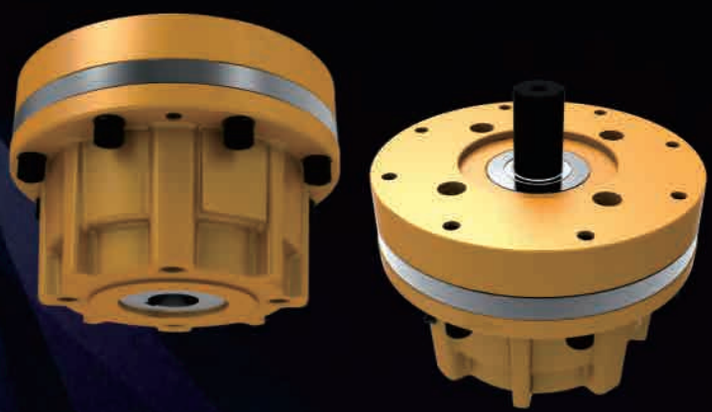


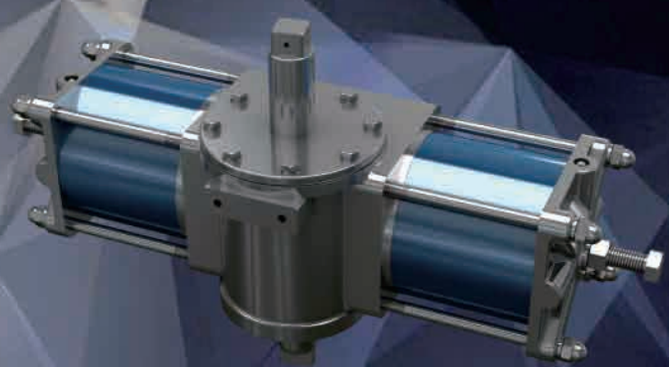


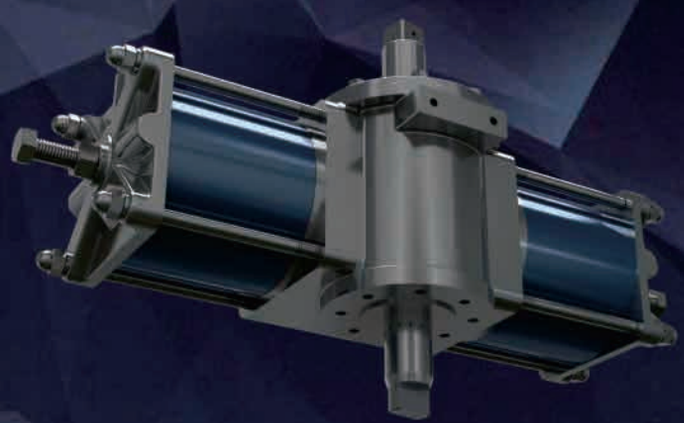
ETC.

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Products



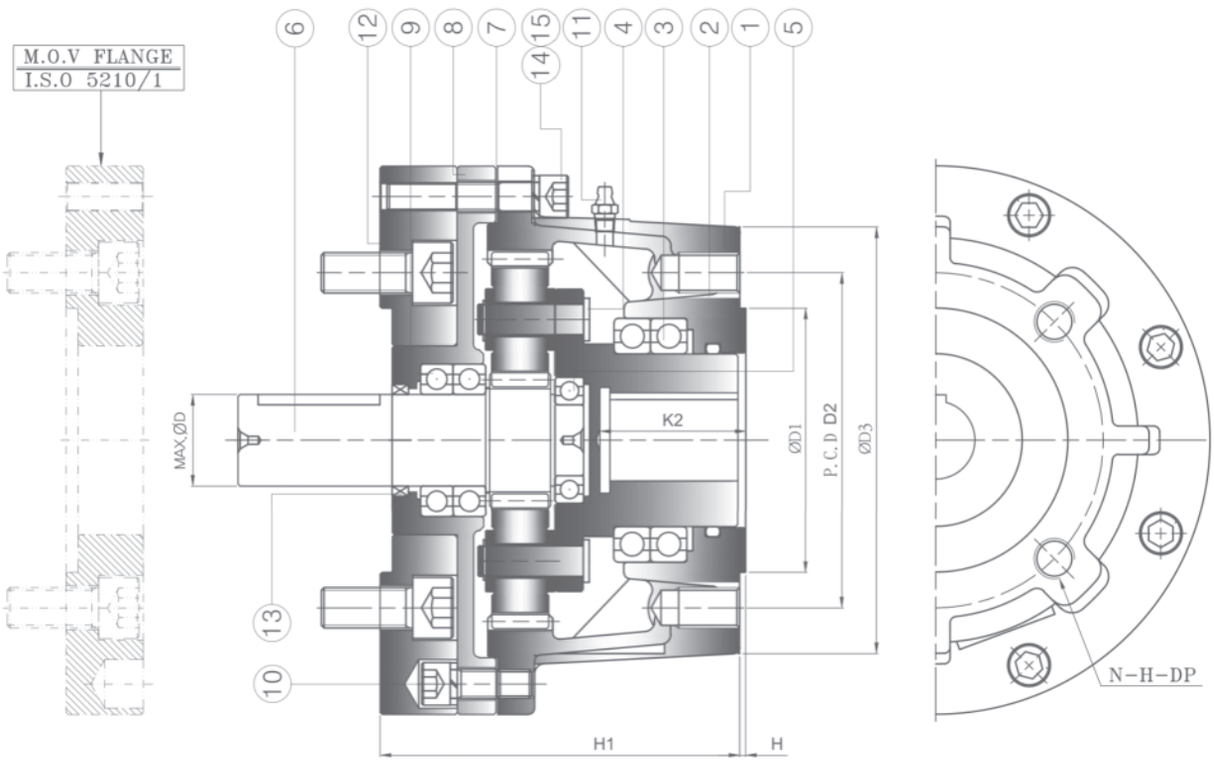


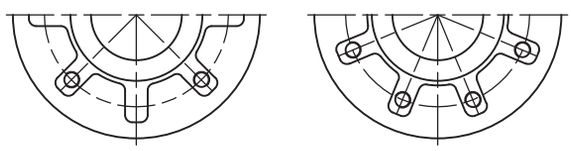


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Planetary Gear Reduction

Vertical input configuration





TYPE-A TYPE-B

ETC.

Dimensions

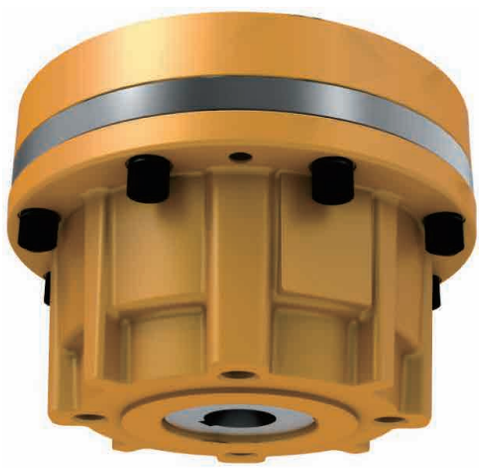
UNIT : mm

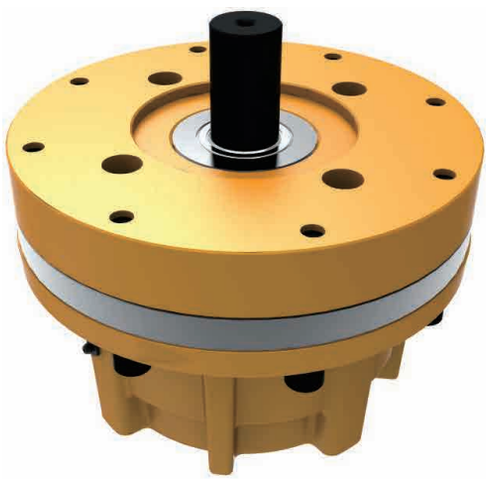
MODEL \ DIM	BASE PART										SELECTION CHART FOR OPERATORS				
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	MAX ØD	K2	GEAR RATIO	MAX. Stem Acceptance	MAX. Torque Capacity		WEIGHT
				ØD2	N-H-DP								N · m	ft · lbf	kg
SBPA-10	A	F-07,F-10	70	102	4-M10-18	125	3	117	30	45	3.6 : 1	35(10X8)	300	221	17
SBPA-12		F-10,F-12	85	125	4-M12-20	150		128	35	48	3.6 : 1	40(12X8)	600	443	26
SBPA-14		F-12,F-14	100	140	4-M16-25	175		160	40	58	3.6 : 1	50(14X9)	1200	885	36
SBPA-16		F-14,F-16	130	165	4-M20-30	210		177	45	68	4 : 1	60(18X11)	1800	2065	48
SBPA-25	B	F-16,F-25	200	254	8-M16-25	300	3	194	50	78	5 : 1	70(20X12)	2500	1844	63

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Features

- Input and output shafts are designed on a common centerline for precise concentricity.
- Input and output rotate in the same, consistent direction.
- Delivers excellent power density.
- High capacity in a compact, lightweight package.
- Low friction losses provide efficient power transmission.
- Compatible with a wide range of valve types.





