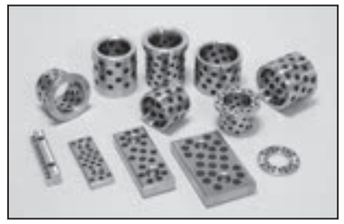
Oiles 500SP1 High-strength brass bearings with embedded solid lubricant



RoHS2 ELV

Feature

- Serviceable without the need for lubrication.
- Demonstrates high performance under high-load and low-speed operations.
- Demonstrates superior wear resistance in applications where oil film is seldom produced such as reciprocating motions, oscillation, frequent starts and stops, etc.
- Superior chemical resistance and corrosion resistance.
- Standard products are available in various sizes.

Service range	500SP$_1$ SL1		500SP$_1$ SL4
Lubrication condition	Dry	periodic lubrication	Dry
Service temperature range ℃	−40～+300	−40～+150	−40～+80
Allowable max. pressure P N/mm² {kgf/cm²}	29 (150) {296 (1,530)}		49 (150) {500 (1,530)}
Allowable max. velocity V m/s {m/min}	0.50 {30}	1.00 {60}	0.25 {15}
Allowable max. PV value N/mm²・m/s {kgf/cm²・m/min}	1.65 {1,010}	3.25 {1,990}	1.65 {1,010}

The values in parentheses are static bearing pressures, which are the bearing pressures in applications with no motion or very small motion (≦0.0017m/s[0.1m/min]).

Mechanical properties

Density	——	g/cm³	7.8
Tensile strength	JIS Z 2241	N/mm² {kgf/mm²}	755 {77}
Tensile elongation at break	JIS Z 2241	%	12
Compressive strength	——	N/mm² {kgf/mm²}	345 {35} (Note)
Impact strength	JIS Z 2242	J/cm² {kgfm/cm²}	19 {1.9}
Hardness	JIS Z 2243	HBW	210
Modulus of longitudinal elasticity	——	N/mm² {kgf/mm²}	105,000 {10,700}
Co-efficient of linear expansion	——	×10⁻⁵ ℃⁻¹	2.12
Thermal conductivity	——	W/m℃ {cal/sec℃cm}	87.8 {0.21}

※The values shown above are typical values, not the standard values.
(Note) Compressive strength is 0.1%

⚠ When you use standard 500SP$_1$ seires in the temperature of 150℃ and over, contact us for more information.

⚠ Refer to page 34 for the suitable solid lubricant for made-to-order bearings.

⚠ Please indicate the type of motion (rotation, reciprocating, rotation & reciprocating) for custom-made products.

Lathe turning

Cutting tool	carbide tool (JIS)	
	Relief angle	5～10°
	Rake angle	2～5°
	Nose radius (mm)	0.40～0.80
Condition	Speed (m/min)	100～200
	Cut depth (mm)	0.05～0.30
	Feed (mm/rev)	0.08～0.30

Some products require application of solid lubricants on the sliding surface after processing.
※Contact us for grinding and milling information.

Machining accuracy (bushing)

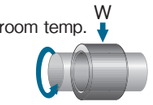
I.D.	O.D.	Length
class 7 to 8	class 6 to 7	class 8 to 9

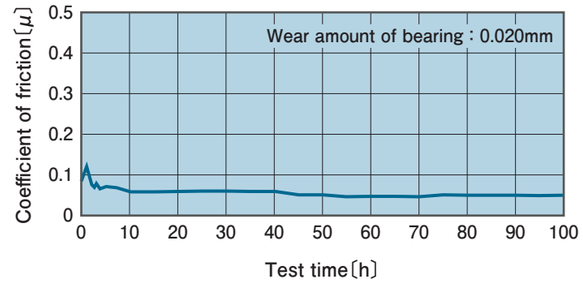
Classes here are in JIS standard.
This product demonstrates satisfactory performance at the slide surface roughness of Rz6.3 to 12.5μm.

Test data

Journal rotation test 500SP$_1$-SL1

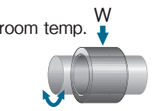
<Testing conditions>
Bearing dimension : φ40×φ50×ℓ30
Mating material : S45C high frequency quenched
Pressure : 24.5N/mm² {250.0kgf/cm²}
Velocity : 0.033m/s {2.0m/min}
Test time : 100h
Ambience : in the atmosphere, room temp.
Lubrication : dry

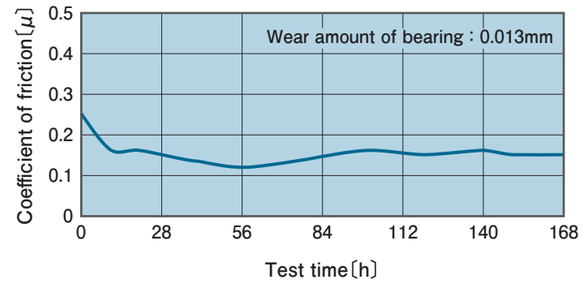




Journal oscillation test 500SP$_1$-SL1

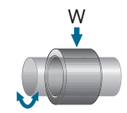
<Testing conditions>
Bearing dimension : φ40×φ50×ℓ30
Mating material : S45C
Pressure : 19.6N/mm² {200.0kgf/cm²}
Velocity : 0.025m/s {1.5m/min}
Oscillating cycle : 24cpm
Oscillating angle : ±45°
Test time : 168h
Ambience : in the atmosphere, room temp.
Lubrication : dry

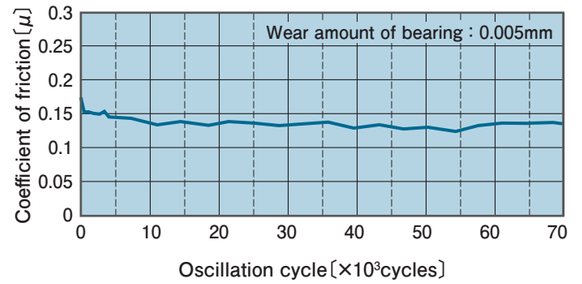




Journal oscillation test 500SP$_1$-SL4

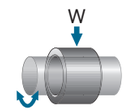
<Testing conditions>
Bearing dimension : φ40×φ50×ℓ30
Mating material : SUS304
Pressure : 29.4N/mm² {300kgf/cm²}
Velocity : 0.012m/s {0.75m/min}
Oscillating cycle :12cpm
Oscillating angle : ±45°
Test cycle : 70,000cycle (97.2h)
Ambience : in the atmosphere, room temp.
Lubrication : initial grease SL464g coating

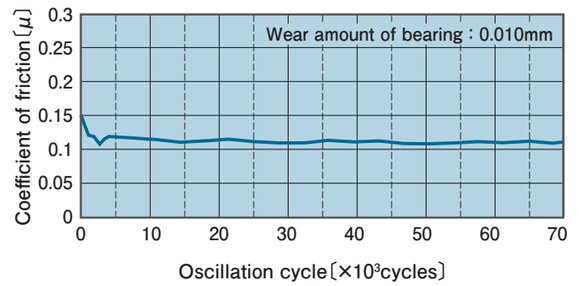




Journal oscillation test 500SP$_1$-SL4

<Testing conditions>
Bearing dimension : φ60×φ75×ℓ50
Mating material : SUS403
Pressure : 24.5N/mm² {250kgf/cm²}
Velocity : 0.018m/s {1.13m/min}
Oscillating cycle :12cpm
Oscillating angle : ±45°
Test cycle : 70,000cycle (97.2h)
Ambience : in the purified water
Lubrication : initial grease SL464g coating





SPB Oiles 500SP1 SL1 Bushings (I.D. ϕ6~ϕ45)

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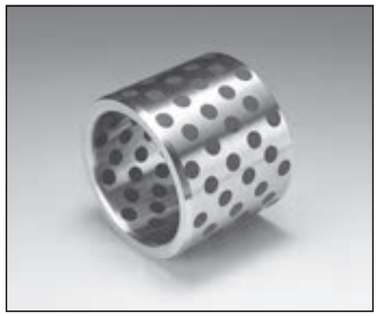
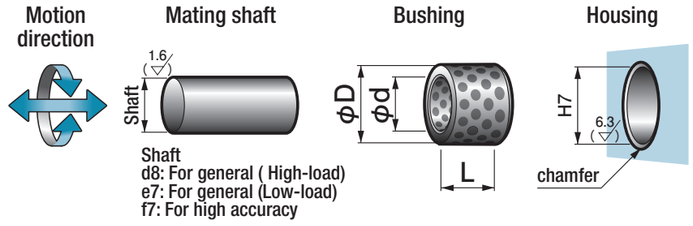
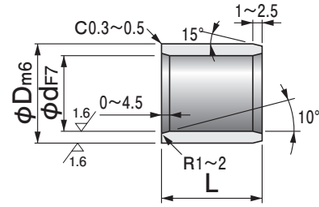


Specify Part No. by required I.D., O.D. and Length.
(e.g.) I.D. is 25mm, O.D. is 33mm, and length is 20mm.

SPB - 253320
Part No.

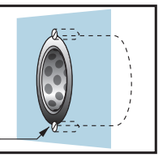


Shaft
d8: For general (High-load)
e7: For general (Low-load)
f7: For high accuracy

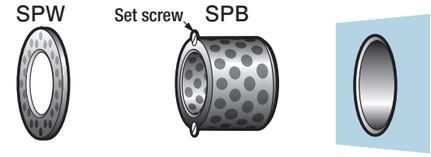


- Applicable to rotation, oscillation, and reciprocating motion.
- Do not use this under water.
- 31.5mm I.D bushing can be used as an intermediate trunnion bushing for hydraulic cylinders.

It is recommended to use a set screw to prevent dislocation.



