



ISO 9001 : 2008



Certificate No. : 37314



1S161207-SIQW61



1S160913-SITQ13

Global Leader
SAMBO
GEAR ACTUATORS

FOR INDUSTRIAL VALVES
High Quality Gear Actuators
High Performance & Efficiency

Global Leader
SAMBO
GEAR ACTUATORS



SAMBO
www.sambo21.com



BRIEF HISTORY



1980. 03.	Established as SAMBO COMPANY
1990. 01.	Changed company name SAMBO INDUSTRIAL
1995. 03.	Introduced Quality Control 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 company by the Busan Bank, Korea. Enrolled Utility 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 anywhere 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 & Medium 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 construction 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 "EXCELLENT 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
2016. 12.	Receiving Export prize (US \$ 20M)

Leader Worldwide

Gear Actuators

Performance & Efficiency



Global Leader Worldwide

High Quality Gear Actuators

High Performance & Efficiency



Global Leader
SAMBO
GEAR ACTUATORS
FOR INDUSTRIAL VALVES

Welcome to SAMBO INDUSTRIAL CO., LTD.

The endless and glorious Korean mountain 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 committed 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.

Valve gear actuators and kit solution · worldwide

We, SAMBO IND. CO., LTD. established in 1980 and we are special company for manufacture of gearbox.

Based on long experience and skill, our quality is No.1 priority in Korea market.

Also, we have a good reputation from all over the world.

We have many efforts to make best quality and new model and our continuous R&D will make us the most advanced product, competitive price and we try to make gearbox company for better tomorrow.

We promise to make development through challenge mind, passion and long experience of management.

We will do our best to make No. 1 priority company all over the world.

In the future, we would highly appreciated if you supply any advice for our improvement.

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Worm Gear Actuators



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Technical Data

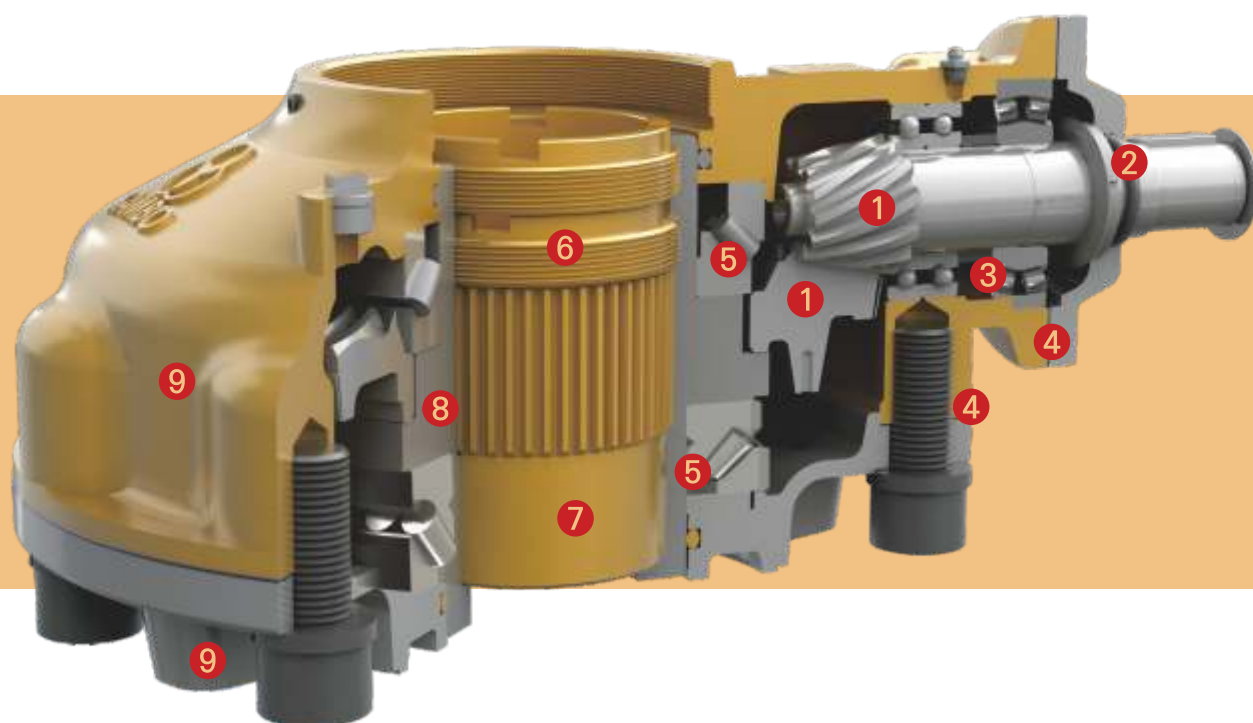


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GEAR ACTUATORS

FOR INDUSTRIAL VALVES
High Quality Gear Actuators
High Performance & Efficiency

Bevel Gear Actuators

Special View & Features



① **Spiral Pinion and Spiral Bevel Gear**

Pinion gear is 1045 heat treated steel. Bevel Gear is 1045 steel. Both gears are precision cut.

② **O-ring**

Units are completely O-ring sealed, suitable for temporary submergence to meet IP67 Class.

③ **Spherical Roller Bearing**

This input Bevel pinion is fully supported on deep groove ball bearings to provide excellent radial support.

Grease ZENITH EPSB 2

Each unit has a Alumite Grease type fitting and a grease plug for adding lubricant.

**The SB-V Series of Spiral Bevel Gear ranges up to 75,000Nm (55,317ft-lbf)
Torque and Thrust capacities up to 7,300KN (2,585,300 lbf)**

Stem capacities are up to 230mm (9.05inch).

A high Load design, type SB-VH is also available ranging up to 142,000Nm (104,734ft-lbf).

Thrust capacities up to 11,500KN (2,585,300lbf) stem capacities are up to 270mm (10.63inch).

④ **Gaskets**

The Base & end cap is sealed by a Non-asbestos Gasket to prevent any leakage and is waterproof.

⑤ **Thrust ball or Self-Aligning Thrust Roller Bearing**

Provides anti-friction capacity and are high load type.

⑥ **Dual Locking Nuts**

This design incorporates dual locking nuts which provide a jam Effect for positive locking.

No set screw or pinning is required.

⑦ **Stem Nut**

A unique top Entry Replaceable stem Nut.

After long years of service can be easily replaced without removing Gear from valve.

Material is high tensile brass providing both corrosion and abrasion resistance.

⑧ **Drive Sleeve**

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

⑨ **Housing and Base**

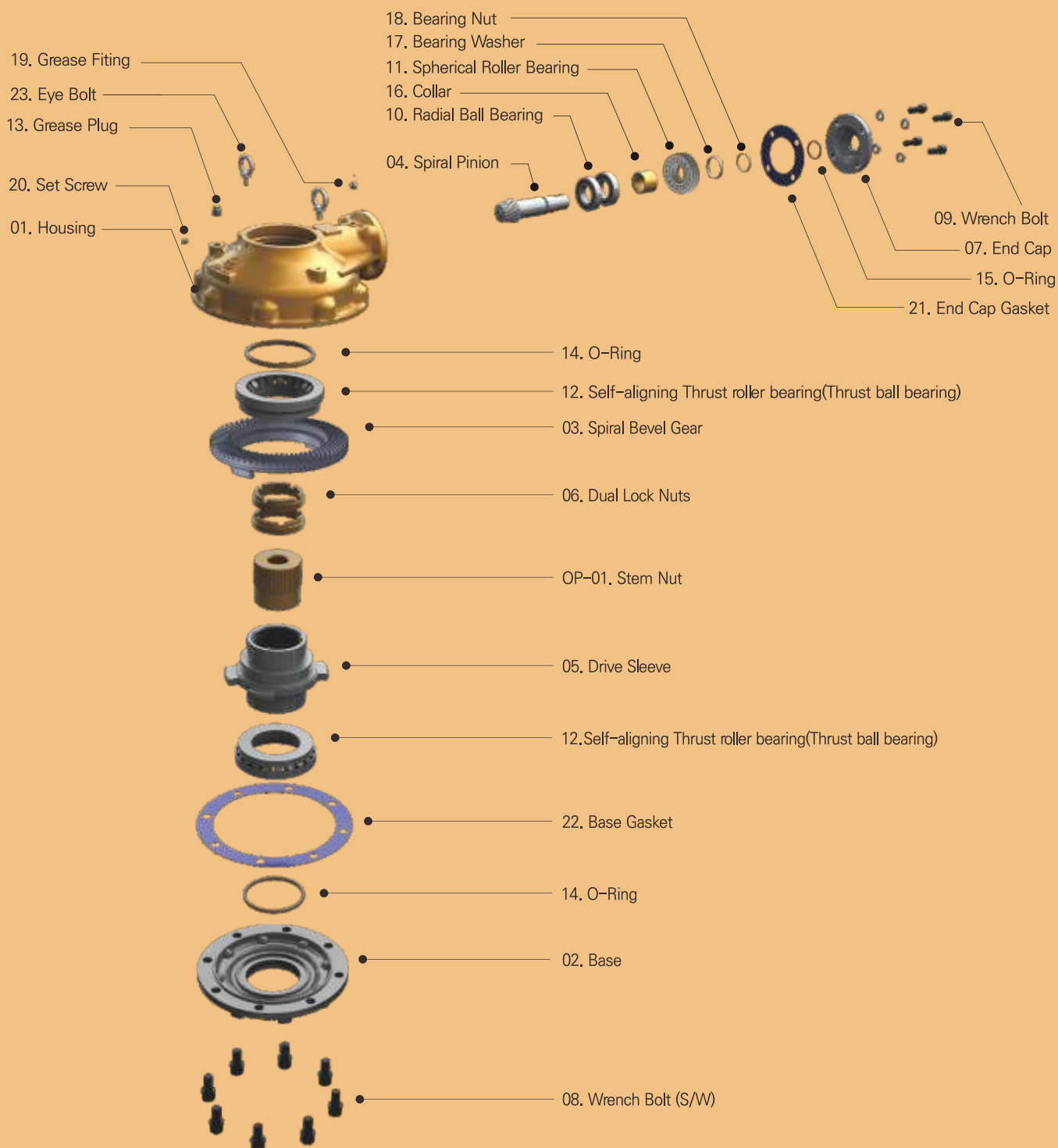
All external castings are Ductile Iron. Class 65-45-12, Tensile Strength of 65,000 psi.

This provides high strength and excellent impact resistance.

Spiral Bevel Gear Actuator Assembly

STANDARD TYPE-A

Thrust & Torque Horizontal Input



❖ Part List & Material

	NO	DESCRIPTION	MATERIAL			REMARK	
			NAME	JIS	ASTM		
STANDARD	1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE.1	
	2	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	NOTE.1	
	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	Buna N	NBR		NOTE.4	
	15	O-Ring	Buna N	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				VALQUA 6601
	22	Base Gasket	Non-Asbestos				VALQUA 6601
	23	Eye Bolt	Steel + Galvanizing				
OPTION	OP-01.	Stem Nut	Bronze	HBSC3	B584-C86200	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 Detail : Option and Material Changes

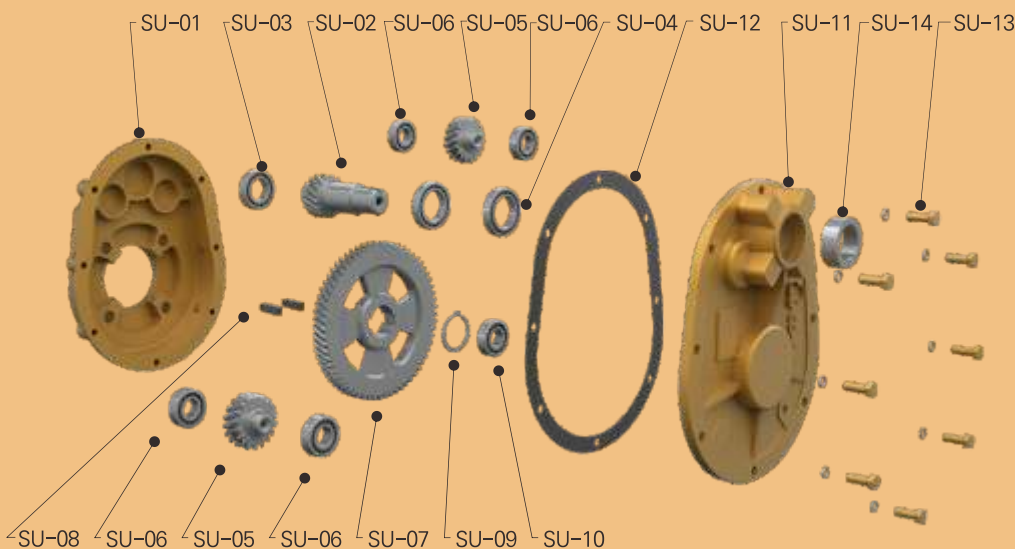
- All castings are Ductile Iron, FCD-450 (ASTM Class 65-45-12)
- In case of option for special request, it can be worked Nickel coating, high tensile stainless.
- Also, the material can be changed as ALBC3(Aluminium Bronze), steel(A576-1045), A439 Gr D2C (Austenitic ductile iron casting), etc.
- O-Ring Seal & Lubricant : Standard is Buna "N", temperature range -20°C to +120°C (-4°F to +248°F).
 Standard lubricant is Zenith EPSB 2, temperature Range -20°C to +200°C (-4°F to +392°F).
 Other option are : High Temperature Viton O-Ring Grade V75, Temperature Range -30°C to +200°C (-22°F to +392°F)
 Lubricant - Zenith SYN WS2 Temperature Range -30°C~400°C (-13°F 752°F)
 Low Temperature Silicon O-ring, Temperature Range -60°C to +150°C (-76°F to +302°F)
 Lubricant - Zenith SLP402, Temperature Range -60°C~140°C (-76°F 284°F)
- SAMBO offers a wide variety of Handwheels, Chainwheels, Input Shaft, Locking Devices, etc.
- SAMBO offers a wide variety of stem cover, stainless steel, polyacryl.
 Paint : Unless specified, units are supplied with vp184 Red epoxy primer. SAMBO can provide finish coating upon request.

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

Spiral Bevel Gear Actuator Assembly

STANDARD TYPE-A

Thrust & Torque Horizontal Input
with Single Reduction Gear Attachment

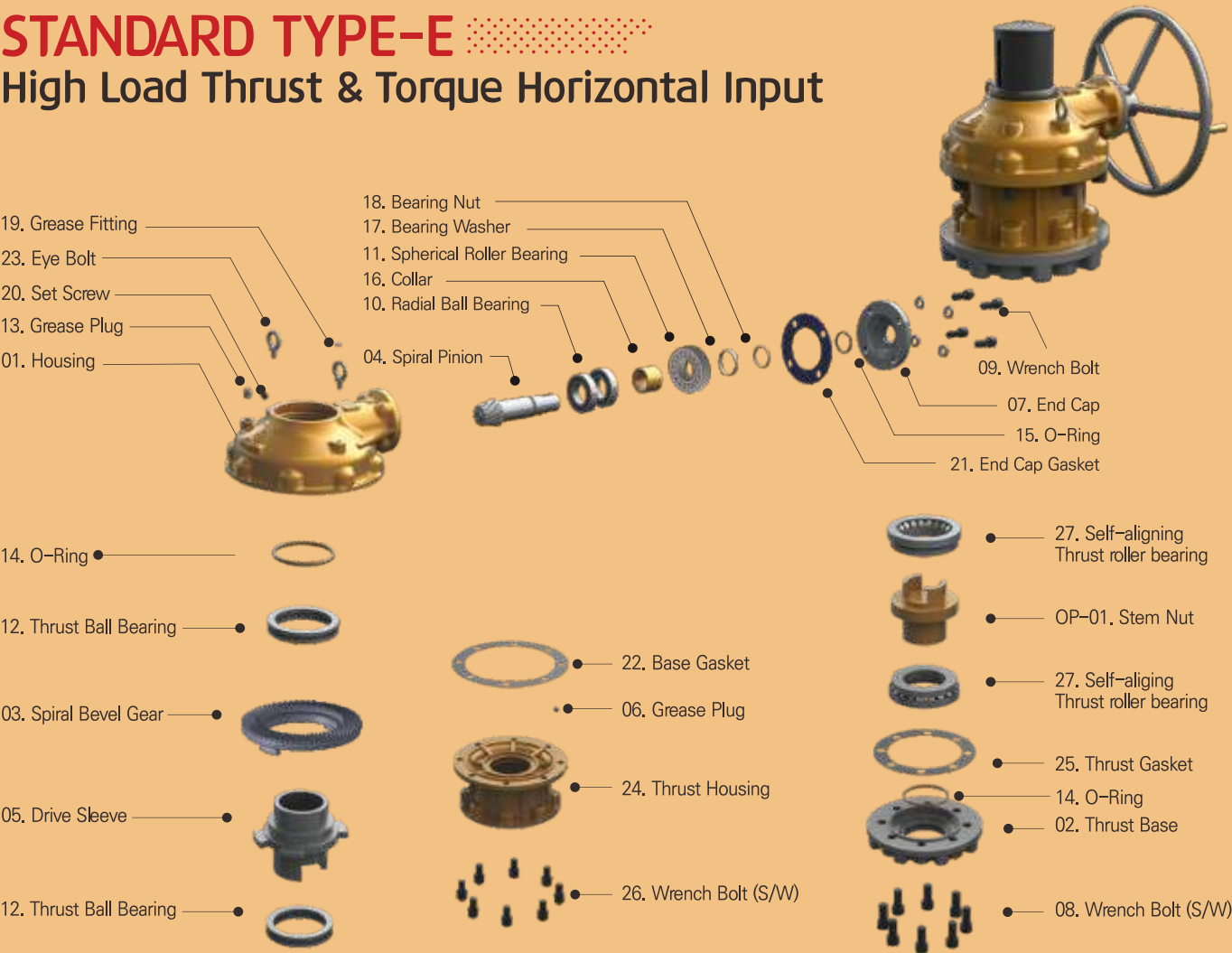


❖ Part List & Material

NO	DESCRIPTION	MATERIAL			REMARK	NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM				NAME	JIS	ASTM	
1	Housing	Ductile Iron	FCD-450	A536-65-45-12		SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12	
2	Base	Ductile Iron	FCD-450	A536-65-45-12		SU-02	Helical Pinion	Carbon Steel	S45C	A576-1045	
3	Spiral Bevel Gear	Carbon Steel	S45C	A576-1045		SU-03	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
4	Spiral Pinion	Carbon Steel	S45C	A576-1045		SU-04	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
5	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12		SU-05	Idle Gear	Carbon Steel	S45C	A576-1045	
6	Dual Lock Nuts	Carbon Steel	S45C	A576-1045		SU-06	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-07	Helical Gear	Carbon Steel	S45C	A576-1045	
8	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135		SU-08	Key(1R)	Carbon Steel	S45C	A576-1045	
9	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135		SU-09	Snap ring	Steel			
10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100		SU-10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100	
11	Spherical Roller Bearing	Special Steel	SUJ2	A295-52100		SU-11	Support Cover	Ductile Iron	FCD-450	A536-65-45-12	
12	Thrust Bearing	Special Steel	SUJ2	A295-52100		SU-12	S-Cover Gasket	Nonasbestos			VALQUA6601
13	Grease Plug	Steel + Galvanizing				SU-13	Hex.Bolt(S/W)	Alloy Steel	SCM435	A322-4135	
14	O-Ring	Buna N	NBR			SU-14	Oil-Seal	Buna N	NBR		
15	O-Ring	Buna N	NBR			OP-01	Stem Nut	Bronze	HBSC3	B584-C86200	NOTE. 3
16	Collar	Steel Pipe	SGP	A53		OP-02	Hand Wheel	Steel Pipe	SGP	A53	OPTION HANDLE PART
17	Bearing Washer	Steel				OP-03	Key(1R)	Carbon Steel	S45C	A576-1045	
18	Bearing Nut	Steel				OP-04	Name Plate	Stainless Steel			
19	Grease Fitting	Steel + Galvanizing				OP-05	Washer	Stainless Steel			
20	Set Screw	Stainless Stell				OP-06	HEX. Bolt (S/W)	Stainless Steel			OPTION STEM COVER
21	End Cap Gasket	Non-Asbestos			VALQUA 6601	OP-07	Stem Cover	Steel Pipe	SGP	A53	
22	Base Gasket	Non-Asbestos			VALQUA 6601	OP-08	Indicate Bolt	Steel + Galvanizing			
23	Eye Bolt	Steel + Galvanizing				OP-09	HEX. Nut	Steel + Galvanizing			
						OP-10	Indicator	Plastic			

Spiral Bevel Gear Actuator Assembly

STANDARD TYPE-E High Load Thrust & Torque Horizontal Input



❖ Part List & Material

NO	DESCRIPTION	MATERIAL			REMARK	NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM				NAME	JIS	ASTM	
1	Housing	Ductile Iron	FCD-450	A536-65-45-12		20	Set Screw	Stainless Steel			
2	Thrust Base	Ductile Iron	FCD-450	A536-65-45-12		21	End Cap Gasket	Non-Asbestops			VALQUA 6601
3	Spiral Bevel Gear	Carbon Steel	S45C	A576-1045		22	Base Gasket	Non-Asbestops			VALQUA 6601
4	Spiral Pinion	Carbon Steel	S45C	A576-1045		23	Eye Bolt	Steel + Galvanizing			
5	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12		24	Thrust Housing	Ductile Iron	FCD-450	A536-65-45-12	
6	Grease Plug	Steel + Galvanizing				25	Thrust Gasket	Non-Asbestos			VALQUA 6601
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		26	Wrench Bolt (S/W)	Alloy Steel	SCM435	A322-4140	
8	Wrench Bolt(S/W)	Alloy Steel	SCM435	A322-4135		27	SR. Thrust Bearing	Special Steel	SUJ2	A295-52100	
9	Wrench Bolt	Alloy Steel	SCM435	A322-4135		OP-01	Stem Nut	Bronze	HBSC3	B584-C86200	
10	Radial Ball Bearing	Special Steel	SUJ2	A295-52100		OP-02	Hand Wheel	Steel Pipe	SGP	A53	OPTION HANDLE PART
11	Spherical Roller Bearing	Special Steel	SUJ2	A295-52100		OP-03	Key(1R)	Carbon Steel	S45C	A576-1045	
12	Thrust Ball Bearing	Special Steel	SUJ2	A295-52100		OP-04	Name Plate	Stainless Steel			
13	Grease Plug	Steel + Galvanizing				OP-05	Washer	Stainless Steel			
14	O-Ring	Buna N	NBR			OP-06	HEX. Bolt (S/W)	Stainless Steel			OPTION STEM COVER
15	O-Ring	Buna N	NBR			OP-07	Stem Cover	Steel Pipe	SGP	A53	
16	Collar	Steel Pipe	SGP	A53		OP-08	Indicate Bolt	Steel + Galvanizing			
17	Bearing Washer	Steel				OP-09	HEX. Nut	Steel + Galvanizing			
18	Bearing Nut	Steel				OP-10	Indicator	Plastic			
19	Grease Fitting	Steel + Galvanizing									

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

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PRODUCTS

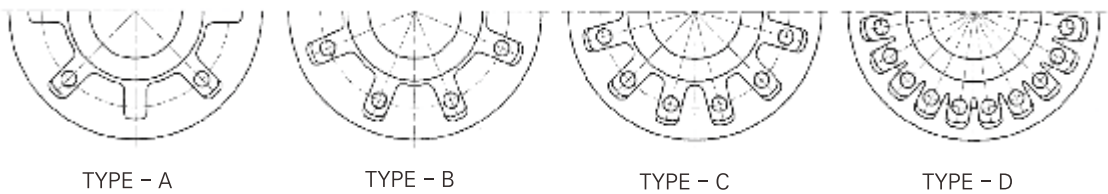
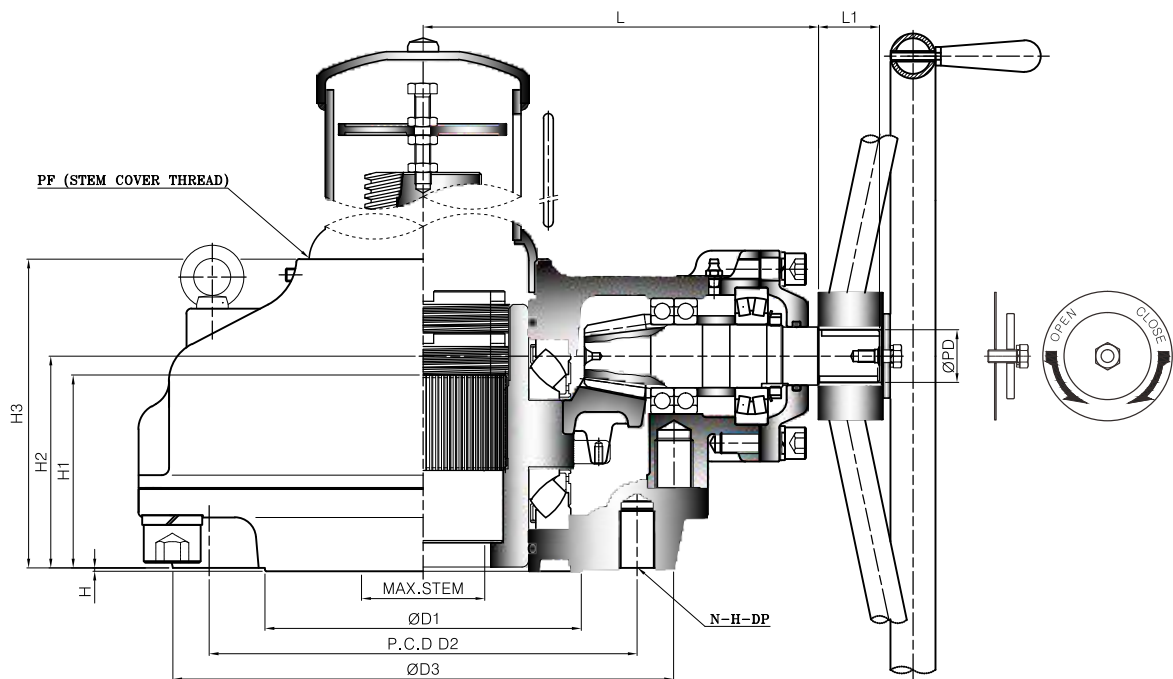
Spiral Bevel Gear Actuators



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STANDARD TYPE-A

Thrust & Torque Horizontal Input



Dimension

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-VS10	A	F-10	70	102	4-M10-15	125	3	56	71	95	121	34	26	8X7	250	PF2"			
SB-VS20		F-12	85	125	4-M12-18	150		63	78.5	106	131				300	PF2-1/2"			
SB-V0		F-14	100	140	4-M16-24	175		72	81	121	154.5				400	PF2-1/2"			
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	630	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				800	PF5"			
SB-V4		F-35	260	356	8-M30-45	410		133	150	209	291				900	PF6"			
SB-V5		F-35	260	356	8-M30-45	415		161	177	245	313								
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	381				58	50	16X10	1000	PF8"
SB-V7		C	F-48	370	483	12-M36-55		560	5	206	222				309	409	58	50	16X10
SB-V75	F-48		370	483	12-M36-55	560	221	248		340	441	58	50	16X10	1000	PF10"			
SB-V8	F-48		370	483	12-M36-55	560	233	259		352	472								
SB-V85	D	F-60	470	603	20-M36-55	700	5	248	278	373	525	58	50	16X10	1000	PF12"			
SB-V9		F-60	470	603	20-M36-55	700		263	295	398	591				1000	PF12"			
SB-V10		(F-60) F-80	650	800	20-M42-63	900		378	375	490	664								

Spiral Bevel Gear Actuators

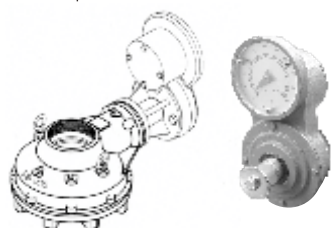
❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation
Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



DIAL INDICATOR

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



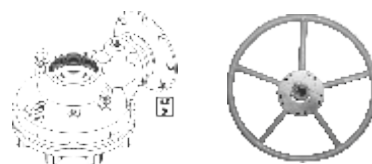
M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



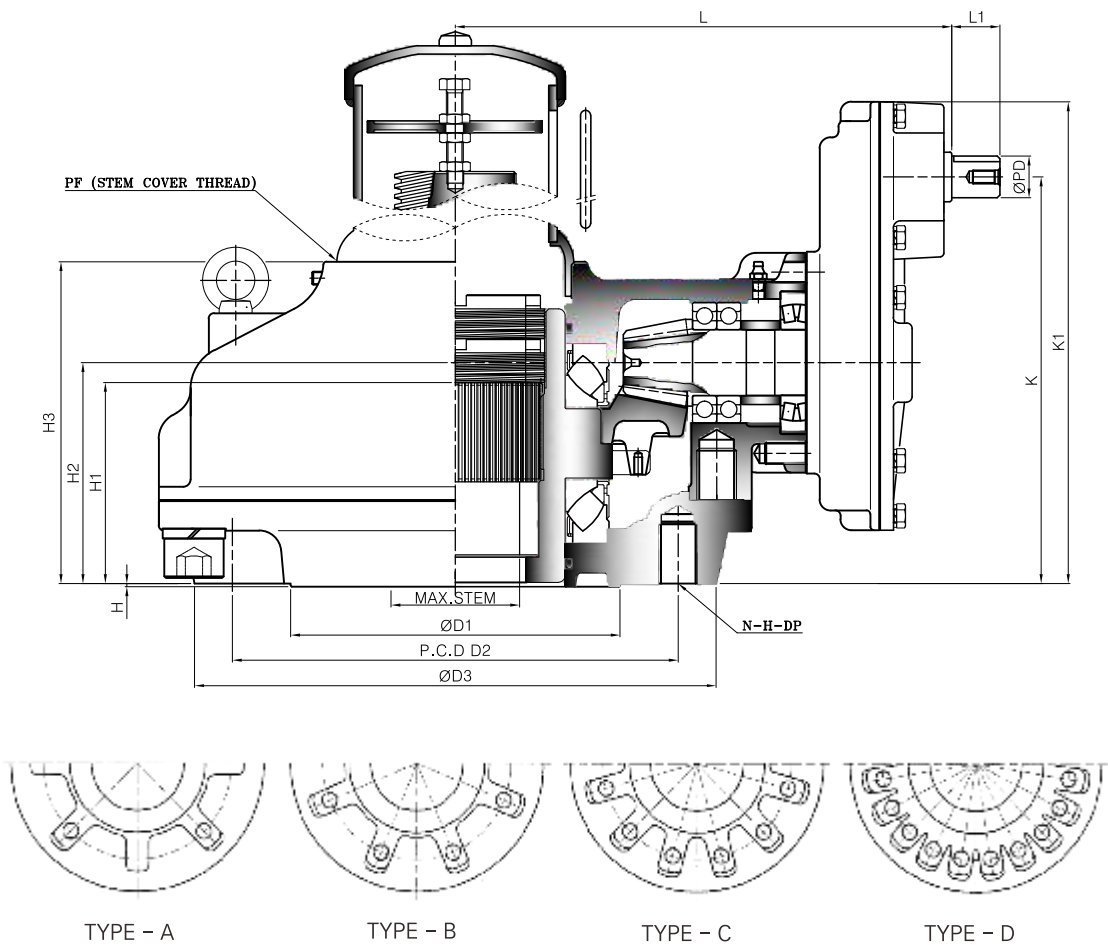
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-VS10	2.5 : 1	30	22 (8X7)	F-07, F-10	75.5	16970	220	162	8
SB-VS20	3 : 1	40	32 (10X8)	F-10, F-12	113	25400	370	273	11
SB-V0	3.25 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	16
SB-V1	3.5 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	22
SB-V2	4 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	34
SB-V3	5 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	45
SB-V35	5.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	78
SB-V4	6 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	99
SB-V5	6.56 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	150
SB-V55	7 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	201
SB-V6	7 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	253
SB-V7	7.56 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	318
SB-V75	8 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	460
SB-V8	8 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	473
SB-V85	8 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	532
SB-V9	8 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	736
SB-V10	8 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	883

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

STANDARD TYPE-A

Thrust & Torque Horizontal Input with Single Reduction Gear Attachment



❖ Dimension

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-V0-1S	A	F-14	100	140	4-M16-24	175	3	72	81	121	160	203	201.5	34	26	8X7	250	PF2-1/2			
SB-V1-1S		F-16	130	165	4-M20-30	210		84	98	140	177	220	214				300	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	400	PF3-1/2"			
SB-V3-1S		F-25	200	254	8-M16-24	300		102	119	166.5	212	260	256.5				500	PF4"			
SB-V35-1S		F-30	230	298	8-M20-30	350		122	138	195	259	316	333				34	32	10X8	630	PF5"
SB-V4-1S		F-35	260	356	8-M30-45	410		133	150	209	271	328	358							710	PF6"
SB-V5-1S		F-35	260	356	8-M30-45	415		161	177	245	322	384.5	387								
SB-V55-1S		F-40	300	406	8-M36-55	475		171	192	261	337	399.5	407	44	38	12X8	800	PF8"			
SB-V6-1S		F-40	300	406	8-M36-55	475		185	201	283	370	439	472								
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	1000	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	1000	PF12"			
SB-V9-1S		F-60	470	603	20-M36-55	700		263	295	398	580	696	821								
SB-V10-1S		(F-60) F-80	650	800	20-M42-63	900		378	375	490	659	775	886	58	50	16X10	1000	PF12"			

Spiral Bevel Gear Actuators

❖ Feature

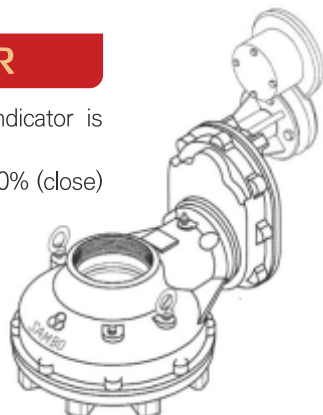
- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



DIAL INDICATOR

A unique local position dial indicator is available.

It is graduated in percent from 0% (close) to 100% (open).



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



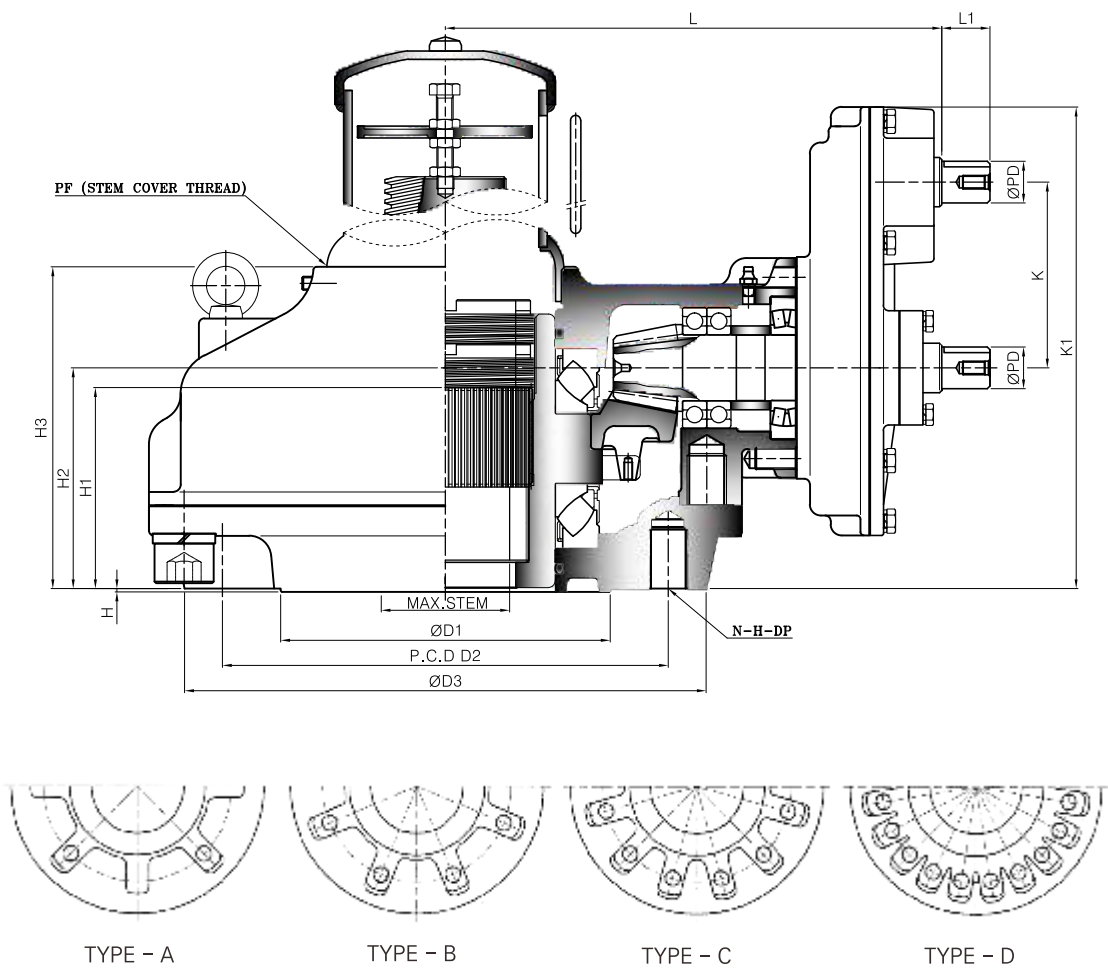
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-1S	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	20
SB-V1-1S	7 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	26
SB-V2-1S	10.13 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	41
SB-V3-1S	12.66 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	52
SB-V35-1S	16.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	90
SB-V4-1S	18 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	112
SB-V5-1S	22.94 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	163
SB-V55-1S	24.5 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	214
SB-V6-1S	28 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	281
SB-V7-1S	30.22 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	346
SB-V75-1S	40 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	532
SB-V8-1S	40 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	545
SB-V85-1S	40 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	604
SB-V9-1S	40 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	1200
SB-V10-1S	40 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1410

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

STANDARD TYPE-A Twin Shaft

Thrust & Torque (Twin Shaft) Horizontal Input with Single Reduction Gear Attachment



Dimension

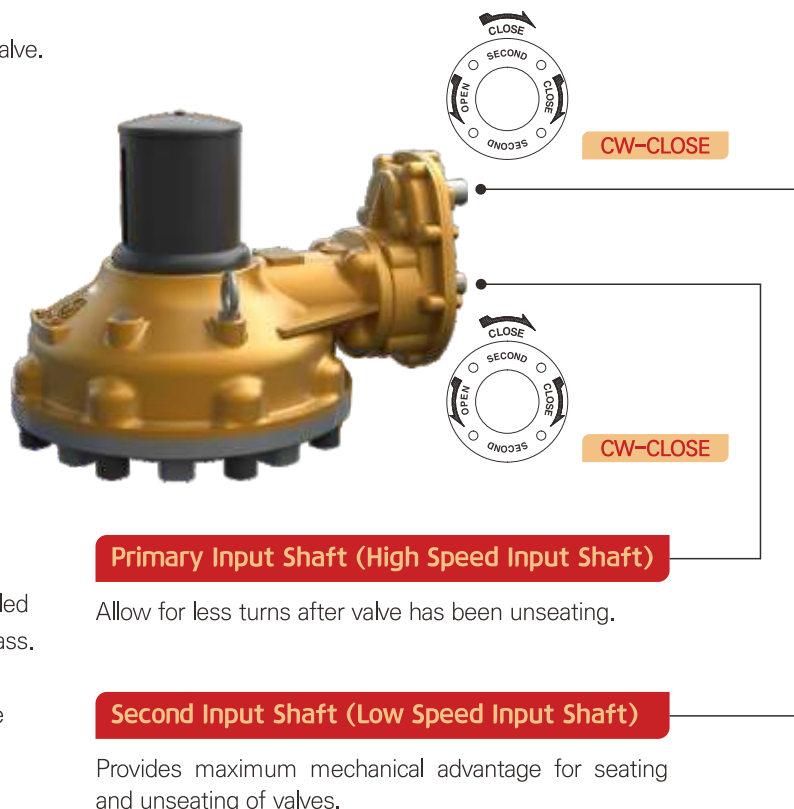
UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			H AND 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-V0-1ST	A	F-14	100	140	4-M16-24	175	3	72	81	121	79	203	201.5	34	26	8X7	250	PF2-1/2			
SB-V1-1ST		F-16	130	165	4-M20-30	210		84	98	140	79	220	214				300	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	400	PF3-1/2"			
SB-V3-1ST		F-25	200	254	8-M16-24	300		102	119	166.5	93	260	256.5				500	PF4"			
SB-V35-1ST		F-30	230	298	8-M20-30	350		122	138	195	121	316	333				34	32	10X8	630	PF5"
SB-V4-1ST		F-35	260	356	8-M30-45	410		133	150	209	121	328	358							710	PF6"
SB-V5-1ST		F-35	260	356	8-M30-45	415		161	177	245	145	384.5	387	44	38	12X8				800	PF8"
SB-V55-1ST		F-40	300	406	8-M36-55	475		171	192	261	145	399.5	407				1000	PF10"			
SB-V6-1ST		F-40	300	406	8-M36-55	475		185	201	283	169	439	472				1000	PF10"			
SB-V7-1ST		C	F-48	370	483	12-M36-55		560	5	206	222	309	169	459	497	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	1000	PF10"			
SB-V8-1ST	F-48		370	483	12-M36-55	560	233	259		352	230	575	651	58	50	16X10	1000	PF10"			
SB-V85-1ST	D	F-60	470	603	20-M36-55	700	5	248	278	373	230	594	695	58	50	16X10	1000	PF12"			
SB-V9-1ST		F-60	470	603	20-M36-55	700		263	295	398	284	696	821	58	50	16X10	1000	PF12"			
SB-V10-1ST		(F-60) F-80	650	800	20-M42-63	900		378	375	490	284	775	886								

Spiral Bevel Gear Actuators

❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut.
High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, stem covers are available.



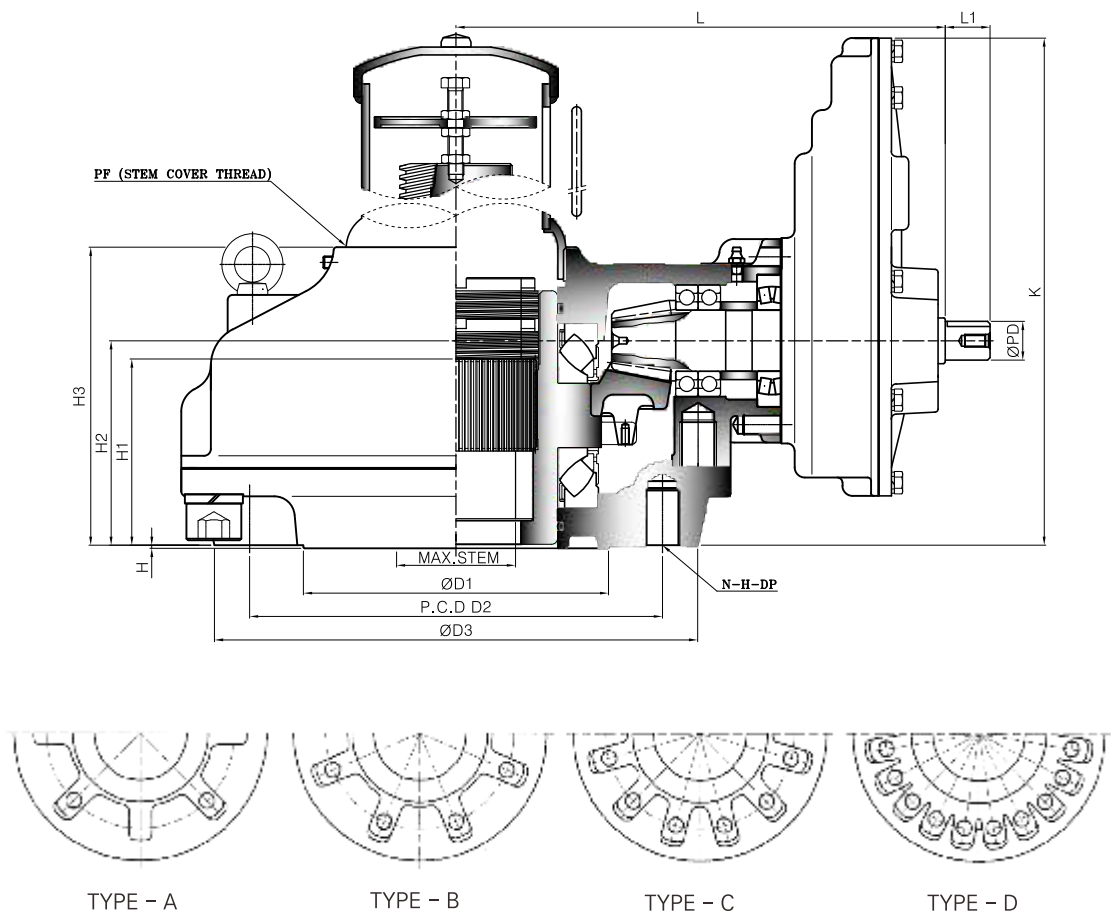
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-1ST	3.25 : 1	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	20
SB-V1-1ST	3.5 : 1	7 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	26
SB-V2-1ST	4 : 1	10.13 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	41
SB-V3-1ST	5 : 1	12.66 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	52
SB-V35-1ST	5.5 : 1	16.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	90
SB-V4-1ST	6 : 1	18 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	112
SB-V5-1ST	6.56 : 1	22.94 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	163
SB-V55-1ST	7 : 1	24.5 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	214
SB-V6-1ST	7 : 1	28 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	281
SB-V7-1ST	7.56 : 1	30.22 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	346
SB-V75-1ST	8 : 1	40 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	532
SB-V8-1ST	8 : 1	40 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	545
SB-V85-1ST	8 : 1	40 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	604
SB-V9-1ST	8 : 1	40 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	1200
SB-V10-1ST	8 : 1	40 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1410

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

STANDARD TYPE-A

Thrust & Torque Horizontal Input with Double Reduction Gear Attachment



Dimension

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-V0-1SD	A	F-14	100	140	4-M16-24	175	3	72	81	121	195	249.5	29	21	6X6	250	PF2-1/2"
SB-V1-1SD		F-16	130	165	4-M20-30	210		84	98	140	212	262				300	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	400	PF3-1/2"
SB-V3-1SD		F-25	200	254	8-M16-24	300		102	119	166.5	263	280.5				500	PF4"
SB-V35-1SD		F-30	230	298	8-M20-30	350		122	138	195	333	369	34	32	10X8	630	PF5"
SB-V4-1SD		F-35	260	356	8-M30-45	410		133	150	209	345	394				710	PF6"
SB-V5-1SD		F-35	260	356	8-M30-45	415		161	177	245	426	426					
SB-V55-1SD		F-40	300	406	8-M36-55	475		171	192	261	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
SB-V75-1SD	F-48		370	483	12-M36-55	560	221	248		340	628	666	58	50	16X10	1000	PF10"
SB-V8-1SD	F-48		370	483	12-M36-55	560	233	259		352	638	697	58	50	16X10	1000	PF10"
SB-V85-1SD	D	F-60	470	603	20-M36-55	700	5	248	278	373	658	741	58	50	16X10	1000	PF12"
SB-V9-1SD		F-60	470	603	20-M36-55	700		263	295	398	784	876					
SB-V10-1SD		(F-60) F-80	650	800	20-M42-63	900		378	375	490	863	941					

Spiral Bevel Gear Actuators

❖ Feature

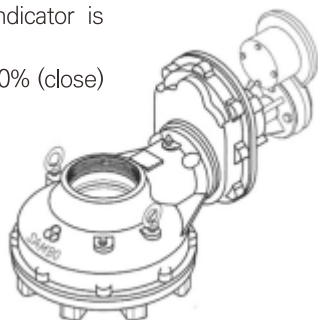
- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut.
High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



DIAL INDICATOR

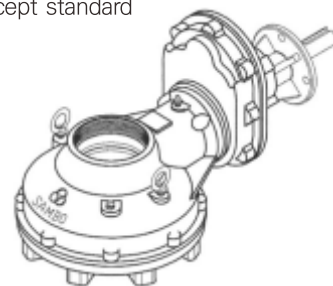
A unique local position dial indicator is available.

It is graduated in percent from 0% (close) to 100% (open).



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



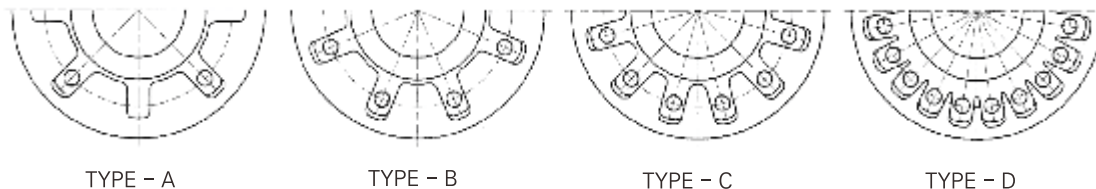
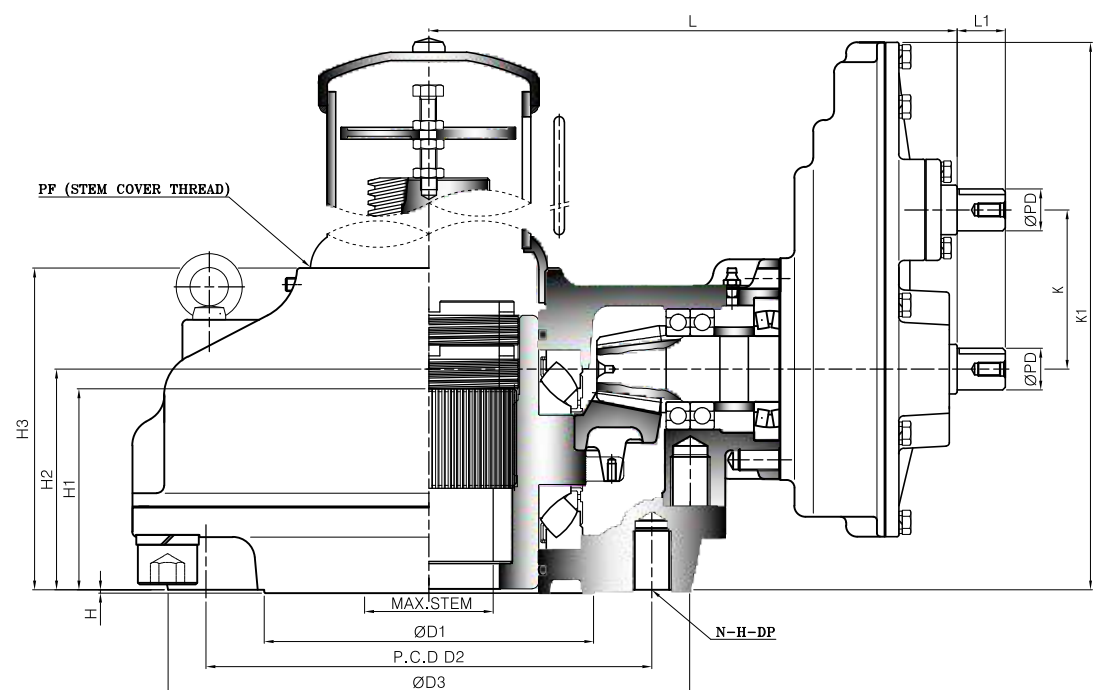
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-1SD	13 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	21
SB-V1-1SD	14 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	27
SB-V2-1SD	25.67 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	42
SB-V3-1SD	32.08 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	54
SB-V35-1SD	49.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	94
SB-V4-1SD	54 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	116
SB-V5-1SD	80.31 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	167
SB-V55-1SD	85.75 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	218
SB-V6-1SD	112 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	295
SB-V7-1SD	120.88 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	359
SB-V75-1SD	200 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	560
SB-V8-1SD	200 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	573
SB-V85-1SD	200 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	632
SB-V9-1SD	200 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	1255
SB-V10-1SD	200 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1465

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

STANDARD TYPE-A Twin Shaft

Thrust & Torque (Twin Shaft) Horizontal Input with Double Reduction Gear Attachment



❖ Dimension

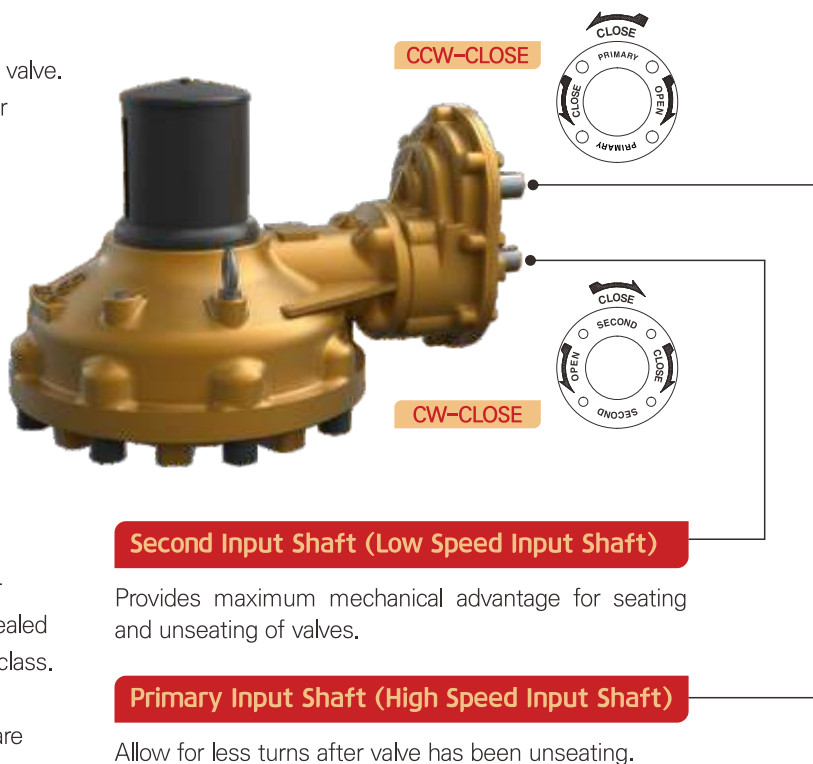
UNIT : mm

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	56	195	249.5	29	21	6X6	250	PF2-1/2"		
SB-V1-1SDT		F-16	130	165	4-M20-30	210		84	98	140	56	212	262				300	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	400	PF3-1/2"		
SB-V3-1SDT		F-25	200	254	8-M16-24	300		102	119	166.5	69	263	280.5				500	PF4"		
SB-V35-1SDT		F-30	230	298	8-M20-30	350		122	138	195	93	333	369				630	PF5"		
SB-V4-1SDT		F-35	260	356	8-M30-45	410		133	150	209	93	345	394						34	32
SB-V5-1SDT		F-35	260	356	8-M30-45	415		161	177	245	121	426	426							
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	1000	PF10"		
SB-V8-1SDT	F-48		370	483	12-M36-55	560	233	259		352	186	638	697	58	50	16X10	1000	PF10"		
SB-V85-1SDT	D	F-60	470	603	20-M36-55	700	5	248	278	373	186	658	741	58	50	16X10	1000	PF12"		
SB-V9-1SDT		F-60	470	603	20-M36-55	700		263	295	398	238	784	876				1000	PF12"		
SB-V10-1SDT		(F-60) F-80	650	800	20-M42-63	900		378	375	490	238	863	941				1000	PF12"		

Spiral Bevel Gear Actuators

❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut.
High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, stem covers are available.



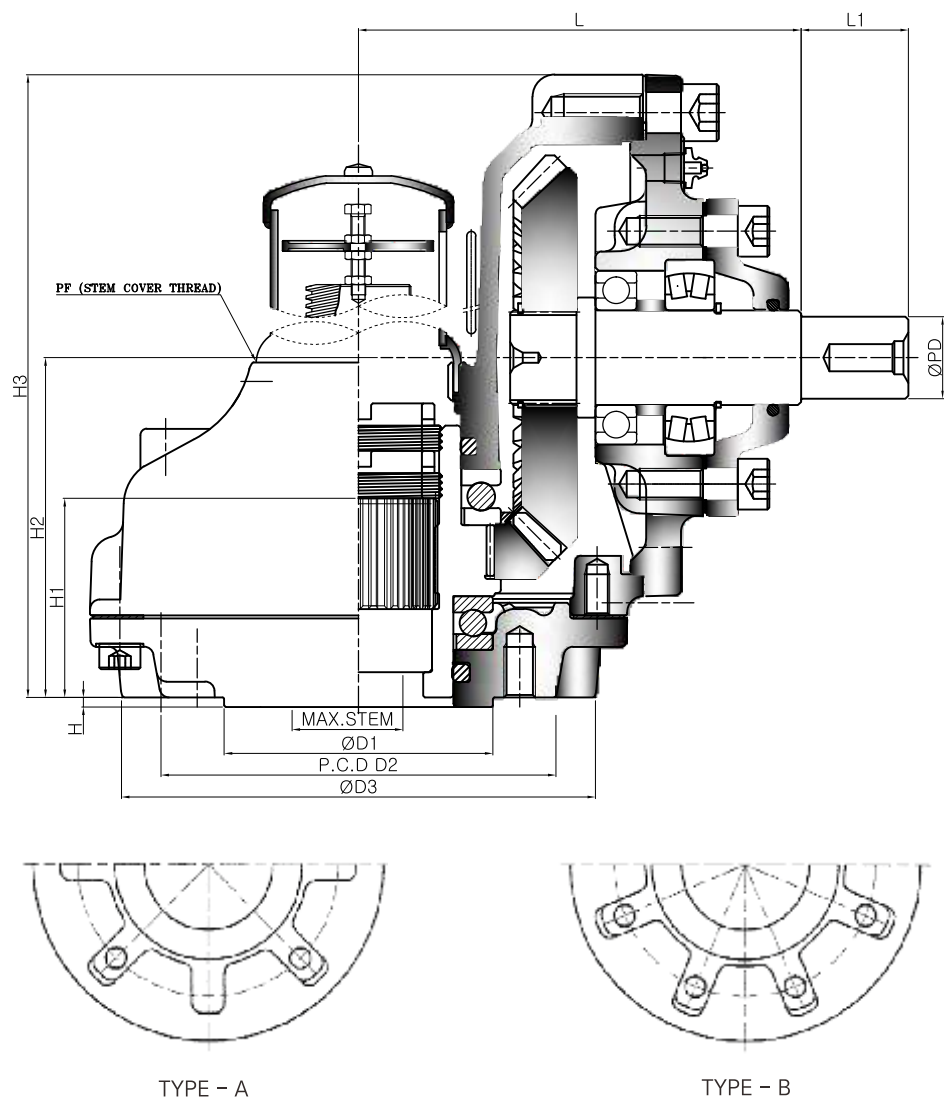
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)		MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-1SDT	6.5 : 1	13 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	21
SB-V1-1SDT	7 : 1	14 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	27
SB-V2-1SDT	10.13 : 1	25.67 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	42
SB-V3-1SDT	12.66 : 1	32.08 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	54
SB-V35-1SDT	16.5 : 1	49.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	94
SB-V4-1SDT	18 : 1	54 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	116
SB-V5-1SDT	22.94 : 1	80.31 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	167
SB-V55-1SDT	24.5 : 1	85.75 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	218
SB-V6-1SDT	28 : 1	112 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	295
SB-V7-1SDT	30.22 : 1	120.88 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	359
SB-V75-1SDT	40 : 1	200 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	560
SB-V8-1SDT	40 : 1	200 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	573
SB-V85-1SDT	40 : 1	200 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	632
SB-V9-1SDT	40 : 1	200 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	1255
SB-V10-1SDT	40 : 1	200 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1465

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

STANDARD TYPE-A

Thrust & Torque Horizontal Input



Dimension

DIM MODEL		BASE PART						EXTERNAL PART				INPUT SHAFT PART			H AND WHEEL	STEM COVER	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L	L1	ØPD			KEY
					ØD2	N-H-DP											
SB-MT-VS10		A	F-10	70	102	4-M10-15	125	3	56	102.5	179	129	34	32	10X8	250	PF2"
SB-MT-VS20			F-12	85	125	4-M12-18	150		63	107.5	197	140				300	PF2-1/2"
SB-MT-V0			F-14	100	140	4-M16-24	175		72	130	231	166.5	34	32	10X8	400	
SB-MT-V1			F-16	130	165	4-M20-30	210		84	157	275	181				500	PF3"
SB-MT-V2		B	(F-16) F-20	140	205	8-M16-24	250	3	95	185	311	204	34	32	10X8	630	PF3-1/2"
SB-MT-V3			F-25	200	254	8-M16-24	300		102	211	361	227				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				900	PF6"
SB-MT-V5			F-35	260	356	8-M30-45	415		161	324.5	540	337					
SB-MT-V55			F-40	300	406	8-M36-55	475		171	358	586	358					
SB-MT-V6				F-40	300	406	8-M36-55		475		185	387	649	409	58	50	16X10

Spiral Bevel Gear Actuators

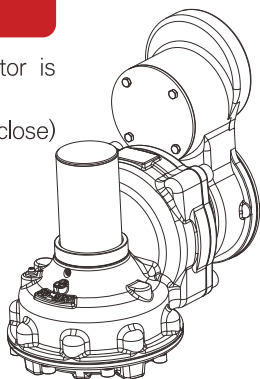
❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



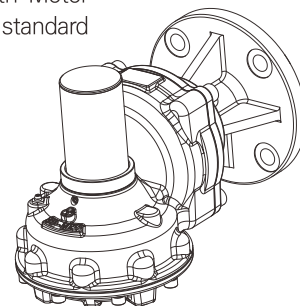
DIAL INDICATOR

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



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



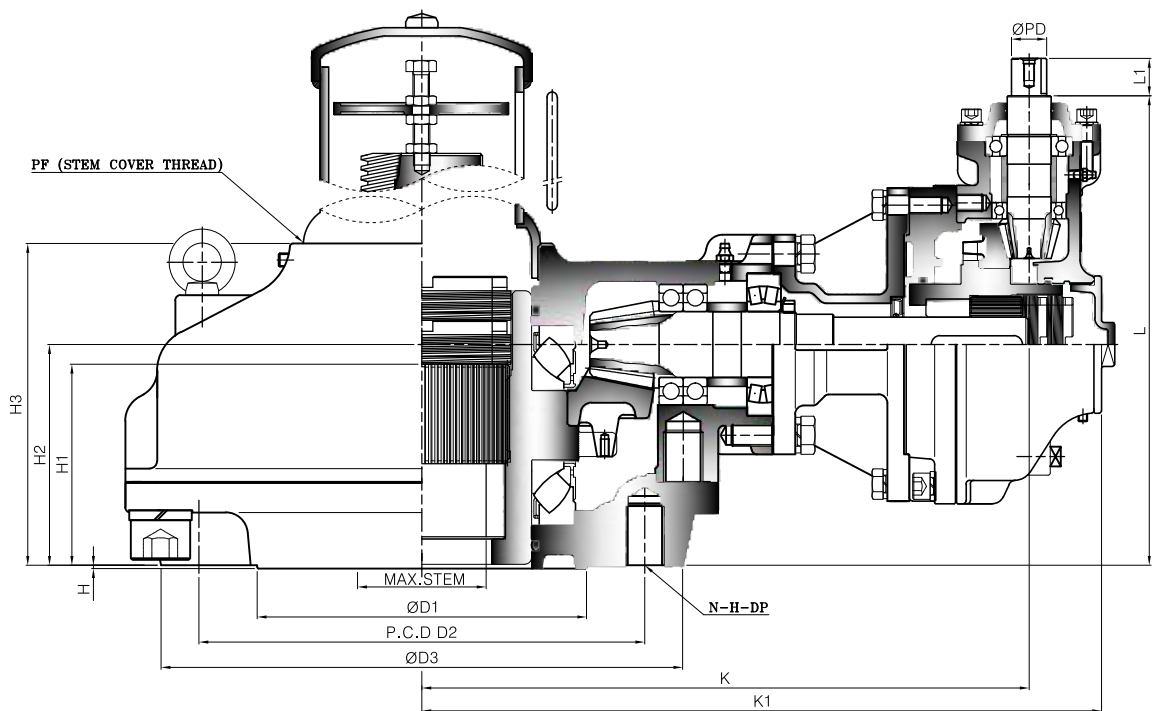
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-MT-VS10	1 : 1	30	22 (8X7)	F-07, F-10	75.5	16970	220	162	10
SB-MT-VS20	1 : 1	40	32 (10X8)	F-10, F-12	113	25400	370	273	14
SB-MT-V0	1 : 1	46	38 (12X8)	F-12, F-14	127	28550	600	442	21
SB-MT-V1	1 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	29
SB-MT-V2	1 : 1	62	52 (16X10)	F-16, (F-20)	190	42710	1500	1106	45
SB-MT-V3	1 : 1	72	60 (18X11)	(F-20), F-25	288	64750	2500	1844	59
SB-MT-V35	1 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	102
SB-MT-V4	1 : 1	98	84 (22X14)	F-30, F-35	400	89920	5200	3835	129
SB-MT-V5	1 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	200
SB-MT-V55	1 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	254
SB-MT-V6	1 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	310

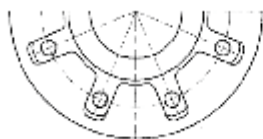
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-B

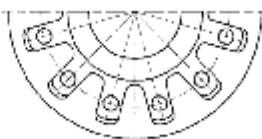
Thrust & Torque Vertical Input
with Single Reduction Gear Attachment



TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			H AND 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	250	PF2-1/2"		
SB-V1-2B		F-16	130	165	4-M20-30	210		84	98	140	252	286	187				250	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	300	PF3-1/2"		
SB-V3-2B		F-25	200	254	8-M16-24	300		102	119	166.5	326.5	368	250				300	PF4"		
SB-V35-2B		F-30	230	298	8-M20-30	350		122	138	195	415	474	292.5				400	PF5"		
SB-V4-2B		F-35	260	356	8-M30-45	410		133	150	209	457	521	317				500	PF6"		
SB-V5-2B		F-35	260	356	8-M30-45	415		161	177	245	419	488.5	365	630						
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	44	38	12X8	800	PF10"		
SB-V85-2B	D	F-60	470	603	20-M36-55	700	5	248	278	373	654	730	569	44	38	12X8	900	PF12"		
SB-V9-2B		F-60	470	603	20-M36-55	700		263	295	398	749	833	630	44	38	12X8	900	PF12"		
SB-V10-2B		(F-60) F-80	650	800	20-M42-63	900		378	375	490	845	938	750	58	50	16X10	1000			

Spiral Bevel Gear Actuators

❖ Feature

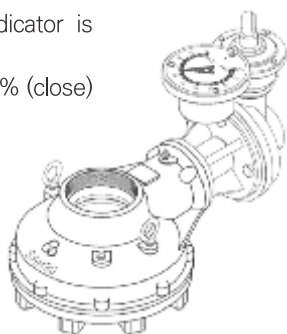
- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut.
High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



DIAL INDICATOR

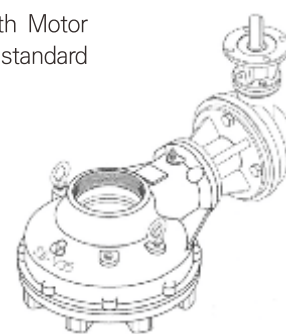
A unique local position dial indicator is available.

