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# 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**

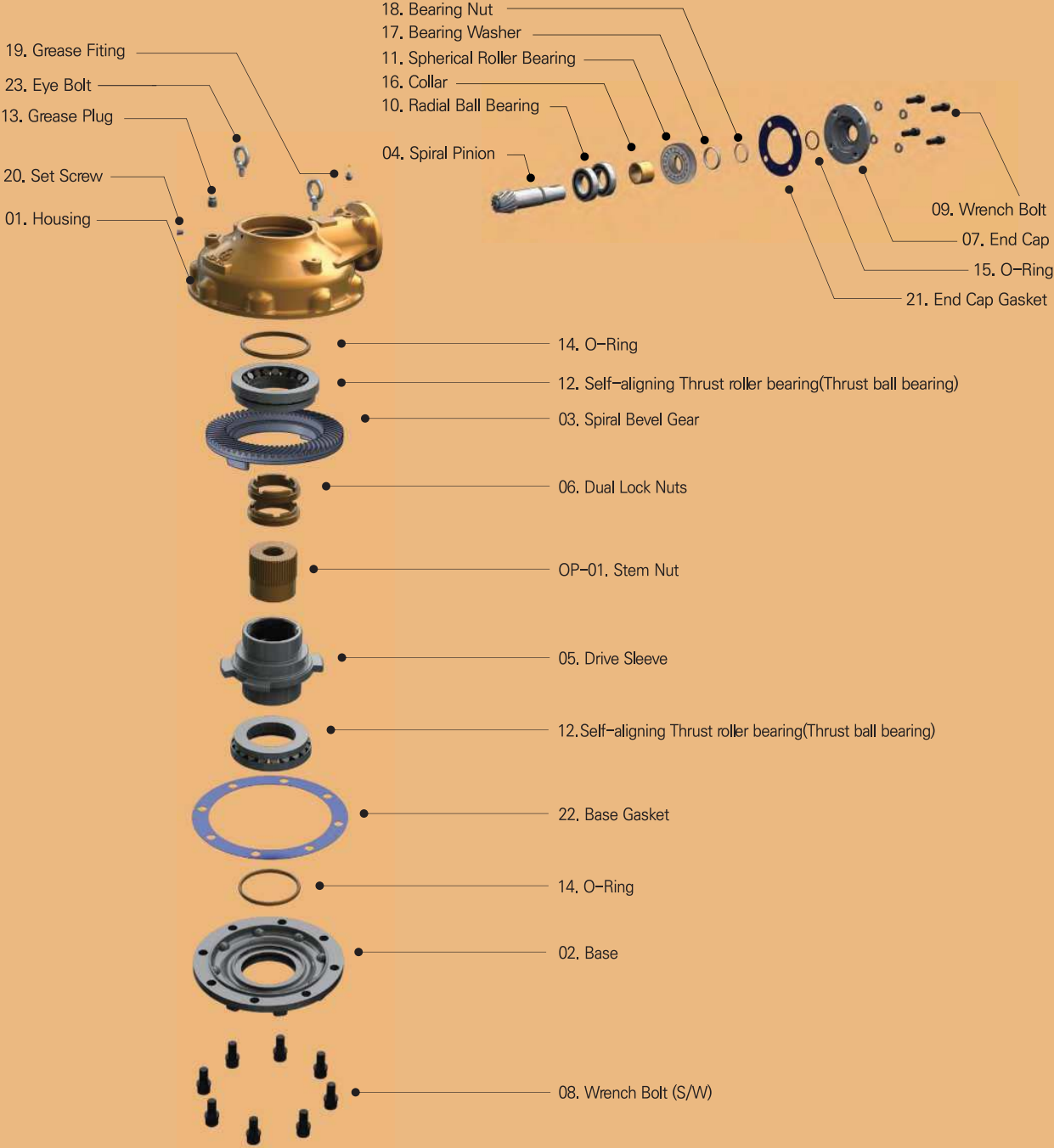
All external castings are Ductile Iron. Class 65-45-12, Tensile Strength of 65,000 psi.

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			STEM COVER NOTE.6
	OP-07.	Stem Cover	Steel Pipe	SGP	A53	
	OP-08.	Indicate Bolt	Steel + Galvanizing			
	OP-09.	HEX. Nut	Steel + Galvanizing			
	OP-10.	Indicator	Plastic			

## ❖ Material Detail : Option and Material Changes

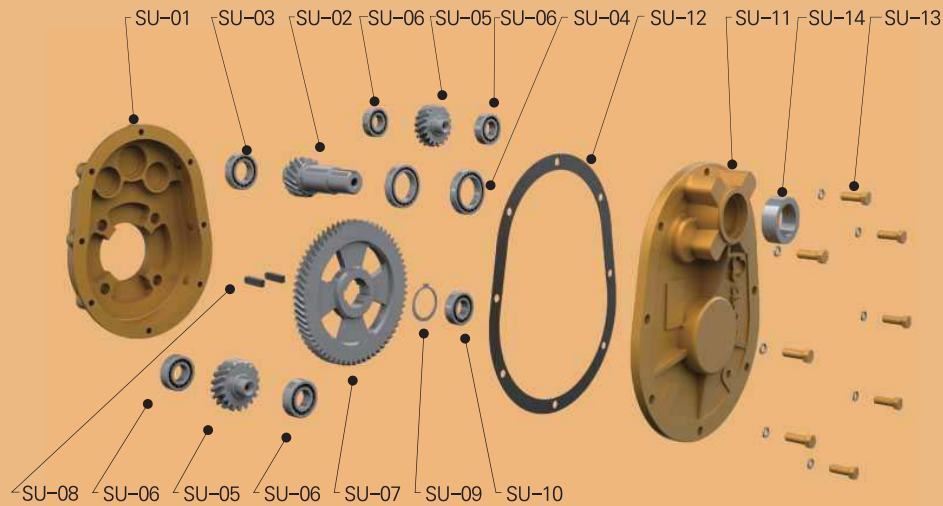
- All castings are Ductile Iron, FCD-450 (ASTM Class 65-45-12)
- In case of option for special request, it can be worked Nickel coating, high tensile stainless.
- Also, the material can be changed as ALBC3(Aluminium Bronze), steel(A576-1045), A439 Gr D2C (Austenitic ductile iron casting), etc.
- O-Ring 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 Steel				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 all 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			
15	O-Ring	Buna N	NBR			OP-07	Stem Cover	Steel Pipe	SGP	A53	OPTION STEM COVER
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									

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# PRODUCTS

## Spiral Bevel Gear Actuators

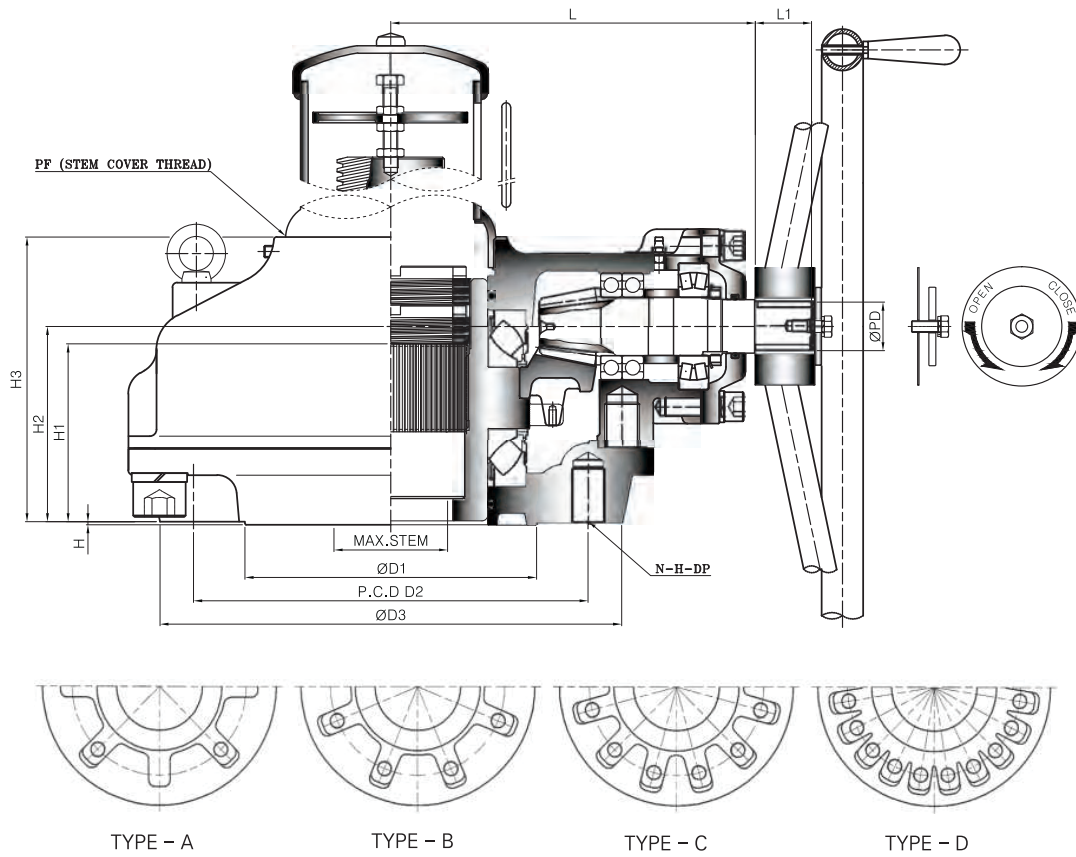


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# STANDARD TYPE-A

## Thrust & Torque Horizontal Input



### Dimension

UNIT : mm

DIM MODEL	TYPE	FLANGE	BASE PART				EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER					
			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	PF3"					
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				1000	PF8"					
SB-V6		F-40	300	406	8-M36-55	475		185	201	283	381						58	50	16X10		
SB-V7		C	F-48	370	483	12-M36-55		560	5	206	222				309	409	58	50	16X10	1000	PF8"
SB-V75			F-48	370	483	12-M36-55		560		221	248				340	441				1000	PF10"
SB-V8			F-48	370	483	12-M36-55		560		233	259				352	472				1000	PF10"
SB-V85	D	F-60	470	603	20-M36-55	700	5	248	278	373	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				1000	PF12"					

# Spiral Bevel Gear Actuators

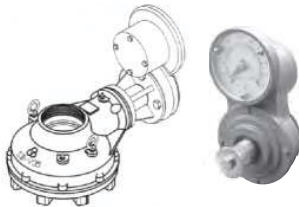
## ❖ Feature

- 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.



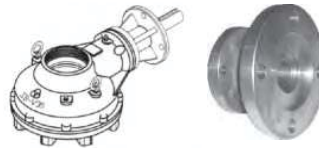
### DIAL INDICATOR

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



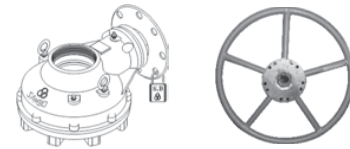
### M · O · V OPTION

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



### LOCKING DEVICE OPTION

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



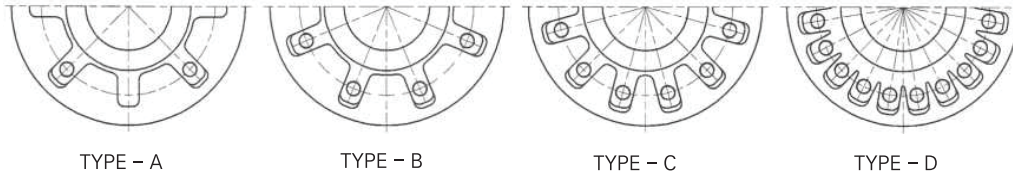
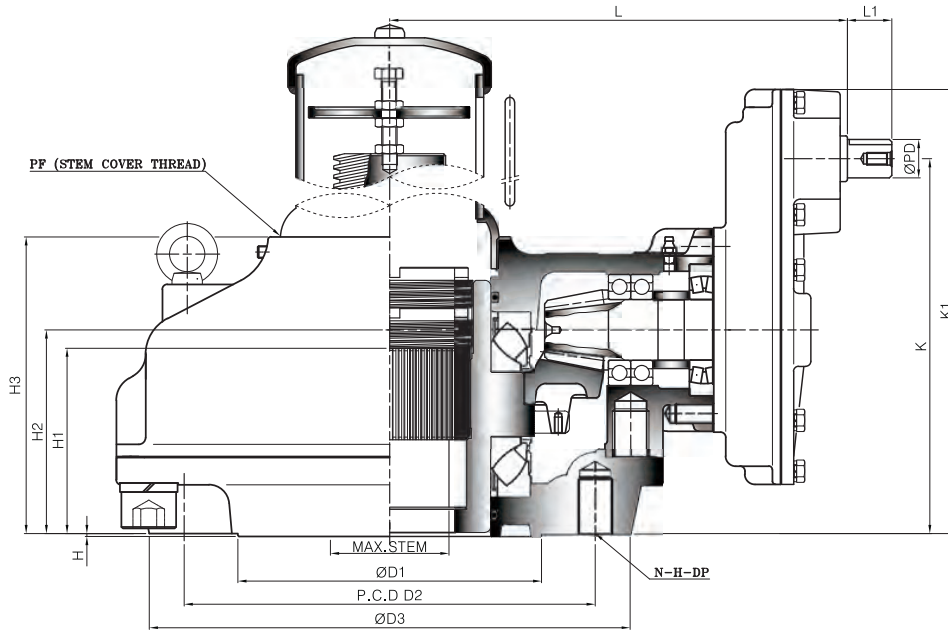
## ❖ Selection Chart for Manual Operation

MODEL	SIZE GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. 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

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# 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				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				800		PF8"		
SB-V55-1S		F-40	300	406	8-M36-55	475		171	192	261	337	399.5	407				900	PF8"			
SB-V6-1S		F-40	300	406	8-M36-55	475		185	201	283	370	439	472				44	38	12X8	800	PF8"
SB-V7-1S		C	F-48	370	483	12-M36-55		560	5	206	222	309	391				459	497	44	38	12X8
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	58	50	16X10	1000	PF12"			
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	58	50	16X10	1000	PF12"			
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.



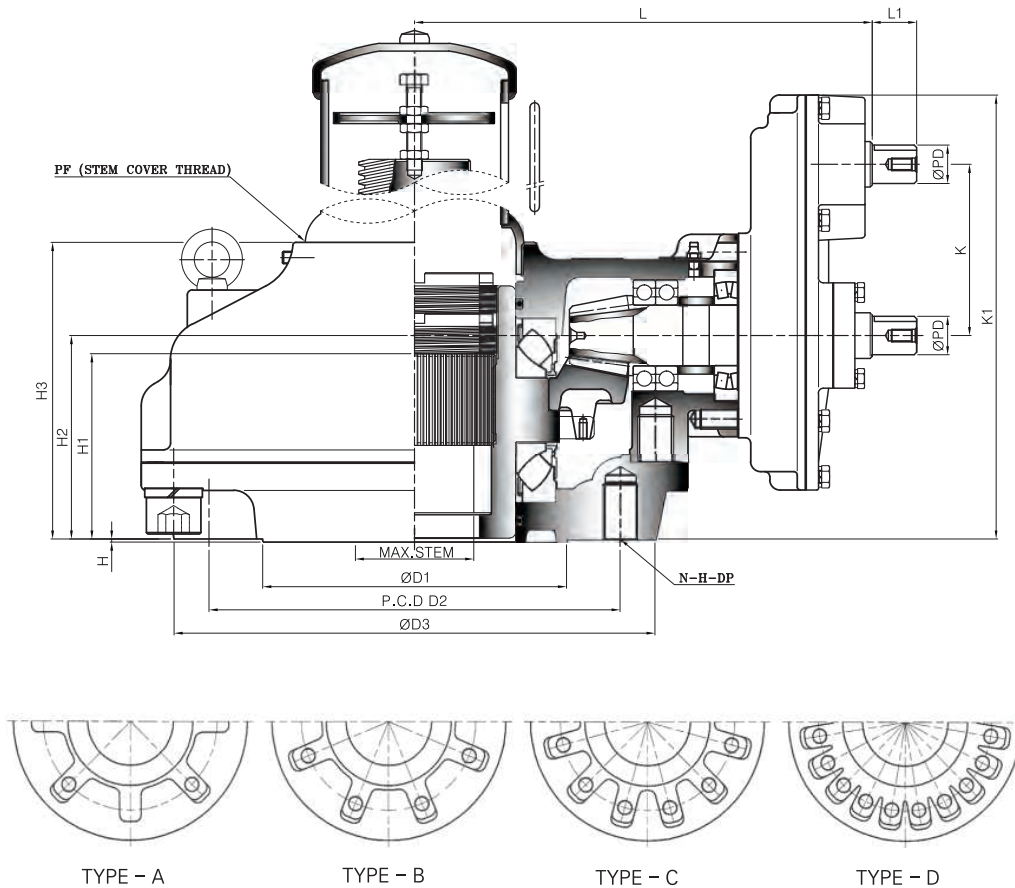
## ❖ Selection Chart for Manual Operation

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	Kg
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

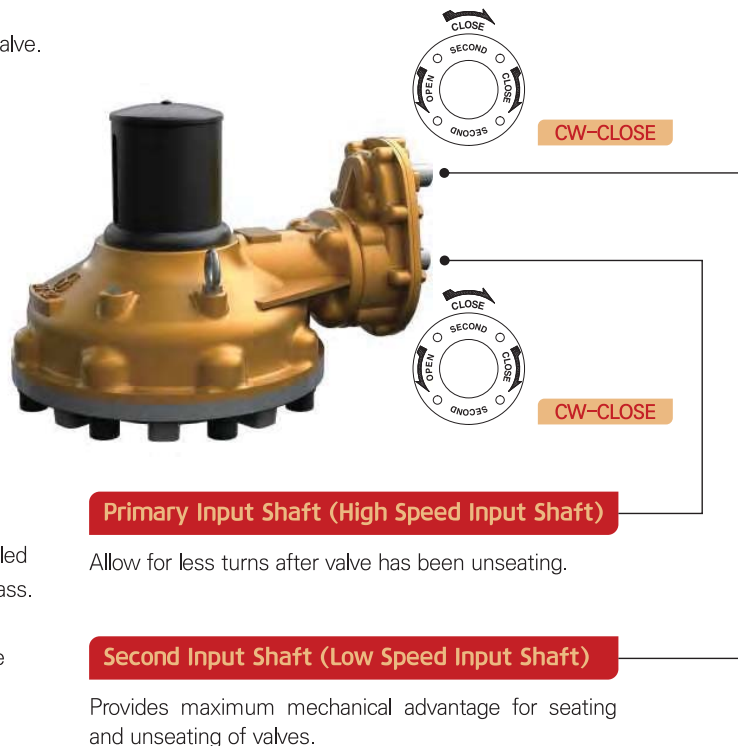
UNIT : mm

DIM MODEL	BASE PART						EXTERNAL PART						INPUT SHAFT PART			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-V0-1ST	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	B	F-30	230	298	8-M20-30	350	3	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	B	F-35	260	356	8-M30-45	415	3	161	177	245	145	384.5	387	34	32	10X8	710	PF6"
SB-V55-1ST		F-40	300	406	8-M36-55	475		171	192	261	145	399.5	407				800	PF8"
SB-V6-1ST	B	F-40	300	406	8-M36-55	475	3	185	201	283	169	439	472	44	38	12X8	800	PF8"
SB-V7-1ST		F-48	370	483	12-M36-55	560		206	222	309	169	459	497	44	38	12X8	900	PF8"
SB-V75-1ST	C	F-48	370	483	12-M36-55	560	5	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	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, stem covers are available.