Use this product together with the Oiles #500SP washer (SPW shown on page 195) in a position where thrust loads are applied.



※Be sure to determine the position with a countersunk head screw and fix when the SPW with ★ shown in the table below is used, since the inner diameter is larger than the shaft diameter.

All SPB bushings have engraved OILES mark.

I.D.		O.D.		Length L Tolerance $^{-0.1}_{-0.3}$							
φd	Tolerance	φD	Tolerance	8	10	12	15	16	19	20	25
6	+0.022 +0.010	10	+0.015 +0.006	061008	061010	061012					
8	+0.028 +0.013	12	+0.018 +0.007	081208	081210	081212	081215				
10	+0.028 +0.013	14	+0.018 +0.007	101408	101410	101412	101415			101420	
12	+0.034 +0.016	18	+0.018 +0.007	121808	121810	121812	121815	121816	121819	121820	121825
13	+0.034 +0.016	19	+0.021 +0.008		131910	131912	131915			131920	131925
14	+0.034 +0.016	20	+0.021 +0.008		142010	142012	142015			142020	142025
15	+0.034 +0.016	21	+0.021 +0.008		152110	152112	152115	152116		152120	152125
16	+0.034 +0.016	22	+0.021 +0.008		162210	162212	162215	162216	162219	162220	162225
17	+0.034 +0.016	23	+0.021 +0.008				172315				
18	+0.034 +0.016	24	+0.021 +0.008		182410	182412	182415	182416		182420	182425
19	+0.041 +0.020	26	+0.021 +0.008				192615			192620	
20	+0.041 +0.020	28	+0.021 +0.008		202810	202812	202815	202816	202819	202820	202825
20	+0.041 +0.020	30	+0.021 +0.008		203010	203012	203015	203016		203020	203025
22	+0.041 +0.020	32	+0.025 +0.009			223212	223215			223220	223225
25	+0.041 +0.020	33	+0.025 +0.009			253312	253315	253316		253320	253325
25	+0.041 +0.020	35	+0.025 +0.009			253512	253515	253516		253520	253525
28	+0.041 +0.020	38	+0.025 +0.009							283820	283825
30	+0.041 +0.020	38	+0.025 +0.009			303812	303815			303820	303825
30	+0.041 +0.020	40	+0.025 +0.009			304012	304015			304020	304025
31.5	+0.050 +0.025	40	+0.025 +0.009								
32	+0.050 +0.025	42	+0.025 +0.009							324220	
35	+0.050 +0.025	44	+0.025 +0.009							354420	354425
35	+0.050 +0.025	45	+0.025 +0.009							354520	354525
38	+0.050 +0.025	48	+0.025 +0.009								
40	+0.050 +0.025	50	+0.025 +0.009				405015			405020	405025
40	+0.050 +0.025	55	+0.030 +0.011				405515				
45	+0.050 +0.025	55	+0.030 +0.011								
45	+0.050 +0.025	56	+0.030 +0.011								
45	+0.050 +0.025	60	+0.030 +0.011								

Length L Tolerance $^{-0.1}_{-0.3}$							I.D. tolerance after press fitting (reference)	Washer	I.D.
30	35	40	50	60	70	80		SPW	φd
							+0.019 +0.007	0603	6
							+0.025 +0.010	0803	8
							+0.025 +0.010	1003	10
121830							+0.031 +0.013	1203	12
131930							+0.030 +0.012	1303	13
142030							+0.030 +0.012	1403	14
152130	152135	152140					+0.030 +0.012	1503	15
162230	162235	162240					+0.030 +0.012	1603	16
							+0.030 +0.012	1803★	17
182430	182435	182440					+0.030 +0.012	1803	18
							+0.037 +0.016	2005★	19
202830	202835	202840	202850				+0.037 +0.016	2005	20
203030	203035	203040	203050				+0.037 +0.016	2505★	20
							+0.037 +0.016	2505	22
253330	253335	253340	253350	253360			+0.037 +0.016	2505	25
253530	253535	253540	253550	253560			+0.037 +0.016	3005★	25
283830		283840					+0.037 +0.016	3005	28
303830	303835	303840	303850	303860			+0.037 +0.016	3005	30
304030	304035	304040	304050	304060			+0.037 +0.016	3505★	30
314030		314040					+0.046 +0.021	3505	31.5
324230		324240					+0.046 +0.021	3505	32
354430	354435	354440	354450	354460			+0.046 +0.021	3505	35
354530	354535	354540	354550	354560			+0.046 +0.021	4007★	35
		384840					+0.046 +0.021	4007	38
405030	405035	405040	405050	405060	405070	405080	+0.046 +0.021	4007	40
405530	405535	405540	405550	405560			+0.045 +0.020	4507★	40
455530	455535	455540	455550	455560			+0.045 +0.020	4507	45
455630	455635	455640	455650	455660			+0.045 +0.020	4507	45
456030	456035	456040	456050	456060	456070	456080	+0.045 +0.020	4507	45

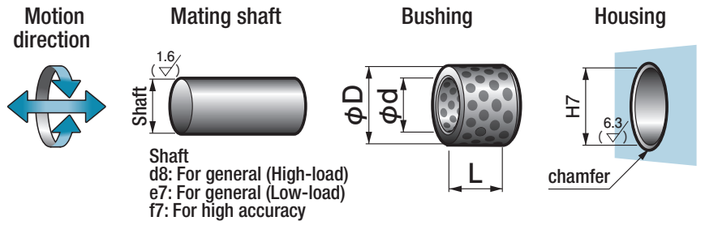
※The I.D. tolerance after press fitting is for reference only.
※I.D. ϕ50~ϕ200 are shown on pages 186 to 187.

SPB Oiles 500SP1 SL1 Bushings (I.D. ϕ50~ϕ200)

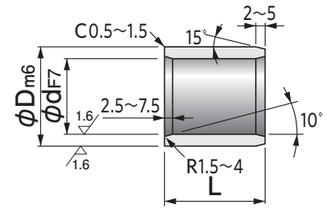
RoHS2 ELV

Specify Part No. by required I.D., O.D. and Length.
(e.g.) I.D. is 80mm, O.D. is 96mm, and length is 70mm.

SPB - 809670
Part No.

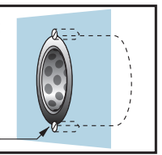


Shaft
d8: For general (High-load)
e7: For general (Low-load)
f7: For high accuracy

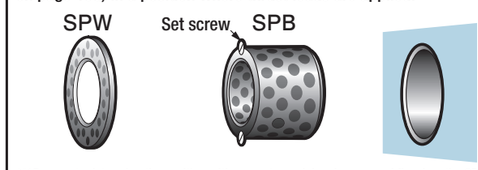


- Applicable to rotation, oscillation, and reciprocating motion.
- Do not use this under water.
- 63mm I.D bushing can be used as an intermediate trunnion bushing for hydraulic cylinders.

It is recommended to use a set screw to prevent dislocation.



Use this product together with the Oiles #500SP washer (SPW shown on page 195) in a position where thrust loads are applied.



※Be sure to determine the position with a countersunk head screw and fix when the SPW with ★ shown in the table below is used, since the inner diameter is larger than the shaft diameter.

All SPB bushings have engraved OILES mark.

I.D.		O.D.		Length L Tolerance $^{-0.1}_{-0.3}$								I.D. tolerance after press fitting (reference)	Washer	I.D.
ϕd	Tolerance	ϕD	Tolerance	20	30	35	40	50	60	70	80		SPW	ϕd
50	+0.050 +0.025	60	+0.030 +0.011	506020	506030	506035	506040	506050	506060	506070	506080	+0.045 +0.020	5008	50
50	+0.050 +0.025	62	+0.030 +0.011		506230	506235	506240	506250	506260	506270	506280	+0.045 +0.020	5008	50
50	+0.050 +0.025	65	+0.030 +0.011		506530		506540	506550	506560	506570	506580	+0.045 +0.020	5008	50
55	+0.060 +0.030	70	+0.030 +0.011		557030	557035	557040	557050	557060	557070		+0.055 +0.025	5508	55
60	+0.060 +0.030	74	+0.030 +0.011		607430	607435	607440	607450	607460	607470	607480	+0.055 +0.025	6008	60
60	+0.060 +0.030	75	+0.030 +0.011		607530	607535	607540	607550	607560	607570	607580	+0.055 +0.025	6008	60
63	+0.060 +0.030	75	+0.030 +0.011						637560	637570	637580	+0.055 +0.025	6508★	63
65	+0.060 +0.030	80	+0.030 +0.011				658040	658050	658060	658070	658080	+0.055 +0.025	6508	65
70	+0.060 +0.030	85	+0.035 +0.013		708530	708535	708540	708550	708560	708570	708580	+0.054 +0.024	7010	70
70	+0.060 +0.030	90	+0.035 +0.013					709050	709060	709070	709080	+0.054 +0.024	7010	70
75	+0.060 +0.030	90	+0.035 +0.013					759050	759060	759070	759080	+0.054 +0.024	7510	75
75	+0.060 +0.030	95	+0.035 +0.013						759560	759570	759580	+0.054 +0.024	7510	75
80	+0.060 +0.030	96	+0.035 +0.013				809640	809650	809660	809670	809680	+0.054 +0.024	8010	80
80	+0.060 +0.030	100	+0.035 +0.013				8010040	8010050	8010060	8010070	8010080	+0.054 +0.024	8010	80
85	+0.071 +0.036	100	+0.035 +0.013						8510060		8510080	+0.065 +0.030	9010★	85
90	+0.071 +0.036	110	+0.035 +0.013					9011050	9011060		9011080	+0.065 +0.030	9010	90
100	+0.071 +0.036	120	+0.035 +0.013					10012050	10012060	10012070	10012080	+0.065 +0.030	10010	100
110	+0.071 +0.036	130	+0.040 +0.015					11013050		11013070	11013080	+0.064 +0.029	12010★	110
120	+0.071 +0.036	140	+0.040 +0.015							12014070	12014080	+0.064 +0.029	12010	120
125	+0.083 +0.043	145	+0.040 +0.015									+0.076 +0.036	—	125
130	+0.083 +0.043	150	+0.040 +0.015								13015080	+0.076 +0.036	—	130
140	+0.083 +0.043	160	+0.040 +0.015									+0.076 +0.036	—	140
150	+0.083 +0.043	170	+0.040 +0.015								15017080	+0.076 +0.036	—	150
160	+0.083 +0.043	180	+0.040 +0.015								16018080	+0.076 +0.036	—	160
170	+0.083 +0.043	190	+0.046 +0.017									+0.076 +0.036	—	170
180	+0.083 +0.043	200	+0.046 +0.017									+0.076 +0.036	—	180
190	+0.096 +0.050	210	+0.046 +0.017									+0.088 +0.042	—	190
200	+0.096 +0.050	230	+0.046 +0.017									+0.088 +0.042	—	200