It is graduated in percent from 0% (close) to 100% (open).



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



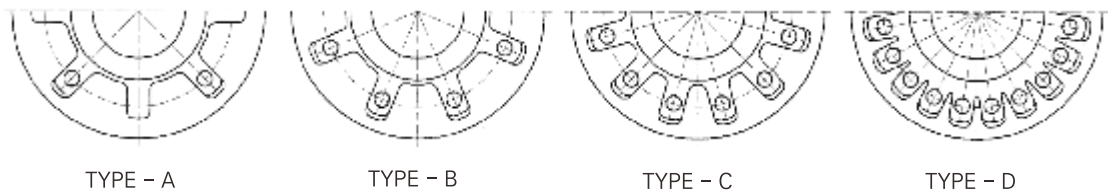
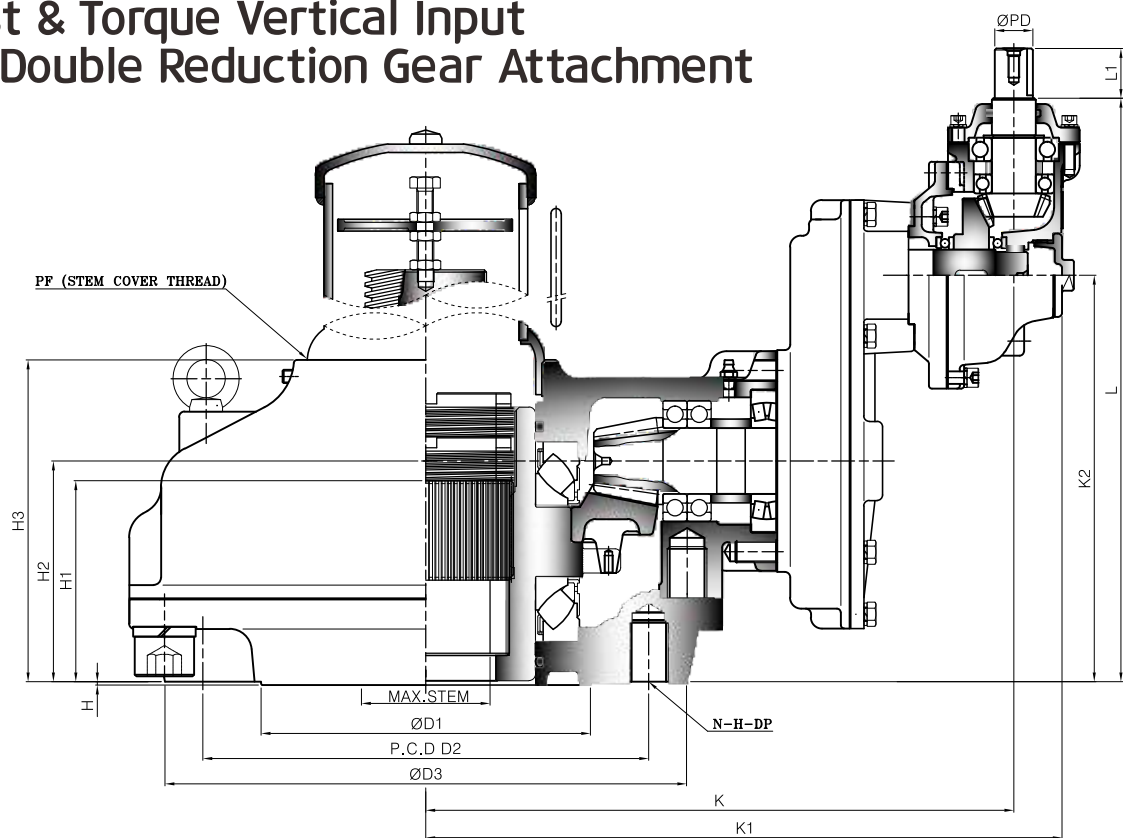
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-2B	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	23
SB-V1-2B	7 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	29
SB-V2-2B	10 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	42
SB-V3-2B	15 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	56
SB-V35-2B	17.87 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	93
SB-V4-2B	21 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	121
SB-V5-2B	26.22 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	184
SB-V55-2B	35 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	235
SB-V6-2B	35 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	297
SB-V7-2B	37.77 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	362
SB-V75-2B	40 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	538
SB-V8-2B	44 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	551
SB-V85-2B	48 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	631
SB-V9-2B	52.44 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	890
SB-V10-2B	56 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1121

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

STANDARD TYPE-B

Thrust & Torque Vertical Input with Double Reduction Gear Attachment



Dimension

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		
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				250	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	250	PF3-1/2"
SB-V3-1S2B		F-25	200	254	8-M16-24	300		102	119	166.5	297.5	337.5	212	301				250	PF4"
SB-V35-1S2B		F-30	230	298	8-M20-30	350		122	138	195	390	435	259	380				300	PF5"
SB-V4-1S2B		F-35	260	356	8-M30-45	410		133	150	209	416	466	271	392				300	PF6"
SB-V5-1S2B		F-35	260	356	8-M30-45	415		161	177	245	446	491	322	443				300	
SB-V55-1S2B		F-40	300	406	8-M36-55	475		171	192	261	466	511	337	458				400	
SB-V6-1S2B	C	F-40	300	406	8-M36-55	475	5	185	201	283	539.5	589.5	370	501	34	26	8X7	400	PF8"
SB-V7-1S2B		F-48	370	483	12-M36-55	560		206	222	309	567.5	617.5	391	522				400	PF8"
SB-V75-1S2B		F-48	370	483	12-M36-55	560		221	248	340	722.5	787.5	478	666				400	PF10"
SB-V8-1S2B		F-48	370	483	12-M36-55	560		233	259	352	753.5	818.5	488	676				400	PF10"
SB-V85-1S2B	D	F-60	470	603	20-M36-55	700	5	248	278	373	837	902	508	716	34	32	10X8	400	PF12"
SB-V9-1S2B		F-60	470	603	20-M36-55	700		263	295	398	970	1035	580	788				400	PF12"
SB-V10-1S2B		(F-60) F-80	650	800	20-M42-63	900		378	375	490	1053	1135.5	659	925				500	

Spiral Bevel Gear Actuators

❖ Feature

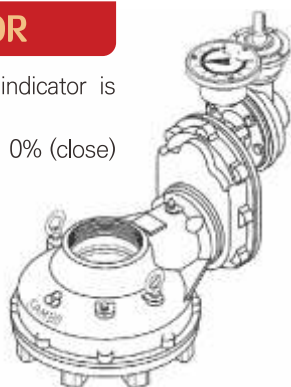
- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut.
High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



DIAL INDICATOR

A unique local position dial indicator is available.

It is graduated in percent from 0% (close) to 100% (open).



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



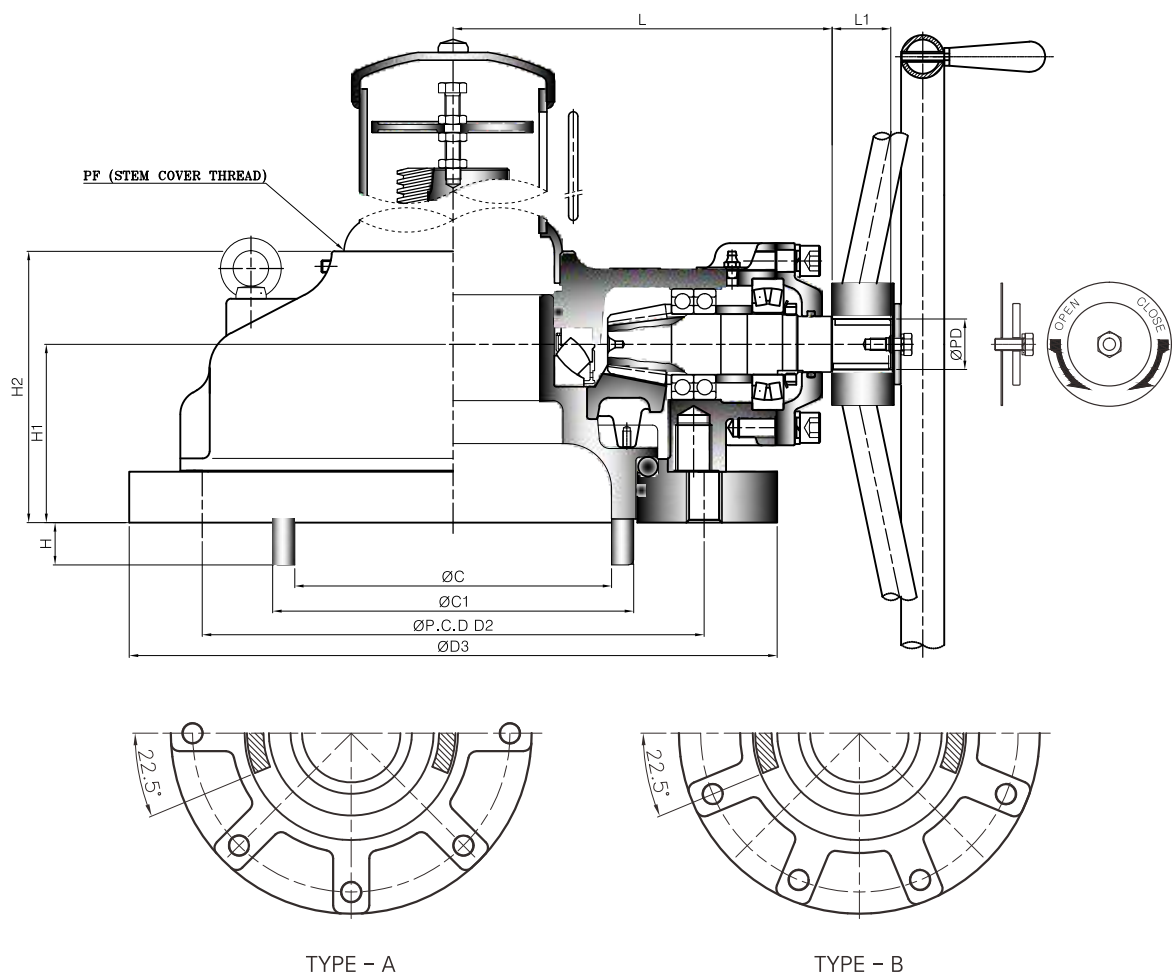
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-1S2B	13 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	25
SB-V1-1S2B	14 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	31
SB-V2-1S2B	20.26 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	46
SB-V3-1S2B	25.32 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	57
SB-V35-1S2B	41.25 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	98
SB-V4-1S2B	45 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	119
SB-V5-1S2B	57.36 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	171
SB-V55-1S2B	61.25 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	226
SB-V6-1S2B	84 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	291
SB-V7-1S2B	90.67 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	356
SB-V75-1S2B	140 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	566
SB-V8-1S2B	160 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	573
SB-V85-1S2B	200 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	644
SB-V9-1S2B	200 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	873
SB-V10-1S2B	220 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1057

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

STANDARD TYPE-C Torque Only Lug Drive

Horizontal Input



Dimension

UNIT : mm

DIM MODEL	BASE PART					CLAMP PART			EXTERNAL PART			INPUT SHAFT PART			HAND WHEEL	STEM COVER			
	TYPE	FLANGE	P.C.D		ØD3	ØC	ØC1	H	H1	H2	L	L1	ØPD	KEY					
			ØD2	N-H-DP															
SB-VS10C	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-VS20C		F-16	165	8-1/2"-13UNC	220	91	105	11	73	100	131	34	32	10X8	300	PF2-1/2"			
		(F-20)	193.7																
SB-V0C		F-16	165	8-1/2"-13UNC	220	110	126	14	75	115	155							400	
		(F-20)	193.7																
SB-V1C		(F-20)	193.7	8-1/2"-13UNC	300	128	146	17	90	132	167				500	PF3"			
		F-25	254	8-5/8"-11UNC															
SB-V2C	B	F-25	254	8-5/8"-11UNC	350	146	166	19	107	152	188	34	32	10X8	630	PF3-1/2"			
		F-30	298	8-3/4"-10UNC															
SB-V3C		F-30	298	8-3/4"-10UNC	415	173	197	21	110	158	209							710	PF4"
		F-35	356	8-1"-8UNC															
SB-V35C		F-35	356	8-1"-8UNC	475	220	247	23	122	184	266	44	38	12X8	800	PF5"			
		F-40	406	8-11/4"-7UNC															
SB-V4C		F-35	356	8-11/4"-7UNC	475	258	292	25	145	202	291							900	PF6"
		F-40	406																
SB-V5C		F-35	356	8-11/4"-7UNC	480	266	306	27	172	242	334					PF6"			
		F-40	406																

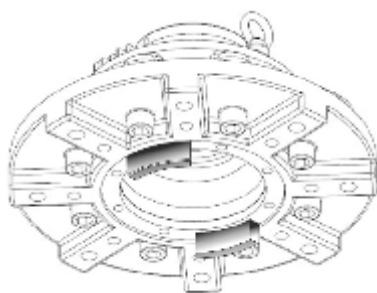
Spiral Bevel Gear Actuators

❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for torque applications.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

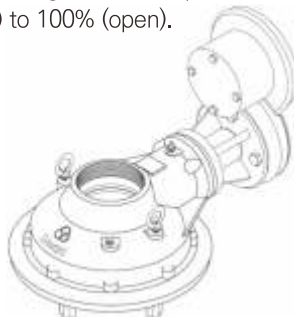


MOUNTING BASE



DIAL INDICATOR

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



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



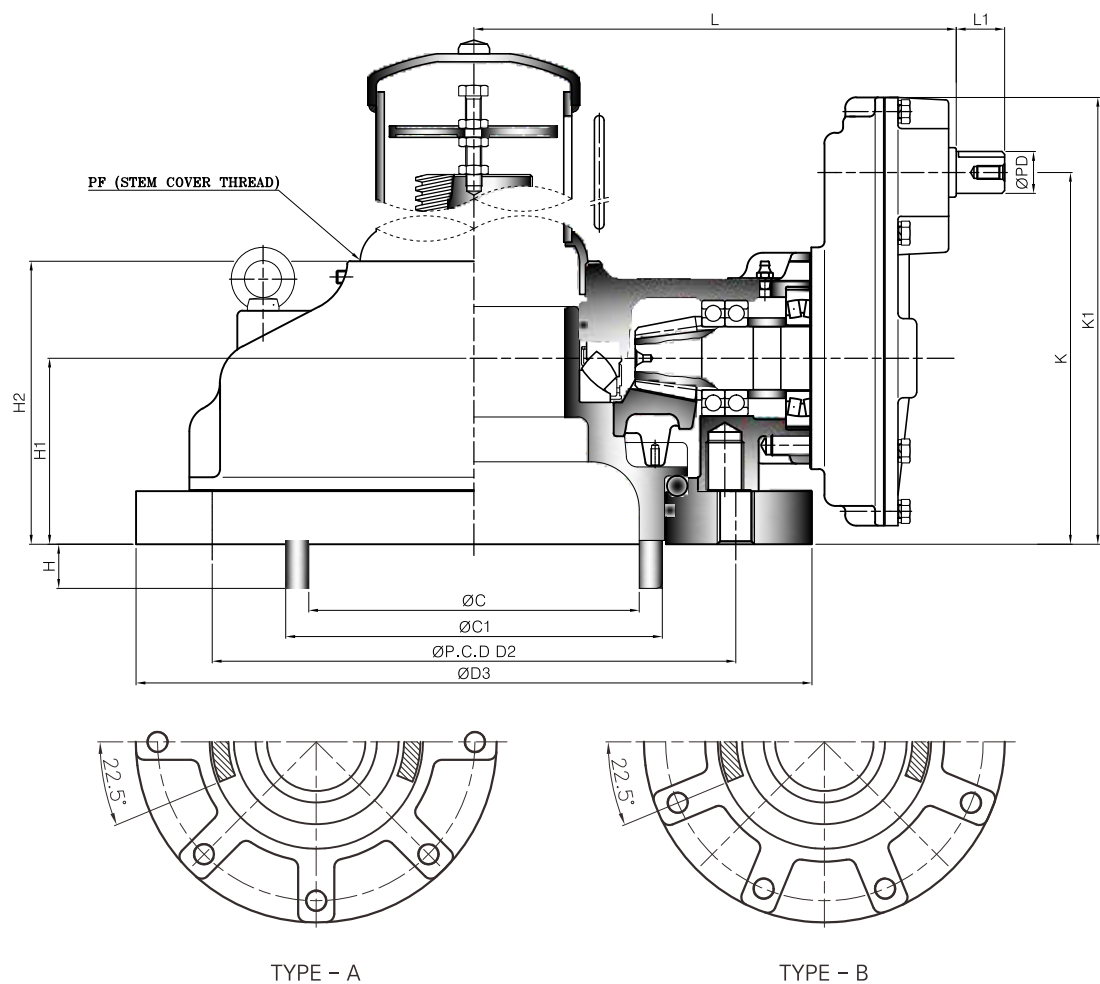
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MAX. TORQUE CAPACITY		WEIGHT
			N-m	Ft. lbf	Kg
SB-VS10C	2.5 : 1	42	220	162	7.5
SB-VS20C	3 : 1	50	370	273	10
SB-V0C	3.25 : 1	60	600	442	14.5
SB-V1C	3.5 : 1	69	980	723	21
SB-V2C	4 : 1	79	1500	1106	29
SB-V3C	5 : 1	97	2500	1844	45
SB-V35C	5.5 : 1	115	3500	2581	72
SB-V4C	6 : 1	130	5200	3835	91
SB-V5C	6.5 : 1	145	7800	5752	123

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

STANDARD TYPE-C Torque Only Lug Drive

Horizontal Input with Single Reduction Gear Attachment



Dimension

UNIT : mm

DIM MODEL	BASE PART				CLAMP PART				EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER					
	TYPE	FLANGE	P.C.D		ØD3	ØC	ØC1	H	H1	H2	K	K1	L	L1	ØPD			KEY				
			ØD2	N-H-DP																		
SB-VS10C-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-VS20C-1S		F-16	165	8-1/2"-13UNC	220	91	105	11	73	100	151	195	184	34	26	8X7	300	PF2-1/2"				
		(F-20)	193.7																			
SB-V0C-1S		F-16	165	8-1/2"-13UNC	220	110	126	14	75	115	154	197	202					34	26	8X7	300	PF3"
		(F-20)	193.7																			
SB-V1C-1S		(F-20)	193.7	8-1/2"-13UNC	300	128	146	17	90	132	169	212	214					PF3"				
		F-25	254	8-5/8"-11UNC																		
SB-V2C-1S	B	F-25	254	8-5/8"-11UNC	350	146	166	19	107	152	200	248	237	34	26	8X7	400	PF3-1/2"				
		F-30	298	8-3/4"-10UNC																		
SB-V3C-1S		F-30	298	8-3/4"-10UNC	415	173	197	21	110	158	204	251	257				34	26	8X7	500	PF4"	
		F-35	356	8-1"-8UNC																		
SB-V35C-1S		F-35	356	8-1"-8UNC	475	220	247	23	122	184	249	305	333	34	32	10X8	630	PF5"				
		F-40	406	8-11/4"-7UNC																		
SB-V4C-1S		F-35	356	8-11/4"-7UNC	475	258	292	25	145	202	260	317	358					34	32	10X8	630	PF6"
		F-40	406																			
SB-V5C-1S			F-35	356	8-11/4"-7UNC	480	266	306	27	172	242	293	350	401	34	32	10X8	710	PF6"			
		F-40	406																			

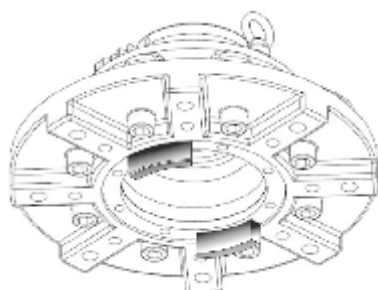
Spiral Bevel Gear Actuators

❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for torque applications.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet IP67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

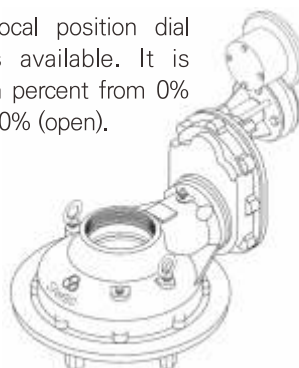


MOUNTING BASE



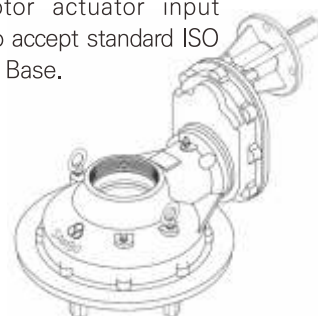
DIAL INDICATOR

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



M · O · V OPTION

Bevel Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



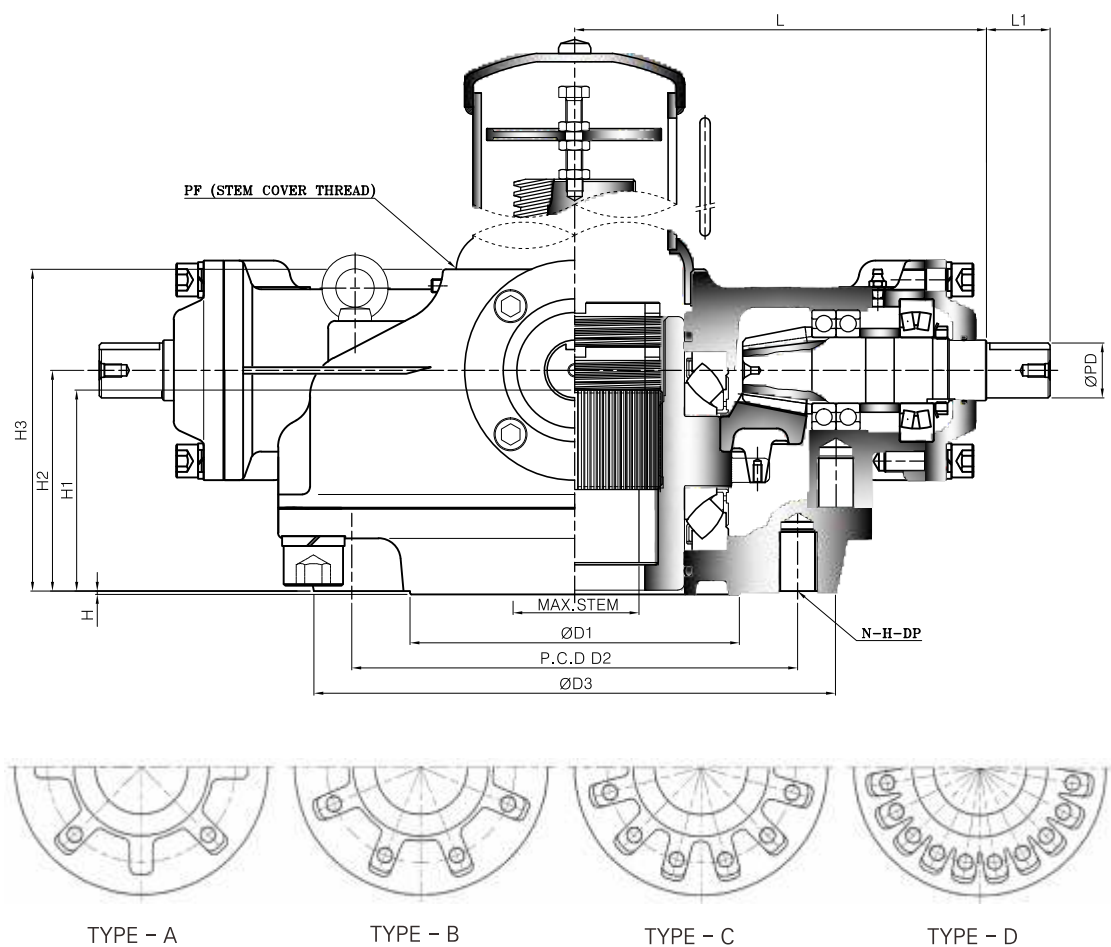
❖ Selection Chart for Manual Operation

MODEL \ SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE	MAX. TORQUE CAPACITY		WEIGHT
			N-m	Ft . lbf	Kg
SB-VS10C-1S	5 : 1	42	220	162	9.5
SB-VS20C-1S	6 : 1	50	370	273	12.5
SB-V0C-1S	6.5 : 1	60	600	442	25
SB-V1C-1S	7 : 1	69	980	723	32
SB-V2C-1S	10.13 : 1	79	1500	1106	45
SB-V3C-1S	12.66 : 1	97	2500	1844	60
SB-V35C-1S	16.5 : 1	115	3500	2581	95
SB-V4C-1S	18 : 1	130	5200	3835	120
SB-V5C-1S	19.5 : 1	145	7800	5752	135

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

STANDARD TYPE-D Multiple Input Shaft

Thrust & Torque Vertical Input



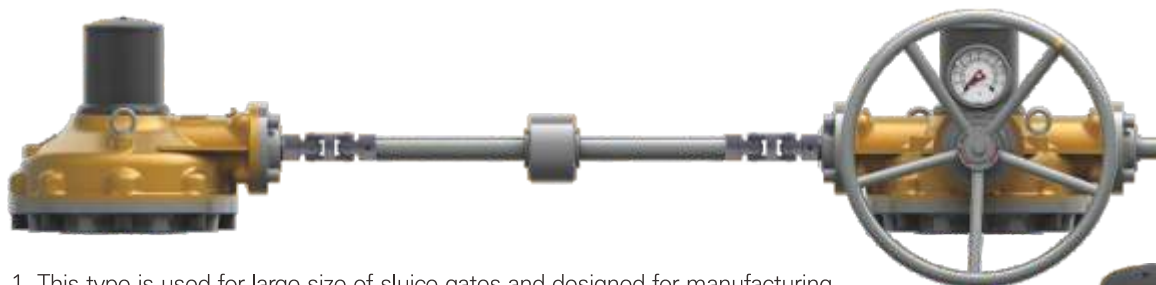
Dimension

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-V0W	A	F-14	100	140	4-M16-24	175	3	72	81	121	154.5	34	32	10X8	400	PF2-1/2"
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	630	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				800	PF5"
SB-V4W		F-35	260	356	8-M30-45	410		133	150	209	291	44	38	12X8	900	PF6"
SB-V5W		F-35	260	356	8-M30-45	415		161	177	245	313					
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	381	58	50	16X10	1000	PF8"
SB-V7W		C	F-48	370	483	12-M36-55		560	5	206	222	309	409	58	50	16X10
SB-V75W	F-48		370	483	12-M36-55	560	221	248		340	441	58	50	16X10	1000	PF10"
SB-V8W	F-48		370	483	12-M36-55	560	233	259		352	472					
SB-V85W	D	F-60	470	603	20-M36-55	700	5	248	278	373	525	58	50	16X10	1000	PF12"
SB-V9W		F-60	470	603	20-M36-55	700		263	295	398	591					
SB-V10W		(F-60) F-80	650	800	20-M42-63	900		378	375	490	664					

Spiral Bevel Gear Actuators

❖ Dual Gear Actuator Type (Manual Dial Indicator) : Typical Arrangement for Two Spindles Application



1. This type is used for large size of sluice gates and designed for manufacturing type to operate efficiently using 2 spindles.
2. Local dial position indicator provides clear indication of gate position.
3. Sambo can provide suitable interconnecting shafts and couplings if required.
(Customer must state the center distance between the gate stems.)



❖ Dual Gear Actuator Type (Electric Actuators) : Typical Arrangement for Two Spindles Application



1. This type is used for large size of sluice gates and designed for manufacturing type to operate efficiently using 2 spindles.
2. Sambo can provide suitable interconnecting shafts and couplings if required.
(Customer must state the center distance between the gate stems.)

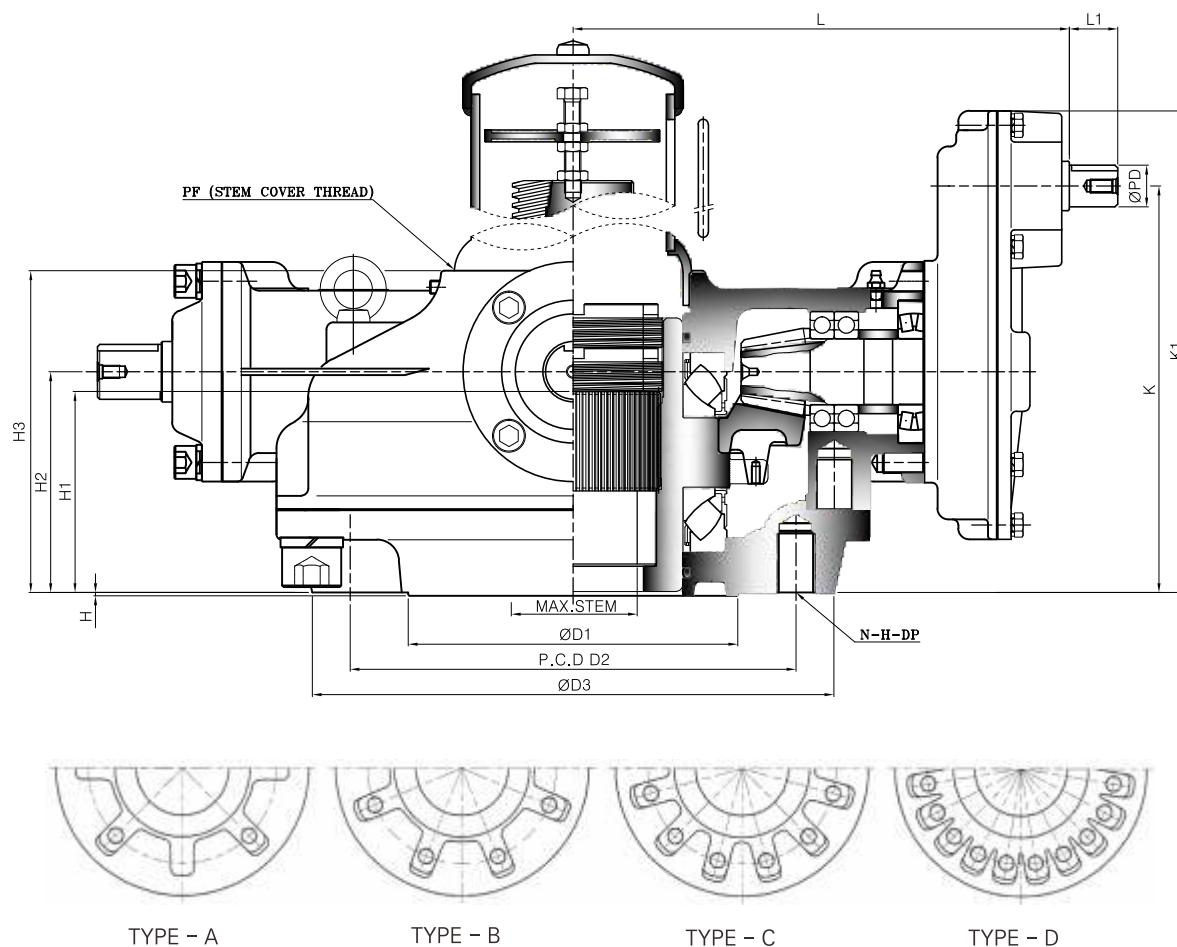
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0W	3.25 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	19
SB-V1W	3.5 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	25
SB-V2W	4 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	37
SB-V3W	5 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	49
SB-V35W	5.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	84
SB-V4W	6 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	106
SB-V5W	6.56 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	159
SB-V55W	7 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	210
SB-V6W	7 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	263
SB-V7W	7.56 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	330
SB-V75W	8 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	473
SB-V8W	8 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	488
SB-V85W	8 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	550
SB-V9W	8 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	758
SB-V10W	8 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	916

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

STANDARD TYPE-D Multiple Input Shaft

Thrust & Torque Horizontal Input
with Single Reduction Gear Attachment



TYPE - A

TYPE - B

TYPE - C

TYPE - D

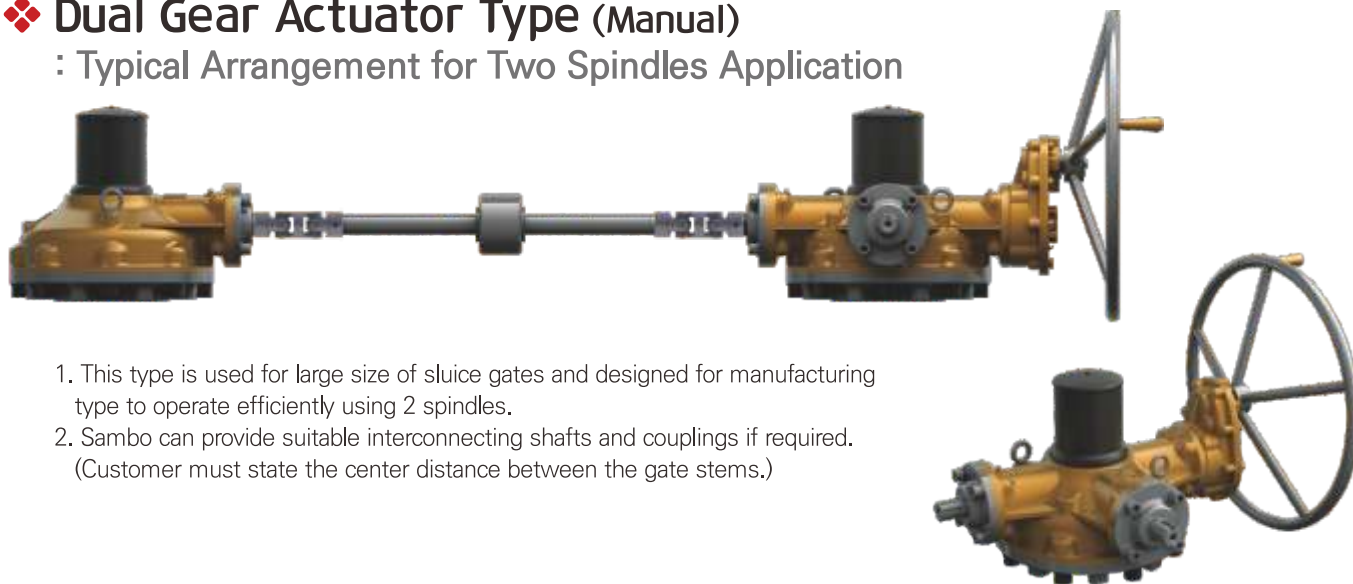
Dimension

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-V0W-1S	A	F-14	100	140	4-M16-24	175	3	72	81	121	160	203	201.5	34	26	8X7	250	PF2-1/2			
SB-V1W-1S		F-16	130	165	4-M20-30	210		84	98	140	177	220	214				300	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	400	PF3-1/2"			
SB-V3W-1S		F-25	200	254	8-M16-24	300		102	119	166.5	212	260	256.5				500	PF4"			
SB-V35W-1S		F-30	230	298	8-M20-30	350		122	138	195	259	316	333				34	32	10X8	630	PF5"
SB-V4W-1S		F-35	260	356	8-M30-45	410		133	150	209	271	328	358							710	PF6"
SB-V5W-1S		F-35	260	356	8-M30-45	415		161	177	245	322	384.5	387								
SB-V55W-1S		F-40	300	406	8-M36-55	475		171	192	261	337	399.5	407	44	38	12X8	800	PF8"			
SB-V6W-1S		F-40	300	406	8-M36-55	475		185	201	283	370	439	472								
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	1000	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	1000	PF12"			
SB-V9W-1S		F-60	470	603	20-M36-55	700		263	295	398	580	696	821	58	50	16X10	1000	PF12"			
SB-V10W-1S		(F-60) F-80	650	800	20-M42-63	900		378	375	490	659	775	886								

Spiral Bevel Gear Actuators

❖ Dual Gear Actuator Type (Manual) : Typical Arrangement for Two Spindles Application



1. This type is used for large size of sluice gates and designed for manufacturing type to operate efficiently using 2 spindles.
2. Sambo can provide suitable interconnecting shafts and couplings if required.
(Customer must state the center distance between the gate stems.)

❖ Dual Gear Actuator Type (Electric Actuators) : Typical Arrangement for Two Spindles Application



1. This type is used for large size of sluice gates and designed for manufacturing type to operate efficiently using 2 spindles.
2. Sambo can provide suitable interconnecting shafts and couplings if required.
(Customer must state the center distance between the gate stems.)

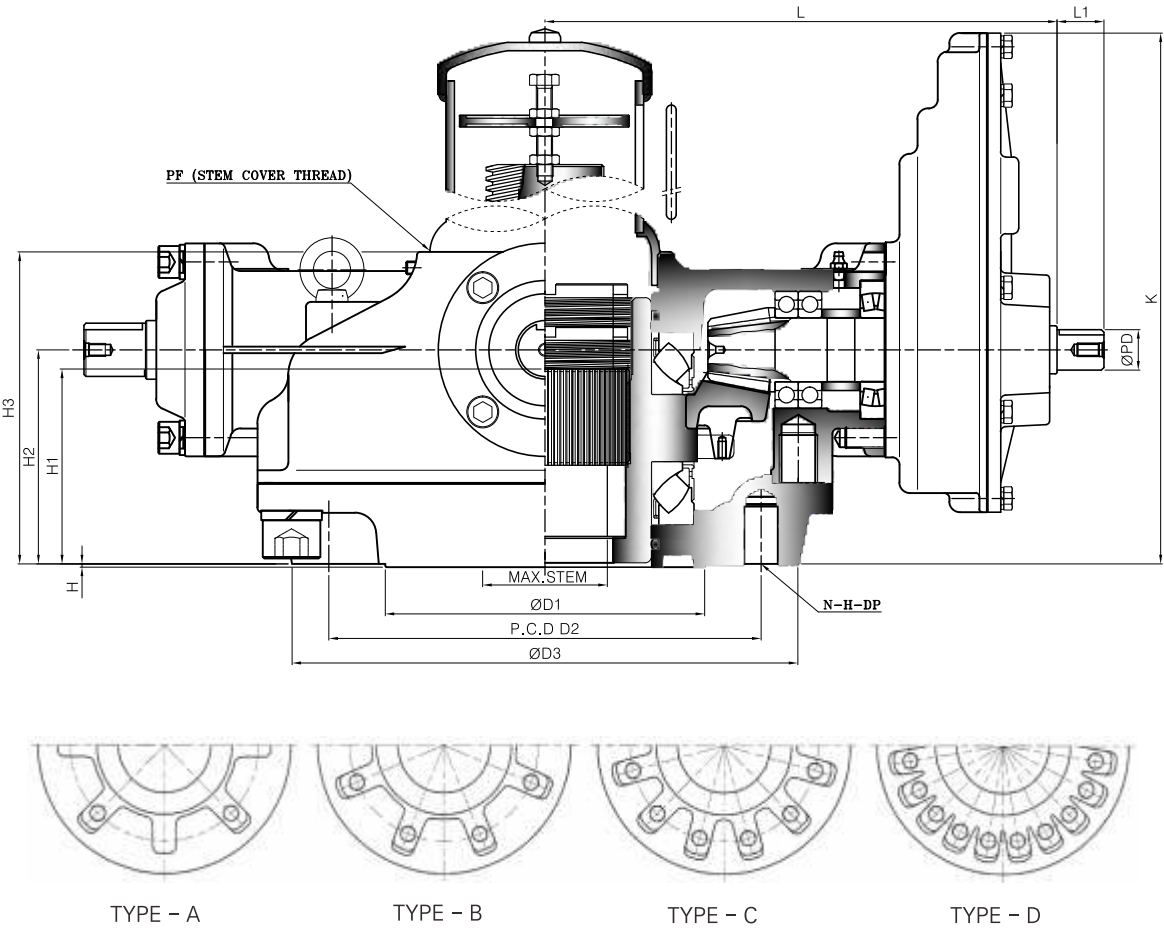
❖ Selection Chart for Manual Operation

MODEL	SIZE	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	GEAR RATIO	TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0W-1S	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	23
SB-V1W-1S	7 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	29
SB-V2W-1S	10.13 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	45
SB-V3W-1S	12.66 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	57
SB-V35W-1S	16.5 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	97
SB-V4W-1S	18 : 1	98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	118
SB-V5W-1S	22.94 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	171
SB-V55W-1S	24.5 : 1	120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	223
SB-V6W-1S	28 : 1	130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	291
SB-V7W-1S	30.22 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	358
SB-V75W-1S	40 : 1	160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	545
SB-V8W-1S	40 : 1	180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	560
SB-V85W-1S	40 : 1	190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	622
SB-V9W-1S	40 : 1	200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	855
SB-V10W-1S	40 : 1	230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1013

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

STANDARD TYPE-D Multiple Input Shaft

Thrust & Torque Horizontal Input with Double Reduction Gear Attachment



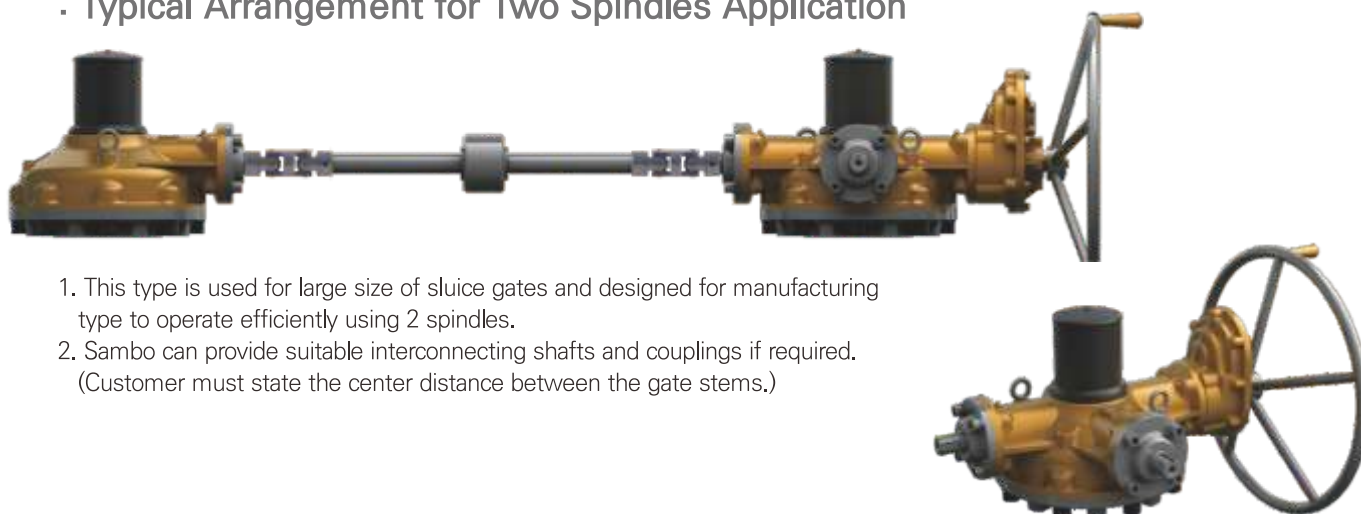
Dimension

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	195	249.5	34	26	8X7	250	PF2-1/2"
SB-V1W-1SD		F-16	130	165	4-M20-30	210		84	98	140	212	262				300	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	400	PF3-1/2"
SB-V3W-1SD		F-25	200	254	8-M16-24	300		102	119	166.5	263	280.5				500	PF4"
SB-V35W-1SD		F-30	230	298	8-M20-30	350		122	138	195	333	369				34	32
SB-V4W-1SD		F-35	260	356	8-M30-45	410		133	150	209	345	394	710	PF6"			
SB-V5W-1SD		F-35	260	356	8-M30-45	415		161	177	245	426	426					
SB-V55W-1SD		F-40	300	406	8-M36-55	475		171	192	261	441	446			800	PF8"	
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
SB-V75W-1SD	F-48		370	483	12-M36-55	560	221	248		340	628	666	58	50	16X10	1000	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	1000	PF12"
SB-V9W-1SD		F-60	470	603	20-M36-55	700		263	295	398	784	876				1000	PF12"
SB-V10W-1SD		(F-60) F-80	650	800	20-M42-63	900		378	375	490	863	941					

Spiral Bevel Gear Actuators

❖ Dual Gear Actuator Type (Manual Dial Indicator) : Typical Arrangement for Two Spindles Application



1. This type is used for large size of sluice gates and designed for manufacturing type to operate efficiently using 2 spindles.
2. Sambo can provide suitable interconnecting shafts and couplings if required.
(Customer must state the center distance between the gate stems.)

❖ Dual Gear Actuator Type (Electric Actuators) : Typical Arrangement for Two Spindles Application



1. This type is used for large size of sluice gates and designed for manufacturing type to operate efficiently using 2 spindles.
2. Sambo can provide suitable interconnecting shafts and couplings if required.
(Customer must state the center distance between the gate stems.)

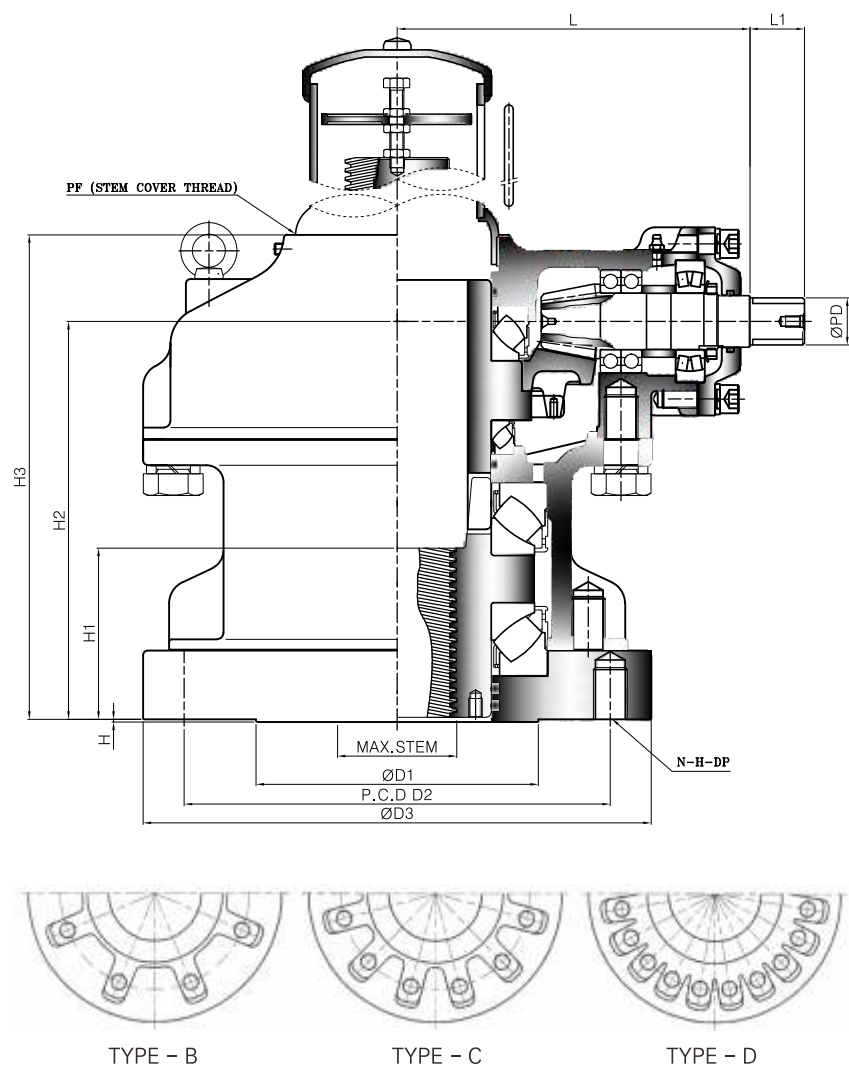
❖ Selection Chart for Manual Operation

MODEL	SIZE	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0W-1SD	13 : 1		46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	24
SB-V1W-1SD	14 : 1		55	45 (14X9)	F-14, F-16	141	31700	980	723	30
SB-V2W-1SD	25.67 : 1		62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	46
SB-V3W-1SD	32.08 : 1		72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	58
SB-V35W-1SD	49.5 : 1		85	72 (20X12)	F-25, F-30	350	78680	3500	2581	101
SB-V4W-1SD	54 : 1		98	84 (22X14)	F-25, F-30, F-35	400	89920	5200	3835	122
SB-V5W-1SD	80.31 : 1		110	95 (28X16)	F-30, F-35	510	114650	7800	5753	176
SB-V55W-1SD	85.75 : 1		120	105 (28X16)	F-30, F-35, F-40	1500	337210	10400	7671	227
SB-V6W-1SD	112 : 1		130	115 (32X18)	F-30, F-35, F-40	2310	519300	13000	9588	305
SB-V7W-1SD	120.88 : 1		150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	371
SB-V75W-1SD	200 : 1		160	140 (36X20)	F-40, F-48	3450	775590	21000	15489	573
SB-V8W-1SD	200 : 1		180	160 (40X22)	F-40, F-48	4100	921700	32000	23602	588
SB-V85W-1SD	200 : 1		190	170 (40X22)	F-48, F-60	5150	1157760	40000	29502	650
SB-V9W-1SD	200 : 1		200	180 (45X25)	F-48, F-60	5450	1225180	55000	40566	893
SB-V10W-1SD	200 : 1		230	200 (50X28)	F-60, (F-80)	7300	2585300	75000	55317	1051

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

STANDARD TYPE-E

High Load Thrust & Torque Horizontal Input



Dimension

UNIT : mm

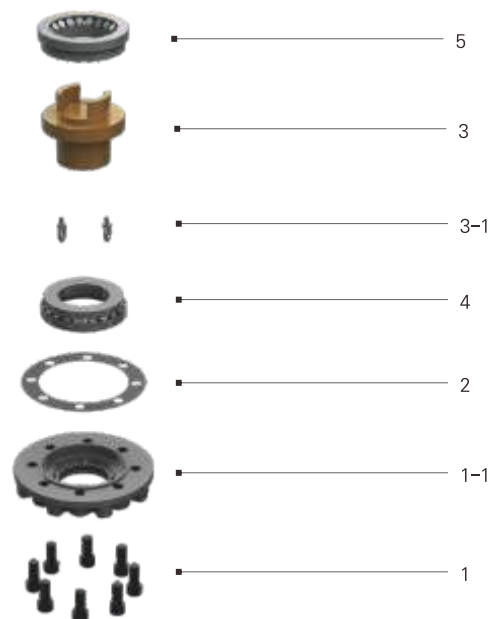
DIM MODEL	BASE PART							EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	L	L1	ØPD	KEY		
				ØD2	N-H-DP											
SB-V2H	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	188	34	32	10X8	630	PF3-1/2"
SB-V3H		F-30	230	298	8-M20-30	350		118	263	310.5	208				710	PF4"
SB-V35H		F-35	260	356	8-M30-45	415		143	316	373	266				44	38
SB-V4H								155	342	401	291	900	PF6"			
SB-V5H								F-40	300	406	8-M36-55			475		
SB-V55H	C	F-48	370	483	12-M36-55	560	5	186	410	479	333	44	38	12X8	900	PF6"
SB-V6H		F-48	370	483	12-M36-55	560		197	429	511	381	58	50	16X10	1000	PF8"
SB-V7H		F-48						217	475	562	409					
SB-V75H	D	F-60	470	603	20-M36-55	700	5	229	505	597	441	58	50	16X10	1000	PF10"
SB-V8H		F-60	470	603	20-M36-55	700		242	540	635	472	58	50	16X10	1000	PF10"
SB-V85H		F-60						269	612	706	525				PF12"	
SB-V9H		F-80						650	800	20-M42-63	900					281
SB-V10H		F-80	305	701	816	664										

Spiral Bevel Gear Actuators



Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.



❖ Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation, Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

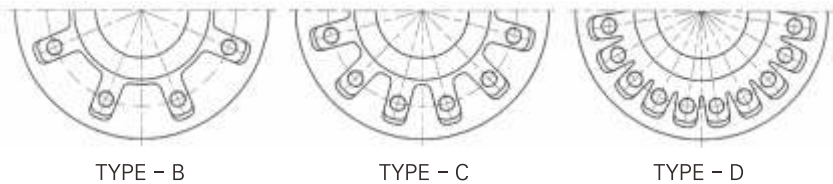
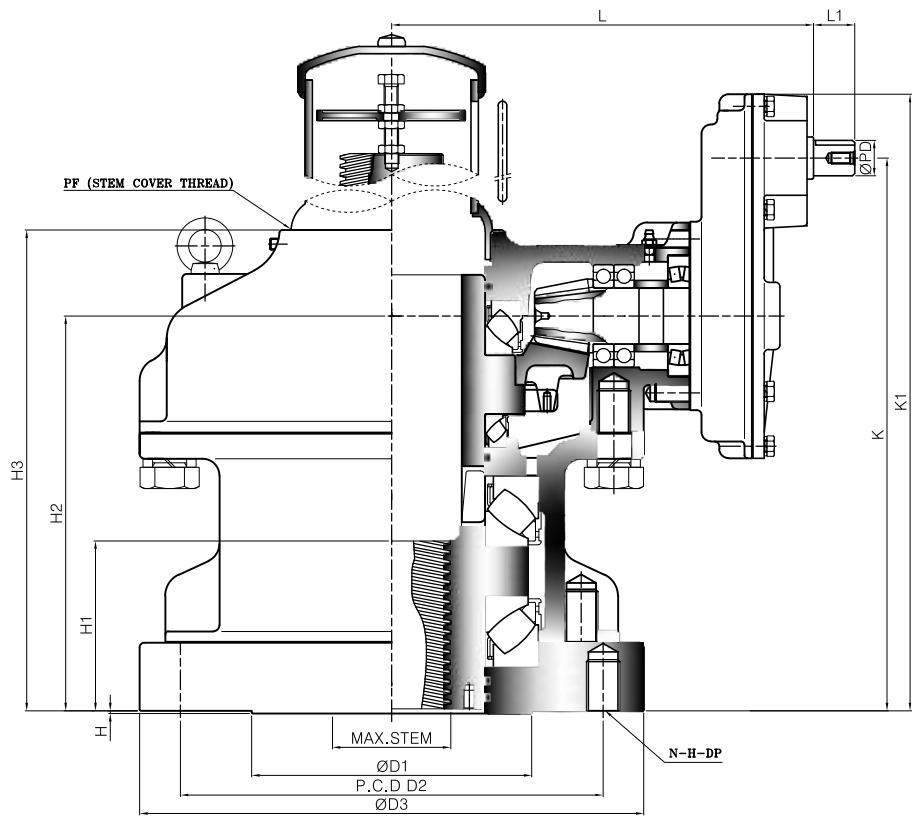
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		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	1080	242800	2900	2139	62
SB-V3H	5 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	93
SB-V35H	5.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	158
SB-V4H	6 : 1	110	95 (25X14)		2900	651900	9800	7228	200
SB-V5H	6.56 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	264
SB-V55H	7 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	390
SB-V6H	7 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	525
SB-V7H	7.56 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	595
SB-V75H	8 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	865
SB-V8H	8 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	955
SB-V85H	8 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1220
SB-V9H	8 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1797
SB-V10H	8 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	1969

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

STANDARD TYPE-E

High Load Thrust & Torque Horizontal Input
with Single Reduction Gear Attachment



Dimension

UNIT : mm

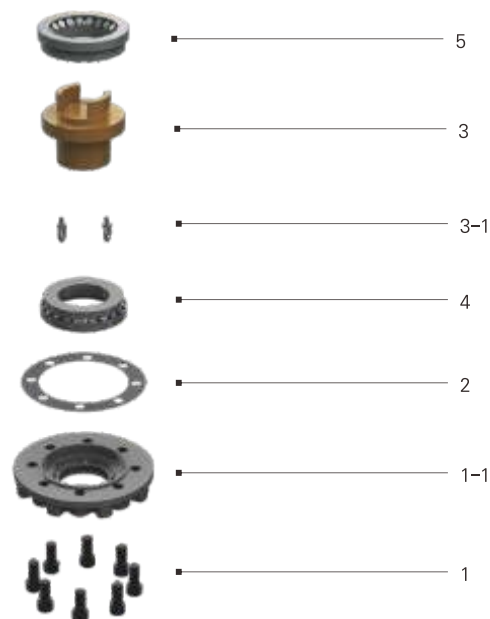
DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			H AND WHEEL	STEM COVER			
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY					
				ØD2	N-H-DP																
SB-V2H-1S	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	322	370	236.5	34	26	8X7	400	PF3-1/2"			
SB-V3H-1S		F-30	230	298	8-M20-30	350		118	263	310	356	404	256.5				500	PF4"			
SB-V35H-1S		F-35	260	356	8-M30-45	415		143	316	373	437	494	333				34	32	10X8	630	PF5"
SB-V4H-1S								155	342	401	463	520	358							710	PF6"
SB-V5H-1S								F-40	300	406	8-M36-55	475	172								
SB-V55H-1S	C	F-48	370	483	12-M36-55	560	5	186	410	479	555	617	407	34	32	10X8	800	PF6"			
SB-V6H-1S		F-48	370	483	12-M36-55	560		197	429	511	598	666	472	44	38	12X8	800	PF8"			
SB-V7H-1S		F-48						217	475	562	644	713	497				900				
SB-V75H-1S	D	F-60	470	603	20-M36-55	700	5	229	505	597	735	821	620	58	50	16X10	1000	PF10"			
SB-V8H-1S		F-60						242	540	635	770	856	651	58	50	16X10	1000	PF12"			
SB-V85H-1S		F-60						269	612	706	842	928	695								
SB-V9H-1S		F-80	650	800	20-M42-63	900		281	636	739	920	1036	821	58	50	16X10	1000				
SB-V10H-1S		F-80						305	701	816	985	1101	886								

Spiral Bevel Gear Actuators



Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.



Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

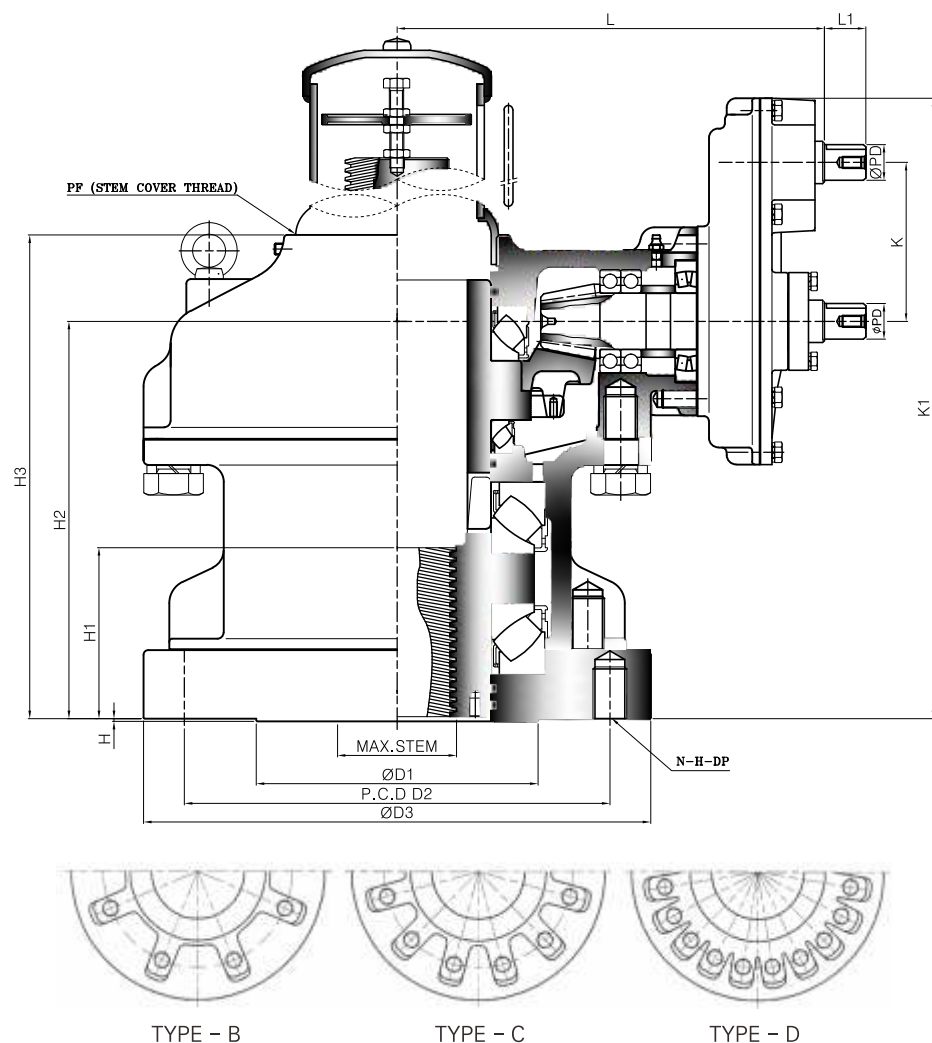
Selection Chart for Manual Operation

MODEL	SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2H-1S		10.13 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	70
SB-V3H-1S		12.66 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	101
SB-V35H-1S		16.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	170
SB-V4H-1S		18 : 1	110	95 (25X14)		2900	651900	9800	7228	212
SB-V5H-1S		22.94 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	276
SB-V55H-1S		24.5 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	403
SB-V6H-1S		28 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	553
SB-V7H-1S		30.22 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	623
SB-V75H-1S		40 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	937
SB-V8H-1S		40 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1027
SB-V85H-1S		40 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1292
SB-V9H-1S		40 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1894
SB-V10H-1S		40 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2066

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

STANDARD TYPE-E Twin Shaft

High Load Thrust & Torque (Twin Shaft) Horizontal Input with Single Reduction Gear Attachment

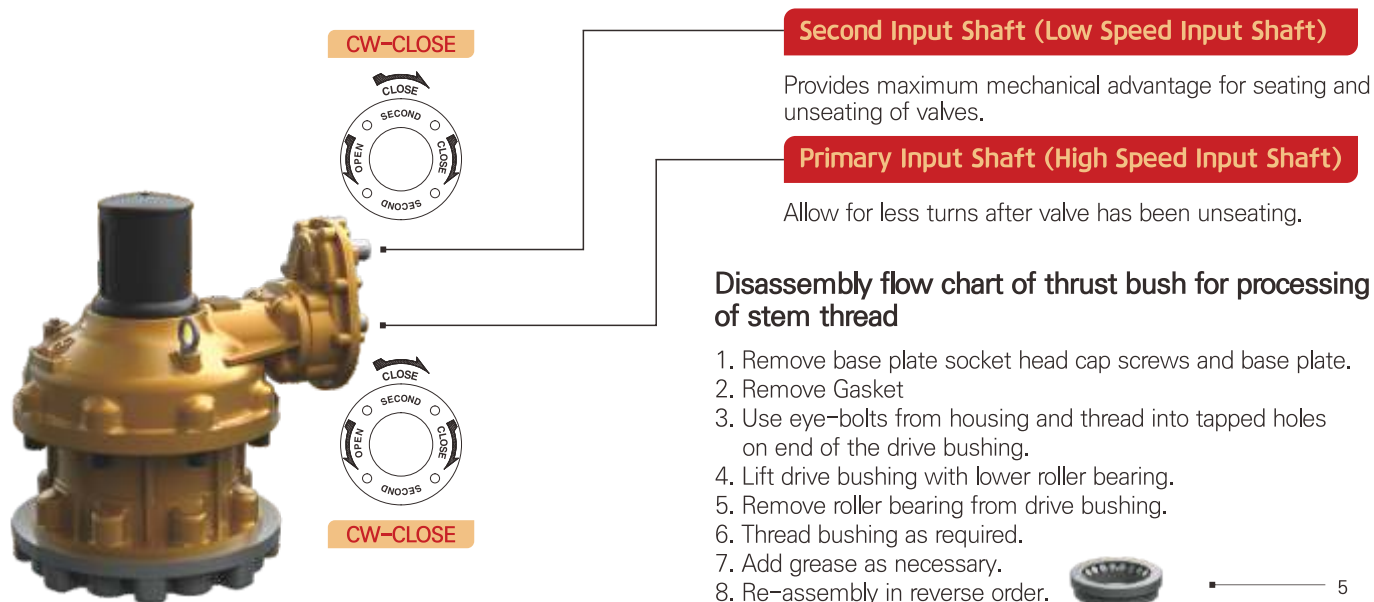


Dimension

UNIT : mm

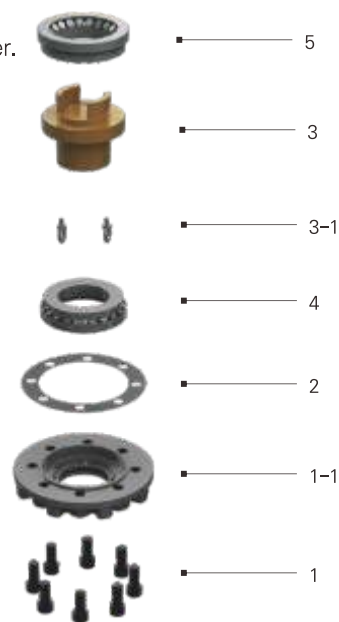
DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER	
	TYPE	FLANGE	ØD1	P.C,D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY			
				ØD2	N-H-DP														
SB-V2H-1ST	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	93	370	236.5	34	26	8X7	400	PF3-1/2"	
SB-V3H-1ST		F-30	230	298	8-M20-30	350		118	263	310		404	256.5				500	PF4"	
SB-V35H-1ST		F-35	260	356	8-M30-45	415		143	316	373	121	494	333				34	32	10X8
SB-V4H-1ST								155	342	401		520	358	710	PF6"				
SB-V5H-1ST								F-40	300	406		8-M36-55	475			172			
SB-V55H-1ST	C	F-48	370	483	12-M36-55	560	5	186	410	479	145	617	407	34	32	10X8	710	PF6"	
SB-V6H-1ST		F-48	370	483	12-M36-55	560		197	429	511	169	666	472	44	38	12X8	800	PF8"	
SB-V7H-1ST		F-48						217	475	562		713	497				900		
SB-V75H-1ST	D	F-60	470	603	20-M36-55	700	5	229	505	597	230	821	620	58	50	16X10	1000	PF10"	
SB-V8H-1ST		F-60	470	603	20-M36-55	700		242	540	635		856	651	58	50	16X10	1000		
SB-V85H-1ST		F-60						269	612	706		928	695				1000	PF12"	
SB-V9H-1ST		F-80						281	636	739	284	1036	821						
SB-V10H-1ST		F-80	650	800	20-M42-63	900		305	701	816		1101	886	58	50	16X10	1000		

Spiral Bevel Gear Actuators



Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



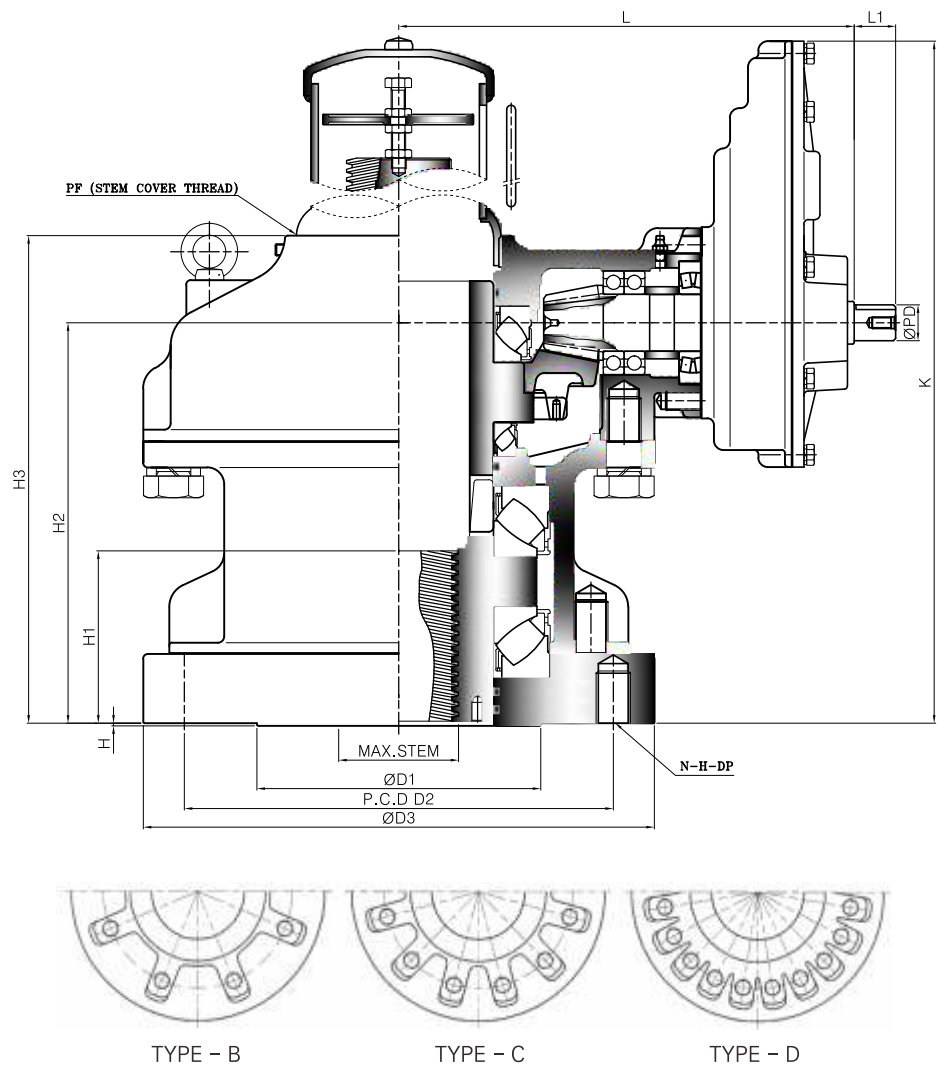
Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE		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	1080	242800	2900	2139	70
SB-V3H-1ST	5 : 1	12.66 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	101
SB-V35H-1ST	5.5 : 1	16.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	170
SB-V4H-1ST	6 : 1	18 : 1	110	95 (25X14)		2900	651900	9800	7228	212
SB-V5H-1ST	6.56 : 1	22.94 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	276
SB-V55H-1ST	7 : 1	24.5 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	403
SB-V6H-1ST	7 : 1	28 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	553
SB-V7H-1ST	7.56 : 1	30.22 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	623
SB-V75H-1ST	8 : 1	40 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	937
SB-V8H-1ST	8 : 1	40 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1027
SB-V85H-1ST	8 : 1	40 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1292
SB-V9H-1ST	8 : 1	40 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1894
SB-V10H-1ST	8 : 1	40 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2066

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

STANDARD TYPE-E

High Load Thrust & Torque Horizontal Input
with Double Reduction Gear Attachment



Dimension

UNIT : mm

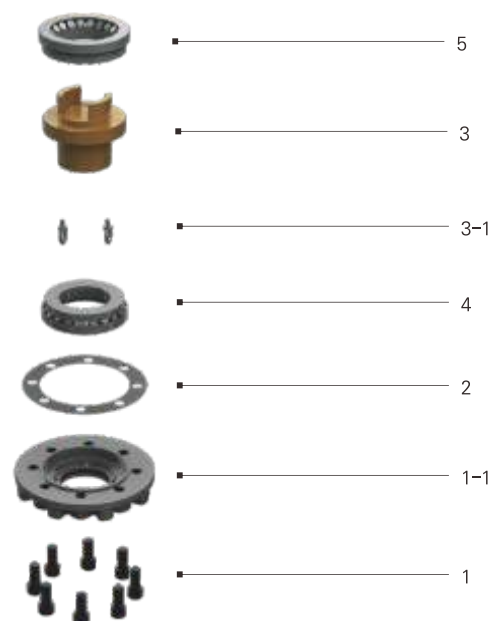
DIM MODEL		BASE PART						EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER				
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	L	L1	ØPD			KEY			
					ØD2	N-H-DP															
SB-V2H-1SD		B	F-25	200	254	8-M16-24	300	3	99	229	273.5	373	260.5	34	26	8X7	400	PF3-1/2"			
SB-V3H-1SD			F-30	230	298	8-M20-30	350		118	263	310	407	280.5				500	PF4"			
SB-V35H-1SD			F-35	260	356	8-M30-45	415		143	316	373	511	369				34	32	10X8	630	PF5"
SB-V4H-1SD									155	342	401	537	394							PF6"	
SB-V5H-1SD			F-40	300	406	8-M36-55	475		172	376	444	625	426				710				
SB-V55H-1SD		C	F-48	370	483	12-M36-55	560	5	186	410	479	659	446	34	32	10X8	800	PF6"			
SB-V6H-1SD			F-48	370	483	12-M36-55	560		197	429	511	726.5	498	44	38	12X8	800	PF8"			
SB-V7H-1SD			F-48						217	475	562	772.5	526				900				
SB-V75H-1SD		D	F-60	470	603	20-M36-55	700	5	229	505	597	885	666	58	50	16X10	1000	PF10"			
SB-V8H-1SD			F-60	470	603	20-M36-55	700		242	540	635	920	697	58	50	16X10	1000				
SB-V85H-1SD			F-60						269	612	706	992	741				1000	PF12"			
SB-V9H-1SD			F-80	650	800	20-M42-63	900		281	636	739	1124	876								
SB-V10H-1SD			F-80						305	701	816	1189	941								

Spiral Bevel Gear Actuators



Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.



❖ Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

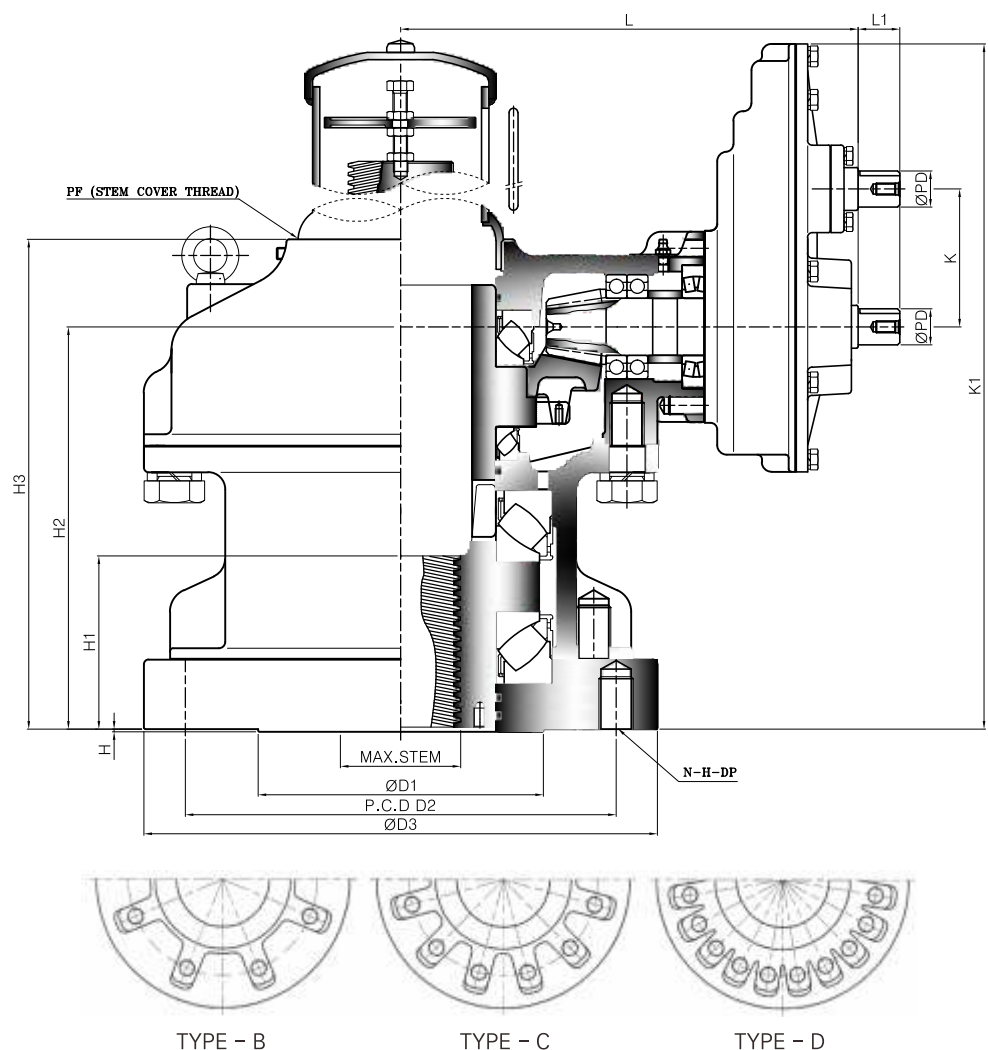
❖ Selection Chart for Manual Operation

MODEL	SIZE	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2H-1SD		25.67 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	71
SB-V3H-1SD		32.08 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	102
SB-V35H-1SD		49.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	174
SB-V4H-1SD		54 : 1	110	95 (25X14)		2900	651900	9800	7228	216
SB-V5H-1SD		80.31 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	280
SB-V55H-1SD		85.75 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	407
SB-V6H-1SD		112 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	566
SB-V7H-1SD		120.88 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	636
SB-V75H-1SD		200 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	965
SB-V8H-1SD		200 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1055
SB-V85H-1SD		200 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1320
SB-V9H-1SD		200 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1932
SB-V10H-1SD		200 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2104

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STANDARD TYPE-E Twin Shaft

High Load Thrust & Torque (Twin Shaft) Horizontal Input
with Double Reduction Gear Attachment

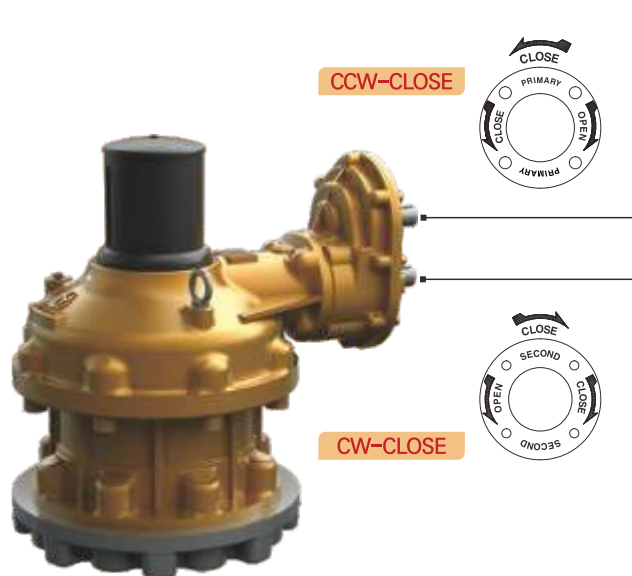


Dimension

UNIT : mm

DIM MODEL	BASE PART						EXTERNAL PART						INPUT SHAFT PART			H AND 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-V2H-1SDT	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	69	373	260.5	34	26	8X7	400	PF3-1/2"
SB-V3H-1SDT		F-30	230	298	8-M20-30	350		118	263	310		407	280.5				500	PF4"
SB-V35H-1SDT		F-35	260	356	8-M30-45	415		143	316	373	93	511	369				34	32
SB-V4H-1SDT								155	342	401		537	394	710	PF6"			
SB-V5H-1SDT								F-40	300	406		8-M36-55	475			172		
SB-V55H-1SDT	C	F-48	370	483	12-M36-55	560	5	186	410	479	121	659	446	34	32	10X8	710	PF6"
SB-V6H-1SDT		F-48	370	483	12-M36-55	560		197	429	511	145	726.5	498	44	38	12X8	800	PF8"
SB-V7H-1SDT		F-48						217	475	562		772.5	526				900	
SB-V75H-1SDT	D	F-60	470	603	20-M36-55	700	5	229	505	597	186	885	666	58	50	16X10	1000	PF10"
SB-V8H-1SDT		F-60	470	603	20-M36-55	700		242	540	635		920	697	58	50	16X10	1000	
SB-V85H-1SDT		F-60						269	612	706		992	741					
SB-V9H-1SDT		F-80	650	800	20-M42-63	900		281	636	739	238	1124	876	58	50	16X10	1000	PF12"
SB-V10H-1SDT		F-80						305	701	816		1189	941					

Spiral Bevel Gear Actuators



Primary Input Shaft (High Speed Input Shaft)

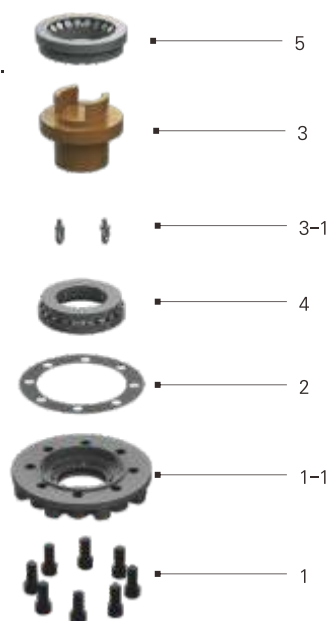
Allow for less turns after valve has been unseating.

Second Input Shaft (Low Speed Input Shaft)

Provides maximum mechanical advantage for seating and unseating of valves.

Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.



Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

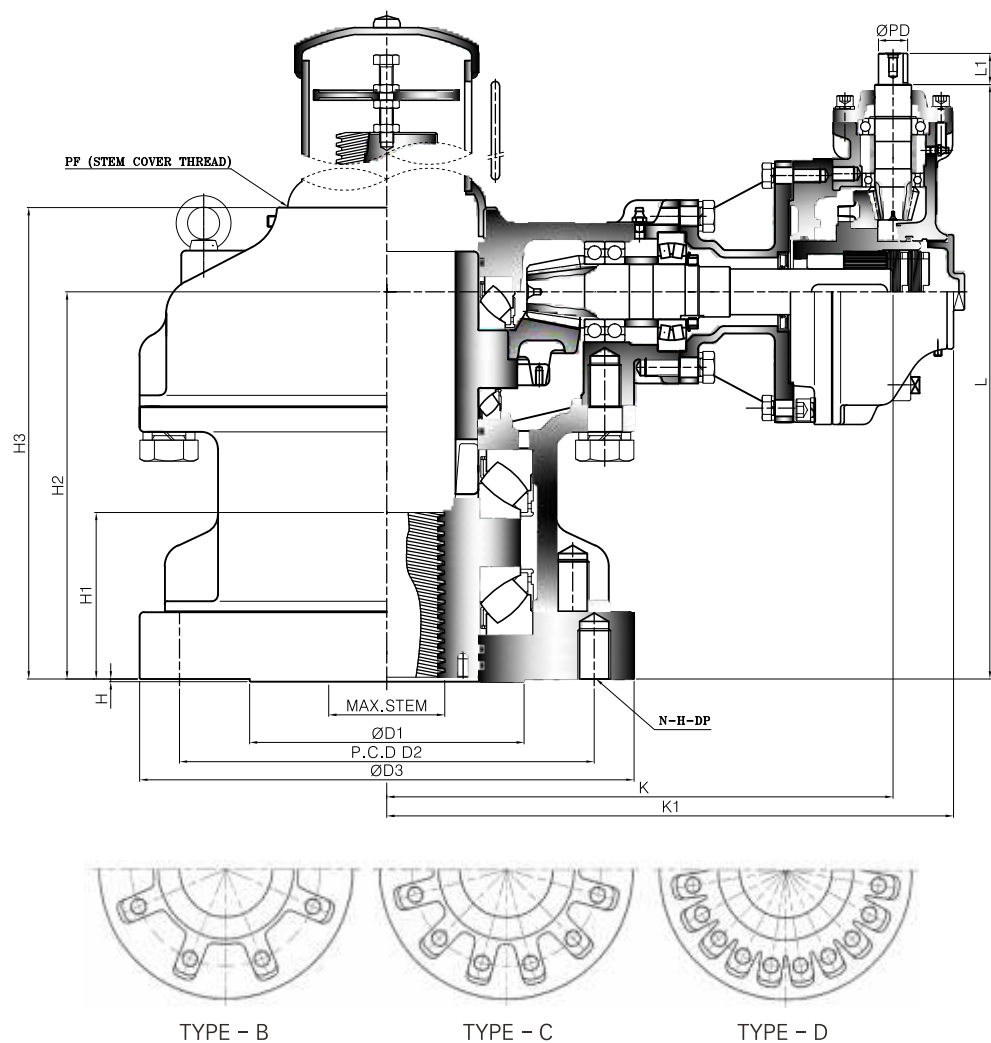
Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2H-1SDT	10.13 : 1	25.67 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	71
SB-V3H-1SDT	12.66 : 1	32.08 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	102
SB-V35H-1SDT	16.5 : 1	49.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	174
SB-V4H-1SDT	18 : 1	54 : 1	110	95 (25X14)		2900	651900	9800	7228	216
SB-V5H-1SDT	22.94 : 1	80.31 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	280
SB-V55H-1SDT	24.5 : 1	85.75 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	407
SB-V6H-1SDT	28 : 1	112 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	566
SB-V7H-1SDT	30.22 : 1	120.88 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	636
SB-V75H-1SDT	40 : 1	200 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	965
SB-V8H-1SDT	40 : 1	200 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1055
SB-V85H-1SDT	40 : 1	200 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1320
SB-V9H-1SDT	40 : 1	200 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1932
SB-V10H-1SDT	40 : 1	200 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2104

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

STANDARD TYPE-E

High Load Thrust & Torque Vertical Input
with Single Reduction Gear Attachment



Dimension

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-V2H-2B	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	299	340	350	34	26	8X7	300	PF3-1/2"			
SB-V3H-2B		F-30	230	298	8-M20-30	350		118	263	310	326.5	368	394				400	PF4"			
SB-V35H-2B		F-35	260	356	8-M30-45	415		143	316	373	415	474	470.5				34	32	10X8	400	PF5"
SB-V4H-2B								155	342	401	457	521	509							500	PF6"
SB-V5H-2B								F-40	300	406	8-M36-55	475	172							376	444
SB-V55H-2B	C	F-48	370	483	12-M36-55	560	5	186	410	479	439	508.5	598	34	32	10X8	630	PF6"			
SB-V6H-2B		F-48	370	483	12-M36-55	560		197	429	511	482	557.5	637				710	PF8"			
SB-V7H-2B		F-48						217	475	562	510	585.5	683								
SB-V75H-2B	D	F-60	470	603	20-M36-55	700	5	229	505	597	567	639	771	44	38	12X8	800	PF10"			
SB-V8H-2B		F-60	470	603	20-M36-55	700		242	540	635	608	670	806				900	900	PF12"		
SB-V85H-2B		F-60						269	612	706	654	730	903								
SB-V9H-2B		F-80						650	800	20-M42-63	900	281	636				739			749	833
SB-V10H-2B		F-80	305	701	816	845						938	1076				58	50	16X10	1000	

Spiral Bevel Gear Actuators

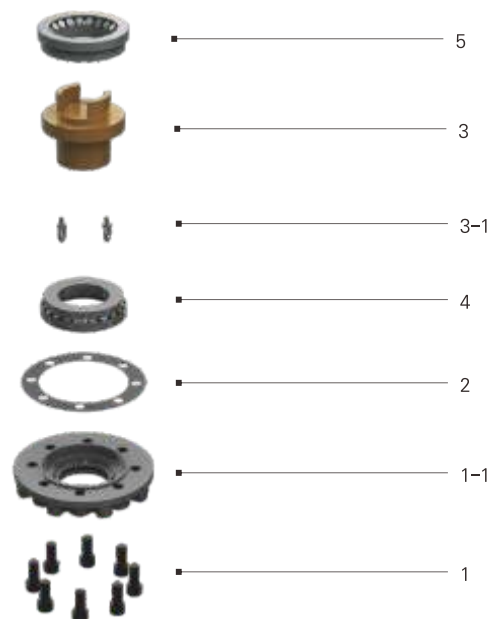


Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.

❖ Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



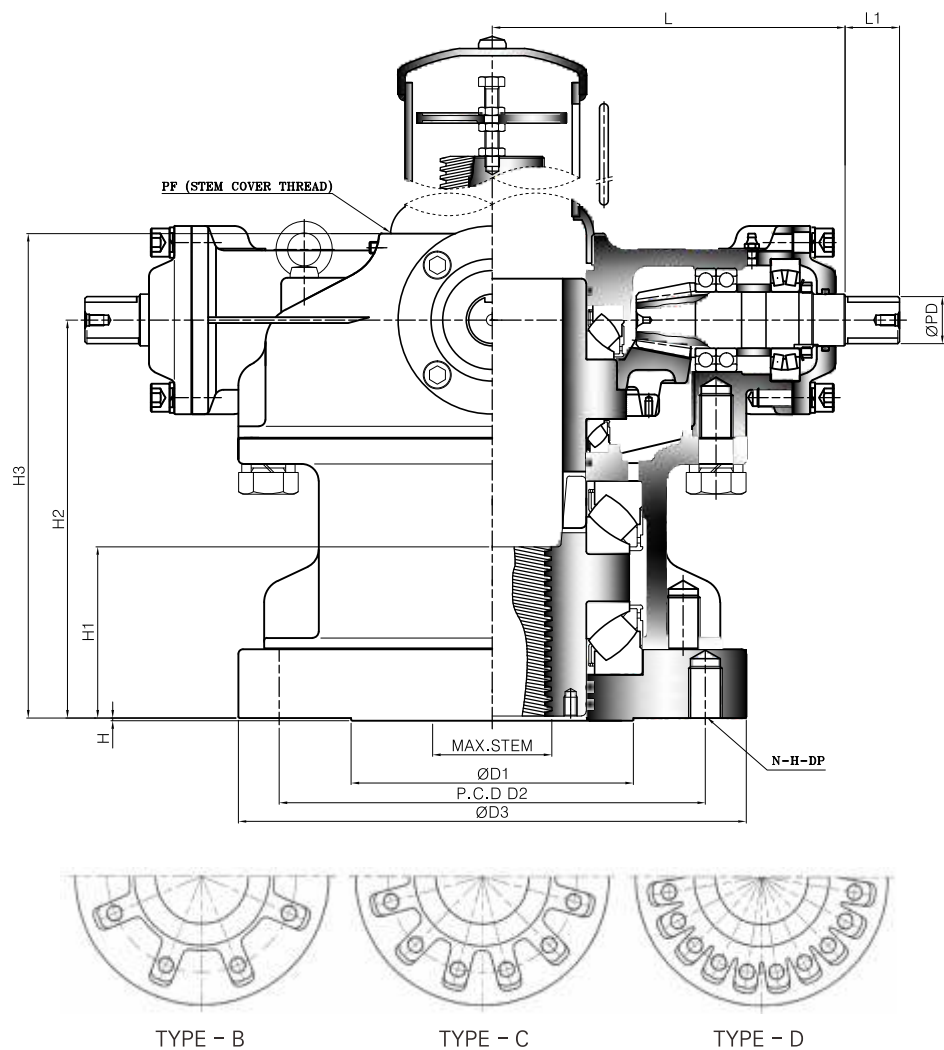
❖ Selection Chart for Manual Operation

MODEL	SIZE	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	GEAR RATIO	TW	KEY		KN	lbf	N-m	Ft . lbf	Kg
SB-V2H-2B	10 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	71
SB-V3H-2B	15 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	105
SB-V35H-2B	17.87 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	173
SB-V4H-2B	21 : 1	110	95 (25X14)		2900	651900	9800	7228	222
SB-V5H-2B	26.22 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	297
SB-V55H-2B	35 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	424
SB-V6H-2B	35 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	565
SB-V7H-2B	37.77 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	635
SB-V75H-2B	40 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	943
SB-V8H-2B	44 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1032
SB-V85H-2B	48 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1319
SB-V9H-2B	52.44 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1951
SB-V10H-2B	56 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2207

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

STANDARD TYPE-F Multiple Input Shaft

High Load Thrust & Torque Horizontal Input



Dimension

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	99	229	273.5	188	34	32	10X8	630	PF3-1/2"
SB-V3HW		F-30	230	298	8-M20-30	350		118	263	310.5	208				710	PF4"
SB-V35HW		F-35	260	356	8-M30-45	415		143	316	373	266				44	38
SB-V4HW								155	342	401	291	900	PF6"			
SB-V5HW								F-40	300	406	8-M36-55			475	172	376
SB-V55HW	C	F-48	370	483	12-M36-55	560	5	186	410	479	333	44	38	12X8	900	PF6"
SB-V6HW		F-48	370	483	12-M36-55	560		197	429	511	381	58	50	16X10	1000	PF8"
SB-V7HW		F-48						217	475	562	409					
SB-V75HW	D	F-60	470	603	20-M36-55	700	5	229	505	597	441	58	50	16X10	1000	PF10"
SB-V8HW		F-60	470	603	20-M36-55	700		242	540	635	472					
SB-V85HW		F-60						269	612	706	525					
SB-V9HW		F-80						650	800	20-M42-63	900					281
SB-V10HW		F-80	305	701	816	664										

Spiral Bevel Gear Actuators

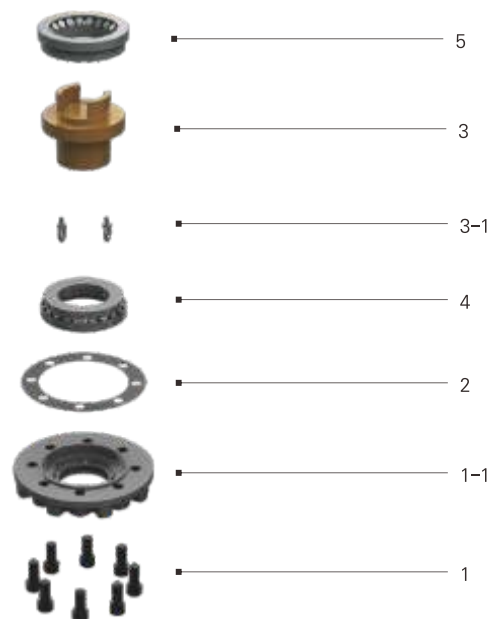


Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.

❖ Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



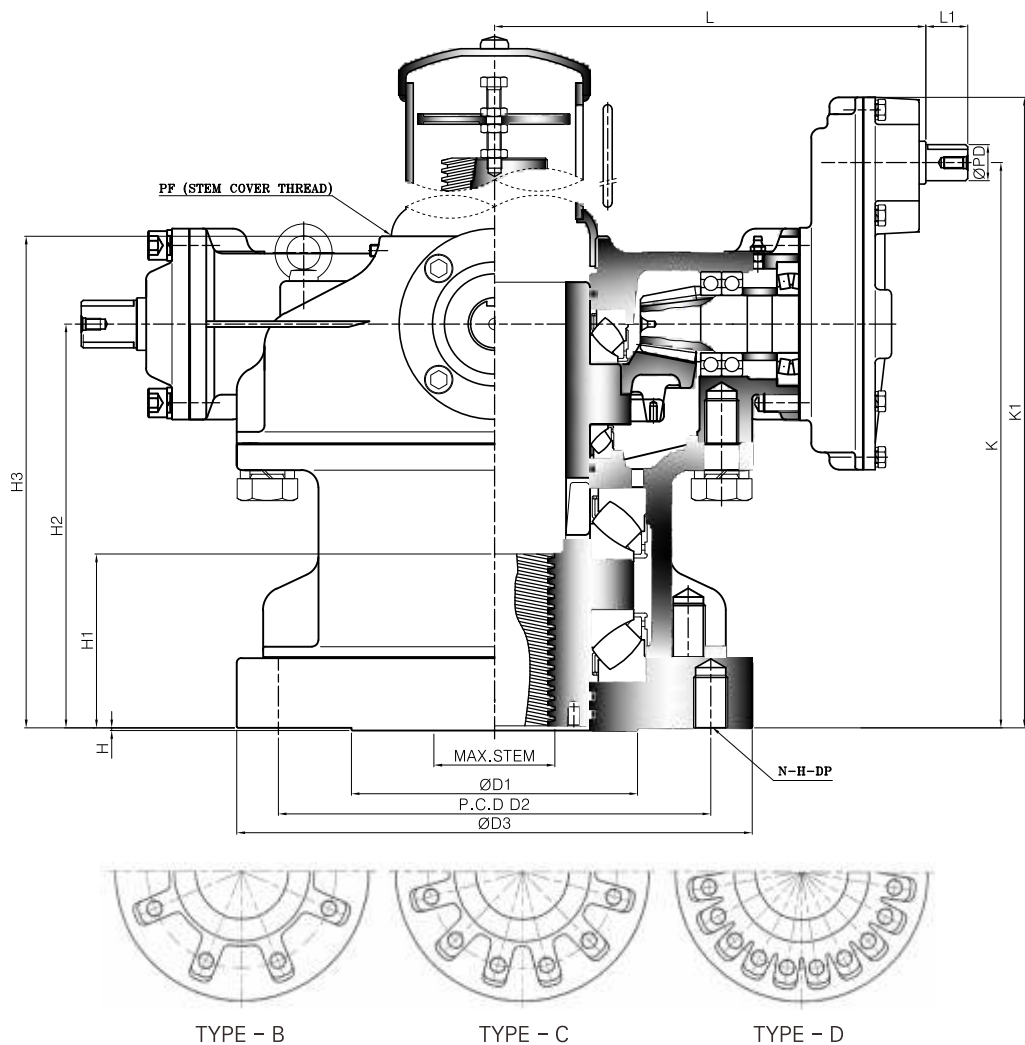
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		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	1080	242800	2900	2139	65
SB-V3HW	5 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	96
SB-V35HW	5.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	162
SB-V4HW	6 : 1	110	95 (25X14)		2900	651900	9800	7228	207
SB-V5HW	6.56 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	273
SB-V55HW	7 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	399
SB-V6HW	7 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	535
SB-V7HW	7.56 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	607
SB-V75HW	8 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	878
SB-V8HW	8 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	970
SB-V85HW	8 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1238
SB-V9HW	8 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1819
SB-V10HW	8 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2002

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

STANDARD TYPE-F Multiple Input Shaft

High Load Thrust & Torque Horizontal Input with Single Reduction Gear Attachment



Dimension

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-V2HW-1S	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	322	370	236.5	34	26	8X7	400	PF3-1/2"
SB-V3HW-1S		F-30	230	298	8-M20-30	350		118	263	310	356	404	256.5				500	PF4"
SB-V35HW-1S		F-35	260	356	8-M30-45	415		143	316	373	437	494	333	34	32	10X8	630	PF5"
SB-V4HW-1S								155	342	401	463	520	358				710	PF6"
SB-V5HW-1S		F-40	300	406	8-M36-55	475		172	376	444	521	584	387	710	PF6"			
SB-V55HW-1S	C	F-48	370	483	12-M36-55	560	5	186	410	479	555	617	407	34	32	10X8	710	PF6"
SB-V6HW-1S		F-48	370	483	12-M36-55	560		197	429	511	598	666	472	44	38	12X8	800	PF8"
SB-V7HW-1S		F-48						217	475	562	644	713	497				900	
SB-V75HW-1S	D	F-60	470	603	20-M36-55	700	5	229	505	597	735	821	620	58	50	16X10	1000	PF10"
SB-V8HW-1S								242	540	635	770	856	651					
SB-V85HW-1S		F-60						269	612	706	842	928	695					PF12"
SB-V9HW-1S		F-80	650	800	20-M42-63	900		281	636	739	920	1036	821					
SB-V10HW-1S		F-80						305	701	816	985	1101	886					

Spiral Bevel Gear Actuators

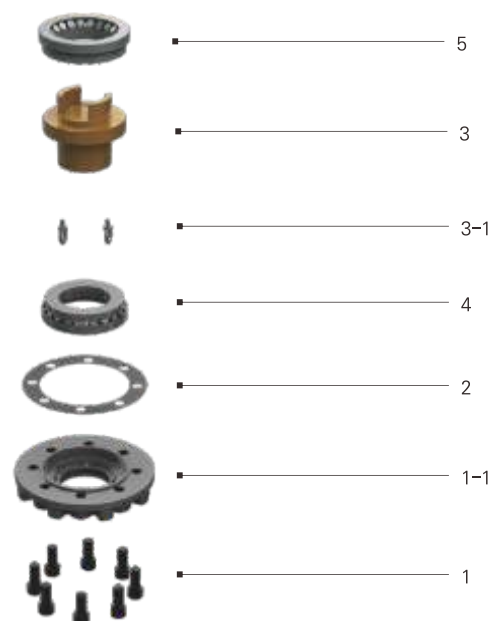


Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.

❖ Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



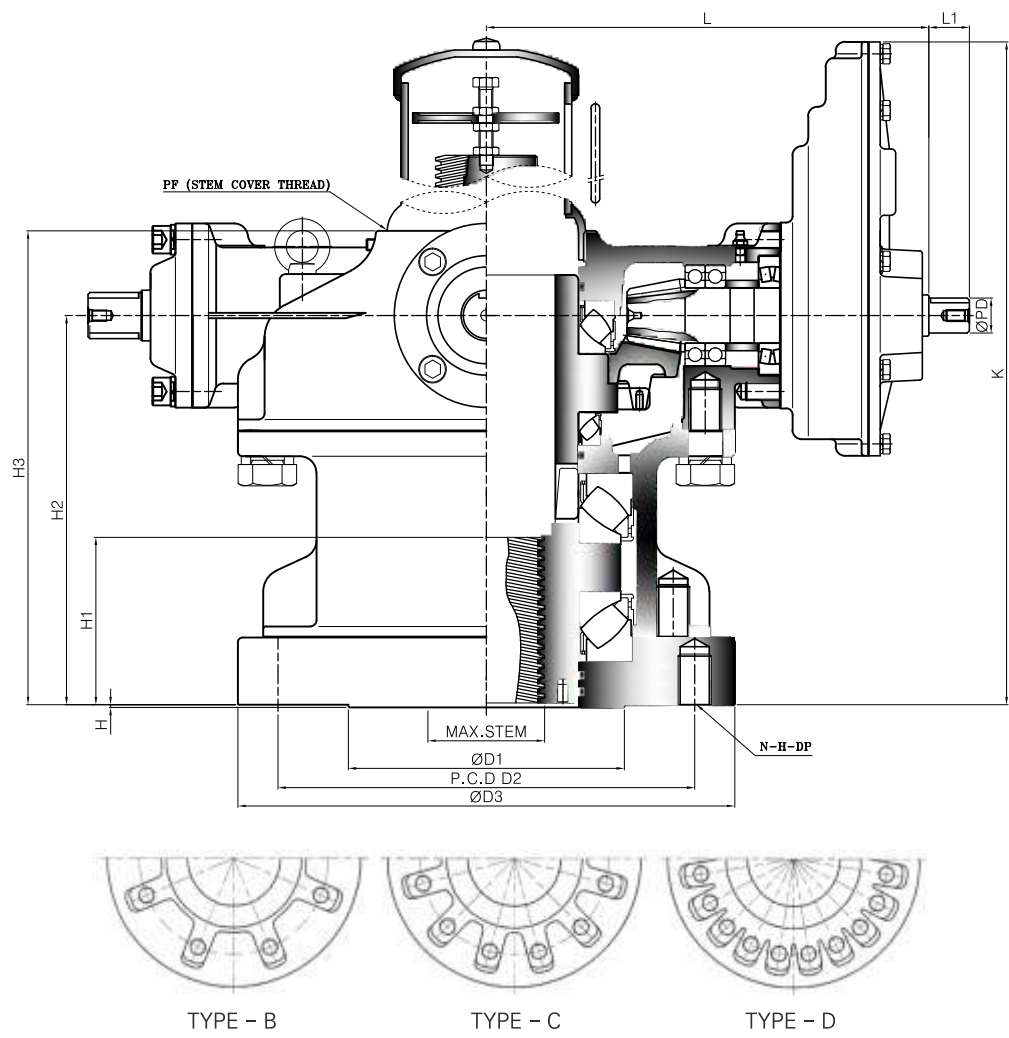
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE		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	1080	242800	2900	2139	73
SB-V3HW-1S	12.66 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	104
SB-V35HW-1S	16.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	174
SB-V4HW-1S	18 : 1	110	95 (25X14)		2900	651900	9800	7228	219
SB-V5HW-1S	22.94 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	285
SB-V55HW-1S	24.5 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	412
SB-V6HW-1S	28 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	563
SB-V7HW-1S	30.22 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	635
SB-V75HW-1S	40 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	950
SB-V8HW-1S	40 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1042
SB-V85HW-1S	40 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1310
SB-V9HW-1S	40 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1916
SB-V10HW-1S	40 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2099

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

STANDARD TYPE-F Multiple Input Shaft

High Load Thrust & Torque Horizontal Input with Double Reduction Gear Attachment



Dimension

UNIT : mm

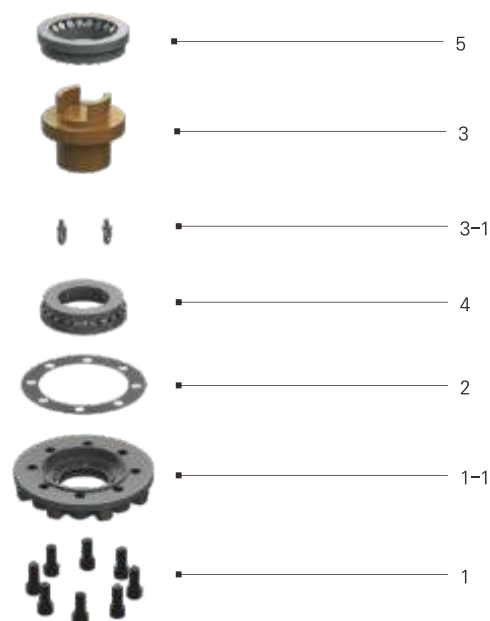
DIM MODEL		BASE PART						EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	L	L1	ØPD			KEY
					ØD2	N-H-DP												
SB-V2HW-1SD		B	F-25	200	254	8-M16-24	300	3	99	229	273.5	373	260.5	34	26	8X7	400	PF3-1/2"
SB-V3HW-1SD			F-30	230	298	8-M20-30	350		118	263	310	407	280.5				500	PF4"
SB-V35HW-1SD			F-35	260	356	8-M30-45	415		143	316	373	511	369	34	32	10X8	630	PF5"
SB-V4HW-1SD									155	342	401	537	394				710	PF6"
SB-V5HW-1SD									F-40	300	406	8-M36-55	475					
SB-V55HW-1SD		C	F-48	370	483	12-M36-55	560	5	186	410	479	659	446	34	32	10X8	710	PF6"
SB-V6HW-1SD			F-48	370	483	12-M36-55	560		197	429	511	726.5	498	44	38	12X8	800	PF8"
SB-V7HW-1SD									217	475	562	772.5	526				900	
SB-V75HW-1SD		D	F-60	470	603	20-M36-55	700	5	229	505	597	885	666	58	50	16X10	1000	PF10"
SB-V8HW-1SD			F-60	470	603	20-M36-55	700		242	540	635	920	697					
SB-V85HW-1SD			F-60						269	612	706	992	741					
SB-V9HW-1SD			F-80	650	800	20-M42-63	900		281	636	739	1124	876				1000	PF12"
SB-V10HW-1SD			F-80						305	701	816	1189	941					

Spiral Bevel Gear Actuators



Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.



Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

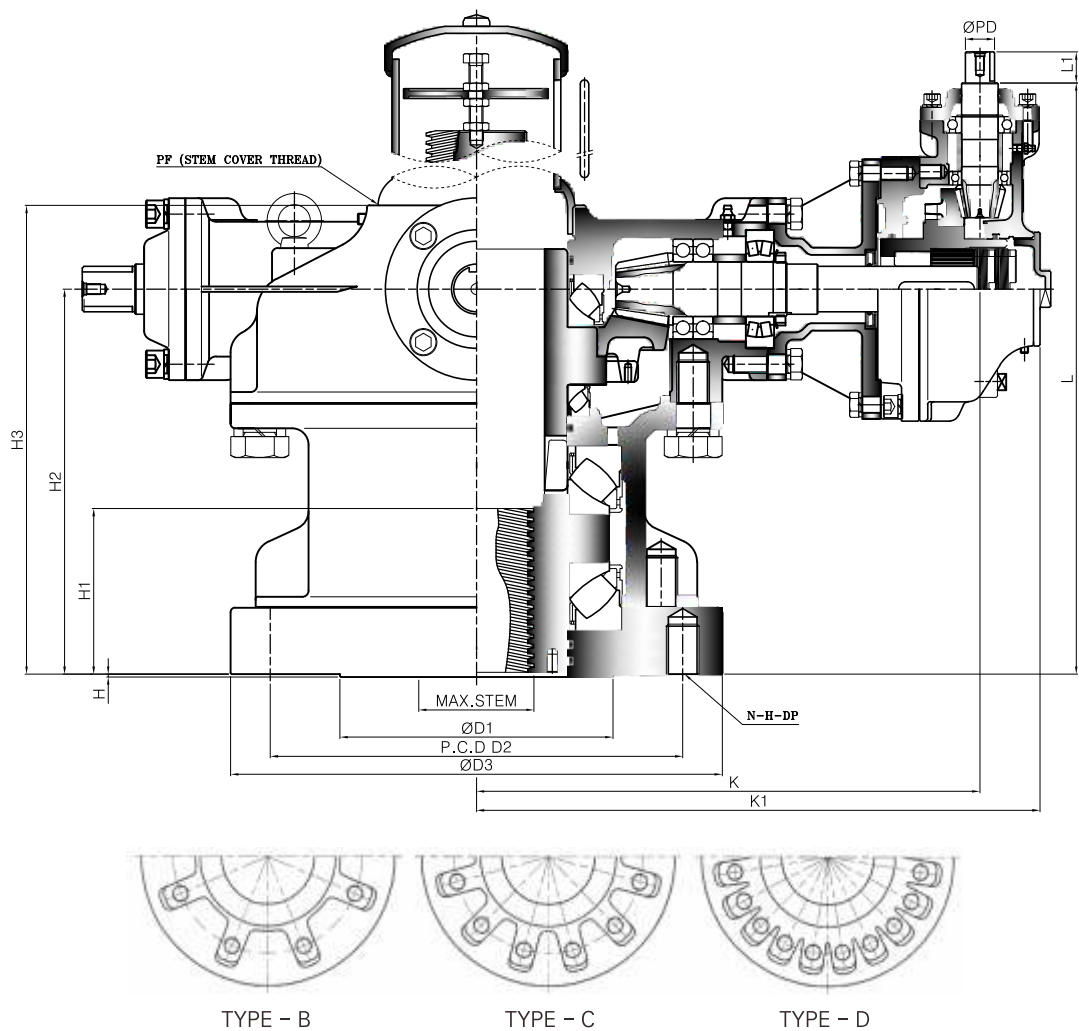
Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
		TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2HW-1SD	25.67 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	74
SB-V3HW-1SD	32.08 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	105
SB-V35HW-1SD	49.5 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	178
SB-V4HW-1SD	54 : 1	110	95 (25X14)		2900	651900	9800	7228	223
SB-V5HW-1SD	80.31 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	289
SB-V55HW-1SD	85.75 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	416
SB-V6HW-1SD	112 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	576
SB-V7HW-1SD	120.88 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	648
SB-V75HW-1SD	200 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	978
SB-V8HW-1SD	200 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1070
SB-V85HW-1SD	200 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1338
SB-V9HW-1SD	200 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1954
SB-V10HW-1SD	200 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2137

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

STANDARD TYPE-F Multiple Input Shaft

High Load Thrust & Torque Vertival Input with Single Reduction Gear Attachment



Dimension

UNIT : mm

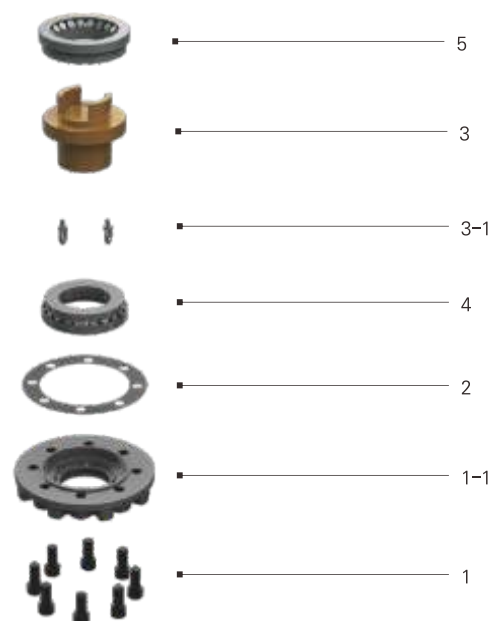
DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER				
	TYPE	FLANGE	ØD1	P.C,D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD	KEY						
				ØD2	N-H-DP																	
SB-V2HW-2B	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	299	340	350	34	26	8X7	300	PF3-1/2"				
SB-V3HW-2B		F-30	230	298	8-M20-30	350		118	263	310	326.5	368	394					PF4"				
SB-V35HW-2B		F-35	260	356	8-M30-45	415		143	316	373	415	474	470.5					34	32	10X8	400	PF5"
SB-V4HW-2B								155	342	401	457	521	509								500	PF6"
SB-V5HW-2B								F-40	300	406	8-M36-55	475	172								376	444
SB-V55HW-2B	C	F-48	370	483	12-M36-55	560	5	186	410	479	439	508.5	598	34	32	10X8	630	PF6"				
SB-V6HW-2B		F-48	370	483	12-M36-55	560		197	429	511	482	557.5	637				710	PF8"				
SB-V7HW-2B		F-48						217	475	562	510	585.5	683									
SB-V75HW-2B	D	F-60	470	603	20-M36-55	700	5	229	505	597	567	639	771	44	38	12X8	800	PF10"				
SB-V8HW-2B		F-60	470	603	20-M36-55	700		242	540	635	608	670	806									
SB-V85HW-2B		F-60						269	612	706	654	730	903				900	PF12"				
SB-V9HW-2B		F-80						650	800	20-M42-63	900	281	636						739	749	833	970
SB-V10HW-2B		F-80	305	701	816	845						938	1076						58	50	16X10	1000

Spiral Bevel Gear Actuators



Disassembly flow chart of thrust bush for processing of stem thread

1. Remove base plate socket head cap screws and base plate.
2. Remove Gasket
3. Use eye-bolts from housing and thread into tapped holes on end of the drive bushing.
4. Lift drive bushing with lower roller bearing.
5. Remove roller bearing from drive bushing.
6. Thread bushing as required.
7. Add grease as necessary.
8. Re-assembly in reverse order.



❖ Feature

- This series suitable for extreme high thrust loads for use with Gate & Glove type valves. Also sluice gates and any other type requiring linear motion for high load thrust and torque applications.
- Bottom entry type stem nut. High tensile aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

❖ Selection Chart for Manual Operation

MODEL \ SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2HW-2B	10 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	74
SB-V3HW-2B	15 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	108
SB-V35HW-2B	17.87 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	7000	5163	177
SB-V4HW-2B	21 : 1	110	95 (25X14)		2900	651900	9800	7228	229
SB-V5HW-2B	26.22 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	15000	11063	321
SB-V55HW-2B	35 : 1	140	120 (32X18)	F-35, F-40, F-48	4200	944197	19000	14014	433
SB-V6HW-2B	35 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	23000	16964	575
SB-V7HW-2B	37.77 : 1	170	150 (40X22)	F-48	5200	1169000	37000	27290	647
SB-V75HW-2B	40 : 1	190	170 (40X22)	F-48, F-60	6800	1528701	46000	33928	956
SB-V8HW-2B	44 : 1	215	185 (45X25)	F-48, F-60	7650	1719800	58000	42778	1047
SB-V85HW-2B	48 : 1	225	195 (45X25)	F-48, F-60	9100	2045760	74000	54579	1337
SB-V9HW-2B	52.44 : 1	240	215 (50X28)	F-60, F-80	9400	2113200	104000	76706	1973
SB-V10HW-2B	56 : 1	270	240 (56X32)	F-60, F-80	11500	2585300	142000	104734	2240

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

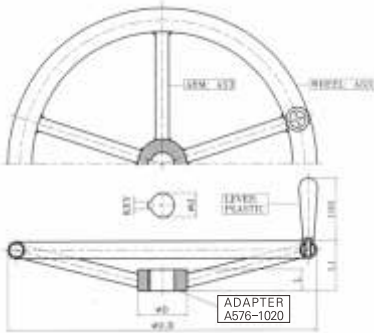
Handwheel Type

❖ Spiral Bevel Standard Handwheel : Gate Valve

UNIT : mm

SIZE MODEL	Φ0.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
BH-250	250	60	Φ26 8X7	35	70	4EA
BH-300	300				90	5EA
BH-400	400					
BH-500	500	70	Φ32 10X8	35	110	5EA
BH-630	630					
BH-710	710					
BH-800	800	80	Φ38 12X8	45	130	6EA
BH-900	900					
BH-1000	1000					

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 models.

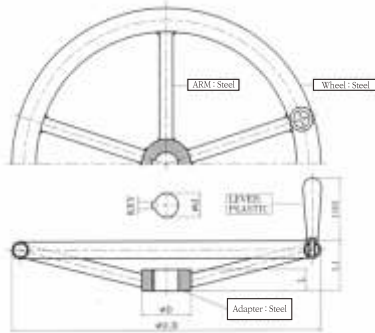


❖ SOLID HANDWHEEL

UNIT : mm

SIZE MODEL	Φ0.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
BSH-250	250	60	Φ26 8X7	35	70	4EA
BSH-300	300				90	5EA
BSH-400	400					
BSH-500	500	70	Φ32 10X8	35	110	5EA
BSH-630	630					
BSH-710	710					
BSH-800	800	80	Φ38 12X8	45	130	6EA
BSH-900	900					
BSH-1000	1000					

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 models.

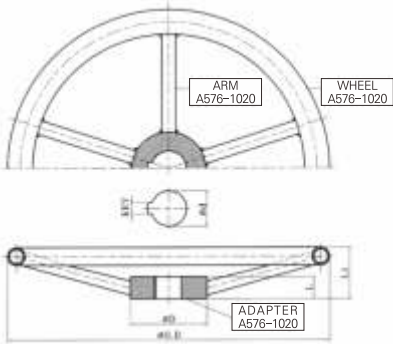


❖ Round Bar Handwheel : Globe Valve

UNIT : mm

SIZE MODEL	Φ0.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
BRH-250	250	80	Φ26 8X7	35	55	4EA
BRH-300	300				60	5EA
BRH-400	400					
BRH-500	500	100	Φ32 10X8	35	65	5EA
BRH-630	630					
BRH-710	710					
BRH-800	800	140	Φ38 12X8	45	70	6EA
BRH-900	900					
BRH-1000	1000					

All material of round bar handwheel are made by carbon steel and it is used for required momentary impact to be suitable globe valve.

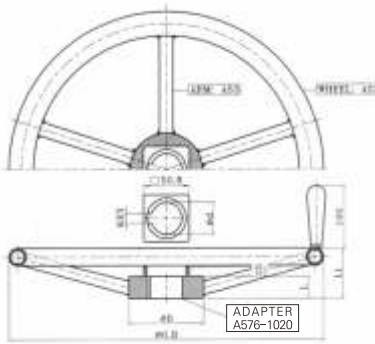


❖ Drive Nut Handwheel

UNIT : mm

SIZE MODEL	Φ0.D	ΦD	ΦD&KEY	L	L1	ARM Q'TY
BDNH-250	250	90	Φ26 8X7	35	70	4EA
BDNH-300	300				90	5EA
BDNH-400	400					
BDNH-500	500	90	Φ32 10X8	35	110	5EA
BDNH-630	630					
BDNH-710	710					
BDNH-800	800	90	Φ38 12X8	45	130	6EA
BDNH-900	900					
BDNH-1000	1000					

This Handwheel is the type using air impact wrench and it can be made properly according to customer's request.



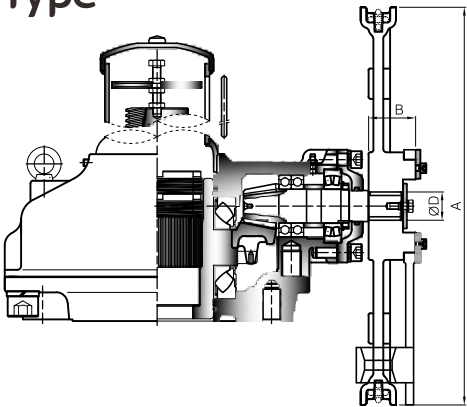
Chain wheel Type

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	51.5	Φ38 - 12X8 Φ50 - 16X10
CH-700	700		
CH-800	800	53	

Gear Type



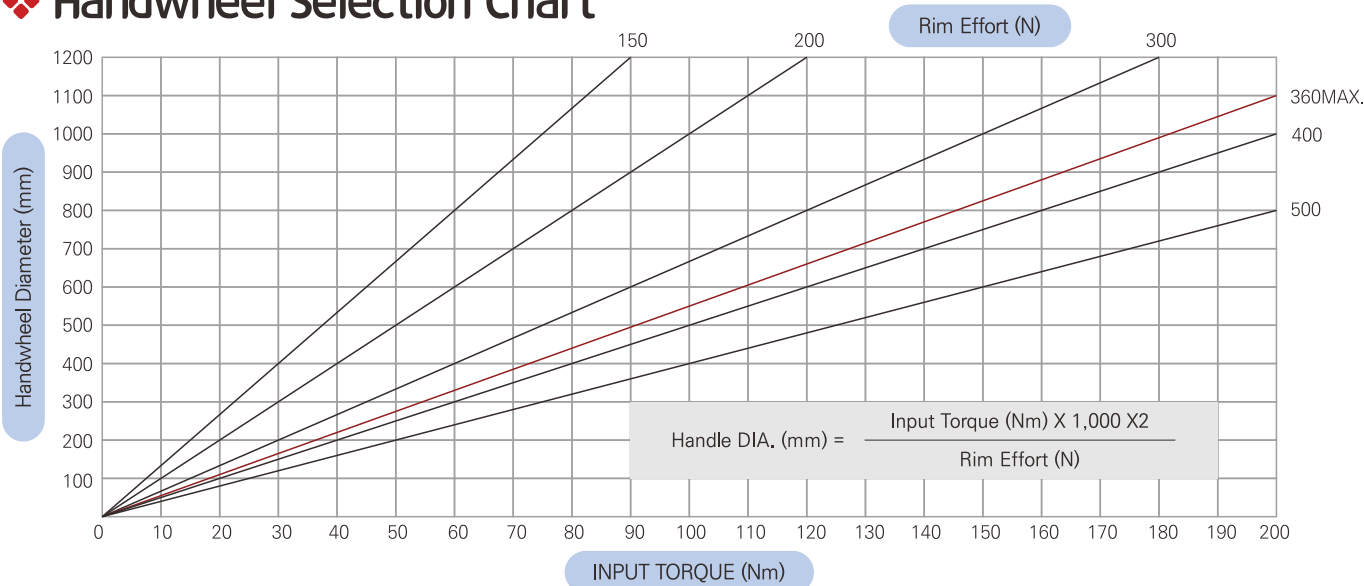
Hammer Type



Chainwheel has 2 types

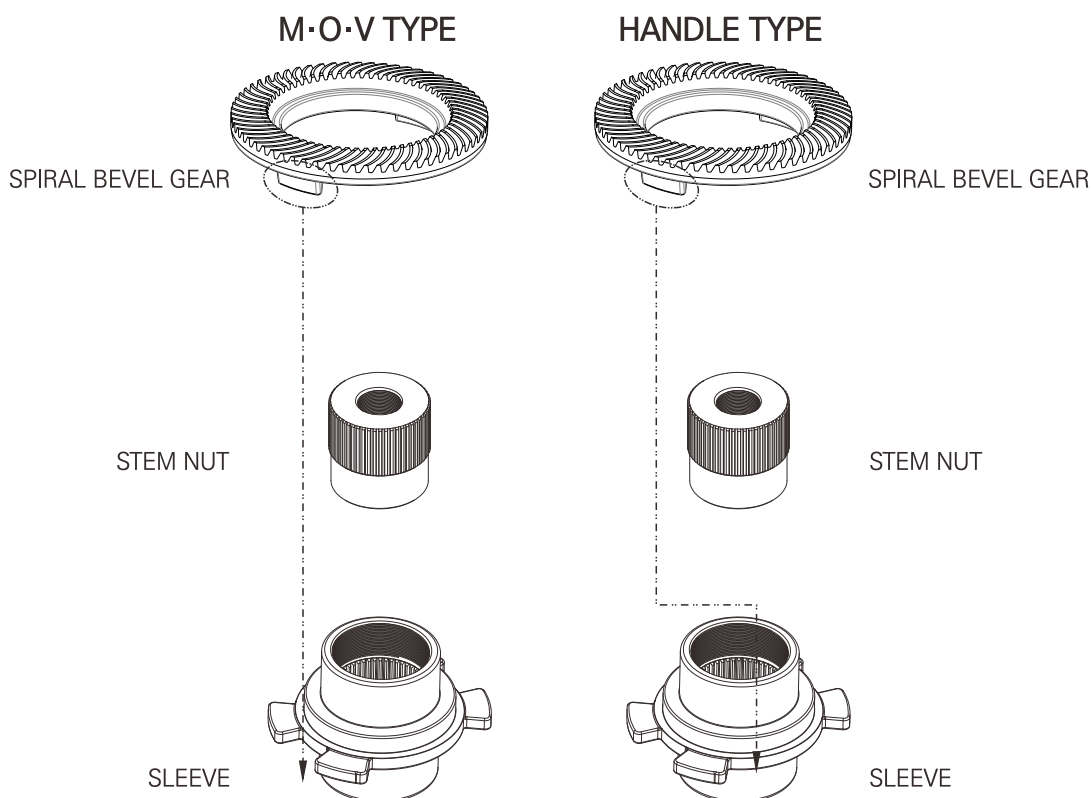
- First, hammer type which is joined with handwheel.
- Second, gear type which is adhered to gear directly.
- material : sprocket rim (FCD450), guide arm (A576-1045), chain (steel+zn)

Handwheel Selection Chart



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

The SB Series Spiral Bevel Gears have the ability to be assembled with “Lost-Motion-[Hammer blow]” or with “No-Lost Motion” output drive arrangement



❖ Fix Type (M-O-V)

No-Lost Motion

This type eliminates the gap in the lug drive between the Spiral Bevel Gear and Drive Sleeve.

It is the preferred method for Electric Actuators having positioning control capability.

❖ Hammer Blow Type (Handle)

Lost Motion

This type eliminates the gap in the lug drive between the Spiral Bevel Gear and Drive Sleeve enabling a momentary impact.