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Part List

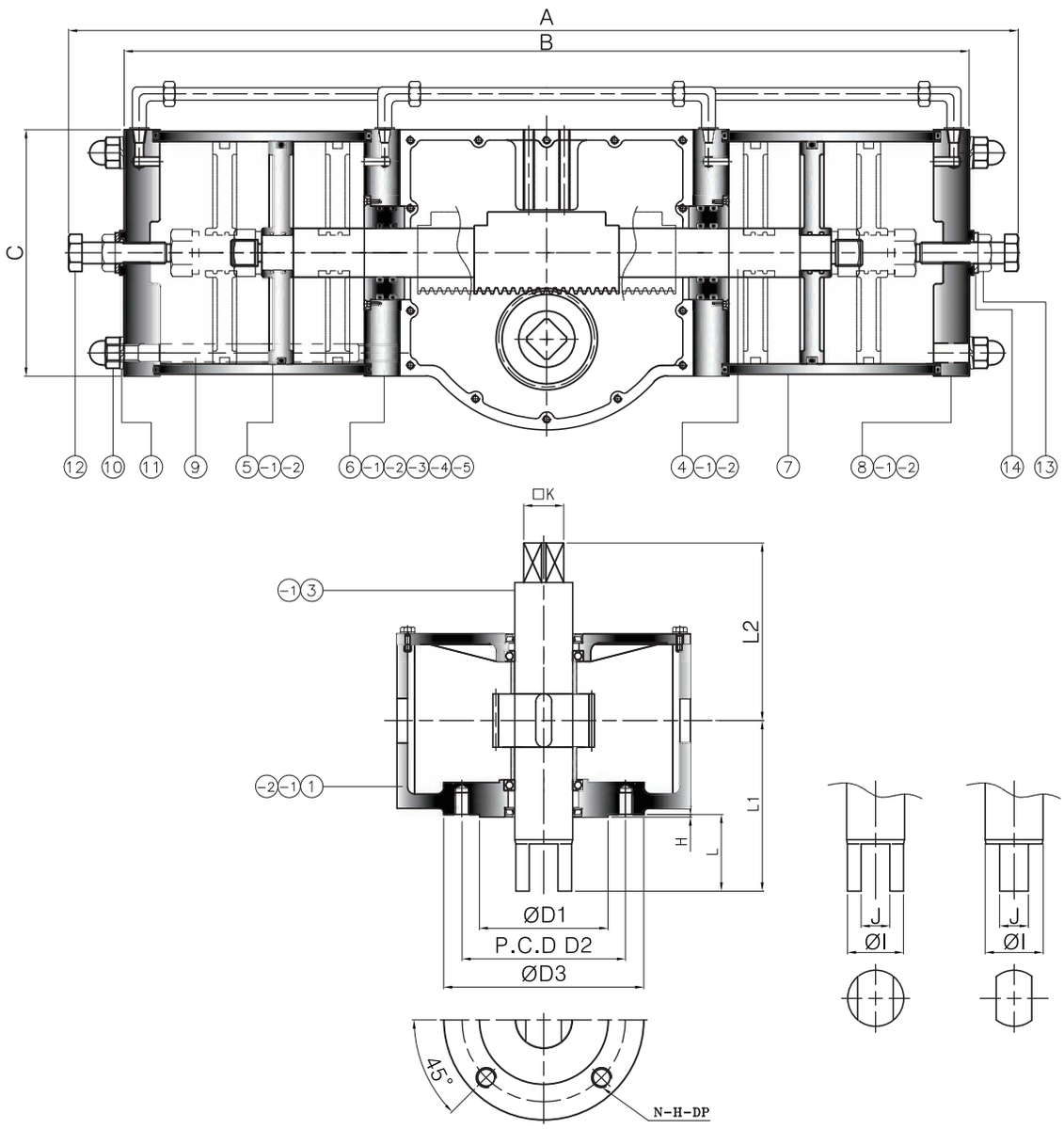
NO	PART NAME	MATERIAL
1	Out Base	Ductile Iron
2	O-Ring	Silicon
3	Bearing	A295-52100
4	Carrier Kit	Steel
5	Ball Bearing	A295-52100
6	Sun Pinion	A576-1045
7	Gasket	N-Asbestos
8	Support Pad	Ductile Iron

NO	PART NAME	MATERIAL
9	Ball Bearing	A295-52100
10	Wrench Bolt	A193-B7
11	Grease Nipple	Steel
12	Input Base	Steel
13	Oil Seal	NBR
14	Washer Spring	Steel
15	Wrench Bolt	A193-B7

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135° Air Cylinder

Rack-and-Pinion Type

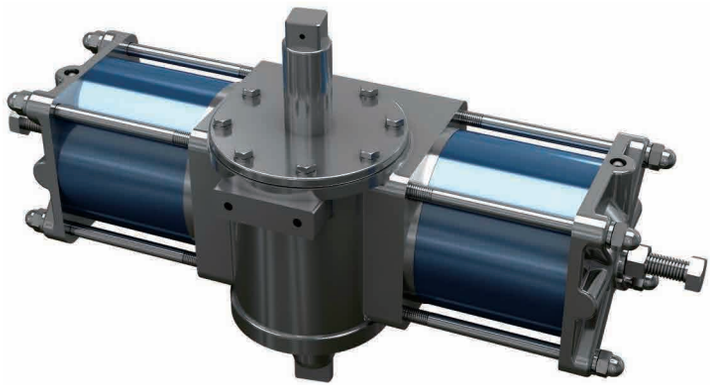


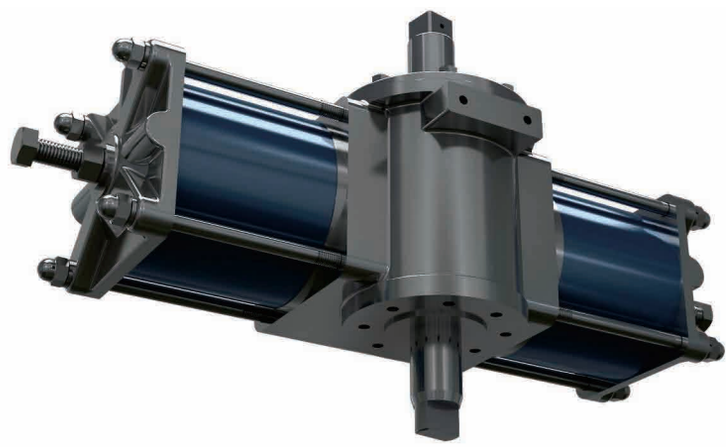
Dimensions

UNIT : mm

DIM / MODEL	BASE PART						EXTERNAL PART								
	FLANGE	ØD1	P.C.D		ØD3	H	A	B	C	ØI	J	□K	L	L1	L2
			ØD2	N-H-DP											
SB-50AIR	F-10	70	102	4-M10-17	125	3	385	324	68	20	12	15	35	66	129
SB-80AIR	F-12	85	125	4-M12-20	150		560	476	107	34	16	21	50	118	186
SB-125AIR							655	563	155	39	16	25	65	163	202
SB-160AIR	F-14	100	140	4-M16-25	175		580	606	175	39	16	25	80	170	212
SB-200AIR	F-16	130	165	4-M20-30	210		820	704	216	39	16	25	95	205	218
SB-250AIR	F-25	200	254	8-M16-32	300		1170	1050	277	49	20	33	105	212	221

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Part List

Materials in accordance with ASTM standards			
NO	PART NAME	MATERIAL	REMARK
1	Body	AC4C	
-1	O-Ring	Silicon	
-2	Du-Bush	BSC2	
2	Body-Cover	AC4C	
-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
-3	Du-Bush	BSC2	
-4	HEX. Bolt	SUS304	
-5	Spring Washer	SUS304	
3	STEM	A576-1045	
-1	Key	A576-1045	
4	Rack	A576-1045	
-1	HEX. Nut	SUS304	
-2	Spring Washer	SUS304	
5	Piston	AC4C	
-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
6	Pipe Cap	AC4C	
-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
-3	O-Ring	Silicon	
-4	O-Ring	Silicon	
-5	Du-Bush	BSC2	
7	Cylinder Tube	A120	
8	Pipe Cover	AC4C	
-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
9	Rod Bolt	A576-1045	
10	Cap Nut	A576-1045	
11	Spring Washer	A576-1045	
12	HEX. Bolt	SUS304	
13	HEX. Nut	SUS304	
14	Plane Washer	SUS304	

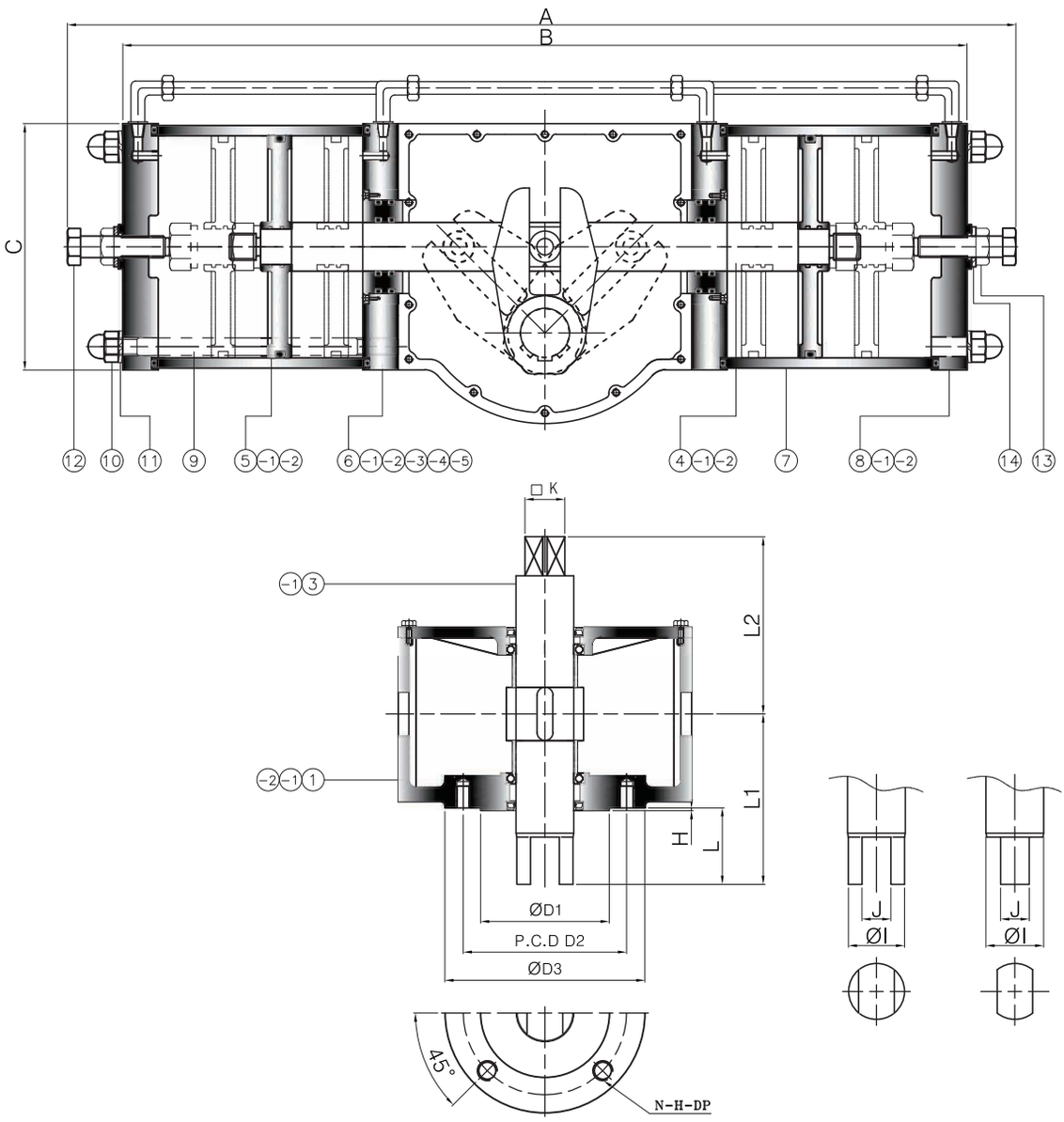
Selection Chart

MODEL	Double Acting 1/4 Turn Actuators								
	Diameter of Cylinder (mm)	Torque Capacity (N · m)							
		2bar	3bar	4bar	5bar	6bar	7bar	8bar	9bar	10bar
SB-50AIR	50	10	14	19	24	29	34	38	43	48
SB-80AIR	80	39	59	79	98	118	138	158	177	197
SB-125AIR	125	108	162	216	270	325	379	433	487	541
SB-160AIR	160	201	301	402	502	603	703	804	904	1,004
SB-200AIR	200	369	554	739	923	1,108	1,292	1,477	1,662	1,846
SB-250AIR	250	933	1,399	1,866	2,332	2,798	3,265	3,731	4,197	4,664