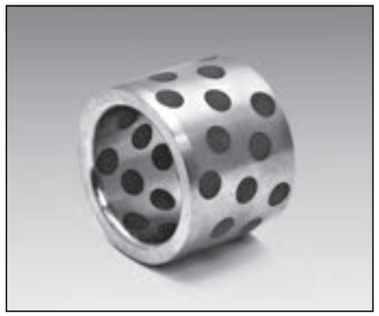
Length L Tolerance $^{-0.1}_{-0.3}$							I.D. tolerance after press fitting (reference)	Washer	I.D.
90	100	120	130	140	150	200		SPW	ϕd
							+0.045 +0.020	5008	50
							+0.045 +0.020	5008	50
	5065100						+0.045 +0.020	5008	50
							+0.055 +0.025	5508	55
							+0.055 +0.025	6008	60
	6075100						+0.055 +0.025	6008	60
							+0.055 +0.025	6508★	63
							+0.055 +0.025	6508	65
	7085100						+0.054 +0.024	7010	70
							+0.054 +0.024	7010	70
	7590100						+0.054 +0.024	7510	75
	7595100						+0.054 +0.024	7510	75
	8096100	8096120					+0.054 +0.024	8010	80
	80100100	80100120		80100140			+0.054 +0.024	8010	80
							+0.065 +0.030	9010★	85
9011090	90110100	90110120					+0.065 +0.030	9010	90
10012090	100120100	100120120		100120140			+0.065 +0.030	10010	100
	110130100	110130120					+0.064 +0.029	12010★	110
12014090	120140100	120140120		120140140			+0.064 +0.029	12010	120
	125145100	125145120					+0.076 +0.036	—	125
	130150100		130150130				+0.076 +0.036	—	130
	140160100			140160140			+0.076 +0.036	—	140
	150170100				150170150		+0.076 +0.036	—	150
	160180100				160180150		+0.076 +0.036	—	160
	∗170190100				∗170190150		+0.076 +0.036	—	170
	∗180200100				∗180200150		+0.076 +0.036	—	180
	∗190210100				∗190210150		+0.088 +0.042	—	190
					∗200230150	∗200230200	+0.088 +0.042	—	200

※Part No. with ∗ are custom-made.
※The I.D. tolerance after press fitting is for reference only.
※I.D. ϕ6~ϕ45 are shown on pages 185 to 186.

SPBL Oiles 500SP1 SL4 Bushings

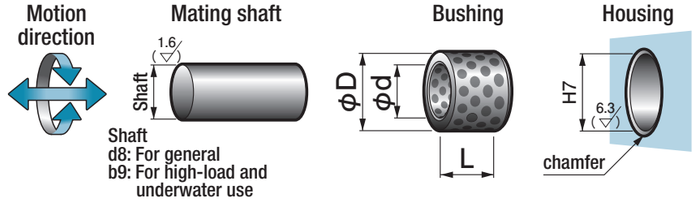
General • Underwater

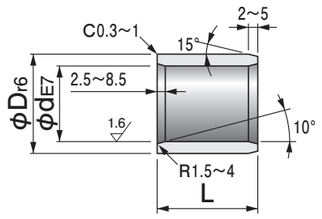
RoHS2 ELV



Specify Part No. by required I.D., O.D. and Length.
(e.g.) I.D. is 60mm, O.D. is 75mm, and length is 80mm.

SPBL - 607580
Part No.





- Applicable to rotational, oscillating, and reciprocating motion.
- Be sure to apply grease supplied with the product to the inner sliding surface before assembling the bearing. Run in the bearing.
- May be used over the maximum allowable speed or maximum allowable PV value in short-time intermittent operations. Inquire us in such a case.
- Use a stainless steel or chrome-plated (30μm or more) mating shaft when using the product in water, in a water-splashed place, etc.
- Use a mating shaft made of high-grade stainless steel with higher corrosion resistance or plated with thicker chrome when using the product in severe corrosive conditions. Supply grease for rust prevention.
- Provide the bushing with a set screw when using the product for high loads.
- Usable without the need for lubrication in the air and water. Use lithium grease with extreme pressure additive if greasing is required.

※Operating Temperature Range: −40～ +80˚C (−40～ +176˚F)

Solid Lubricant : SL464 (refer to page 34)

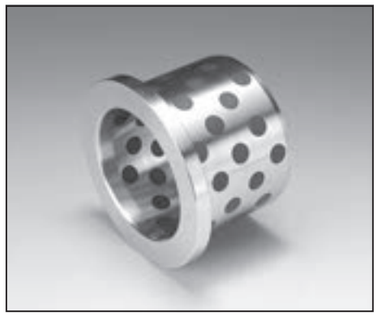
I.D.		O.D.		Length L Tolerance $^{-0.1}_{-0.3}$								
φd	Tolerance	φD	Tolerance	20	25	30	35	40	50	60	70	80
12	+0.050 +0.032	18	+0.034 +0.023	121820								
15	+0.050 +0.032	21	+0.041 +0.028	152120								
16	+0.050 +0.032	22	+0.041 +0.028	162220		162230						
18	+0.050 +0.032	24	+0.041 +0.028	182420								
20	+0.061 +0.040	30	+0.041 +0.028	203020		203030		203040				
25	+0.061 +0.040	35	+0.050 +0.034	253520	253525	253530		253540	253550			
30	+0.061 +0.040	40	+0.050 +0.034	304020	304025	304030		304040	304050			
35	+0.075 +0.050	45	+0.050 +0.034	354520		354530	354535	354540	354550	354560		
40	+0.075 +0.050	50	+0.050 +0.034			405030		405040	405050	405060		
40	+0.075 +0.050	55	+0.060 +0.041					405540	405550	405560		
45	+0.075 +0.050	60	+0.060 +0.041			456030			456050	456060		
50	+0.075 +0.050	60	+0.060 +0.041					506040	506050	506060		
50	+0.075 +0.050	65	+0.060 +0.041					506540	506550	506560	506570	
55	+0.090 +0.060	70	+0.062 +0.043					557040		557060	557070	
60	+0.090 +0.060	75	+0.062 +0.043						607550	607560	607570	607580
65	+0.090 +0.060	80	+0.062 +0.043							658060	658070	658080
70	+0.090 +0.060	90	+0.073 +0.051							709060	709070	709080
75	+0.090 +0.060	95	+0.073 +0.051								759570	
80	+0.090 +0.060	100	+0.073 +0.051							8010060		8010080
90	+0.107 +0.072	110	+0.076 +0.054							9011060		9011080
100	+0.107 +0.072	120	+0.076 +0.054							10012060		10012080
110	+0.107 +0.072	130	+0.088 +0.063									
120	+0.107 +0.072	140	+0.088 +0.063									12014080
130	+0.125 +0.085	150	+0.090 +0.065									
140	+0.125 +0.085	160	+0.090 +0.065									
150	+0.125 +0.085	170	+0.093 +0.068									
160	+0.125 +0.085	180	+0.093 +0.068									
170	+0.125 +0.085	190	+0.106 +0.077									
180	+0.125 +0.085	200	+0.106 +0.077									
190	+0.146 +0.100	210	+0.109 +0.080									
200	+0.146 +0.100	230	+0.113 +0.084									

Length L Tolerance $^{-0.1}_{-0.3}$								I.D. tolerance after press fitting (reference)	I.D.
90	100	110	120	130	140	150	200		φd
								+0.031 +0.013	12
								+0.026 +0.008	15
								+0.026 +0.008	16
								+0.026 +0.008	18
								+0.037 +0.016	20
								+0.032 +0.011	25
								+0.032 +0.011	30
								+0.046 +0.021	35
								+0.046 +0.021	40
								+0.040 +0.015	40
								+0.040 +0.015	45
								+0.040 +0.015	50
								+0.040 +0.015	50
								+0.053 +0.023	55
								+0.053 +0.023	60
								+0.053 +0.023	65
709090	7090100							+0.046 +0.016	70
	7595100							+0.046 +0.016	75
8010090	80100100	80100110						+0.046 +0.016	80
9011090	90110100							+0.060 +0.025	90
	100120100		100120120					+0.060 +0.025	100
	110130100	110130110						+0.052 +0.017	110
	120140100		120140120					+0.052 +0.017	120
	130150100			130150130		130150150		+0.068 +0.028	130
	140160100				140160140			+0.068 +0.028	140
	150170100					150170150		+0.065 +0.025	150
	160180100					160180150		+0.065 +0.025	160
	∗170190100					∗170190150		+0.065 +0.025	170
	∗180200100					∗180200150		+0.065 +0.025	180
	∗190210100					∗190210150		+0.078 +0.032	190
						∗200230150	∗200230200	+0.078 +0.032	200

※Part No. with ∗ are made-to-order.
※The I.D. tolerance after press fitting is for reference only.