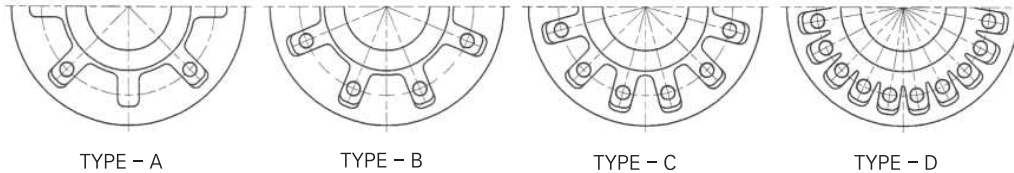
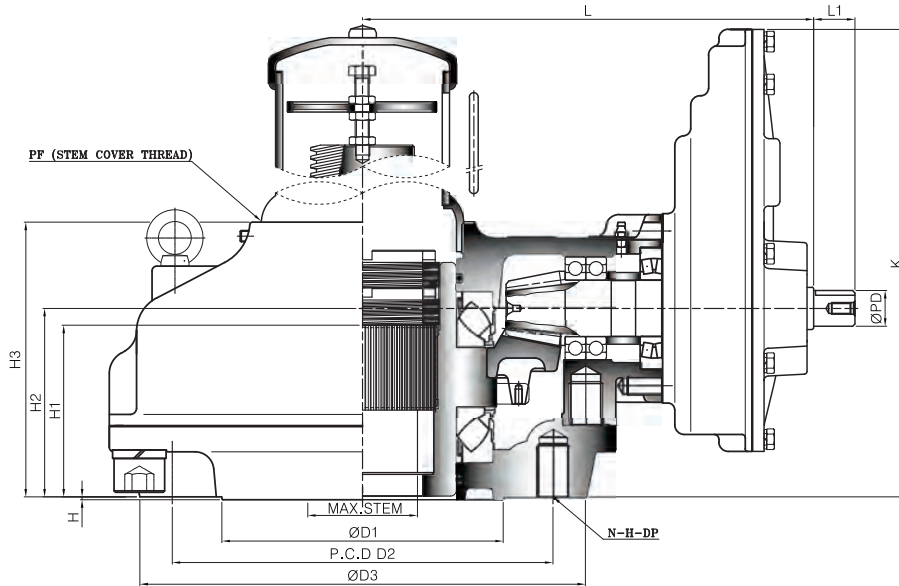
## ❖ Selection Chart for Manual Operation

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-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				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				800	PF8"
SB-V55-1SD		F-40	300	406	8-M36-55	475		171	192	261	441	446				900	PF8"
SB-V6-1SD	F-40	300	406	8-M36-55	475	185	201	283	498.5	498	44	38	12X8	800	PF8"		
SB-V7-1SD	C	F-48	370	483	12-M36-55	560	5	206	222	309	519.5	526	44	38	12X8	900	PF8"
SB-V75-1SD		F-48	370	483	12-M36-55	560		221	248	340	628	666	58	50	16X10	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	58	50	16X10	1000	PF12"
SB-V10-1SD		(F-60) F-80	650	800	20-M42-63	900		378	375	490	863	941	58	50	16X10	1000	PF12"

# Spiral Bevel Gear Actuators

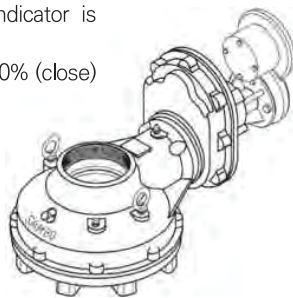
## ❖ Feature

- 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.



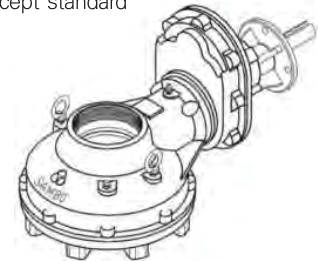
### DIAL INDICATOR

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

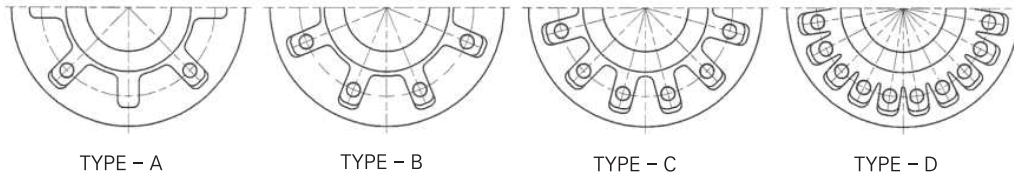
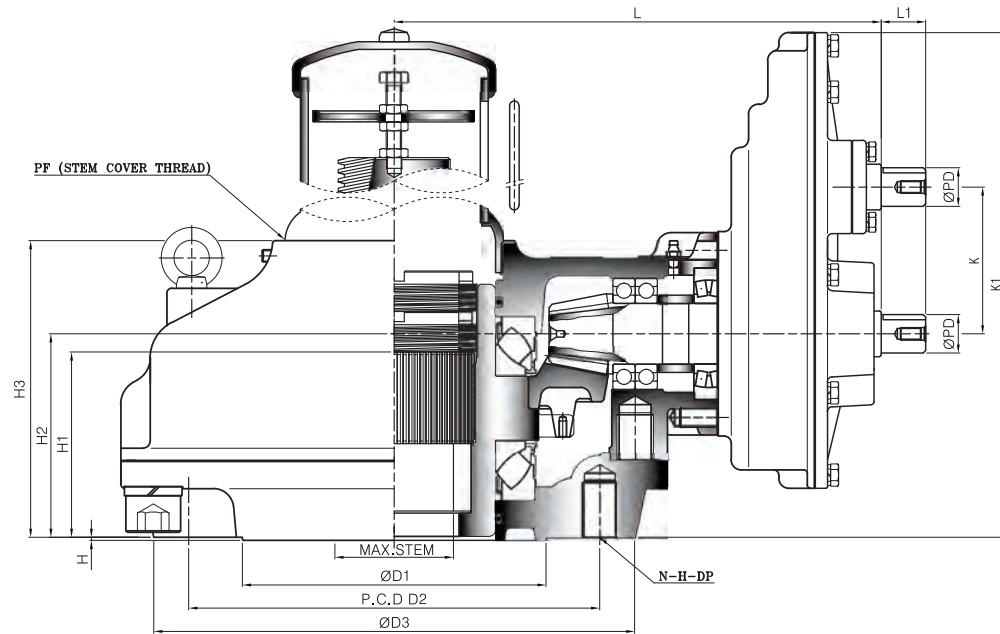
MODEL	SIZE MAX. GEAR RATIO (Changeable)	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0-1SD	13 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	21
SB-V1-1SD	14 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	27
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

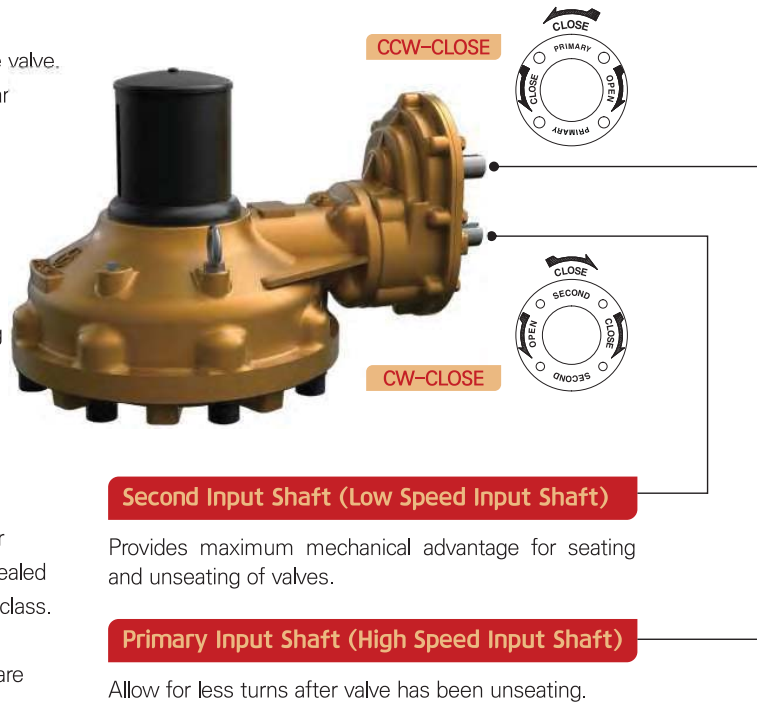
UNIT : mm

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				710	10X8	630	PF6"	
SB-V5-1SDT		F-35	260	356	8-M30-45	415		161	177	245	121	426	426						710	PF6"	
SB-V55-1SDT		F-40	300	406	8-M36-55	475		171	192	261	121	441	446				800	12X8	800	PF8"	
SB-V6-1SDT		F-40	300	406	8-M36-55	475		185	201	283	145	498.5	498						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
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				58	50	16X10	1000	PF12"
SB-V10-1SDT		(F-60) F-80	650	800	20-M42-63	900		378	375	490	238	863	941				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, stem covers are available.



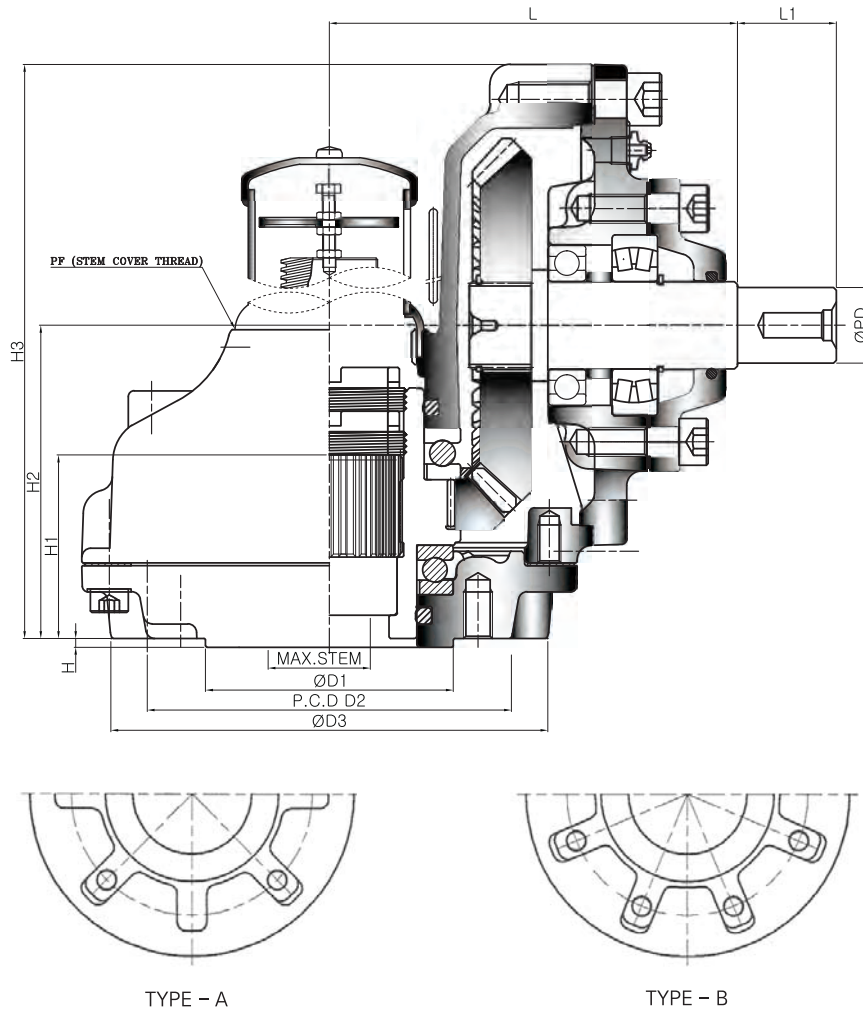
## ❖ Selection Chart for Manual Operation

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-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

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-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				400	PF3"	
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				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				1000	PF8"	
SB-MT-V6		F-40	300	406	8-M36-55	475		185	387	649	409						58

# Spiral Bevel Gear Actuators

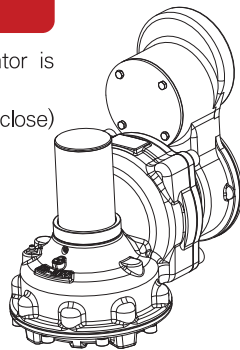
## ◆ Feature

- 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.



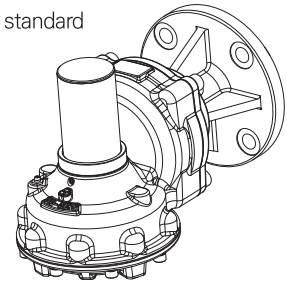
### DIAL INDICATOR

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.



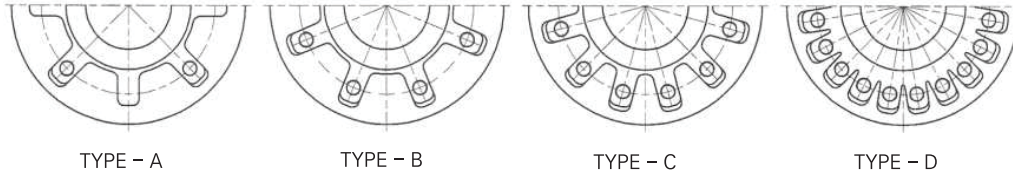
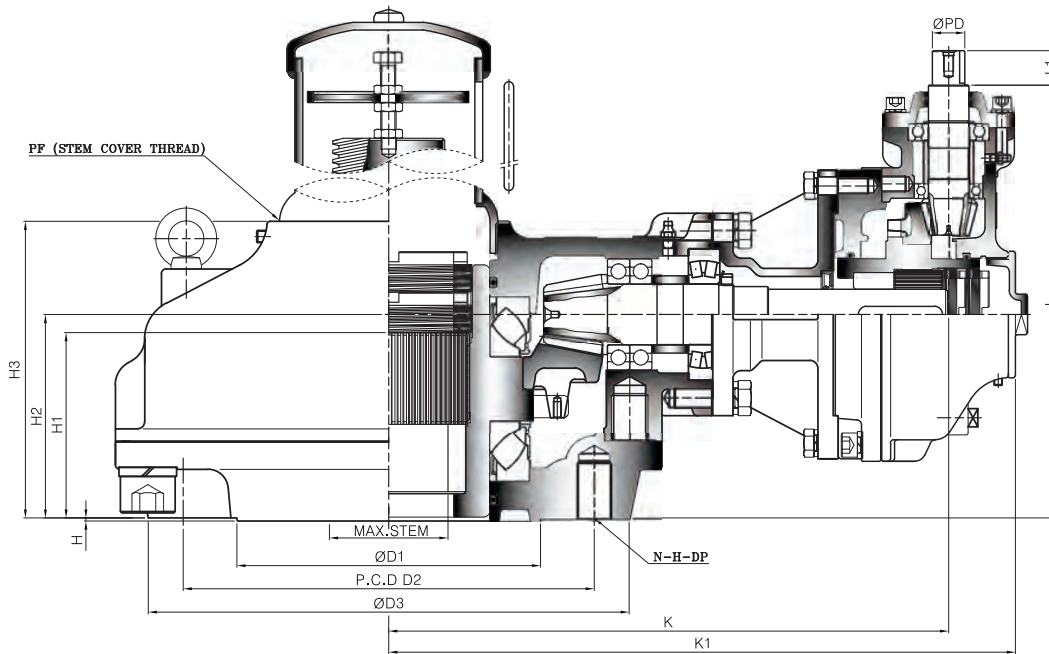
## ◆ Selection Chart for Manual Operation

MODEL	SIZE 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-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



### 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-V0-2B	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	B	F-40	300	406	8-M36-55	475	3	171	192	261	439	508.5	380	34	32	10X8	710	PF8"			
SB-V6-2B		F-40	300	406	8-M36-55	475		185	201	283	482	557.5	409				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

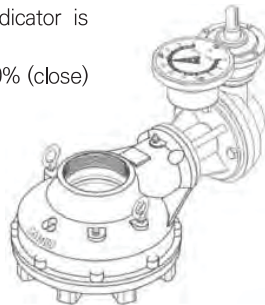
## ❖ Feature

- 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.