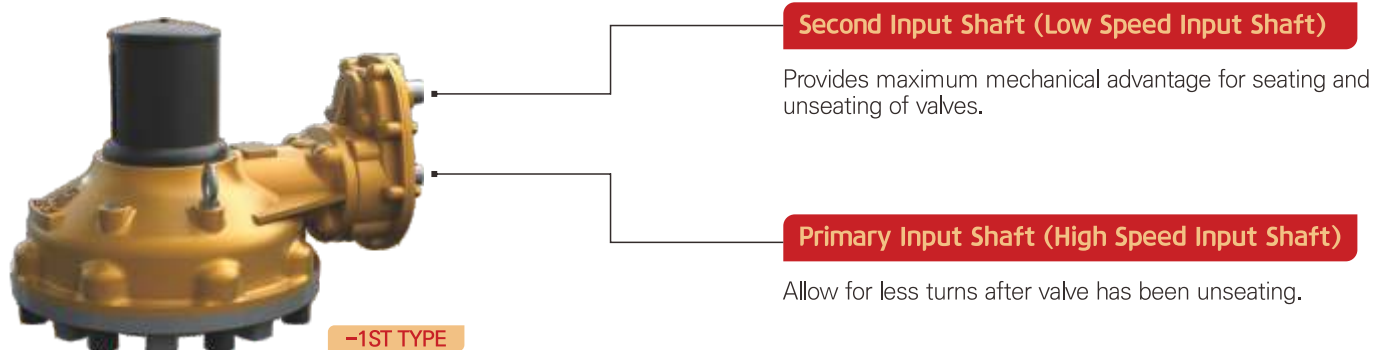
It is the preferred method for all Manual operation and for Electric Actuators of Wedge Gates and Globe Valves.

Spiral Bevel Gear Actuators

ETC

❖ Twin Shaft Gear Actuators Type

There are two input shafts in the below support box type. One shaft is for high speed and the other shaft is for low speed.



❖ Manual Both Ends

The below input shaft type is used to require Gear Actuators which is operated by 2 spindles. As option, there are motorized type, dial type and manual type.



❖ Manual - Motorised



❖ Valve Spindle Cover Tubes

Stem cover for valve can be offered as A53, SUS304, polycarbonate and etc. Stem cover and indicator sets can be made by several different types. The length of stem cover will be changed as per customer's request.



❖ The Other Used Options in SAMBO

Sambo's standard input shaft rotation is based on a clockwise input resulting in a clockwise output (Clockwise In = Clockwise Out).

The reverse rotation can be operated. As per customer's request, it can be made by such types as buried, submersible, marine, radiation and high & low temperature service and etc. Also, Gear ratio and specification of flange can be changed.

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

INDEX

Spur Gear Actuators



A

Standard Type A

Vertical Input

068 · 069

Standard Type A - Thrust & Torque (Twin Shaft)

Vertical Input with Single Reduction Gear Attachment

070 · 071

B

Standard Type B

Horizontal Input

072 · 073

C

Standard Type C - High Load

Thrust & Torque Vertical Input

074 · 075

Standard Type C - High Load

Thrust & Torque (Twin Shaft) Vertical Input
with Single Reduction Gear Attachment

076 · 077

Standard Type C - High Load

Thrust & Torque Horizontal Input

078 · 079



PRODUCTS

Spur Gear Actuators



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



❖ Part List & Material

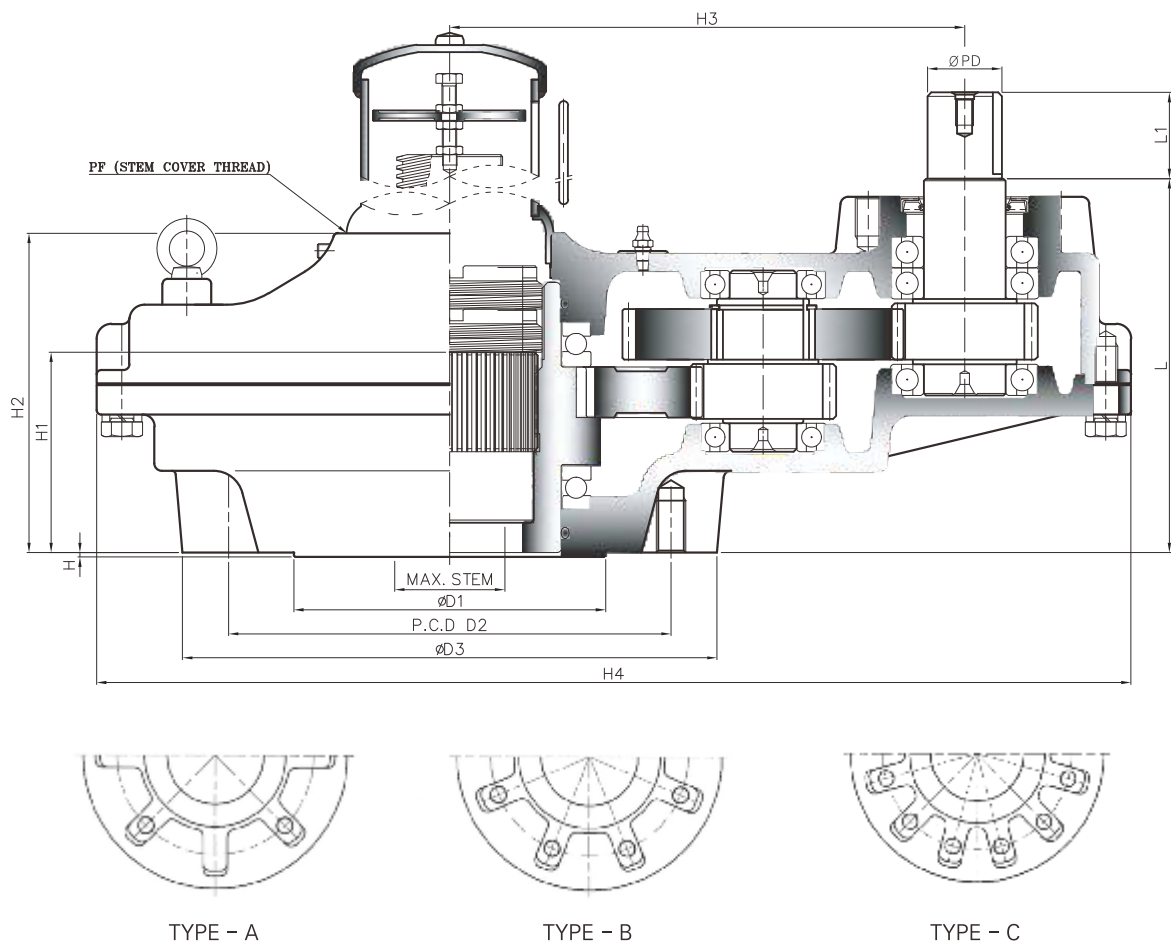
	NO	DESCRIPTION	MATERIAL			REMARK	
			NAME	JIS	ASTM		
STANDARD	1	Housing	Ductile Iron	FCD-450	A536-65-45-12		
	2	Base	Ductile Iron	FCD-450	A536-65-45-12		
	3	Drive Sleeve	Ductile Iron	FCD-450	A536-65-45-12		
	4	Dual Lock Nuts	Carbon Steel	S45C	A576-1045		
	5	M-Helical Gear	Carbon Steel	S45C	A576-1045		
	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		
	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	Buna N	NBR			
	17	Oil-Seal	Buna N	NBR			
	18	Gasket	Non Asbestos				VALQUA 6601
	19	Set Screw	Stainless Steel				
	20	Eye Bolt	Steel + Galvanizing				
OPTION	OP-01.	Stem Nut	Bronze	HBSC3	B584-C86200	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 Detail : Option and Material Changes

- All castings are Ductile Iron, FCD-450 (ASTM Class 65-45-12)
- In case of option for special request, it can be worked Nickel coating, high tensile stainless.
- Also, the material can be changed as ALBC3(Aluminium Bronze), steel(A576-1045), A439 Gr D2C (Austenitic ductile iron casting), etc.
- O-Ring Seal & Lubricant : Standard is Buna "N", temperature range -20°C to +120°C (-4°F to +248°F).
Standard lubricant is Zenith EPSB 2, temperature Range -20°C to +200°C (-4°F to +392°F).
Other option are : High Temperature Viton O-Ring Grade V75, Temperature Range -30°C to +200°C (-22°F to +392°F)
Lubricant – Zenith SYN WS2 Temperature Range -30°C~400°C (-13°F 752°F)
Low Temperature Silicone O-Ring, Temperature Range -60°C to +150°C (-76°F to +302°F)
Lubricant – Zenith SLP402, Temperature Range -60°C~140°C (-76°F 284°F)
- SAMBO offers a wide variety of Handwheels, Chainwheels, Input Shaft, Locking Devices and etc.
- SAMBO offers a wide variety of stem cover, stainless steel, Polycarbonate.
Paint : Unless specified, units are supplied with vp184 Red epoxy primer. SAMBO can provide finish coating upon request.

STANDARD TYPE-A

Vertical Input



Dimension

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	319		121	196	315	630	218	44	38	12X8	500	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				500	PF6"
SB-SR550		F-40	300	406	8-M36-55	449		172	263	413	840	302	58	50	16X10	500	PF6"
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
SB-SR750	F-48		370	483	12-M36-55	595	220	334		527	1095	383	710	PF10"			
SB-SR800	F-48		370	483	12-M36-55	630	233	354		559	1160	406	710	PF10"			

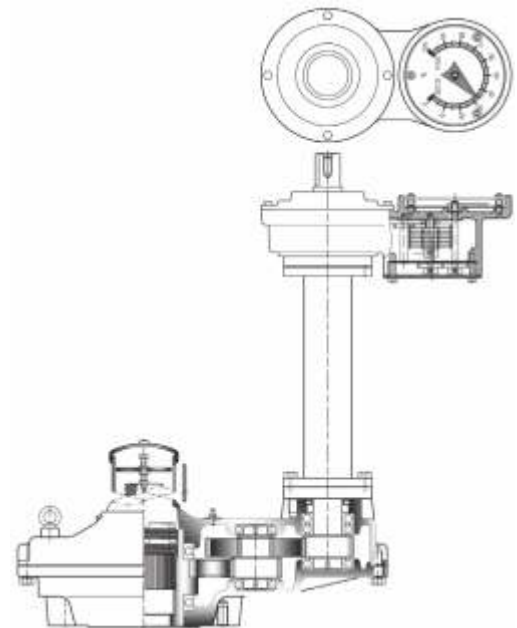
Spur Gear Actuators

❖ Feature

- This series suitable for use with Gate & Globe type valve.
Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut.
High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation. Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.



❖ Extension Dial Type



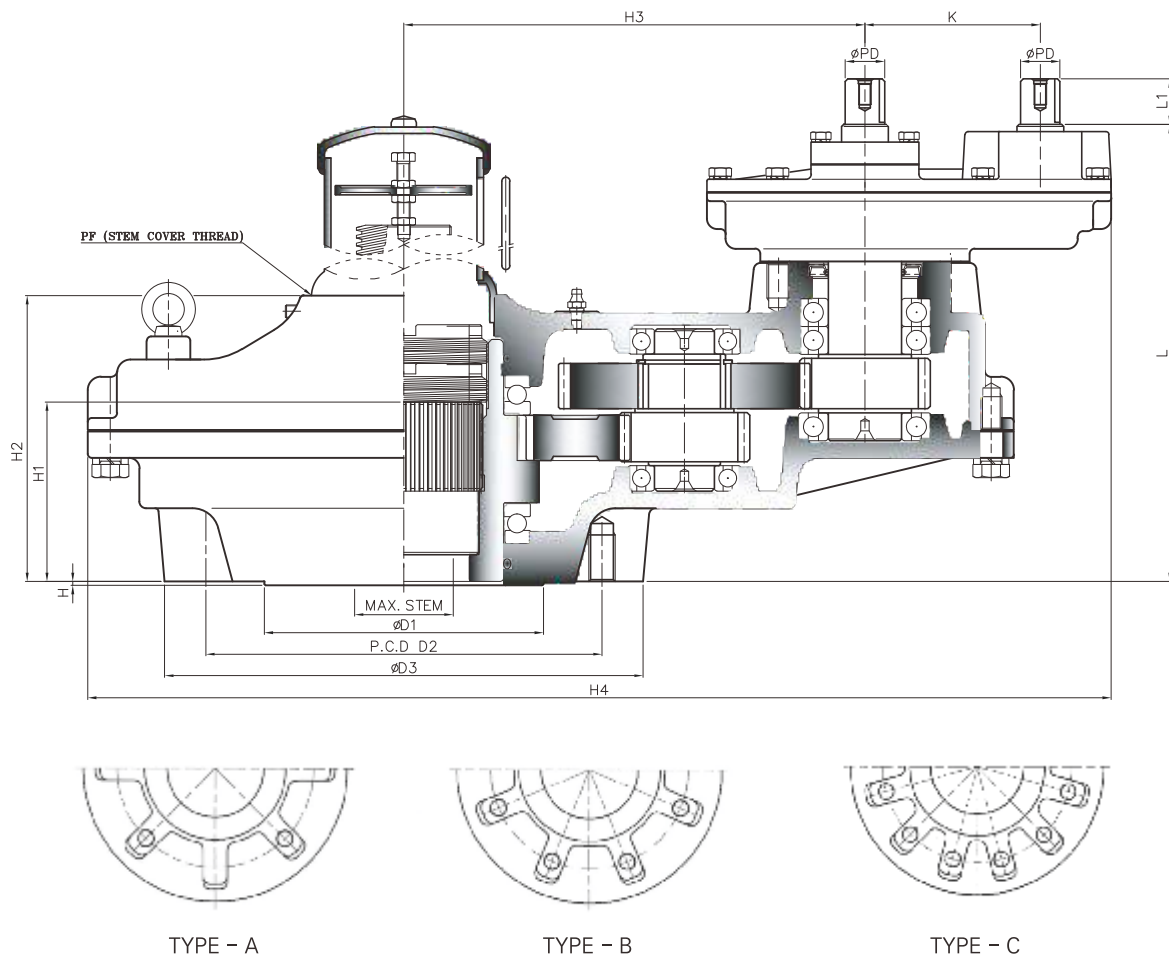
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-SR50	2~10 : 1	40	32 (10X8)	F-10, F-12	113	25400	370	273	16
SB-SR100	2.5~12 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	35
SB-SR200	3~12 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	48
SB-SR300	3~13 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	70
SB-SR350	4~13 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	101
SB-SR400	4~14 : 1	98	84 (22X14)	F-25, F-30	400	89920	5200	3835	132
SB-SR500	4~15 : 1	115	100 (28X16)	F-30, F-35	510	114650	7800	5753	220
SB-SR550	4~15 : 1	120	105 (28X16)	F-35, F-40	1500	337210	10400	7671	273
SB-SR600	5~16 : 1	130	115 (32X18)	F-35, F-40	2310	519300	13000	9588	325
SB-SR700	5~17 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	448
SB-SR750	5~17 : 1	160	140 (36X20)	F-48	3450	775590	21000	15489	539
SB-SR800	5~17 : 1	180	160 (40X22)	F-48	4100	921700	32000	23602	630

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

STANDARD TYPE-A Twin Shaft

Thrust & Torque (Twin Shaft) Vertical Input with Single Reduction Gear Attachment

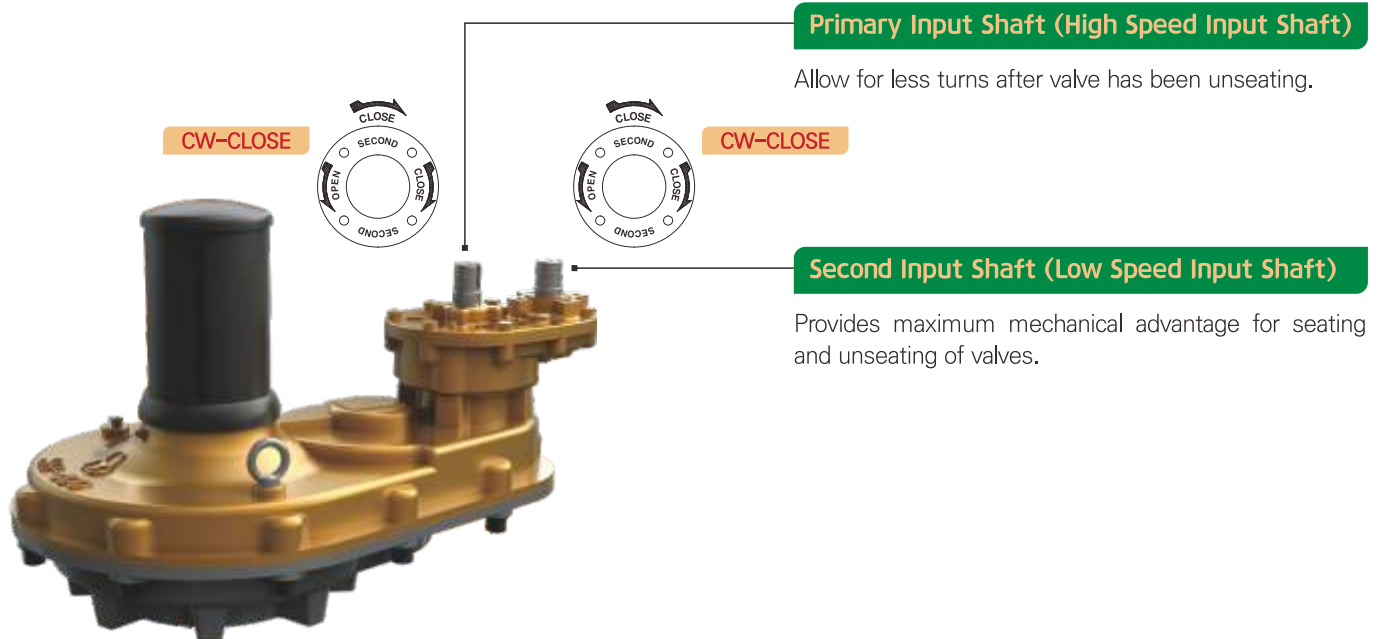


Dimension

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	315	705	121	321	34	32	10X8	500	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		382				500	PF6"	
SB-SR550-1ST		F-40	300	406	8-M36-55	449		172	263	413	915	145	411	44	38	12X8	500	PF6"	
SB-SR600-1ST		F-40	300	406	8-M36-55	475		182	279	437.5	987		455				500	PF8"	
SB-SR700-1ST		C	F-48	370	483	12-M36-55	560	5	206	309	503	1101	169	486	44	38	12X8	630	PF8"
SB-SR750-1ST	F-48		370	483	12-M36-55	595	220		334	527	1240	230		606	58	50	16X10	710	PF10"
SB-SR800-1ST	F-48		370	483	12-M36-55	630	233		354	559	1295	230		628	58	50	16X10	710	PF10"

Spur Gear Actuators



❖ Feature

- This series suitable for use with Gate & Globe type valve. Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation. Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, stem covers are available.

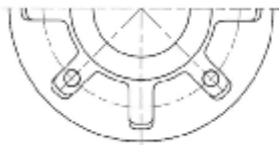
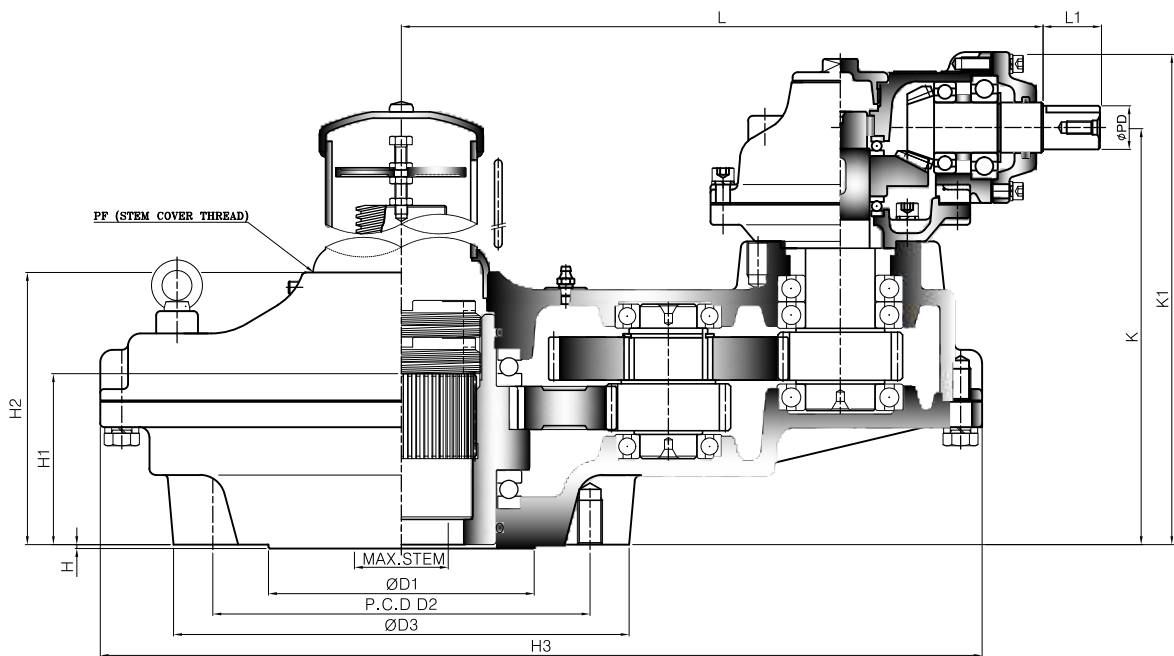
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)		MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-SR50-1ST	10 : 1	20 : 1	40	32 (10X8)	F-10, F-12	113	25400	370	273	20
SB-SR100-1ST	12 : 1	24 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	39
SB-SR200-1ST	12 : 1	30 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	56
SB-SR300-1ST	13 : 1	33 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	78
SB-SR350-1ST	13 : 1	39 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	111
SB-SR400-1ST	14 : 1	42 : 1	98	84 (22X14)	F-25, F-30	400	89920	5200	3835	144
SB-SR500-1ST	15 : 1	45 : 1	110	95 (28X16)	F-30, F-35	510	114650	7800	5753	232
SB-SR550-1ST	15 : 1	52.5 : 1	120	105 (28X16)	F-35, F-40	1500	337210	10400	7671	293
SB-SR600-1ST	16 : 1	64 : 1	130	115 (32X18)	F-35, F-40	2310	519300	13000	9588	353
SB-SR700-1ST	17 : 1	68 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	476
SB-SR750-1ST	17 : 1	85 : 1	160	140 (36X20)	F-48	3450	775590	21000	15489	589
SB-SR800-1ST	17 : 1	85 : 1	180	160 (40X22)	F-48	4100	921700	32000	23602	702

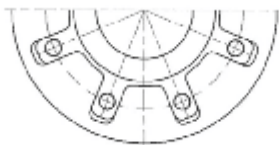
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-B

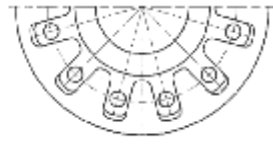
Horizontal Input



TYPE - A



TYPE - B



TYPE - C

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			H AND 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	200	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	400	PF4"
SB-SR350-2B		F-30	230	298	8-M20-30	319		121	196	630	278	328	446				500	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	630	PF6"	
SB-SR550-2B		F-40	300	406	8-M36-55	449		172	263	840	404	470	601				630	PF6"	
SB-SR600-2B		F-40	300	406	8-M36-55	475		182	279	890	424.5	489.5	625.5				630	PF8"	
SB-SR700-2B		C	F-48	370	483	12-M36-55		560	5	206	309	1030	508	573	711	34	32	10X8	630
SB-SR750-2B	F-48		370	483	12-M36-55	595	220	334		1095	553	635	793	44	38	12X8	710	PF10"	
SB-SR800-2B	F-48		370	483	12-M36-55	630	236	354		1160	575	657	825	44	38	12X8	710	PF10"	

Spur Gear Actuators



❖ Feature

- This series suitable for use with Gate & Globe type valve. Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation. Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

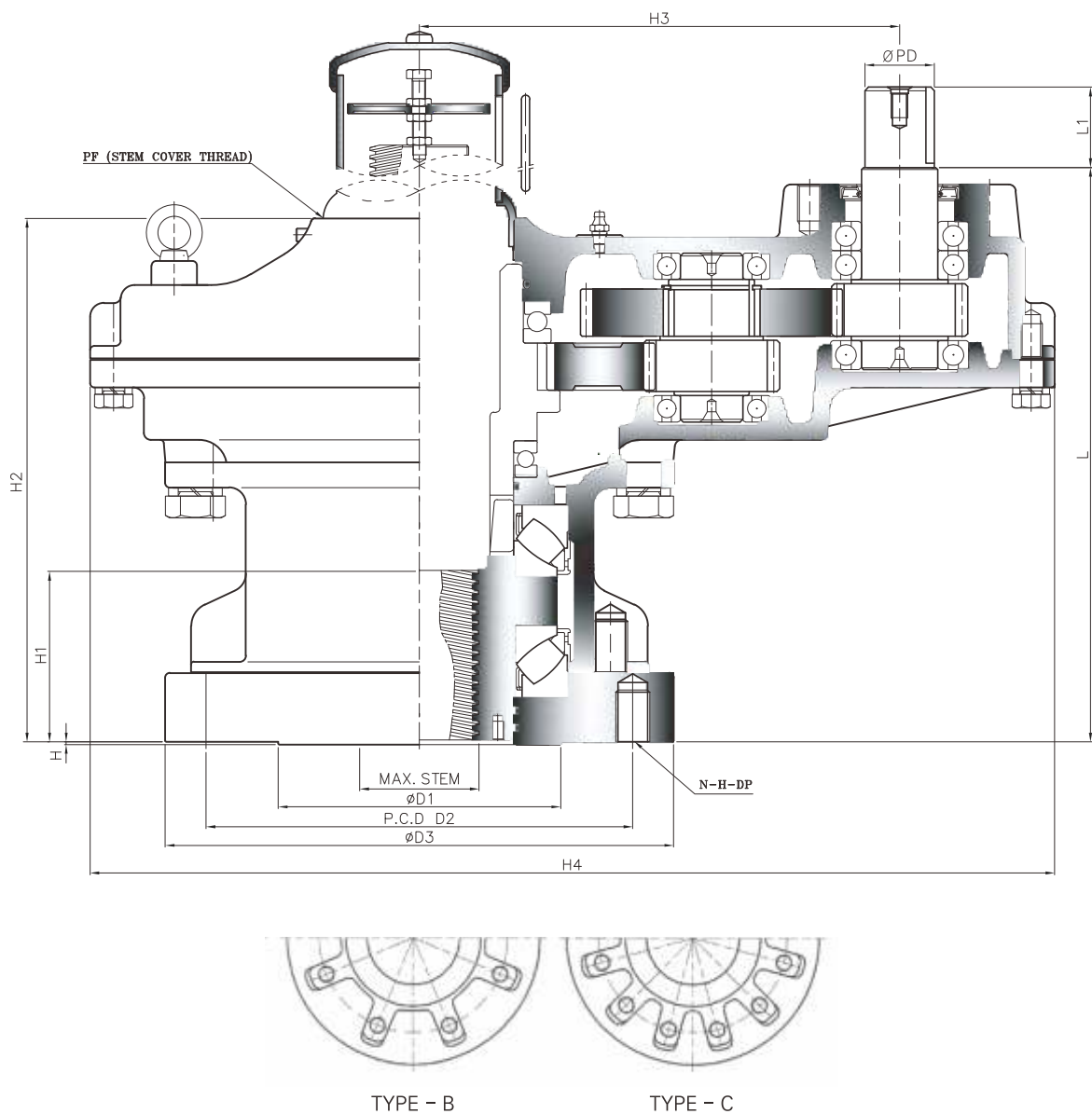
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-SR50-2B	4~20 : 1	40	32 (10X8)	F-10, F-12	113	25400	370	273	21
SB-SR100-2B	5~24 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	40
SB-SR200-2B	7.5~30 : 1	62	52 (16X10)	F-14, F-16, (F-20)	190	42710	1500	1106	56
SB-SR300-2B	7.5~32 : 1	72	60 (18X11)	F-16, (F-20), F-25	288	64750	2500	1844	78
SB-SR350-2B	12~39 : 1	85	72 (20X12)	F-25, F-30	350	78680	3500	2581	110
SB-SR400-2B	12~42 : 1	98	84 (22X14)	F-25, F-30	400	89920	5200	3835	142
SB-SR500-2B	16~60 : 1	115	100 (28X16)	F-30, F-35	510	114650	7800	5753	253
SB-SR550-2B	16~60 : 1	120	105 (28X16)	F-35, F-40	1500	337210	10400	7671	306
SB-SR600-2B	20~64 : 1	130	115 (32X18)	F-35, F-40	2310	519300	13000	9588	358
SB-SR700-2B	25~85 : 1	150	130 (36X20)	F-40, F-48	2500	562020	17600	12981	492
SB-SR750-2B	27.5~93.5 : 1	160	140 (36X20)	F-48	3450	775590	21000	15489	600
SB-SR800-2B	27.5~93.5 : 1	180	160 (40X22)	F-48	4100	921700	32000	23602	707

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

STANDARD TYPE-C High Load

Thrust & Torque Vertical Input



Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART					INPUT SHAFT PART			H AND WHEEL	STEM COVER
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	L	L1	ØPD	KEY		
				ØD2	N-H-DP												
SB-SR200H	B	F-25	200	254	8-M16-24	300	3	99	317	230	480	337	34	32	10X8	300	PF3-1/2"
SB-SR300H		F-30	230	298	8-M20-30	350		118	351	279	570	380				400	PF4"
SB-SR350H		F-30	230	298	8-M20-30	350		118	388	315	630	410	44	38	12X8	500	PF5"
SB-SR400H		F-35	260	356	8-M30-45	415		143	412	346	691	436	44	38	12X8	500	PF6"
SB-SR500H		F-35	260	356	8-M30-45	415		155	473	398	790	499	58	50	16X10	500	PF6"
SB-SR550H		F-40	300	406	8-M36-55	475		170	528.5	413	840	569				500	PF6"
SB-SR600H		F-40	300	406	8-M36-55	475		170	520	437.5	890	563				500	PF8"
SB-SR700H	C	F-48	370	483	12-M36-55	560	5	197	613	503	1030	657	58	50	16X10	630	PF8"
SB-SR750H		F-48	370	483	12-M36-55	560		217	668	527	1095	717				710	PF10"
SB-SR800H		F-48	370	483	12-M36-55	560		217	689	559	1160	746				710	PF10"

Spur Gear Actuators



❖ Feature

- This series suitable for use with Gate & Globe type valve. Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation. Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

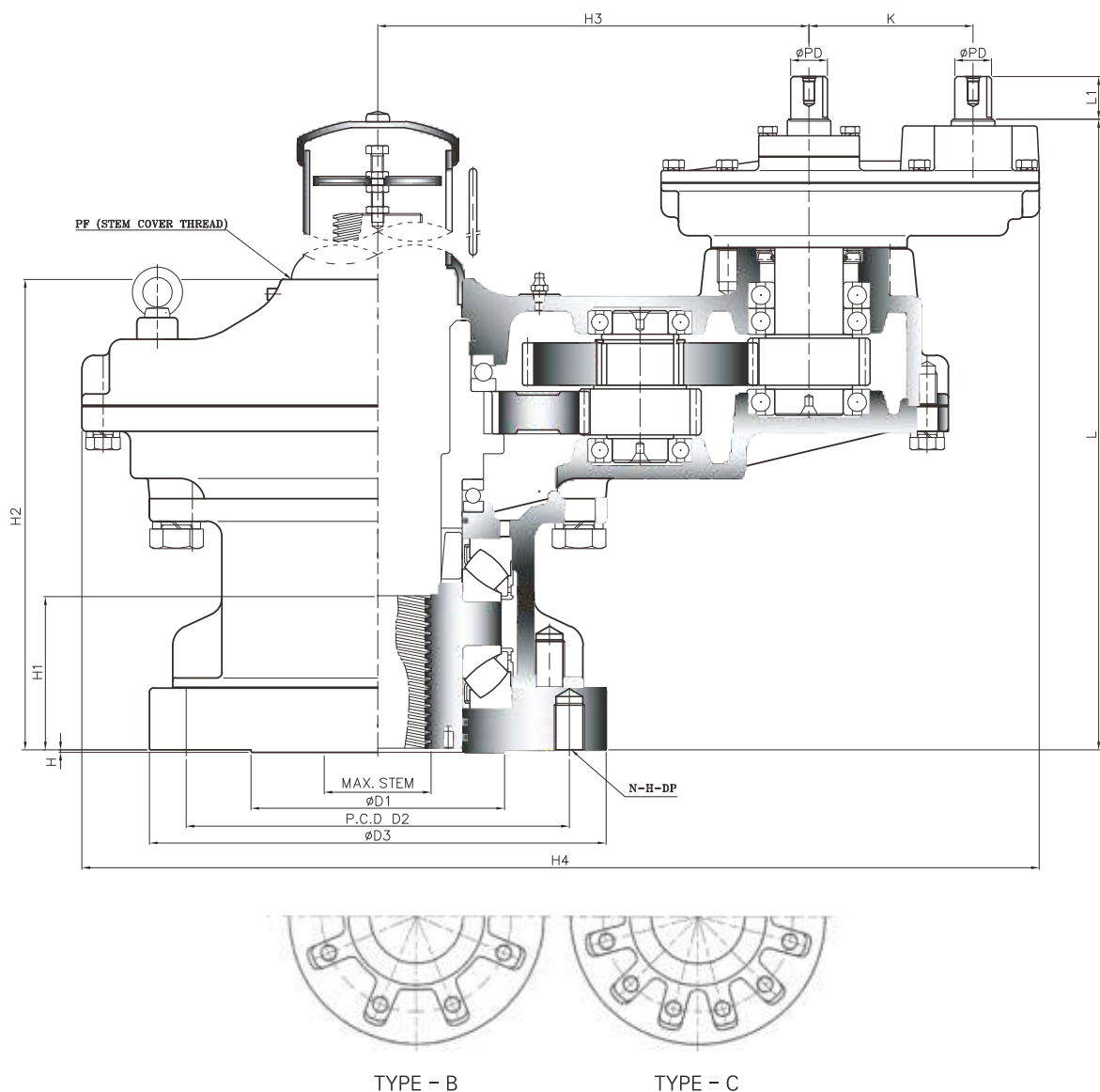
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-SR200H	3~12 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	78
SB-SR300H	3~13 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	126
SB-SR350H	4~13 : 1	85	72(20X12)	F-25, F-30	2100	472099	7000	5163	157
SB-SR400H	4~14 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	9800	7228	188
SB-SR500H	4~15 : 1	110	95 (25X14)	F-25, F-30, F-35	2900	651900	15000	11063	330
SB-SR550H	4~15 : 1	120	105 (28X16)	F-30, F-35, F-40	3400	764350	19000	14013	402
SB-SR600H	5~16 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	23000	16964	474
SB-SR700H	5~17 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	37000	27290	710
SB-SR750H	5~17 : 1	160	140(36X20)	F-48	5000	1124045	46000	33928	852
SB-SR800H	5~17 : 1	170	160 (40X22)	F-48	5200	1169000	58000	42778	994

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

STANDARD TYPE-C High Load

Thrust & Torque (Twin Shaft) Vertical Input
with Single Reduction Gear Attachment

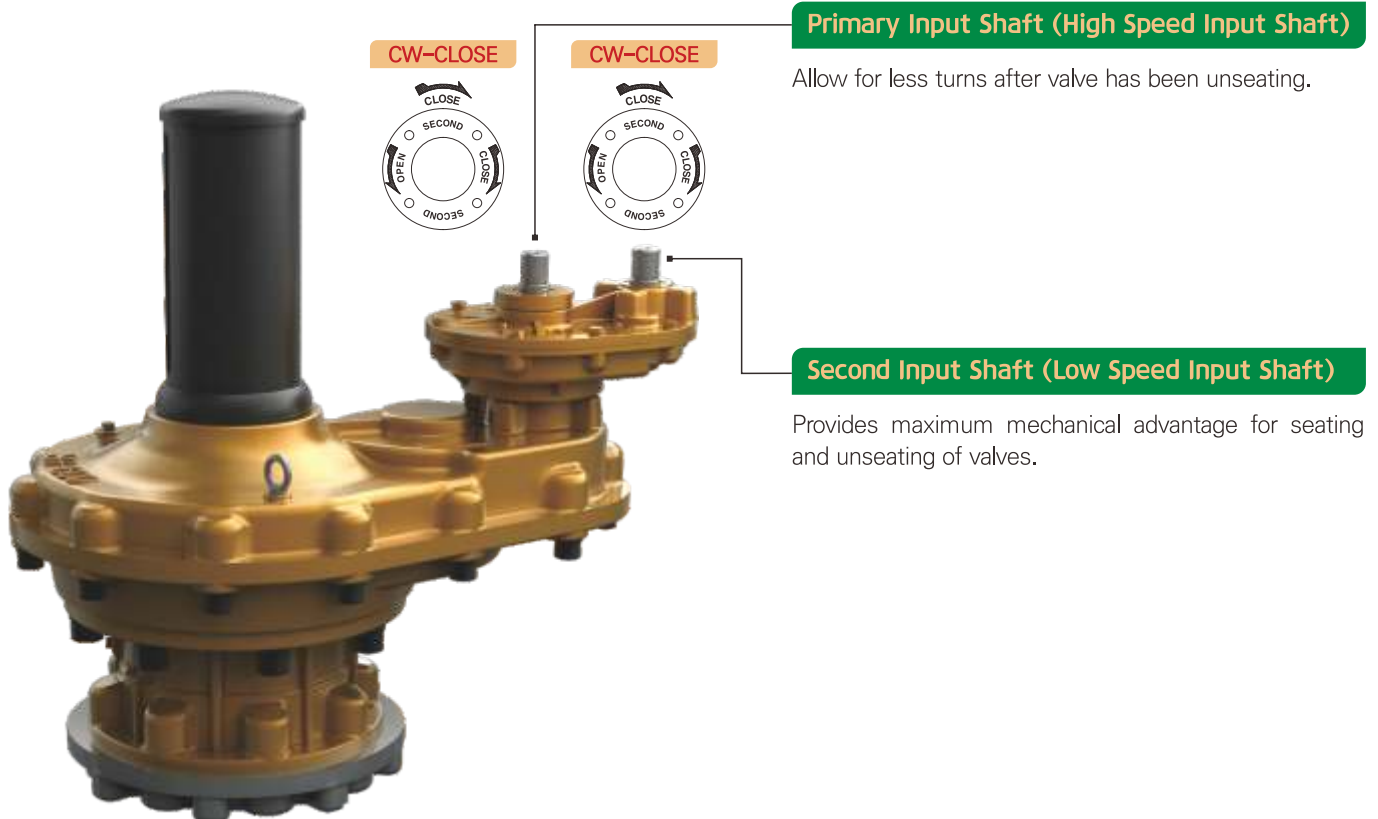


Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			H AND 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	99	317	230	531	93	416	34	26	8X7	300	PF3-1/2"			
SB-SR300H-1ST		F-30	230	298	8-M20-30	350		118	351	279	615		459				400	PF4"			
SB-SR350H-1ST		F-30	230	298	8-M20-30	350		118	388	315	705		513				500	PF6"			
SB-SR400H-1ST		F-35	260	356	8-M30-45	415		143	412	346	756	121	538				34	32	10X8	500	PF6"
SB-SR500H-1ST		F-35	260	356	8-M30-45	415		155	473	398	841	603	500							PF6"	
SB-SR550H-1ST		F-40	300	406	8-M36-55	475		170	528.5	413	915	145	678							500	PF6"
SB-SR600H-1ST		F-40	300	406	8-M36-55	475		170	520	437.5	987	169	696	44	38	12X8	500	PF8"			
SB-SR700H-1ST	C	F-48	370	483	12-M36-55	560	5	197	613	503	1101	169	790	44	38	12X8	630	PF8"			
SB-SR750H-1ST		F-48	370	483	12-M36-55	560		217	668	527	1240	230	940	58	50	16X10	710	PF10"			
SB-SR800H-1ST		F-48	370	483	12-M36-55	560		217	689	559	1295	230	963	58	50	16X10	710	PF10"			

Spur Gear Actuators



❖ Feature

- This series suitable for use with Gate & Globe type valve. Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation. Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, stem covers are available.

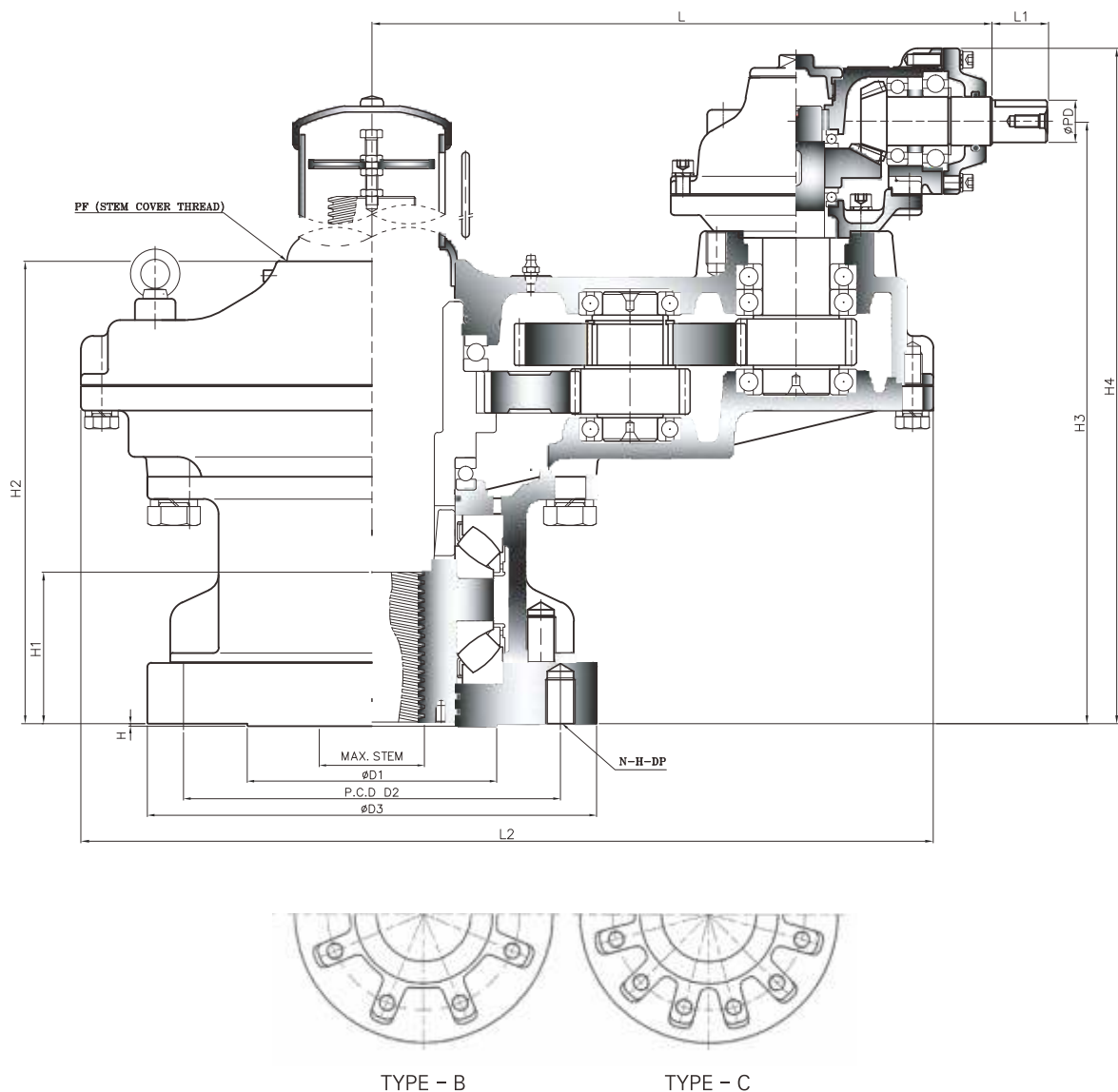
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)		MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-SR200H-1ST	12 : 1	30 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	86
SB-SR300H-1ST	13 : 1	33 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	134
SB-SR350H-1ST	13 : 1	39 : 1	85	72(20X12)	F-25, F-30	2100	472099	7000	5163	167
SB-SR400H-1ST	14 : 1	42 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	9800	7228	200
SB-SR500H-1ST	15 : 1	45 : 1	110	95 (25X14)	F-25, F-30, F-35	2900	651900	15000	11063	342
SB-SR550H-1ST	15 : 1	52.5 : 1	120	105(28X16)	F-30, F-35, F-40	3400	764350	19000	14013	422
SB-SR600H-1ST	16 : 1	64 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	23000	16964	502
SB-SR700H-1ST	17 : 1	68 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	37000	27290	738
SB-SR750H-1ST	17 : 1	85 : 1	160	140(36X20)	F-48	5000	1124045	46000	33928	902
SB-SR800H-1ST	17 : 1	85 : 1	170	160 (40X22)	F-48	5200	1169000	58000	42778	1066

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

STANDARD TYPE-C High Load

Thrust & Torque Horizontal Input



Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART						INPUT SHAFT PART			H AND 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	99	317	396	446	480	351	34	26	8X7	300	PF3-1/2"
SB-SR300H-2B		F-30	230	298	8-M20-30	350		118	351	432	482	570	400				400	PF4"
SB-SR350H-2B		F-30	230	298	8-M20-30	350		118	388	469	519	630	446				500	PF6"
SB-SR400H-2B		F-35	260	356	8-M30-45	415		143	412	495.5	545.5	691	477				500	PF6"
SB-SR500H-2B		F-35	260	356	8-M30-45	415		155	473	603.5	668.5	790	586				500	PF6"
SB-SR550H-2B		F-40	300	406	8-M36-55	475		170	528.5	678	737	840	601				500	PF6"
SB-SR600H-2B		F-40	300	406	8-M36-55	475		170	520	665.5	730	890	625.5				500	PF8"
SB-SR700H-2B	C	F-48	370	483	12-M36-55	560	5	197	613	781	846	1030	711	34	32	10X8	630	PF8"
SB-SR750H-2B		F-48	370	483	12-M36-55	560		217	668	887	969	1095	793	44	38	12X8	710	PF10"
SB-SR800H-2B		F-48	370	483	12-M36-55	560		217	689	910	993	1160	825	44	38	12X8	710	PF10"

Spur Gear Actuators



❖ Feature

- This series suitable for use with Gate & Globe type valve. Also sluice gates and any other type requiring linear motion for thrust and torque applications.
- Unique Top Entry Replaceable Stem Nut. High Tensile Aluminum bronze material providing corrosion and abrasion resistance.
- Castings are Ductile Iron, class 65-45-12 providing high strength and impact resistance.
- Heavy duty roller bearings supporting both radial & axial thrust loads.
- Gears are Machine cut, heat treated and ground for optimum operation. Units are completely O-Ring Sealed suitable for temporary submergence to meet Ip67 class.
- Many options, such as hand wheels, chain wheels, stem covers, position dial indicators are available.

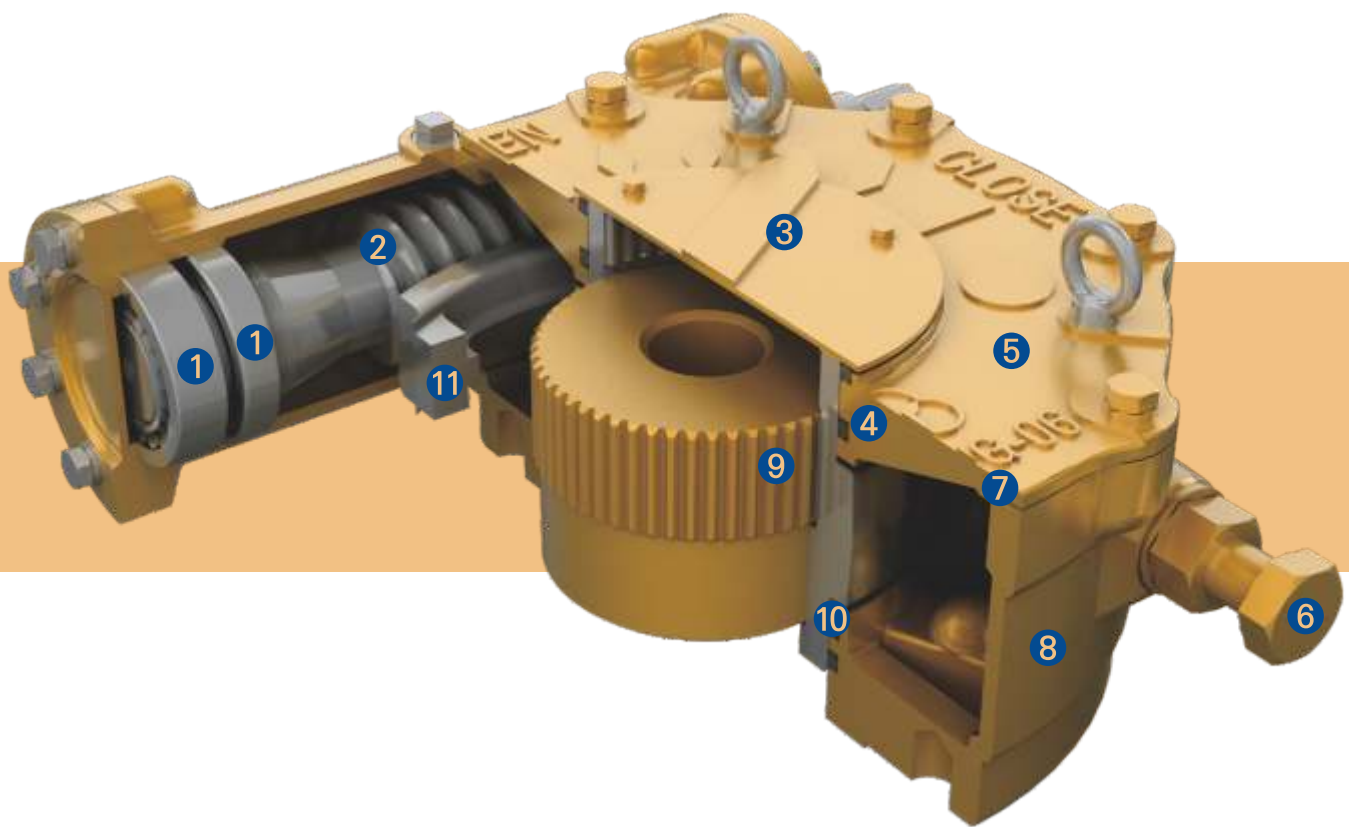
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-SR200H-2B	7.5~30 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	86
SB-SR300H-2B	7.5~32 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	134
SB-SR350H-2B	12~42 : 1	85	72(20X12)	F-25, F-30	2100	472099	7000	5163	166
SB-SR400H-2B	12~42 : 1	95	85 (22X14)	F-25, F-30, F-35	2450	550800	9800	7228	198
SB-SR500H-2B	16~60 : 1	110	95 (25X14)	F-25, F-30, F-35	2900	651900	15000	11063	363
SB-SR550H-2B	16~60 : 1	120	105(28X16)	F-30, F-35, F-40	3400	764350	19000	14013	435
SB-SR600H-2B	20~64 : 1	130	115 (32X18)	F-30, F-35, F-40	3500	786800	23000	16964	507
SB-SR700H-2B	25~85 : 1	150	130 (36X20)	F-35, F-40, F-48	4700	1056600	37000	27290	754
SB-SR750H-2B	27.5~93.5 : 1	160	140(36X20)	F-48	5000	1124045	46000	33928	913
SB-SR800H-2B	27.5~93.5 : 1	170	160 (40X22)	F-48	5200	1169000	58000	42778	1071

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

Worm Gear Actuators

Special View & Features



① Tapered Roller & Ball Bearings

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

② Worm

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

③ Indicator Plate

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

④ Sealing

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

⑤ Cover

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

⑥ External Adjustable Stops

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

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

⑦ Gaskets

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

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

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

⑧ Housing

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

⑨ Splined Bushings

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

⑩ Thrust Washer

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

⑪ Worm Gear

Standard material is Ductile Iron, Grade 80-55-06, Suitable most industrial applications.

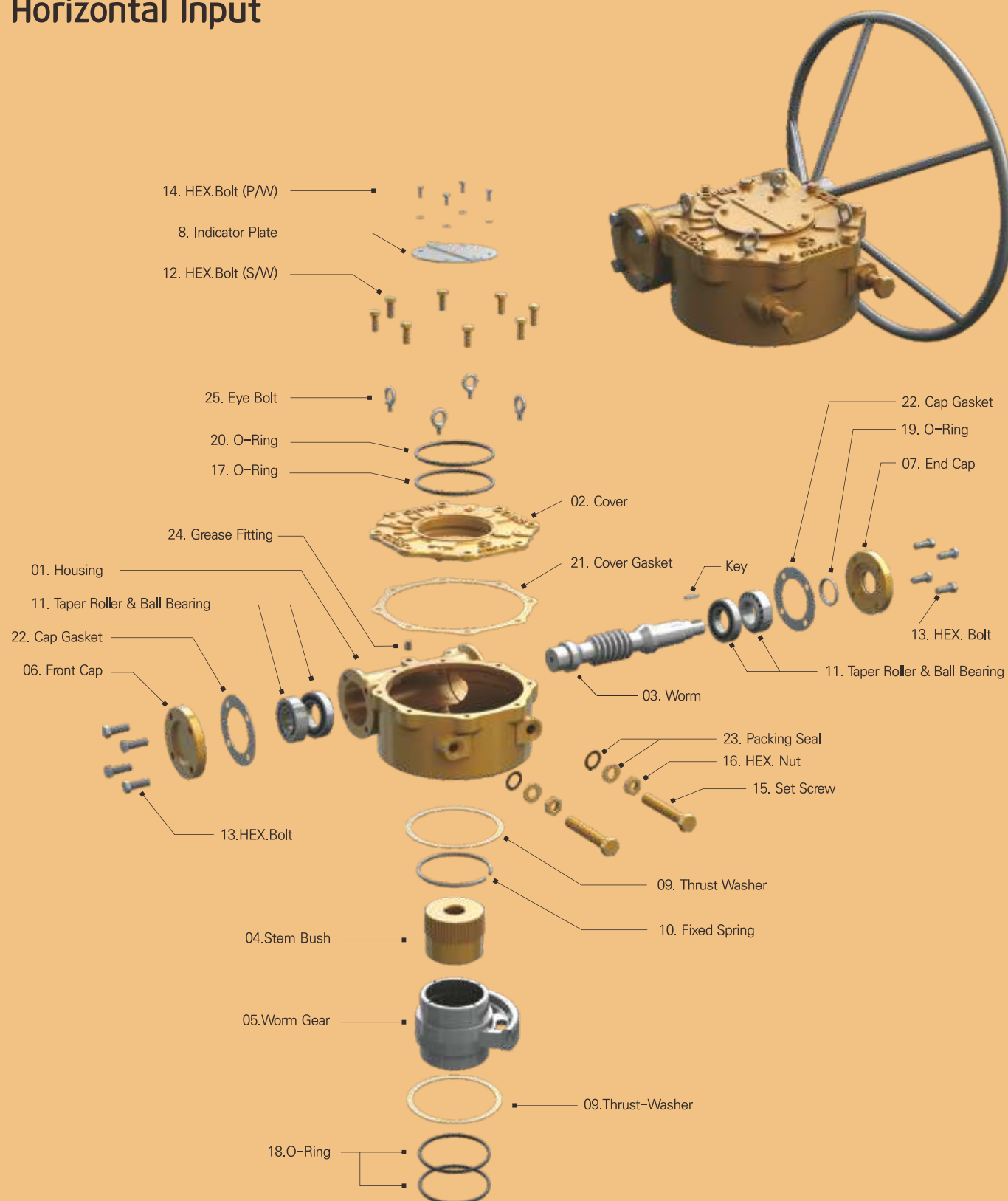
Option is aluminum bronze having a tensile strength of 85,000 psi.

Normally required for motorized applications involving modulating service and is also a requirement to meet the AWWA standards.