SPF Oiles 500SP1 SL1 Flange Bushings

RoHS2 ELV

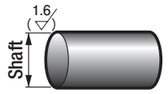


Specify Part No. by required I.D. and Length.
(e.g.) I.D. is 50mm and length is 30mm.

SPF - 5030
Part No.

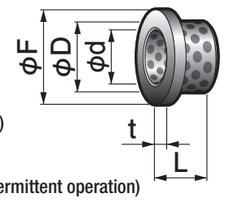
Motion direction

Mating shaft

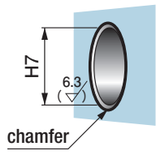


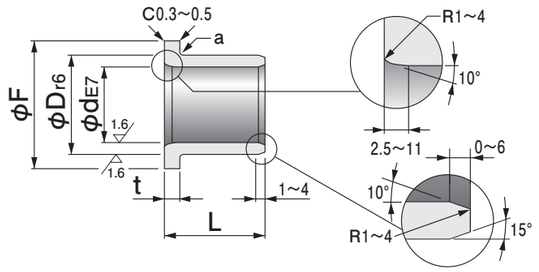
Shaft
d8: For general (high-load)
e7: For general (low-load)
f7: For high accuracy
g6: For high accuracy (intermittent operation)

Flange bushing



Housing





a: Chamfering for under flange

ϕd	~18	~65	~160
a	R0.3	R0.5	R1

(mm)

★ 4 model number of SPF-6040/6050/6080/6367 is R1.

- Applicable to rotational, oscillating, and reciprocating motion.
- Flange surface is not subject to a thrust load as no lubricant is embedded.
- Do not use this under water.
- 31.5mm I.D. and 63mm I.D bushing can be used as an intermediate trunnion bushing for hydraulic cylinders.

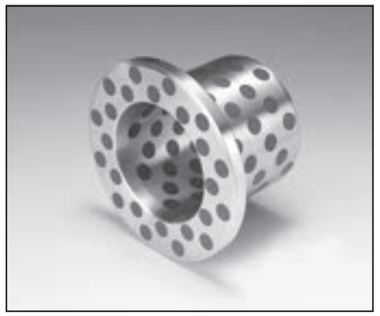
I.D.		O.D.		Flange				Length L Tolerance $^{-0.1}_{-0.3}$								I.D. tolerance after press fitting (reference)	I.D.
ϕd	Tolerance	ϕD	Tolerance	ϕF	Tolerance	t	Tolerance	10	12	15	17	18	20	23	25		ϕd
6	+0.032 +0.020	10	+0.028 +0.019	16	0 −0.3	2	0 −0.1	0610	0612							+0.016 +0.004	6
8	+0.040 +0.025	12	+0.034 +0.023	20	0 −0.3	2	0 −0.1	0810	0812	0815						+0.021 +0.006	8
10	+0.040 +0.025	14	+0.034 +0.023	22	0 −0.3	2	0 −0.1	1010	1012	1015	1017		1020			+0.021 +0.006	10
12	+0.050 +0.032	18	+0.034 +0.023	25	0 −0.3	3	0 −0.1	1210	1212	1215			1220		1225	+0.031 +0.013	12
13	+0.050 +0.032	19	+0.041 +0.028	26	0 −0.3	3	0 −0.1	1310	1312	1315			1320		1325	+0.026 +0.008	13
14	+0.050 +0.032	20	+0.041 +0.028	27	0 −0.3	3	0 −0.1			1415			1420		1425	+0.026 +0.008	14
15	+0.050 +0.032	21	+0.041 +0.028	28	0 −0.3	3	0 −0.1	1510	1512	1515			1520		1525	+0.026 +0.008	15
16	+0.050 +0.032	22	+0.041 +0.028	29	0 −0.3	3	0 −0.1		1612	1615		1618	1620	1623	1625	+0.026 +0.008	16
18	+0.050 +0.032	24	+0.041 +0.028	32	0 −0.3	3	0 −0.1			1815			1820		1825	+0.026 +0.008	18
20	+0.061 +0.040	30	+0.041 +0.028	40	0 −0.3	5	0 −0.1			2015			2020		2025	+0.037 +0.016	20
25	+0.061 +0.040	35	+0.050 +0.034	45	0 −0.3	5	0 −0.1			2515			2520		2525	+0.032 +0.011	25
30	+0.061 +0.040	40	+0.050 +0.034	50	0 −0.3	5	0 −0.1						3020		3025	+0.032 +0.011	30
31.5	+0.075 +0.050	40	+0.050 +0.034	50	0 −0.3	5	0 −0.1						3120			+0.046 +0.021	31.5
35	+0.075 +0.050	45	+0.050 +0.034	60	0 −0.3	5	0 −0.1						3520		3525	+0.046 +0.021	35
40	+0.075 +0.050	50	+0.050 +0.034	65	0 −0.3	5	0 −0.1						4020		4025	+0.046 +0.021	40
45	+0.075 +0.050	55	+0.060 +0.041	70	0 −0.3	5	0 −0.1									+0.040 +0.015	45
50	+0.075 +0.050	60	+0.060 +0.041	75	0 −0.3	5	0 −0.1									+0.040 +0.015	50
55	+0.090 +0.060	65	+0.060 +0.041	80	0 −0.3	5	0 −0.1									+0.055 +0.025	55
60	+0.090 +0.060	75	+0.062 +0.043	90	0 −0.3	7.5	0 −0.1									+0.053 +0.023	60
63	+0.090 +0.060	75	+0.062 +0.043	85	0 −0.3	7.5	0 −0.1									+0.053 +0.023	63
65	+0.090 +0.060	80	+0.062 +0.043	95	0 −0.3	7.5	0 −0.1									+0.053 +0.023	65
70	+0.090 +0.060	85	+0.073 +0.051	105	0 −0.3	7.5	0 −0.1									+0.046 +0.016	70
75	+0.090 +0.060	90	+0.073 +0.051	110	0 −0.3	7.5	0 −0.1									+0.046 +0.016	75
80	+0.090 +0.060	100	+0.073 +0.051	120	0 −0.3	10	0 −0.1									+0.046 +0.016	80
90	+0.107 +0.072	110	+0.076 +0.054	130	0 −0.3	10	0 −0.1									+0.060 +0.025	90
100	+0.107 +0.072	120	+0.076 +0.054	150	0 −0.3	10	0 −0.1									+0.060 +0.025	100
120	+0.107 +0.072	140	+0.088 +0.063	170	0 −0.3	10	0 −0.1									+0.052 +0.017	120
130	+0.125 +0.085	150	+0.090 +0.065	180	0 −0.3	10	0 −0.1									+0.068 +0.028	130
140	+0.125 +0.085	160	+0.090 +0.065	190	0 −0.3	10	0 −0.1									+0.068 +0.028	140
150	+0.125 +0.085	170	+0.093 +0.068	200	0 −0.3	10	0 −0.1									+0.065 +0.025	150
160	+0.125 +0.085	180	+0.093 +0.068	210	0 −0.3	10	0 −0.1									+0.065 +0.025	160

Length L Tolerance $^{-0.1}_{-0.3}$									I.D. tolerance after press fitting (reference)	I.D.
30	35	40	50	60	67.5	80	100	120		ϕd
									+0.016 +0.004	6
									+0.021 +0.006	8
									+0.021 +0.006	10
1230									+0.031 +0.013	12
1330									+0.026 +0.008	13
									+0.026 +0.008	14
1530									+0.026 +0.008	15
1630	1635	1640							+0.026 +0.008	16
1830	1835	1840							+0.026 +0.008	18
2030	2035	2040							+0.037 +0.016	20
2530	2535	2540	2550						+0.032 +0.011	25
3030	3035	3040	3050						+0.032 +0.011	30
3130	3135	3140							+0.046 +0.021	31.5
3530	3535	3540	3550						+0.046 +0.021	35
4030	4035	4040	4050						+0.046 +0.021	40
4530	4535	4540	4550	4560					+0.040 +0.015	45
5030	5035	5040	5050	5060					+0.040 +0.015	50
		5540		5560					+0.055 +0.025	55
		★6040	★6050	6060		★6080			+0.053 +0.023	60
					★6367				+0.053 +0.023	63
				6560					+0.053 +0.023	65
			7050			7080			+0.046 +0.016	70
				7560					+0.046 +0.016	75
				8060		8080	80100		+0.046 +0.016	80
				9060		9080			+0.060 +0.025	90
						10080	100100		+0.060 +0.025	100
						12080	120100		+0.052 +0.017	120
						∗13080	∗130100		+0.068 +0.028	130
						∗14080	∗140100		+0.068 +0.028	140
							∗150100	∗150120	+0.065 +0.025	150
							∗160100	∗160120	+0.065 +0.025	160

※Part No. with ∗ are made-to-order.
※The I.D. tolerance after press fitting is for reference only.