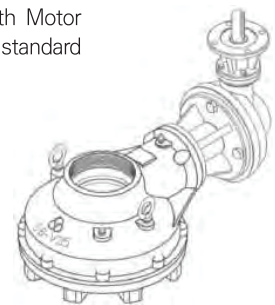
### DIAL INDICATOR

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.



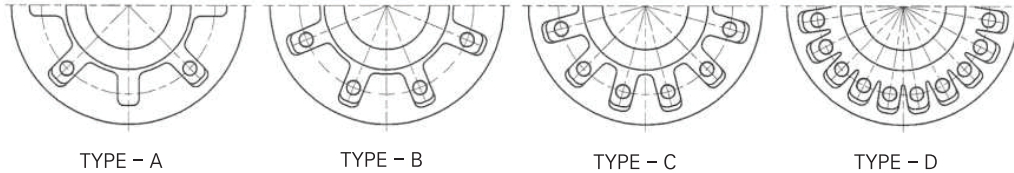
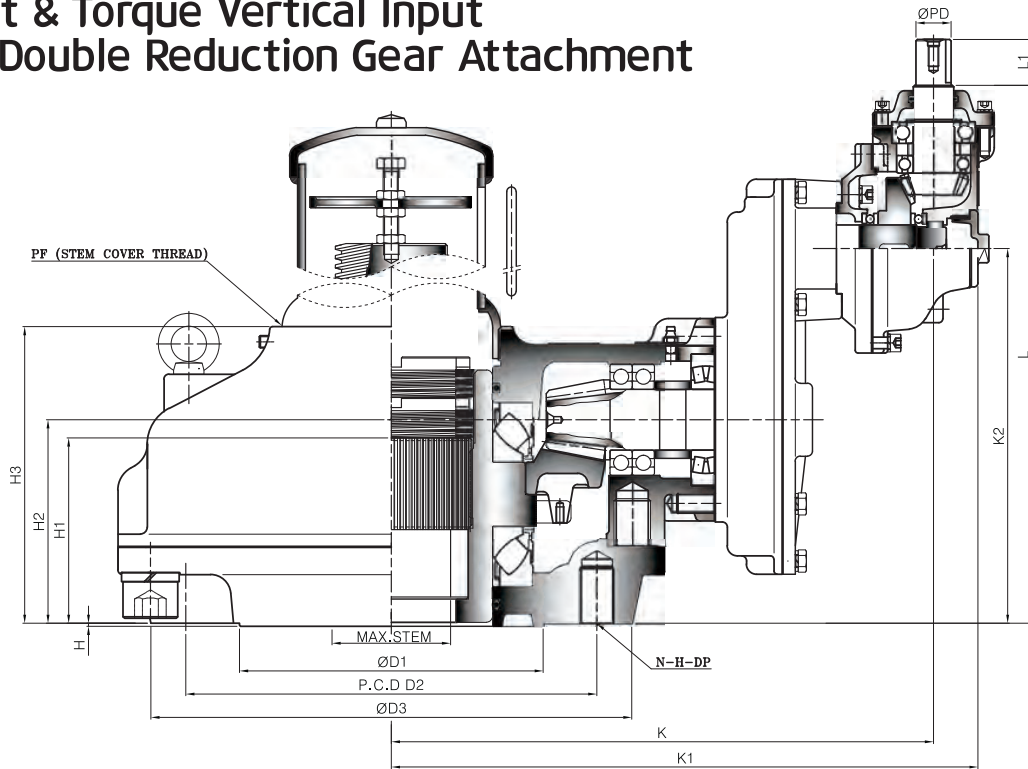
## ❖ Selection Chart for Manual Operation

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	Kg
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	B	F-30	230	298	8-M20-30	350	3	122	138	195	390	435	259	380	34	26	8X7	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	B	F-35	260	356	8-M30-45	415	3	161	177	245	446	491	322	443	34	26	8X7	300	PF6"			
SB-V55-1S2B		F-40	300	406	8-M36-55	475		171	192	261	466	511	337	458				400	PF8"			
SB-V6-1S2B	B	F-40	300	406	8-M36-55	475	3	185	201	283	539.5	589.5	370	501	34	26	8X7	400	PF8"			
SB-V7-1S2B	C	F-48	370	483	12-M36-55	560	5	206	222	309	567.5	617.5	391	522	34	26	8X7	400	PF8"			
SB-V75-1S2B		F-48	370	483	12-M36-55	560		221	248	340	722.5	787.5	478	666				34	32	10X8	400	PF10"
SB-V8-1S2B	C	F-48	370	483	12-M36-55	560	5	233	259	352	753.5	818.5	488	676	34	32	10X8	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				34	32	10X8	400	PF12"
SB-V10-1S2B		(F-60) F-80	650	800	20-M42-63	900		378	375	490	1053	1135.5	659	925				44	38	12X8	500	PF12"

# Spiral Bevel Gear Actuators

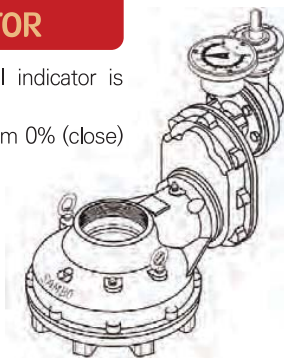
## ❖ Feature

- 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.



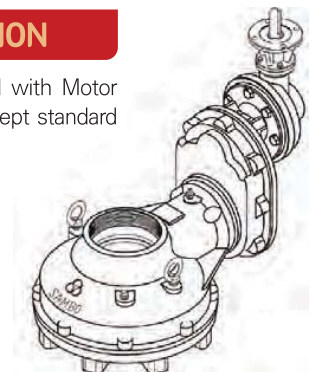
### DIAL INDICATOR

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

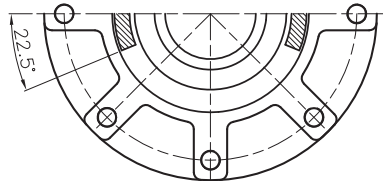
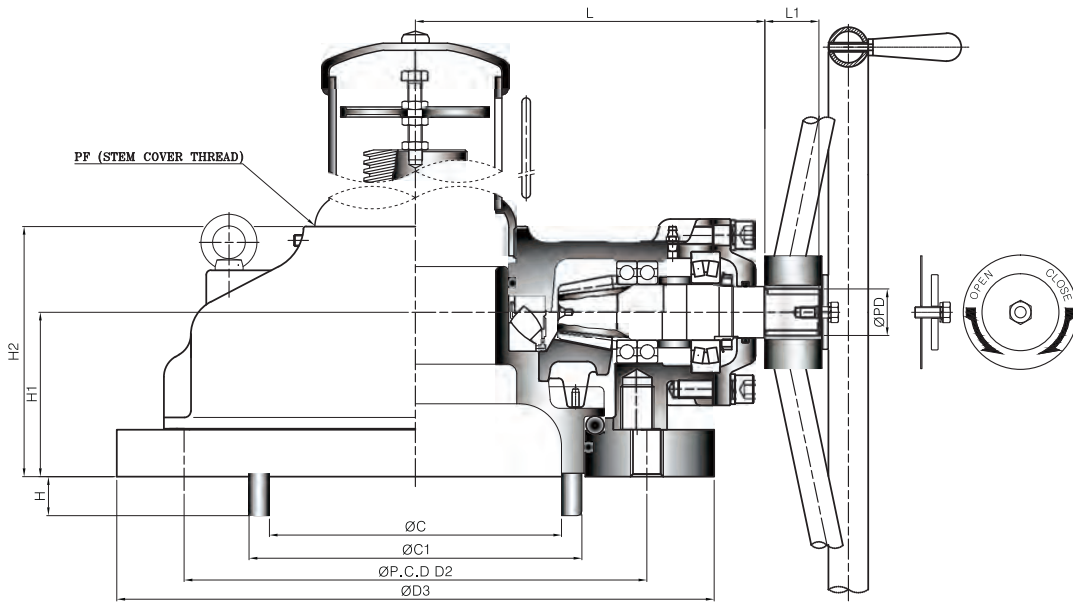
MODEL \ SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
		TW	KEY		KN	lbf	N-m	Ft. lbf	Kg
SB-V0-1S2B	13 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	25
SB-V1-1S2B	14 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	31
SB-V2-1S2B	20.26 : 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.

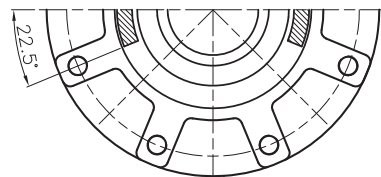


# STANDARD TYPE-C Torque Only Lug Drive

## Horizontal Input



TYPE - A



TYPE - B

## Dimension

UNIT : mm

DIM MODEL	TYPE	FLANGE	BASE PART			CLAMP PART			EXTERNAL PART			INPUT SHAFT PART			HAND WHEEL	STEM COVER	
			ØD2	P.C.D		ØD3	ØC	ØC1	H	H1	H2	L	L1	ØPD			KEY
				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	400	PF2-1/2"
		(F-20)	193,7														
SB-V0C		F-16	165	8-1/2"-13UNC		220	110	126	14	75	115	155	34	32	10X8	500	PF3"
		(F-20)	193,7														
SB-V1C		(F-20)	193,7	8-1/2"-13UNC		300	128	146	17	90	132	167	34	32	10X8	630	PF3-1/2"
		F-25	254														
SB-V2C		F-25	254	8-5/8"-11UNC		350	146	166	19	107	152	188	34	32	10X8	710	PF4"
		F-30	298	8-3/4"-10UNC													
SB-V3C	F-30	298	8-3/4"-10UNC		415	173	197	21	110	158	209	44	38	12X8	900	PF6"	
	F-35	356	8-1"-8UNC														
SB-V35C	F-35	356	8-1"-8UNC		475	220	247	23	122	184	266	44	38	12X8	900	PF6"	
	F-40	406	8-11/4"-7UNC														
SB-V4C	F-35	356	8-11/4"-7UNC		475	258	292	25	145	202	291	44	38	12X8	900	PF6"	
	F-40	406															
SB-V5C	F-35	356	8-11/4"-7UNC		480	266	306	27	172	242	334	44	38	12X8	900	PF6"	
	F-40	406															

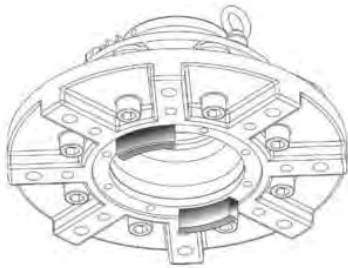
# Spiral Bevel Gear Actuators

## ❖ 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.

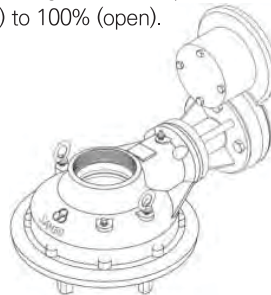


### MOUNTING BASE



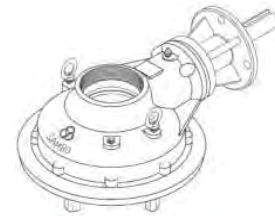
### DIAL INDICATOR

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.



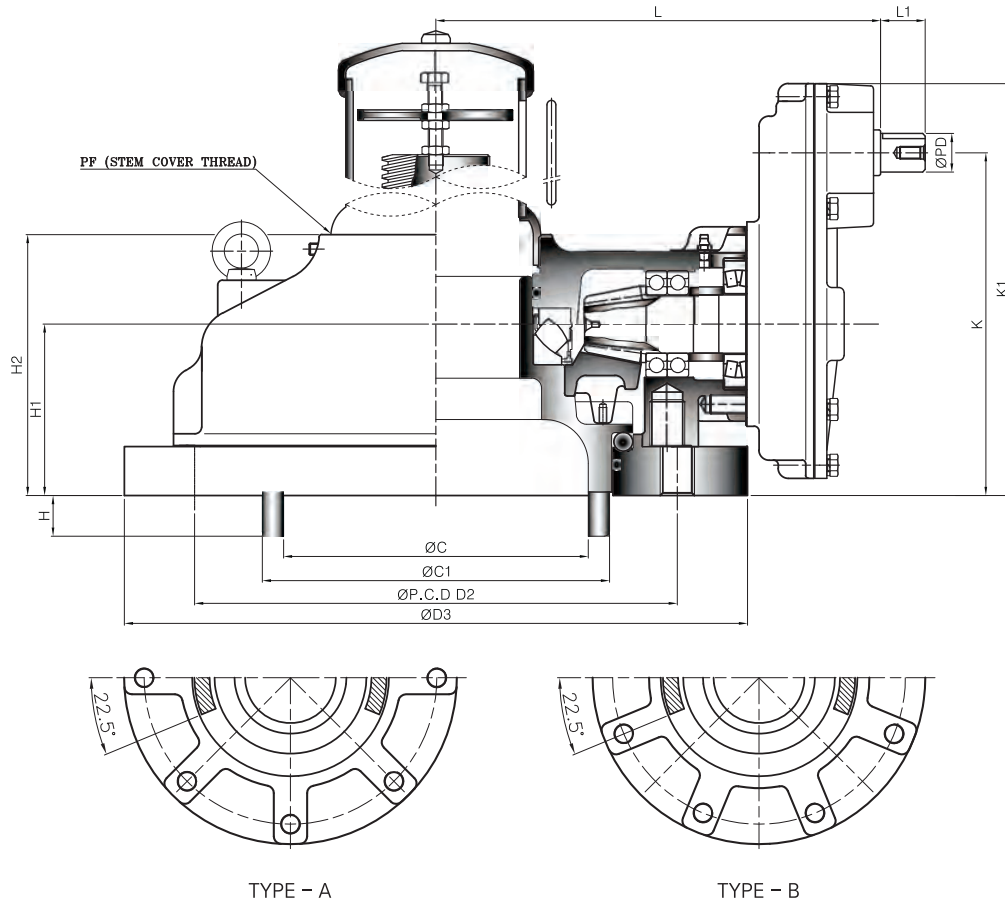
## ❖ Selection Chart for Manual Operation

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

MODEL	DIM	TYPE	FLANGE	BASE PART		CLAMP PART				EXTERNAL PART				INPUT SHAFT PART			HAND WHEEL	STEM COVER	
				ØD2	P.C.D	ØD3	ØC	ØC1	H	H1	H2	K	K1	L	L1	ØPD			KEY
					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	A	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	A	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	A	(F-20)	193.7	8-1/2"-13UNC	300	128	146	17	90	132	169	212	214	34	26	8X7	400	PF3-1/2"	
		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	500	PF4"	
		F-30	298	8-3/4"-10UNC															
SB-V3C-1S	B	F-30	298	8-3/4"-10UNC	415	173	197	21	110	158	204	251	257	34	32	10X8	630	PF6"	
		F-35	356	8-1"-8UNC															
SB-V35C-1S	B	F-35	356	8-1"-8UNC	475	220	247	23	122	184	249	305	333	34	32	10X8	710	PF6"	
		F-40	406	8-11/4"-7UNC															
SB-V4C-1S	B	F-35	356	8-11/4"-7UNC	475	258	292	25	145	202	260	317	358	34	32	10X8	710	PF6"	
		F-40	406																
SB-V5C-1S	B	F-35	356	8-11/4"-7UNC	480	266	306	27	172	242	293	350	401	34	32	10X8	710	PF6"	
		F-40	406																