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90° Air Cylinder

Scotch-Yoke Type

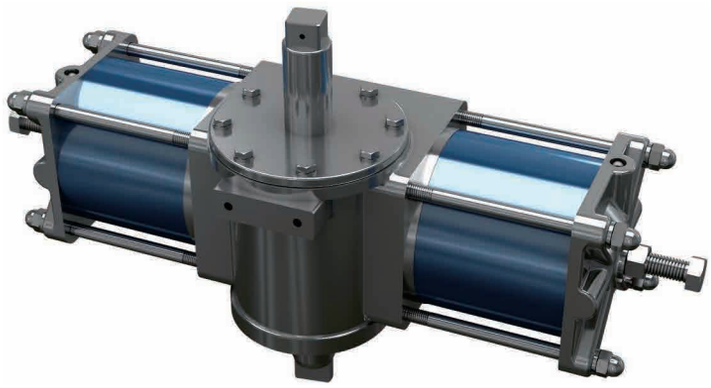


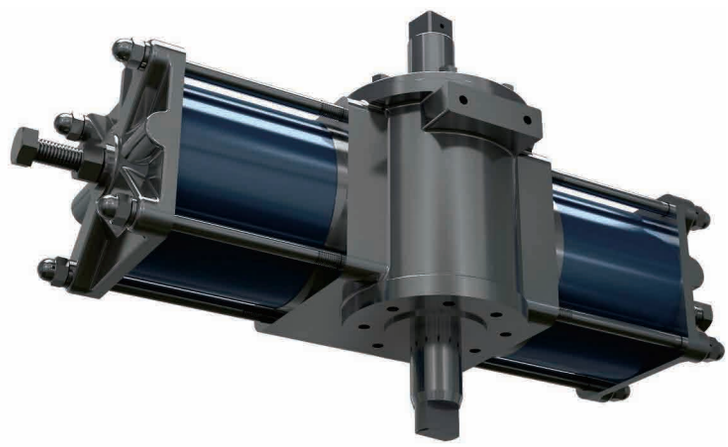
Dimensions

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4	Rack	A576-1045	
-1	HEX. Nut	SUS304	
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-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
6	Pipe Cap	AC4C	
-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
-3	O-Ring	Silicon	
-4	O-Ring	Silicon	
-5	Du-Bush	BSC2	
7	Cylinder Tube	A120	
8	Pipe Cover	AC4C	
-1	O-Ring	Silicon	
-2	O-Ring	Silicon	
9	Rod Bolt	A576-1045	
10	Cap Nut	A576-1045	
11	Spring Washer	A576-1045	
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Selection Chart

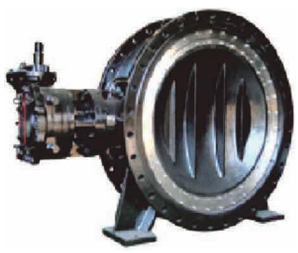
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User's Manual

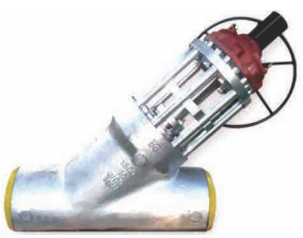
SAMBO Standard for All Gear Products

Lubrication



- Sambo gears are factory-filled with Zenith EPSB 2 grease for operation from -20˚C to +200˚C (-4˚F to +392˚F).
- Buna-N O-rings and seals are supplied as standard; all units are rated IP67 for temporary submersion.

High Temperature Option



- For high-temperature service, Shell Darina R2 grease is used, supporting −10˚C to +200˚C (+14˚F to +392˚F).
- O-rings and seals are Viton Grade V75.

Low Temperature Option



- For low-temperature applications, Zenith SBLT600 grease is used, providing a range of −60˚C to +120˚C (−76˚F to +248˚F).
- O-rings and seals are fluorosilicone.

Painting

- All gears are primer-coated with a two-component wash primer.

Option

- Sambo can accommodate most additional customer requirements: please provide exact specifications before placing an order.

Marine Duty



- Sambo has supplied the marine industry for many years.
- Our standard marine configuration is furnished as follows: The lubricant is Zenith EPSB 2 with an operating range of −20˚C to +200˚C (−4˚F to +392˚F).
- All fasteners are zinc plated or otherwise corrosion resistant.
- Input shafts are hard nickel plated.
- All castings are ductile iron, grade FCD-450.
- Certain options, such as dial indicators, may not be suitable for marine service.

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AWWA Standard C504 (American Water Works Association)

· To meet this standard, all worm gears are manufactured from aluminum bronze.
· For buried service applications, input shafts are bright zinc-plated.

Nuclear Service

· With client approval, Sambo can meet most nuclear-service requirements, including specified material grades and special coatings. Compliance will be validated by calculation.

Raw Sewage

· Units for raw sewage immersion are lubricated with 751 grease and sealed to achieve IP68 submersible performance.
· Certain options, such as dial indicators, may not be suitable for this service.








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User's Manual

SAMBO Service SBWG Worm Gears Recommended Installation and Maintenance

The SAMBO range of Worm Gear Operators is supplied in accordance with the purchase order requirements.
The output drive bushing is normally supplied blank, unless specified otherwise on the purchase order.
In the event, SAMBO is requested to machine the bushing, a drawing of the required bore & keyway sizes should accompany the order.
Also the location of the keyway, in relation to the valve stem key position should be included.
All units are supplied with a clockwise input and clockwise output as standard unless notify to do.
The bushing is removable bottom of the unit, it is secured in the drive sleeve by means of retaining ring.
SAMBO to state the tool required for removal ··· need more complete informations.

Handling of Units

All SBWG series Worm Gears are furnished with two eye bolts installed in the covers.
These may be used be lift to units from the shipping crates.
[CAUTION] The eye bolts are not designed to lift a complete valve/actuator package.
Doing so could cause serious personal injury and damage to the gear actuator.
Upon receipt and before mounting to the valve, units should be stored in a dry place, preferably on a storage shelf.

Mounting to the Valve

Before mounting, check to see that the bushing has been machined and mounting base conforms to the purchase order requirements. Place the valve in either to Open or Close position.
Through use of the handwheel, position the gear actuator is the same position using the dial pointer as a guide.
Prior to mounting gear actuator to valve, it is recommended that a thin film of grease be applied to the valve flange.
This will help prevent corrosion of the valve flange surface and gear actuator mounting base.
Mounting gear actuator to valve and fasten with appropriate size mounting screw.
It is highly recommended that the mounting hardware be a minimum of Grade 8. (High Tensile)
Painting of the mounting screws is also recommended to avoid corrosion.
Operate the valve from full open to full close, by use of the handwheel or by motor actuator is supplied.
Should ant travel adjustment be required, the two stop screw on the side of the housing can provide final position control.
All units are suitable for +/-5°C adjustment .

Maintenance

All units are lubricated for life. Under normal operating conditions, no maintenance if required.
The units are completely sealed with large cross-selection O-Rings to prevent any leakage.
Units are suitable for temporary submergence to IP67.
SAMBO standard lubricant is shell Zenith EPSB 2, which is suitable for ambient temperatures of -20°C to +200°C. (-4°F to +392°F)
Other lubricants are available : must be determined at time of order.
Each unit is supplied with a grease fitting if additional lubricant is required.
Periodic inspection is suggested to determine if any leaks have occurred.
External surfaces should also be examined, and if necessary, touch up painting is recommended.

Spare Parts

In the event any spare (replacement) parts are required, refer to the parts list supplied with the order, or contact SAMBO directly for assistance.
Always provide the nameplate information when ordering parts.

Summary

This manual intends that SAMBO's clients use rightly & safely.

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User's Manual

Inspection



- Receiving the goods, check the status of the goods.
  (If it has any problem, feel free to contact us.)
- Looking through the model, Ratio, Manufactured NO., and the rest on the plate whether corresponds with your order particulars or not. If it has any problem, feel free to contact us directly for assistance. Always provide the nameplate information when ordering parts.

Instruction

- Storage

  For best results, SAMBO operations should be stored in a clean, dry area in their shipping containers. If operators are stored in high humidity areas, steps should be taken to reduce the amount of moisture.
  Input shafts are plated to prevent corrosion. If operators are being stored for a long period of time, operator mounting surfaces should be lightly greased to prevent corrosion.



- Maintenance

  SAMBO manual operators do not require periodic maintenance. They are, for most applications, lubricated for life, with all components designed to have a life equal to or exceeding the wear life of operator gearing.

Installation

- Move the valve in the closed position and insure valve seal has been attained.
- Install the Yoke Nut Driver on the bottom of the bevel gear using the bolt pattern supplied.
- Before installing the operator, liberally grease the Yoke Nut and the Yoke Nut Driver. This will reduce the possibility of corrosion between the two components.
- Align the operator with the Yoke Nut and lower the operator into position on the valve flange or mounting kit.
- Install and tighten the valve to operator mounting bolts.
- Rotate the operator handwheel counterclockwise moving the valve from the close to the open position checking to make sure the operator turns smoothly through the complete cycle. Visually verify that the open position has been achieved.
- Rotate the valve from close to open several times to insure proper operation.

Precautions

- When it replaces to be gear, shaft & cover, necessarily contact us.
- Without any instruction from SAMBO, it could cause severe damage..

Basic Check

Article	Contents	Period
Gear & Bearing	noise	per 6month
Grease	volume of grease	per 6month
Oilseal	oil leak	per 6month

- Check ordinarly the stated below in order to avoid breaking down the unit.