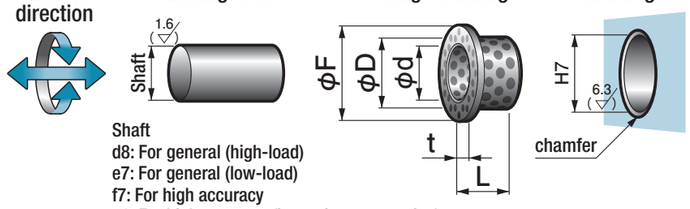
SPFG Oiles 500SP1 SL1 Thrust Bushings

RoHS2 ELV

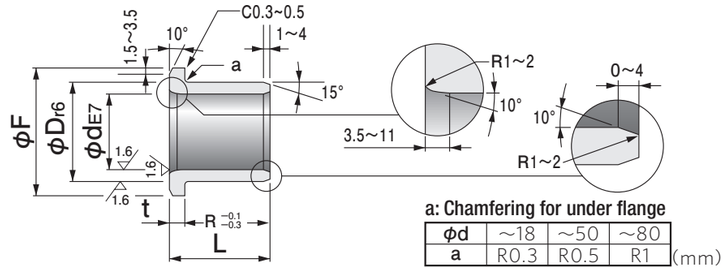


Specify Part No. by required I.D. and Length.
(e.g.) I.D. is 35mm and length is 25mm.

SPFG - 3525
Part No.



Shaft
d8: For general (high-load)
e7: For general (low-load)
f7: For high accuracy
g6: For high accuracy (intermittent operation)



a: Chamfering for under flange

ϕd	~18	~50	~80
a	R0.3	R0.5	R1

(mm)

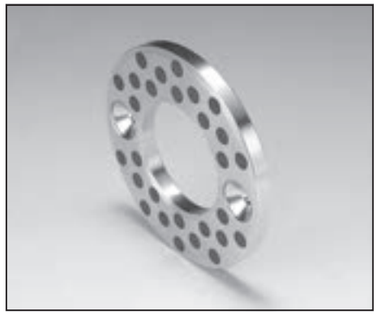
- Applicable to rotational, oscillating, and reciprocating motion.
- This bushing can be subject to both radial-journal and thrust load.
- Improve machining by more accurate flange thickness.

I.D.		O.D.		Flange				Length L												I.D. tolerance after press fitting (reference)	I.D.
ϕd	Tolerance	ϕD	Tolerance	ϕF	Tolerance	t	Tolerance	11	13	18	20	23	25	27	35	37	38	47	48	50	58	60	68	80	90		ϕd
6	+0.032 +0.020	10	+0.028 +0.019	20	0 −0.3	3	0 −0.03	**0611**																		+0.016 +0.004	6
8	+0.040 +0.025	12	+0.034 +0.023	25	0 −0.3	3	0 −0.03		**0813**																	+0.021 +0.006	8
10	+0.040 +0.025	14	+0.034 +0.023	25	0 −0.3	3	0 −0.03		**1013**	**1018**																+0.021 +0.006	10
12	+0.050 +0.032	18	+0.034 +0.023	30	0 −0.3	3	0 −0.03	**1211**		**1218**		**1223**														+0.031 +0.013	12
13	+0.050 +0.032	19	+0.041 +0.028	30	0 −0.3	3	0 −0.03		**1313**	**1318**		**1323**														+0.026 +0.008	13
15	+0.050 +0.032	21	+0.041 +0.028	35	0 −0.3	3	0 −0.03		**1513**	**1518**		**1523**														+0.026 +0.008	15
16	+0.050 +0.032	22	+0.041 +0.028	35	0 −0.3	3	0 −0.03		**1613**	**1618**		**1623**														+0.026 +0.008	16
18	+0.050 +0.032	24	+0.041 +0.028	40	0 −0.3	3	0 −0.03			**1818**		**1823**														+0.026 +0.008	18
20	+0.061 +0.040	28	+0.041 +0.028	45	0 −0.3	5	0 −0.03				**2020**		**2025**													+0.037 +0.016	20
25	+0.061 +0.040	33	+0.050 +0.034	50	0 −0.3	5	0 −0.03				**2520**		**2525**													+0.032 +0.011	25
30	+0.061 +0.040	38	+0.050 +0.034	55	0 −0.3	5	0 −0.03				**3020**		**3025**		**3035**											+0.032 +0.011	30
35	+0.075 +0.050	44	+0.050 +0.034	65	0 −0.3	5	0 −0.03				**3520**		**3525**		**3535**											+0.046 +0.021	35
40	+0.075 +0.050	50	+0.050 +0.034	70	0 −0.3	7	0 −0.03							**4027**		**4037**		**4047**								+0.046 +0.021	40
50	+0.075 +0.050	62	+0.060 +0.041	90	0 −0.3	8	0 −0.04										**5038**		**5048**		**5058**					+0.040 +0.015	50
60	+0.090 +0.060	74	+0.062 +0.043	110	0 −0.3	8	0 −0.04										**6038**		**6048**		**6058**		**6068**			+0.053 +0.023	60
70	+0.090 +0.060	85	+0.073 +0.051	120	0 −0.3	10	0 −0.04													**7050**				**7080**		+0.046 +0.016	70
80	+0.090 +0.060	96	+0.073 +0.051	140	0 −0.3	10	0 −0.04															**8060**			**8090**	+0.046 +0.016	80

※The I.D. tolerance after press fitting is for reference only.

SPW Oiles 500SP1 SL1 Thrust Washers

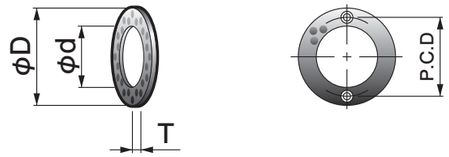
RoHS2 ELV



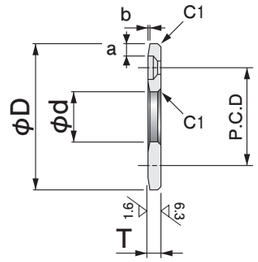
- May be combined with the SPB.
- See the description of the SPB for combination. (Pages 185 to 188)
- The products with the N marks at the end of the part numbers have no mounting holes.

Specify Part No. by required I.D. and thickness.
(e.g.) I.D. is 30.2mm and thickness is 5mm.

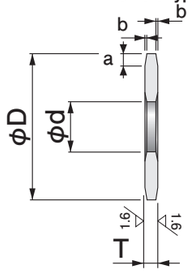
SPW - 3005
Part No.



Countersink type



No hole type



a b: Chamfering for I.D. and O.D.

φd	~10.2	~18.2	~35.2	~45.2	~55.3	~100.5	120.5
a	1.5	2	2.5	3	4	5	4
b	0.3	0.4	0.4	0.5	0.6	0.8	0.8

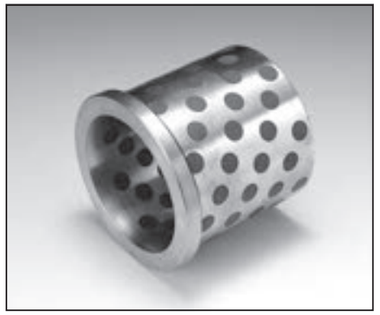
(mm)

Part No.	I.D.		O.D.	Thickness		Mounting hole		
	φd	Tolerance	φD	T	Tolerance	P.C.D	No. of holes	Countersink screw size
SPW-0603	6.2	+0.2 +0.1	25	3	0 −0.1	15	2	M3
SPW-0803	8.2	+0.2 +0.1	28	3	0 −0.1	18	2	M3
SPW-1003	10.2	+0.2 +0.1	30	3	0 −0.1	20	2	M3
SPW-1203	12.2	+0.2 +0.1	40	3	0 −0.1	28	2	M3
SPW-1203N	12.2	+0.2 +0.1	40	3	0 −0.1	no hole		
SPW-1303	13.2	+0.2 +0.1	40	3	0 −0.1	28	2	M3
SPW-1403	14.2	+0.2 +0.1	40	3	0 −0.1	28	2	M3
SPW-1503	15.2	+0.2 +0.1	50	3	0 −0.1	35	2	M3
SPW-1603	16.2	+0.2 +0.1	50	3	0 −0.1	35	2	M3
SPW-1603N	16.2	+0.2 +0.1	50	3	0 −0.1	no hole		
SPW-1803	18.2	+0.2 +0.1	50	3	0 −0.1	35	2	M3
SPW-2005	20.2	+0.2 +0.1	50	5	0 −0.1	35	2	M5
SPW-2505	25.2	+0.2 +0.1	55	5	0 −0.1	40	2	M5
SPW-2505N	25.2	+0.2 +0.1	55	5	0 −0.1	no hole		
SPW-3005	30.2	+0.2 +0.1	60	5	0 −0.1	45	2	M5
SPW-3005N	30.2	+0.2 +0.1	60	5	0 −0.1	no hole		
SPW-3505	35.2	+0.2 +0.1	70	5	0 −0.1	50	2	M5

Part No.	I.D.		O.D.	Thickness		Mounting hole		
	φd	Tolerance	φD	T	Tolerance	P.C.D	No. of holes	Countersink screw size
SPW-4007	40.2	+0.2 +0.1	80	7	0 −0.1	60	2	M6
SPW-4507	45.2	+0.2 +0.1	90	7	0 −0.1	70	2	M6
SPW-5008	50.3	+0.3 +0.1	100	8	0 −0.1	75	4	M6
SPW-5508	55.3	+0.3 +0.1	110	8	0 −0.1	85	4	M6
SPW-6008	60.3	+0.3 +0.1	120	8	0 −0.1	90	4	M8
SPW-6508	65.3	+0.3 +0.1	125	8	0 −0.1	95	4	M8
SPW-7010	70.3	+0.3 +0.1	130	10	0 −0.1	100	4	M8
SPW-7510	75.3	+0.3 +0.1	140	10	0 −0.1	110	4	M8
SPW-8010	80.3	+0.3 +0.1	150	10	0 −0.1	120	4	M8
SPW-9010	90.5	+0.3 +0.1	170	10	0 −0.1	140	4	M10
SPW-10010	100.5	+0.3 +0.1	190	10	0 −0.1	160	4	M10
SPW-12010	120.5	+0.3 +0.1	200	10	0 −0.1	175	4	M10

SGF Oiles 500SP1 SL1 Flange Guide Bushings

RoHS2 ELV

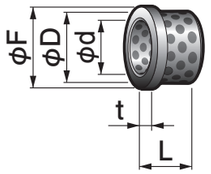


Specify Part No. by required I.D., O.D. and Length.
(e.g.) I.D. is 65mm, O.D. is 80mm, and length is 80mm.