Worm Gear Actuator Assembly

STANDARD TYPE-A

Horizontal Input



❖ Part List & Material

	NO	DESCRIPTION	MATERIAL			REMARK	
			NAME	JIS	ASTM		
STANDARD	1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	
	2	Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	
	3	Worm	Carbon Steel	S45C	A576-1045	NOTE. 2	
	4	Stem Bush	Ductile Iron	FCD-450	A536-65-4512		
	5	Worm Gear	Ductile Iron	FCD-600	A536-80-55-06	B148-C95800(ALBC3)	
	6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12		
	7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		
	8	Indicator Plate	Steel + EP				
	9	Thrust Washer	Steel				
	10	Fixed Spring	Steel				
	11	Taper Roller & Ball Bearing	Special Steel	SUJ2	A295-52100		
	12	HEX. Bolt	Alloy Steel	SCM435	A322-4135		
	13	HEX. Bolt	Alloy Steel	SCM435	A322-4135		
	14	HEX. Bolt (P/W)	Stainless Steel				
	15	Set Screw	Carbon Steel	S45c	A576-1045		
	16	HEX. Nut	Carbon Steel	S45c	A576-1045		
	17	O-Ring	Buna N	NBR		NOTE. 3	
	18	O-Ring	Buna N	NBR			
	19	O-Ring	Buna N	NBR			
	20	O-Ring	Buna N	NBR			
	21	Cover Gasket	Non – Asbestos				VALQUA 6601
	22	Cap Gasket	Non – Asbestos				
	23	Packing Seal	Bunan	NBR			
	24	Grease Fitting	Steel + Galvanizing				
	25	Eye Bolt	Steel + Galvanizing				
OPTION	OP-01.	Hand Wheel	Steel Pipe	SGP	A53	HANDLE PART NOTE. 4	
	OP-02.	Key	Carbon Steel	S45C	A576-1045		
	OP-03.	Name Plate	Stainless Steel				
	OP-04.	Washer	Stainless Steel				
	OP-05.	HEX.Bolt (S/W)	Stainless Steel				

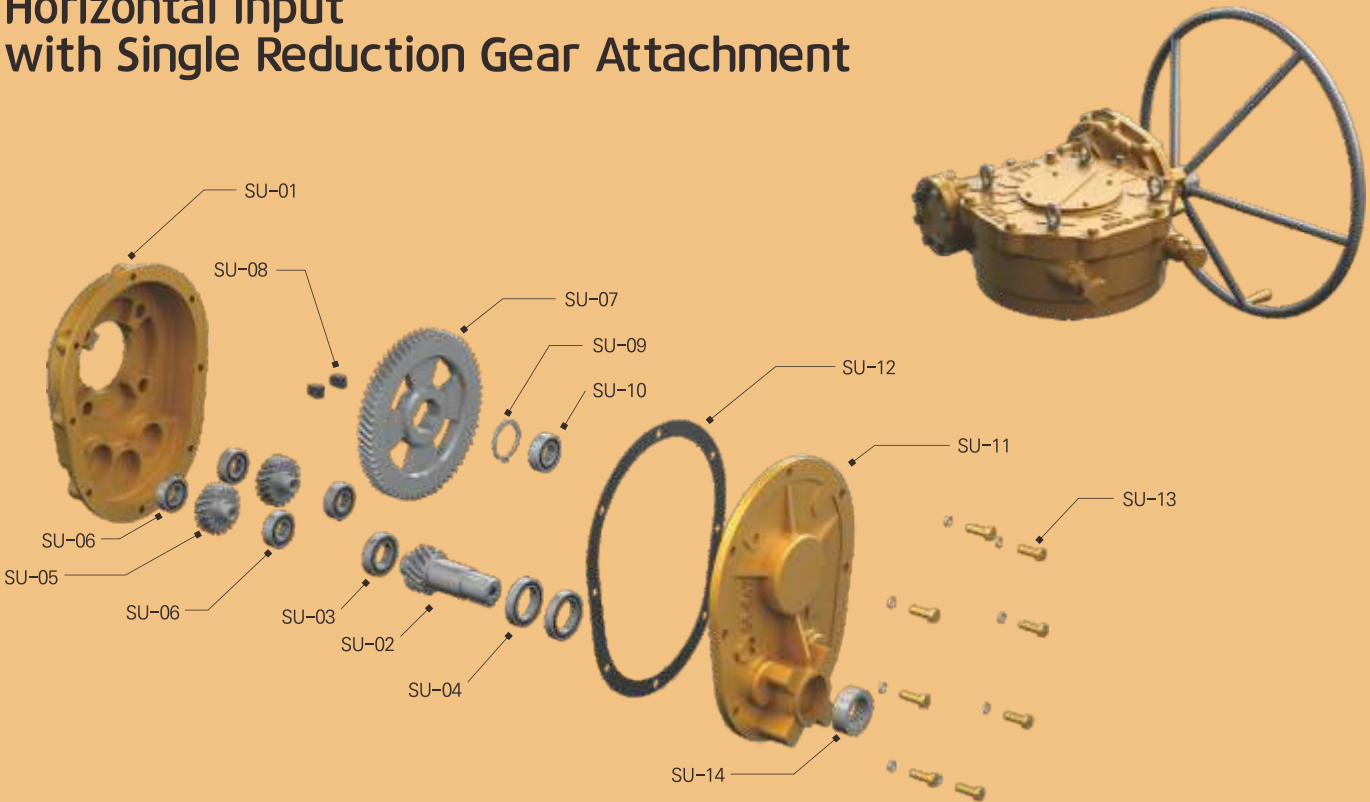
❖ Material Detail : Option and Material Changes

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

Worm Gear Actuator Assembly

STANDARD TYPE-A

Horizontal Input
with Single Reduction Gear Attachment



❖ Part List & Material

NO	DESCRIPTION	MATERIAL			REMARK	NO	DESCRIPTION	MATERIAL			REMARK
		NAME	JIS	ASTM				NAME	JIS	ASTM	
1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	23	Packing Seal	Buna N	NBR		
2	Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	24	Grease Fitting	Steel + Galvanizing			
3	Worm	Carbon Steel	S45C	A576-1045	NOTE. 2	25	Eye Bolt	Steel + Galvanizing			
4	Stem Bush	Ductile Iron	FCD-450	A536-65-4512		SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12	
5	Worm Gear	Ductile Iron	FCD-600	A536-80-55-06	B148-95800(ALBC3)	SU-02	Helical Pinion	Carbon Steel	S45C	A576-1045	
6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-03	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-04	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
8	Indicator Plate	Steel + EP				SU-05	Idle Gear	Carbon Steel	S45C	A576-1045	
9	Thrust Washer	Steel				SU-06	Radial Ball B/R	Speciaal Steel	SUJ2	A295-52100	
10	Fixed Spring	Steel				SU-07	Helical Gear	Carbon Steel	S45C	A576-1045	
11	Taper Roller Bearing	Special Steel	SUJ2	A295-52100		SU-08	Key (1R)	Carbon Steel	S45C	A576-1045	
12	HEX. Bolt (S/W)	Alloy Steel	SCM435	A322-4135		SU-09	Snap Ring	Carbon Steel	S45C	A576-1045	
13	HEX. Bolt	Alloy Steel	SCM435	A322-4135		SU-10	Radial Ball B/R	Special Steel	SUJ2	A295-52100	
14	HEX. Bolt (P/W)	Stainless Steel				SU-11	Support Cover	Ductile Iron	FCD-450	A536-65-45-12	
15	Set Screw	Carbon Steel	S45c	A576-1045		SU-12	S-Cover Gasket	Nonasbestos			VALQUA6601
16	HEX. Nut	Carbon Steel	S45c	A576-1045		SU-13	HEX.Bolt (S/W)	Alloy Steel	SCM435	A322-4135	
17	O-Ring	Buna N	NBR		NOTE. 3	SU-14	Oil-Seal	Buna N	NBR		
18	O-Ring	Buna N	NBR			OP-01	Hand Wheel	Steel Pipe	SGP	A53	OPTION HANDLE PART
19	O-Ring	Buna N	NBR			OP-02	Key(1R)	Carbon Steel	S45C	A576-1045	
20	O-Ring	Buna N	NBR			OP-03	Name Plate	Stainless Steel			
21	Cover Gasket	Non - Asbestos			VALQUA 6601	OP-04	Washer	Stainless Steel			
22	Cap Gasket	Non - Asbestos				OP-05	HEX. Bolt (S/W)	Stainless Steel			

Worm Gear Actuator Assembly

STANDARD TYPE-A

Horizontal Input
with Double Reduction Gear Attachment



❖ Part List & Material

NO	DESCRIPTION	MATERIAL			REMARK	NO	DESCRIPTION	MATERIAL			REMARK	
		NAME	JIS	ASTM				NAME	JIS	ASTM		
1	Housing	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	23	Packing Seal	Buna N	NBR			
2	Cover	Ductile Iron	FCD-450	A536-65-45-12	NOTE. 1	24	Grease Fitting	Steel + Galvanizing				
3	Worm	Carbon Steel	S45C	A576-1045	NOTE. 2	25	Eye Bolt	Steel + Galvanizing				
4	Stem Bush	Ductile Iron	FCD-450	A536-65-4512		SU-01	Support Housing	Ductile Iron	FCD-450	A536-65-45-12		
5	Worm Gear	Ductile Iron	FCD-600	A536-80-55-06	B148-95800(ALBC3)	SU-02	Helical Gear	Carbon Steel	S45C	A576-1045		
6	Front Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-03	Key (1R)	Carbon Steel	S45C	A576-1045		
7	End Cap	Ductile Iron	FCD-450	A536-65-45-12		SU-04	Snap Ring	Carbon Steel	S45C	A576-1045		
8	Indicator Plate	Steel + EP				SU-05	Idle Gear	Carbon Steel	S45C	A576-1045		
9	Thrust Washer	Steel				SU-06	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
10	Fixed Spring	Steel			SU-07	Key (1R)	Carbon Steel	S45C	A576-1045			
11	Taper Roller Bearing	Special Steel	SUJ2	A295-52100		SU-08	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
12	HEX. Bolt (S/W)	Alloy Steel	SCM435	A322-4135		SU-09	Helical Pinion	Carbon Steel	S45C	A576-1045		
13	HEX. Bolt	Alloy Steel	SCM435	A322-4135		SU-10	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
14	HEX. Bolt (P/W)	Stainless Steel				SU-11	Radial Ball B/R	Special Steel	SUJ2	A295-52100		
15	Set Screw	Carbon Steel	S45c	A576-1045		SU-12	Support Cover	Ductile Iron	FCD-450	A536-65-45-12		
16	HEX. Nut	Carbon Steel	S45c	A576-1045		SU-13	S-Cover Gasket	Nonasbestos			VALQUA6601	
17	O-Ring	Buna N	NBR		NOTE. 3	SU-14	HEX. Bolt (S/W)	Stainless	SCM435	A322-4135		
18	O-Ring	Buna N	NBR			SU-15	Oil-Seal	Buna N	NBR			
19	O-Ring	Buna N	NBR			OP-01	Hand Wheel	Steel Pipe	SGP	A53		OPTION HANDLE PART
20	O-Ring	Buna N	NBR			OP-02	Key (1R)	Carbon Steel	S45C	A576-1045		
21	Cover Gasket	Non - Asbestos			OP-03	Name Plate	Stainless Steel					
22	Cap Gasket	Non - Asbestos			OP-04	Washer	Stainless Steel					
					OP-05	HEX. Bolt (S/W)	Stainless Steel					

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

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Multi
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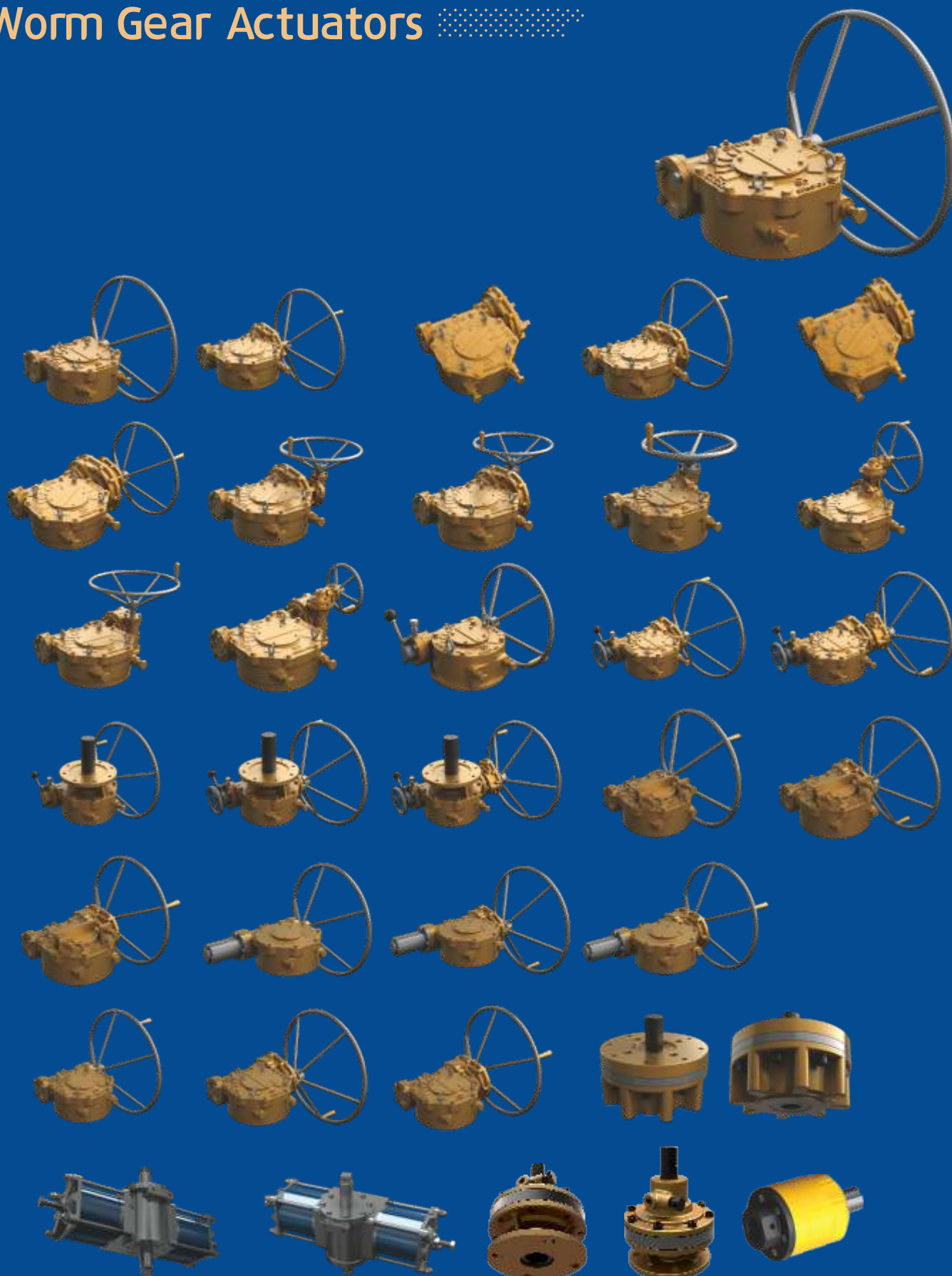
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PRODUCTS

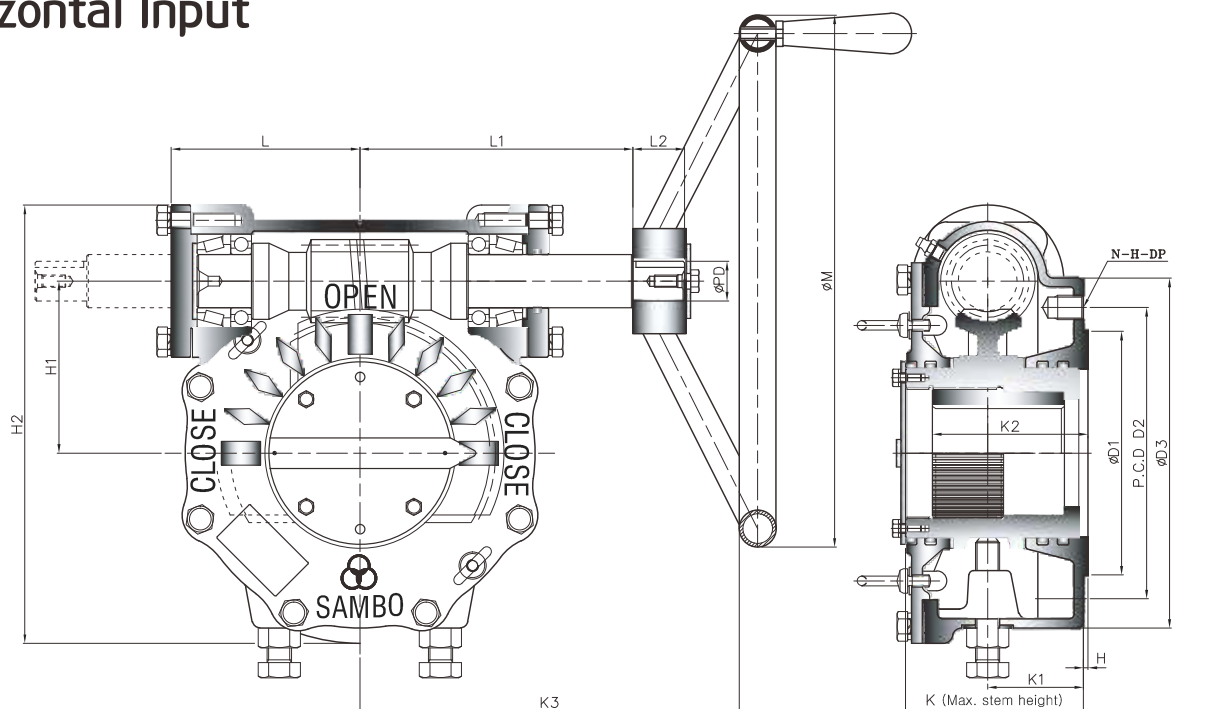
Worm Gear Actuators



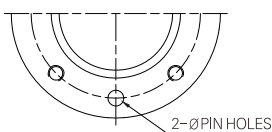
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STANDARD TYPE-A

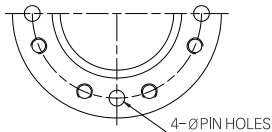
Horizontal Input



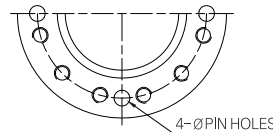
• Pin hole size is same as tap out diameter



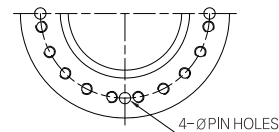
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			H A N D W H E E L
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-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	177	71.5	104.5				250
SBWG-00		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	230	86	138				300
SBWG-01		F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	260	95	147				400
SBWG-02		F-16	130	165	4-M20-30	220		97	257	109.5	56	75.5	294	108	166				500
SBWG-03	B	(F-16) F-20	160	205	8-M16-24	250	3	112	287	116	59	87	324	118	176	34	26	8X7	560
SBWG-35		F-25	200	254	8-M16-24	300		127	319.5	126	63	91	329	125	181				
SBWG-04		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	370	153	207				
SBWG-05		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	400	163	217				
SBWG-55						350		202	484.5	162	80	144	420	183	237				
SBWG-06		F-35	260	356	8-M30-45	415		230	558.5	200	109	175	489	117	286	44	38	12X8	800
SBWG-07		F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	538	252	315				900
SBWG-75	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	617	279	381	58	50	16X10	1000
SBWG-08						560		379	884	254	125	245	652	314	416				
SBWG-09	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	692	354	456	58	50	16X10	1000
SBWG-10						800		513	1191	352	164	330	814	426	614				
SBWG-11						900		616.5	1399.5	400	181	370	857	468.5	657				
SBWG-12						1000		711	1621	484	265	455	980	554	702				
SBWG-13		(F-80)	650	800	20-M42-63	1000		809	1814	546	301	515	988	609	752				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain and etc.

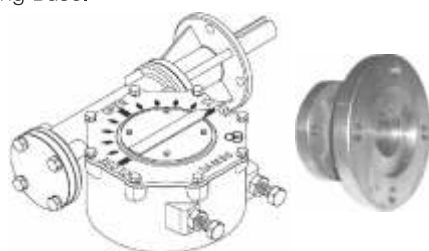
Bushing Type

Splines permit accurate alignment of valve stem key.



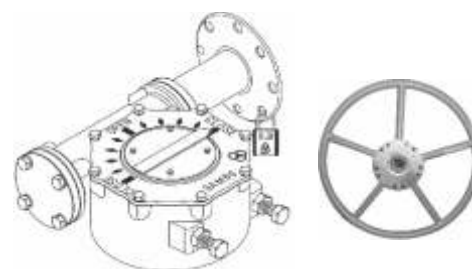
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



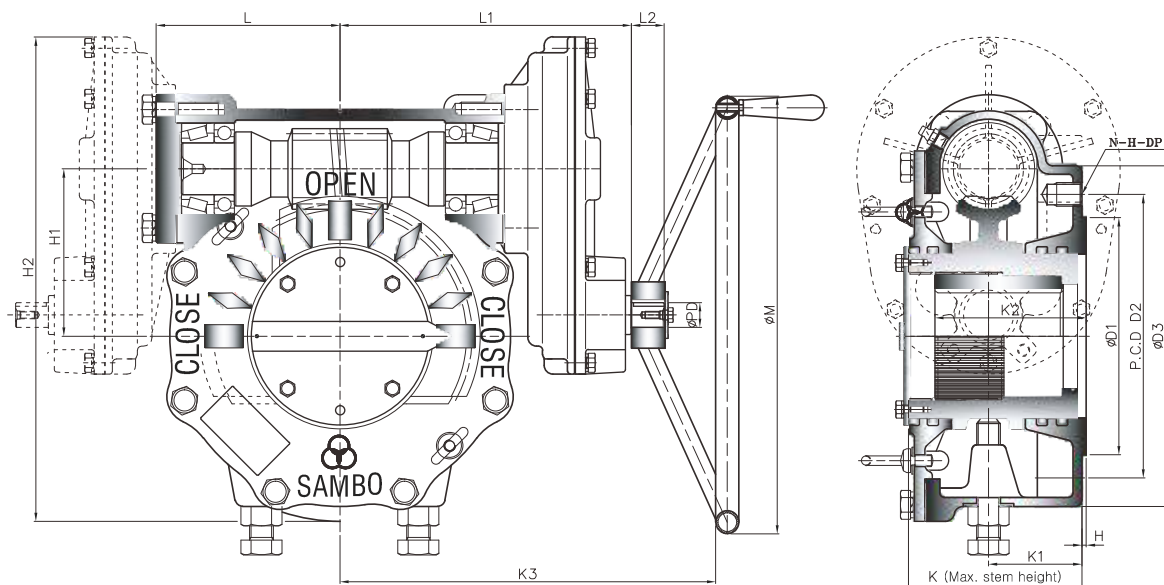
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	Kg
SBWG-BF	32 : 1	20 (6X6)	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	33
SBWG-04	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	56
SBWG-05	60 : 1	115 (32X18)	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
SBWG-11	68 : 1	360 (80X40)	F-60	442000	326002	2085
SBWG-12	70 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	2900
SBWG-13	72 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	3800

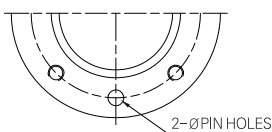
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-A

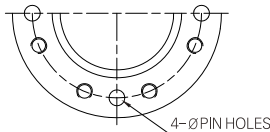
Horizontal Input with Single Reduction Gear Attachment



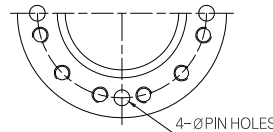
• Pin hole size is same as tap out diameter



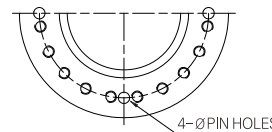
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

MODEL	DIM	BASE PART						EXTERNAL PART								INPUT SHAFT PART			H AND 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	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	259	86	166	29	21	6X6	300
SBWG-01-1S		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	288	95	175				400
SBWG-02-1S		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	319	108	190.5				34
SBWG-03-1S	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	349	118	200.5	34	26	8X7	560
SBWG-35-1S		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	367	125	212.5				
SBWG-04-1S		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	413	153	250				
SBWG-05-1S		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	443	163	260				
SBWG-55-1S						350		202	516.5	162	80	144	463	183	280				
SBWG-06-1S		F-35	260	356	8-M30-45	415		230	621	200	109	175	552	117	349	44	38	12X8	800
SBWG-07-1S		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	607	252	384				900
SBWG-75-1S	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	721	279	485	58	50	16X10	1000
SBWG-08-1S						560		379	968	254	125	245	756	314	520				
SBWG-09-1S	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	796	354	560	58	50	16X10	1000
SBWG-10-1S						800		513	1291	352	164	330	927	426	691				
SBWG-11-1S						900		616.5	1499.5	400	181	370	969.5	468.5	733.5				
SBWG-12-1S		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1140	554	905				
SBWG-13-1S						1000		809	1944	546	301	515	1190	609	955				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

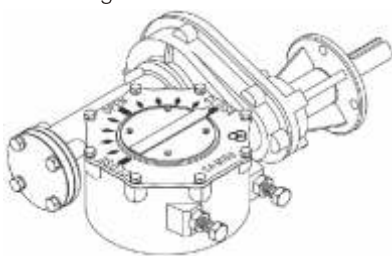
Bushing Type

Splines permit accurate alignment of valve stem key.



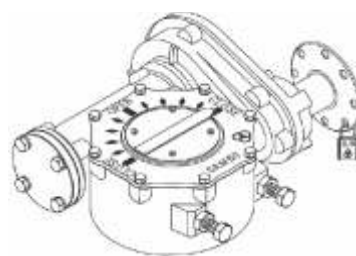
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



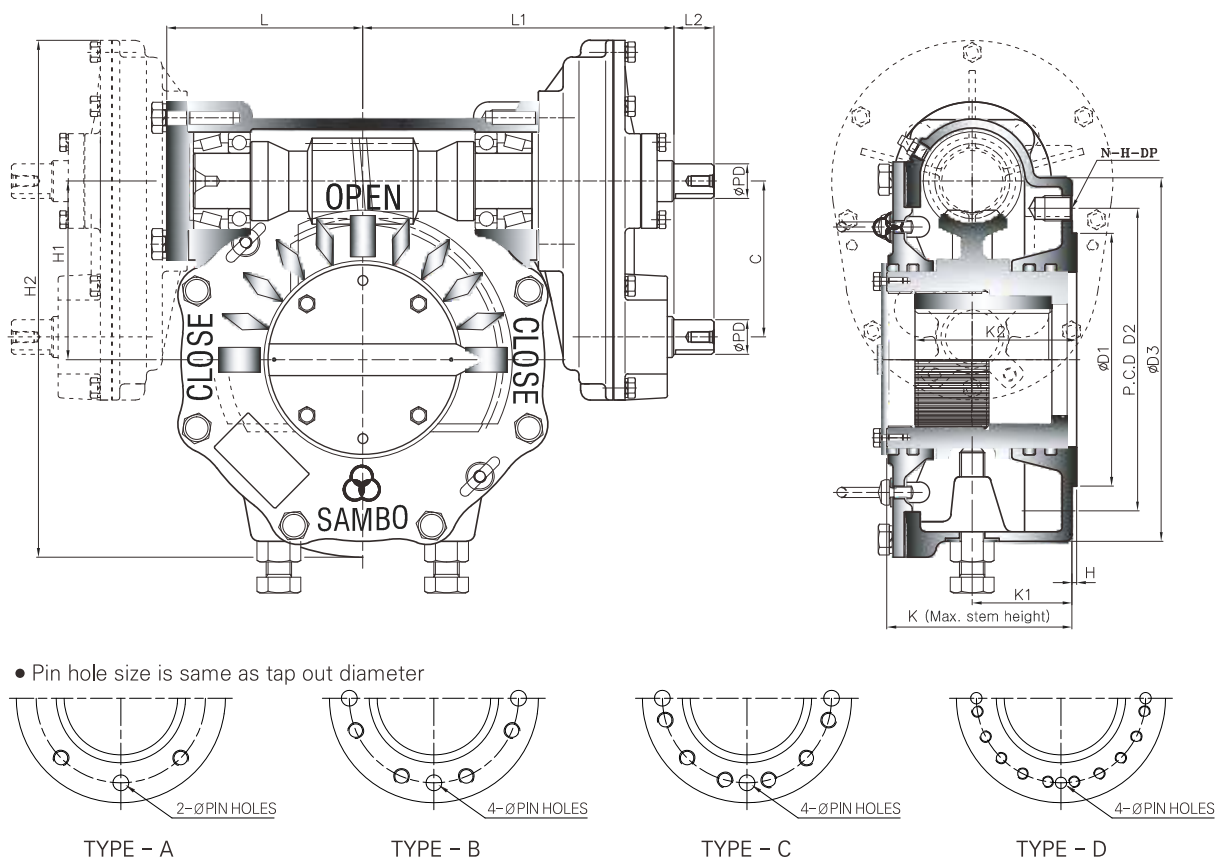
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	40
SBWG-04-1S	168 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	66
SBWG-05-1S	180 : 1	115 (32X18)	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
SBWG-11-1S	340 : 1	360 (80X40)	F-60	442000	326002	2182
SBWG-12-1S	350 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3081
SBWG-13-1S	360 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	3980

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

STANDARD TYPE-A Twin Shaft

Horizontal Input with Single Reduction Gear Attachment



Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			H AND 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-00-1ST	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	109.5	56	75.5	68.6	108	214.5				34	26	8X7
SBWG-03-1ST	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	68.6	118	224.5	34	26	8X7	560		
SBWG-35-1ST		F-25	200	254	8-M16-24	300		127	339.5	126	63	91		125	236.5						
SBWG-04-1ST		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	153	286	34					32	10X8
SBWG-05-1ST		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	121.2	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	175	169	117	376	44	38	12X8	800		
SBWG-07-1ST		F-40	300	406	8-M36-55	475		280.5	723	227	116	209		252	411				900		
SBWG-75-1ST		C	F-48	370	483	12-M36-55		560	5	326	860	246	120	220	230	279	531	58	50	16X10	1000
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	1000		
SBWG-10-1ST						800		513	1291	352	164	330	426	746							
SBWG-11-1ST						900		616.5	1499.5	400	181	370	468.5	788.5							
SBWG-12-1ST		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	334	554	969						
SBWG-13-1ST						1000		809	1944	546	301	515		609	1009						

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - ▶ Ductile iron, Class 80-55-06
 - ▶ Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels and etc.

Second Input Shaft (Low Speed Input Shaft)

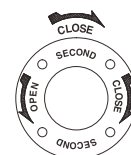
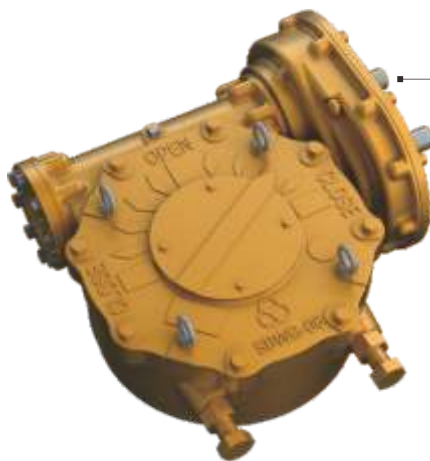
Provides maximum mechanical advantage for seating and unseating of valves.

Primary Input Shaft (High Speed Input Shaft)

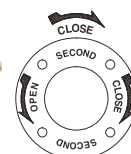
Allow for less turns after valve has been unseating.

Bushing Type

Splines permit accurate alignment of valve stem key.



CW-CLOSE



CW-CLOSE

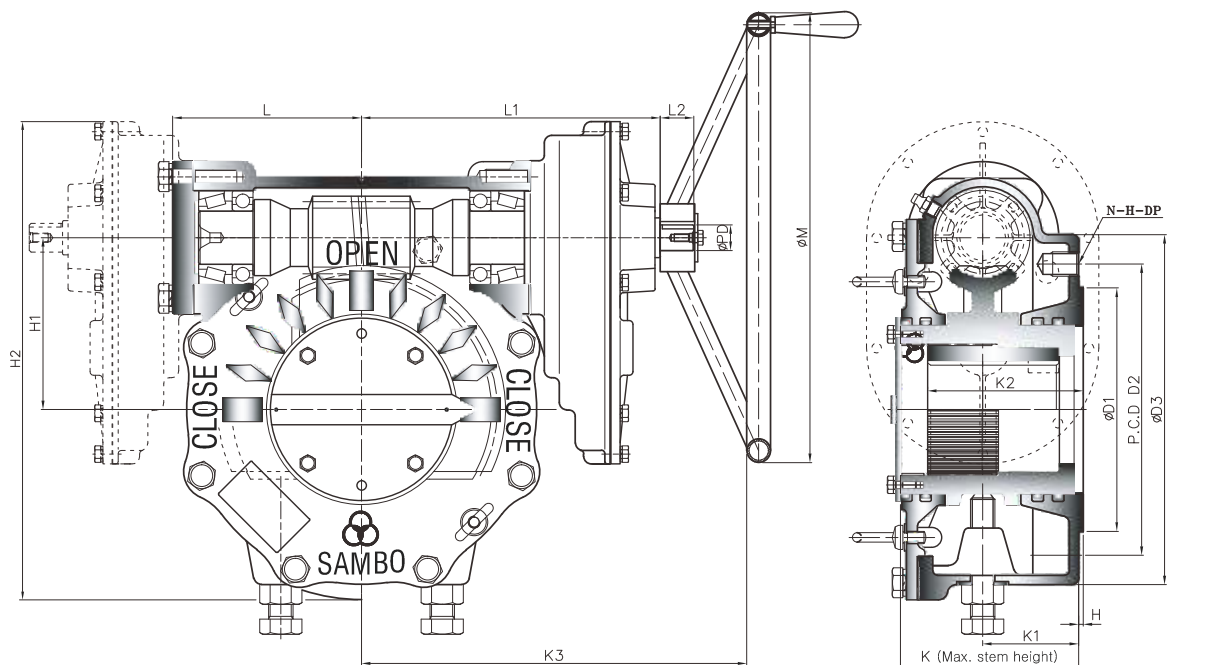
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
	PRIMARY	SECOND			N-m	Ft. lbf	
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	40
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-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
SBWG-11-1ST	68 : 1	340 : 1	360 (80X40)	F-60	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	440 (100X50)	F-60 , (F-80)	970000	715435	3980

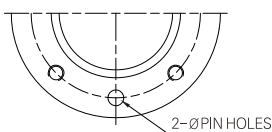
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-A

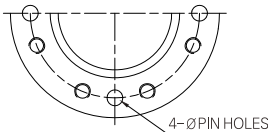
Horizontal Input with Double Reduction Gear Attachment



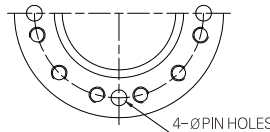
• Pin hole size is same as tap out diameter



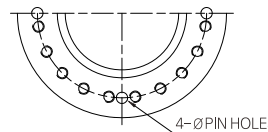
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			H A N D W H E E L			
	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	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	276	86	183	29	21	6X6	300			
SBWG-01-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	305	95	192				400			
SBWG-02-1SD		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	343	108	214.5				34	26	8X7	500
SBWG-03-1SD	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	373	118	224.5	34	26	8X7	560			
SBWG-35-1SD		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	391	125	236.5							
SBWG-04-1SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	449	153	286				34	32	10X8	630
SBWG-05-1SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	479	163	296							710
SBWG-55-1SD						350		202	516.5	162	80	144	499	183	316	44	38	12X8	800			
SBWG-06-1SD		F-35	260	356	8-M30-45	415		230	621	200	109	175	579	117	376				900			
SBWG-07-1SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	634	252	411				1000			
SBWG-75-1SD		C	F-48	370	483	12-M36-55		560	5	326	860	246	120	220	767	279	531	58	50	16X10	1000	
SBWG-08-1SD	560						379	968		254	125	245	802	314	566							
SBWG-09-1SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	842	354	606	58	50	16X10	1000			
SBWG-10-1SD						800		513	1291	352	164	330	982	426	746							
SBWG-11-1SD						900		616.5	1499.5	400	181	370	1039.5	468.5	788.5							
SBWG-12-1SD		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1205	554	969							
SBWG-13-1SD						1000		809	1944	546	301	515	1245	609	1009							

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

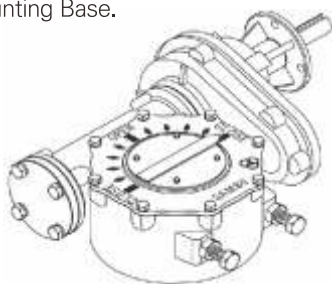
Bushing Type

Splines permit accurate alignment of valve stem key.



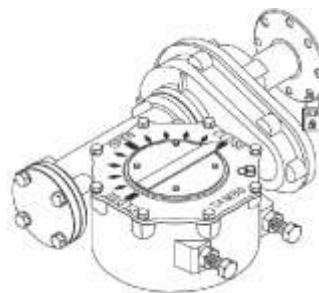
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



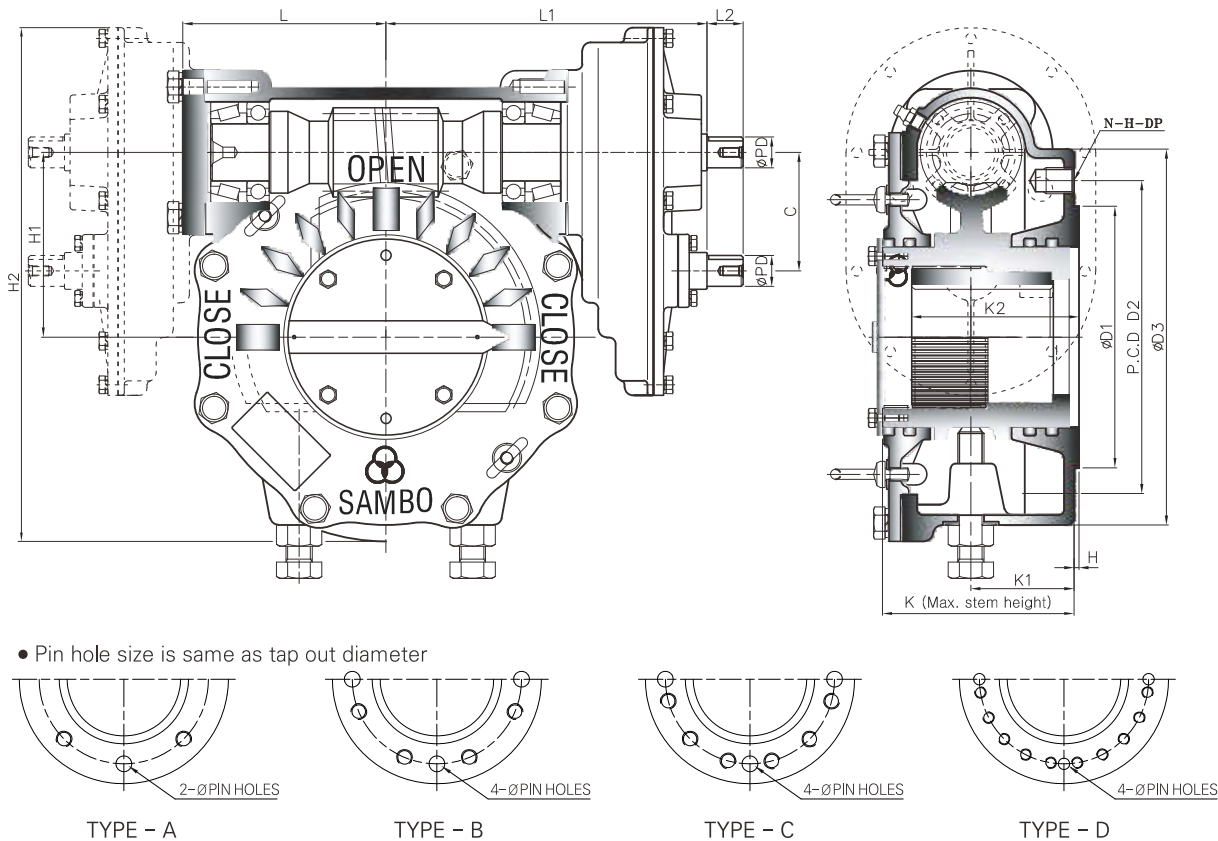
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX.GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	42
SBWG-04-1SD	504 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	71
SBWG-05-1SD	540 : 1	115 (32X18)	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
SBWG-11-1SD	1700 : 1	360 (80X40)	F-60	442000	326002	2220
SBWG-12-1SD	1750 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3081
SBWG-13-1SD	1800 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	3980

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

STANDARD TYPE-A Twin Shaft

Horizontal Input with Double Reduction Gear Attachment



Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			H AND 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	109.5	56	75.5		68.6	108				214.5
SBWG-03-1SDT	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	68.6	118	224.5	34	26	8X7	560
SBWG-35-1SDT		F-25	200	254	8-M16-24	300		127	339.5	126	63	91		125	236.5				710
SBWG-04-1SDT		F-25	200	254	8-M16-24	300		153	417.5	147	73	120		153	286				630
SBWG-05-1SDT		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	93.2	163	296	34	32	10X8	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	175	145	117	376	44	38	12X8	800
SBWG-07-1SDT		F-40	300	406	8-M36-55	475		280.5	723	227	116	209		252	411				900
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	1000
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	1000
SBWG-10-1SDT						800		513	1291	352	164	330		426	746				
SBWG-11-1SDT						900		616.5	1499.5	400	181	370		237.6	468.5				
SBWG-12-1SDT		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	298.5	554	969				
SBWG-13-1SDT						1000		809	1944	546	301	515		609	1009				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - ▶ Ductile iron, Class 80-55-06
 - ▶ Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels and etc.

Primary Input Shaft (High Speed Input Shaft)

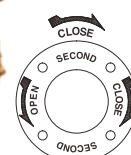
Allow for less turns after valve has been unseating.

Second Input Shaft (Low Speed Input Shaft)

Provides maximum mechanical advantage for seating and unseating of valves.



CW-CLOSE



CCW-CLOSE

Bushing Type

Splines permit accurate alignment of valve stem key.



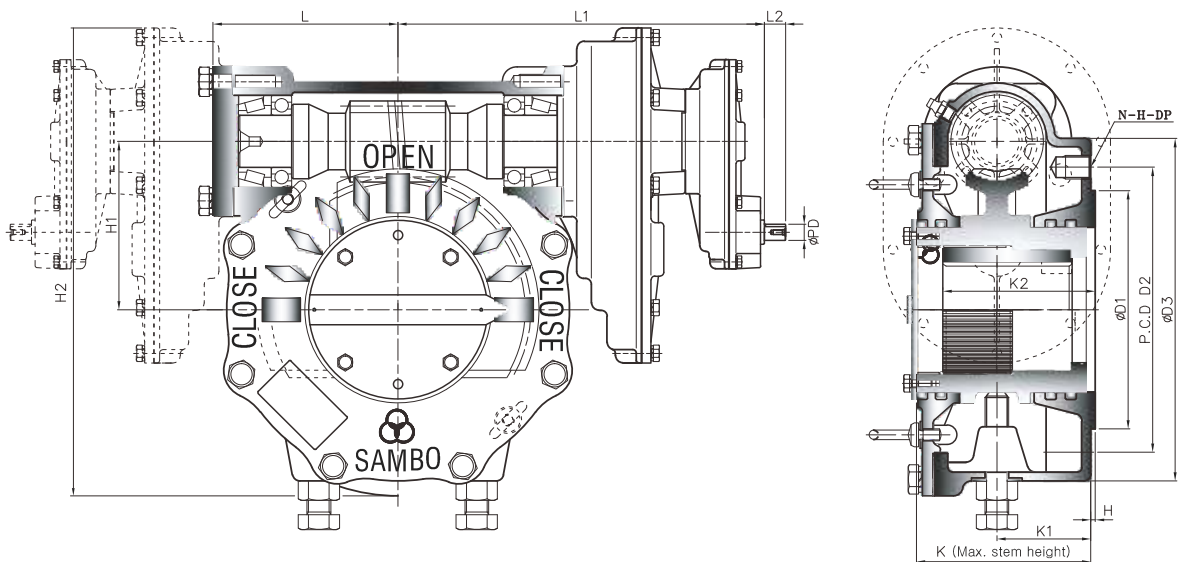
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO		MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
	PRIMARY	SECOND			N-m	Ft . lbf	
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	42
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-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
SBWG-10-1SDT	320 : 1	1600 : 1	320 (70X36)	F-60	275000	202830	1464
SBWG-11-1SDT	340 : 1	1700 : 1	360 (80X40)	F-60	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	440 (100X50)	F-60, (F-80)	970000	715435	3980

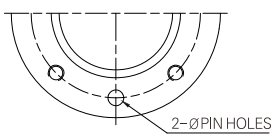
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-A

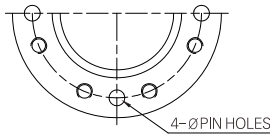
Horizontal Input with Triple Reduction Gear Attachment



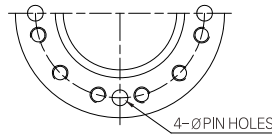
• Pin hole size is same as tap out diameter



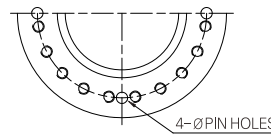
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART							INPUT SHAFT PART			H A N D W H E E L				
	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	300				
SBWG-01-2SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	95	270				400				
SBWG-02-2SD		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	108	295.5				34	21	8X7	500	
SBWG-03-2SD	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	118	305.5	34	21	8X7	560				
SBWG-35-2SD		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	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	10X8	630	
SBWG-05-2SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	163	374.5	34	32	12X8				710	
SBWG-55-2SD		F-30	230	298	8-M20-30	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	175	117	471	34	32	12X8	800
SBWG-07-2SD						F-40		300	406	8-M36-55	475	280.5	723	227	116	209	252	506				900
SBWG-75-2SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	279	662	44	38	16X10	1000				
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						
SBWG-10-2SD						800		513	1291	352	164	330	426	959								
SBWG-11-2SD						900		616.5	1499.5	400	181	370	468.5	1001.5								
SBWG-12-2SD						1000		711	1751	484	265	455	554	1255								
SBWG-13-2SD		(F-80)	650	800	20-M42-63	1000		809	1944	546	301	515	609	1295	58	50	16X10	1000				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

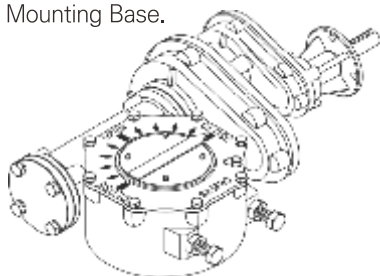
Bushing Type

Splines permit accurate alignment of valve stem key.



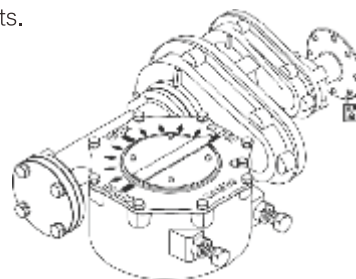
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.

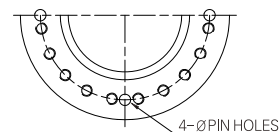


❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	1276.8 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	75
SBWG-05-2SD	1368 : 1	115 (32X18)	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
SBWG-11-2SD	8500 : 1	360 (80X40)	F-60	442000	326002	2292
SBWG-12-2SD	8750 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3178
SBWG-13-2SD	9000 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4077

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

Vertical Input with Double Reduction Gear Attachment



TYPE - D

UNIT : mm

• • • 100 • • •

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

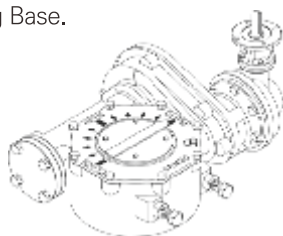
Bushing Type

Splines permit accurate alignment of valve stem key.



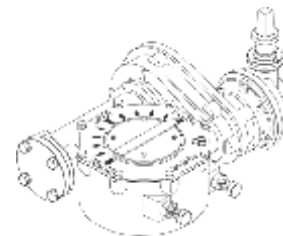
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



SQUARE NUT OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



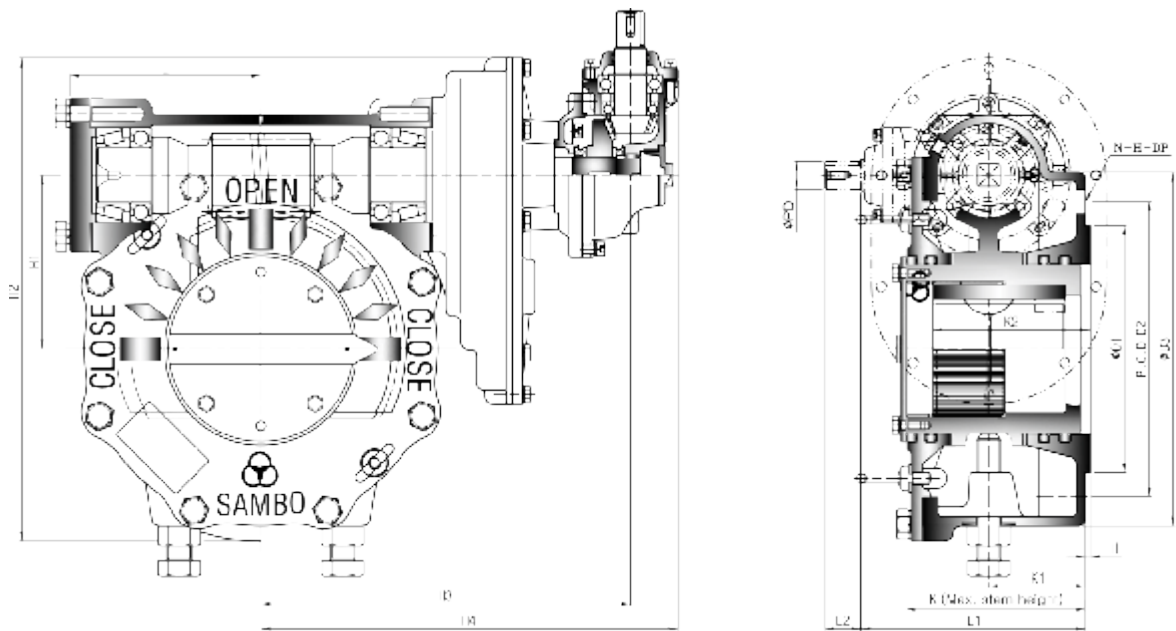
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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-25 , F-30	15900	11727	96
SBWG-55-1S2B	465 : 1	125 (32X18)	F-25 , 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	1320 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	450
SBWG-08-1S2B	1320 : 1	250 (56X32)	F-40 , F-48	121000	89245	573
SBWG-09-1S2B	1320 : 1	280 (63X32)	F-48 , F-60	192500	141981	930
SBWG-10-1S2B	1600 : 1	320 (70X36)	F-60	275000	202830	1470
SBWG-11-1S2B	1700 : 1	360 (80X40)	F-60	442000	326002	2260
SBWG-12-1S2B	1925 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3158
SBWG-13-1S2B	2160 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4079

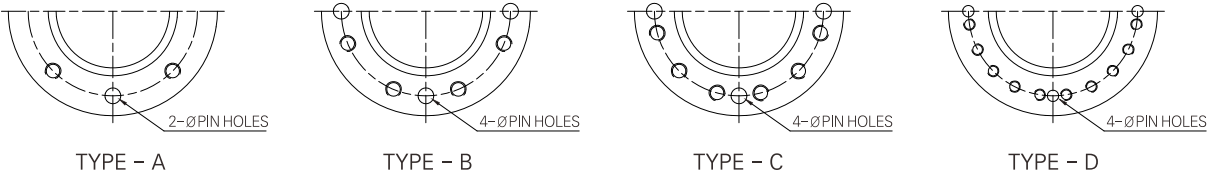
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-B

Vertical Input with Triple Reduction Gear Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART										INPUT SHAFT PART			HAND WHEEL
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
					ØD2	N-H-DP															
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	109.5	56	75.5	108	145				
SBWG-03-1SD2B		B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	265.5	305.5	116	59	87	118	148	34	26	8X7	250
SBWG-35-1SD2B			F-25	200	254	8-M16-24	300		127	339.5	277.5	317.5	126	63	91	125	152				
SBWG-04-1SD2B			F-25	200	254	8-M16-24	300		153	417.5	344	394	147	73	120	153	194				
SBWG-05-1SD2B			F-30	230	298	8-M20-30	350		202	516.5	374	424	162	80	144	183	201	34	26	8X7	300
SBWG-55-1SD2B							350														
SBWG-06-1SD2B			F-35	260	356	8-M30-45	415		230	621	438.5	488.5	200	109	175	117	240	34	26	8X7	400
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	630
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	630
SBWG-10-1SD2B							800		513	1291	893	958	352	164	330	426	384.5				
SBWG-11-1SD2B							900		616.5	1499.5	935.5	1000.5	400	181	370	468.5	401.5				
SBWG-12-1SD2B			(F-80)	650	800	20-M42-63	1000		711	1751	1135	1217.5	484	265	455	554	536	44	38	12X8	800
SBWG-13-1SD2B							1000														

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

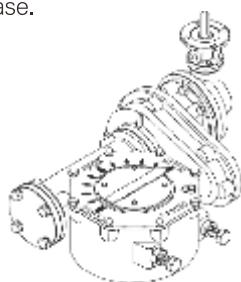
Bushing Type

Splines permit accurate alignment of valve stem key.



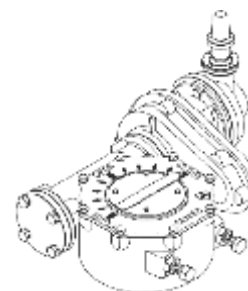
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



SQUARE NUT OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



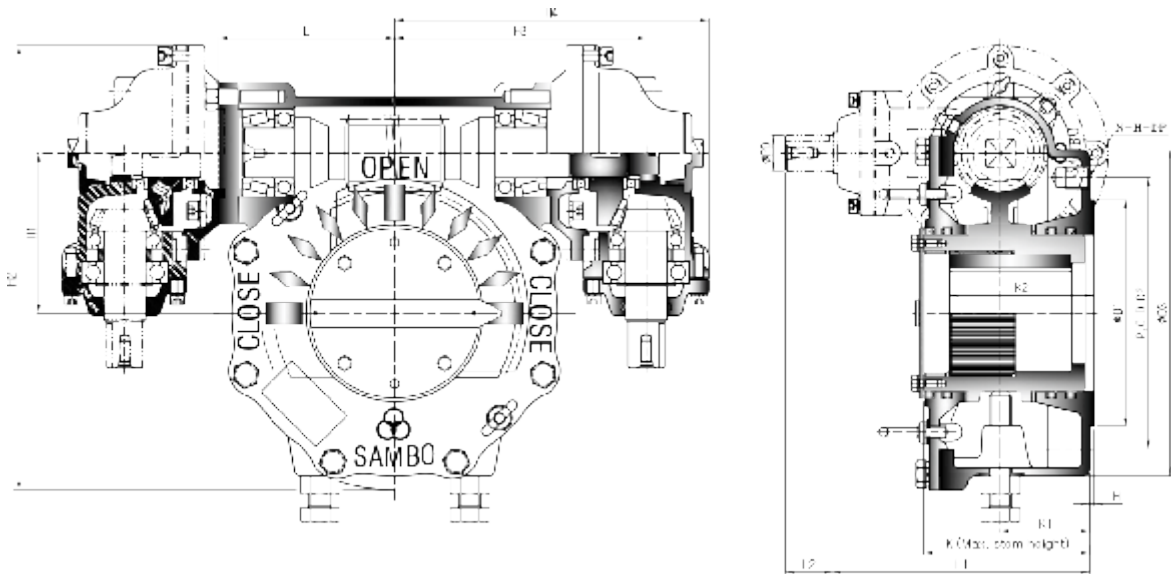
❖ Selection Chart for Manual Operation

MODEL \ SIZE	MAX. GEAR RATIO (Change Able)	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	
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	667.4 : 1	75 (20X12)	F-14 , F-16 , (F-20)	4300	3172	40
SBWG-35-1SD2B	667.4 : 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-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	6600 : 1	210 (50X28)	F-35 , F-40 , F-48	81500	60111	478
SBWG-08-1SD2B	6600 : 1	250 (56X32)	F-40 , F-48	121000	89245	602
SBWG-09-1SD2B	6600 : 1	280 (63X32)	F-48 , F-60	192500	141981	958
SBWG-10-1SD2B	8000 : 1	320 (70X36)	F-60	275000	202830	1508
SBWG-11-1SD2B	8500 : 1	360 (80X40)	F-60	442000	326002	2264
SBWG-12-1SD2B	9625 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3158
SBWG-13-1SD2B	10800 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4079

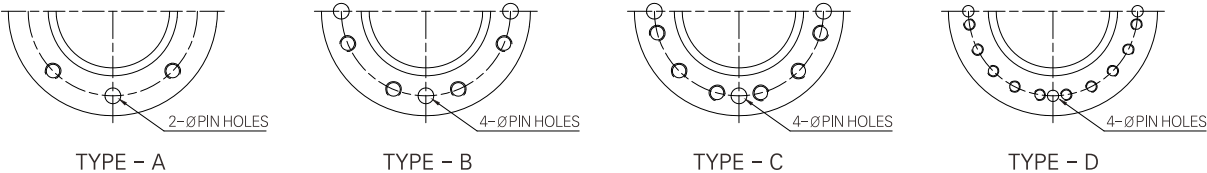
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-B

Vertical Input with Single Reduction Gear Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART									INPUT SHAFT PART			HAND WHEEL	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD		KEY
					ØD2	N-H-DP															
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	250
SBWG-01-2B			F-14	100	140	4-M16-24	190		82.5	240	135	175	96	53	65	95	142				
SBWG-02-2B			F-16	130	165	4-M20-30	220		97	284.5	164	214	109.5	56	75.5	108	177				
SBWG-03-2B		B	(F-16) F-20	160	205	8-M16-24	250	3	112	314.5	174	224	116	59	87	118	180	34	26	8X7	300
SBWG-35-2B			F-25	200	254	8-M16-24	300		127	342	192	242	126	63	91	125	184				
SBWG-04-2B			F-25	200	254	8-M16-24	300		153	406.5	212.5	262.5	147	73	120	153	204				
SBWG-05-2B			F-30	230	298	8-M20-30	350		180	458.5	222.5	272.5	155	78	141	163	209	34	26	8X7	500
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	175	117	297	34	32	10X8	630
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	710
SBWG-08-2B							560		379	954	498	580.5	254	125	245	314	391	44	38	12X8	800
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	44	38	12X8	900
SBWG-11-2B							900		616.5	1489.5	784.5	867	400	181	370	468.5	494				
SBWG-12-2B			(F-80)	650	800	20-M42-63	1000		711	1711	886	986	484	265	455	554	651	58	50	16X10	1000
SBWG-13-2B							1000		809	1941.5	947	1047	546	301	515	609	710				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

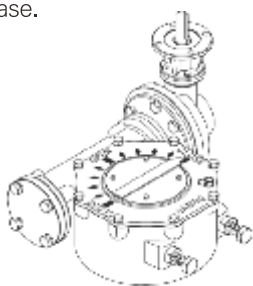
Bushing Type

Splines permit accurate alignment of valve stem key.



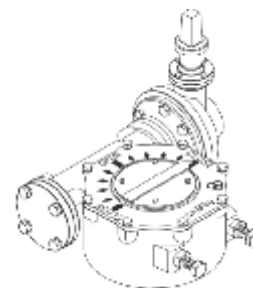
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



SQUARE NUT OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



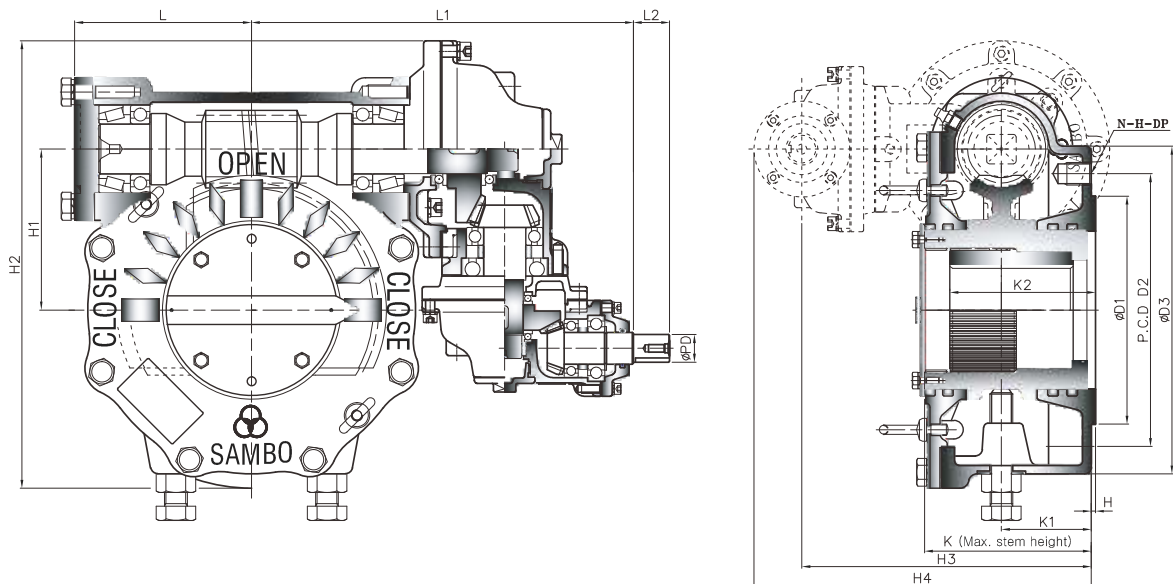
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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-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
SBWG-11-2B	442 : 1	360 (80X40)	F-60	442000	326002	2239
SBWG-12-2B	490 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3116
SBWG-13-2B	544 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4118

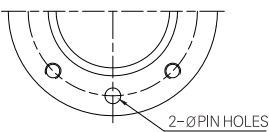
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-C

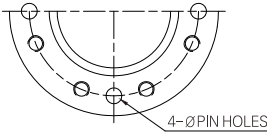
Horizontal Input with Double Reduction Gear Attachment



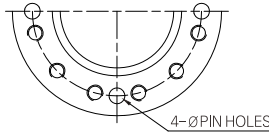
• Pin hole size is same as tap out diameter



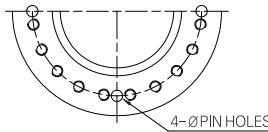
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART										INPUT SHAFT PART			HAND WHEEL
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY		
				ØD2	N-H-DP																
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	250	
SBWG-01-2BD		F-14	100	140	4-M16-24	190		82.5	240	172	212	96	53	65	95	224					
SBWG-02-2BD		F-16	130	165	4-M20-30	220		97	284.5	202	242	109.5	56	75.5	108	253					
SBWG-03-2BD	B	(F-16) F-20	160	205	8-M16-24	250	3	112	314.5	205	245	116	59	87	118	263	34	26	8X7	250	
SBWG-35-2BD		F-25	200	254	8-M16-24	300		127	342	209	249	126	63	91	125	281					
SBWG-04-2BD		F-25	200	254	8-M16-24	300		153	406.5	242	292	147	73	120	153	333.5					
SBWG-05-2BD		F-30	230	298	8-M20-30	350		202	505.5	249	299	162	80	144	183	363.5	34	26	8X7	300	
SBWG-55-2BD						350															
SBWG-06-2BD						415															
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	34	26	8X7	400	
SBWG-75-2BD	560					500															
SBWG-08-2BD	560					379	954													475	530
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	34	32	10X8	710	
SBWG-10-2BD						800		513	1281	563	628	352	164	330	426	922					
SBWG-11-2BD						900		616.5	1489.5	580	645	400	181	370	468.5	965.5					
SBWG-12-2BD		(F-80)	650	800	20-M42-63	1000		711	1711	771	853.5	484	265	455	554	1152	44	38	12X8	800	
SBWG-13-2BD						1000		809	1941.5	842	924.5	546	301	515	609	1238				900	

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

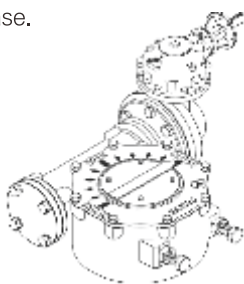
Bushing Type

Splines permit accurate alignment of valve stem key.



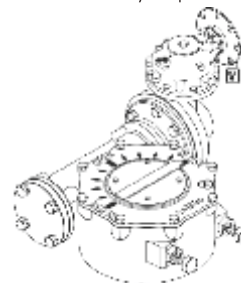
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



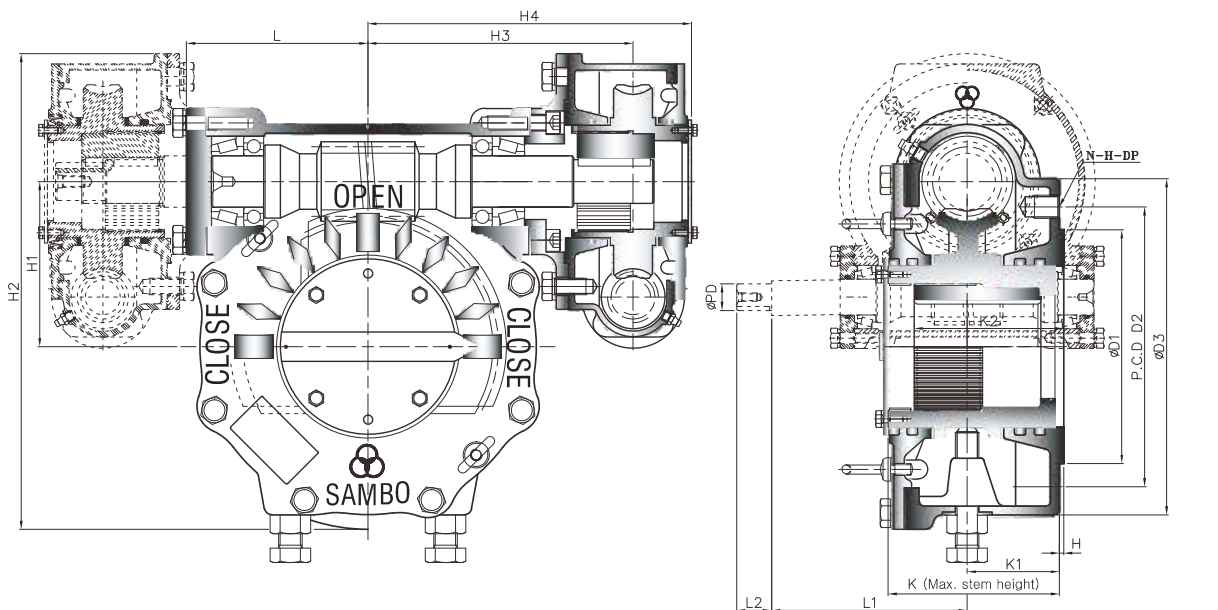
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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-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	990 : 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
SBWG-11-2BD	2210 : 1	360 (80X40)	F-60	442000	326002	2279
SBWG-12-2BD	2695 : 1	400 (90X45)	F-60, (F-80)	610000	449913	3187
SBWG-13-2BD	3264 : 1	440 (100X50)	F-60, (F-80)	970000	715435	4217

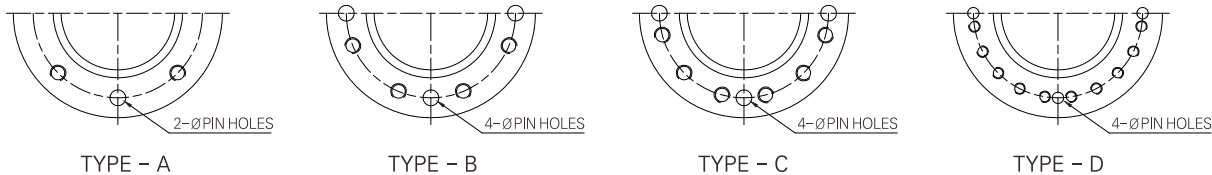
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-E

Vertical Input with Single Reduction Gear Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART									INPUT SHAFT PART			H AND WHEEL					
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY						
				ØD2	N-H-DP																				
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	250					
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	109.5	56	75.5	108	138									
SBWG-03-3W	B	(F-16) F-20	160	205	8-M16-24	250	3	112	319.5	183	229	116	59	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					400				
SBWG-04-3W		F-25	200	254	8-M16-24	300		153	425.5	235	291	147	73	120	153	166									
SBWG-05-3W		F-30	230	298	8-M20-30	350		180	477.5	245	301	155	78	141	163	166	34	26	8X7	500					
SBWG-55-3W						350		202	539.5	273	332	162	80	144	183	176					560				
SBWG-06-3W		F-35	260	356	8-M30-45	415		230	606	375	442	200	109	175	117	181									
SBWG-07-3W		F-40	300	406	8-M36-55	475		280.5	708	410	477	227	116	209	252	181						560			
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	630					
SBWG-08-3W						560		379	961.5	438	518	254	125	245	314	217					710				
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					44	38	12X8	800	
SBWG-11-3W						900		616.5	1539.5	722.5	843.5	400	181	370	468.5	341									900
SBWG-12-3W						1000		711	1781	805	935.5	484	265	455	554	381									
SBWG-13-3W		(F-80)	650	800	20-M42-63	1000		809	2034	850	985.5	546	301	515	609	416	58	50	16X10	1000					

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

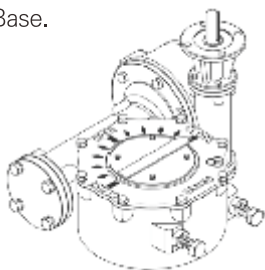
Bushing Type

Splines permit accurate alignment of valve stem key.



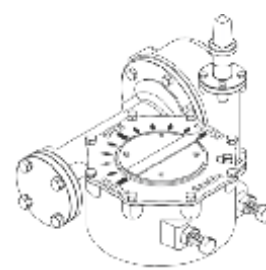
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



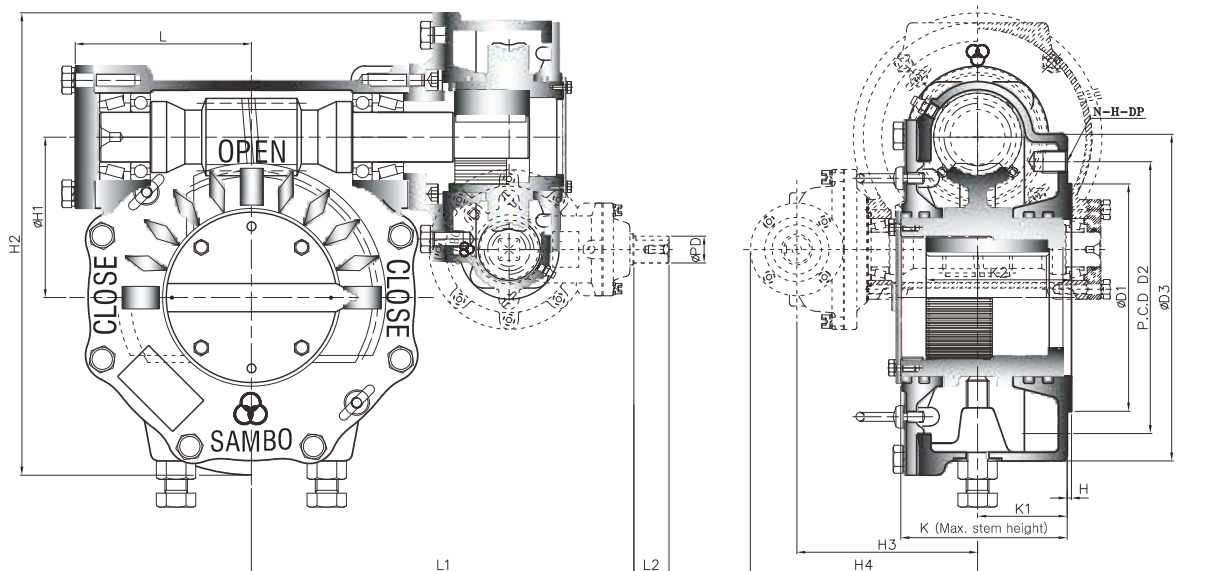
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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-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
SBWG-11-3W	4624 : 1	360 (80X40)	F-60	442000	326002	2328
SBWG-12-3W	4620 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3251
SBWG-13-3W	4752 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4273

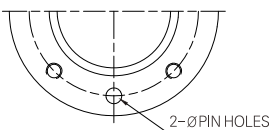
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

STANDARD TYPE-E

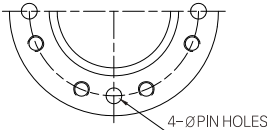
Horizontal Input with Double Reduction Gear Attachment



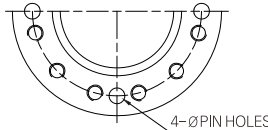
• Pin hole size is same as tap out diameter



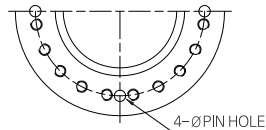
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART										INPUT SHAFT PART			H A N D WHEEL
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	H4	K	K1	K2	L	L1	L2	ØPD	KEY	
					ØD2	N-H-DP															
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	250
SBWG-01-3W2B			F-14	100	140	4-M16-24	190		82.5	245	113.5	153.5	96	53	65	95	231				250
SBWG-02-3W2B			F-16	130	165	4-M20-30	220		97	289.5	126	166	109.5	56	75.5	108	262				250
SBWG-03-3W2B		B	(F-16) F-20	160	205	8-M16-24	250	3	112	319.5	126	166	116	59	87	118	272	34	26	8X7	250
SBWG-35-3W2B			F-25	200	254	8-M16-24	300		127	359.5	135	175	126	63	91	125	292				250
SBWG-04-3W2B			F-25	200	254	8-M16-24	300		153	425.5	164	214	147	73	120	153	356				300
SBWG-05-3W2B			F-30	230	298	8-M20-30	350		180	477.5	164	214	155	78	141	163	366				300
SBWG-55-3W2B							350		202	539.5	174	224	162	80	144	183	394				300
SBWG-06-3W2B							F-35		260	356	8-M30-45	415	230	606	192	232	200				109
SBWG-07-3W2B			F-40	300	406	8-M36-55	475		280.5	708	192	232	227	116	209	252	531				500
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	630
SBWG-08-3W2B							560		379	961.5	222.5	272.5	254	125	245	314	569				630
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	630
SBWG-10-3W2B							800		513	1279.5	312	377	352	164	330	426	862				710
SBWG-11-3W2B							900		616.5	1539.5	347	412	400	181	370	468.5	910.5				
SBWG-12-3W2B			(F-80)	650	800	20-M42-63	1000		711	1781	380	445	484	265	455	554	1013	34	32	10X8	800
SBWG-13-3W2B							1000		809	2033	466	548.5	546	301	515	609	1116				44

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

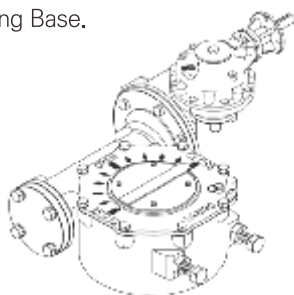
Bushing Type

Splines permit accurate alignment of valve stem key.