Trouble Shooting

CAUSE	COUNTERPLAN
percolation of impurity	removal of clean
abrasion of gear	replacement
abrasion of bearing	replacement
loose of tightening up position	tightening up
breakage of oilseal	replacement
shortage of grease	filling up of grease

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Spiral Bevel Gear Actuators

Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-VS10	2.5:1	75.5	220	162	2.3	95.7	30	22 (8x7)	F-10 F-07 (OPTION)
SB-VS10-1S	5:1				4.2	52.0			
SB-MT10	1:1				0.9	244.4			
SB-VS10C	2.5:1				2.3	95.7	Ø42		F-14, F-16
SB-VS10C-1S	5:1				4.2	52.0			
SB-VS20	3:1	113	370	273	2.8	134.1	40	32 (10x8)	F-12 F-10 (OPTION)
SB-VS20-1S	6:1				5.1	72.9			
SB-MT20	1:1				0.9	411.1			
SB-VS20C	3:1				2.8	134.1	Ø50		F-16, (F-20)
SB-VS20C-1S	6:1				5.1	72.9			
SB-V0	3.25:1	127	600	443	3.0	200.7	46	38 (12x8)	F-14 F-12 (OPTION)
SB-V0W									
SB-V0-1S	6.5:1				5.5	109.1			
SB-V0W-1S									
SB-V0-1ST	P-3.25:1				3.2	186.3			
	S-6.5:1				5.5	109.1			
SB-V0-1S2B	13:1				10.1	59.3			
SB-V0-1SD	20.9:1				17.7	34.0			
SB-V0W-1SD									
SB-V0-1SDT	P-6.5:1				5.5	109.1			
	20.9:1				17.7	34.0			
SB-MT0	1:1				0.85	708.9			
SB-V0-2B	6.5:1				5.5	109.1			
SB-V0W-2B									
SB-V0C	3.25:1				3.0	200.7	Ø60		F-16, (F-20)
SB-V0C-1S	6.5:1				5.5	109.1			
SB-V1	3.5:1	141	980	723	3.2	304.3	55	45 (14x9)	F-16 F-14 (OPTION)
SB-V1W									
SB-V1-1S	7:1				5.9	165.4			
SB-V1W-1S									
SB-V1-1ST	P-3.5:1				3.0	330.8			
	S-7:1				5.9	165.4			
SB-V1-1S2B	14:1				10.9	89.9			
SB-V1-1SD	22.5:1				19.0	51.5			
SB-V1W-1SD									
SB-V1-1SDT	P-7:1				5.9	165.4			
	22.5:1				19.0	51.5			
SB-MT1	1:1				0.90	1088.9			
SB-V1-2B	7:1				5.9	165.4			
SB-V1W-2B									
SB-V1C	3.5:1				3.2	304.3	Ø69		(F-20), F-25
SB-V1C-1S	7:1				5.9	165.4			

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Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-V2	4:1	190	1500	1106	3.7	407.6	62	52 (16x10)	(F-20) F-14,F-16 (OPTION)
SB-V2W									
SB-V2-1S	10.13:1				8.6	174.9			
SB-V2W-1S									
SB-V2-1ST	P-4:1				3.4	443.1			
	S-10.13:1				9.3	160.6			
SB-V2-1S2B	20.27:1				17.7	84.5			
SB-V2-1SD	25.67:1				23.7	63.4			
SB-V2W-1SD									
SB-V2-1SDT	P-10.13:1				9.3	160.6			
	S-25.67:1				23.7	63.4			
SB-MT2	1:1				0.92	1627.8			
SB-V2-2B	10:1				9.0	166.2			
SB-V2W-2B									
SB-V2C	4:1				3.8	394.7	Ø78		F-25, F-30
SB-V2C-1S	10.13 :1				9.3	160.6			
SB-V2H	4:1	350	2900	2139	3.8	763.2	65	55 (16x10)	F-25 (F-20) (OPTION)
SB-V2HW									
SB-V2H-1S	10.13:1				9.3	310.6			
SB-V2HW-1S									
SB-V2H-1ST	P-4:1				3.7	786.8			
	S-10.13:1				9.3	310.6			
SB-V2H-1SD	25.67:1				23.7	122.6			
SB-V2HW-1SD									
SB-V2H-1SDT	P-10.13:1				9.3	310.6			
	S-25.67:1				23.7	122.6			
SB-V2H-2B	10:1				9.0	321.3			
SB-V2HW-2B									
SB-V3	5:1	288	2500	1844	4.6	543.5	72	60 (18x11)	F-25 (F-20), F-16 (OPTION)
SB-V3W									
SB-V3-1S	12.67:1				10.7	233.2			
SB-V3W-1S									
SB-V3-1ST	P-5:1				4.2	590.7			
	S-12.67:1				10.7	233.2			
SB-V3-1S2B	25.33:1				19.7	126.7			
SB-V3-1SD	32.1:1				27.2	92.0			
SB-V3W-1SD									
SB-V3-1SDT	P-12.67:1				10.7	233.2			
	S-32.09:1				27.2	92.0			
SB-MT3	1:1				0.85	2953.7			
SB-V3-2B	15:1				12.7	196.9			
SB-V3W-2B									
SB-V3C	5:1				4.6	543.5	Ø97		F-30, F-35
SB-V3C-1S	12.67:1				10.7	233.2			
SB-V3H	5:1	510	4500	3319	4.6	978.3	80	70 (20x12)	F-30 F-25(OPTION)
SB-V3HW									
SB-V3H-1S	12.67:1				10.7	419.7			
SB-V3HW-1S									
SB-V3H-1ST	P-5:1				4.2	1063.3			
	S-12.67:1				10.7	419.7			
SB-V3H-1SD	32.1:1				27.2	165.7			
SB-V3HW-1SD									
SB-V3H-1SDT	P-12.67:1				10.7	419.7			
	S-32.09:1				27.2	165.7			
SB-V3H-2B	15:1				12.7	354.4			
SB-V3HW-2B									

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Technical Data

Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-V35	5.5:1	350	3500	2581	5.1	691.7	85	72 (20x12)	F-30 F-25 (OPTION)
SB-V35W									
SB-V35-1S	16.5:1				14.0	250.6			
SB-V35W-1S									
SB-V35-1ST	P-5.5:1				4.7	751.8			
	S-16.5:1				14.0	243.1			
SB-V35-1S2B	41.25:1				32.1	109.0			
SB-V35-1SD	49.5:1				41.9	83.5			
SB-V35W-1SD									
SB-V35-1SDT	P-16.5:1				14.0	250.6			
	S-49.5:1				41.9	83.5			
SB-V35-2B	17.88:1				15.1	231.3			
SB-V35W-2B									
SB-V35C	5.5:1				5.1	691.7	Ø115		F-35, F-40
SB-V35C-1S	16.5:1				14.0	250.6			
SB-V35H	5.5:1	800	7000	5163	5.1	1383.4	95	85(22X14)	F-35 F-30, F-25 (OPTION)
SB-V35HW									
SB-V35H-1S	16.5:1				14.0	501.2			
SB-V35HW-1S									
SB-V35H-1ST	P-5.5:1				4.7	1503.7			
	S-16.5:1				14.0	501.2			
SB-V35H-1SD	49.5:1				41.9	167.1			
SB-V35HW-1SD									
SB-V35H-1SDT	P-16.5:1				14.0	501.2			
	S-49.5:1				41.9	167.1			
SB-V35H-2B	17.88 :1				15.1	462.7			
SB-V35HW-2B									
SB-V4	6:1	400	5200	3835	5.5	942.0	95	80 (22X14)	F-35 F-30, F-25 (OPTION)
SB-V4W									
SB-V4-1S	18:1				15.2	341.3			
SB-V4W-1S									
SB-V4-1ST	P-6:1				5.1	1023.9			
	S-18:1				15.2	341.3			
SB-V4-1S2B	45:1				35.0	148.4			
SB-V4-1SD	54:1				45.7	113.8			
SB-V4W-1SD									
SB-V4-1SDT	P-18:1				15.2	341.3			
	S-54:1				45.7	113.8			
SB-V4-2B	21:1				17.8	292.6			
SB-V4W-2B									
SB-V4C	6:1				5.5	942.0	Ø130		F-35, F-40
SB-V4C-1S	18:1				15.2	341.3			
SB-V4H	6:1	1100	9800	7228	5.5	1775.4	105	90 (25X14)	F-35 F-30, F-25 (OPTION)
SB-V4HW									
SB-V4H-1S	18:1				15.2	643.2			
SB-V4HW-1S									
SB-V4H-1ST	P-6:1				5.1	1929.7			
	S-18:1				15.2	643.2			
SB-V4H-1SD	54::1				45.7	214.4			
SB-V4HW-1SD									
SB-V4H-1SDT	P-18:1				15.2	643.2			
	S-54:1				45.7	214.4			
SB-V4H-2B	21:1				17.8	551.4			
SB-V4HW-2B									
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			(N · m)	(Ft · lbf)			TW	KEY	
SB-V5	6.56:1	510	7800	5753	6.0	1293.3	105	90 (25X14)	F-35 F-30 (OPTION)
SB-V5W									
SB-V5-1S	22.94:1				19.4	401.6			
SB-V5W-1S									
SB-V5-1ST	P-6.556:1				5.5	1405.8			
	S-22.94:1				19.4	401.6			
SB-V5-1S2B	57.36:1				44.7	174.6			
SB-V5-1SD	80.31:1				68.0	114.7			
SB-V5W-1SD									
SB-V5-1SDT	P-22.94:1				19.4	401.6			
	S-80.31:1				68.0	114.7			
SB-V5-2B	22.94:1				22.2	351.4			
SB-V5W-2B									
SB-V5H	6.55556:1	1500	15000	11063	6.0	2487.1	120	105 (28x16)	F-35 F-30 (OPTION)
SB-V5HW									
SB-V5H-1S	22.9444:1				19.4	772.4			
SB-V5HW-1S									
SB-V5H-1ST	P-6.556::1				5.5	2703.4			
	S-22.94:1				19.4	772.4			
SB-V5H-1SD	80.31:1				68.0	220.7			
SB-V5HW-1SD									
SB-V5H-1SDT	P-22.94:1				19.4	772.4			
	S-580,31:1				68.0	220.7			
SB-V5H-2B	26,2222:1				22.2	675.8			
SB-V5HW-2B									
SB-V55	7:1	1083.6	10400	7671	6.7	1563.9	115	100 (28X16)	F-35 F-30 (OPTION)
SB-V55W									
SB-V55-1S	24,5:1				22.6	460.7			
SB-V55W-1S									
SB-V55-1ST	P-7:1				6.5	1612.3			
	S-24,5:1				22.6	460.7			
SB-V55-1S2B	61.25:1				53.6	194.0			
SB-V55-1SD	85.75:1				79.0	131.6			
SB-V55W-1SD									
SB-V55-1SDT	P-24,5:1				22.6	460.7			
	S-85.75:1				79.0	131.6			
SB-V55-2B	35:1				31.6	329.2			
SB-V55W-2B									
SB-V55H	7:1	2052	19000	14014	6.7	2857.1	135	115 (32x18)	F-48 F-40, F-35 (OPTION)
SB-V55HW									
SB-V55H-1S	24,5:1				22.6	841.6			
SB-V55HW-1S									
SB-V55H-1ST	P-7:1				6.5	2945.5			
	S-24,5:1				22.6	841.6			
SB-V55H-1SD	85.75:1				79.0	240.4			
SB-V55HW-1SD									
SB-V55H-1SDT	P-24,5:1				22.6	841.6			
	S-85.75:1				79.0	240.4			
SB-V55H-2B	35:1				31.6	601.5			
SB-V55HW-2B									
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Technical Data

Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-V6	7:1	1404	13000	9588	6.7	1954.9	125	110 (32X18)	F-40 F-35 (OPTION)
SB-V6W									
SB-V6-1S	28:1				25.8	503.8			
SB-V6W-1S									
SB-V6-1ST	P-7:1				6.5	2015.3			
	S-28:1				25.8	503.8			
SB-V6-1S2B	84:1				73.5	176.8			
SB-V6-1SD	112:1				103.2	126.0			
SB-V6W-1SD									
SB-V6-1SDT	P-28:1				25.8	503.8			
	S-112:1				103.2	126.0			
SB-V6-2B	35:1				31.6	411.6			
SB-V6W-2B									
SB-V6H	7:1	2484	23000	16964	6.7	3458.6	150	130 (36x20)	F-48 F-40, F-35 (OPTION)
SB-V6HW									
SB-V6H-1S	28:1				25.8	891.4			
SB-V6HW-1S									
SB-V6H-1ST	P-7:1				6.5	3565.6			
	S-28:1				25.8	891.4			
SB-V6H-1SD	112:1				103.2	222.9			
SB-V6HW-1SD									
SB-V6H-1SDT	P-28:1				25.8	891.4			
	S-112:1				103.2	222.9			
SB-V6H-2B	35:1				31.6	728.1			
SB-V6HW-2B									
SB-V7	7.56:1	1836	17600	12981	7.2	2452.0	140	120 (36X20)	F-48 F-40 (OPTION)
SB-V7W									
SB-V7-1S	30.22:1				27.8	632.0			
SB-V7W-1S									
SB-V7-1ST	7.56 :1				7	2527.8			
	30.22 :1				27.8	632.0			
SB-V7-1S2B	90.67:1				79.4	221.7			
SB-V7-1SD	120.89:1				111.4	158.0			
SB-V7W-1SD									
SB-V7-1SDT	30.22 :1				27.8	632.0			
	120.89 :1				111.4	158.0			
SB-V7-2B	37.78 :1				34.1	516.2			
SB-V7W-2B									
SB-V7H	7.56:1	3421	37000	27290	7.2	5154.8	160	140 (36X20)	F-48
SB-V7HW									
SB-V7H-1S	30.22 :1				27.8	1328.6			
SB-V7HW-1S									
SB-V7H-1ST	7.56 :1				7	5314.2			
	30.22 :1				27.8	1328.6			
SB-V7H-1SD	120.89:1				111.4	332.1			
SB-V7HW-1SD									
SB-V7H-1SDT	30.22 :1				27.8	1328.6			
	120.89:1				111.4	332.1			
SB-V7H-2B	37.78:1				34.1	1085.2			
SB-V7HW-2B									
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			(N · m)	(Ft · lbf)			TW	KEY	
SB-V75	8:1	2280	21000	15489	7.6	2763.2	150	130 (36X20)	F-48
SB-V75W									
SB-V75-1S	40:1				36.9	569.7			
SB-V75W-1S									
SB-V75-1ST	8:1				7.4	2848.6			
	40:1				36.9	569.7			
SB-V75-1S2B	0.7:1				0.6	34269.1			
SB-V75-1SD	200:1				184.3	113.9			
SB-V75W-1SD									
SB-V75-1SDT	40:1				36.9	569.7			
	200:1				184.3	113.9 528.8			
SB-V75-2B	44:1				39.7	6052.6			
SB-V75W-2B									
SB-V75H	8:1	4554	46000	33928	7.6	1248.0	175	155 (40X22)	F-60 F-48 (OPTION)
SB-V75HW									
SB-V75H-1S	40:1				36.9	6239.8			
SB-V75HW-1S									
SB-V75H-1ST	8:1				7.4	1248.0			
	40:1				36.9	249.6			
SB-V75H-1SD	200:1				184.3	1248.0			
SB-V75HW-1SD									
SB-V75H-1SDT	40:1				36.9				
	200:1				184.3	249.6			
SB-V75H-2B	44:1				39.7	1158.4			
SB-V75HW-2B									
SB-V8	8:1	3190	32000	23602	7.6	4210.5	160	140 (36X20)	F-48 F-40 (OPTION)
SB-V8W									
SB-V8-1S	40:1				36.9	868.1			
SB-V8W-1S									
SB-V8-1ST	P-8:1				7.4	4340.7			
	S-40:1				36.9	868.1			
SB-V8-1S2B	160:1				140.1	228.5			
SB-V8-1SD	200:1				184.3	173.6			
SB-V8W-1SD									
SB-V8-1SDT	P-40:1				36.9	868.1			
	S-200:1				184.3	173.6			
SB-V8-1SI	1:1				0.9	34726.0			
SB-V8-2B	44:1				39.7	805.8			
SB-V8W-2B									
SB-V8H	8:1	5200	58000	42778	7.6	7631.6	190	160 (40X22)	F-60 F-48 (OPTION)
SB-V8HW									
SB-V8H-1S	40:1				36.9	1573.5			
SB-V8HW-1S									
SB-V8H-1ST	P-8:1				7.4	7867.6			
	S-40:1				36.9	1573.5			
SB-V8H-1SD	200:1				184.3	314.7			
SB-V8HW-1SD									
SB-V8H-1SDT	P-40:1				36.9	1573.5			
	S-200:1				184.3	314.7			
SB-V8H-2B	44:1				39.7	1460.6			
SB-V8HW-2B									
Remark	• Ratio & Base specification to be changeable.								
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Technical Data

Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-V85	8:1	3960	40000	29502	7.6	5263.2	170	150 (40X22)	F-48 F-40 (OPTION)
SB-V85W									
SB-V85-1S	40:1				36.9	1085.2			
SB-V85W-1S									
SB-V85-1ST	P-8:1				7.4	5425.9			
	S-40:1				36.9	1085.2			
SB-V85-1S2B	200:1				175.1	228.5			
SB-V85-1SD	200:1				184.3	217.0			
SB-V85W-1SD									
SB-V85-1SDT	P-40:1				36.9	1085.2			
	S-200:1				184.3	217.0			
SB-V85-1SI	1:1				0.9	43407.5			
SB-V85-2B	48:1				43.3	923.4			
SB-V85W-2B									
SB-V85H	8:1	6090	74000	54579	7.6	9736.8	210	180 (45X25)	F-60 F-48 (OPTION)
SB-V85HW									
SB-V85H-1S	40:1				36.9	2007.6			
SB-V85HW-1S									
SB-V85H-1ST	P-8:1				7.4	10038.0			
	S-40:1				36.9	2007.6			
SB-V85H-1SD	200:1				184.3	401.5			
SB-V85HW-1SD									
SB-V85H-1SDT	P-40:1				36.9	2007.6			
	S-200:1				184.3	401.5			
SB-V85H-2B	48:1				43.3	1708.2			
SB-V85HW-2B									
SB-V9	8:1	4768.5	55000	40566	7.6	7236.8	185	165 (40X22)	F-60 F-48 (OPTION)
SB-V9W									
SB-V9-1S	40:1				36.9	1492.1			
SB-V9W-1S									
SB-V9-1ST	P-8:1				7.4	7460.7			
	S-40:1				36.9	1492.1			
SB-V9-1S2B	200:1				175.1	314.1			
SB-V9-1SD	200:1				184.3	298.4			
SB-V9W-1SD									
SB-V9-1SDT	P-40:1				36.9	1492.1			
	S-200:1				184.3	298.4			
SB-V9-1SI	1:1				0.9	59685.3			
SB-V9-2B	52.44:1				43.3	1162.0			
SB-V9W-2B									
SB-V9H	8:1	7245	104000	76706	7.6	13684.2	230	205 (50X28)	(F-80) F-60 (OPTION)
SB-V9HW									
SB-V9H-1S	40:1				36.9	2821.5			
SB-V9HW-1S									
SB-V9H-1ST	P-8:1				7.4	14107.4			
	S-40:1				36.9	2821.5			
SB-V9H-1SD	200:1				184.3	564.3			
SB-V9HW-1SD									
SB-V9H-1SDT	P-40:1				36.9	2821.5			
	S-200:1				184.3	564.3			
SB-V9H-2B	52.44:1				47.3	2197.3			
SB-V9HW-2B									

Remark	• Ratio & Base specification to be changeable.
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Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-V100	8:1	6270	75000	55317	7.6	9868.4	200	180 (45X25)	(F-80) F-60 (OPTION)
SB-V100W									
SB-V100-1S	40:1				36.9	2034.7			
SB-V100W-1S									
SB-V100-1ST	P-8:1				7.4	10173.6			
	S-40:1				36.9	2034.7			
SB-V100-1S2B	220:1				192.6	389.4			
SB-V100-1SD	200:1				184.3	406.9			
SB-V100W-1SD									
SB-V100-1SDT	P-40:1				36.9	2034.7			
	S-200:1				184.3	406.9			
SB-V100-2B	56:1				50.5	1484.0			
SB-V100W-2B									
SB-V10H	8:1	8925	142000	104734	7.6	18684.2	250	220 (56X32)	(F-80) F-60 (OPTION)
SB-V100HW									
SB-V100H-1S	40:1				36.9	3852.4			
SB-V100HW-1S									
SB-V100H-1ST	P-8:1				7.4	19262.1			
	S-40:1				36.9	3852.4			
SB-V100H-1SD	200:1				184.3	770.5			
SB-V100HW-1SD									
SB-V100H-1SDT	P-40:1				36.9	3852.4			
	S-200:1				184.3	770.5			
SB-V100H-2B	56:1				50.5	2809.7			
SB-V100HW-2B									