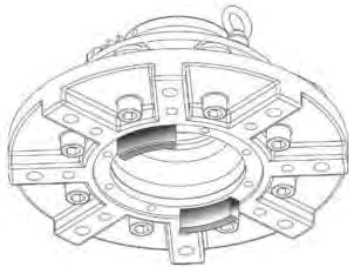
# Spiral Bevel Gear Actuators

## ❖ 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.

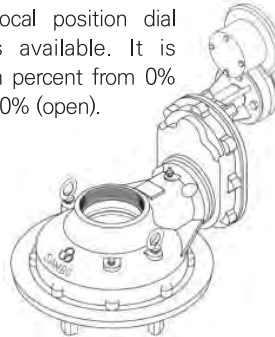


### MOUNTING BASE



### 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.



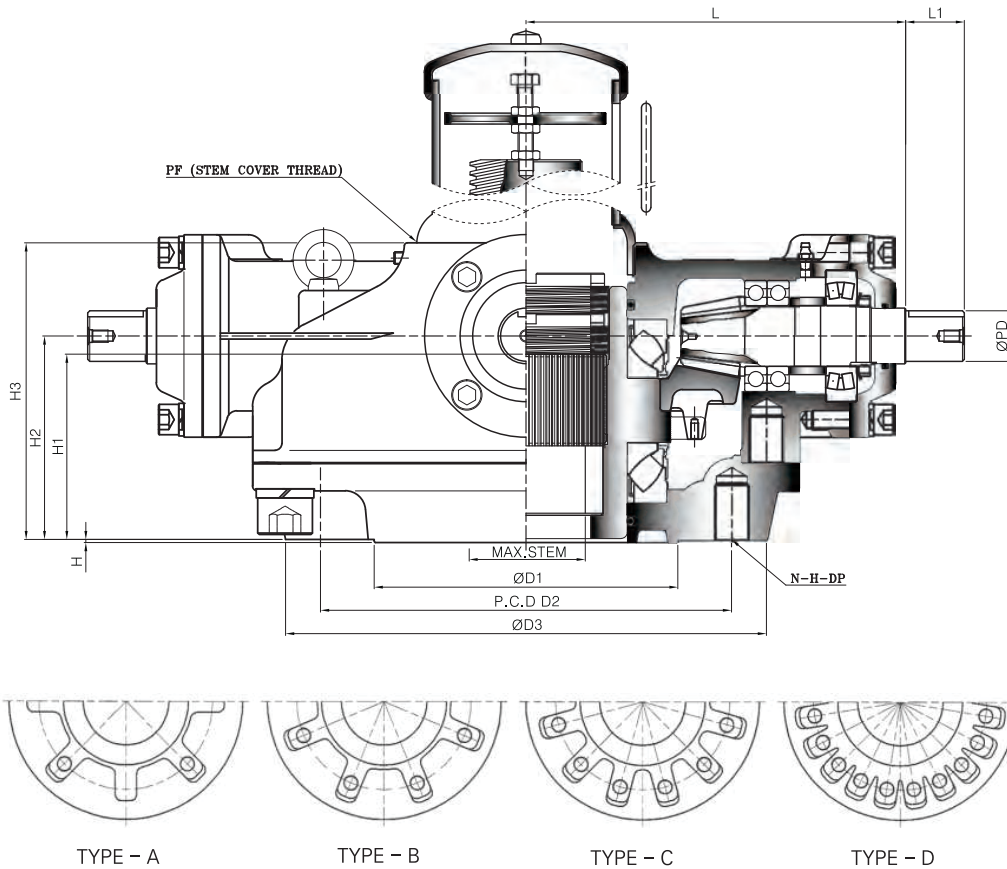
## ❖ Selection Chart for Manual Operation

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



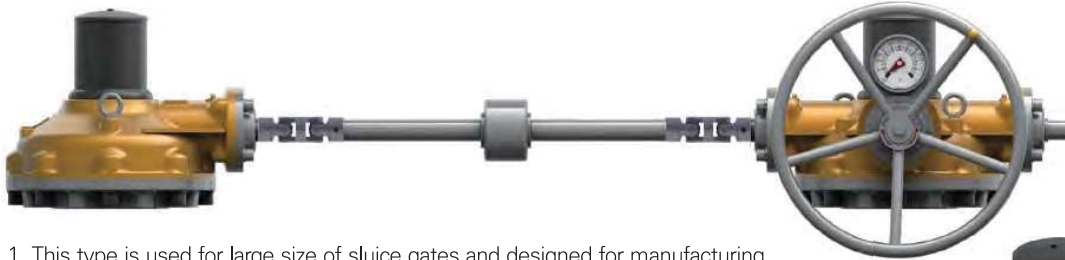
### Dimension

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				58	50	16X10	1000	PF8"
SB-V6W		F-40	300	406	8-M36-55	475		185	201	283	381								
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	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				1000	PF12"			
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.)

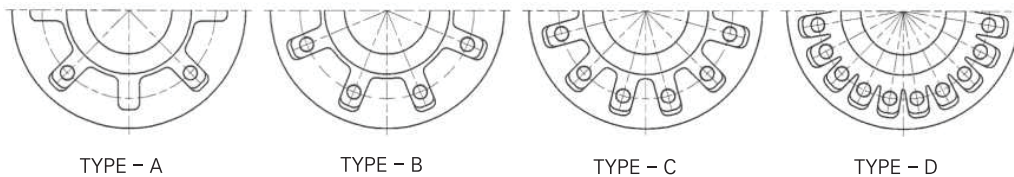
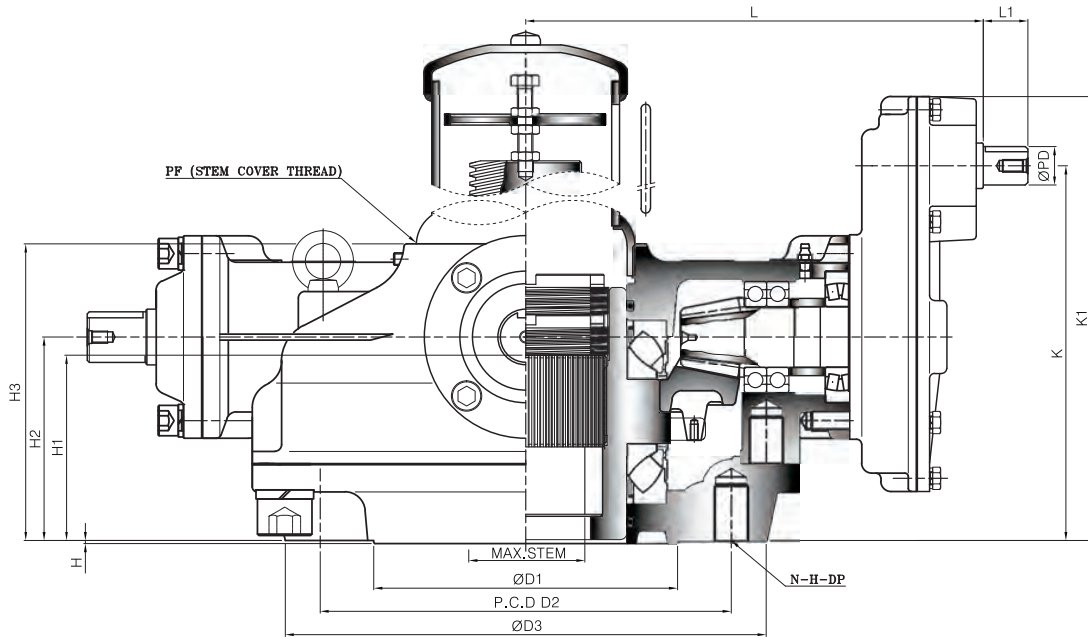
## ❖ Selection Chart for Manual Operation

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	Kg
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



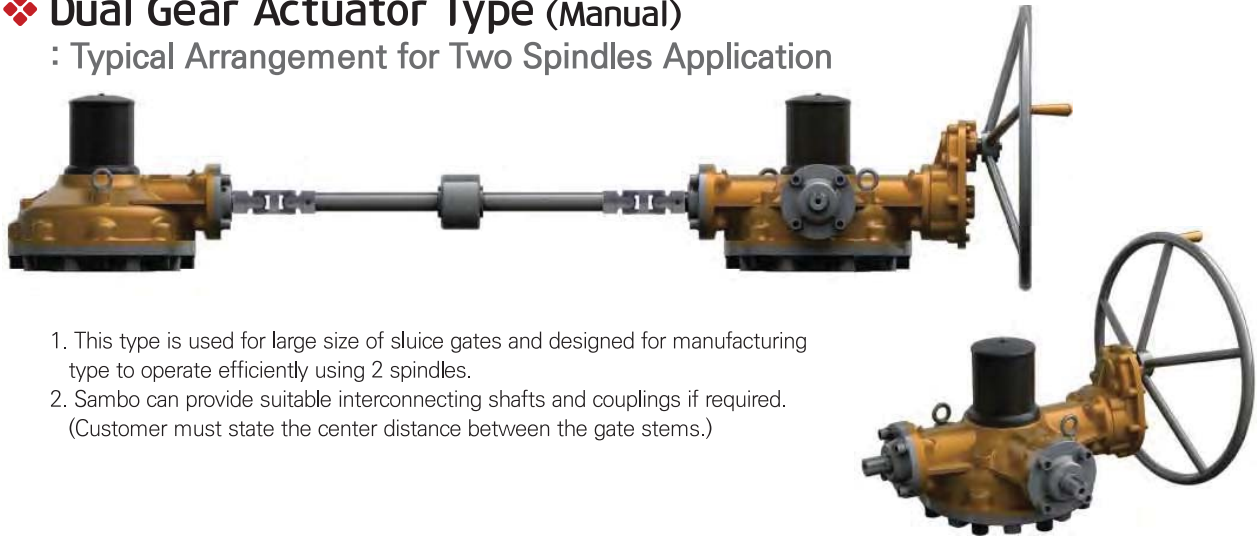
### Dimension

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				630	PF5"			
SB-V4W-1S		F-35	260	356	8-M30-45	410		133	150	209	271	328	358						34	32	10X8
SB-V5W-1S		F-35	260	356	8-M30-45	415		161	177	245	322	384.5	387				800	PF8"			
SB-V55W-1S		F-40	300	406	8-M36-55	475		171	192	261	337	399.5	407				900	PF8"			
SB-V6W-1S		F-40	300	406	8-M36-55	475		185	201	283	370	439	472				44	38	12X8	800	PF8"
SB-V7W-1S		C	F-48	370	483	12-M36-55		560	5	206	222	309	391				459	497	44	38	12X8
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	58	50	16X10	1000	PF12"			
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	58	50	16X10	1000	PF12"			

# 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

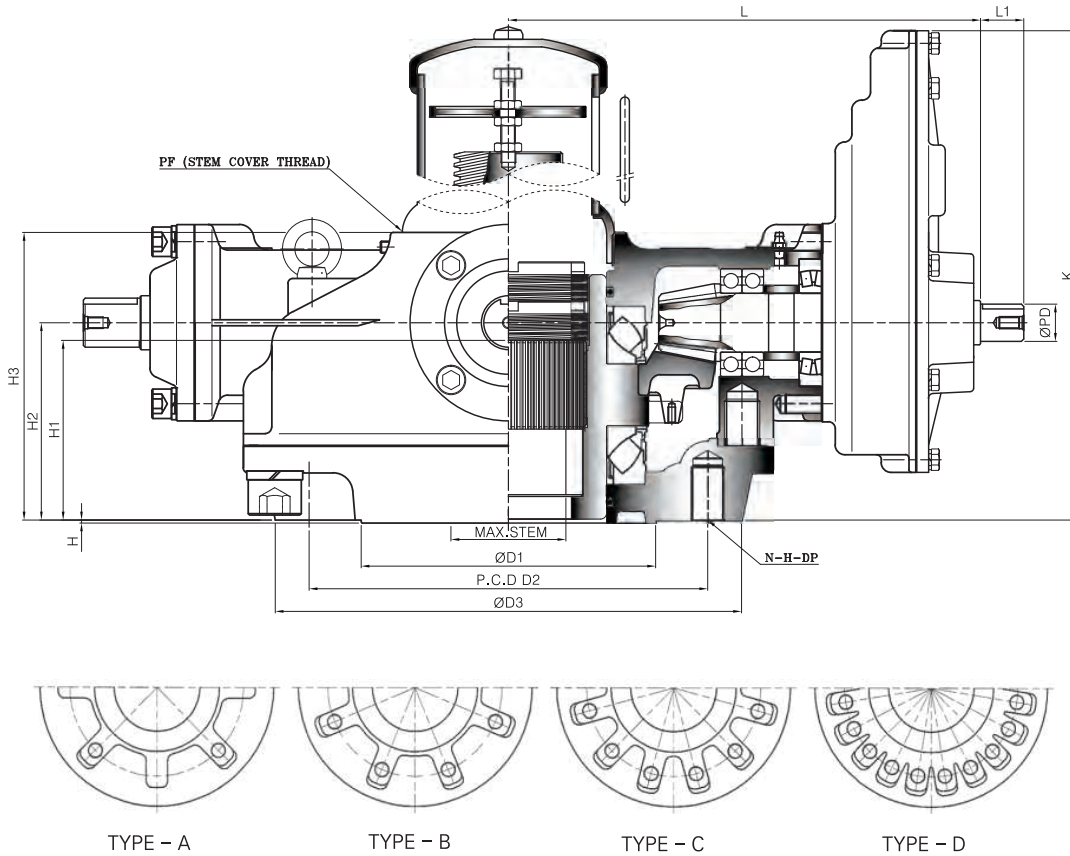
MODEL	SIZE GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
		TW	KEY		KN	lbf	N-m	Ft. lbf	
SB-V0W-1S	6.5 : 1	46	38 (12X8)	F-10, F-12, F-14	127	28550	600	442	23
SB-V1W-1S	7 : 1	55	45 (14X9)	F-14, F-16	141	31700	980	723	29
SB-V2W-1S	10.13 : 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

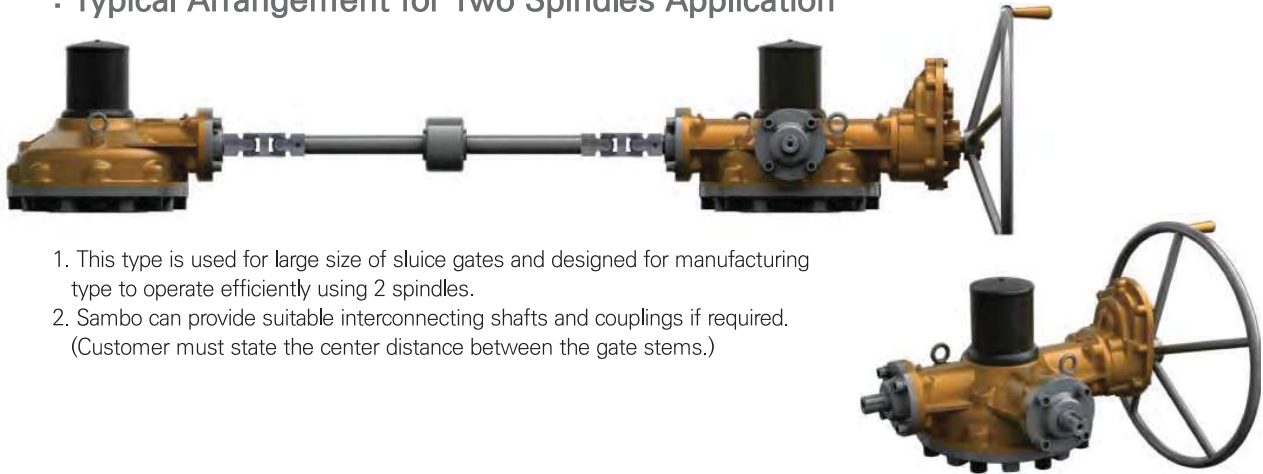
UNIT : mm

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				630	PF5"
SB-V4W-1SD		F-35	260	356	8-M30-45	410		133	150	209	345	394					710
SB-V5W-1SD		F-35	260	356	8-M30-45	415		161	177	245	426	426				800	
SB-V55W-1SD		F-40	300	406	8-M36-55	475		171	192	261	441	446					900
SB-V6W-1SD		F-40	300	406	8-M36-55	475		185	201	283	498.5	498				900	
SB-V7W-1SD		F-48	370	483	12-M36-55	560		206	222	309	519.5	526					900
SB-V75W-1SD	C	F-48	370	483	12-M36-55	560	5	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				1000	PF10"
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)

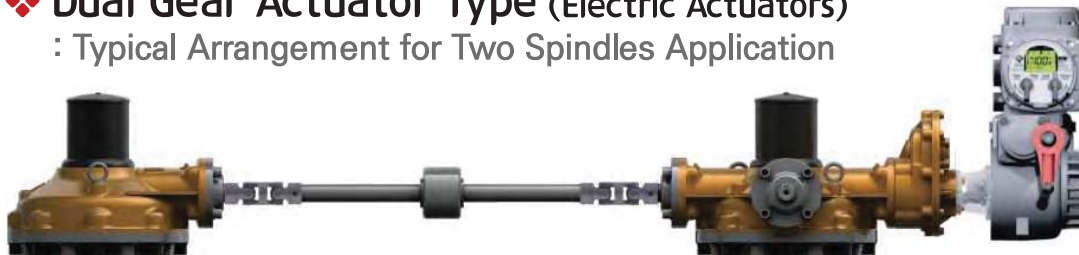
: Typical Arrangement for Two Spindles Application



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.)