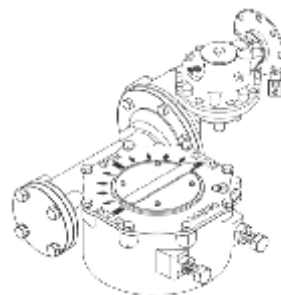
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



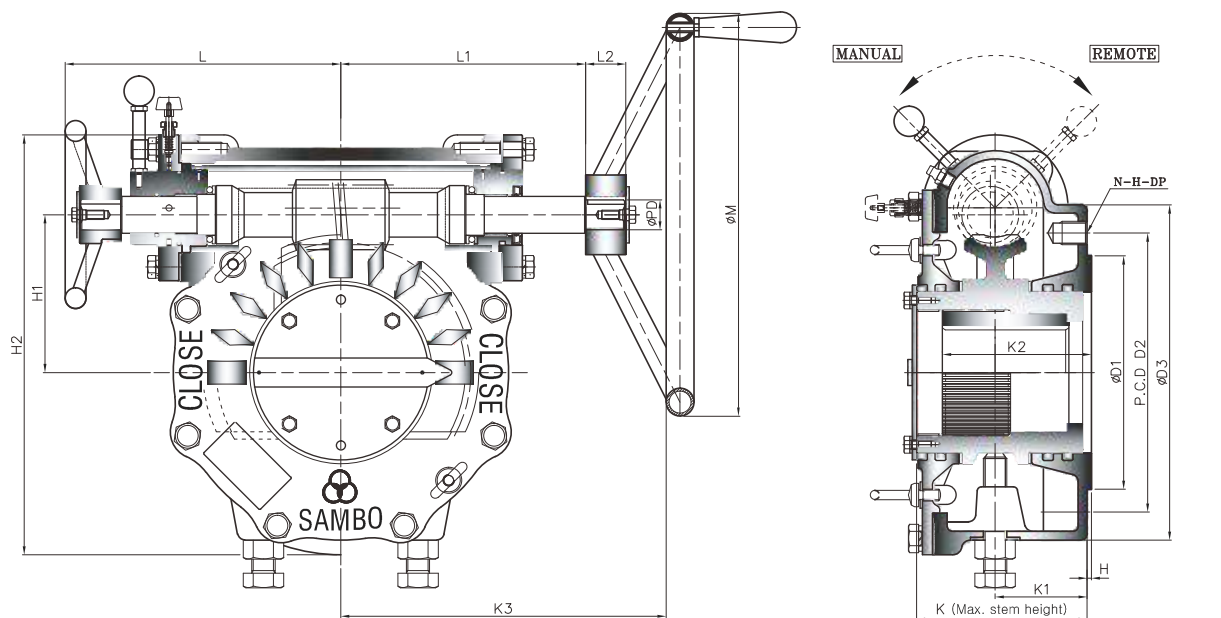
❖ Selection Chart for Manual Operation

MODEL \ SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	
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-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
SBWG-11-3W2B	9248 : 1	360 (80X40)	F-60	442000	326002	2358
SBWG-12-3W2B	11550 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3291
SBWG-13-3W2B	13068 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4313

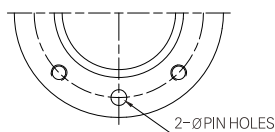
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

DECLUTCH GEAR

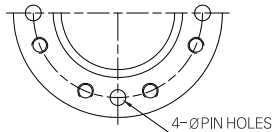
Horizontal Input



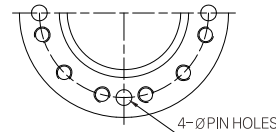
- Pin hole size is same as tap out diameter



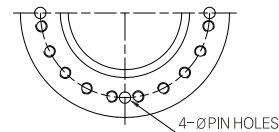
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

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-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	177	111.5	104.5				250			
SBWG-00DC		F-12	85	125	4-M12-18	165		65.5	192	86.5	43	53.6	230	122	138				300			
SBWG-01DC		F-14	100	140	4-M16-24	190		78.5	217.5	96	53	65	260	131	147				400			
SBWG-02DC		F-16	130	165	4-M20-30	220		92.5	257	109.5	56	75.5	294	184	166				29	21	6X6	500
SBWG-03DC	B	(F-16) F-20	160	205	8-M16-24	250	3	107.5	287	116	59	87	324	194	176	29	21	6X6	560			
SBWG-35DC		F-25	200	254	8-M16-24	300		122	319.5	126	63	91	329	201	181				630			
SBWG-04DC		F-25	200	254	8-M16-24	300		147	385.5	147	73	120	370	247	207				34	32	10X8	710
SBWG-05DC		F-30	230	298	8-M20-30	350		174	437.5	155	78	141	400	257	217							800
SBWG-55DC		F-30	230	298	8-M20-30	350		196	484.5	162	80	144	420	277	237				44	38	12X8	900
SBWG-06DC		F-35	260	356	8-M30-45	415		222	558.5	200	109	175	489	316	286							1000
SBWG-07DC		F-40	300	406	8-M36-55	475		272.5	660.5	227	116	209	538	350.5	315				58	50	16X10	1000
SBWG-75DC	C	F-48	370	483	12-M36-55	560	5	313	776	246	120	220	617	389.5	381	58	50	16X10	1000			
SBWG-08DC		F-48	370	483	12-M36-55	560		366	884	254	125	245	652	424.5	416				1000			
SBWG-09DC	D	F-60	470	603	20-M36-55	700	5	435.5	1023.5	284	138	270	692	465	456	58	50	16X10	1000			
SBWG-10DC		F-60	470	603	20-M36-55	800		498	1191	352	164	330	814	550	614				1000			

Worm Gear Actuators

❖ Feature

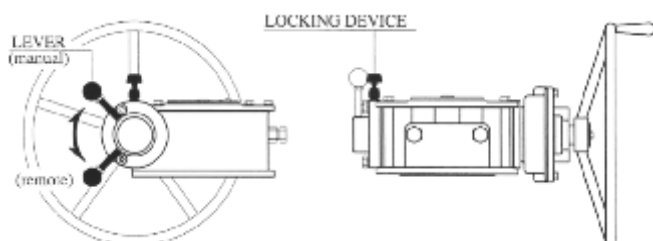
- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Manual Override Operation



- Somewhere it should be noted that these units have been specifically developed for use with pneumatic and Hydraulic Actuators providing a positive mechanical means of manual operation.

1. Pull up on locking device knob.
2. Rotate lever to "Manual" position.
3. Handwheel can now be operated.
Note : pneumatic actuator is now fully disengaged.
4. The lever must be placed back in "Remote" position for pneumatic operation.

CAUTION

- Operate to check the position of manual and remote.
- When convert "manual" position, control the position of worm shaft and then operate to accord with worm gear.

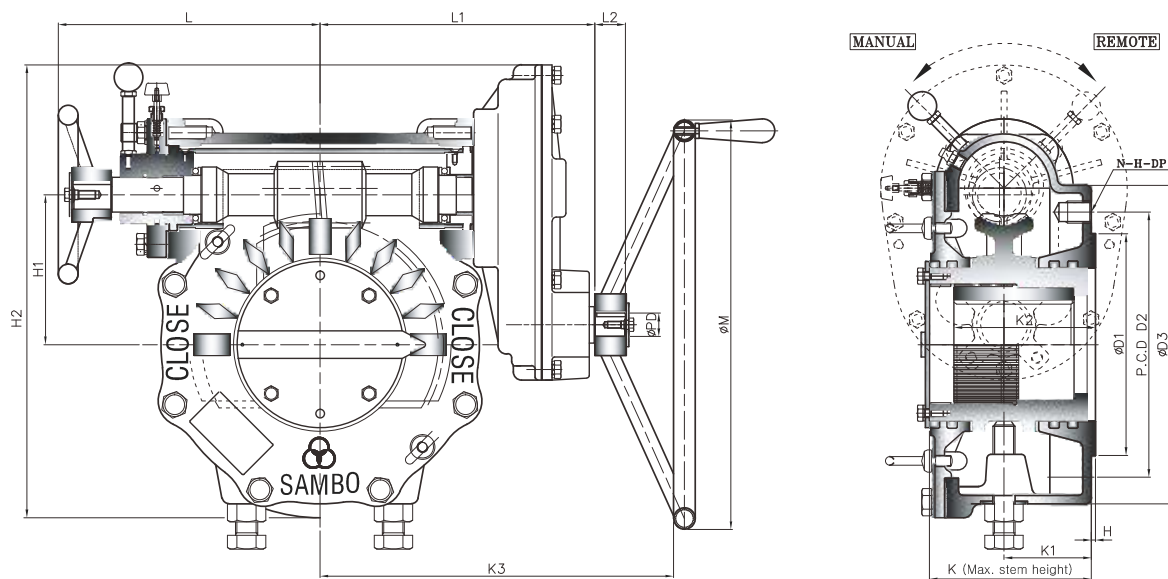
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	Kg
SBWG-BFDC	29 : 1	20 (6X6)	F-07	320	236	4
SBWG-ODC	34 : 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-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

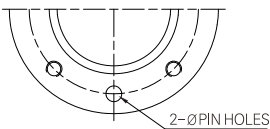
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

DECLUTCH GEAR

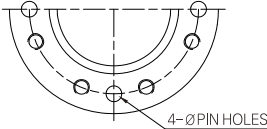
Horizontal Input with Single Reduction Gear Attachment



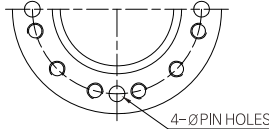
• Pin hole size is same as tap out diameter



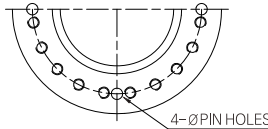
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART								INPUT SHAFT PART			H A N D W H E E L				
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD		KEY			
					ØD2	N-H-DP																	
SBWG-00DC-1S		A	F-12	85	125	4-M12-18	165	2	65.5	210	86.5	43	53.6	259	122	166	29	21	6X6	300			
SBWG-01DC-1S			F-14	100	140	4-M16-24	190		78.5	235.5	96	53	65	288	131	175				400			
SBWG-02DC-1S			F-16	130	165	4-M20-30	220		92.5	282	109.5	56	75.5	319	184	190.5				500			
SBWG-03DC-1S		B	(F-16) F-20	160	205	8-M16-24	250	3	107.5	312	116	59	87	349	194	200.5	34	32	10X8	560			
SBWG-35DC-1S			F-25	200	254	8-M16-24	300		122	339.5	126	63	91	367	201	212.5				630			
SBWG-04DC-1S			F-25	200	254	8-M16-24	300		147	417.5	147	73	120	413	247	250				34	32	10X8	710
SBWG-05DC-1S			F-30	230	298	8-M20-30	350		174	469.5	155	78	141	443	257	260							
SBWG-55DC-1S			F-30	230	298	8-M20-30	350		196	516.5	162	80	144	463	277	280							
SBWG-06DC-1S			F-35	260	356	8-M30-45	415		222	621	200	109	175	552	316	349				44	38	12X8	800
SBWG-07DC-1S		F-40	300	406	8-M36-55	475	272.5	723	227	116	209	607	350.5	384	900								
SBWG-75DC-1S		C	F-48	370	483	12-M36-55	560	5	313	860	246	120	220	721	389.5	485	58	50	16X10	1000			
SBWG-08DC-1S							560		366	968	254	125	245	756	424.5	520							
SBWG-09DC-1S		D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	284	138	270	796	465	560	58	50	16X10	1000			
SBWG-10DC-1S							800		498	1191	352	164	330	927	550	691							

Worm Gear Actuators

❖ Feature

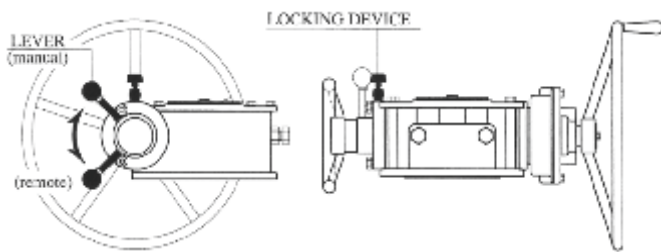
- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Manual Override Operation



- Somewhere it should be noted that these units have been specifically developed for use with pneumatic and Hydraulic Actuators providing a positive mechanical means of manual operation.

1. Pull up on locking device knob.
2. Rotate lever to "Manual" position.
3. Handwheel can now be operated.
Note : pneumatic actuator is now fully disengaged.
4. The lever must be placed back in "Remote" position for pneumatic operation.

CAUTION

- Operate to check the position of manual and remote.
- When convert "manual" position, control the position of worm shaft and then operate to accord with worm gear.

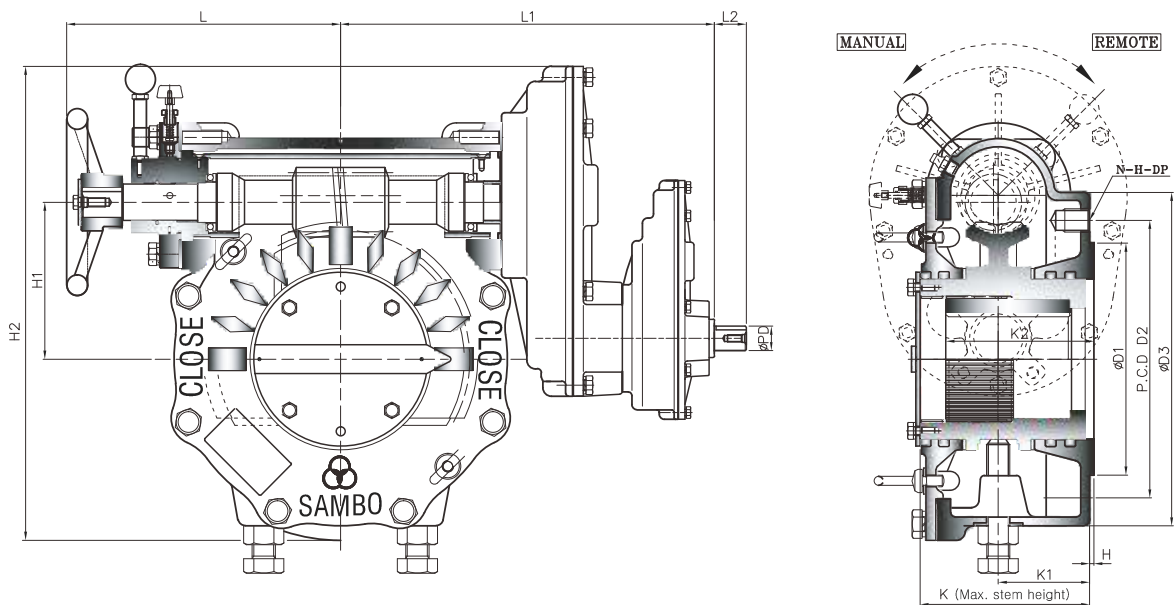
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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-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	266 : 1	320 (70X36)	F-60	253000	186600	1426

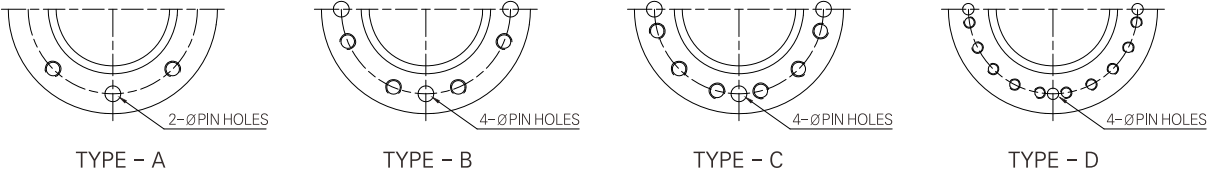
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

DECLUTCH GEAR

Horizontal Input
with Double Reduction Gear Attachment



• Pin hole size is same as tap out diameter



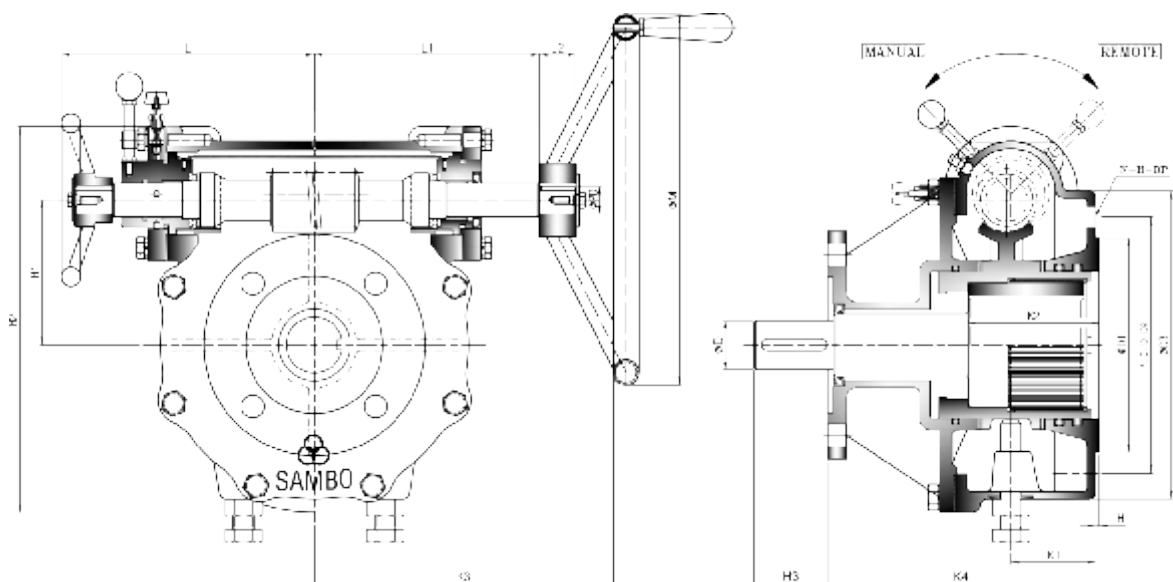
Dimension

UNIT : mm

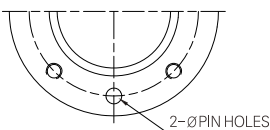
DIM MODEL		BASE PART						EXTERNAL PART							INPUT SHAFT PART			H AND WHEEL	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	L	L1	L2	ØPD		KEY
					ØD2	N-H-DP													
SBWG-00DC-2SD		A	F-12	85	125	4-M12-18	165	2	65.5	210	86.5	43	53.6	122	261	29	21	6X6	300
SBWG-01DC-2SD			F-14	100	140	4-M16-24	190		78.5	235.5	96	53	65	131	270				400
SBWG-02DC-2SD			F-16	130	165	4-M20-30	220		92.5	282	109.5	56	75.5	184	282.5				500
SBWG-03DC-2SD		B	(F-16) F-20	160	205	8-M16-24	250	3	107.5	312	116	59	87	194	292.5	29	21	6X6	560
SBWG-35DC-2SD			F-25	200	254	8-M16-24	300		122	339.5	126	63	91	201	310.5				630
SBWG-04DC-2SD			F-25	200	254	8-M16-24	300		147	417.5	147	73	120	247	352.5				
SBWG-05DC-2SD			F-30	230	298	8-M20-30	350		174	469.5	155	78	141	257	362.5	34	26	8X7	710
SBWG-55DC-2SD							350		196	516.5	162	80	144	277	382.5				800
SBWG-06DC-2SD			F-35	260	356	8-M30-45	415		222	621	200	109	175	316	497	34	32	10X8	900
SBWG-07DC-2SD			F-40	300	406	8-M36-55	475		272.5	723	227	116	209	350.5	515				
SBWG-75DC-2SD		C	F-48	370	483	12-M36-55	560	5	313	860	246	120	220	389.5	641	44	38	12X8	1000
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	1000
SBWG-10DC-2SD							800		498	1191	352	164	330	550	860				

DECLUTCH GEAR Pneumatic Actuator

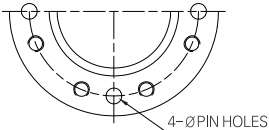
Horizontal Input



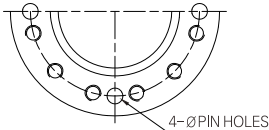
• Pin hole size is same as tap out diameter



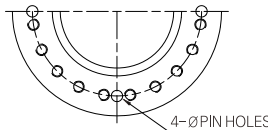
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

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	K3	K4	L	L1	L2	ØPD	KEY	
				ØD2	N-H-DP														
SBWG-BFDCM	A	F-07	55	70	4-M8-12	110	2	38.5	132	38	38.6	150	131	104	97	24	16	6X6	200
SBWG-0DCM		F-10	70	102	4-M10-15	135		53.5	159.5	38	43.6	177	133	111.5	104.5				250
SBWG-00DCM		F-12	85	125	4-M12-18	165		65.5	192	43	53.6	230	145.5	122	138				300
SBWG-01DCM		F-14	100	140	4-M16-24	190		78.5	217.5	53	65	260	170	131	147				400
SBWG-02DCM		F-16	130	165	4-M20-30	220		92.5	257	56	75.5	294	188.5	184	166				500
SBWG-03DCM	B	(F-16) F-20	160	205	8-M16-24	250	3	107.5	287	59	87	324	204	194	176	29	21	6X6	560
SBWG-35DCM		F-25	200	254	8-M16-24	300		122	319.5	63	91	329	216	201	181				
SBWG-04DCM		F-25	200	254	8-M16-24	300		147	385.5	73	120	370	242	247	207				
SBWG-05DCM		F-30	230	298	8-M20-30	350		174	437.5	78	141	400	247.5	257	217	34	32	10X8	710
SBWG-55DCM						350		196	484.5	80	144	420	256	277	237				
SBWG-06DCM		F-35	260	356	8-M30-45	415		222	558.5	109	175	489	302	316	286	44	38	12X8	800
SBWG-07DCM		F-40	300	406	8-M36-55	475		272.5	660.5	116	209	538	349	350.5	315				900
SBWG-75DCM		C	F-48	370	483	12-M36-55		560	5	313	776	120	220	617	430	389.5	381	58	50
SBWG-08DCM	560						366	884		125	245	652	439	424.5	416				
SBWG-09DCM	D	F-60	470	603	20-M36-55	700	5	435.5	1023.5	138	270	692	467	465	456	58	50	16X10	1000
SBWG-10DCM						800		498	1191	352	164	330	562	550	614				

Worm Gear Actuators

❖ Feature

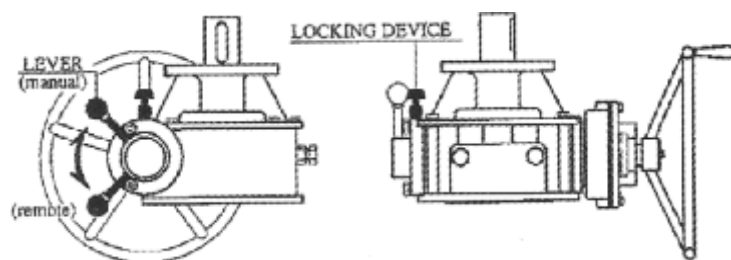
- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Manual Override Operation



- Somewhere it should be noted that these units have been specifically developed for use with pneumatic and Hydraulic Actuators providing a positive mechanical means of manual operation.

1. Pull up on locking device knob.
 2. Rotate lever to "Manual" position.
 3. Handwheel can now be operated.
- Note : pneumatic actuator is now fully disengaged.
4. The lever must be placed back in "Remote" position for pneumatic operation.

CAUTION

- Operate to check the position of manual and remote.
- When convert "manual" position, control the position of worm shaft and then operate to accord with worm gear.

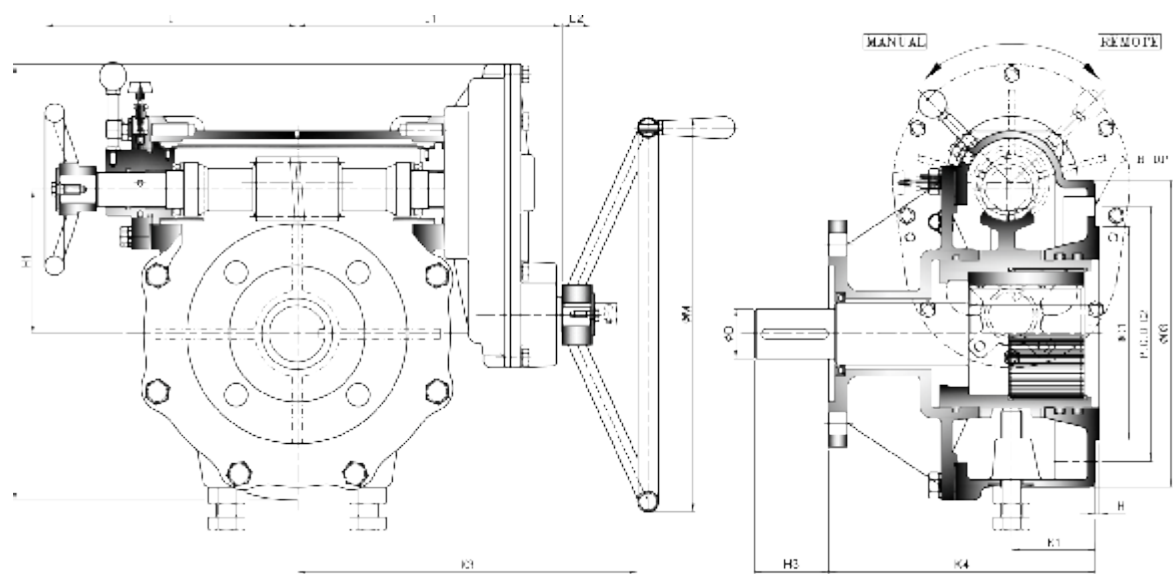
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	PNEUMATIC PART			MAX. TORQUE CAPACITY		WEIGHT
				ØD	H3	MOUNTING OPTION	N-m	Ft . lbf	
SBWG-BFDCM	29 : 1	20 (6X6)	F-07	Ø20	50	F-07	320	236	5
SBWG-0DCM	34 : 1	28 (8X7)	F-07, F-10	Ø30	50	F-10, F-07	680	502	7
SBWG-00DCM	38 : 1	36 (10X8)	F-10, F-12	Ø40	60	F-12,, & F-10	980	723	11
SBWG-01DCM	43 : 1	46 (14X9)	F-10, F-12, F-14	Ø50	75	F-14, F-12, F-10	1600	1180	18
SBWG-02DCM	46 : 1	60 (18X11)	F-12, F-14, F-16	Ø65	80	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-16, F-14	5600	4130	63
SBWG-04DCM	56 : 1	95 (25X14)	F-16, (F-20), F-25	Ø85	90	F-25, F-20, F-16	9600	7081	86
SBWG-05DCM	60 : 1	115 (32X18)	F-25, F-30	Ø100	145	F-30, F-25, F-20	14400	10621	120
SBWG-55DCM	62 : 1	125 (32X18)	F-25, F-30	Ø120	145	F-30, F-25, F-20	21150	15599	169
SBWG-06DCM	64 : 1	140 (36X20)	F-25, F-30, F-35	Ø130	145	F-30, F-25, F-20	29520	21773	250
SBWG-07DCM	68 : 1	180 (45X25)	F-30, F-35, F-40	Ø180	180	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	Ø280	320	F-60	253000	186600	1665

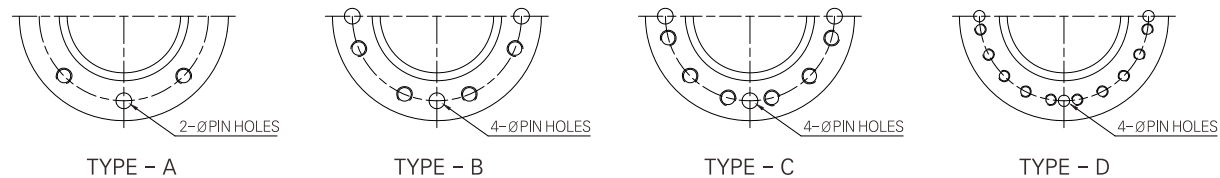
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

DECLUTCH GEAR Pneumatic Actuator

Horizontal Input
with Single Reduction Gear Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART								INPUT SHAFT PART			H AND WHEEL				
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K1	K2	K3	K4	L	L1	L2	ØPD		KEY			
					ØD2	N-H-DP																	
SBWG-00DCM-1S		A	F-12	85	125	4-M12-18	165	2	65.5	210	43	53.6	259	145.5	154	166	29	21	6X6	300			
SBWG-01DCM-1S			F-14	100	140	4-M16-24	190		78.5	235.5	53	65	288	170	163	175				400			
SBWG-02DCM-1S			F-16	130	165	4-M20-30	220		92	282	56	75.5	319	188.5	184	190.5				500			
SBWG-03DCM-1S		B	(F-16) F-20	160	205	8-M16-24	250	3	107	312	59	87	349	204	194	200.5	34	32	10X8	560			
SBWG-35DCM-1S			F-25	200	254	8-M16-24	300		122	339.5	63	91	367	216	201	212.5				630			
SBWG-04DCM-1S			F-25	200	254	8-M16-24	300		147	417.5	73	120	413	242	247	250				34	32	10X8	710
SBWG-05DCM-1S			F-30	230	298	8-M20-30	350		174	469.5	78	141	443	247.5	257	260							
SBWG-55DCM-1S							350		196	516.5	80	144	463	256	277	280							
SBWG-06DCM-1S			F-35	260	356	8-M30-45	415		222	621	109	175	552	302	316	349				44	38	12X8	800
SBWG-07DCM-1S		F-40	300	406	8-M36-55	475	272.5	723	116	209	607	349	349	384	900								
SBWG-75DCM-1S		C	F-48	370	483	12-M36-55	560	5	313	860	120	220	721	430	389.5	485	58	50	16X10	1000			
SBWG-08DCM-1S							560		366	968	125	245	756	439	424.5	520							
SBWG-09DCM-1S		D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	138	270	796	467	465	560	58	50	16X10	1000			
SBWG-10DCM-1S							800		498	1191	164	330	927	560	550	691							

Worm Gear Actuators

❖ Feature

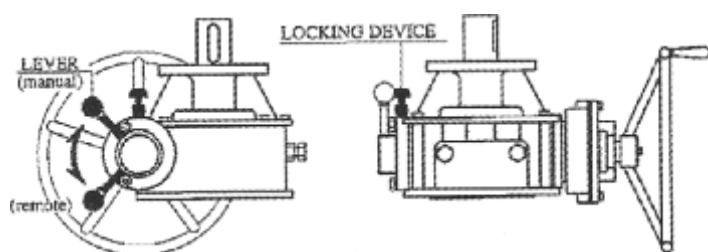
- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Manual Override Operation



- Somewhere it should be noted that these units have been specifically developed for use with pneumatic and Hydraulic Actuators providing a positive mechanical means of manual operation.

1. Pull up on locking device knob.
2. Rotate lever to "Manual" position.
3. Handwheel can now be operated.
Note : pneumatic actuator is now fully disengaged.
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- Operate to check the position of manual and remote.
- When convert "manual" position, control the position of worm shaft and then operate to accord with worm gear.

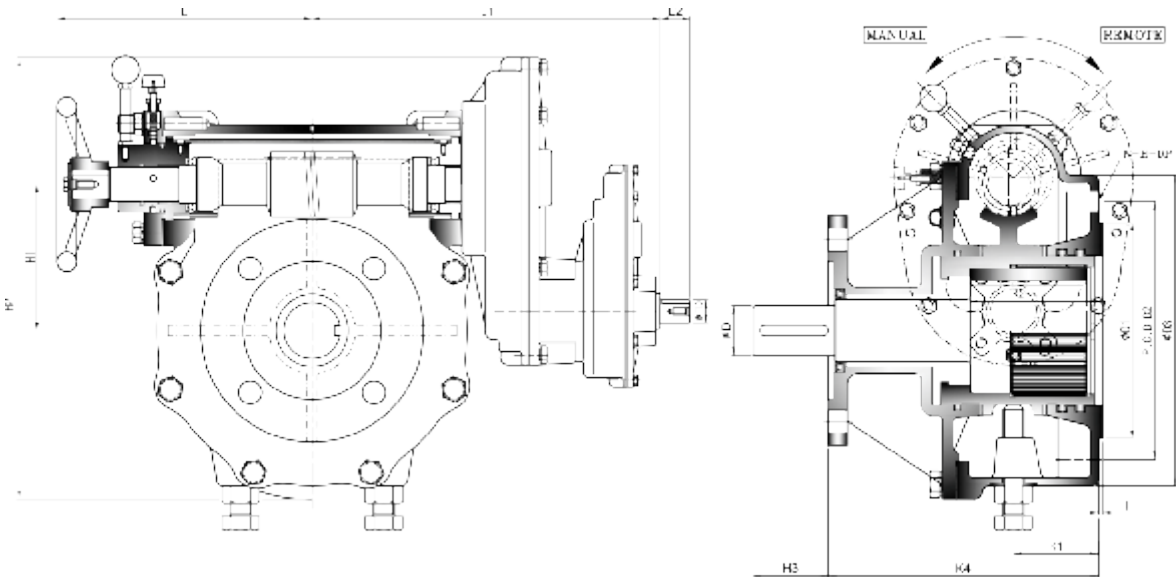
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	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	Ø40	60	F-12, F-10	980	723	13
SBWG-01DCM-1S	75 : 1	46 (14X9)	F-10 , F-12 , F-14	Ø50	75	F-14, F-12, F-10	1600	1180	21
SBWG-02DCM-1S	107 : 1	60 (18X11)	F-12 , F-14 , F-16	Ø65	80	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-16, F-14	5600	4130	66
SBWG-04DCM-1S	149.3 : 1	95 (25X14)	F-16 , (F-20) , F-25	Ø85	90	F-25, F-20, F-16	9600	7081	95
SBWG-05DCM-1S	160 : 1	115 (32X18)	F-25 , F-30	Ø100	145	F-30, F-25, F-20	14400	10621	124
SBWG-55DCM-1S	165 : 1	125 (32X18)	F-25 , F-30	Ø120	145	F-30, F-25, F-20	21150	15599	173
SBWG-06DCM-1S	232 : 1	140 (36X20)	F-25 , F-30 , F-35	Ø130	145	F-30, F-25, F-20	29520	21773	260
SBWG-07DCM-1S	247 : 1	180 (45X25)	F-30 , F-35 , F-40	Ø180	180	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	266 : 1	320 (70X36)	F-60	Ø280	320	F-60	253000	186600	1782

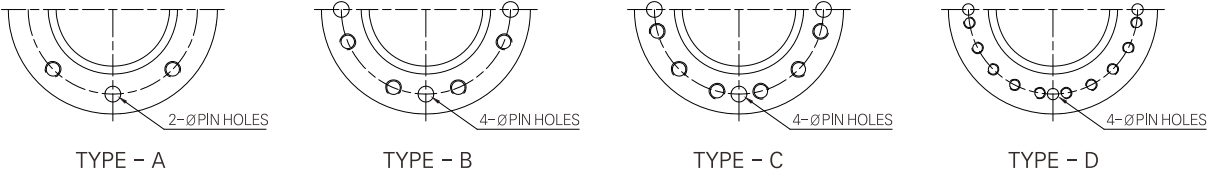
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

DECLUTCH GEAR Pneumatic Actuator

Horizontal Input with Single Reduction Gear Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART							INPUT SHAFT PART			H AND WHEEL	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K1	K2	K4	L	L1	L2	ØPD		KEY
					ØD2	N-H-DP													
SBWG-00DCM-2SD		A	F-12	85	125	4-M12-18	165	2	65.5	210	43	53.6	145.5	154	261	29	21	6X6	300
SBWG-01DCM-2SD			F-14	100	140	4-M16-24	190		78.5	235.5	53	65	170	163	270				400
SBWG-02DCM-2SD			F-16	130	165	4-M20-30	220		92	282	56	75.5	188.5	184	282.5				500
SBWG-03DCM-2SD		B	(F-16) F-20	160	205	8-M16-24	250	3	107	312	59	87	204	194	292.5	29	21	6X6	560
SBWG-35DCM-2SD			F-25	200	254	8-M16-24	300		122	339.5	63	91	216	201	310.5				
SBWG-04DCM-2SD			F-25	200	254	8-M16-24	300		147	417.5	73	120	242	247	352.5				
SBWG-05DCM-2SD			F-30	230	298	8-M20-30	350		174	469.5	78	141	247.5	257	362.5				
SBWG-55DCM-2SD							350		196	516.5	80	144	256	277	382.5	800			
SBWG-06DCM-2SD			F-35	260	356	8-M30-45	415		222	621	109	175	302	316	497	34	32	10X8	800
SBWG-07DCM-2SD			F-40	300	406	8-M36-55	475		272.5	723	116	209	349	349	515				900
SBWG-75DCM-2SD		C	F-48	370	483	12-M36-55	560	5	313	860	120	220	430	389.5	641	44	38	12X8	1000
SBWG-08DCM-2SD							560		366	968	125	245	439	424.5	676				
SBWG-09DCM-2SD		D	F-60	470	603	20-M36-55	700	5	435.5	1107.5	138	270	467	465	716	58	50	16X10	1000
SBWG-10DCM-2SD							800		498	1191	164	330	560	550	860				

Worm Gear Actuators

❖ Feature

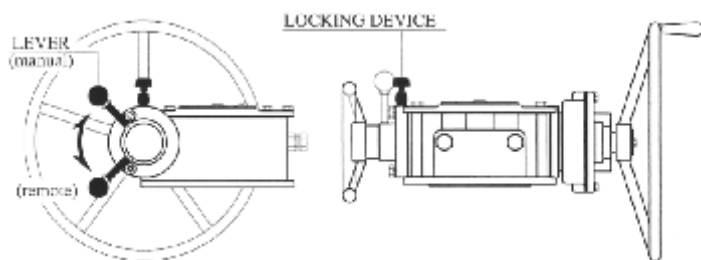
- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
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Bushing Type

Splines permit accurate alignment of valve stem key.



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- Somewhere it should be noted that these units have been specifically developed for use with pneumatic and Hydraulic Actuators providing a positive mechanical means of manual operation.

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- Operate to check the position of manual and remote.
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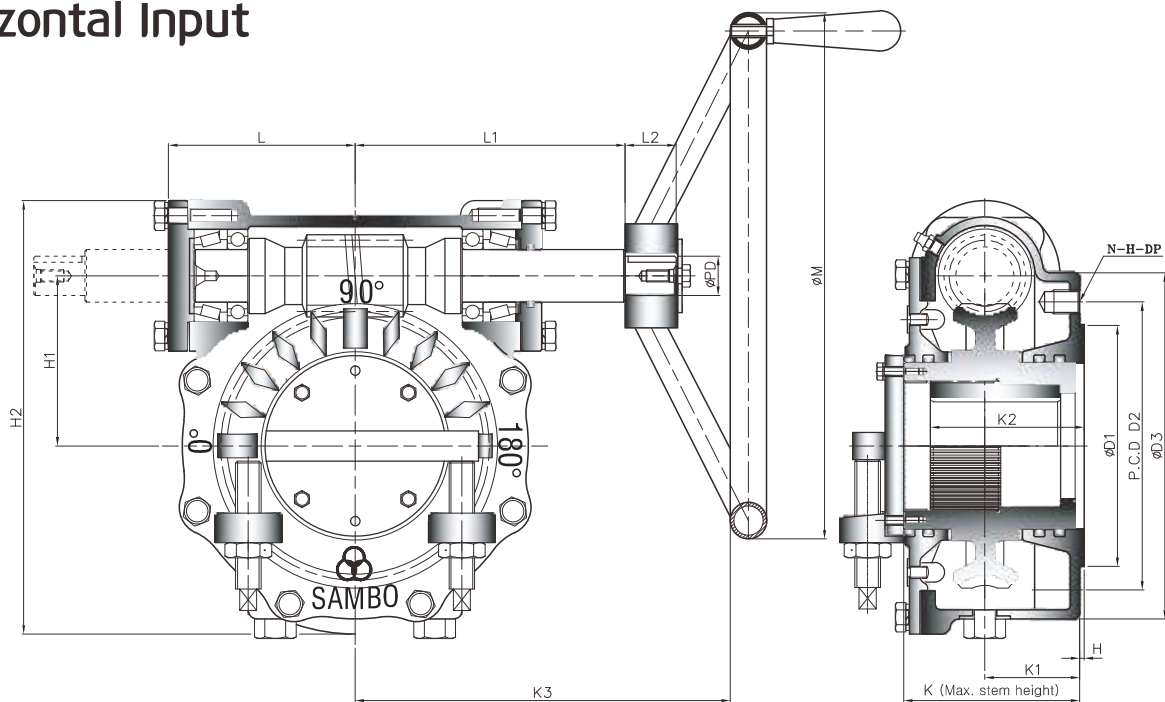
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	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	Ø40	60	F-12, F-10	980	723	16
SBWG-01DCM-2SD	298 : 1	46 (14X9)	F-10 , F-12 , F-14	Ø50	75	F-14, F-12, F-10	1600	1180	24
SBWG-02DCM-2SD	449 : 1	60 (18X11)	F-12 , F-14 , F-16	Ø65	80	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-16, F-14	5600	4130	70
SBWG-04DCM-2SD	958 : 1	95 (25X14)	F-16 , (F-20) , F-25	Ø85	90	F-25, F-20, F-16	9600	7081	101
SBWG-05DCM-2SD	1026 : 1	115 (32X18)	F-25 , F-30	Ø100	145	F-30, F-25, F-20	14400	10621	130
SBWG-55DCM-2SD	1061 : 1	125 (32X18)	F-25 , F-30	Ø120	145	F-30, F-25, F-20	21150	15599	179
SBWG-06DCM-2SD	2088 : 1	140 (36X20)	F-25 , F-30 , F-35	Ø130	145	F-30, F-25, F-20	29520	21773	275
SBWG-07DCM-2SD	2218 : 1	180 (45X25)	F-30 , F-35 , F-40	Ø180	180	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	6650 : 1	320 (70X36)	F-60	Ø280	320	F-60	253000	186600	1830

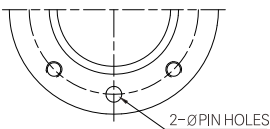
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PART TURN 180°

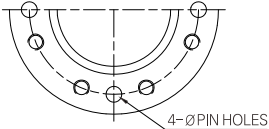
Horizontal Input



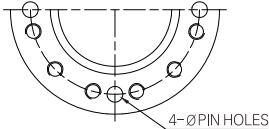
• Pin hole size is same as tap out diameter



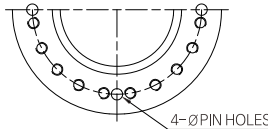
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART								INPUT SHAFT PART			H A N D W H E E L	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	K	K1	K2	K3	L	L1	L2	ØPD		KEY
					ØD2	N-H-DP														
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	177	71.5	104.5				250
SBWG-00 180			F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	230	86	138				300
SBWG-01 180			F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	260	95	147				400
SBWG-02 180			F-16	130	165	4-M20-30	220		97	257	109.5	56	75.5	294	108	166				34
SBWG-03 180		B	(F-16) F-20	160	205	8-M16-24	250	3	112	287	116	59	87	324	118	176	34	26	8X7	560
SBWG-35 180			F-25	200	254	8-M16-24	300		127	319.5	126	63	91	329	125	181				630
SBWG-04 180			F-25	200	254	8-M16-24	300		153	385.5	147	73	120	370	153	207				
SBWG-05 180			F-30	230	298	8-M20-30	350		180	437.5	155	78	141	400	163	217	34	32	10X8	710
SBWG-55 180							350		202	484.5	162	80	144	420	183	237				
SBWG-06 180			F-35	260	356	8-M30-45	415		230	558.5	200	109	175	489	117	286	44	38	12X8	800
SBWG-07 180			F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	538	252	315				900
SBWG-75 180		C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	617	279	381	58	50	16X10	1000
SBWG-08 180							560		379	884	254	125	245	652	314	416				
SBWG-09 180		D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	692	354	456	58	50	16X10	1000
SBWG-10 180							800		513	1191	352	164	330	814	426	614				
SBWG-11 180							900		616.5	1399.5	400	181	370	857	468.5	657				
SBWG-12 180			(F-80)	650	800	20-M42-63	1000		711	1621	484	265	455	980	554	702				
SBWG-13 180							1000		809	1814	546	301	515	988	609	752				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

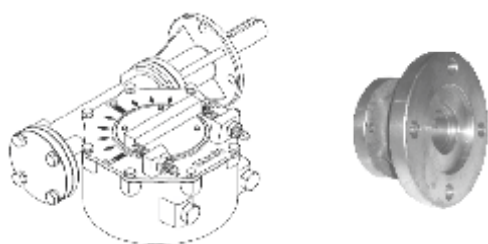
Bushing Type

Splines permit accurate alignment of valve stem key.



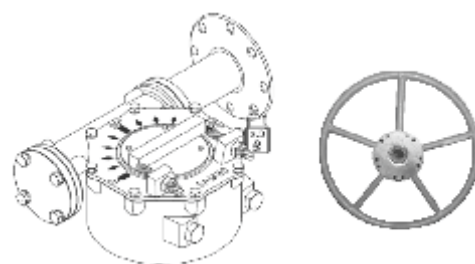
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



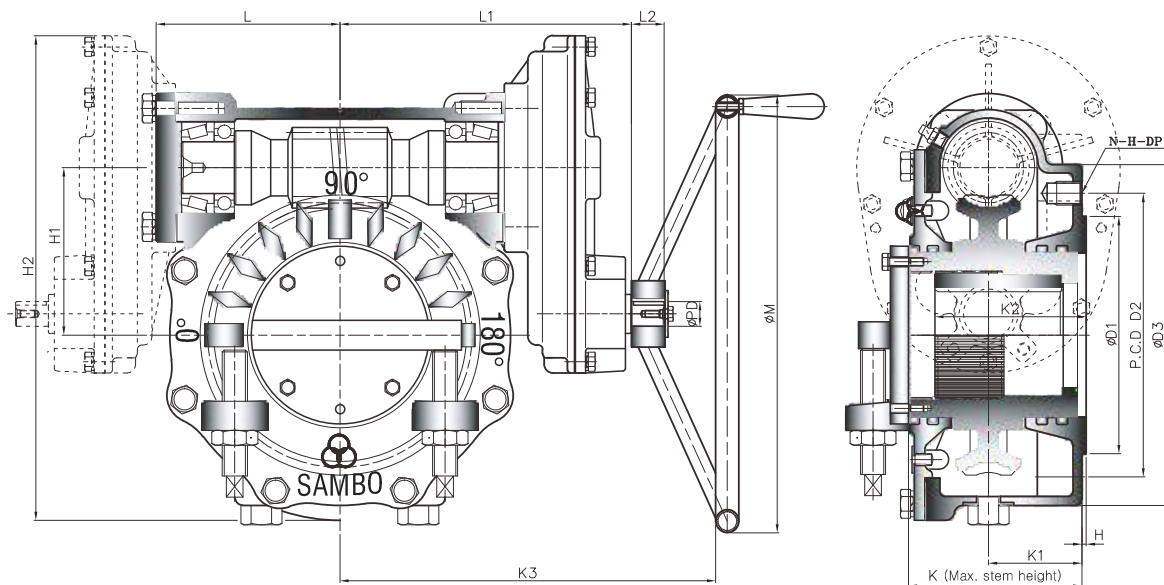
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft . lbf	
SBWG-BF 180	32 : 1	20 (6X6)	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	33
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-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
SBWG-11 180	68 : 1	360 (80X40)	F-60	442000	326002	2105
SBWG-12 180	70 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	2923
SBWG-13 180	72 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	3825

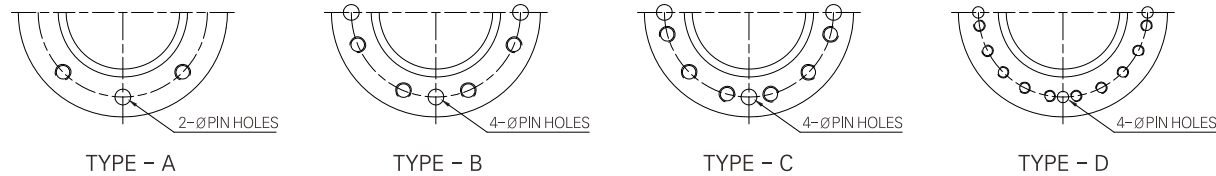
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

PART TURN 180°

Horizontal Input with Single Reduction Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART								INPUT SHAFT PART			H AND 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	259	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	288	95	175				400
SBWG-02-1S 180			F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	319	108	190.5				34
SBWG-03-1S 180		B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	349	118	200.5	34	26	8X7	560
SBWG-35-1S 180			F-25	200	254	8-M16-24	300		127	339.5	126	63	91	367	125	212.5				630
SBWG-04-1S 180			F-25	200	254	8-M16-24	300		153	417.5	147	73	120	413	153	250				710
SBWG-05-1S 180			F-30	230	298	8-M20-30	350		202	516.5	162	80	144	463	183	280	34	32	10X8	800
SBWG-55-1S 180							350													230
SBWG-06-1S 180			F-35	260	356	8-M30-45	415		230	621	200	109	175	552	117	349	44	38	12X8	800
SBWG-07-1S 180			F-40	300	406	8-M36-55	475		280.5	723	227	116	209	607	252	384				900
SBWG-75-1S 180		C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	721	279	485	58	50	16X10	1000
SBWG-08-1S 180							560		379	968	254	125	245	756	314	520				
SBWG-09-1S 180		D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	796	354	560	58	50	16X10	1000
SBWG-10-1S 180							800		513	1291	352	164	330	927	426	691				
SBWG-11-1S 180							900		616.5	1499.5	400	181	370	969.5	468.5	733.5				
SBWG-12-1S 180			(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1140	554	905				
SBWG-13-1S 180							1000		809	1944	546	301	515	1190	609	955				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

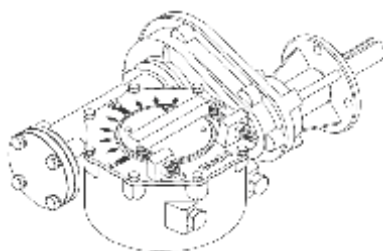
Bushing Type

Splines permit accurate alignment of valve stem key.



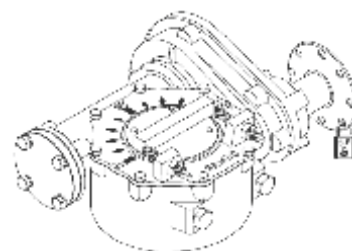
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



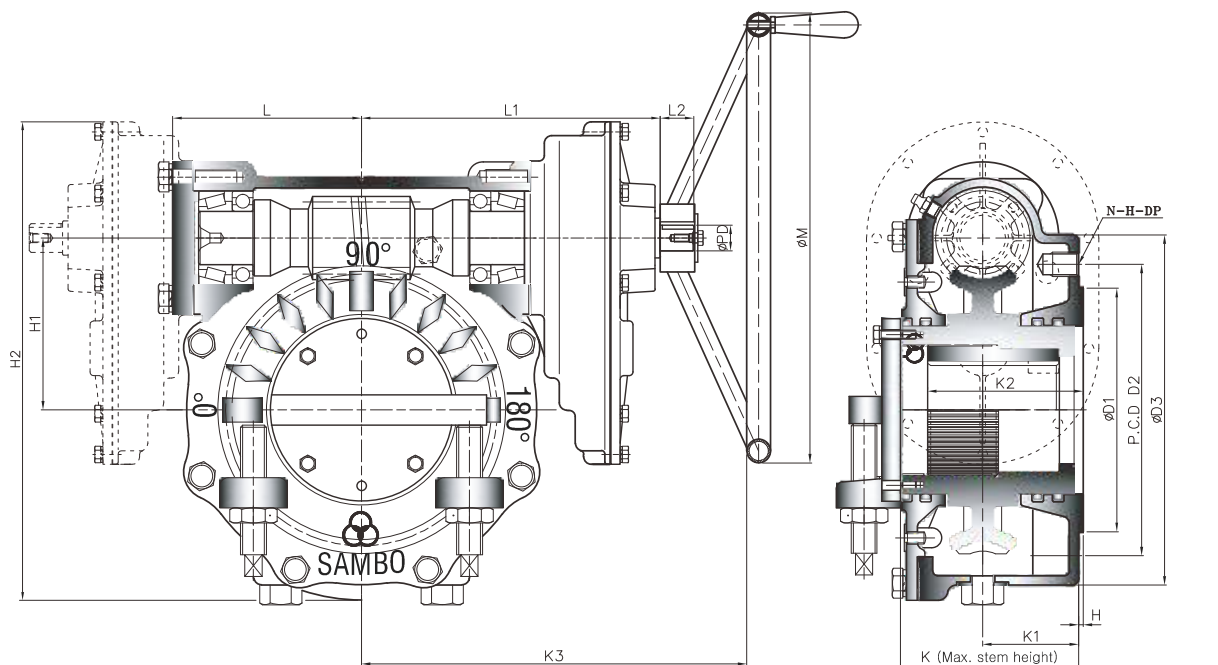
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	41
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-25, F-30	15900	11727	94
SBWG-55-1S 180	186 : 1	125 (32X18)	F-25, F-30	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
SBWG-11-1S 180	340 : 1	360 (80X40)	F-60	442000	326002	2202
SBWG-12-1S 180	350 : 1	400 (90X45)	F-60, (F-80)	610000	449913	3103
SBWG-13-1S 180	360 : 1	440 (100X50)	F-60, (F-80)	970000	715435	4005

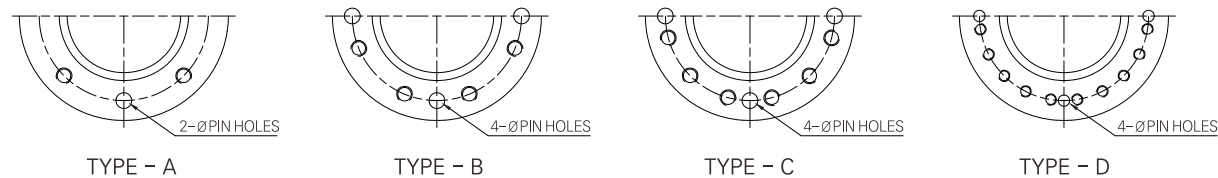
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

PART TURN 180°

Horizontal Input with Double Reduction Gear Attachment



• Pin hole size is same as tap out diameter



Dimension

UNIT : mm

MODEL	DIM	BASE PART						EXTERNAL PART								INPUT SHAFT PART			H AND 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	276	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	305	95	192				400
SBWG-02-1SD 180		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	343	108	214.5				34
SBWG-03-1SD 180	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	373	118	224.5	34	26	8X7	560
SBWG-35-1SD 180		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	391	125	236.5				
SBWG-04-1SD 180		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	449	153	286				
SBWG-05-1SD 180		F-30	230	298	8-M20-30	350		202	516.5	162	80	144	499	183	316				
SBWG-55-1SD 180						350													
SBWG-06-1SD 180		F-35	260	356	8-M30-45	415		230	621	200	109	175	579	117	376	44	38	12X8	800
SBWG-07-1SD 180		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	634	252	411				900
SBWG-75-1SD 180		C	F-48	370	483	12-M36-55		560	5	326	860	246	120	220	767	279	531	58	50
SBWG-08-1SD 180	560						379	968		254	125	245	802	314	566				
SBWG-09-1SD 180	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	842	354	606	58	50	16X10	1000
SBWG-10-1SD 180						800		513	1291	352	164	330	982	426	746				
SBWG-11-1SD 180						900		616.5	1499.5	400	181	370	1039.5	468.5	788.5				
SBWG-12-1SD 180		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1205	554	969				
SBWG-13-1SD 180						1000		809	1944	546	301	515	1245	609	1009				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
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- Worm is 1045 heat treated Carbon steel.
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- Options include hand wheels, chain wheels and etc.

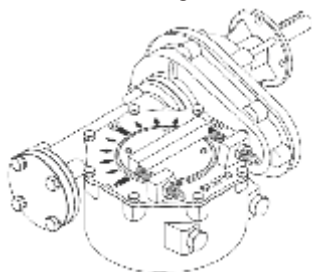
Bushing Type

Splines permit accurate alignment of valve stem key.



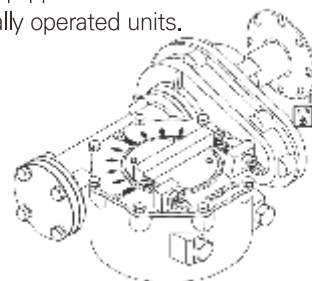
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



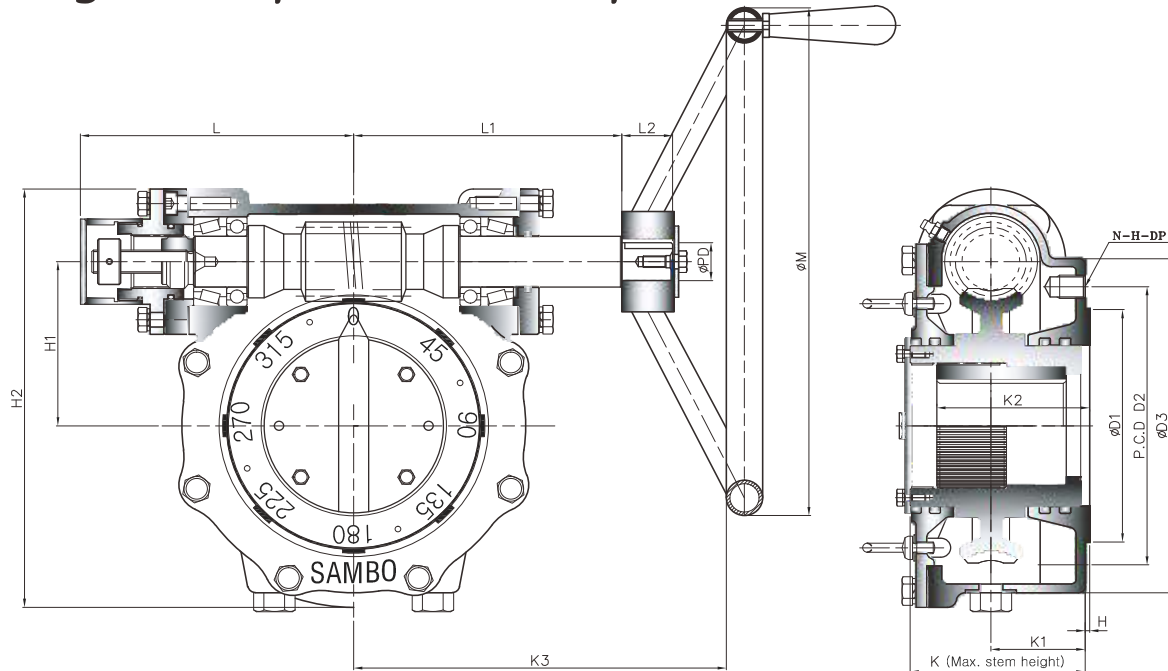
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	43
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-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
SBWG-11-1SD 180	1700 : 1	360 (80X40)	F-60	442000	326002	2240
SBWG-12-1SD 180	1750 : 1	400 (90X45)	F-60, (F-80)	610000	449913	3103
SBWG-13-1SD 180	1800 : 1	440 (100X50)	F-60, (F-80)	970000	715435	4005

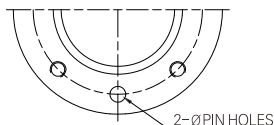
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

PART TURN 45° 90° 135° 180° 225° 270° 315° 360°

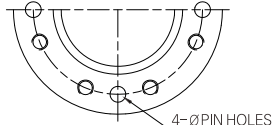
Traveling Nut Stop : Horizontal Input



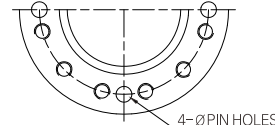
- Pin hole size is same as tap out diameter



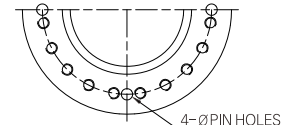
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

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-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	177	152.5	104.5				250
SBWG-00TN		F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	230	181	138				300
SBWG-01TN		F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	260	190	147				400
SBWG-02TN		F-16	130	165	4-M20-30	220		97	257	109.5	56	75.5	294	228	166				500
SBWG-03TN	B	(F-16) F-20	160	205	8-M16-24	250	3	112	287	116	59	87	324	238	176	34	26	8X7	560
SBWG-35TN		F-25	200	254	8-M16-24	300		127	319.5	126	63	91	329	243	181				
SBWG-04TN		F-25	200	254	8-M16-24	300		153	385.5	147	73	120	370	352	207				
SBWG-05TN		F-30	230	298	8-M20-30	350		180	437.5	155	78	141	400	362	217	34	32	10X8	710
SBWG-55TN						350		202	484.5	162	80	144	420	382	237				
SBWG-06TN		F-35	260	356	8-M30-45	415		230	558.5	200	109	175	489	497	286	44	38	12X8	800
SBWG-07TN		F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	538	532	315				900
SBWG-75TN	C	F-48	370	483	12-M36-55	560	5	326	776	246	120	220	617	621	381	58	50	16X10	1000
SBWG-08TN						560		379	884	254	125	245	652	656	416				
SBWG-09TN	D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	692	696	456	58	50	16X10	1000
SBWG-10TN						800		513	1191	352	164	330	814	845	614				
SBWG-11TN						900		616.5	1399.5	400	181	370	857	886.5	657				
SBWG-12TN		(F-80)	650	800	20-M42-63	1000		711	1621	484	265	455	980	1056	702				
SBWG-13TN						1000		809	1814	546	301	515	988	1096	752				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - ▶ Ductile iron, Class 80-55-06
 - ▶ Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Traveling Nut Stop

- If worm gear actuators are supplied on a valve, the end stops are already set.

- In case end stops need to be adjusted set end position OPEN first, if the exact end position of the valve can not be seen through a position marking at the valve shaft, the setting may have to be done with the valve removed.

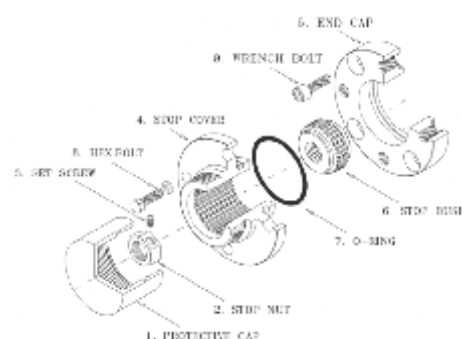


[SETTING]

- Remove all bolts⑧ at stop cover.④
- Turn valve manually to end position OPEN.
- In case stop cover.④ do not correspond to the threads of the housing.

Take off the stop covers.④ and place it in the required position.

- Fit bolts⑧ with washers and fasten them evenly.
- Finally, protective cap① remove, turn stop nut② to adjust end position CLOSE.