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Spur Gear Actuators

Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB-SR50	10:1	113	370	273	9.2	40.2	40	32 (10x8)	F-12 F-10 (OPTION)
SB–SR50-2B	20:1				16.6	22.3			
SB–SR50-1ST	P-10:1				8.5	43.7			
	S-20:1				16.9	21.9			
SB–SR100	12:1	141	980	723	11	88.8	55	45 (14x9)	F-16 F-14 (OPTION)
SB–SR100-2B	24:1				19.9	49.3			
SB–SR100-1ST	P-12:1				10.2	96.5			
	S-24:1				20.3	48.2			
SB–SR200	12:1	190	1500	1106	11	135.9	62	52 (16x10)	(F-20) F-16,F-14 (OPTION)
SB–SR200-2B	30:1				24.8	60.4			
SB–SR200-1ST	P-12:1				10.2	147.7			
	S-30:1				25.4	59.1			
SB–SR200H	12:1	350	2900	2139	11	262.7	65	55 (16x10)	F-25 (F-20) (OPTION)
SB–SR200H-2B	30:1				24.8	116.7			
SB–SR200H-1ST	P-12:1				10.2	285.5			
	S-30:1				25.4	114.2			
SB–SR300	13:1	288	2500	1844	12	209.0	72	60 (18x11)	F-25 (F-20), F-16 (OPTION)
SB–SR300-2B	32:1				26.5	94.4			
SB–SR300-1ST	P-13:1				11.0	227.2			
	S-33:1				27.9	89.5			
SB–SR300H	13:1	510	4500	3319	12	376.3	78	70 (20x12)	F-30 F-25 (OPTION)
SB–SR300H-2B	32:1				26.5	169.8			
SB–SR300H-1ST	P-13:1				11	409.0			
	S-33:1				27.9	161.1			
SB–SR350	13:1	350	3500	2581	12.0	292.6	85	72 (20x12)	F-30 F-25 (OPTION)
SB–SR350-2B	39:1				32.3	108.4			
SB–SR350-1ST	P-13:1				11.0	318.1			
	S-39:1				33.0	106.0			
SB–SR350H	13:1	800	7000	5163	12.0	585.3	78	70 (20x12)	F-30 F-25 (OPTION)
SB–SR350H-2B	39:1				32.3	216.8			
SB–SR350H-1ST	P-13:1				11.0	636.2			
	S-39:1				33.0	212.1			
SB–SR400	14:1	400	5200	3835	12.9	403.7	90	80 (22X14)	F-30 F-25 (OPTION)
SB–SR400-2B	42:1				34.8	149.5			
SB–SR400-1ST	P-14:1				11.8	438.8			
	S-42:1				35.5	146.3			
SB–SR400H	14:1	1100	9800	7228	12.9	760.9	95	80 (22X14)	F-35 F-30, F-25 (OPTION)
SB–SR400H-2B	42:1				34.8	281.8			
SB–SR400H-1ST	P-14:1				11.8	827.0			
	S-42:1				35.5	275.7			
SB–SR500	15:1	510	7800	5753	13.8	565.2	105	90 (25X14)	F-35 F-30 (OPTION)
SB–SR500-2B	60:1				49.7	157.0			
SB–SR500-1ST	P-15:1				12.7	614.4			
	S-52.5:1				44.4	175.5			

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Model	Ratio	Max. Thrust Capacity (KN)	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Bore Diameter (Stem. Max)		Mounting Flange (ISO5210/1)
			(N · m)	(Ft · lbf)			TW	KEY	
SB–SR500H	15:1	1500	15000	11063	13.8	1087.0	105	90 (25X14)	F-35 F-30, F-25 (OPTION)
SB–SR500H-2B	60:1				49.7	301.9			
SB–SR500H-1ST	P-15:1				12.7	1181.5			
	S-52.5 : 1				44.4	337.6			
SB–SR600	16:1	1404	13000	9588	14.7	883.2	125	110 (32X18)	F-40 F-35, F–30 (OPTION)
SB–SR600-2B	64:1				53	245.3			
SB–SR600-1ST	P-16:1				13.5	959.9			
	S-64:1				54.2	240.0			
SB–SR600H	16:1	2484	23000	16964	14.7	1562.5	120	105 (28X16)	F-40 F-35, F-30 (OPTION)
SB–SR600H-2B	64:1				53	434.0			
SB–SR600H-1ST	P-16:1				13.5	1698.4			
	S-64:1				54.2	424.6			
SB–SR700	17:1	1836	17600	12981	15.6	1125.3	140	120 (36X20)	F-48 F-40, F–35 (OPTION)
SB–SR700-2B	85:1				70.4	250.1			
SB–SR700-1ST	P-17:1				14.4	1223.2			
	S-68:1				57.6	305.8			
SB–SR700H	17:1	3421	37000	27290	15.6	2365.7	150	130 (36x20)	F-48 F-40, F-35 (OPTION)
SB–SR700H-2B	85:1				70.4	525.7			
SB–SR700H-1ST	P-17:1				14.4	2571.4			
	S-68:1				57.6	642.9			
SB–SR800	17:1	3190	32000	23602	15.6	2046.0	160	140 (36X20)	F-48
SB–SR800-2B	93.5:1				77.4	413.3			
SB–SR800-1ST	P-17:1				14.4	2224.0			
	S-85:1				71.9	444.8			
SB–SR800H	17:1	5200	58000	42778	15.6	3708.4	160	140 (36X20)	F-48
SB–SR800H-2B	93.5:1				77.4	749.2			
SB–SR800H-1ST	P-17:1				14.4	4030.9			
	S-85:1				71.9	806.2			

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Worm Gear Actuators

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 F–05 (OPTION)
SBWG-BFTN								
SBWG-BFMT						32		
SBWG-BFDC	29:1	320	236	10.9	29.4	8.0		
SBWG-BFDCM								
SBWG-0	36:1	780	575	13.4	58.1	9	28 (8x7)	F-10 F-07 (OPTION)
SBWG-0TN								
SBWG-0MT						36		
SBWG-0DC	34:1	680	502	13.3	51.1	8.5		
SBWG-0DCM								
SBWG-00	40:1	1200	885	14.1	85.0	10	36 (10x8)	F-12 F-10 (OPTION)
SBWG-00TN								
SBWG-00MT						40		
SBWG-00-1S	80:1			26.0	46.2	20		
SBWG-00TN-1S								
SBWG-00MT-1S						80		
SBWG-00-1ST	P-40:1			14.1	85.0	10		
	S-80:1			26.0	46.2	20		
SBWG-00-1SD	160 :1			47.8	25.1	40		
SBWG-00TN-1SD								
SBWG-00MT-1SD						160		
SBWG-00-1SDT	P-80:1			26.0	46.2	20		
	S-160:1			47.8	25.1	40		
SBWB-00-2SD	320 :1			87.9	13.7	80		
SBWG-00-1S2B	160:1			49.3	24.3	40		
SBWG-00-1SD2B	320:1			90.8	13.2	80		
SBWG-00-2B	80 :1			26.8	44.8	20		
SBWG-00-2BD	160:1			50.9	23.6	40		
SBWG-00-3W	1440:1			189.3	6.3	360		
SBWG-00-3W2B	1440:1			176.1	6.8	360		
SBWG-00DC	38 :1	980	723	14.1	69.3	9.5		
SBWG-00DCM								
SBWG-00DC-1S	67:1			22.8	43.1	16.6		
SBWG-00DCM-1S								
SBWG-00DC-2SD	266:1			77.0	12.7	66.5		
SBWG-00DCM-2SD								

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Model	Ratio	Max. Output Torque (N · m)	Max. Output Torque (Ft · lbf)	Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
SBWG-01	44:1	2000	1475	15.1	132.2	11	46 (14x9)	F-14 F-12, F-10 (OPTION)
SBWG-01TN								
SBWG-01MT						44		
SBWG-01-1S	88 :1			27.8	71.8	22		
SBWG-01TN-1S								
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								
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		
SBWG-01DCM								
SBWG-01DC-1S	75:1			26.1	61.2	18.8		
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	60 (18x11)	F-16 F-14, F-12 (OPTION)
SBWG-02TN								
SBWG-02MT						48		
SBWG-02-1S	121.6:1			37.1	75.6	30.4		
SBWG-02TN-1S								
SBWG-02MT-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								
SBWG-02MT-1SD						308.1		
SBWG-02-1SDT	P-121.6:1			37.1	75.6	30.4		
	S-308.1V			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		
SBWG-02DCM								
SBWG-02DC-1S	107:1			34.0	73.5	26.8		
SBWG-02DCM-1S								
SBWG-02DC-2SD	429:1			115.4	21.7	107.3		
SBWG-02DCM-2SD								

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Technical Data

Model	Ratio	Max. Output Torque (N · m)	Max. Output Torque (Ft · lbf)	Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
SBWG-03	52:1	4300	3172	16.9	253.7	13	75 (20x12)	(F-20) F-16, F-14 (OPTION)
SBWG-03TN								
SBWG-03MT						52		
SBWG-03-1S	131.7:1			39.5	108.9	32.9		
SBWG-03TN-1S								
SBWG-03MT-1S						131.7		
SBWG-03-1ST	P-52:1			16.9	253.7	13		
	S-131.7:1			39.5	108.9	32.9		
SBWG-03-1SD	333.7:1			92.1	46.7	83.4		
SBWG-03TN-1SD								
SBWG-03MT-1SD						333.7		
SBWG-03-1SDT	P-131.7:1			39.5	108.9	32.9		
	S-333.7:1			92.1	46.7	83.4		
SBWG-03-2SD	667.4:1			169.4	25.4	166.9		
SBWG-03-1S2B	263.5:1			75.0	57.3	65.9		
SBWG-03-1SD2B	667.4:1			174.9	24.6	166.9		
SBWG-03-2B	130:1			40.2	106.8	32.5		
SBWG-03-2BD	260:1			76.5	56.2	65		
SBWG-03-3W	2080:1			233.1	18.4	520		
SBWG-03-3W2B	2080:1			216.8	19.8	520		
SBWG-03DC	50:1	3800	2803	16.9	224.6	12.5		
SBWG-03DCM								
SBWG-03DC-1S	117:1			36.4	104.3	29.3		
SBWG-03DCM-1S								
SBWG-03DC-2SD	467:1			123.0	30.9	116.8		
SBWG-03DCM-2SD								
SBWG-35	52:1	6100	4499	17.4	350.5	13	80 (22x14)	F-25, (F–20) F–16 (OPTION)
SBWG-35TN								
SBWG-35MT						52		
SBWG-35-1S	131.7:1			40.6	150.4	32.9		
SBWG-35TN-1S								
SBWG-35MT-1S						131.7		
SBWG-35-1ST	P-52:1			17.4	350.5	13		
	S-131.7:1			40.6	150.4	32.9		
SBWG-35-1SD	333.7:1			94.5	64.5	83.4		
SBWG-35TN-1SD								
SBWG-35MT-1SD						333.7		
SBWG-35-1SDT	P-131.7:1			40.6	150.4	32.9		
	S-333.7:1			94.5	64.5	83.4		
SBWG-35-2SD	667.4:1			173.9	35.1	166.9		
SBWG-35-1S2B	263.5:1			77.1	79.2	65.9		
SBWG-35-1SD2B	667.4:1			179.6	34.0	166.9		
SBWG-35-2B	130:1			41.3	147.6	32.5		
SBWG-35-2BD	260:1			78.5	77.7	65		
SBWG-35-3W	2080:1			233.1	18.4	520		
SBWG-35-3W2B	2080:1			216.8	19.8	520		
SBWG-35DC	52:1	5600	4130	20.1	278.6	13		
SBWG-35DCM								
SBWG-35DC-1S	118:1			41.9	133.6	29.5		
SBWG-35DCM-1S								
SBWG-35DC-2SD	471:1			141.9	39.5	117.9		
SBWG-35DCM-2SD								
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Model	Ratio	Max. Output Torque (N · m)	Max. Output Torque (Ft · lbf)	Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
SBWG-04	56:1	10400	7671	18.3	569.8	14	95 (25x14)	F-25 (F-20), F-16 (OPTION)
SBWG-04TN								
SBWG-04MT						56		
SBWG-04-1S	168:1			50.4	206.5	42		
SBWG-04TN-1S								
SBWG-04MT-1S						168		
SBWG-04-1ST	P-56:1			18.3	569.8	14		
	S-168:1			50.4	206.5	42		
SBWG-04-1SD	504:1			139.0	74.8	126		
SBWG-04TN-1SD								
SBWG-04MT-1SD						504		
SBWG-04-1SDT	P-168:1			50.4	206.5	42		
	S-504:1			139.0	74.8	126		
SBWG-04-2SD	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		
SBWG-04DCM								
SBWG-04DC-1S	149.3:1			52.0	184.5	37.3		
SBWG-04DCM-1S								
SBWG-04DC-2SD	958:1			282.5	34.0	239.5		
SBWG-04DCM-2SD								
SBWG-05	60:1	15900	11727	19.6	813.1	15	115 (32x18)	F-30 F-25 (OPTION)
SBWG-05TN								
SBWG-05MT						60		
SBWG-05-1S	180:1			54.0	294.6	45		
SBWG-05TN-1S								
SBWG-05MT-1S						180		
SBWG-05-1ST	P-60:1			19.6	813.1	15		
	S-180:1			54.0	294.6	45		
SBWG-05-1SD	540:1			149.0	106.7	135		
SBWG-05TN-1SD								
SBWG-05MT-1SD						540		
SBWG-05-1SDT	P-180:1			54.0	294.6	45		
	S-540:1			149.0	106.7	135		
SBWG-05-2SD	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		
SBWG-05DCM								
SBWG-05DC-1S	160:1			54.9	262.5	40		
SBWG-05DCM-1S								
SBWG-05DC-2SD	1026:1			297.9	48.3	256.6		
SBWG-05DCM-2SD								