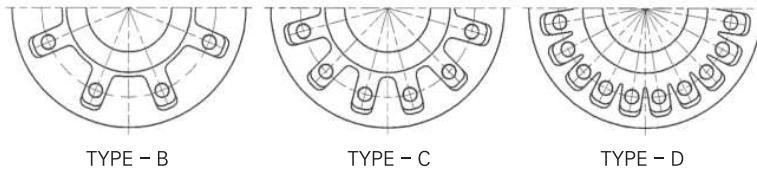
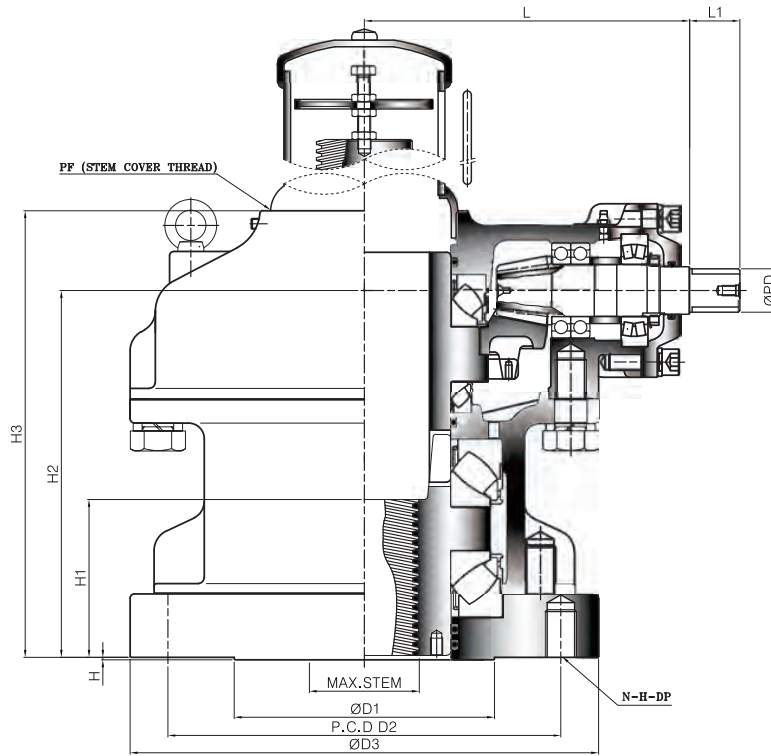
## ❖ Selection Chart for Manual Operation

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				800	PF5"			
SB-V4H			260	356	8-M30-45	415		155	342	401	291				900	PF6"			
SB-V5H			300	406	8-M36-55	475		172	376	444	313				900	PF6"			
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	370	483	12-M36-55	560		217	475	562	409				58	50	16X10	1000	PF8"
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	470	603	20-M36-55	700		269	612	706	525				58	50	16X10	1000	PF12"
SB-V9H		F-80	650	800	20-M42-63	900		281	636	739	591				58	50	16X10	1000	PF12"
SB-V10H		F-80	650	800	20-M42-63	900		305	701	816	664				58	50	16X10	1000	PF12"

# Spiral Bevel Gear Actuators

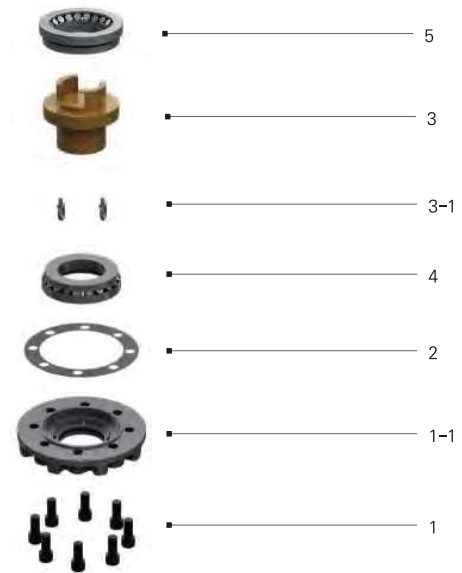


## Disassembly flow chart of thrust bush for processing of stem thread

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.



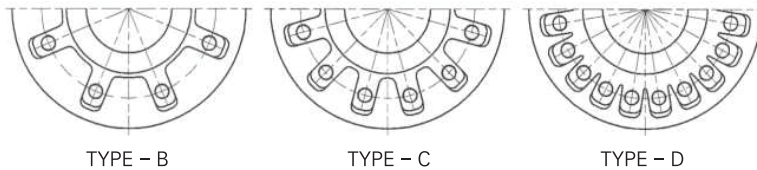
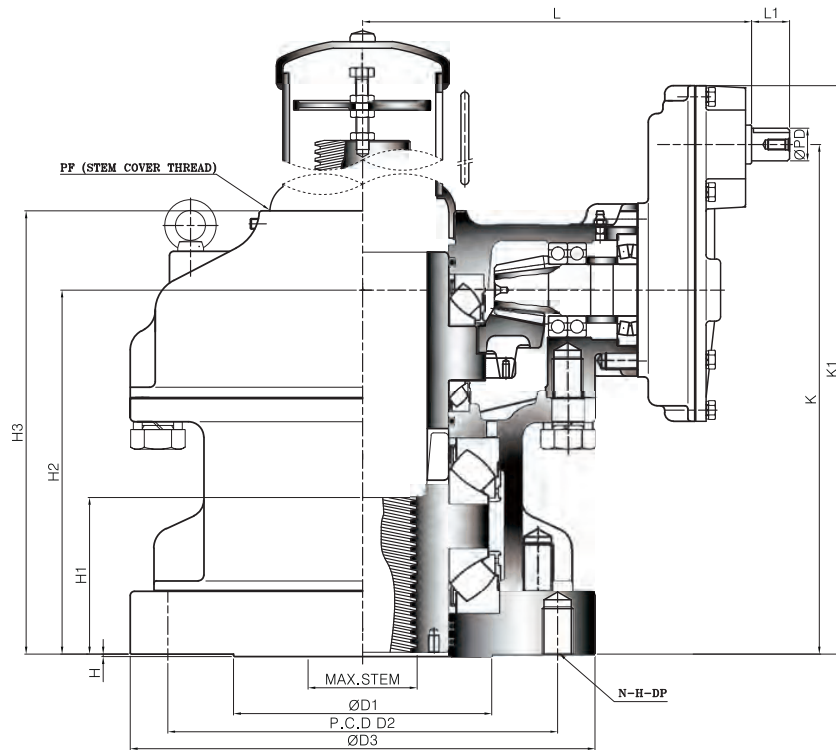
## ◆ Selection Chart for Manual Operation

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		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

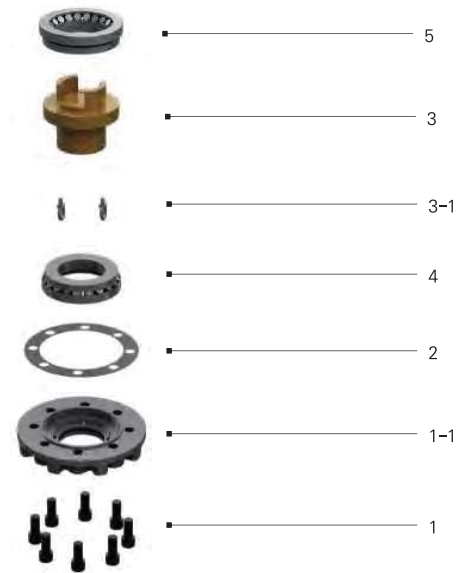
DIM MODEL	BASE PART						EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER				
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD			KEY			
				ØD2	N-H-DP																
SB-V2H-1S	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	322	370	236.5	34	26	8X7	400	PF3-1/2"			
SB-V3H-1S		F-30	230	298	8-M20-30	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				630	PF5"			
SB-V4H-1S			155	342	401	463		520	358	34	32	10X8	PF6"								
SB-V5H-1S			F-40	300	406	8-M36-55		475	172	376	444	521	584				387	710			
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		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		242						540	635	770	856	651	1000				PF10"				
SB-V85H-1S		F-60						269	612	706	842	928	695				PF12"				
SB-V9H-1S		F-80						650	800	20-M42-63	900	281	636				739	920	1036	821	1000
SB-V10H-1S		F-80										305	701				816	985	1101	886	58

# 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.

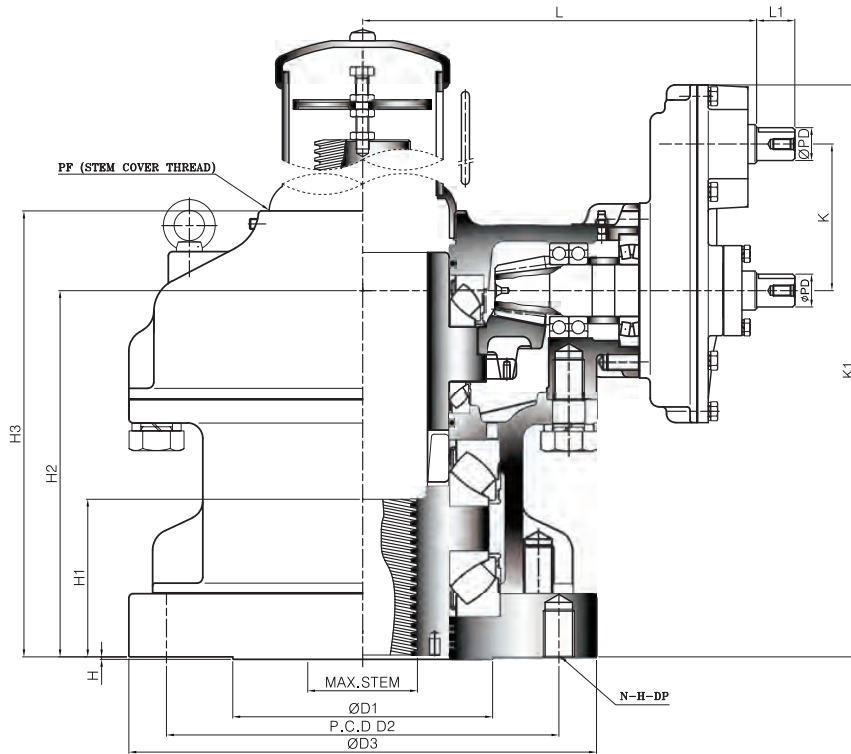
## Selection Chart for Manual Operation

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

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# STANDARD TYPE-E Twin Shaft

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



TYPE - B

TYPE - C

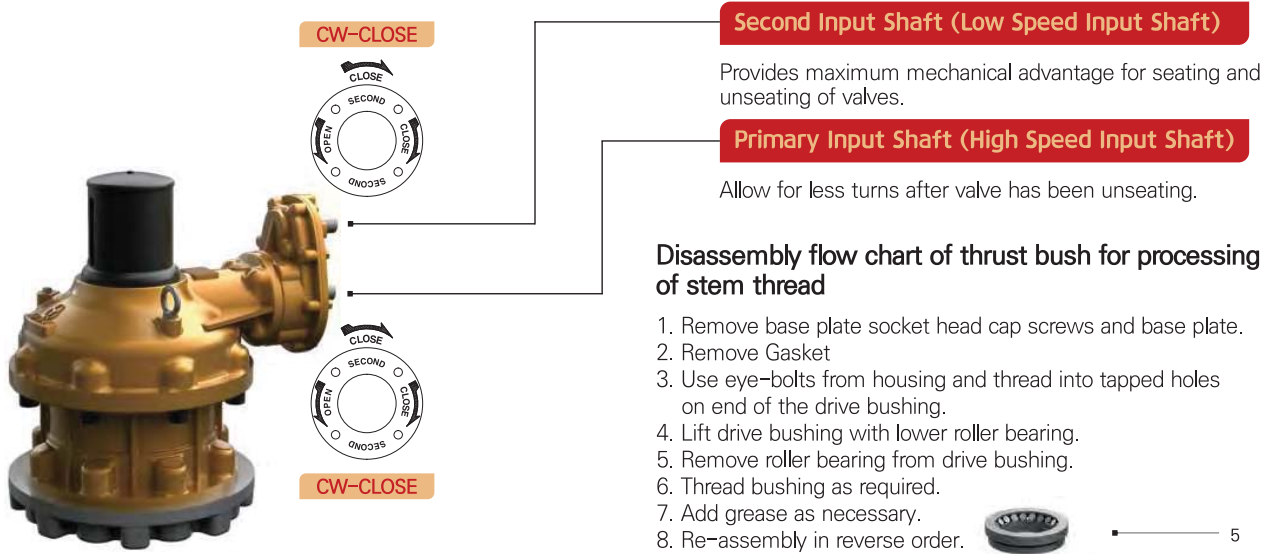
TYPE - D

## Dimension

UNIT : mm

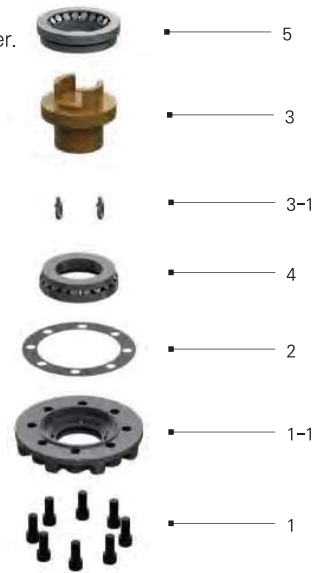
DIM MODEL	BASE PART						EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER					
	TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD			KEY				
				ØD2	N-H-DP																	
SB-V2H-1ST	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	93	370	236.5	34	26	8X7	400	PF3-1/2"				
SB-V3H-1ST		F-30	230	298	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	630	PF5"
SB-V4H-1ST			155	342	401	520		358	710	PF6"												
SB-V5H-1ST			F-40	300	406	8-M36-55		475	172	376			444				145				584	387
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		217	475	562	713	497		900	PF8"													
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				1000					
SB-V85H-1ST		F-60	470	603	20-M36-55	700		269	612	706		928	695				1000					
SB-V9H-1ST		F-80	650	800	20-M42-63	900		281	636	739		284	1036				821		58	50	16X10	1000
SB-V10H-1ST		F-80						305	701	816			1101				886					

# 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

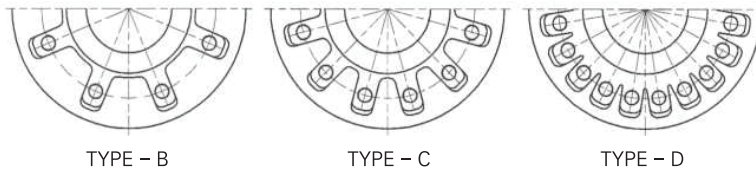
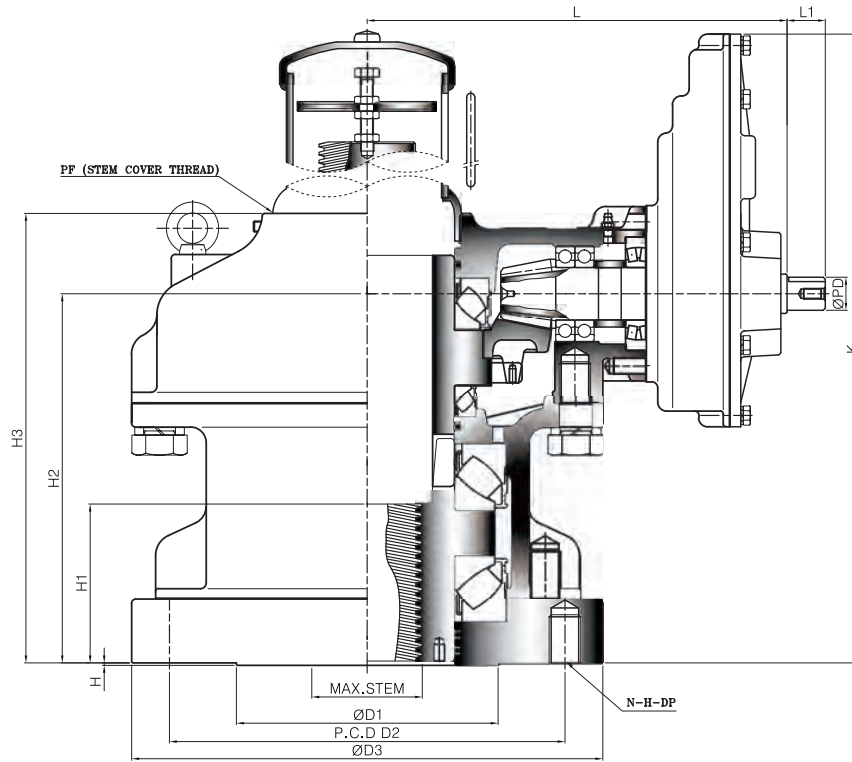
SIZE	GEAR RATIO		MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
	PRIMARY	SECOND	TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2H-1ST	4 : 1	10,13 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	70
SB-V3H-1ST	5 : 1	12,66 : 1	80	70 (20X12)	F-25, F-30	1710	384400	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

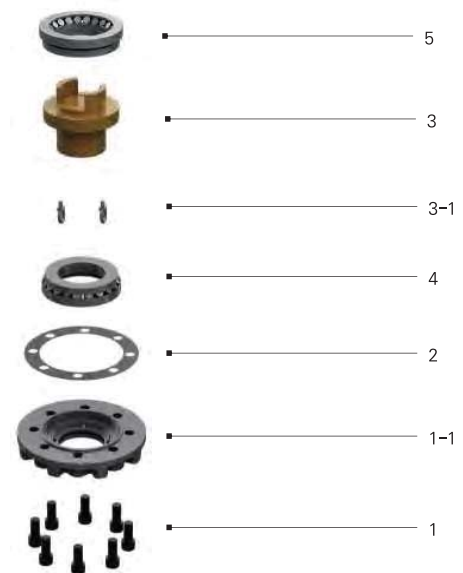
MODEL	DIM	BASE PART						EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	L	L1	ØPD			KEY
					ØD2	N-H-DP												
SB-V2H-1SD	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	373	260.5	34	26	8X7	400	PF3-1/2"	
SB-V3H-1SD		F-30	230	298	8-M20-30	350		118	263	310	407	280.5				500	PF4"	
SB-V35H-1SD		F-35	260	356	8-M30-45	415		143	316	373	511	369				630	PF5"	
SB-V4H-1SD			155	342	401	537		394	34	32	10X8	PF6"						
SB-V5H-1SD			172	376	444	625		426	710	PF6"								
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			217	475	562	772.5		526	900	PF8"								
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	470	603	20-M36-55		700	269	612	706	992	741	58	50	16X10	1000	
SB-V9H-1SD		F-80		650	800	20-M42-63		900	281	636	739	1124	876	58	50	16X10	1000	PF12"
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.