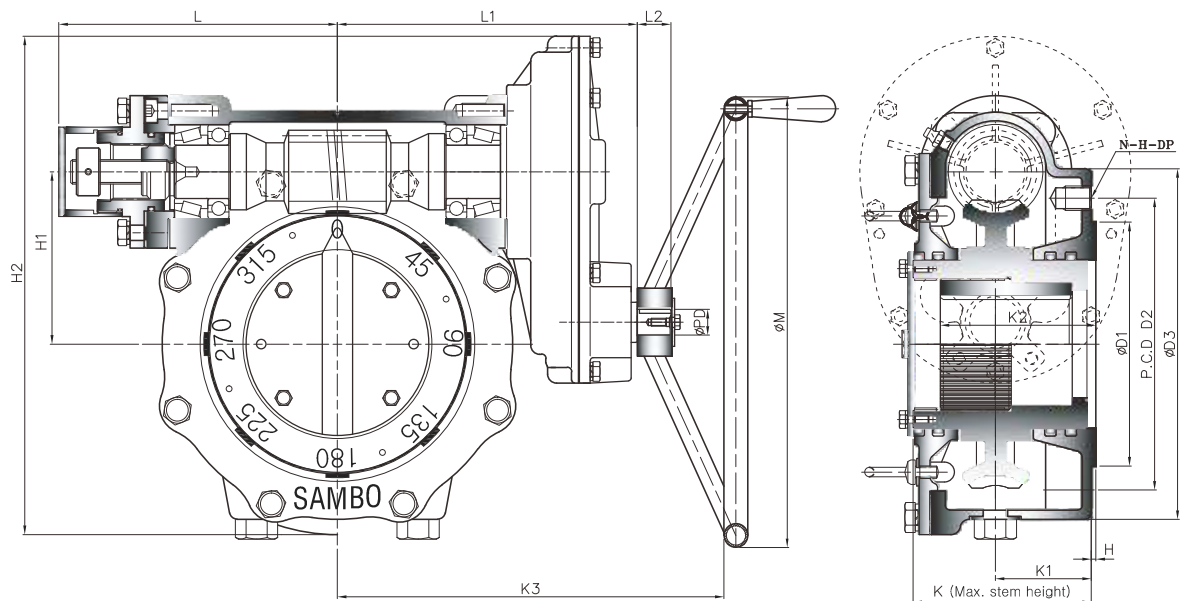
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft. lbf	Kg
SBWG-BFTN	32 : 1	20 (6X6)	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-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
SBWG-11TN	68 : 1	360 (80X40)	F-60	442000	326002	2113
SBWG-12TN	70 : 1	400 (90X45)	F-60, (F-80)	610000	449913	2931
SBWG-13TN	72 : 1	440 (100X50)	F-60, (F-80)	970000	715435	3835

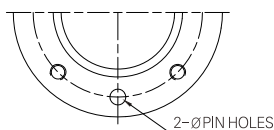
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

PART TURN 45°90°135°180°225°270°315°360°

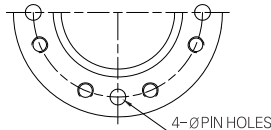
Traveling Nut Stop : Horizontal Input with Single Reduction Attachment



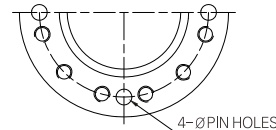
- Pin hole size is same as tap out diameter



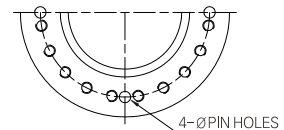
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

MODEL	DIM	BASE PART						EXTERNAL PART								INPUT SHAFT PART			H A N D W H E E L	
		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	259	181	166	29	21	6X6	300	
SBWG-01TN-1S		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	288	190	175				400	
SBWG-02TN-1S		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	319	228	190.5				500	
SBWG-03TN-1S	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	349	238	200.5	34	26	8X7	560	
SBWG-35TN-1S		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	367	243	212.5					
SBWG-04TN-1S		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	413	352	250					
SBWG-05TN-1S		F-30	230	298	8-M20-30	350		202	516.5	162	80	144	463	382	280	34	32	10X8	710	
SBWG-55TN-1S						350														
SBWG-06TN-1S		F-35	260	356	8-M30-45	415		230	621	200	109	175	552	497	349	44	38	12X8	800	
SBWG-07TN-1S		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	607	532	384					900
SBWG-75TN-1S	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	721	621	485	58	50	16X10	1000	
SBWG-08TN-1S						560		379	968	254	125	245	756	656	520					
SBWG-09TN-1S	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	796	696	560	58	50	16X10	1000	
SBWG-10TN-1S						800		513	1291	352	164	330	927	845	691					
SBWG-11TN-1S						900		616.5	1499.5	400	181	370	969.5	886.5	733.5					
SBWG-12TN-1S		(F-80)	650	800	20-M42-63	1000	711	1751	484	265	455	1140	1056	905						
SBWG-13TN-1S						1000	809	1944	546	301	515	1190	1096	955						

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - ▶ Ductile iron, Class 80-55-06
 - ▶ Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Traveling Nut Stop

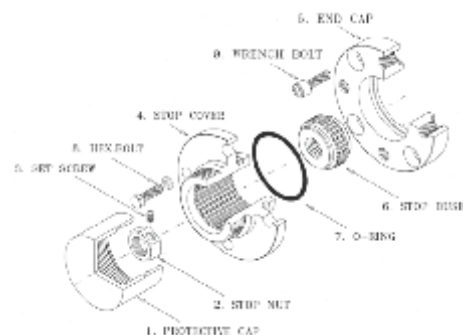
• If worm gear actuators are supplied on a valve, the end stops are already set.

• In case end stops need to be adjusted set end position OPEN first, if the exact end position of the valve can not be seen through a position marking at the valve shaft, the setting may have to be done with the valve removed.



[SETTING]

- Remove all bolts⑧ at stop cover.④
- Turn valve manually to end position OPEN.
- In case stop cover.④ do not correspond to the threads of the housing.
- Take off the stop covers.④ and place it in the required position.
- Fit bolts⑧ with washers and fasten them evenly.
- Finally, protective cap① remove, turn stop nut② to adjust end position CLOSE.



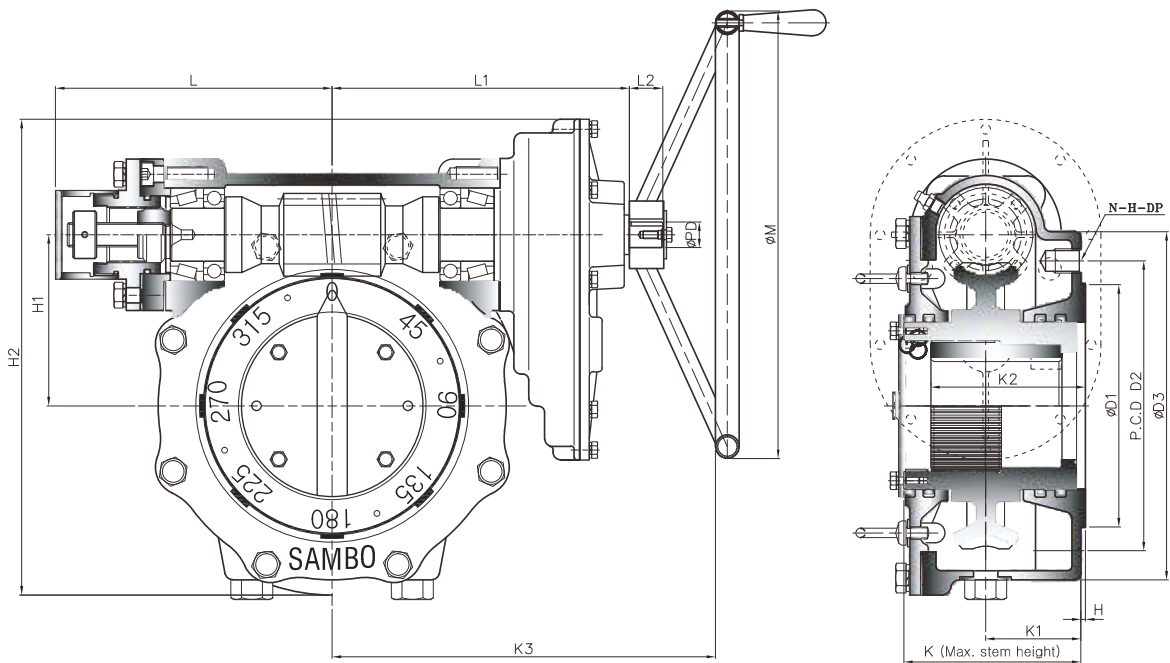
❖ Selection Chart for Manual Operation

MODEL \ SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE	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-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
SBWG-11TN-1S	340 : 1	360 (80X40)	F-60	442000	326002	2210
SBWG-12TN-1S	350 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	3110
SBWG-13TN-1S	360 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	4015

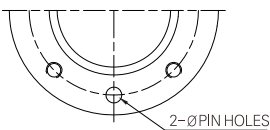
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

PART TURN 45°90°135°180°225°270°315°360°

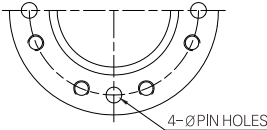
Traveling Nut Stop : Horizontal Input with Double Reduction Attachment



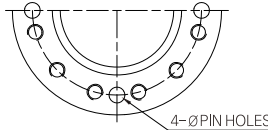
• Pin hole size is same as tap out diameter



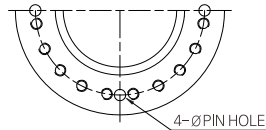
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			H AND 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-1SD	A	F-12	85	125	4-M12-18	165	2	69.5	210	86.5	43	53.6	276	181	183	29	21	6X6	300
SBWG-01TN-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	305	190	192				400
SBWG-02TN-1SD		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	343	228	214.5				500
SBWG-03TN-1SD	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	373	238	224.5	34	26	8X7	560
SBWG-35TN-1SD		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	391	243	236.5				630
SBWG-04TN-1SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	449	352	286				710
SBWG-05TN-1SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	479	362	296	34	32	10X8	
SBWG-55TN-1SD						350		202	516.5	162	80	144	499	382	316				
SBWG-06TN-1SD		F-35	260	356	8-M30-45	415		230	621	200	109	175	579	497	376	44	38	12X8	800
SBWG-07TN-1SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	634	532	411				900
SBWG-75TN-1SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	767	621	531	58	50	16X10	1000
SBWG-08TN-1SD						560		379	968	254	125	245	802	656	566				
SBWG-09TN-1SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	842	696	606	58	50	16X10	1000
SBWG-10TN-1SD						800		513	1291	352	164	330	982	845	746				
SBWG-11TN-1SD						900		616.5	1499.5	400	181	370	1039.5	886.5	788.5				
SBWG-12TN-1SD		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1205	1056	969				
SBWG-13TN-1SD						1000		809	1944	546	301	515	1245	1096	1009				

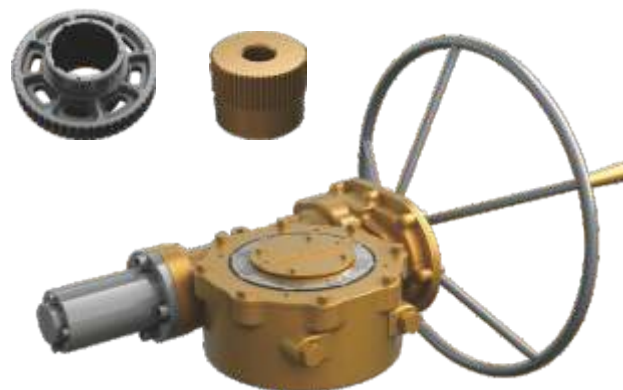
Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - ▶ Ductile iron, Class 80-55-06
 - ▶ Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Traveling Nut Stop

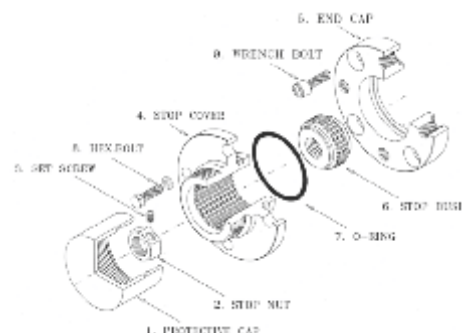
• If worm gear actuators are supplied on a valve, the end stops are already set.

• In case end stops need to be adjusted set end position OPEN first, if the exact end position of the valve can not be seen through a position marking at the valve shaft, the setting may have to be done with the valve removed.



[SETTING]

- Remove all bolts⑧ at stop cover.④
- Turn valve manually to end position OPEN.
- In case stop cover.④ do not correspond to the threads of the housing.
- Take off the stop covers.④ and place it in the required position.
- Fit bolts⑧ with washers and fasten them evenly.
- Finally, protective cap① remove, turn stop nut② to adjust end position CLOSE.



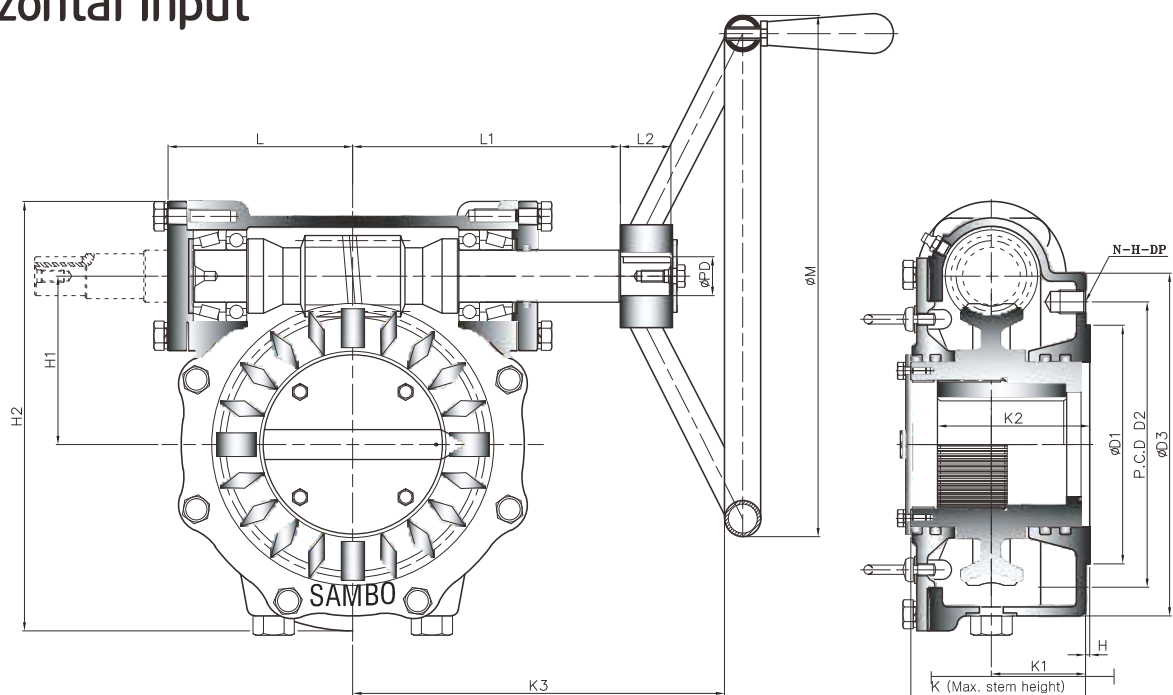
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	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-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
SBWG-11TN-1SD	1700 : 1	360 (80X40)	F-60	442000	326002	2248
SBWG-12TN-1SD	1750 : 1	400 (90X45)	F-60, (F-80)	610000	449913	3111
SBWG-13TN-1SD	1800 : 1	440 (100X50)	F-60, (F-80)	970000	715435	4015

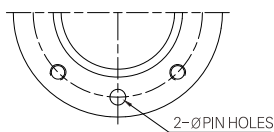
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

MULTI TURN 360°

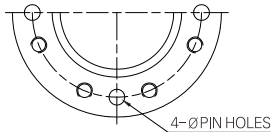
Horizontal Input



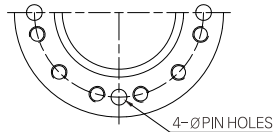
• Pin hole size is same as tap out diameter



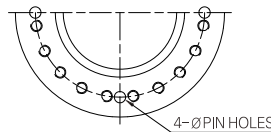
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL		BASE PART						EXTERNAL PART								INPUT SHAFT PART			H AND 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-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	177	71.5	104.5				250		
SBWG-00MT			F-12	85	125	4-M12-18	165		69.5	192	86.5	43	53.6	230	86	138				300		
SBWG-01MT			F-14	100	140	4-M16-24	190		82.5	217.5	96	53	65	260	95	147				400		
SBWG-02MT			F-16	130	165	4-M20-30	220		97	257	109.5	56	75.5	294	108	166				34	26	8X7
SBWG-03MT		B	(F-16) F-20	160	205	8-M16-24	250	3	112	287	116	59	87	324	118	176	34	26	8X7	560		
SBWG-35MT			F-25	200	254	8-M16-24	300		127	319.5	126	63	91	329	125	181				630		
SBWG-04MT			F-25	200	254	8-M16-24	300		153	385.5	147	73	120	370	153	207						
SBWG-05MT			F-30	230	298	8-M20-30	350		180	437.5	155	78	141	400	163	217	34	32	10X8	710		
SBWG-55MT							350		202	484.5	162	80	144	420	183	237						
SBWG-06MT			F-35	260	356	8-M30-45	415		230	558.5	200	109	175	489	117	286	44	38	12X8	800		
SBWG-07MT			F-40	300	406	8-M36-55	475		280.5	660.5	227	116	209	538	252	315				900		
SBWG-75MT			C	F-48	370	483	12-M36-55		560	5	326	776	246	120	220	617	279	381	58	50	16X10	1000
SBWG-08MT							560		379		884	254	125	245	652	314	416					
SBWG-09MT		D	F-60	470	603	20-M36-55	700	5	448.5	1023.5	284	138	270	692	354	456	58	50	16X10	1000		
SBWG-10MT							800		513	1191	352	164	330	814	426	614						
SBWG-11MT							900		616.5	1399.5	400	181	370	857	468.5	657						
SBWG-12MT							(F-80)		650	800	20-M42-63	1000	711	1621	484	265					455	980
SBWG-13MT			1000	809	1814	546						301	515	988	609	752						

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

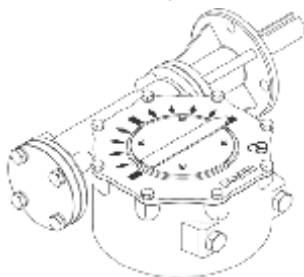
Bushing Type

Splines permit accurate alignment of valve stem key.



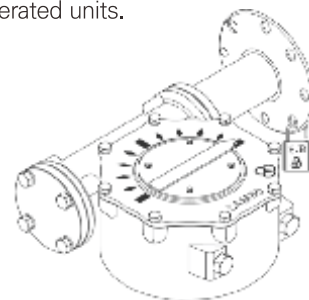
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



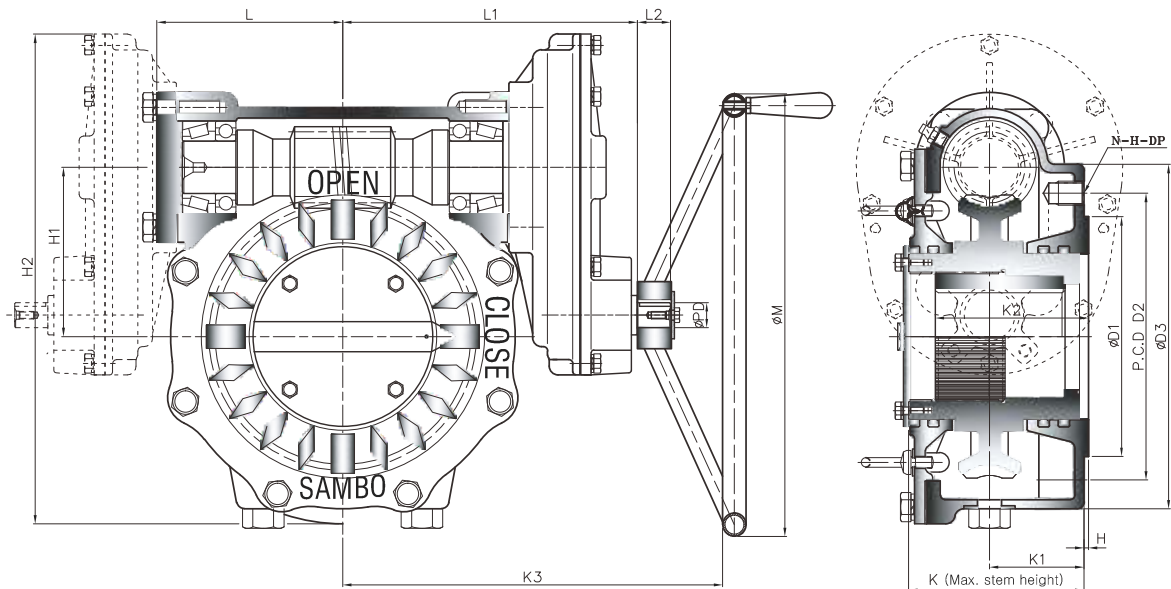
❖ Selection Chart for Manual Operation

MODEL \ SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT
				N-m	Ft . lbf	Kg
SBWG-BFMT	32 : 1	20 (6X6)	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	39
SBWG-04MT	56 : 1	95 (25X14)	F-16 , (F-20) , F-25	10400	7671	63
SBWG-05MT	60 : 1	115 (32X18)	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
SBWG-11MT	68 : 1	360 (80X40)	F-60	442000	326002	2113
SBWG-12MT	70 : 1	400 (90X45)	F-60 , (F-80)	610000	449913	2931
SBWG-13MT	72 : 1	440 (100X50)	F-60 , (F-80)	970000	715435	3835

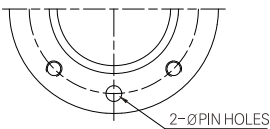
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

MULTI TURN 360°

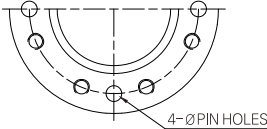
Horizontal Input with Single Reduction Gear Attachment



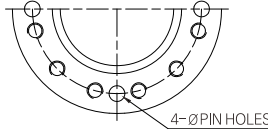
• Pin hole size is same as tap out diameter



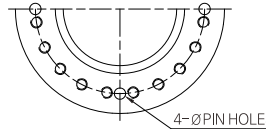
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

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	259	86	166	29	21	6X6	300
SBWG-01MT-1S			F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	288	95	175				400
SBWG-02MT-1S			F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	319	108	190.5				34
SBWG-03MT-1S		B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	349	118	200.5	34	26	8X7	560
SBWG-35MT-1S			F-25	200	254	8-M16-24	300		127	339.5	126	63	91	367	125	212.5				
SBWG-04MT-1S			F-25	200	254	8-M16-24	300		153	417.5	147	73	120	413	153	250				
SBWG-05MT-1S			F-30	230	298	8-M20-30	350		180	469.5	155	78	141	443	163	260	34	32	10X8	710
SBWG-55MT-1S							350		202	516.5	162	80	144	463	183	280				
SBWG-06MT-1S			F-35	260	356	8-M30-45	415		230	621	200	109	175	552	117	349	44	38	12X8	800
SBWG-07MT-1S			F-40	300	406	8-M36-55	475		280.5	723	227	116	209	607	252	384				900
SBWG-75MT-1S		C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	721	279	485	58	50	16X10	1000
SBWG-08MT-1S							560		379	968	254	125	245	756	314	520				
SBWG-09MT-1S		D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	796	354	560	58	50	16X10	1000
SBWG-10MT-1S							800		513	1291	352	164	330	927	426	691				
SBWG-11MT-1S							900		616.5	1499.5	400	181	370	969.5	468.5	733.5				
SBWG-12MT-1S			(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1140	554	905				
SBWG-13MT-1S							1000		809	1944	546	301	515	1190	609	955				

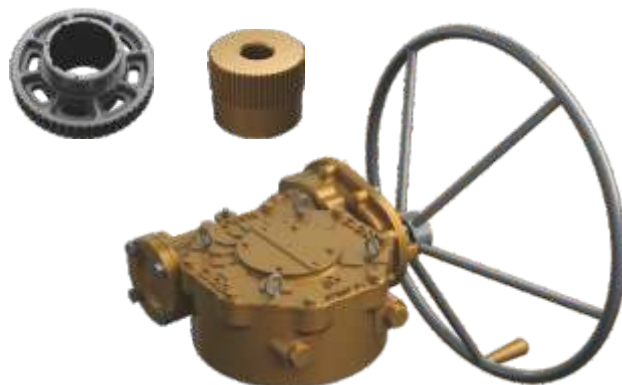
Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

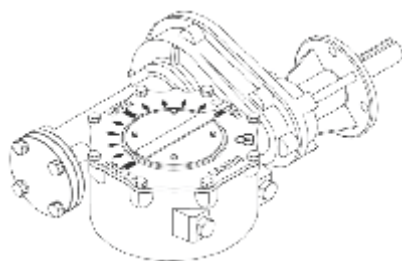
Bushing Type

Splines permit accurate alignment of valve stem key.



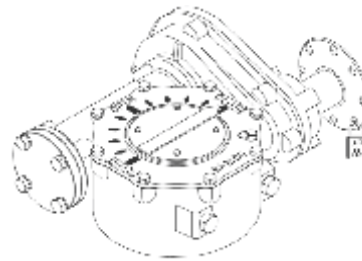
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



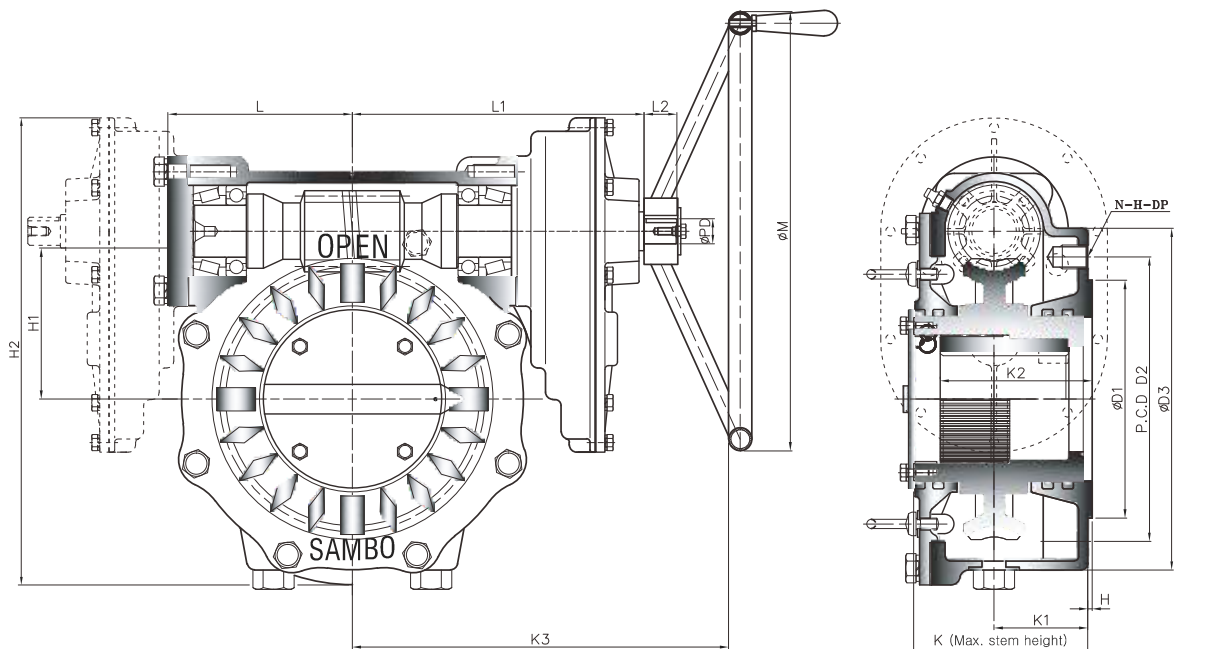
❖ Selection Chart for Manual Operation

SIZE MODEL	GEAR RATIO	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	43
SBWG-04MT-1S	168 : 1	95 (25X14)	F-16, (F-20), F-25	10400	7671	73
SBWG-05MT-1S	180 : 1	115 (32X18)	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
SBWG-11MT-1S	340 : 1	360 (80X40)	F-60	442000	326002	2210
SBWG-12MT-1S	350 : 1	400 (90X45)	F-60, (F-80)	610000	449913	3110
SBWG-13MT-1S	360 : 1	440 (100X50)	F-60, (F-80)	970000	715435	4015

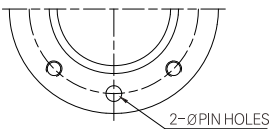
Size and component specification in this catalogue are subject to change without prior notice for quality improvement.

MULTI TURN 360°

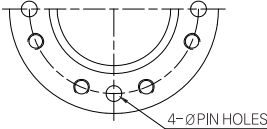
Horizontal Input with Double Reduction Gear Attachment



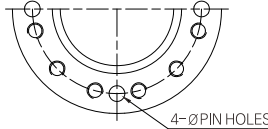
• Pin hole size is same as tap out diameter



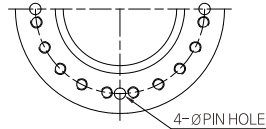
TYPE - A



TYPE - B



TYPE - C



TYPE - D

Dimension

UNIT : mm

DIM MODEL	BASE PART							EXTERNAL PART								INPUT SHAFT PART			H AND 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	276	86	183	29	21	6X6	300
SBWG-01MT-1SD		F-14	100	140	4-M16-24	190		82.5	235.5	96	53	65	305	95	192				400
SBWG-02MT-1SD		F-16	130	165	4-M20-30	220		97	282	109.5	56	75.5	343	108	214.5				34
SBWG-03MT-1SD	B	(F-16) F-20	160	205	8-M16-24	250	3	112	312	116	59	87	373	118	224.5	34	26	8X7	560
SBWG-35MT-1SD		F-25	200	254	8-M16-24	300		127	339.5	126	63	91	391	125	236.5				630
SBWG-04MT-1SD		F-25	200	254	8-M16-24	300		153	417.5	147	73	120	449	153	286				710
SBWG-05MT-1SD		F-30	230	298	8-M20-30	350		180	469.5	155	78	141	479	163	296	34	32	10X8	800
SBWG-55MT-1SD						350		202	516.5	162	80	144	499	183	316				900
SBWG-06MT-1SD		F-35	260	356	8-M30-45	415		230	621	200	109	175	579	117	376	44	38	12X8	900
SBWG-07MT-1SD		F-40	300	406	8-M36-55	475		280.5	723	227	116	209	634	252	411				1000
SBWG-75MT-1SD	C	F-48	370	483	12-M36-55	560	5	326	860	246	120	220	767	279	531	58	50	16X10	1000
SBWG-08MT-1SD						560		379	968	254	125	245	802	314	566				
SBWG-09MT-1SD	D	F-60	470	603	20-M36-55	700	5	448.5	1107.5	284	138	270	842	354	606	58	50	16X10	1000
SBWG-10MT-1SD						800		513	1291	352	164	330	982	426	746				
SBWG-11MT-1SD						900		616.5	1499.5	400	181	370	1039.5	468.5	788.5				
SBWG-12MT-1SD		(F-80)	650	800	20-M42-63	1000		711	1751	484	265	455	1205	554	969				
SBWG-13MT-1SD						1000		809	1944	546	301	515	1245	609	1009				

Worm Gear Actuators

❖ Feature

- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

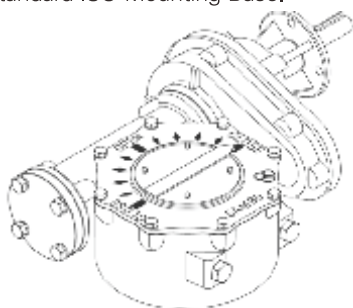
Bushing Type

Splines permit accurate alignment of valve stem key.



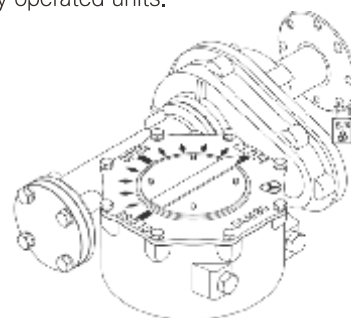
M · O · V OPTION

Worm Gear can be provided with Motor actuator input flanges to accept standard ISO Mounting Base.



LOCKING DEVICE OPTION

Input can be equipped with a Handwheel locking device for Manually operated units.



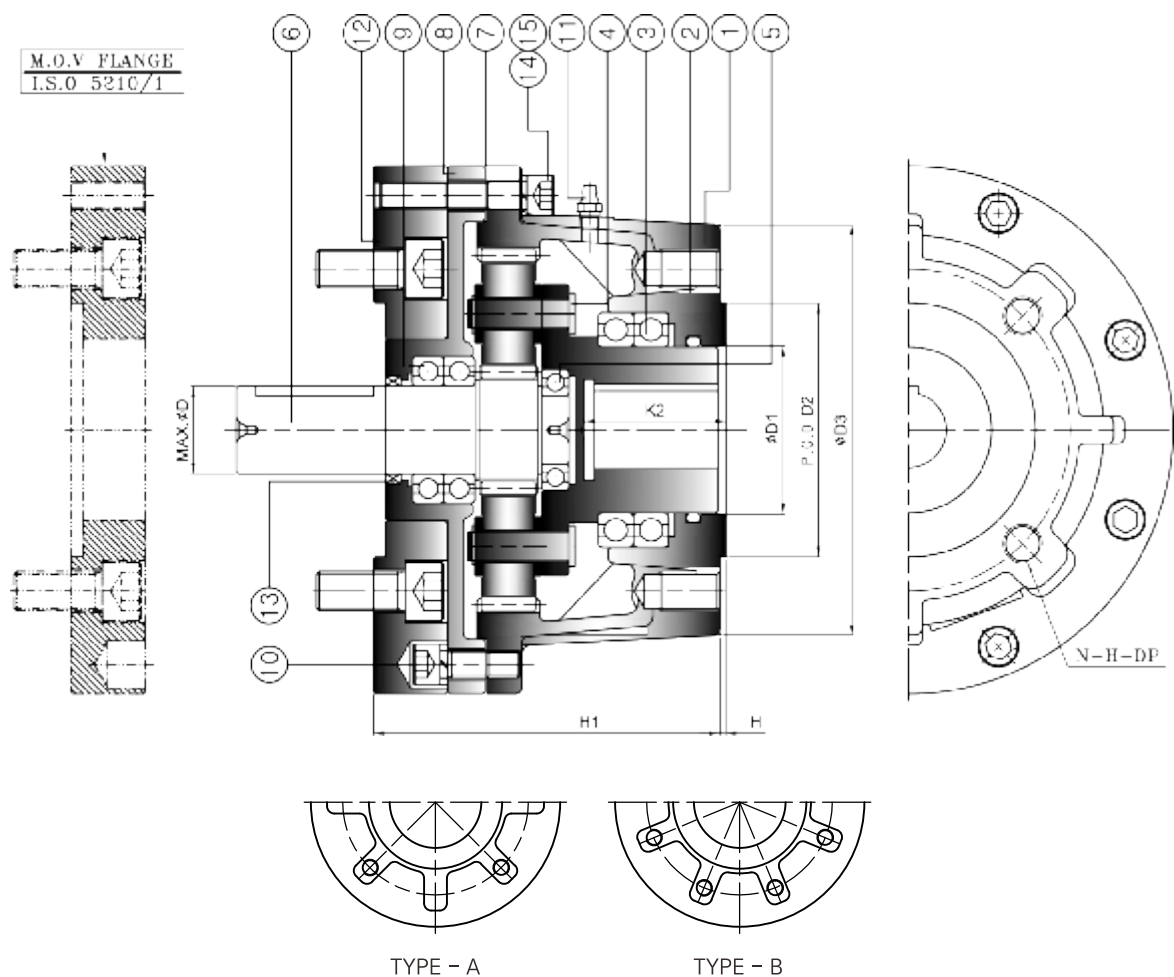
❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft. lbf	
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	45
SBWG-04MT-1SD	504 : 1	95 (25X14)	F-16, (F-20), F-25	10400	7671	78
SBWG-05MT-1SD	540 : 1	115 (32X18)	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
SBWG-11MT-1SD	1700 : 1	360 (80X40)	F-60	442000	326002	2248
SBWG-12MT-1SD	1750 : 1	400 (90X45)	F-60, (F-80)	610000	449913	3111
SBWG-13MT-1SD	1800 : 1	440 (100X50)	F-60, (F-80)	970000	715435	4015

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Planetary Gear Reducer

Vertical Input



Dimension

UNIT : mm

DIM MODEL	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	
SBPA-10	A	F-07, F-10	70	102	4-M10-18	125	3	117	30	45	3.6 : 1	35(10X8)	600	443	17
SBPA-12		F-10, F-12	85	125	4-M12-20	150		128	35	48	3.6 : 1	40(12X8)	1200	885	26
SBPA-14		F-12, F-14	100	140	4-M16-25	175		160	40	58	3.6 : 1	50(14X9)	1800	1327	36
SBPA-16		F-14, F-16	130	165	4-M20-30	210		177	45	68	4 : 1	60(18X11)	2800	2065	48
SBPA-25	B	F-16, F-25	200	254	8-M16-25	300	3	194	50	78	5 : 1	70(20X12)	4800	3540	63

Planetary Gear Reducer



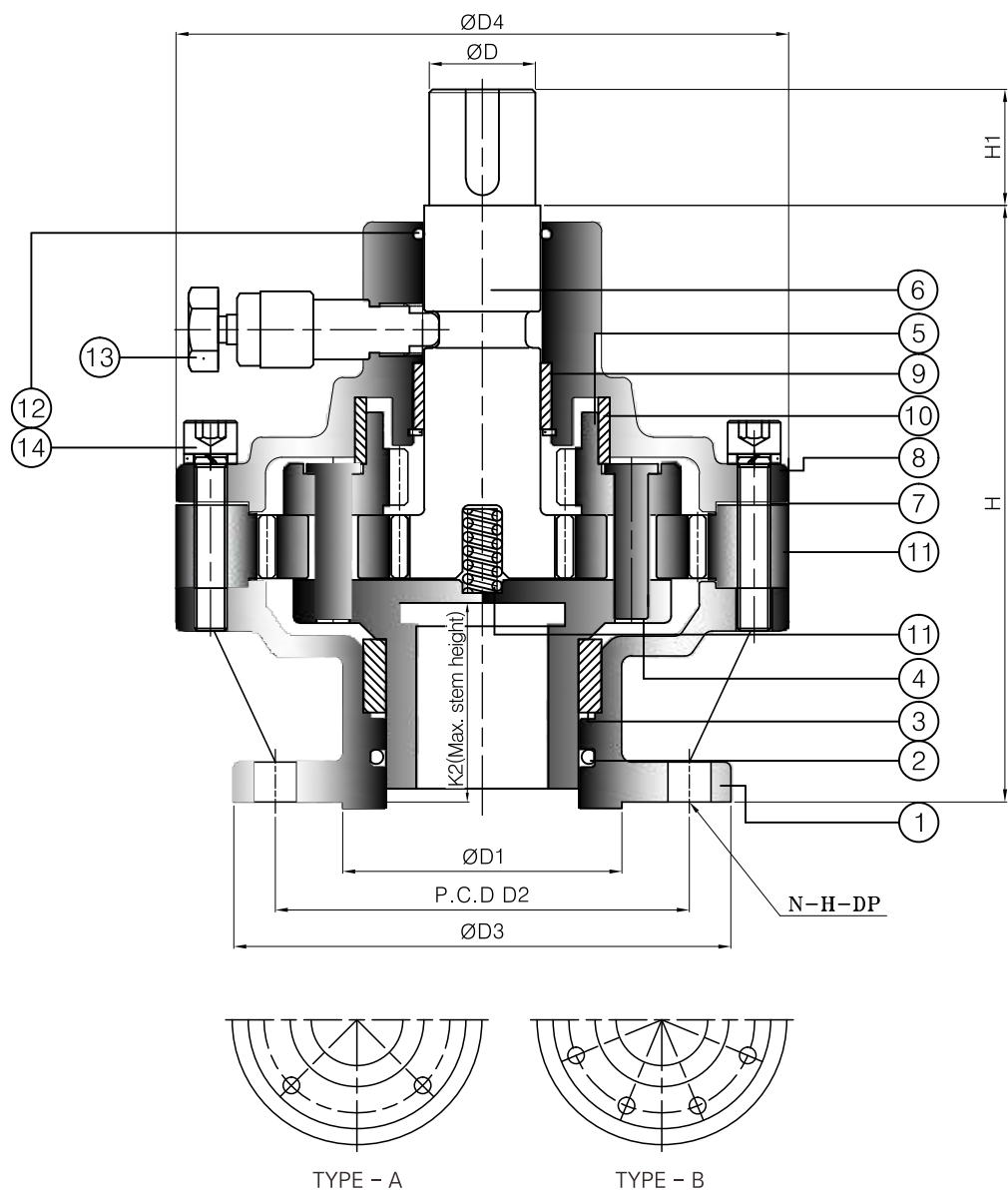
❖ Part List

NO	PART NAME	MATERIAL	NO	PART NAME	MATERIAL
1	Out Base	Ductile Iron	9	Ball Bearing	A295-52100
2	O-Ring	NBR	10	Wrench Bolt	A193-B7
3	Bearing	A295-52100	11	Grease Nipple	Steel
4	Carrier Kit	Steel	12	Input Base	Steel
5	Ball Bearing	A295-52100	13	Oil Seal	NBR
6	Sun Pinion	A576-1045	14	Washer Spring	Steel
7	Gasket	N-Asbestos	15	Wrench Bolt	A193-B7
8	Support Pad	Ductile Iron			

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

Planetary Gear Reducer

Dual Input Speed

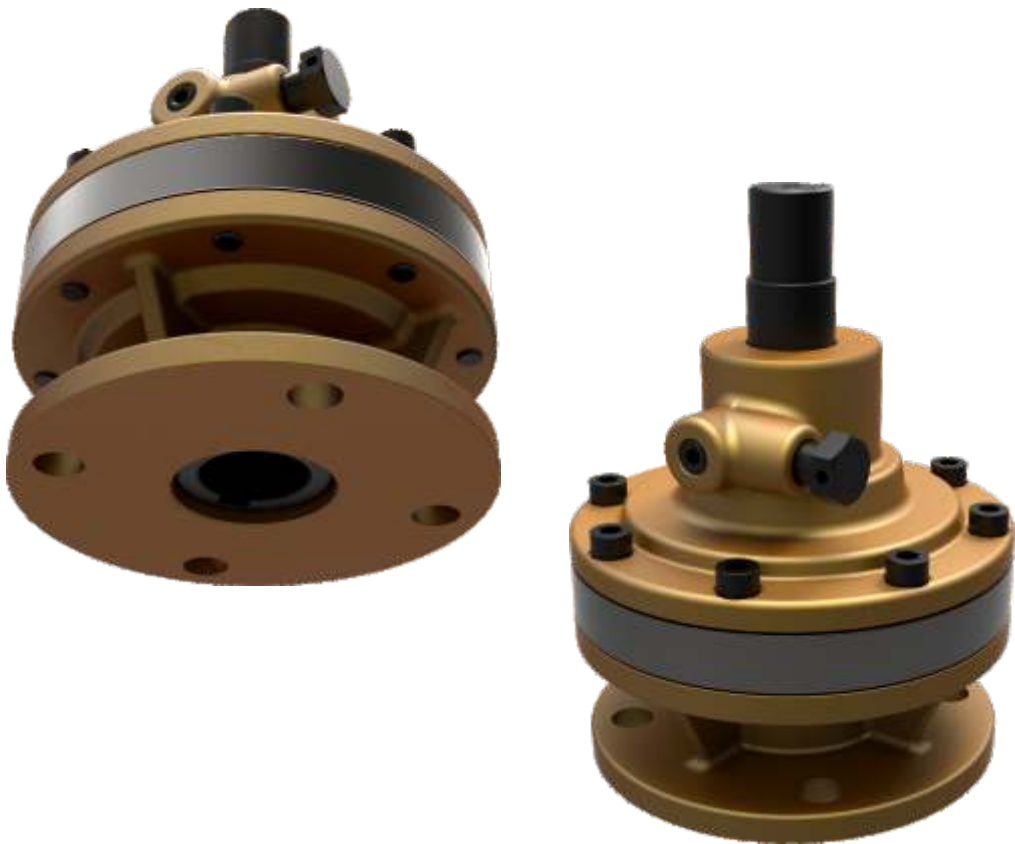


Dimension

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	
SB-DS10	A	F-07,F-10	70	102	4-Ø10-18	125	160	35	150	26	90	1 : 1	3.6 : 1	70	300	221	18
SB-DS12		F-10,F-12	85	125	4-Ø12-20	150	180	35	185	32	80	1 : 1	3.6 : 1	60	600	443	27
SB-DS14		F-12,F-14	100	140	4-Ø16-25	175	210	35	225	32	70	1 : 1	3.6 : 1	50	1200	885	38
SB-DS16		F-14,F-16	130	165	4-Ø20-30	210	237	44	250	38	60	1 : 1	4 : 1	40	1800	2065	51
SB-DS25	B	F-16,F-25	200	254	8-Ø16-25	300	260	44	330	38	50	1 : 1	5 : 1	35	2500	1844	68

Planetary Gear Reducer

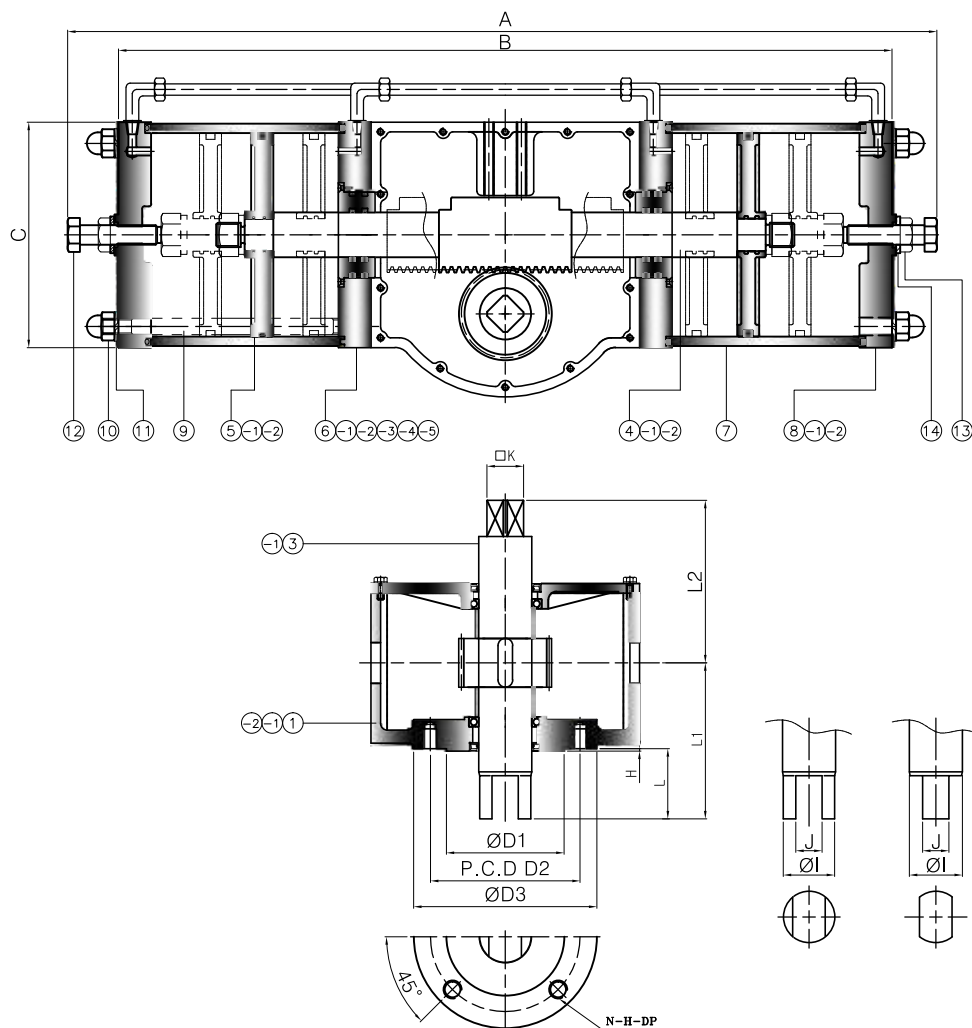


❖ Part List

NO	PART NAME	MATERIAL	NO	PART NAME	MATERIAL
1	OUT BASE	DUCTILE IRON	8	COVER	DUCTILE IRON
2	O-RING	NBR	9	BUSHING	BRASS
3	BUSHING	BRASS	10	BUSHING	BRASS
4	CARRIER KIT	STEEL	11	RING GEAR	A576-1045
5	COVERSION GEAR	A576-1045	12	O-RING	NBR
6	SUN PINION	A576-1045	13	FIX PIN	A576-1045
7	GASKET	N-ASBESTOS	14	HEX. BOLT	A193-B7

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

AIR CYLINDER 135°
Rack-Pinion Type



Dimension

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-120AIR							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

AIR CYLINDER 135°

❖ Part List



MATERIAL ACCORDING TO ASTM			
NO	PART NAME	MATERIAL	REMARK
1	Body	AC4C	
-1	O-Ring	NBR	
-2	Du-Bush	BSC2	
2	Body-Cover	AC4C	
-1	O-Ring	NBR	
-2	O-Ring	NBR	
-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	NBR	
-2	O-Ring	NBR	
6	Pipe Cap	AC4C	
-1	O-Ring	NBR	
-2	O-Ring	NBR	
-3	O-Ring	NBR	
-4	O-Ring	NBR	
-5	Du-Bush	BSC2	
7	Cylinder Tube	A120	
8	Pipe Cover	AC4C	
-1	O-Ring	NBR	
-2	O-Ring	NBR	
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	

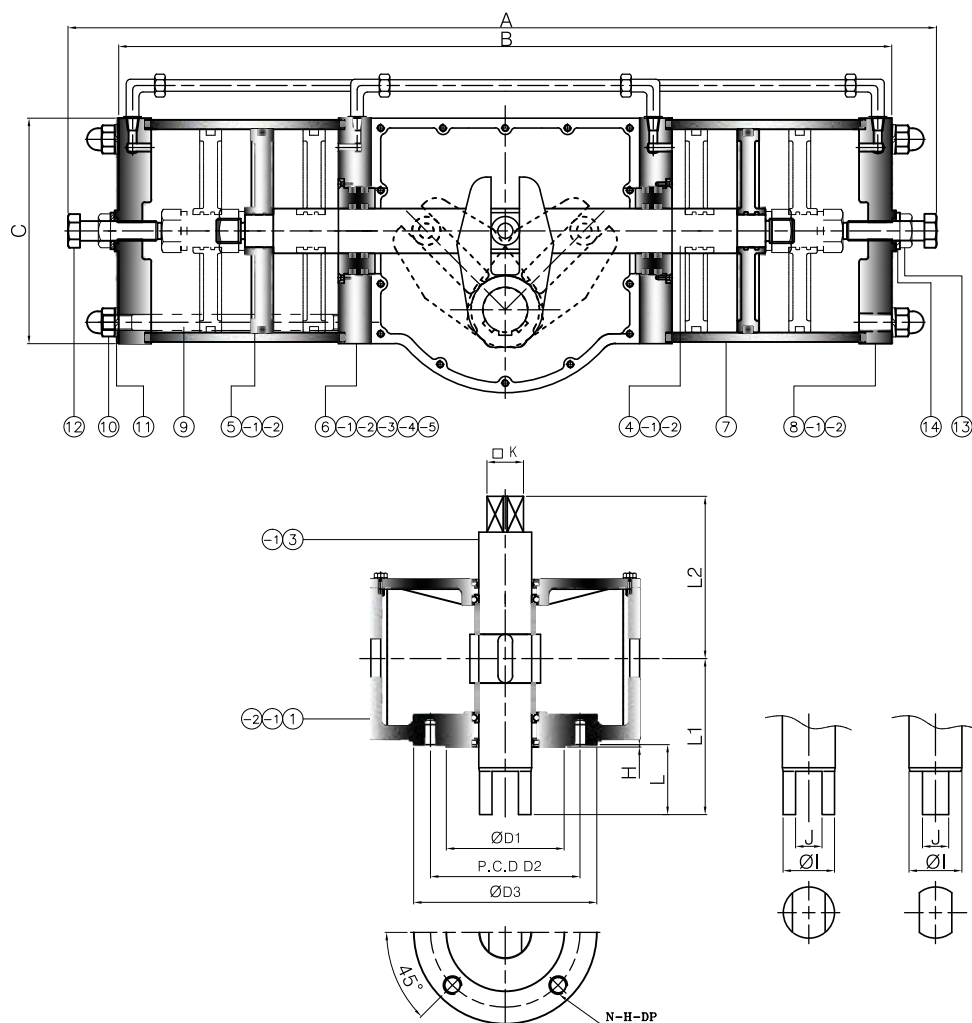
❖ Selection Chart

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-120AIR	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

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

AIR CYLINDER 90°

Scotch-Yoke Type



Dimension

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

AIR CYLINDER 90°

❖ Part List



MATERIAL ACCORDING TO ASTM			
NO	PART NAME	MATERIAL	REMARK
1	Body	AC4C	
-1	O-Ring	NBR	
-2	Du-Bush	BSC2	
2	Body-Cover	AC4C	
-1	O-Ring	NBR	
-2	O-Ring	NBR	
-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	NBR	
-2	O-Ring	NBR	
6	Pipe Cap	AC4C	
-1	O-Ring	NBR	
-2	O-Ring	NBR	
-3	O-Ring	NBR	
-4	O-Ring	NBR	
-5	Du-Bush	BSC2	
7	Cylinder Tube	A120	
8	Pipe Cover	AC4C	
-1	O-Ring	NBR	
-2	O-Ring	NBR	
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	

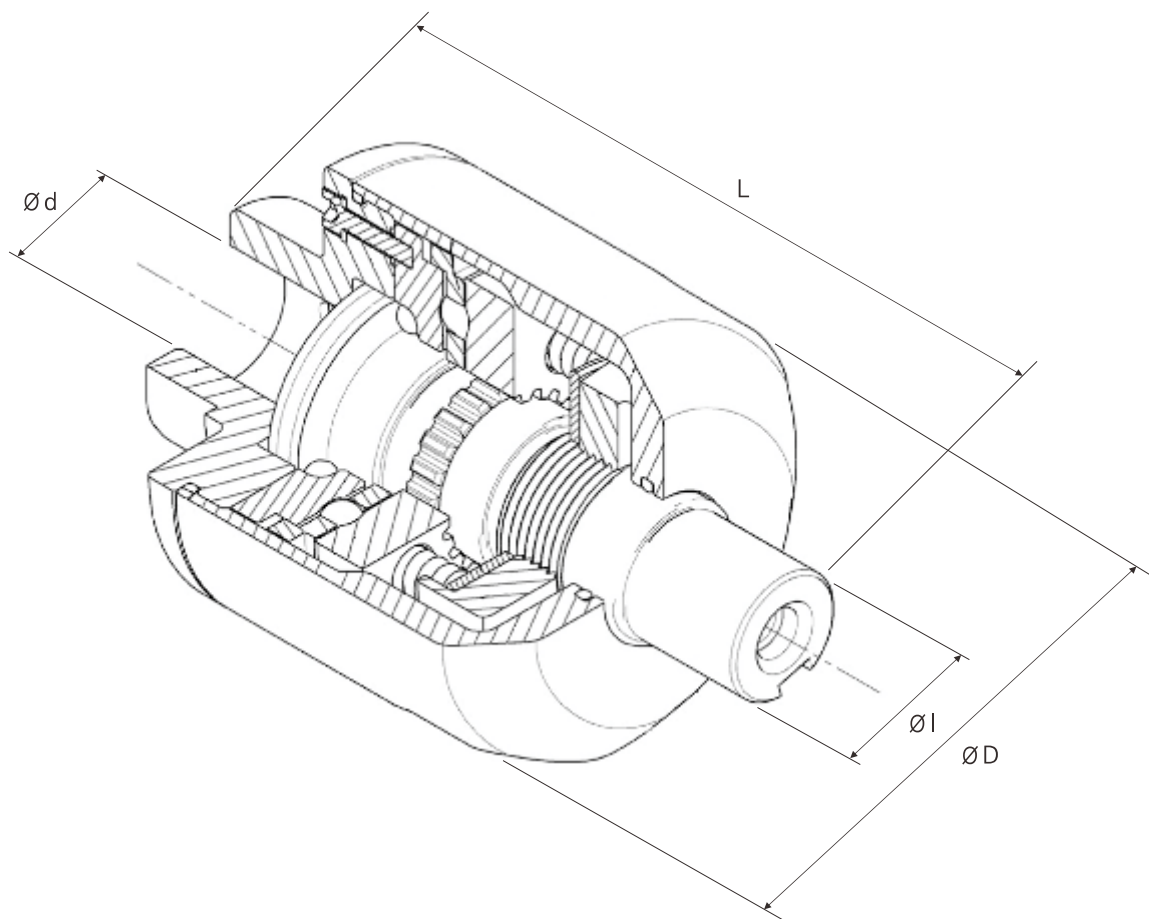
❖ Selection Chart

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-120AIR	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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TORQUE LIMITER

SB-TL SERIES



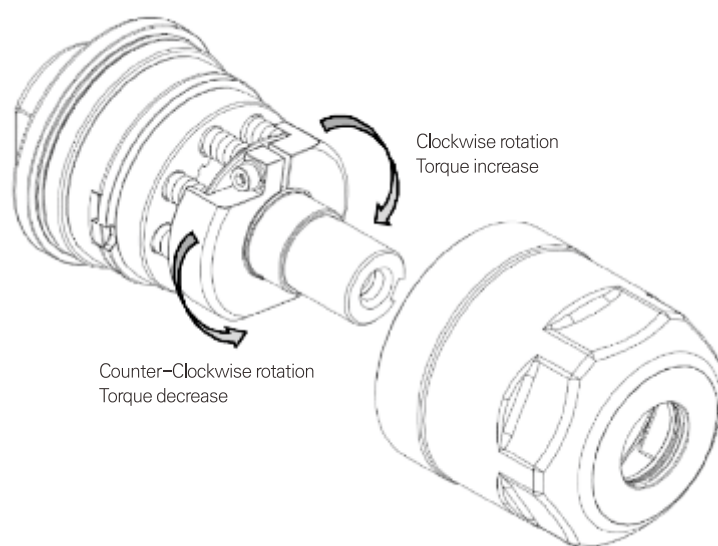
Dimension

DIM MODEL	External Part		Input	Output	Torque Range	Weight
	Ø D	L	Ø I	Ø d		
	(mm)	(mm)	(mm)	(mm)	(N.m)	(kg)
SB-TL50	70	135	MAX Ø16	MAX Ø16	10~50	3.5
SB-TL100	80	158	MAX Ø26	MAX Ø26	50~100	4
SB-TL200	102	172	MAX Ø32	MAX Ø32	100~200	5.5
SB-TL300	118	172	MAX Ø32	MAX Ø38	200~300	9.5
SB-TL400	140	182	MAX Ø38	MAX Ø38	300~400	15

TORQUE LIMITER

❖ Feature

- Water Proof
- Different type
 - ▶ Automatic Re-engage type (Standard)
 - ▶ Clockwise rotation "Close" manual re-engage type
 - ▶ Counter-Clockwise rotation "Close" manual re-engage type
- Easy torque limit adjustment.
- Durable and easy maintenance.
- Variety applications.



❖ Torque Adjustment

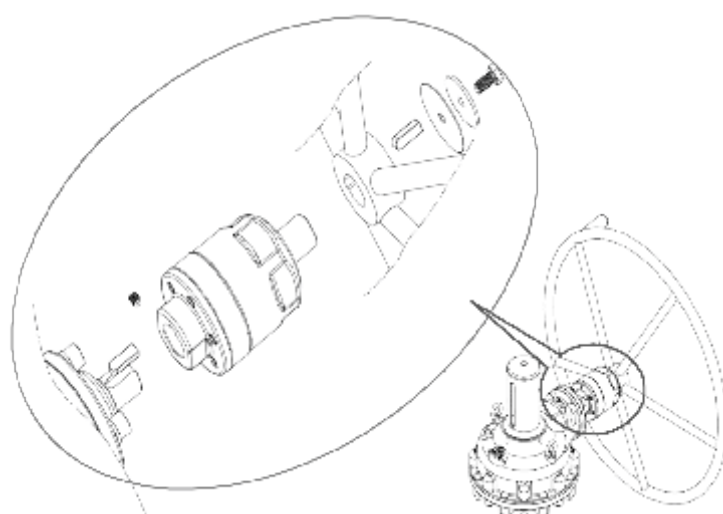
1. Remove housing
2. Loosen fixing bolts
3. Adjust the torque by rotating the locking nut
 - ▶ Increase torque when rotating CW
 - ▶ decrease torque when rotating CCW

❖ WARNING

- Never make any changes to the torque settings without a skilled professional or our consultants.

❖ Installation

1. Combine with drive (gearbox)
2. Tighten the Set screw
3. Combine with the handwheel kit



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

M-O-V TYPE

Selection Chart for Electric Actuator Dimension



❖

Spiral Bevel Gear Actuator

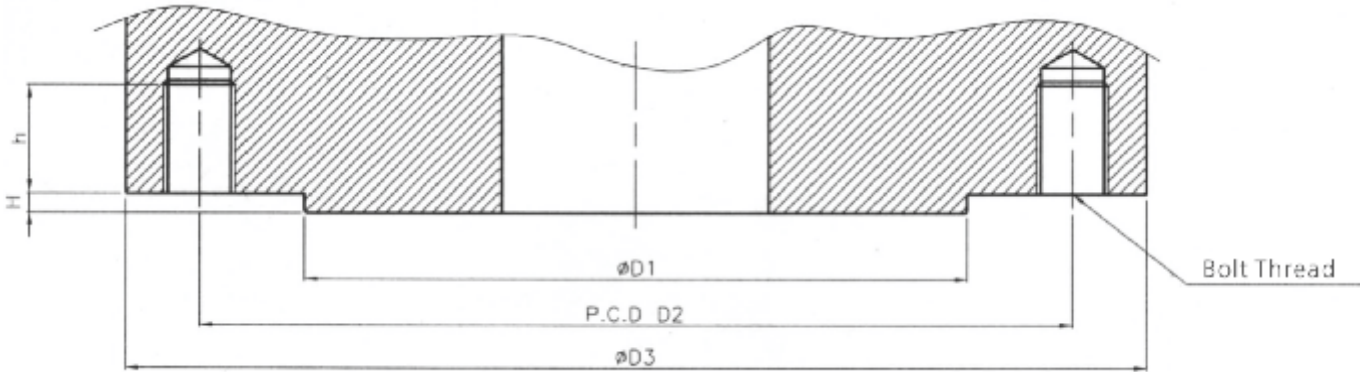
Standard Type						Support Type					
NO MODEL	Flange Type				Max. ΦD & Key	NO MODEL	Flange Type				Max. ΦD & Key
	F-10,F-14,F-16		F-25,F-30,F-35				F-10,F-14,F-16		F-25,F-30		
	K	H	K	H			K	H	K	H	
SB-VS10	70	6	90	8	Φ30 (10X8)	SB-V0-1S,1SD	70	6	90	8	-1SD Φ30 (10X8)
SB-VS20					-1SD Φ25 (8X7)						
SB-V0					Φ30 (10X8)						
SB-V1					Φ35 (10X8)						
SB-V2					Φ40 (12X8)						
SB-V3					Φ45 (14X9)						
SB-V35					Φ55 (16X10)						
SB-V4					Φ60 (18X11)						
SB-V5					Φ60 (18X11)						
SB-V55					Φ80						
SB-V6					Φ90						
SB-V65											
SB-V7											
SB-V75											
SB-V8											
SB-V85											
SB-V9											
SB-V10											

❖

Worm Gear Actuator

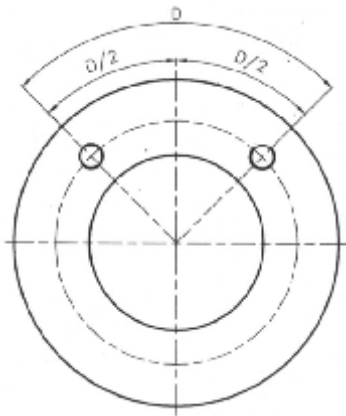
Standard Type						Support Type					
NO MODEL	Flange Type				Max. ΦD & Key	NO MODEL	Flange Type				Max. ΦD & Key
	F-10,F-14,F-16		F-25,F-30,F-35				F-10,F-14,F-16		F-25,F-30		
	K	H	K	H			K	H	K	H	
SBWG-BF	70	6	90	8	Φ20 (6X6)	SBWG-00-1S,1SD	70	6	90	8	Φ25 (8X7)
SBWG-0					SBWG-01-1S,1SD	Φ30 (10X8)					
SBWG-00					SBWG-02-1S,1SD						
SBWG-01					SBWG-03-1S,1SD						
SBWG-02					SBWG-35-1S,1SD	Φ35 (10X8)					
SBWG-03					SBWG-04-1S,1SD						
SBWG-35					SBWG-05-1S,1SD						
SBWG-04					SBWG-55-1S,1SD	Φ45 (14X9)					
SBWG-05					SBWG-06-1S,1SD						
SBWG-55					SBWG-07-1S,1SD						
SBWG-06					SBWG-75-1S,1SD	Φ55 (16X10)					
SBWG-07					SBWG-08-1S,1SD						
SBWG-75					SBWG-09-1S,1SD						
SBWG-08					SBWG-10-1S,1SD	Φ70 (18X11)					
SBWG-09					SBWG-11-1S,1SD						
SBWG-10					SBWG-12-1S,1SD						
SBWG-11					SBWG-13-1S,1SD	Φ80					
SBWG-12											
SBWG-13											

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 Screws
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	8
F-16	130	165	210	5	M20	3/4"-10UNC	30	
F-25	200	254	300		M16	5/8"-11UNC	24	
F-30	230	298	350		M20	3/4"-10UNC	30	
F-35	260	356	415	8	M30	1"-8UNC	45	12
F-40	300	406	475		M36	1 1/4"-7UNC	54	
F-48	370	483	560		M36	1 1/4"-7UNC	54	
F-60	470	603	686		M36	1 1/4"-7UNC	54	20

❖ Position of Holes



FLANGE TYPE	NO. of Screws	D/2
F-05 to F-16	4	45°
F-25 to F-40	8	22.5°
F-48	12	15°
F-60	20	9°

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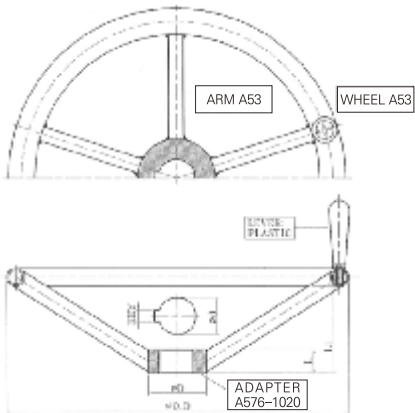
Handwheel Type

Worm Standard Handwheel

UNIT : mm

MODEL\SIZE	Φ0.D	ΦD	Φd&KEY	L	L1	ARM Q'TY
WH-200	200	40	Ø16 6X6	25	70	3EA
WH-250	250				90	
WH-300	300				110	
WH-350	350	50	Ø21 6X6	30	120	4EA
WH-400	400				130	
WH-450	450				150	
WH-500	500	60	Ø26 8X7	35	160	5EA
WH-560	560				170	
WH-630	630				190	
WH-710	710	70	Ø32 10X8	35	210	6EA
WH-800	800				230	
WH-900	900				250	
WH-1000	1000	90	Ø50 16X10	59	270	

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.