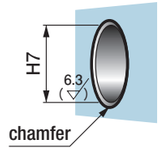
SGF - 658080
Part No.

Motion direction

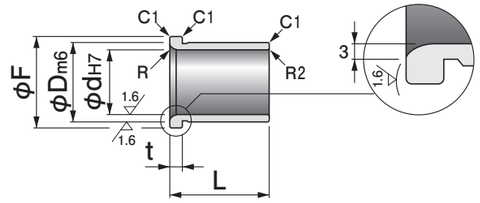
Flange bushing



Housing



- Applicable to rotation, oscillation, and reciprocating motion.
- It is recommended to use a set screw to prevent dislocation.



Part No.	I.D.		O.D.		Flnage		Length		R
	φd	Tolerance	φD	Tolerance	φF	t	L	Tolerance	
SGF-253540	25	+0.021 0	35	+0.025 +0.009	45	7	40	0 −0.3	10
SGF-304050	30	+0.021 0	40	+0.025 +0.009	50	10	50	0 −0.3	20
SGF-405570	40	+0.025 0	55	+0.030 +0.011	65	10	70	0 −0.3	20
SGF-506580	50	+0.025 0	65	+0.030 +0.011	75	10	80	0 −0.3	20
SGF-607580	60	+0.030 0	75	+0.030 +0.011	85	10	80	0 −0.3	20
SGF-658080	65	+0.030 0	80	+0.030 +0.011	90	10	80	0 −0.3	20
SGF-6580120	65	+0.030 0	80	+0.030 +0.011	90	10	120	0 −0.3	20
SGF-80100100	80	+0.030 0	100	+0.035 +0.013	110	10	100	0 −0.3	20
SGF-80100140	80	+0.030 0	100	+0.035 +0.013	110	10	140	0 −0.3	20
SGF-100120100	100	+0.035 0	120	+0.035 +0.013	130	10	100	0 −0.3	20
SGF-100120140	100	+0.035 0	120	+0.035 +0.013	130	10	140	0 −0.3	20

SGB Oiles 500SP1 SL1 Guide Bushings

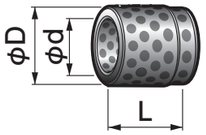
RoHS2 ELV

Specify Part No. by required I.D., O.D. and Length.
(e.g.) I.D. is 60mm, O.D. is 80mm, and length is 90mm.

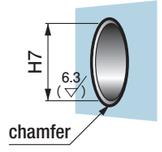
SGB - 608090
Part No.

Motion direction

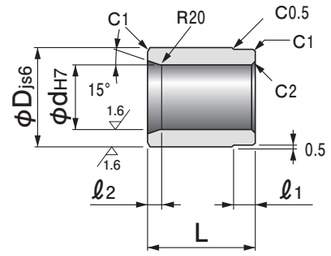
Bushing



Housing



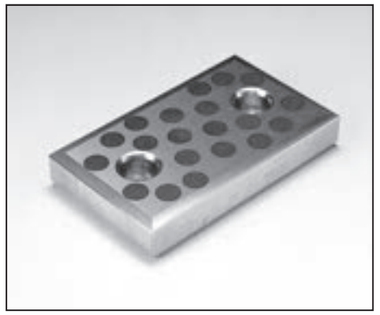
- Applicable to reciprocating motion.
- It is recommended to use a set screw to prevent dislocation.



Part No.	I.D.		O.D.		Length		ℓ1	ℓ2
	φd	Tolerance	φD	Tolerance	L	Tolerance		
SGB-254040	25	+0.021 0	40	±0.008	40	0 −0.2	10	5
SGB-305050	30	+0.021 0	50	±0.008	50	0 −0.2	10	5
SGB-356055	35	+0.025 0	60	±0.0095	55	0 −0.2	15	5
SGB-406060	40	+0.025 0	60	±0.0095	60	0 −0.2	10	5
SGB-507075	50	+0.025 0	70	±0.0095	75	0 −0.2	15	10
SGB-608090	60	+0.030 0	80	±0.0095	90	0 −0.2	20	10
SGB-80100120	80	+0.030 0	100	±0.011	120	0 −0.2	25	10
SGB-100120150	100	+0.035 0	120	±0.011	150	0 −0.2	25	10
SGB-120140180	120	+0.035 0	140	±0.0125	180	0 −0.2	25	10

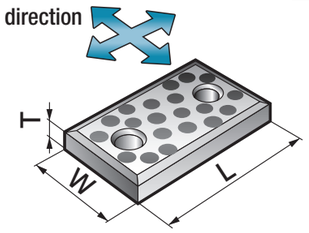
SWP Oiles 500SP1 SL1 Wear Plates

RoHS2 ELV

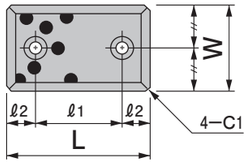


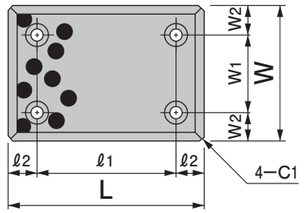
Specify Part No. by required width and length.
(e.g.) Width is 75mm and length is 200mm. **SWP - 75200**
Part No.

Motion direction

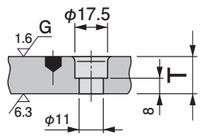


● Motion direction: width and length direction



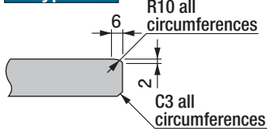


Cross-section

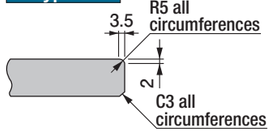


Chamfering

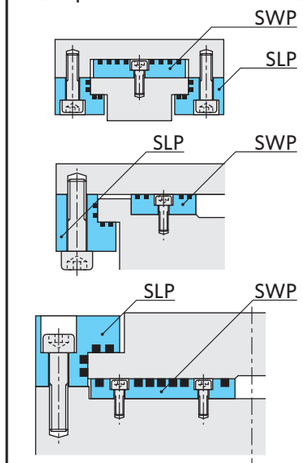
Type A



Type B



■ Example of combination use with SLP.

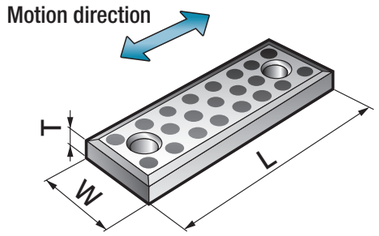


Part No.	Width		Length		Thickness		Mounting hole intervals						Attach bolts		Chamfering
	W	Tolerance	L	Tolerance	T	Tolerance	W_1	Tolerance	W_2	ℓ_1	Tolerance	ℓ_2	Type	Qty	
SWP-4875	48	−0.1 −0.3	75	−0.1 −0.3	20	±0.025	—	—	—	45	±0.2	15	M10 Hexagon socket head	2	B
SWP-48100	48	−0.1 −0.3	100	−0.1 −0.3	20	±0.025	—	—	—	50	±0.2	25	M10 Hexagon socket head	2	B
SWP-48125	48	−0.1 −0.3	125	−0.1 −0.3	20	±0.025	—	—	—	75	±0.2	25	M10 Hexagon socket head	2	B
SWP-48150	48	−0.1 −0.3	150	−0.1 −0.3	20	±0.025	—	—	—	100	±0.2	25	M10 Hexagon socket head	2	B
SWP-7575B	75	−0.1 −0.3	75	−0.1 −0.3	20	±0.025	—	—	—	25	±0.2	25	M10 Hexagon socket head	2	A
SWP-75100B	75	−0.1 −0.3	100	−0.1 −0.3	20	±0.025	—	—	—	50	±0.2	25	M10 Hexagon socket head	2	A
SWP-75125	75	−0.1 −0.3	125	−0.1 −0.3	20	±0.025	—	—	—	75	±0.2	25	M10 Hexagon socket head	2	A
SWP-75150	75	−0.1 −0.3	150	−0.1 −0.3	20	±0.025	—	—	—	100	±0.2	25	M10 Hexagon socket head	2	A
SWP-75200	75	−0.1 −0.3	200	−0.1 −0.3	20	±0.025	—	—	—	150	±0.2	25	M10 Hexagon socket head	2	A
SWP-100100	100	−0.1 −0.3	100	−0.1 −0.3	20	±0.025	50	±0.2	25	50	±0.2	25	M10 Hexagon socket head	4	A
SWP-100125	100	−0.1 −0.3	125	−0.1 −0.3	20	±0.025	50	±0.2	25	75	±0.2	25	M10 Hexagon socket head	4	A
SWP-100150	100	−0.1 −0.3	150	−0.1 −0.3	20	±0.025	50	±0.2	25	100	±0.2	25	M10 Hexagon socket head	4	A
SWP-100200	100	−0.1 −0.3	200	−0.1 −0.3	20	±0.025	50	±0.2	25	150	±0.2	25	M10 Hexagon socket head	4	A
SWP-100250	100	−0.1 −0.3	250	−0.1 −0.3	20	±0.025	50	±0.2	25	200	±0.2	25	M10 Hexagon socket head	4	A
SWP-125150	125	−0.1 −0.3	150	−0.1 −0.3	20	±0.025	50	±0.2	37.5	100	±0.2	25	M10 Hexagon socket head	4	A
SWP-125200	125	−0.1 −0.3	200	−0.1 −0.3	20	±0.025	50	±0.2	37.5	150	±0.2	25	M10 Hexagon socket head	4	A
SWP-125250	125	−0.1 −0.3	250	−0.1 −0.3	20	±0.025	50	±0.2	37.5	200	±0.2	25	M10 Hexagon socket head	4	A
SWP-150150	150	−0.1 −0.3	150	−0.1 −0.3	20	±0.025	100	±0.2	25	100	±0.2	25	M10 Hexagon socket head	4	A
SWP-150200	150	−0.1 −0.3	200	−0.1 −0.3	20	±0.025	100	±0.2	25	150	±0.2	25	M10 Hexagon socket head	4	A
SWP-150250	150	−0.1 −0.3	250	−0.1 −0.3	20	±0.025	100	±0.2	25	200	±0.2	25	M10 Hexagon socket head	4	A