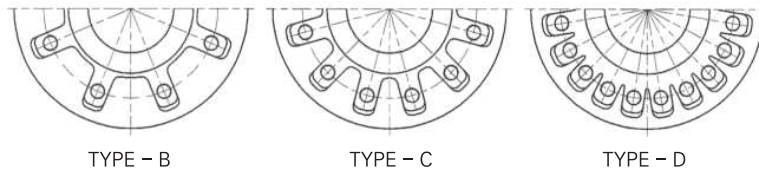
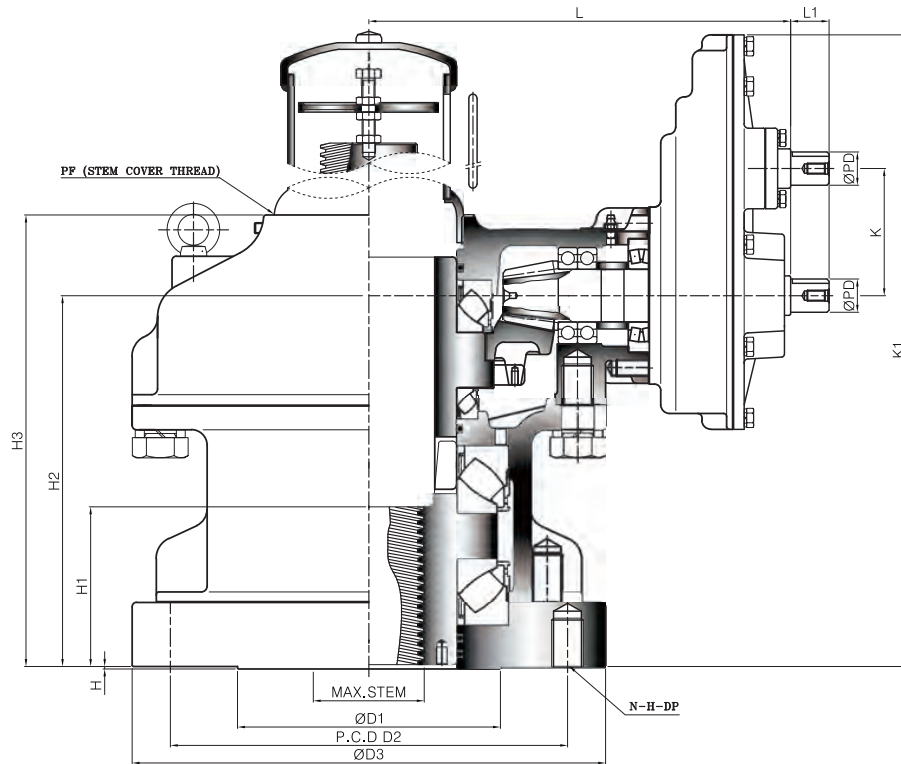
## ◆ Selection Chart for Manual Operation

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

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 Double Reduction Gear Attachment

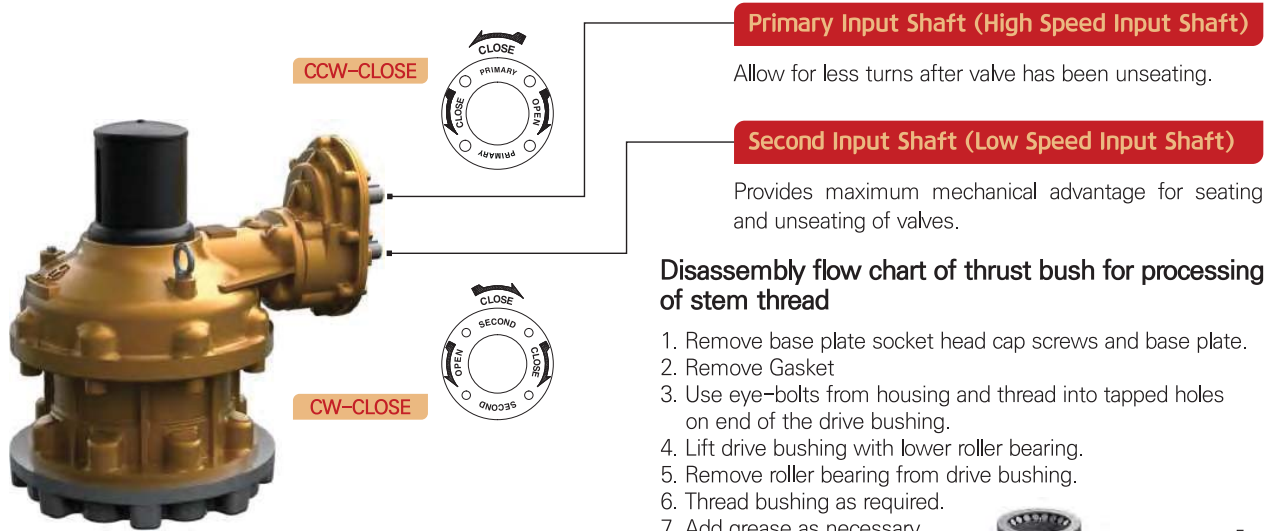


## Dimension

UNIT : mm

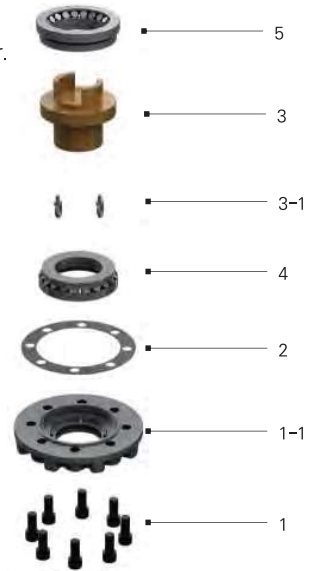
MODEL	DIM	BASE PART						EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER				
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1			ØPD	KEY		
					ØD2	N-H-DP															
SB-V2H-1SDT	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	69	373	260.5	34	26	8X7	400	PF3-1/2"			
SB-V3H-1SDT		F-30	230	298	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		511	369				630	PF5"			
SB-V4H-1SDT		F-40	300	406	8-M36-55	475		155	342	401		537	394				34	32	10X8	710	PF6"
SB-V5H-1SDT		F-48	370	483	12-M36-55	560		172	376	444		625	426				710	PF6"			
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		726.5	498				44	38	12X8	800	PF8"
SB-V7H-1SDT		F-48	370	483	12-M36-55	560		217	475	562		772.5	526				900	PF8"			
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				1000		PF10"		
SB-V85H-1SDT		F-60	470	603	20-M36-55	700		269	612	706		992	741				1000	PF12"			
SB-V9H-1SDT		F-80	650	800	20-M42-63	900		281	636	739		1124	876				1000	PF12"			
SB-V10H-1SDT		F-80	650	800	20-M42-63	900		305	701	816		1189	941				1000	PF12"			

# 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.

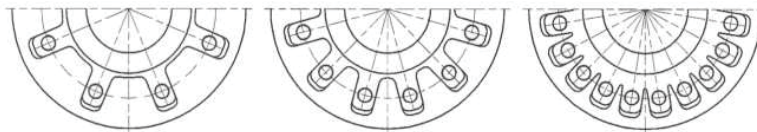
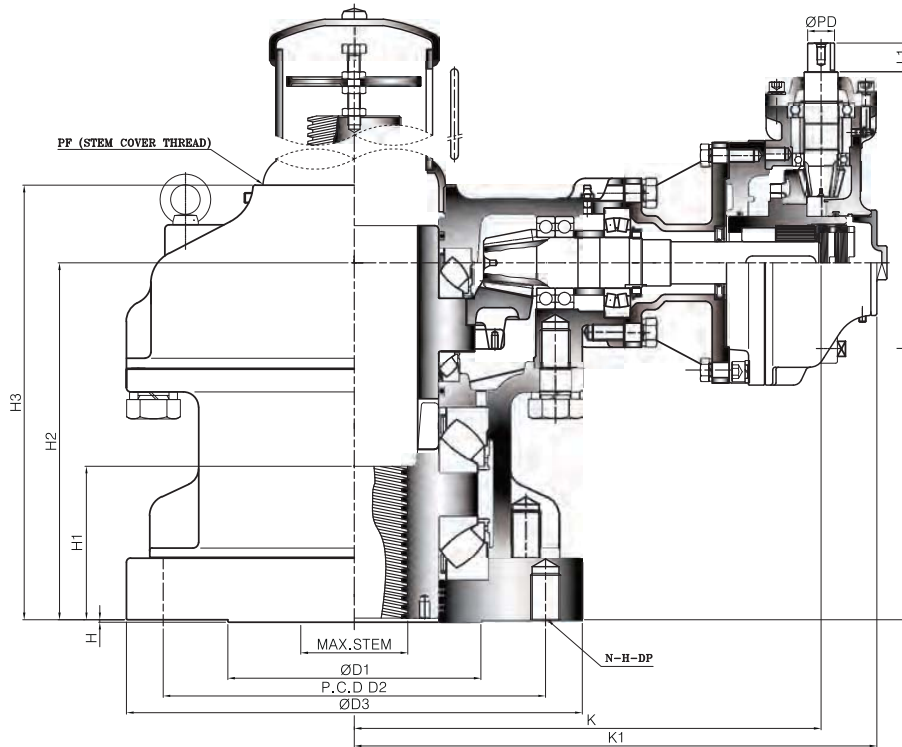
## Selection Chart for Manual Operation

MODEL	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-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



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-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				400	PF5"
SB-V4H-2B		F-35	260	356	8-M30-45	415		155	342	401	457	521	509				500	PF6"
SB-V5H-2B		F-40	300	406	8-M36-55	475		172	376	444	419	488.5	564				630	PF6"
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	370	483	12-M36-55	560		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	PF12"
SB-V85H-2B		F-60	470	603	20-M36-55	700		269	612	706	654	730	903					
SB-V9H-2B		F-80	650	800	20-M42-63	900		281	636	739	749	833	970					
SB-V10H-2B		F-80	650	800	20-M42-63	900		305	701	816	845	938	1076				58	50

# Spiral Bevel Gear Actuators

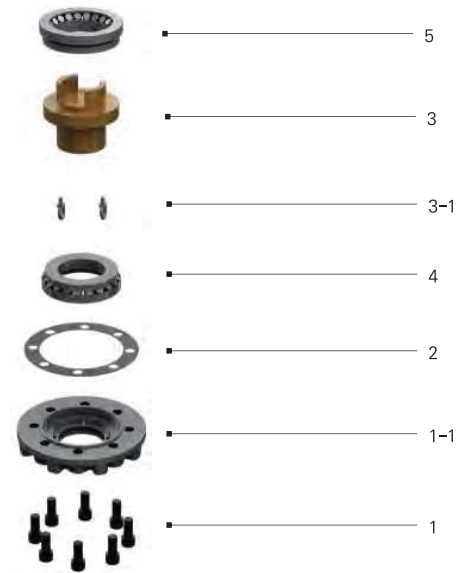


## Disassembly flow chart of thrust bush for processing of stem thread

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.



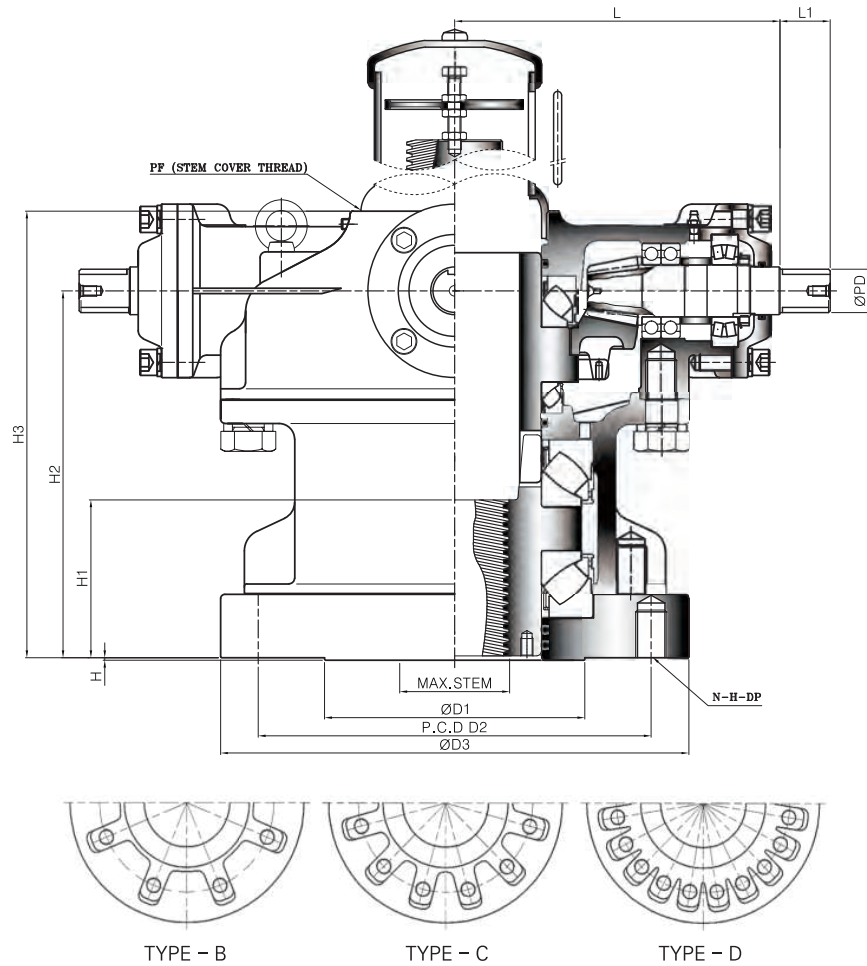
## ◆ Selection Chart for Manual Operation

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-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				800	PF5"			
SB-V4HW		F-40	300	406	8-M36-55	475		155	342	401	291				900	PF6"			
SB-V5HW		F-48	370	483	12-M36-55	560		172	376	444	313				900	PF6"			
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	370	483	12-M36-55	560		217	475	562	409				58	50	16X10	1000	PF8"
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	470	603	20-M36-55	700		269	612	706	525								
SB-V9HW		F-80	650	800	20-M42-63	900		281	636	739	591								
SB-V10HW		F-80	650	800	20-M42-63	900		305	701	816	664								