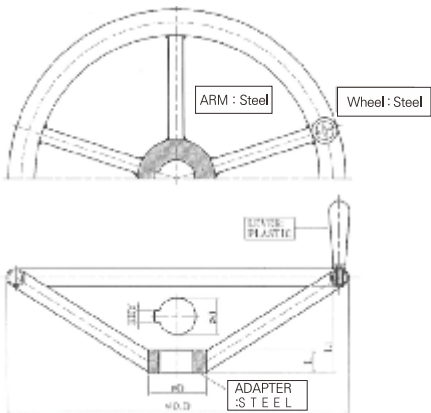


Worm Solid Handwheel

UNIT : mm

MODEL\SIZE	Φ0.D	ΦD	Φd&KEY	L	L1	ARM Q'TY
WSH-200	200	40	Ø16 6X6	25	70	3EA
WSH-250	250				90	
WSH-300	300				110	
WSH-350	350	50	Ø21 6X6	30	120	4EA
WSH-400	400				130	
WSH-450	450				150	
WSH-500	500	60	Ø26 8X7	35	160	5EA
WSH-560	560				170	
WSH-630	630				190	
WSH-710	710	70	Ø32 10X8	35	210	6EA
WSH-800	800				230	
WSH-900	900				250	
WSH-1000	1000	90	Ø50 16X10	59	270	

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.

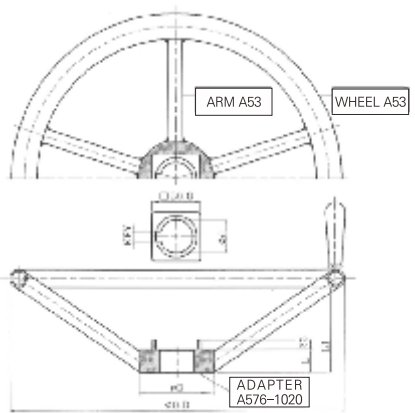


Drive Nut Handwheel

UNIT : mm

MODEL\SIZE	Φ0.D	ΦD	Φd&KEY	L	L1	ARM Q'TY		
WDNH-200	200	90	Ø 16 6X6	25	70	3EA		
WDNH-250	250				90			
WDNH-300	300				110			
WDNH-350	350		Ø 21 6X6	30	120	4EA		
WDNH-400	400				130			
WDNH-450	450				150			
WDNH-500	500		Ø 26 8X7	35	160	5EA		
WDNH-560	560				170			
WDNH-630	630				190			
WDNH-710	710		Ø 32 10X8	35	210			
WDNH-800	800				Ø 38 12X8	45	230	6EA
WDNH-900	900						250	
WDNH-1000	1000		Ø 50 16X10	59			270	

This Handwheel is the type using air impact wrench and if can be made properly according to customer's request.



Worm Gear Actuators

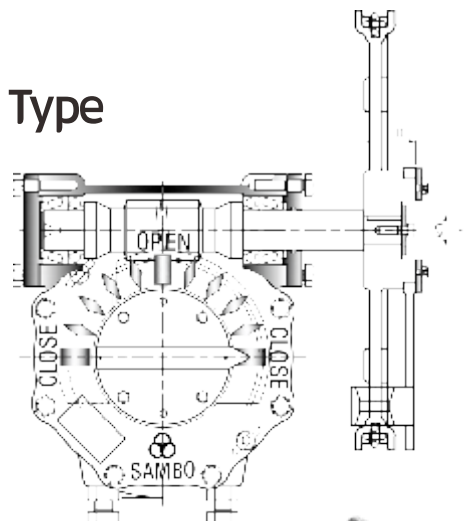
Chain wheel Type

❖ 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	51.5	Φ38 - 12X8 Φ50 - 16X10
CH-700	700		
CH-800	800	53	

❖ Gear Type



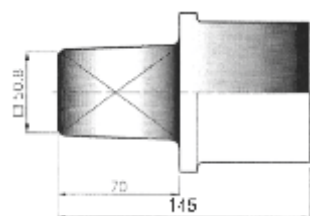
❖ Hammer Type



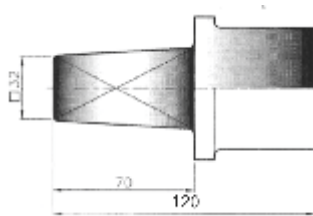
Chainwheel has 2 types

- First, hammer type which is joined with handwheel.
- Second, gear type which is adhered to gear directly.
- material : sprocket rim (FCD-450), guide arm (FCD-450), chain (steel+zn)

❖ Square Adapter



2" Square Nut Adapter



32 Square Nut Adapter

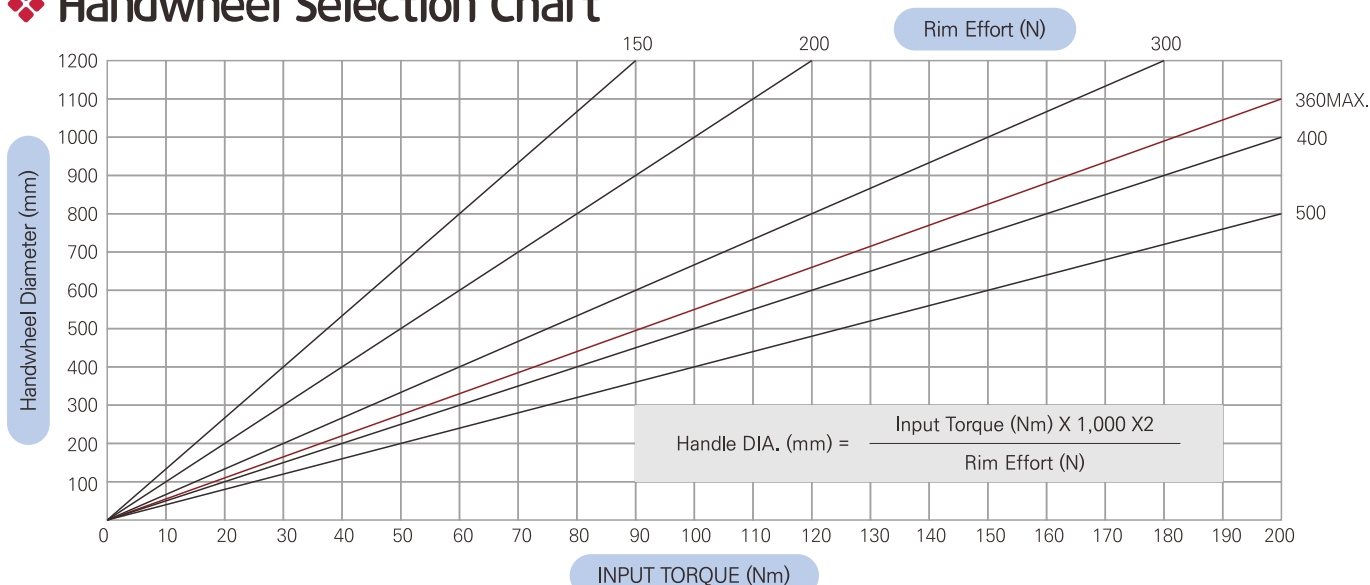


Hexagon Adapter



2" Square Nut

❖ Handwheel Selection Chart

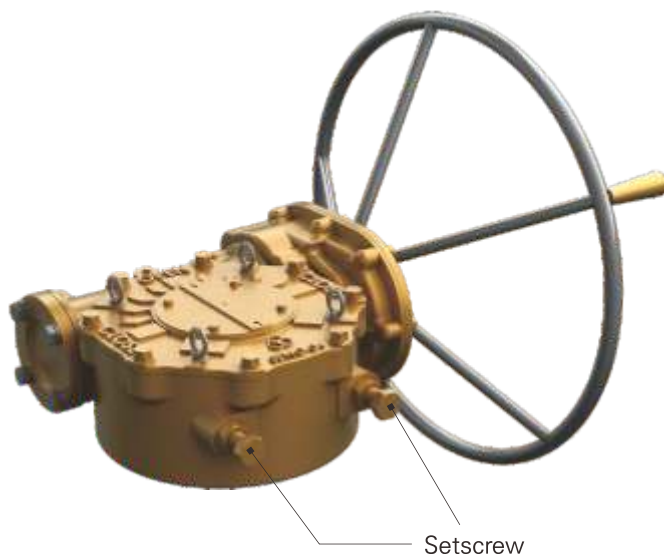


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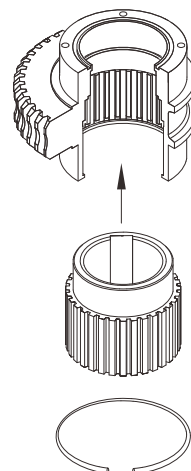
USER'S MANUAL

The Following Instructions should be followed for mounting of the gear to the valve

❖ BUSH INSERT & SETSCREW

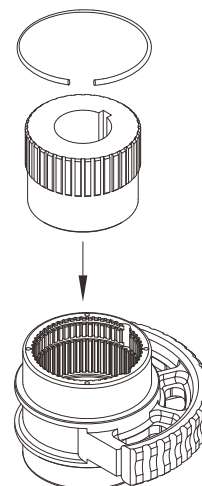


❖ Bottom Entry



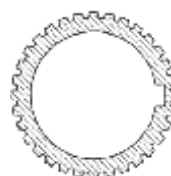
SBWG-0 ~ 35 Series

❖ Upper Entry

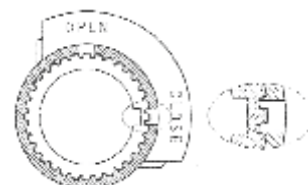


SBWG-04 ~ 13 Series

❖ Stem Bush



❖ Worm Gear



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

❖ ADJUSTMENT OF SETSCREW

1. Secure setting for the valve and actuator correctly.
2. After finish setting, finally use to adjust the setscrews of worm gearbox.

WARNING

- SAMBO worm gearboxes are not set at exactly 90 degree.
- After complete valve and actuator, accurately adjust and use setscrews.
- Incorrect setting of setscrews may cause damage and user is responsible for this.

❖ BUSH INSERT

Assembly

1. Turn gear box to see bottom side.
2. Insert bush correctly into the worm gear.
Insert bush into grooves of worm gear.
(Match groove and bushing key in a straight line.)
There is 2 grooves at bottom of worm gear.
One groove is for open and the other is for close.
3. Fix spring.

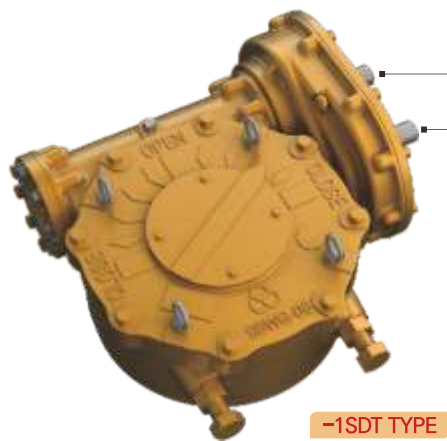
CAUTION

- In case of bushing insert, match groove of worm gear and bushing key correctly.
- This groove is marked the position of Caution "Close" or "Open".
- If it does not match, the position may not be proper.

USER'S MANUAL

❖ Twin Shaft Gear Actuators Type

There are two input shafts in the below support actuator type. One Shaft is for high speed and the other shaft is for low speed.



Second Input Shaft (Low Speed Input Shaft)

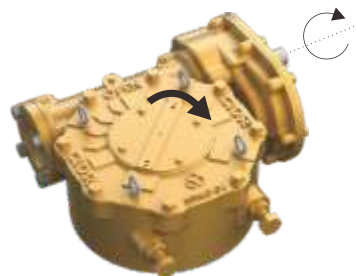
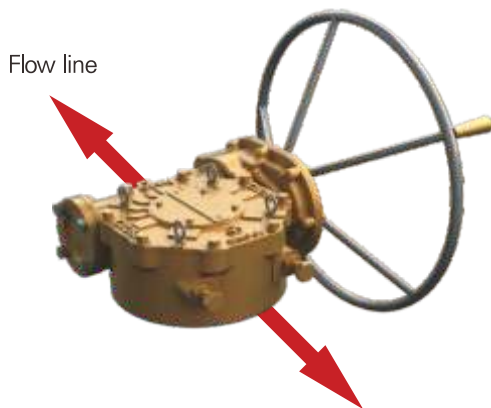
Provides maximum mechanical advantage for seating and unseating of valves.

Primary Input Shaft (High Speed Input Shaft)

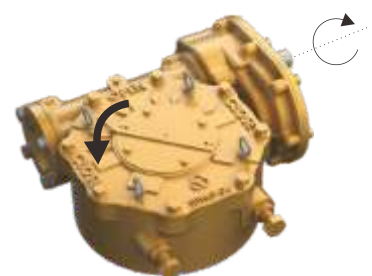
Allow for less turns after valve has been unseating.

❖ Input / Output Shaft Rotation Options

Right Hand Input

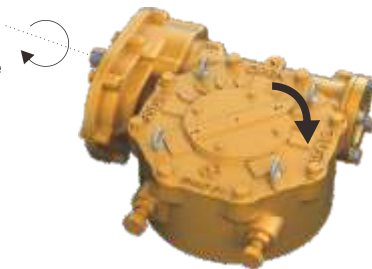
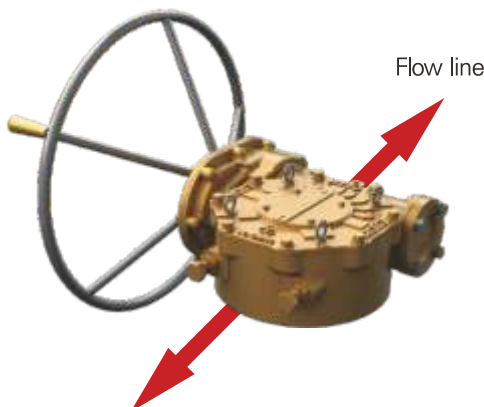


① Right Hand Input
CW in- CW out is most standard
Assembly position "A"

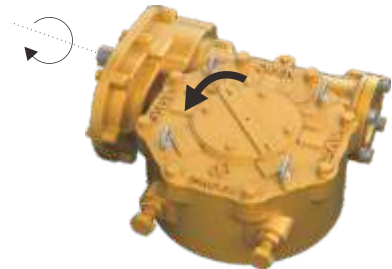


② Right Hand Input
CW in- CCW out Assembly
position "B"

Left Hand Input



③ Left Hand Input
CW in- CW out is most standard
Assembly position "C"



④ Left Hand Input
CW in- CCW out Assembly
position "D"

USER'S MANUAL

SAMBO Standards for all Gear Products

❖ Lubrication

Sambo gears are grease packed with Zenith EPSB 2 having a temperature range of -20°C to $+200^{\circ}\text{C}$. (-4°F to $+392^{\circ}\text{F}$)
All O-Rings and seals are Buna N as standard : All units are rated IP67 suitable for temporary submergence.



❖ High Temperature Option

For higher temperatures, Sambo uses shell Darina R2, providing a temperature range of -10°C to $+200^{\circ}\text{C}$. ($+14^{\circ}\text{F}$ to $+392^{\circ}\text{F}$)
O-Rings and Seals are Viton Grade V75.



❖ Low Temperature Option

For low temperatures, Sambo uses Zenith SLP 402 grease providing a temperature range of -60°C to $+154^{\circ}\text{C}$. (-76°F to $+310^{\circ}\text{F}$)
O-Rings and Seals are fluoro silicone.
Housing, Base and end caps are carbon steel, grade A352 LCB.



❖ Painting

All gears are primer coated vp 184 Red epoxy primer.

❖ Option

Sambo can meet most any other customer requirements as necessary contact us with exact specifications before placing order.



❖ Marine Duty

Sambo has been providing product to the Marine Industry for many years our standard Marine product is furnished as follows :

Lubricant is Zenith EPSB 2 with an operating temperature of -20°C to $+200^{\circ}\text{C}$. (-4°F to $+392^{\circ}\text{F}$)

All fasteners are zinc plated or anti-corrosive.

Input shafts are hard nickel plated.

All castings are ductile iron, grade FCD-450.

Certain options such as dial indicators and etc. may not be suitable for this service.

USER'S MANUAL

❖ AWWA Standard (American Water Works Association), Standard C504

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

❖ Nuclear Service

Sambo, with client's approval, can meet most requirements for this special service, such as material grades, special coatings and etc. Qualifications will be justified by calculations.

❖ Raw Sewage

Units supplied for immersion in raw sewage are lubricated with the 751 grease and have special sealing to meet IP68 submersible ratings.

Input shafts are stainless steel.

Special coatings such as polyurethane, epoxy, and chlorinated rubber can be supplied based on the client specification.

Certain options such as dial indicators and etc. may not be suitable for this service.



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 to lift 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 in 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 an 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 is required.

The units are completely sealed with large cross-section O-Rings to prevent any leakage.

Units are suitable for temporary submergence to IP67.

SAMBO standard lubricant is Shell Zenith EPB 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.

USER'S MANUAL

❖ Summary

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

❖ 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.

❖ Basic Check

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

- Check ordinarily 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

❖ Precautions

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

Spiral Bevel Gear Actuators

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-VS10	2.5:1	75.5	220	162	2.4	92.6	30	22 (8x7)	F-10 F-07 (OPTION)				
SB-VS10-1S	5:1				4.6	47.7							
SB-MT-VS10	1:1				0.9	243.8							
SB-VS10C	2.5:1				2.4	92.6	Ø42		F-14, F-16				
SB-VS10C-1S	5:1				4.6	47.7							
SB-VS20	3:1	113	370	273	2.9	129.8	40	32 (10x8)	F-12 F-10 (OPTION)				
SB-VS20-1S	6:1				5.5	66.9							
SB-MT-VS20	1:1				0.9	410							
SB-VS20C	3:1				2.9	129.8	Ø50		F-16, (F-20)				
SB-VS20C-1S	6:1				5.5	66.9							
SB-V0	3.5:1	127	600	443	3.1	194.3	46	38 (12x8)	F-14 F-12 (OPTION) F-10				
SB-V0W													
SB-V0-1S	6.5:1				6	100.2							
SB-V0W-1S													
SB-V0-1ST	P-3.25:1				3.3	180.5							
	S-6.5:1				6.0	100.2							
SB-V0-1S2B	13:1				11.4	52.7							
SB-V0-1SD	13:1				11.7	51.1							
SB-V0W-1SD													
SB-V0-1SDT	P-6.5:1				5.9	102.3							
	S-13:1				11.7	51.1							
SB-MT-V0	1:1				0.9	664.8							
SB-V0-2B	6.5:1				5.9	102.3							
SB-V0W-2B													
SB-V0C	3.25:1				3.1	194.3	Ø60		F-16, (F-20)				
SB-V0C-1S	6.5:1				5.9	102.3							
SB-V1	3.5:1	141	980	723	3.3	294.7	55	45 (14x9)	F-16 F-14 (OPTION)				
SB-V1W													
SB-V1-1S	7:1				6.3	155.1							
SB-V1W-1S													
SB-V1-1ST	P-3.5:1				3.2	310.2							
	S-7:1				6.3	155.1							
SB-V1-1S2B	14:1				12	81.6							
SB-V1-1SD	14:1				12.6	77.6							
SB-V1W-1SD													
SB-V1-1SDT	P-7:1				6.3	155.1							
	S-14:1				12.6	77.6							
SB-MT-V1	1:1				0.9	1085.9							
SB-V1-2B	7:1				6.3	155.1							
SB-V1W-2B													
SB-V1C	3.5:1				3.3	294.7	Ø69		(F-20), F-25				
SB-V1C-1S	7:1				6.3	155.1							
Remark	● Ratio & Base specification to be changeable.												
	● Max Output Torque includes safety factor.												
	● If any request requirement, please contact us any time.												

Spiral Bevel Gear Actuators 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-V2	4:1	190	1500	1106	3.8	394.7	62	52 (16x10)	(F-20) F-14,F-16 (OPTION)						
SB-V2W															
SB-V2-1S	10.13 :1				9.3	160.6									
SB-V2W-1S															
SB-V2-1ST	P-4:1 S-10.13:1				3.7	406.9									
					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 S-25.67:1				9.3	160.6									
					23.7	63.4									
SB-MT-V2	1:1				0.92	1627.8									
SB-V2-2B	10:1				9.	166.2									
SB-V2W-2B															
SB-V2C	4:1	3.8	394.7	Ø78											
SB-V2C-1S	10.13 :1	9.3	160.6			F-25, F-30									
SB-V2H	4:1	1080	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 S-10.13:1				3.7	786.8									
					9.3	310.6									
SB-V2H-1SD	25.67 :1				23.7	122.6									
SB-V2HW-1SD	P-10.13:1 S-25.67:1				9.3	310.6									
					23.7	122.6									
SB-V2H-2B	10:1				9	321.3									
SB-V2HW-2B															
SB-V3	5:1				288	2500				1844	4.8	526.3	72	60 (18x11)	F-25 (F-20),F-16 (OPTION)
SB-V3W															
SB-V3-1S	12.67 :1										11.7	214.2			
SB-V3W-1S															
SB-V3-1ST	P-5:1 S-12.67:1	4.6	542.6												
		11.7	214.2												
SB-V3-1S2B	25.33 :1	22.2	112.7												
SB-V3-1SD	32.1 :1	29.6	84.5												
SB-V3W-1SD															
SB-V3-1SDT	P-12.67:1 S-32.08:1	11.7	214.2												
		29.6	84.5												
SB-MT-V3	1:1	0.92	2713												
SB-V3-2B	15:1	13.5	184.7												
SB-V3W-2B															
SB-V3C	5:1	4.8	526.3	Ø97											
SB-V3C-1S	12.67 :1	11.7	214.2			F-30, F-35									
SB-V3H	5:1	1710	4500	3319	4.8	947.4	80	70 (20x12)	F-30 F-25(OPTION)						
SB-V3HW															
SB-V3H-1S	12.67 :1				11.7	385.5									
SB-V3HW-1S															
SB-V3H-1ST	P-5:1 S-12.67:1				4.6	976.7									
					11.7	385.5									
SB-V3H-1SD	32.1 :1				29.6	152.2									
SB-V3HW-1SD															
SB-V3H-1SDT	P-12.67:1 S-32.08:1				11.7	385.5									
					29.6	152.2									
SB-V3H-2B	15:1				13.5	332.4									
SB-V3HW-2B															
Remark	● Ratio & Base specification to be changeable.														
	● Max Output Torque includes safety factor.														
	● If any request requirement, please contact us any time.														

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Spiral Bevel Gear Actuators

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	5.2	669.9	85	72 (20x12)	F-30 F-25 (OPTION)						
SB-V35W															
SB-V35-1S	16.5:1					15.2				230.2					
SB-V35W-1S															
SB-V35-1ST	P-5.5:1				5.1	690.6									
	S-16.5:1				15.2	243.1									
SB-V35-1S2B	41.25:1				36.1	96.9									
SB-V35-1SD	49.5:1				45.6	76.7									
SB-V35W-1SD															
SB-V35-1SDT	P-16.5:1				15.2	230.2									
	S-49.5:1				45.6	76.7									
SB-MT-V35	1:1				0.92	3798.2									
SB-V35-2B	17.88 :1					16.1				217					
SB-V35W-2B															
SB-V35C	5.5:1				5.2	669.9	Ø115		F-35, F-40						
SB-V35C-1S	16.5:1				15.2	230.2									
SB-V35H	5.5:1	2450	7000	5163	5.2	1339.7	95	85 (22x14)	F-35 F-30,F-25 (OPTION)						
SB-V35HW															
SB-V35H-1S	16.5:1				15.2	460.4									
SB-V35HW-1S															
SB-V35H-1ST	P-5.5:1				5.1	1381.1									
	S-16.5:1				15.2	460.4									
SB-V35H-1SD	49.5:1				45.6	153.5									
SB-V35HW-1SD															
SB-V35H-1SDT	P-16.5:1				15.2	460.4									
	S-49.5:1				45.6	153.5									
SB-V35H-2B	17.88 :1					16.1				433.9					
SB-V35HW-2B															
SB-V4	6:1	400	5200	3835	5.7	912.3	98	84 (22x14)	F-35 F-30,F-25 (OPTION)						
SB-V4W															
SB-V4-1S	18:1				16.6	313.5									
SB-V4W-1S															
SB-V4-1ST	P-6:1				5.5	940.5									
	S-18:1				16.6	313.5									
SB-V4-1S2B	45:1				39.4	132									
SB-V4-1SD	54:1				49.8	104.5									
SB-V4W-1SD															
SB-V4-1SDT	P-18:1				16.6	313.5									
	S-54:1				49.8	104.5									
SB-MT-V4	1:1				0.92	5643									
SB-V4-2B	21:1					19				274.4					
SB-V4W-2B															
SB-V4C	6:1				5.7	912.3	Ø130		F-35, F-40						
SB-V4C-1S	18:1				16.6	313.5									
SB-V4H	6:1	2900	9800	7228	5.7	1719.3	110	95 (25x14)	F-35 F-30,F-25 (OPTION)						
SB-V4HW															
SB-V4H-1S	18:1				16.6	590.8									
SB-V4HW-1S															
SB-V4H-1ST	P-6:1				5.5	1772.5									
	S-18:1				16.6	590.8									
SB-V4H-1SD	54:1				49.8	196.9									
SB-V4HW-1SD															
SB-V4H-1SDT	P-18:1				16.6	590.8									
	S-54:1				49.8	196.9									
SB-V4H-2B	21:1					19				517.1					
SB-V4HW-2B															
Remark	● Ratio & Base specification to be changeable.														
	● Max Output Torque includes safety factor.														
	● If any request requirement, please contact us any time.														

Spiral Bevel Gear Actuators

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-V5	6.56:1	510	7800	5753	6.2	1252.5	110	95 (28x16)	F-35 F-30 (OPTION)						
SB-V5W															
SB-V5-1S	22.9444:1				21.1	368.9									
SB-V5W-1S															
SB-V5-1ST	P-6.556:1				6	1291.2									
	S-22.94:1				21.1	368.9									
SB-V5-1S2B	57.36:1				41.5	187.9									
SB-V5-1SD	80.31:1				74	105.4									
SB-V5W-1SD															
SB-V5-1SDT	P-22.94:1				21.1	368.9									
	S-80.31:1				74	105.4									
SB-MT-V5	1:1				0.9	8464.5									
SB-V5-2B	26.2222:1				23.7	329.6									
SB-V5W-2B															
SB-V5C	6.5:1	6.2	1252.5	145		F-40, F-35									
SB-V5C-1S	19.5:1	21.1	368.9												
SB-V5H	6.55556:1	3500	15000	11063	6.2	2408.6	130	115 (32x18)	F-40 F-35, F-30 (OPTION)						
SB-V5HW															
SB-V5H-1S	22.9444:1				21.1	709.4									
SB-V5HW-1S															
SB-V5H-1ST	P-6.556:1				6	2483.1									
	S-22.94:1				21.1	709.4									
SB-V5H-1SD	80.31:1				74	202.7									
SB-V5HW-1SD															
SB-V5H-1SDT	P-22.94:1				21.1	709.4									
	S-580.31:1				74	202.7									
SB-V5H-2B	26.2222:1	23.7	633.8												
SB-V55	7:1	1500	10400	7671	6.7	1563.9	120	105 (28x16)	F-40 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									
SB-V55-1SD	85.75:1				79	131.6									
SB-V55W-1SD															
SB-V55-1SDT	P-24.5:1				22.6	460.7									
	S-85.75:1				79	131.6									
SB-MT-V55	1:1				0.9	11555									
SB-V55-2B	35:1				31.6	329.6									
SB-V55W-2B															
SB-V55H	7:1	4200	19000	14014	6.7	2857.1	140	120 (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	240.4									
SB-V55HW-1SD															
SB-V55H-1SDT	P-24.5:1				22.6	841.6									
	S-85.75:1				79	240.4									
SB-V55H-2B	35:1				31.6	601.5									
SB-V55HW-2B															
Remark	● Ratio & Base specification to be changeable.														
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	● If any request requirement, please contact us any time.														

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Spiral Bevel Gear Actuators

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	2310	13000	9588	6.7	1954.9	130	115 (32x18)	F-40 F-35, F-30 (OPTION)	
SB-V6W										
SB-V6-1S					28:1	25.8				503.8
SB-V6W-1S										
	6.5					2015.3				
SB-V6-1ST	S-28:1				25.8	503.8				
					73.5	176.8				
					103.2	126				
SB-V6-1S2B	84:1									
SB-V6-1SD	112:1									
SB-V6W-1SD										
					25.8	503.8				
SB-V6-1SDT	P-28:1				103.2	126				
					0.9	14107.4				
SB-MT-V6	1:1									
SB-V6-2B	35:1									
SB-V6W-2B										
		31.6	411.6							
SB-V6H	7:1	4700	23000	16964	6.7	3458.6	150	130 (36x20)	F-48 F-40, F-35 (OPTION)	
SB-V6HW										
SB-V6H-1S					25.8	891.4				
SB-V6HW-1S	28:1				6.5	3565.6				
					25.8	891.4				
					103.2	222.9				
SB-V6H-1ST	P-7:1				25.8	891.4				
					103.2	222.9				
					31.6	728.1				
SB-V6H-1SD	112:1									
SB-V6HW-1SD										
SB-V6H-1SDT	P-28:1									
					S-112:1					
SB-V6H-2B	35:1									
SB-V6HW-2B										
SB-V7	7.56 :1				2500	17600				12981
SB-V7W										
SB-V7-1S		30.22 :1	27.8	632						
SB-V7W-1S										
	7		2527.8							
SB-V7-1ST	30.22 :1	27.8	632							
		79.4	221.7							
		111.4	158							
SB-V7-1S2B	90.67 :1									
SB-V7-1SD	120.89 :1									
SB-V7W-1SD										
		27.8	632							
SB-V7-1SDT	30.22 :1	111.4	158							
		34.1	516.2							
SB-V7-2B	37.78 :1									
SB-V7W-2B										
SB-V7H	7.56 :1	5200	37000	27290	7.2	5154.8	170	150 (40x22)	F-48	
SB-V7HW										
SB-V7H-1S					30.22 :1	27.8				1328.6
SB-V7HW-1S										
	7					5314.2				
SB-V7H-1ST	30.22 :1				27.8	1328.6				
					111.4	332.1				
					27.8	1328.6				
SB-V7H-1SD	120.89 :1				111.4	332.1				
SB-V7HW-1SD										
					27.8	1328.6				
SB-V7H-1SDT	30.22 :1				111.4	332.1				
					34.1	1085.2				
SB-V7H-2B	37.78 :1									
SB-V7HW-2B										
Remark	● Ratio & Base specification to be changeable.									
	● Max Output Torque includes safety factor.									
	● If any request requirement, please contact us any time.									

Spiral Bevel Gear Actuators

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-V75	8:1	3450	21000	15489	7.6	2763.2	160	140 (36x20)	F-48 F-40 (OPTION)
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	90.67:1				79.4	264.6			
SB-V75-1SD					184.3	113.9			
SB-V75W-1SD	200:1								
SB-V75-1SDT	40:1				36.9	569.7			
	200:1				184.3	113.9			
SB-V75-2B					34.1	615.9			
SB-V75W-2B	37.78:1								
SB-V75H	8:1	6800	46000	33928	7.6	6052.6	190	170 (40x22)	F-60 F-48 (OPTION)
SB-V75HW									
SB-V75H-1S	40:1				36.9	1248			
SB-V75HW-1S									
SB-V75H-1ST	8:1				7.4	6239.8			
	40:1				36.9	1248			
SB-V75H-1SD					184.3	249.6			
SB-V75HW-1SD	200:1								
SB-V75H-1SDT	40:1				36.9	1248			
	200:1				184.3	249.6			
SB-V75H-2B					34.1	1349.2			
SB-V75HW-2B	37.78:1								
SB-V8	8:1	4100	32000	23602	7.6	4210.5	180	160 (40x22)	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					184.3	173.6			
SB-V8W-1SD	200:1								
SB-V8-1SDT	P-40:1				36.9	868.1			
	S-200:1				184.3	173.6			
SB-V8-2B					39.7	805.8			
SB-V8W-2B	44:1								
SB-V8H	8:1	7650	58000	42778	7.6	7631.6	215	185 (45x25)	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					184.3	314.7			
SB-V8HW-1SD	200:1								
SB-V8H-1SDT	P-40:1				36.9	1573.5			
	S-200:1				184.3	314.7			
SB-V8H-2B					39.7	1460.6			
SB-V8HW-2B	44:1								
Remark	● Ratio & Base specification to be changeable.								
	● Max Output Torque includes safety factor.								
	● If any request requirement, please contact us any time.								

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Spiral Bevel Gear Actuators 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	5150	40000	29502	7.6	5263.2	190	170 (40x22)	F-60 F-48 (OPTION)
SB-V85W									
SB-V85-1S					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			
SB-V85W-1SD									
SB-V85-1SDT	P-40:1				36.9	1085.2			
	S-200:1				184.3	217			
SB-V85-2B	48:1				43.3	923.4			
SB-V85W-2B									
SB-V85H	8:1	9100	74000	54579	7.6	9736.8	225	195 (45x25)	F-60 F-48 (OPTION)
SB-V85HW									
SB-V85H-1S					36.9	2007.6			
SB-V85HW-1S									
SB-V85H-1ST	P-8:1				7.4	10038			
	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				5450	55000			
SB-V9W									
SB-V9-1S		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-V9-2B	52.43:1	46.9	1172						
SB-V9W-2B									
SB-V9H	8:1	9400	104000	76706	7.6	13684.2	240	215 (50x28)	(F-80) F-60 (OPTION)
SB-V9HW									
SB-V9H-1S					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	52.43:1				46.9	2216.1			
SB-V9HW-2B									
Remark	● Ratio & Base specification to be changeable.								
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Spiral Bevel Gear Actuators Technical Data

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Spur Gear Actuators 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-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	1080	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	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	1710	4500	3319	12	376.3	80	70 (20x12)	F-30 F-25 (OPTION)
SB-SR300H-2B	32:1				26.5	169.8			
SB-SR300H-1ST	P-13:1				11	409			
	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	2100	7000	5163	12.0	585.3	85	72 (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	98	82 (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	2450	9800	7228	12.9	760.9	95	85 (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			
	S-42:1				35.5	275.7			
SB-SR500	15:1	510	7800	5753	13.8	565.2	110	95 (28x16)	F-35 F-30 (OPTION)
SB-SR500-2B	60:1				49.7	157			
SB-SR500-1ST	P-15:1				12.7	614.4			
	S-45:1				38.1	204.8			
Remark	● Ratio & Base specification to be changeable.								
	● Max Output Torque includes safety factor.								
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Spur Gear Actuators 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-SR500H	15:1	2900	15000	11063	13.8	1087	110	95 (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-45:1				38.1	393.8			
SB-SR550	15:1	1500	10400	7671	13.8	753.6	120	105 (28x16)	F-35 F-30 (OPTION)
SB-SR550-2B	60:1				49.7	209.3			
SB-SR550-1ST	P-15:1				12.7	819.2			
	S-52.5:1				44.4	234.0			
SB-SR550H	15:1	3400	19000	14014	13.8	1376.8	120	105 (28x16)	F-40 F-35, F-30 (OPTION)
SB-SR550H-2B	60:1				49.7	382.4			
SB-SR550H-1ST	P-15:1				12.7	1496.5			
	S-52.5:1				44.4	427.6			
SB-SR600	16:1	2310	13000	9588	14.7	883.2	130	115 (32x18)	F-40 F-35 (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			
SB-SR600H	16:1	3500	23000	16964	14.7	1562.5	130	115 (32x18)	F-40 F-35, F-30 (OPTION)
SB-SR600H-2B	64:1				53	434			
SB-SR600H-1ST	P-16:1				13.5	1698.4			
	S-64:1				54.2	424.6			
SB-SR700	17:1	2500	17600	12981	15.6	1125.3	150	130 (36x20)	F-48 F-40 (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	4700	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-SR750	17:1	3450	21000	15489	15.6	1342.7	160	140 (36x20)	F-48
SB-SR750-2B	93.5:1				77.4	271.3			
SB-SR750-1ST	P-17:1				14.4	1459.5			
	S-85:1				71.9	291.9			
SB-SR750H	17:1	5000	46000	33928	15.6	2941.2	160	140 (36x20)	F-48
SB-SR750H-2B	93.5:1				77.4	594.2			
SB-SR750H-1ST	P-17:1				14.4	3196.9			
	S-85:1				71.9	639.4			
SB-SR800	17:1	4100	32000	23602	15.6	2046	180	160 (40x22)	F-48
SB-SR800-2B	93.5:1				77.4	413.3			
SB-SR800-1ST	P-17:1				14.4	2224			
	S-85:1				71.9	444.8			
SB-SR800H	17:1	5200	58000	42778	15.6	3708.4	170	150 (40x22)	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			
Remark	● Ratio & Base specification to be changeable.								
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Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (± 10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)											
		(N·m)	(Ft·lbf)																
SBWG-BF	32 :1	360	266	11.6	30.9	8	20 (6x6)	F-07											
SBWG-BFTN						32													
SBWG-BFMT																			
SBWG-BFDC	29 :1	320	236	10.9	29.4	8													
SBWG-BFDCM																			
SBWG-0	36:1	780	575	13.4	58.1	9	28 (8x7)	F-10 F-07 (OPTION)											
SBWG-0TN																			
SBWG-0MT																			
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						40													
SBWG-00MT																			
SBWG-00-1S	80 :1			26.0	46.2	20													
SBWG-00TN-1S						80													
SBWG-00MT-1S																			
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						160													
SBWG-00MT-1SD																			
SBWG-00-1SDT	P-80:1			26.0	46.2	20													
	S-160:1			47.8	25.1	40													
SBWG-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				22.8	43.1	16.6													
SBWG-00DC-1S	67 :1																		
SBWG-00DCM-1S																			
SBWG-00DC-2SD	266 :1			77.0	12.7	66.5													
SBWG-00DCM-2SD																			
Remark	● Ratio & Base specification to be changeable.																		
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Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (± 10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-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						88						
SBWG-01MT-1S						11						
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						176						
SBWG-01MT-1SD						22						
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												
SBWG-01DCM-1S	75 :1			26.1	61.2	18.8						
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						121.6						
SBWG-02TM-1S						12						
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						308.1						
SBWG-02MT-1SD						30.4						
SBWG-02-1SDT	P-121.6:1			37.1	75.6	30.4						
	S-308.1:1			86.4	32.4	77						
SBWG-02-2SD	616.1 :1			158.9	17.6	154						
SBWG-02-1S2B	243.2 :1			70.4	39.8	60.8						
SBWG-02-1SD2B	616.1 :1			164.1	17.1	154						
SBWG-02-2B	120 :1			37.8	74.1	30						
SBWG-02-2BD	240 :1			71.7	39.0	60						
SBWG-02-3W	1920 :1			224.4	12.5	480						
SBWG-02-3W2B	1920 :1			208.7	13.4	480						
SBWG-02DC	46 :1	2500	1844	15.9	157.4	11.5						
SBWG-02DCM												
SBWG-02DC-1S												
SBWG-02DCM-1S	107 :1			34.0	73.5	26.8						
SBWG-02DC-2SD	429 :1			115.4	21.7	107.3						
SBWG-02DCM-2SD												
Remark	● Ratio & Base specification to be changeable.											
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Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (± 10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-03	52 :1	4300	3172	16.9	253.7	13	75 (20x12)	(F-20) F-16, F-14 (OPTION)				
SBWG-03TN						52						
SBWG-03MT						32.9						
SBWG-03-1S	131.7 :1			39.5	108.9	131.7						
SBWG-03TN-1S						13						
SBWG-03MT-1S						32.9						
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						333.7						
SBWG-03MT-1SD						32.9						
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												
SBWG-03DCM-1S	117 :1			36.4	104.3	29.3						
SBWG-03DC-2SD												
SBWG-03DCM-2SD				123.0	30.9	116.8						
SBWG-35	52 :1	6100	4499	17.4	350.5	13	80 (22x14)	F-25, (F-20) F-16 (OPTION)				
SBWG-35TN						52						
SBWG-35MT						32.9						
SBWG-35-1S	131.7 :1			40.6	150.4	131.7						
SBWG-35TN-1S						13						
SBWG-35MT-1S						32.9						
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						333.7						
SBWG-35MT-1SD						32.9						
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	2288 :1			263.3	23.2	572						
SBWG-35-3W2B	2288 :1			244.9	24.9	572						
SBWG-35DC	52 :1	5600	4130	20.1	278.6	13						
SBWG-35DCM												
SBWG-35DC-1S												
SBWG-35DCM-1S	118 :1			41.9	133.6	29.5						
SBWG-35DC-2SD												
SBWG-35DCM-2SD				141.9	39.5	117.9						
Remark	● Ratio & Base specification to be changeable.											
	● Max Output Torque includes safety factor.											
	● If any request requirement, please contact us any time.											

Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem, Max)	Mounting Flange (ISO5210/1)						
		(N·m)	(Ft·lbf)											
SBWG-04	56 :1	10400	7671	18.3	569.8	14	95 (25x14)	F-25 (F-20), F-16 (OPTION)						
SBWG-04TN						56								
SBWG-04MT						42								
SBWG-04-1S	168 :1			50.4	206.5	168								
SBWG-04TN-1S						14								
SBWG-04MT-1S						42								
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						504								
SBWG-04MT-1SD						42								
SBWG-04-1SDT	P-168:1			50.4	206.5	126								
	S-504:1			139.0	74.8	319.2								
SBWG-04-2SD	1276.8 :1			324.0	32.1	105								
SBWG-04-1S2B	420 :1			119.6	86.9	315								
SBWG-04-1SD2B	1260 :1			330.2	31.5	42								
SBWG-04-2B	168 :1			52.0	199.9	105								
SBWG-04-2BD	420 :1			123.5	84.2	672								
SBWG-04-3W	2688 :1			290.2	35.8	840								
SBWG-04-3W2B	3360 :1			337.3	30.8	14								
SBWG-04DC	56 :1	9600	7081	21.2	452.7	37.3								
SBWG-04DCM						239.5								
SBWG-04DC-1S						15								
SBWG-04DCM-1S	149.3 :1			52.0	184.5	60								
SBWG-04DC-2SD	958 :1			282.5	34.0	45								
SBWG-04DCM-2SD						180								
SBWG-05	60:1	15900	11727	19.6	813.1	15	115 (32x18)	F-30 F-25 (OPTION)						
SBWG-05TN						60								
SBWG-05MT						45								
SBWG-05-1S	180:1			54.0	294.6	180								
SBWG-05TN-1S						15								
SBWG-05MT-1S						45								
SBWG-05-1ST	P-60:1			19.6	813.1	135								
	S-180:1			54.0	294.6	540								
SBWG-05-1SD	540 :1			149.0	106.7	45								
SBWG-05TN-1SD						135								
SBWG-05MT-1SD						342								
SBWG-05-1SDT	P-180:1			54.0	294.6	112.5								
	S-540:1			149.0	106.7	337.5								
SBWG-05-2SD	1368:1			347.2	45.8	45								
SBWG-05-1S2B	450:1			128.2	124.0	112.5								
SBWG-05-1SD2B	1350:1			353.8	44.9	112.5								
SBWG-05-2B	180:1			55.7	285.3	720								
SBWG-05-2BD	450:1			132.4	120.1	900								
SBWG-05-3W	2880:1			305.9	52.0	15								
SBWG-05-3W2B	3600:1			355.6	44.7	40								
SBWG-05DC	60:1	14400	10621	22.4	644.0	256.6								
SBWG-05DCM						40								
SBWG-05DC-1S						15								
SBWG-05DCM-1S	160:1			54.9	262.5	256.6								
SBWG-05DC-2SD	1026:1			297.9	48.3	15								
SBWG-05DCM-2SD						40								
Remark	● Ratio & Base specification to be changeable.													
	● Max Output Torque includes safety factor.													
	● If any request requirement, please contact us any time.													

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Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (± 10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem, Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-55	62:1	23500	17333	20.8	1129.8	15.5	125 (32x18)	F-30 F-25 (OPTION)				
SBWG-55TN												
SBWG-55MT						62						
SBWG-55-1S	186:1			57.4	409.3	46.5						
SBWG-55TN-1S						186						
SBWG-55MT-1S						15.5						
SBWG-55-1ST	P-62:1			20.8	1129.8	46.5						
	S-186:1			57.4	409.3	139.5						
SBWG-55-1SD	558:1			158.5	148.3	558						
SBWG-55TN-1SD												
SBWG-55MT-1SD						46.5						
SBWG-55-1SDT	P-186:1			57.4	409.3	139.5						
	S-558:1			158.5	148.3	353.4						
SBWG-55-2SD	1413.6:1			369.3	63.6	116.3						
SBWG-55-1S2B	465:1			136.3	172.4	348.8						
SBWG-55-1SD2B	1395:1			376.3	62.4	46.5						
SBWG-55-2B	186:1			59.3	396.4	116.3						
SBWG-55-2BD	465:1			140.8	166.9	806						
SBWG-55-3W	3224:1			352.5	66.7	1007.5						
SBWG-55-3W2B	4030:1			409.8	57.3							
SBWG-55DC	62:1	21150	15599	23.6	897.5	15.5						
SBWG-55DCM												
SBWG-55DC-1S						41.3						
SBWG-55DCM-1S	1061:1			313.9	67.4	265.2						
SBWG-55DC-2SD												
SBWG-55DCM-2SD												
SBWG-06	64:1	32800	24192	20.2	1627.5	16	140 (36x20)	F-35 F-30, F-25 (OPTION)				
SBWG-06TN												
SBWG-06MT						64						
SBWG-06-1S	256:1			74.2	442.2	64						
SBWG-06TN-1S						256						
SBWG-06MT-1S						16						
SBWG-06-1ST	P-64:1			20.2	1627.5	64						
	S-256:1			74.2	442.2	256						
SBWG-06-1SD	1024:1			272.9	120.2	256						
SBWG-06TN-1SD						1024						
SBWG-06MT-1SD						64						
SBWG-06-1SDT	P-256:1			74.2	442.2	256						
	S-1024:1			272.9	120.2	768						
SBWG-06-2SD	3072:1			753.3	43.5	192						
SBWG-06-1S2B	768:1			211.4	155.2	768						
SBWG-06-1SD2B	3072:1			777.9	42.2	64						
SBWG-06-2B	256:1			76.6	428.3	192						
SBWG-06-2BD	768:1			218.3	150.3	832						
SBWG-06-3W	3328:1			350.7	93.5	1040						
SBWG-06-3W2B	4160:1			407.7	80.4							
SBWG-06DC	64:1	29520	21773	23.3	1267.2	16						
SBWG-06DCM												
SBWG-06DC-1S						58						
SBWG-06DCM-1S	232:1			77.7	380,0							
SBWG-06DC-2SD	2088:1			591.8	49.9	522						
SBWG-06DCM-2SD												
Remark	● Ratio & Base specification to be changeable.											
	● Max Output Torque includes safety factor.											
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Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (± 10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem, Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-07	68:1	51100	37689	22.0	2323.0	17	180 (45x25)	F-40 F-35,F-30 (OPTION)				
SBWG-07TN						68						
SBWG-07MT						68						
SBWG-07-1S	272:1			80.9	631.3	68						
SBWG-07TN-1S						272						
SBWG-07MT-1S						68						
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						1088						
SBWG-07MT-1SD						68						
SBWG-07-1SDT	P-272:1			80.9	631.3	272						
	S-1088:1			297.9	171.5	68						
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						61.6						
SBWG-07DC-1S						554.5						
SBWG-07DCM-1S	247:1			83.2	540.6	61.6						
SBWG-07DC-2SD	2218:1			633.9	71.0	16.5						
SBWG-07DCM-2SD						66						
SBWG-75	66:1	81500	60111	23.1	3532.3	16.5	210 (50x28)	F-48 F-40, F-35 (OPTION)				
SBWG-75TN						330						
SBWG-75MT						82.5						
SBWG-75-1S	330:1			106.1	767.9	330						
SBWG-75TN-1S						16.5						
SBWG-75MT-1S						82.5						
SBWG-75-1ST	P-66:1			23.1	3532.3	16.5						
	S-330:1			106.1	767.9	82.5						
SBWG-75-1SD	1650:1			488.2	166.9	412.5						
SBWG-75TN-1SD						1650						
SBWG-75MT-1SD						82.5						
SBWG-75-1SDT	P-330:1			106.1	767.9	412.5						
	S-1650:1			488.2	166.9	1650						
SBWG-75-2SD	6600:1			1796.7	45.4	1650						
SBWG-75-1S2B	1320:1			403.3	202.1	330						
SBWG-75-1SD2B	6600:1			1855.3	43.9	1650						
SBWG-75-2B	330:1			109.6	743.6	82.5						
SBWG-75-2BD	1072.5:1			338.4	240.9	268.1						
SBWG-75-3W	3696:1			421.1	193.5	924						
SBWG-75-3W2B	5544:1			587.4	138.7	1386						
SBWG-75DC	65:1	73350	54100	25.7	2856.0	16.3						
SBWG-75DCM						72.6						
SBWG-75DC-1S						1161.3						
SBWG-75DCM-1S	290:1			105.5	695.0	72.6						
SBWG-75DC-2SD	4645:1			1429.3	51.3	1161.3						
SBWG-75DCM-2SD												
Remark	● Ratio & Base specification to be changeable.											
	● Max Output Torque includes safety factor.											
	● If any request requirement, please contact us any time.											

Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem, Max)	Mounting Flange (ISO5210/1)
		(N·m)	(Ft·lbf)					
SBWG-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						330		
SBWG-08MT-1S								
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						1650		
SBWG-08MT-1SD						82.5		
SBWG-08-1SDT	P-330:1			111.8	1082.2	412.5		
	S-1650:1			514.3	235.3	1650		
SBWG-08-2SD	6600:1			1892.8	63.9	330		
SBWG-08-1S2B	1320:1			424.9	284.8	1650		
SBWG-08-1SD2B	6600:1			1954.5	61.9	90.8		
SBWG-08-2B	363:1			127.0	952.7	317.6		
SBWG-08-2BD	1270.5:1			422.3	286.5	990		
SBWG-08-3W	3960:1			475.3	254.6	1485		
SBWG-08-3W2B	5940:1			663.1	182.5			
SBWG-08DC	65:1	108900		26.4	4120.7	16.3		
SBWG-08DCM								
SBWG-08DC-1S				108.6	1002.8	72.6		
SBWG-08DCM-1S								
SBWG-08DC-2SD				1470.7	74.0	1161.3		
SBWG-08DCM-2SD	4645:1							
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						330		
SBWG-09MT-1S								
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						1650		
SBWG-09MT-1SD						82.5		
SBWG-09-1SDT	P-330:1			119.2	1615.1	412.5		
	S-1650:1			548.3	351.1	1650		
SBWG-09-2SD	6600:1			2017.6	95.4	330		
SBWG-09-1S2B	1320:1			452.9	425.0	1650		
SBWG-09-1SD2B	6600:1			2083.4	92.4	99		
SBWG-09-2B	396:1			147.7	1303.4	396		
SBWG-09-2BD	1584:1			561.2	343.0	1023		
SBWG-09-3W	4092:1			538.9	357.2	1534.5		
SBWG-09-3W2B	6138:1			751.8	256.0			
SBWG-09DC	64:1	178000	131286	27.0	6604.5	16		
SBWG-09DCM								
SBWG-09DC-1S				110.8	1607.2	71.5		
SBWG-09DCM-1S								
SBWG-09DC-2SD	4574:1			1499.9	118.7	1143.5		
SBWG-09DCM-2SD								
Remark	● Ratio & Base specification to be changeable.							
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Worm Gear Actuators

Technical Data

Model	Ratio	Max. Output Torque		Mechanical Advantage (±10%)	Max. Input Torque (N·m)	Turns to Close (REV)	Bore Diameter (Stem. Max)	Mounting Flange (ISO5210/1)				
		(N·m)	(Ft·lbf)									
SBWG-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						320						
SBWG-10MT-1S												
SBWG-10-1ST	P-64:1			24.3	11313.4	16						
	S-320:1			111.8	2459.4	80						
SBWG-10-1SD	1600:1			514.3	534.7	400						
SBWG-10TN-1SD						1600						
SBWG-10MT-1SD												
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	1600:1			531.1	517.8	400						
SBWG-10-1SD2B	8000:1			2443.1	112.6	2000						
SBWG-10-2B	416:1			150.1	1832.1	104						
SBWG-10-2BD	2080:1			713.0	385.7	520						
SBWG-10-3W	4096:1			489.9	561.3	1024						
SBWG-10-3W2B	8192:1	911.2	301.8	2048								
SBWG-10DC	62:1	253000	186600	25.1	10075.7	15.5						
SBWG-10DCM												
SBWG-10DC-1S	266:1			102.1	2476.9	66.5						
SBWG-10DCM-1S												
SBWG-10DC-2SD	6650:1			2307.6	109.6	1662.5						
SBWG-10DCM-2SD												
SBWG-11	68:1	442000	326002	26.2	16882.0	17	360 (80x40)	F-60				
SBWG-11TN						68						
SBWG-11MT												
SBWG-11-1S	340:1			120.4	3670.0	85						
SBWG-11TN-1S						340						
SBWG-11MT-1S												
SBWG-11-1ST	P-68:1			26.2	16882.0	17						
	S-340:1			120.4	3670.0	85						
SBWG-11-1SD	1700:1			554.0	797.8	425						
SBWG-11TN-1SD						1700						
SBWG-11MT-1SD												
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						
SBWG-11-3W2B	9248:1			1071.2	412.6	2312						
Remark	● Ratio & Base specification to be changeable.											
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Worm Gear Actuators

Technical Data

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

SAMBO BUSINESS



❖ POWER PLANT Coal-fired electrical Power · Plant Combined Heat Power Plant · Hydroelectric Power Station Nuclear Power Plant · Hydro & Nuclear Power Plant · Wind Power Plant · ETC.

SAMBO specialize in producing actuators and related equipment for every part of the power generation industry.

We have a full range of actuators, all designed to meet the stringent requirements of the power generation industry to provide the levels of durability and reliability. We provide actuators for new projects and also provide complete customer support programs, including free replacement and maintenance. Our customer service is exceptional, always meeting our customers' requirements circumstances.

Actuators help control everything that happens in a power plant. SAMBO actuators are accurate, robust and efficient. All our actuators are designed to endure in all types of extreme (temperature, tremble, and dust) conditions. Backed by full customer service support, SAMBO provide the control, lower cost, low emissions and a safe environment.

❖ WATER RESOURCES Seawater Treatment Plant · Water Treatment Plant · Sewage Treatment Plant · ETC.

SAMBO serve the water industry worldwide, which have been developed and fine-tuned to meet the specific needs of our water company customers.

As a company specialize in water resources, we do our best to meet our customers' specific requirements. SAMBO valve actuators are widely recognized as being the most technically advanced, reliable, durable, waterproof, and user-friendly actuators in the valve business.

❖ OIL & GAS Natural Gas Plant · The Petrochemical Industry Refinery · LNG Plant · Plural form of Gas Tank · Oil Pipeline · ETC.

SAMBO specialize in producing actuators and related equipment for every part of the petro-chemical industry, including production, processing, distribution and storage.

With over 30 years' experience in serving the industry, we are the world's most recognized independent manufacturer of heavy duty valve actuators and our products control thousands of valve in petro-chemical plants across the world. Actuators help control almost everything that happens in a petro-chemical service, support resulting in precise control, lower costs, lower emissions and safe environment.

❖ GENERAL INDUSTRY Air Conditioning · Geared Traction Machine · Large Vessel · Industrial Automation field Paper Manufacturing · ETC.

At SAMBO, we are working behind the scenes to help move, control and protect products that our customers depend on.

As a trusted partner, our success in valve markets worldwide shows our continued strength in these various industries. We produce actuators and related equipment for shipbuilding industries and other general industrial companies. The SAMBO actuators designed to endure in all types of conditions.

All of our actuators are eligible for free inspection, maintenance, and replacement during the warranty period.

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

WARRANTY

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.

Purchaser shall give notice to SAMBO upon finding of any defect or assuming defect and, SAMBO has privilege to check the facts of the defect.

SAMBO sole obligation under this warranty shall be limited to the follow :

- (1) repair of the material or,
- (2) replacement of the parts and material or,
- (3) refund the purchase price or collect the defected products from the original purchaser.

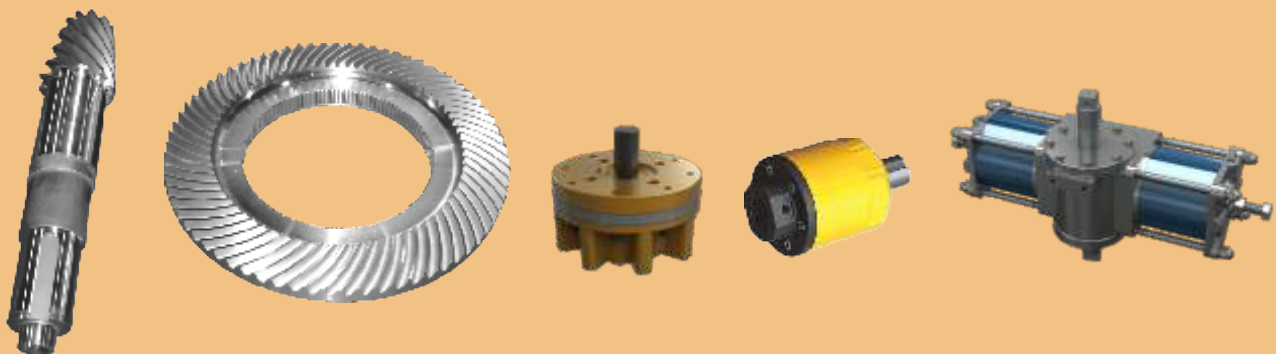
SAMBO is not responsible to claim for consequential damage, loss or expense of any kind arising out of the defect.

The scope and limitation of warrant can be changed through the agreement between SAMBO and purchaser.

This catalog is for reference only.

The data presented in this catalog is for general information only. Manufacturer is not responsible for acceptability of these products in relation to system requirements.

Also, contents of this catalog can be changed when improvements of product design and performance without notice .



EPILOGUE

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Many thanks for everyone's efforts to make it.

We hope this catalog will be helpful for international business.



Innovation & Change for Customer

Global Leader
SAMBO
 GEAR ACTUATORS



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High Quality Gear Actuators High Performance & Efficiency

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

Innovation & Change for Customer

SAMBO GEAR ACTUATORS



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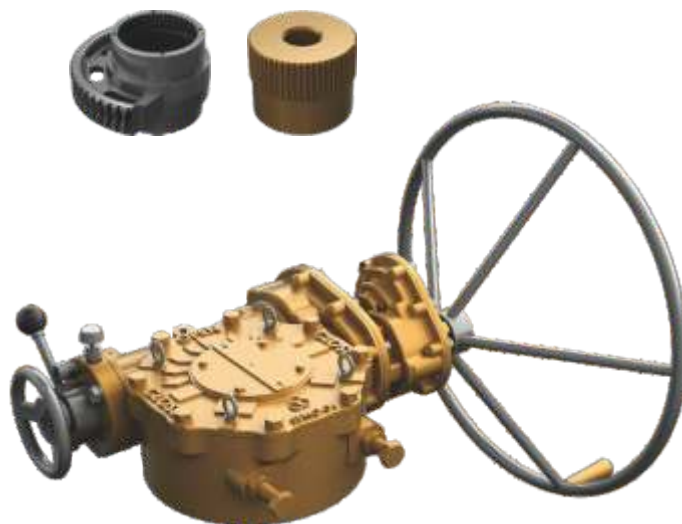
Worm Gear Actuators

❖ Feature

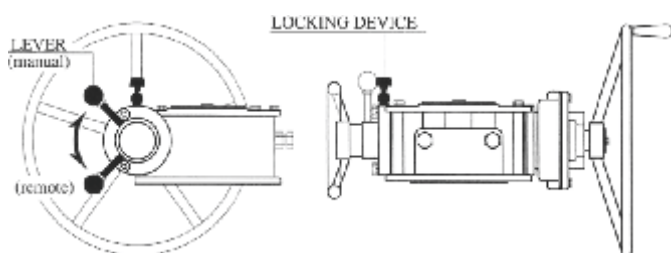
- All mounting bases conform to ISO 5210/1 standards.
- All castings are ductile iron, Class 65-45-12 excellent strength and impact resistance.
- Worm gear material is available in two option.
 - Ductile iron, Class 80-55-06
 - Aluminum bronze, B148-C95800
- Worm is 1045 heat treated Carbon steel.
- Removable splined bushing to permit accurate positioning between gear drive and valve stem.
- Options include hand wheels, chain wheels and etc.

Bushing Type

Splines permit accurate alignment of valve stem key.



Manual Override Operation



- Somewhere it should be noted that these units have been specifically developed for use with pneumatic and Hydraulic Actuators providing a positive mechanical means of manual operation.

1. Pull up on locking device knob.
2. Rotate lever to "Manual" position.
3. Handwheel can now be operated.
Note : pneumatic actuator is now fully disengaged.
4. The lever must be placed back in "Remote" position for pneumatic operation.

CAUTION

- Operate to check the position of manual and remote.
- When convert "manual" position, control the position of worm shaft and then operate to accord with worm gear.

❖ Selection Chart for Manual Operation

SIZE MODEL	MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE	MOUNTING OPTION & STANDARD	MAX. TORQUE CAPACITY		WEIGHT Kg
				N-m	Ft . lbf	
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-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	6650 : 1	320 (70X36)	F-60	253000	186600	1464

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