SFP Oiles 500SP1 SL1 Flat Plates

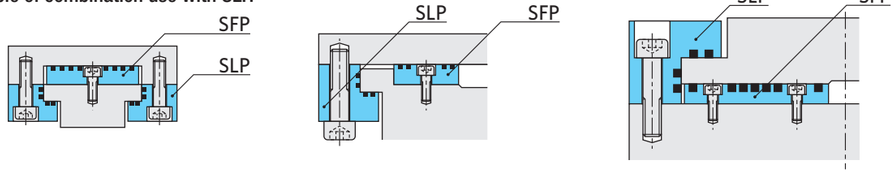
RoHS2 ELV

Specify Part No. by required width and length.
(e.g.) Width is 28mm and length is 150mm. **SFP - 28150**
Part No.

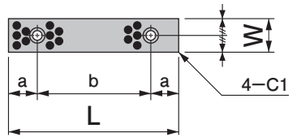


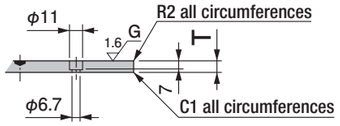
● Motion direction: length direction

■ Example of combination use with SLP.



W=18、28、38、48

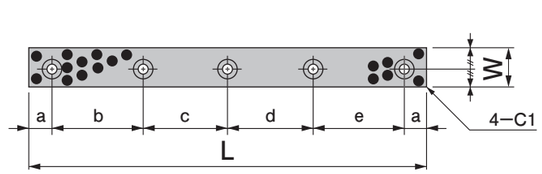


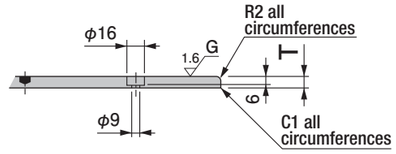


Cross-section

Part No.	Width	Length	Thickness		Hole intervals		Attach bolts	
	W	L	T	Toleramce	a	b	Type	Qty
SFP-1875	18	75	10	+0.04 +0.01	15	45	M6 Hexagon socket head	2
SFP-18100	18	100	10	+0.04 +0.01	25	50	M6 Hexagon socket head	2
SFP-18125	18	125	10	+0.04 +0.01	25	75	M6 Hexagon socket head	2
SFP-18150	18	150	10	+0.04 +0.01	25	100	M6 Hexagon socket head	2
SFP-2875	28	75	10	+0.04 +0.01	15	45	M6 Hexagon socket head	2
SFP-28100	28	100	10	+0.04 +0.01	25	50	M6 Hexagon socket head	2
SFP-28125	28	125	10	+0.04 +0.01	25	75	M6 Hexagon socket head	2
SFP-28150	28	150	10	+0.04 +0.01	25	100	M6 Hexagon socket head	2
SFP-3875	38	75	10	+0.04 +0.01	15	45	M6 Hexagon socket head	2
SFP-38100	38	100	10	+0.04 +0.01	25	50	M6 Hexagon socket head	2
SFP-38125	38	125	10	+0.04 +0.01	25	75	M6 Hexagon socket head	2
SFP-38150	38	150	10	+0.04 +0.01	25	100	M6 Hexagon socket head	2
SFP-4875	48	75	10	+0.04 +0.01	15	45	M6 Hexagon socket head	2
SFP-48100	48	100	10	+0.04 +0.01	25	50	M6 Hexagon socket head	2
SFP-48125	48	125	10	+0.04 +0.01	25	75	M6 Hexagon socket head	2
SFP-48150	48	150	10	+0.04 +0.01	25	100	M6 Hexagon socket head	2

W=35、50

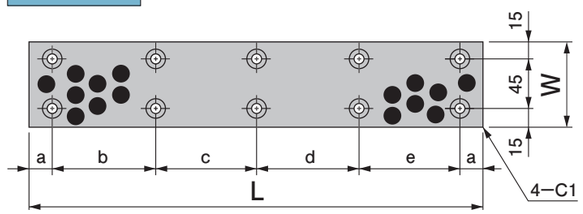


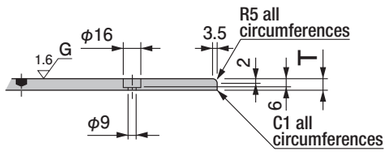


Cross-section

Part No.	Width	Length	Thickness		Hole intervals					Attach bolts	
	W	L	T	Toleramce	a	b	c	d	e	Type	Qty
SFP-35100	35	100	10	±0.025	20	60	—	—	—	M8 Flat head	2
SFP-35150	35	150	10	±0.025	20	55	55	—	—	M8 Flat head	3
SFP-35200	35	200	10	±0.025	20	55	50	55	—	M8 Flat head	4
SFP-35250	35	250	10	±0.025	20	70	70	70	—	M8 Flat head	4
SFP-35300	35	300	10	±0.025	20	65	65	65	65	M8 Flat head	5
SFP-35350	35	350	10	±0.025	20	80	75	75	80	M8 Flat head	5
SFP-50100	50	100	10	±0.025	20	60	—	—	—	M8 Flat head	2
SFP-50150	50	150	10	±0.025	20	55	55	—	—	M8 Flat head	3
SFP-50200	50	200	10	±0.025	20	55	50	55	—	M8 Flat head	4
SFP-50250	50	250	10	±0.025	20	70	70	70	—	M8 Flat head	4
SFP-50300	50	300	10	±0.025	20	65	65	65	65	M8 Flat head	5
SFP-50400	50	400	10	±0.025	20	90	90	90	90	M8 Flat head	5

W=75





Cross-section

Part No.	Width	Length	Thickness		Hole intervals					Attach bolts	
	W	L	T	Toleramce	a	b	c	d	e	Type	Qty
SFP-75150	75	150	10	±0.025	20	110	—	—	—	M8 Flat head	4
SFP-75200	75	200	10	±0.025	20	80	80	—	—	M8 Flat head	6
SFP-75250	75	250	10	±0.025	20	105	105	—	—	M8 Flat head	6
SFP-75300	75	300	10	±0.025	20	85	90	85	—	M8 Flat head	8
SFP-75400	75	400	10	±0.025	20	120	120	120	—	M8 Flat head	8
SFP-75500	75	500	10	±0.025	20	115	115	115	115	M8 Flat head	10

SLP Oiles 500SP1 SL1 L Type Plates

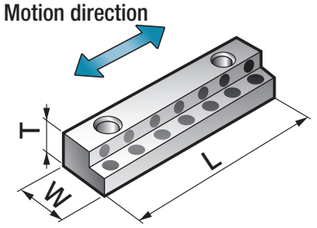
RoHS2 ELV

● Motion direction: length direction

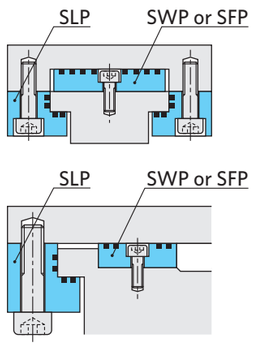
Specify Part No. by required width and length.
(e.g.) Width is 50mm and length is 300mm.

SLP - 50300A
Part No.

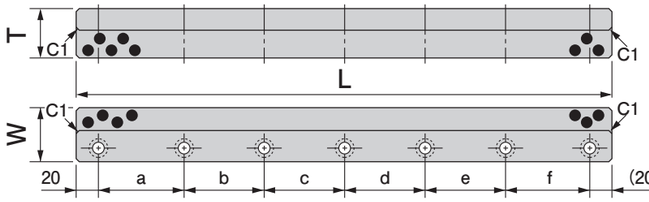
Motion direction

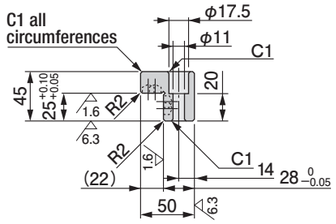


■ Example of combination use with SWP or SFP.



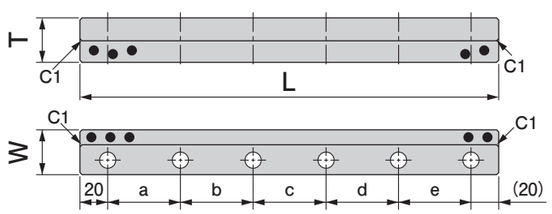
● Hexagonal socket head bolts are fitted.