# Spiral Bevel Gear Actuators

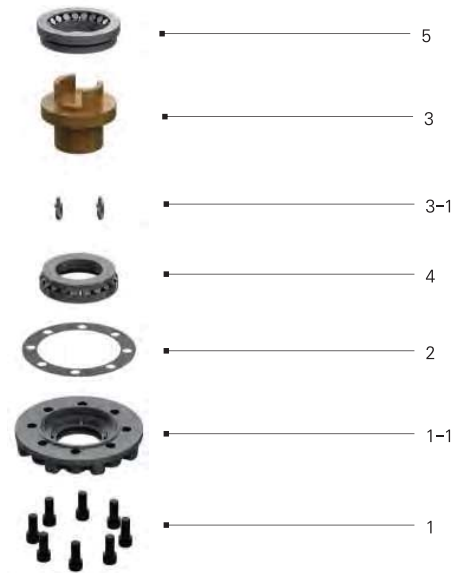


## Disassembly flow chart of thrust bush for processing of stem thread

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

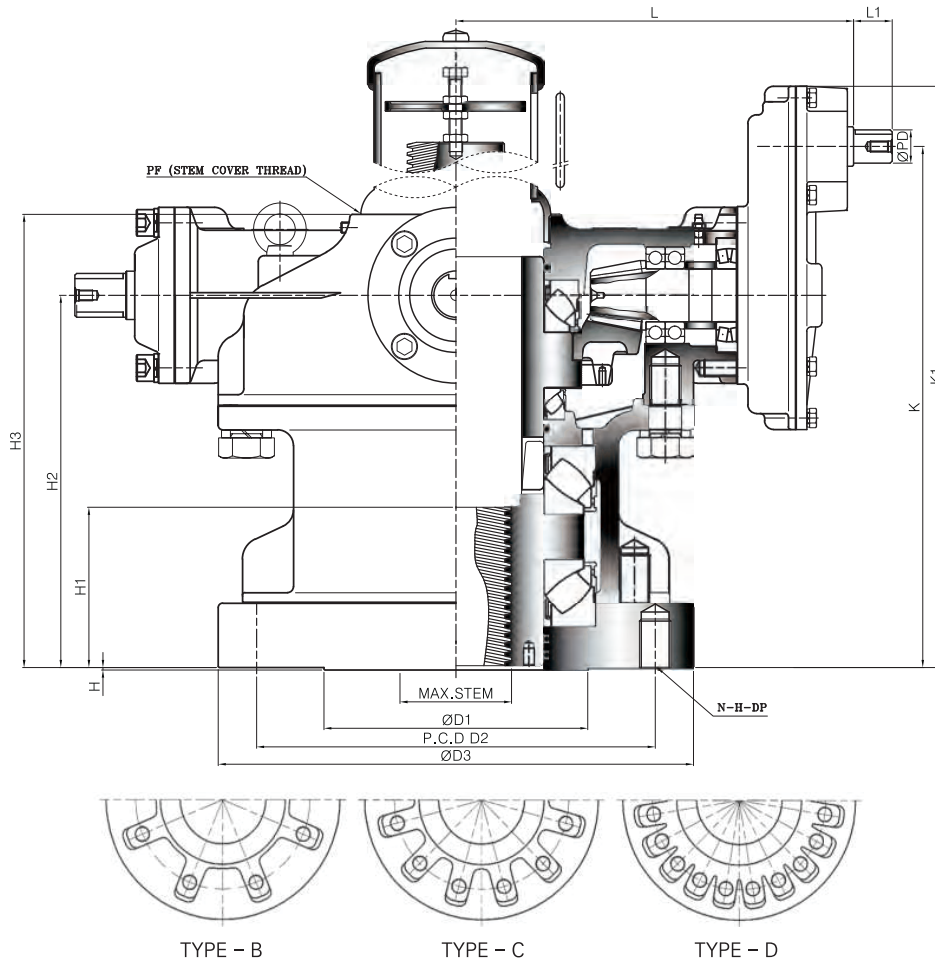
MODEL	SIZE	GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT
			TW	KEY		KN	lbf	N-m	Ft . lbf	
SB-V2HW		4 : 1	65	55 (16X10)	(F-20), F-25	1080	242800	2900	2139	65
SB-V3HW		5 : 1	80	70 (20X12)	F-25, F-30	1710	384400	4500	3319	96
SB-V35HW		5.5 : 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				630	PF5"
SB-V4HW-1S			155	342	401	463		520	358	34	32	10X8	710				PF6"	
SB-V5HW-1S			F-40	300	406	8-M36-55		475	172	376	444	521	584				387	710
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		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									
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

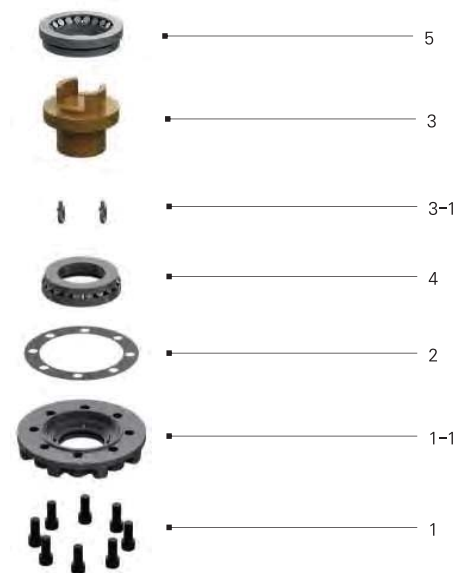


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## ◆ Feature

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- 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.



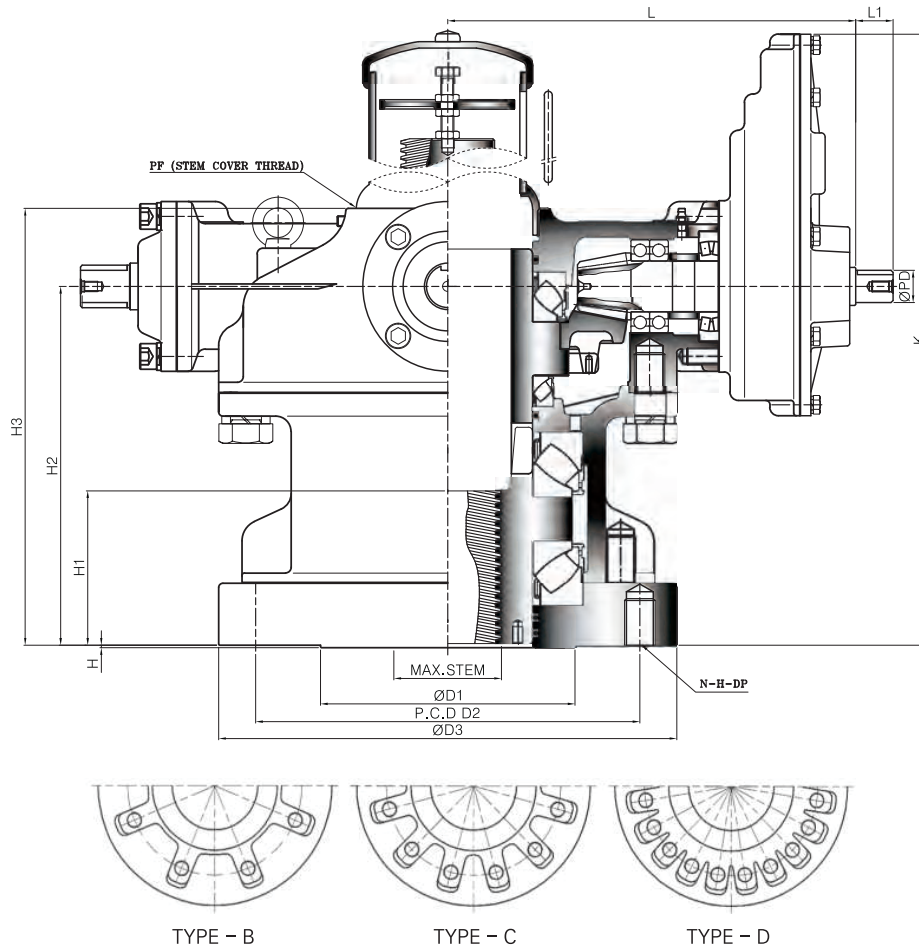
## ◆ Selection Chart for Manual Operation

MODEL	SIZE GEAR RATIO	MAX. STEM ACCEPTANCE		MOUNTING OPTION & STANDARD	MAX. THRUST CAPACITY		MAX. TORQUE CAPACITY		WEIGHT Kg
		TW	KEY		KN	lbf	N-m	Ft . lbf	
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

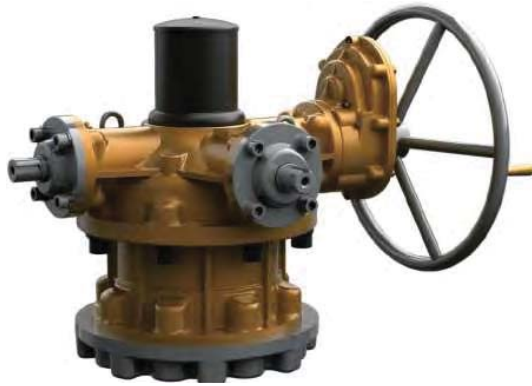


### Dimension

UNIT : mm

MODEL	DIM	BASE PART						EXTERNAL PART					INPUT SHAFT PART			HAND WHEEL	STEM COVER					
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	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				630	PF5"					
SB-V4HW-1SD		F-40	300	406	8-M36-55	475		155	342	401	537	394				710	PF6"					
SB-V5HW-1SD		F-48	370	483	12-M36-55	560		172	376	444	625	426										
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		F-48	370	483	12-M36-55	560		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	470	603	20-M36-55	700		269	612	706	992	741										
SB-V9HW-1SD		F-80	650	800	20-M42-63	900		281	636	739	1124	876										PF12"
SB-V10HW-1SD		F-80	650	800	20-M42-63	900		305	701	816	1189	941										

# Spiral Bevel Gear Actuators

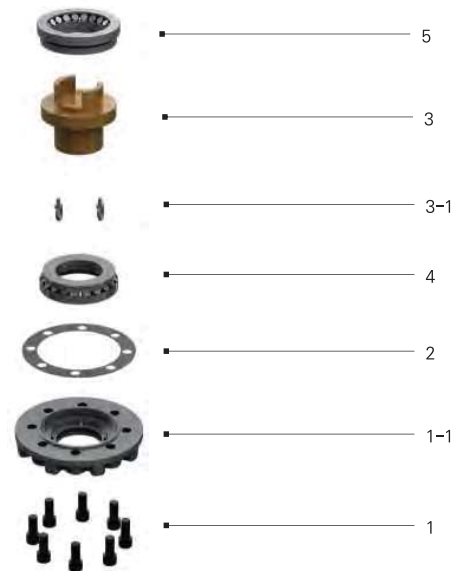


## Disassembly flow chart of thrust bush for processing of stem thread

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.



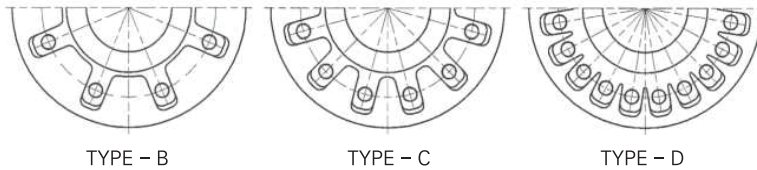
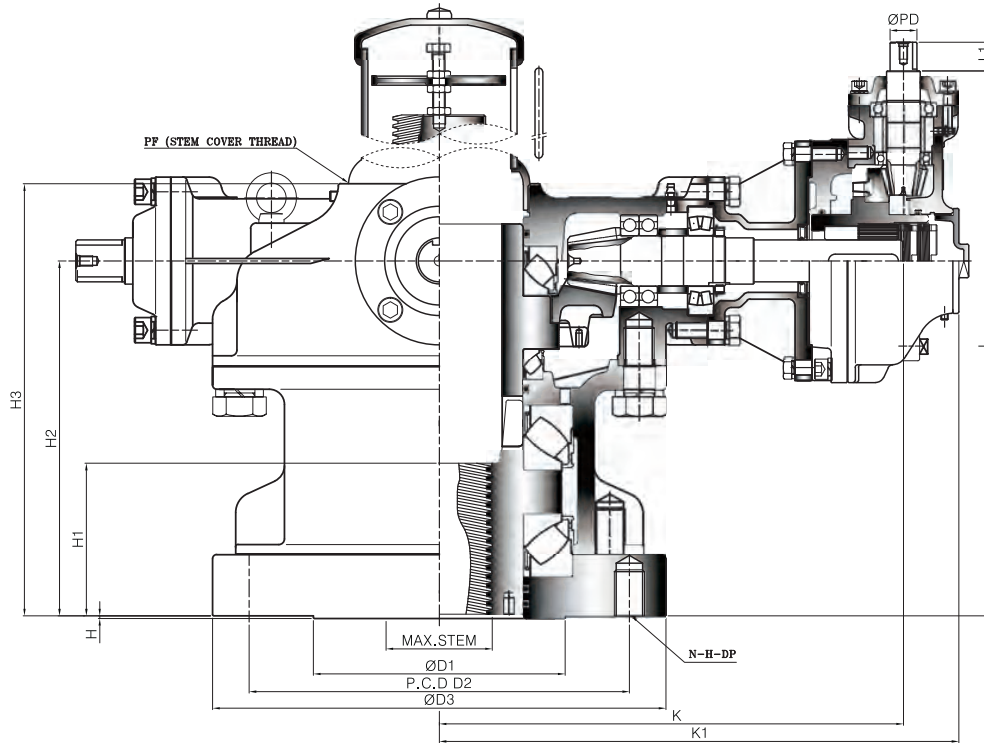
## Selection Chart for Manual Operation

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-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 Vertical Input with Single Reduction Gear Attachment



### ◆ Dimension

UNIT : mm

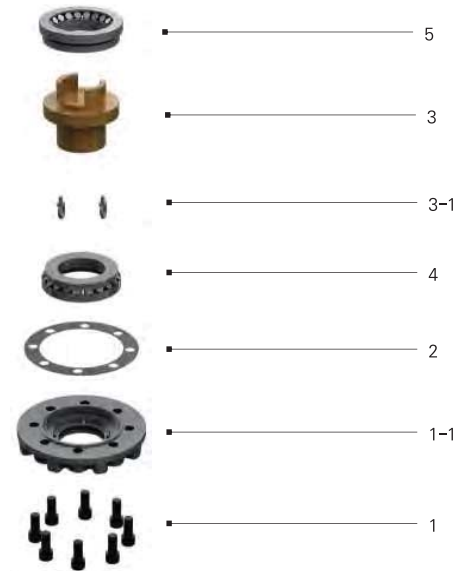
MODEL	DIM	BASE PART						EXTERNAL PART						INPUT SHAFT PART			HAND WHEEL	STEM COVER	
		TYPE	FLANGE	ØD1	P.C.D		ØD3	H	H1	H2	H3	K	K1	L	L1	ØPD			KEY
					ØD2	N-H-DP													
SB-V2HW-2B	B	F-25	200	254	8-M16-24	300	3	99	229	273.5	299	340	350	34	26	8X7	300	PF3-1/2"	
SB-V3HW-2B		F-30	230	298	8-M20-30	350		118	263	310	326.5	368	394				400	PF4"	
SB-V35HW-2B		F-35	260	356	8-M30-45	415		143	316	373	415	474	470.5				400	PF5"	
SB-V4HW-2B		F-40	300	406	8-M36-55	475		155	342	401	457	521	509				500	PF6"	
SB-V5HW-2B		F-40	300	406	8-M36-55	475		172	376	444	419	488.5	564				630	PF6"	
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	370	483	12-M36-55	560		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				900	PF12"	
SB-V85HW-2B		F-60	470	603	20-M36-55	700		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	650	800	20-M42-63	900		305	701	816	845	938	1076				58	50	16X10

# 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
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8. Re-assembly in reverse order.



## ◆ Feature

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- 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.

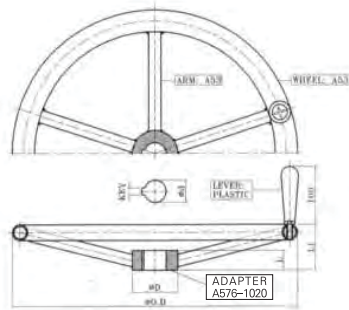
# Handwheel Type

## ❖ Spiral Bevel Standard Handwheel : Gate Valve

UNIT : mm

MODEL	SIZE	φ0.D	φD	φD&KEY	L	L1	ARM QTY
BH-250	250	250	60	φ26 8X7	35	70	4EA
BH-300	300						
BH-400	400	500	70	φ32 10X8	35	90	5EA
BH-500	500						
BH-630	630					110	
BH-710	710						
BH-800	800	80	φ38 12X8	45	130	6EA	
BH-900	900						
BH-1000	1000	90	φ50 16X10	60			

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.

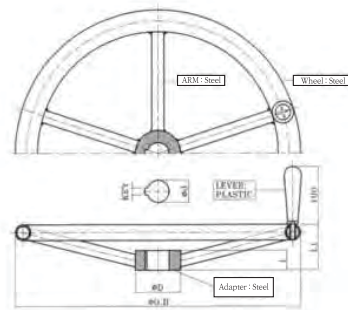


## ❖ SOLID HANDWHEEL

UNIT : mm

MODEL	SIZE	φ0.D	φD	φD&KEY	L	L1	ARM QTY
BSH-250	250	250	60	φ26 8X7	35	70	4EA
BSH-300	300						
BSH-400	400	500	70	φ32 10X8	35	90	5EA
BSH-500	500						
BSH-630	630					110	
BSH-710	710						
BSH-800	800	80	φ38 12X8	45	130	6EA	
BSH-900	900						
BSH-1000	1000	90	φ50 16X10	60			

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.