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Technical Data

Model	Ratio	Max. Output Torque (N · m)	Max. Output Torque (Ft · lbf)	Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
SBWG-55	62:1	23500	17333	20.8	1129.8	15.5	125 (32x18)	F-30 F-25 (OPTION)
SBWG-55TN								
SBWG-55MT						62		
SBWG-55-1S	186:1			57.4	409.3	46.5		
SBWG-55TN-1S								
SBWG-55MT-1S						186		
SBWG-55-1ST	P-62:1			20.8	1129.8	15.5		
	S-186:1			57.4	409.3	46.5		
SBWG-55-1SD	558:1			158.5	148.3	139.5		
SBWG-55TN-1SD								
SBWG-55MT-1SD						558		
SBWG-55-1SDT	P-186:1			57.4	409.3	46.5		
	S-558:1			158.5	148.3	139.5		
SBWG-55-2SD	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		
SBWG-55DCM								
SBWG-55DC-1S	165:1			57.8	365.8	41.3		
SBWG-55DCM-1S								
SBWG-55DC-2SD	1061:1			313.9	67.4	265.2		
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								
SBWG-06MT						64		
SBWG-06-1S	256:1			74.2	442.2	64		
SBWG-06TN-1S								
SBWG-06MT-1S						256		
SBWG-06-1ST	P-64:1			20.2	1627.5	16		
	S-256:1			74.2	442.2	64		
SBWG-06-1SD	1024:1			272.9	120.2	256		
SBWG-06TN-1SD								
SBWG-06MT-1SD						1024		
SBWG-06-1SDT	P-256:1			74.2	442.2	64		
	S-1024:1			272.9	120.2	256		
SBWG-06-2SD	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		
SBWG-06DCM								
SBWG-06DC-1S	232:1			77.7	380.0	58		
SBWG-06DCM-1S								
SBWG-06DC-2SD	2088:1			591.8	49.9	522		
SBWG-06DCM-2SD								
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SBWG-07	68:1	51100	37689	22.0	2323.0	17	180 (45x25)	F-40 F-35,F-30 (OPTION)
SBWG-07TN								
SBWG-07MT						68		
SBWG-07-1S	272:1			80.9	631.3	68		
SBWG-07TN-1S								
SBWG-07MT-1S						272		
SBWG-07-1ST	P-68:1			22.0	2323.0	17		
	S-272:1			80.9	631.3	68		
SBWG-07-1SD	1088:1			297.9	171.5	272		
SBWG-07TN-1SD								
SBWG-07MT-1SD						1088		
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		
SBWG-07DCM								
SBWG-07DC-1S	247:1			83.2	540.6	61.6		
SBWG-07DCM-1S								
SBWG-07DC-2SD	2218:1			633.9	71.0	554.5		
SBWG-07DCM-2SD								
SBWG-75	66:1	81500	60111	23.1	3532.3	16.5	210 (50x28)	F-48 F-40, F-35 (OPTION)
SBWG-75TN								
SBWG-75MT						66		
SBWG-75-1S	330:1			106.1	767.9	82.5		
SBWG-75TN-1S								
SBWG-75MT-1S						330		
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								
SBWG-75MT-1SD						1650		
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	1073:1			327.7	248.7	268.1		
SBWG-75-1SD2B	5775:1			1623.4	50.2	1443.8		
SBWG-75-2B	330:1			109.6	743.6	82.5		
SBWG-75-2BD	990:1			312.7	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		
SBWG-75DCM								
SBWG-75DC-1S	290:1			105.5	695.0	72.6		
SBWG-75DCM-1S								
SBWG-75DC-2SD	4645:1			1429.3	51.3	1161.3		
SBWG-75DCM-2SD								
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SBWG-08	66:1	121000	89245	24.3	4978.0	16.5	250 (56x32)	F-48 F-40 (OPTION)
SBWG-08TN								
SBWG-08MT						66		
SBWG-08-1S	330:1			111.8	1082.2	82.5		
SBWG-08TN-1S								
SBWG-08MT-1S						330		
SBWG-08-1ST	P-66:1			24.3	4978.0	16.5		
	S-330:1			111.8	1082.2	82.5		
SBWG-08-1SD	1650:1			514.3	235.3	412.5		
SBWG-08TN-1SD								
SBWG-08MT-1SD						1650		
SBWG-08-1SDT	P-330:1			111.8	1082.2	82.5		
	S-1650:1			514.3	235.3	412.5		
SBWG-08-2SD	6600:1			1892.8	63.9	1650		
SBWG-08-1S2B	1155:1			371.8	325.8	288.8		
SBWG-08-1SD2B	5775:1			1710.2	70.8	1443.8		
SBWG-08-2B	363:1			127.0	952.7	90.8		
SBWG-08-2BD	1270.5:1			422.3	286.5	317.6		
SBWG-08-3W	3960:1			475.3	254.6	990		
SBWG-08-3W2B	5940:1			663.1	182.5	1485		
SBWG-08DC	65:1	108900		26.4	4120.7	16.3		
SBWG-08DCM								
SBWG-08DC-1S	290:1			108.6	1002.8	72.6		
SBWG-08DCM-1S								
SBWG-08DC-2SD	4645:1			1470.7	74.0	1161.3		
SBWG-08DCM-2SD								
SBWG-09	66:1	192500	141981	25.9	7429.6	16.5	280 (63x32)	F-60 F-48 (OPTION)
SBWG-09TN								
SBWG-09MT						66		
SBWG-09-1S	330:1			119.2	1615.1	82.5		
SBWG-09TN-1S								
SBWG-09MT-1S						330		
SBWG-09-1ST	P-66:1			25.9	7429.6	16.5		
	S-330:1			119.2	1615.1	82.5		
SBWG-09-1SD	1650:1			548.3	351.1	412.5		
SBWG-09TN-1SD								
SBWG-09MT-1SD						1650		
SBWG-09-1SDT	P-330:1			119.2	1615.1	82.5		
	S-1650:1			548.3	351.1	412.5		
SBWG-09-2SD	6600:1			2017.6	95.4	1650		
SBWG-09-1S2B	1155:1			396.3	485.8	288.8		
SBWG-09-1SD2B	5775:1			1822.9	105.6	1443.8		
SBWG-09-2B	396:1			147.7	1303.4	99		
SBWG-09-2BD	1386 : 1			491.1	392.0	346.5		
SBWG-09-3W	4092:1			538.9	357.2	1023		
SBWG-09-3W2B	6138:1			751.8	256.0	1534.5		
SBWG-09DC	64:1	178000	131286	27.0	6604.5	16		
SBWG-09DCM								
SBWG-09DC-1S	286:1			110.8	1607.2	71.5		
SBWG-09DCM-1S								
SBWG-09DC-2SD	4574:1			1499.9	118.7	1143.5		
SBWG-09DCM-2SD								
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		(N · m)	(Ft · lbf)					
SBWG-10	64:1	275000	202830	24.3	11313.4	16	320 (70x36)	F-60
SBWG-10TN								
SBWG-10MT						64		
SBWG-10-1S	320:1			111.8	2459.4	80		
SBWG-10TN-1S								
SBWG-10MT-1S						320		
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								
SBWG-10MT-1SD						1600		
SBWG-10-1SDT	P-320:1			111.8	2459.4	80		
	S-1600:1			514.3	534.7	400		
SBWG-10-2SD	8000:1			2366.0	116.2	2000		
SBWG-10-1S2B	1208:1			424.9	647.2	320		
SBWG-10-1SD2B	6400:1			1954.5	140.7	1600		
SBWG-10-2B	416:1			150.1	1832.1	104		
SBWG-10-2BD	2080:1			713.0	385.7	520.0		
SBWG-10-3W	4096:1			489.9	561.3	1024.0		
SBWG-10-3W2B	8192:1			911.2	301.8	2048.0		
SBWG-10DC	62:1	253000	186600	25.1	10075.7	15.5		
SBWG-10DCM								
SBWG-10DC-1S	277:1			106.2	2382.2	69.2		
SBWG-10DCM-1S								
SBWG-10DC-2SD	6929.4:1			2404.5	105.2	1732.3		
SBWG-10DCM-2SD								
SBWG-105	66:1	358500	264416	25.2	14227.1	16.5	320 (70x36)	F-60
SBWG-105TN								
SBWG-105MT						66.0		
SBWG-105-1S	320:1			112.4	3189.5	80.0		
SBWG-105TN-1S								
SBWG-105MT-1S						320.0		
SBWG-105-1ST	P-66:1			25.2	14227.1	16.5		
	S-320:1			112.4	3189.5	80.0		
SBWG-105-1SD	1650:1			533.2	672.4	412.5		
SBWG-105TN-1SD								
SBWG-105MT-1SD						1650.0		
SBWG-105-1SDT	P-320:1			112.4	3189.5	80.0		
	S-1650:1			533.2	672.4	412.5		
SBWG-105-2SD	8250:1			2452.7	146.2	2062.5		
SBWG-105-1S2B	1320:1			440.5	813.9	330		
SBWG-105-1SD2B	6600:1			2026.1	176.9	1650		
SBWG-105-2B	429:1			155.6	2304.0	107.3		
SBWG-105-2BD	1716:1			591.3	606.3	420		
SBWG-105-3W	4092:1			505.4	709.4	1023		
SBWG-105-3W2B	6138:1			705	508.5	1534.5		