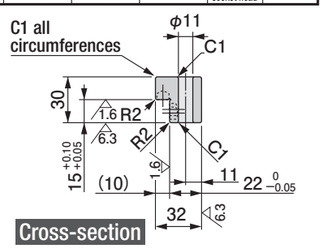




Cross-section

Part No.	Width	Length	Thickness	Hole intervals						Attach bolts	
	W	L	T	a	b	c	d	e	f	Type	Qty
SLP-50200A	50	200	45	55	50	55	—	—	—	M10 Hexagon socket head	4
SLP-50250A	50	250	45	70	70	70	—	—	—	M10 Hexagon socket head	4
SLP-50300A	50	300	45	65	65	65	65	—	—	M10 Hexagon socket head	5
SLP-50350A	50	350	45	80	75	75	80	—	—	M10 Hexagon socket head	5
SLP-50500A	50	500	45	80	75	75	75	75	80	M10 Hexagon socket head	7

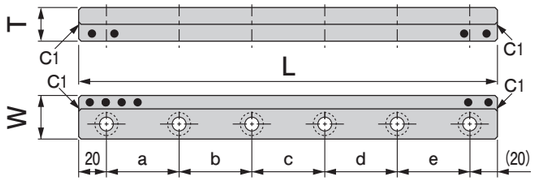


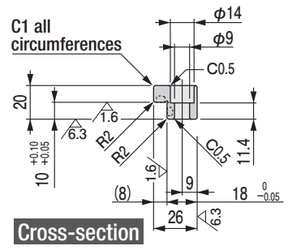


Cross-section

Part No.	Width	Length	Thickness	Hole intervals					Attach bolts	
	W	L	T	a	b	c	d	e	Type	Qty
SLP-32100B	32	100	30	60	—	—	—	—	M10	2
SLP-32150B	32	150	30	55	55	—	—	—	M10	3
SLP-32200B	32	200	30	55	50	55	—	—	M10	4
SLP-32250B	32	250	30	70	70	70	—	—	M10	4
SLP-32400B	32	400	30	75	70	70	70	75	M10	6

● Hexagonal socket head bolts are fitted.





Cross-section

Part No.	Width	Length	Thickness	Hole intervals						Attach bolts	
	W	L	T	a	b	c	d	e	(20)	Type	Qty
SLP-26100C	26	100	20	60	—	—	—	—		M8 Hexagon socket head	2
SLP-26150C	26	150	20	55	55	—	—	—		M8 Hexagon socket head	3
SLP-26200C	26	200	20	55	50	55	—	—		M8 Hexagon socket head	4
SLP-26400C	26	400	20	75	70	70	70	75		M8 Hexagon socket head	6

Cross-section

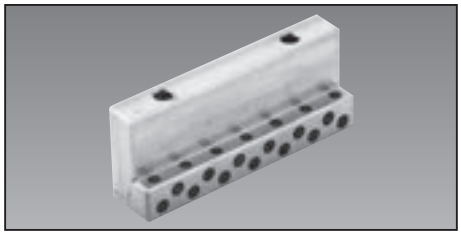
Part No.	Width	Length	Thickness	Hole intervals				Attach bolts	
	W	L	T	a	b	c	d	Type	Qty
SLP-2050	20	50	20	10	30	—	—	M8 Hexagon socket head	2
SLP-20100	20	100	20	20	60	—	—	M8 Hexagon socket head	2
SLP-20150	20	150	20	20	55	55	—	M8 Hexagon socket head	3
SLP-20200	20	200	20	20	55	50	55	M8 Hexagon socket head	4

Cross-section

Part No.	Width	Length	Thickness	Hole intervals				Attach bolts	
	W	L	T	a	b	c	d	Type	Qty
SLP-1550	15	50	15	10	30	—	—	M6 Hexagon socket head	2
SLP-15100	15	100	15	20	60	—	—	M6 Hexagon socket head	2
SLP-15150	15	150	15	20	55	55	—	M6 Hexagon socket head	3
SLP-15200	15	200	15	20	55	50	55	M6 Hexagon socket head	4

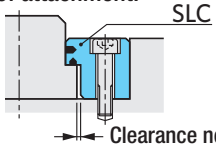
SLC Oiles 500SP1 SL1 Slide Guide Rails

RoHS2 ELV



● Motion direction: length direction

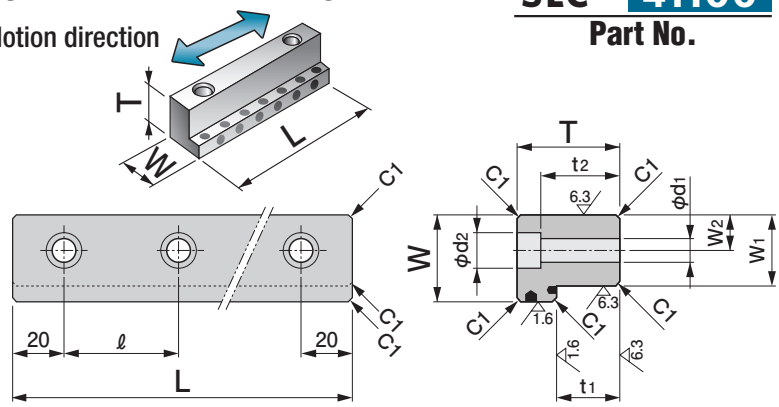
■ Example of attachment.



Specify Part No. by required thickness and length.
(e.g.) Thickness is 20mm and length is 100mm.

SLC - 41100
Part No.

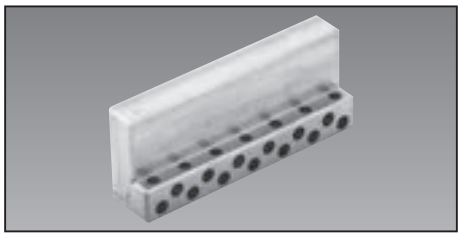
Motion direction



Part No.	Thickness	Length	Width											Attach bolts	
	T	L	W	Tolerance	t1	Tolerance	W1	Tolerance	ℓ	W2	φd1	φd2	t2	Type	Qty
SLC-30100	30	100	23	−0.01 −0.05	15	+0.05 +0.02	15	0 −0.05	60	7.5	7	11	23	M6 Hexagon socket head	2
SLC-30130	30	130	23	−0.01 −0.05	15	+0.05 +0.02	15	0 −0.05	90	7.5	7	11	23	M6 Hexagon socket head	2
SLC-30160	30	160	23	−0.01 −0.05	15	+0.05 +0.02	15	0 −0.05	60	7.5	7	11	23	M6 Hexagon socket head	3
SLC-30220	30	220	23	−0.01 −0.05	15	+0.05 +0.02	15	0 −0.05	60	7.5	7	11	23	M6 Hexagon socket head	4
SLC-41100	41	100	23	−0.01 −0.05	26	+0.05 +0.02	15	0 −0.05	60	7.5	7	11	34	M6 Hexagon socket head	2
SLC-41130	41	130	23	−0.01 −0.05	26	+0.05 +0.02	15	0 −0.05	90	7.5	7	11	34	M6 Hexagon socket head	2
SLC-41160	41	160	23	−0.01 −0.05	26	+0.05 +0.02	15	0 −0.05	60	7.5	7	11	34	M6 Hexagon socket head	3
SLC-41220	41	220	23	−0.01 −0.05	26	+0.05 +0.02	15	0 −0.05	60	7.5	7	11	34	M6 Hexagon socket head	4
SLC-56100	56	100	28	−0.01 −0.05	26	+0.05 +0.02	20	0 −0.05	60	10	9	14	47	M8 Hexagon socket head	2
SLC-56160	56	160	28	−0.01 −0.05	26	+0.05 +0.02	20	0 −0.05	60	10	9	14	47	M8 Hexagon socket head	3
SLC-56220	56	220	28	−0.01 −0.05	26	+0.05 +0.02	20	0 −0.05	60	10	9	14	47	M8 Hexagon socket head	4

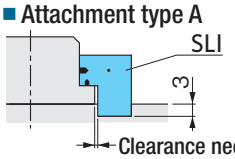
SLI Oiles 500SP1 SL1 Slide Guide Rails for Additional Machining

RoHS2 ELV

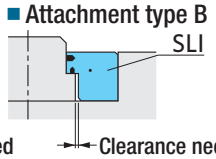


● This slide guide rail may be cut to the necessary dimension or bored for bolts.
● The movement direction is lengthwise.

■ Attachment type A



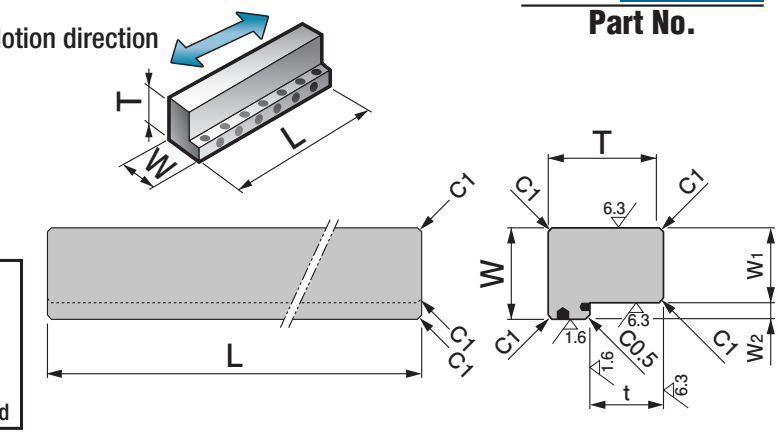
■ Attachment type B



Specify Part No. by required thickness and length.
(e.g.) Thickness is 20mm.

SLI - 20300
Part No.

Motion direction



Part No.	Thickness	Length	Width							Attachment type
	T	L	W	Tolerance	t	Tolerance	W1	Tolerance	W2	
SLI-20300	20	300	15	−0.01 −0.05	11	+0.05 +0.02	10	0 −0.05	5	A
SLI-25300	25	300	23	−0.01 −0.05	10	+0.05 +0.02	15	0 −0.05	8	B