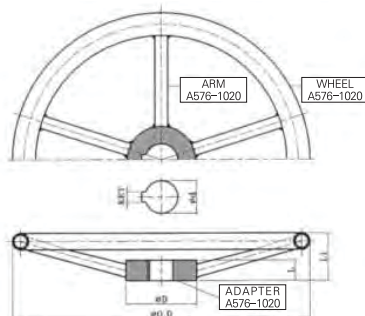


## ❖ Round Bar Handwheel : Globe Valve

UNIT : mm

MODEL	SIZE	φ0.D	φD	φD&KEY	L	L1	ARM QTY
BRH-250	250	250	80	φ26 8X7	35	55	4EA
BRH-300	300						
BRH-400	400	500	100	φ32 10X8	35	60	5EA
BRH-500	500						
BRH-630	630					120	
BRH-710	710						
BRH-800	800	140	φ38 12X8	45	70	6EA	
BRH-900	900						
BRH-1000	1000		φ50 16X10	60			

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

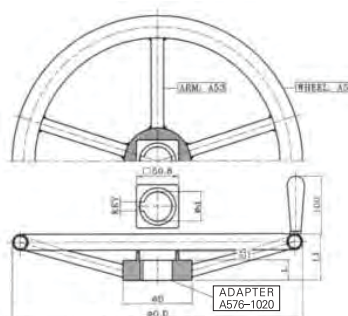


## ❖ Drive Nut Handwheel

UNIT : mm

MODEL	SIZE	φ0.D	φD	φD&KEY	L	L1	ARM QTY
BDNH-250	250	250	80	φ26 8X7	35	70	4EA
BDNH-300	300						
BDNH-400	400	500	100	φ32 10X8	35	90	5EA
BDNH-500	500						
BDNH-630	630					110	
BDNH-710	710						
BDNH-800	800	140	φ38 12X8	45	130	6EA	
BDNH-900	900						
BDNH-1000	1000		φ50 16X10	60			

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



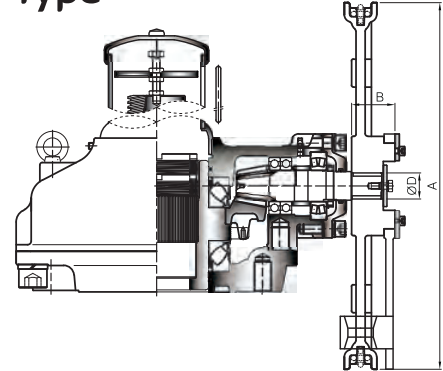
# Chain wheel Type

## ❖ Spiral Bevel Standard

UNIT : mm

SIZE MODEL	A	B	ØD & KEY
CH-200	200	43	Ø16 6X6 Ø21 6X6
CH-250	250		
CH-300	300	43.5	Ø26 8X7 Ø32 10X8
CH-350	350		
CH-400	400	50	Ø38 12X8
CH-450	450		
CH-500	500		
CH-550	550		
CH-600	600	51.5	Ø38 - 12X8 Ø50 - 16X10
CH-700	700		
CH-800	800	53	

## ❖ Gear Type



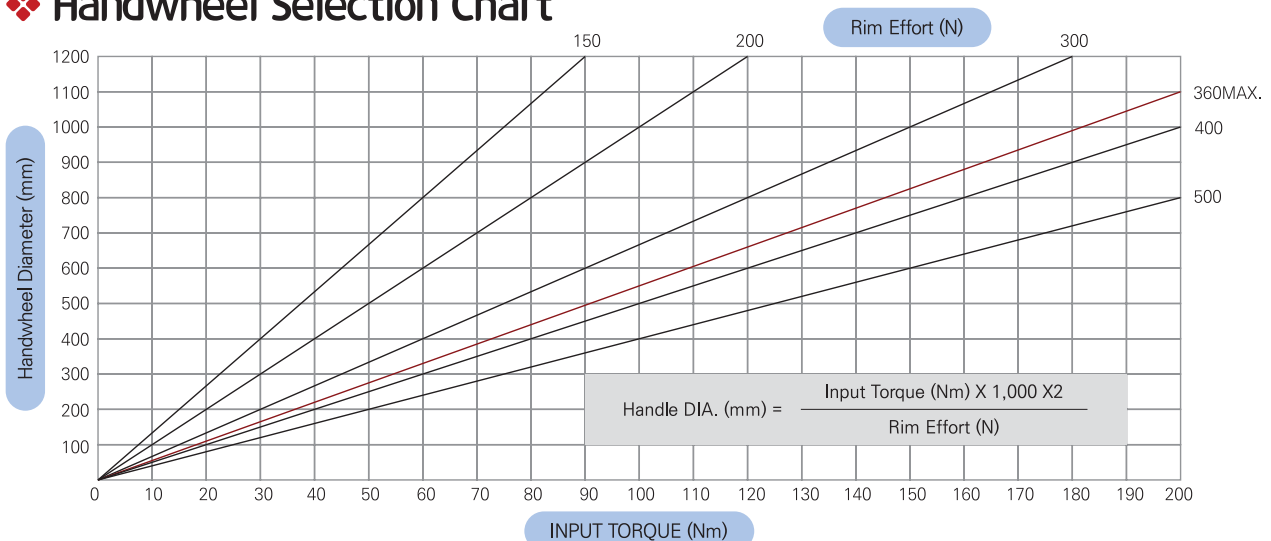
## ❖ Hammer Type



### 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)

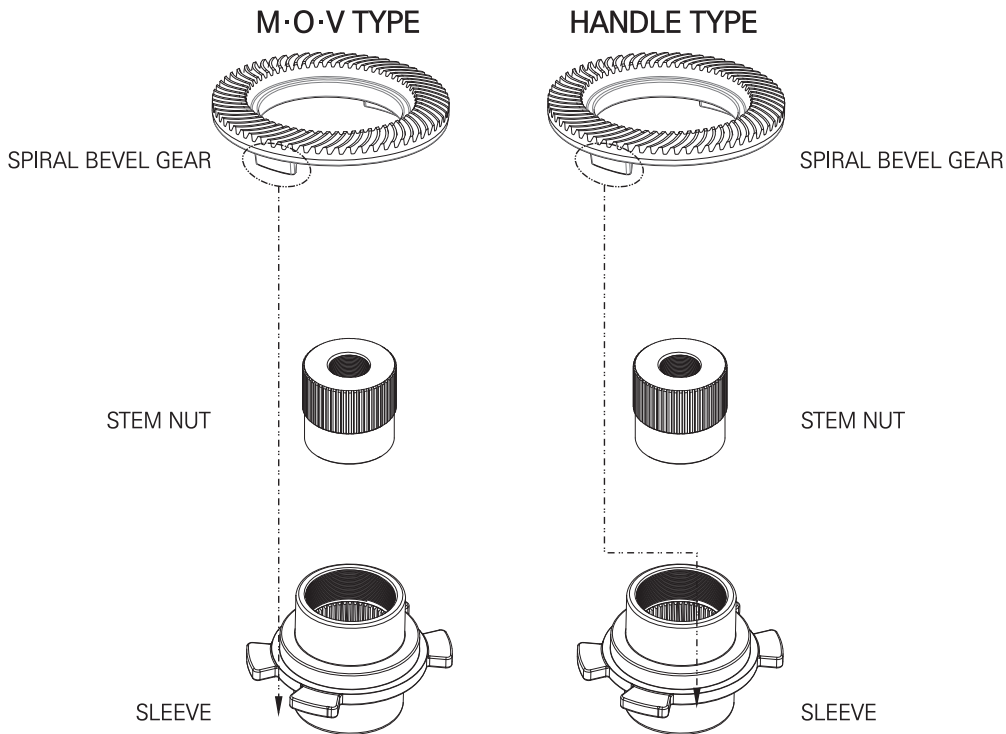
## ❖ Handwheel Selection Chart



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**

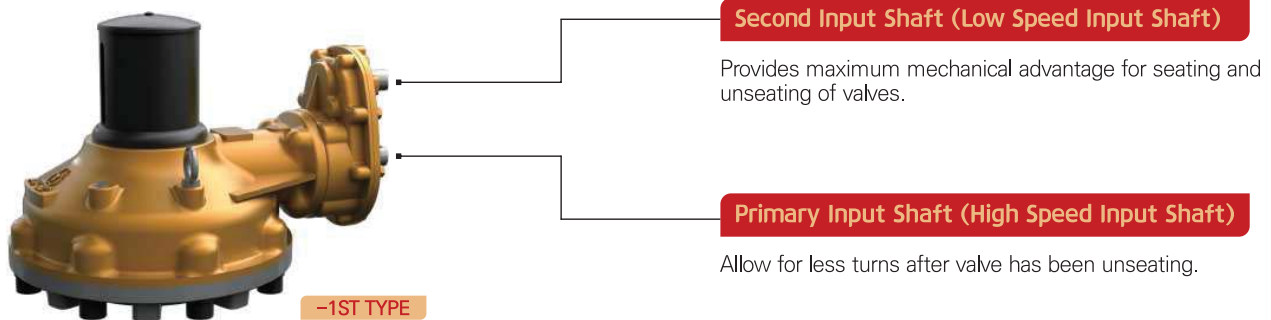
This type eliminates the gap in the lug drive between the Spiral Bevel Gear and Drive Sleeve enabling a momentary impact. It is the preferred method for all Manual operation and for Electric Actuators of Wedge Gates and Globe Valves.

# 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.

# 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	75.5	220	162	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			
SB-VS20C-1S	6:1	113	370	273	5.5	66.9	Ø50		F-16, (F-20)
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	<ul style="list-style-type: none"> <li>Ratio &amp; Base specification to be changeable.</li> <li>Max Output Torque includes safety factor.</li> <li>If any request requirement, please contact us any time.</li> </ul>								

# 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				3.7	406.9									
	S-10.13:1														
SB-V2-1S2B	20.27 :1				17.7	84.5									
SB-V2-1SD	25.67 :1				23.7	63.4									
SB-V2W-1SD															
SB-V2-1SDT	P-10.13:1				9.3	160.6									
	S-25.67:1														
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	F-25, F-30				
SB-V2C-1S	10.13 :1	9.3	160.6												
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				3.7	786.8									
	S-10.13:1														
SB-V2H-1SD	25.67 :1				23.7	122.6									
SB-V2H-1SDT	P-10.13:1				9.3	310.6									
	S-25.67:1														
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	4.6	542.6												
	S-12.67:1														
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	11.7	214.2												
	S-32.08:1														
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			F-30, F-35								
SB-V3C-1S	12.67 :1	11.7	214.2												
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				4.6	976.7									
	S-12.67:1														
SB-V3H-1SD	32.1 :1				29.6	152.2									
SB-V3HW-1SD															
SB-V3H-1SDT	P-12.67:1				11.7	385.5									
	S-32.08:1														
SB-V3H-2B	15:1				29.6	152.2									
SB-V3HW-2B															

Remark

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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															
SB-V35W-1S																
SB-V35-1ST	P-5.5:1															
	S-16.5:1															
SB-V35-1S2B	41.25:1															
SB-V35-1SD	49.5:1															
SB-V35W-1SD																
SB-V35-1SDT	P-16.5:1															
	S-49.5:1															
SB-MT-V35	1:1															
SB-V35-2B	17.88 :1															
SB-V35W-2B																
SB-V35C	5.5:1															
SB-V35C-1S	16.5:1															
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											
SB-V35HW-1S																
SB-V35H-1ST					P-5.5:1											
					S-16.5:1											
SB-V35H-1SD					49.5:1											
SB-V35HW-1SD																
SB-V35H-1SDT					P-16.5:1											
					S-49.5:1											
SB-V35H-2B					17.88 :1											
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											
SB-V4W-1S																
SB-V4-1ST	P-6:1															
	S-18:1															
SB-V4-1S2B	45:1															
SB-V4-1SD	54:1															
SB-V4W-1SD																
SB-V4-1SDT	P-18:1															
	S-54:1															
SB-MT-V4	1:1															
SB-V4-2B	21:1															
SB-V4W-2B																
SB-V4C	6:1															
SB-V4C-1S	18:1															
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											
SB-V4HW-1S																
SB-V4H-1ST					P-6:1											
					S-18:1											
SB-V4H-1SD					54:1											
SB-V4HW-1SD																
SB-V4H-1SDT					P-18:1											
					S-54:1											
SB-V4H-2B					21:1											
SB-V4HW-2B																
Remark					<ul style="list-style-type: none"> <li>Ratio &amp; Base specification to be changeable.</li> <li>Max Output Torque includes safety factor.</li> <li>If any request requirement, please contact us any time.</li> </ul>											

# 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														
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-V5HW-2B															
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														
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	<ul style="list-style-type: none"> <li>Ratio &amp; Base specification to be changeable.</li> <li>Max Output Torque includes safety factor.</li> <li>If any request requirement, please contact us any time.</li> </ul>														

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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															
SB-V6-1ST	P-7:1				6.5	2015.3									
	S-28:1				25.8	503.8									
SB-V6-1S2B	84:1				73.5	176.8									
SB-V6-1SD	112:1				103.2	126									
SB-V6W-1SD															
SB-V6-1SDT	P-28:1				25.8	503.8									
	S-112:1				103.2	126									
SB-MT-V6	1:1				0.9	14107.4									
SB-V6-2B	35:1				31.6	411.6									
SB-V6W-2B															
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	28:1				25.8	891.4									
SB-V6HW-1S															
SB-V6H-1ST	P-7:1				6.5	3565.6									
	S-28:1				25.8	891.4									
SB-V6H-1SD	112:1				103.2	222.9									
SB-V6HW-1SD															
SB-V6H-1SDT	P-28:1				25.8	891.4									
	S-112:1				103.2	222.9									
SB-V6H-2B	35:1				31.6	728.1									
SB-V6HW-2B															
SB-V7	7.56 :1				2500	17600				12981	7.2	2452	150	130 (36x20)	F-48 F-40 (OPTION)
SB-V7W															
SB-V7-1S	30.22 :1	27.8	632												
SB-V7W-1S															
SB-V7-1ST	7.56 :1	7	2527.8												
	30.22 :1	27.8	632												
SB-V7-1S2B	90.67 :1	79.4	221.7												
SB-V7-1SD	120.89 :1	111.4	158												
SB-V7W-1SD															
SB-V7-1SDT	30.22 :1	27.8	632												
	120.89 :1	111.4	158												
SB-V7-2B	37.78 :1	34.1	516.2												
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															
SB-V7H-1ST	7.56 :1				7	5314.2									
	30.22 :1				27.8	1328.6									
SB-V7H-1SD	120.89 :1				111.4	332.1									
SB-V7HW-1SD															
SB-V7H-1SDT	30.22 :1				27.8	1328.6									
	120.89 :1				111.4	332.1									
SB-V7H-2B	37.78 :1				34.1	1085.2									
SB-V7HW-2B															
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# 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								
SB-V75W-1S									
SB-V75-1ST	8:1								
	40:1								
SB-V75-1S2B	90.67:1								
SB-V75-1SD	200:1								
SB-V75W-1SD									
SB-V75-1SDT	40:1								
	200:1								
SB-V75-2B	37.78:1								
SB-V75W-2B									
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								
SB-V75HW-1S									
SB-V75H-1ST	8:1								
	40:1								
SB-V75H-1SD	200:1								
SB-V75HW-1SD									
SB-V75H-1SDT	40:1								
	200:1								
SB-V75H-2B	37.78:1								
SB-V75HW-2B									
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								
SB-V8W-1S									
SB-V8-1ST	P-8:1								
	S-40:1								
SB-V8-1S2B	160:1								
SB-V8-1SD	200:1								
SB-V8W-1SD									
SB-V8-1SDT	P-40:1								
	S-200:1								
SB-V8-2B	44:1								
SB-V8W-2B									
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								
SB-V8HW-1S									
SB-V8H-1ST	P-8:1								
	S-40:1								
SB-V8H-1SD	200:1								
SB-V8HW-1SD									
SB-V8H-1SDT	P-40:1								
	S-200:1								
SB-V8H-2B	44:1								
SB-V8HW-2B									

Remark

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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	40:1									36.9	1085.2
SB-V85W-1S											
SB-V85-1ST	P-8:1									7.4	5425.9
	S-40:1									36.9	1085.2
SB-V85-1S2B	200:1									175.1	228.5
SB-V85-1SD	200:1									184.3	217
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	40:1									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	200:1									36.9	2007.6
SB-V85H-1SDT					P-40:1						184.3
SB-V85H-2B	S-200:1									43.3	1708.2
	48:1										
SB-V9	8:1				5450	55000				40566	7.6
SB-V9W											
SB-V9-1S	40:1			36.9			1492.1				
SB-V9W-1S											
SB-V9-1ST	P-8:1			7.4			7460.7				
	S-40:1			36.9			1492.1				
SB-V9-1S2B	200:1			175.1			314.1				
SB-V9-1SD	200:1			184.3			298.4				
SB-V9W-1SD											
SB-V9-1SDT	P-40:1			36.9			1492.1				
	S-200:1			184.3			298.4				
SB-V9-2B	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	40:1									36.9	2821.5
SB-V9HW-1S											
SB-V9H-1ST	P-8:1									7.4	14107.4
	S-40:1									36.9	2821.5
SB-V9H-1SD	200:1									184.3	564.3
SB-V9HW-1SD	200:1									36.9	2821.5
SB-V9H-1SDT					P-40:1						184.3
SB-V9H-2B	S-200:1									46.9	2216.1
	52.43:1										

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			(N·m)	(Ft·lbf)			TW	KEY			
SB-V10	8:1	7300	75000	55317	7.6	9868.4	230	200 (50x28)	(F-80) F-60 (OPTION)		
SB-V10W											
SB-V10-1S	40:1									36.9	2034.7
SB-V10W-1S											
SB-V10-1ST	P-8:1									7.4	10173.6
	S-40:1									36.9	2034.7
SB-V10-1S2B	220:1									192.6	389.4
SB-V10-1SD	200:1									184.3	406.9
SB-V10W-1SD											
SB-V10-1SDT	P-40:1									36.9	2034.7
	S-200:1									184.3	406.9
SB-V10-2B	56:1									50.5	1484.0
SB-V10W-2B											
SB-V10H	8:1	11500	142000	104734	7.6	18684.2	270	240 (56x32)			
SB-V10HW											
SB-V10H-1S	40:1									36.9	3852.4
SB-V10HW-1S											
SB-V10H-1ST	P-8:1									7.4	19262.1
	S-40:1									36.9	3852.4
SB-V10H-1SD	200:1									184.3	770.5
SB-V10HW-1SD											
SB-V10H-1SDT	P-40:1									36.9	3852.4
	S-200:1									184.3	770.5
SB-V10H-2B	56:1									50.5	2809.7
SB-V10HW-2B											

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