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SBWG-11	68:1	442000	326002	26.2	16882.0	17	360 (80x40)	F-80 F-60 (OPTION)
SBWG-11TN								
SBWG-11MT						68		
SBWG-11-1S	340:1			120.4	3670.0	85		
SBWG-11TN-1S								
SBWG-11MT-1S						340		
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								
SBWG-11MT-1SD						1700		
SBWG-11-1SDT	P-340:1			120.4	3670.0	85		
	S-1700:1			554.0	797.8	425		
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	1156.0		
SBWG-11-3W2B	9248:1			1071.2	412.6	2312.0		
SBWG-12	70:1	610000	449913	27.1	22546.0	17.5	400 (90x45)	F-80 F-60 (OPTION)
SBWG-12TN								
SBWG-12MT						70		
SBWG-12-1S	350 :1			124.5	4901.3	87.5		
SBWG-12TN-1S								
SBWG-12MT-1S						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								
SBWG-12MT-1SD						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	2100:1			608.0	1003.3	525.0		
SBWG-12-1SD2B	10500:1			2796.7	218.1	2625.0		
SBWG-12-2B	490:1			179.9	3390.4	122.5		
SBWG-12-2BD	2695:1			805.7	757.1	673.8		
SBWG-12-3W	4620:1			539.9	1129.9	1155.0		
SBWG-12-3W2B	11550:1			1255.2	486.0	2887.5		
SBWG-13	72:1	970000	715435	28.0	34640.7	18	450 (100x50)	F-80 F-60 (OPTION)
SBWG-13TN								
SBWG-13MT						72		
SBWG-13-1S	360:1			128.8	7530.6	90		
SBWG-13TN-1S								
SBWG-13MT-1S						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								
SBWG-13MT-1SD						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	540.0		
SBWG-13-1SD2B	10800:1			3377.3	287.2	2700.0		
SBWG-13-2B	544:1			201.0	4826.1	136		
SBWG-13-2BD	2992:1			1050.2	923.7	748		
SBWG-13-3W	4752:1			680.6	1425.1	1188		
SBWG-13-3W2B	13068 :1			1740.7	557.2	3267.0		
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For special requirements (ISO/DIN, JWWA, Juabo, etc.), please contact us. For MOV (electrical) types, a different safety factor is applied.

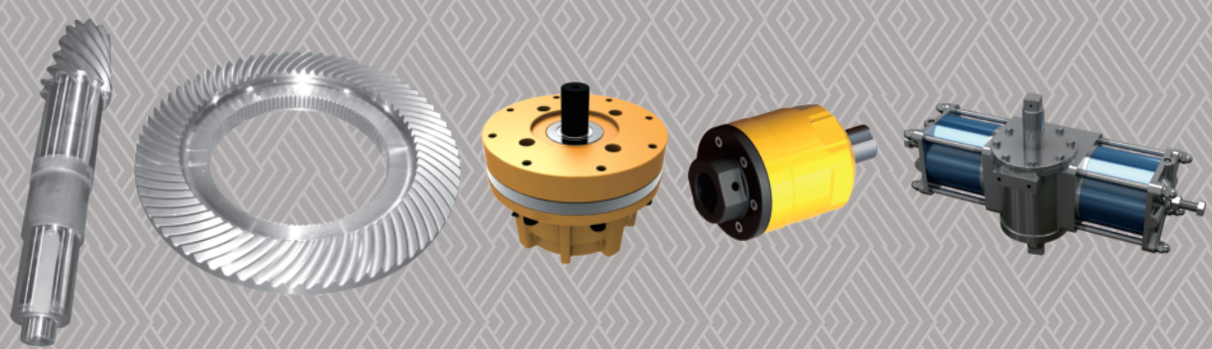
Model	Ratio	Max. Output Torque (N · m)	Max. Output Torque (Ft · lbf)	Mechanical Advantage (±10%)	Max. Input Torque (N · m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)
SBWG-14	74:1	1500000	1106343	29.2	51364.8	18.5	450 (100x50)	F100 F80(OPTION)
SBWG-14TN								
SBWG-14MT						74.0		
SBWG-14-1S	370:1			134.3	11166.3	92.5		
SBWG-14TN-1S								
SBWG-14MT-1S						370.0		
SBWG-14-1ST	P-74:1			29.2	51364.8	18.5		
	S-370:1			134.3	11166.3	92.5		
SBWG-14-1SD	1850:1			617.9	2427.4	462.5		
SBWG-14TN-1SD								
SBWG-14MT-1SD						1850.0		
SBWG-14-1SDT	P-370:1			134.3	11166.3	92.5		
	S-1850:1			617.9	2427.4	462.5		
SBWG-14-2SD	9250:1			2842.5	527.7	2312.5		
SBWG-14-1S2B	2220:1			2765.7	1959	555		
SBWG-14-1SD2B	11100:1			3522.2	425.9	2775		
SBWG-14-2B	592:1			221.9	6758.5	148.0		
SBWG-14-2BD	3552:1			1265.1	1185.7	888		
SBWG-14-3W	4884:1			673.8	2226.2	1221		
SBWG-14-3W2B	13431:1			1723.2	870.5	3357.8		
SBWG-15	80:1	2000000	1475124	30.9	64681.2	20.0	500 (100x50)	F100 F80(OPTION)
SBWG-15TN								
SBWG-15MT						80.0		
SBWG-15-1S	400:1			142.2	14061.1	f		
SBWG-15TN-1S								
SBWG-15MT-1S						400.0		
SBWG-15-1ST	P-80:1			30.9	64681.2	20.0		
	S-400:1			142.2	14061.1	f		
SBWG-15-1SD	2000:1			654.3	3056.8	500.0		
SBWG-15TN-1SD								
SBWG-15MT-1SD						2000.0		
SBWG-15-1SDT	P-400:1			142.2	14061.1	f		
	S-2000:1			654.3	3056.8	500.0		
SBWG-15-2SD	10000:1			3009.7	664.5	2500.0		
SBWG-15-1S2B	2622:1			885.8	2257.8	655.6		
SBWG-15-1SD2B	15100:1			4692.9	426.2	3775.0		
SBWG-15-2B	640:1			235.0	8510.7	160.0		
SBWG-15-2BD	4196:1			1463.5	1366.6	1048.9		
SBWG-15-3W	5280:1			716.4	2803.3	1320		
SBWG-15-3W2B	15840:1			1990.5	1004.8	3960		

Remark	
	• Ratio & Base specification to be changeable.
	• Max Output Torque includes safety factor. • If any request requirement, please contact us any time.
	• We have the right to change the data in accordance with the improvements, and prior documents are invalid after this document is published.

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Warranty

- *SAMBO Industrial Co., Ltd. warrants its products (including parts) to the original purchaser for a period of two years from and after the date of delivery to the original purchaser, against defects in material,workmanship under proper and normal use and service and not caused of installations, improper maintenance and repairs, modifications or alternations.*
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  (2) replacement of the parts and material or,
  (3) refund the purchase price or collect the defected products from the original purchaser.
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- *Also, contents of this catalog can be changed when improvements of product design and performance without notice .*
- *Storage of gearboxes required in appropriate places (no moisture, well ventilated).*



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Epilogue

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Many thanks for everyone's efforts it.
We hope this catalogue will be helpful for international business.



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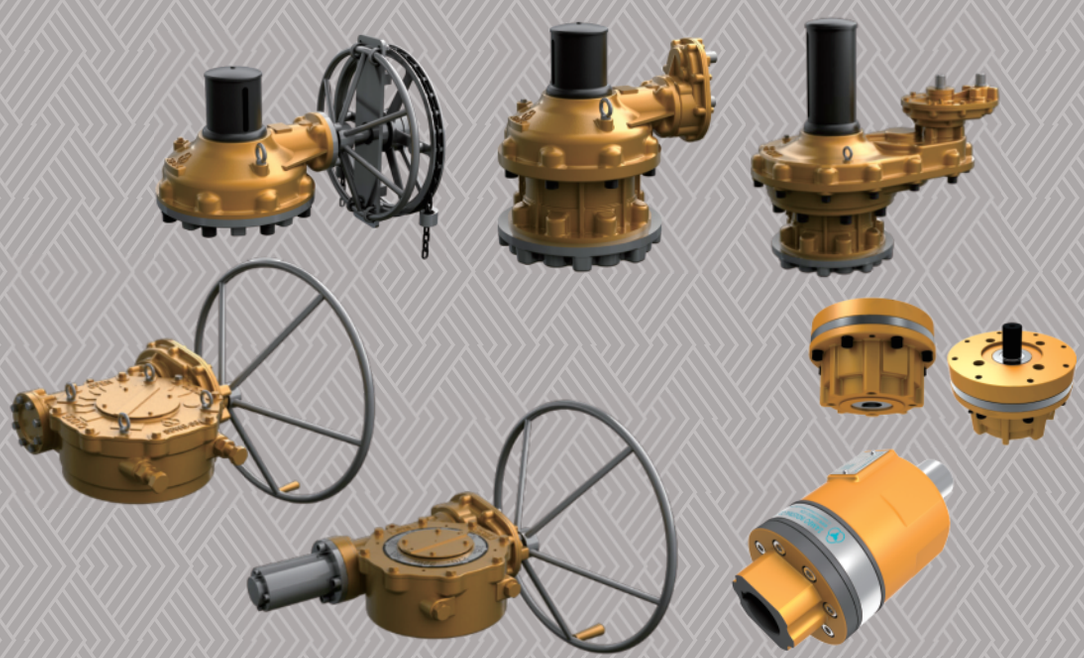


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