

Ball Screw

SBC Precision Rolled Ball Screw

Type

SBC Precision Rolled Ball Screws are available in a variety of shaft diameters from Ø6mm to Ømm and a variety of Leads from 1mm to 40mm. Screws are available in P5 or T7 or both precision grades and lengths up to 7000mm depending on the particular screw.



STK Precision Rolled Ball Screw



SLK Long Lead Rolled Ball Screw



MBS Miniature Rolled Ball Screw

Ball Screw shaft Model No.

Model No.	Diameter	Lead	Max. Length	Accuracy
RM0601T	06	01	900	T7
RM0801T	08	01	1200	T7
RM0802T	08	02	1200	T7
RM0802.5T	08	02.5	1200	T7
RM1002T	10	02	1200	T7
RM1004T	10	04	1200	T7
RM1204T	12	04	1400	T7
RM1205T	12	05	1400	T7
RM1210T	12	10	3000	T7
RM1520T	15	20	3000	T7
RM1605	15.6	05	3000	P5, T7
RM1610T	16	10	3600	T7
RM1616T	16	16	3600	T7
RM2005	19.6	05	4000	P5, T7
RM2010T	20	10	3000	T7
RM2020	19.6	20	4000	P5, T7
RM2505	24.6	05	5000	P5, T7
RM2510	24.6	10	5000	P5, T7
RM2525	24.6	25	5000	P5, T7
RM3205	31.6	05	6000	P5, T7
RM3210	31.6	10	6000	P5, T7
RM3220T	32	20	6000	T7
RM3232T	32	32	6000	T7
RM4005	39.6	05	6000	P5, T7
RM4010	39.6	10	6000	P5, T7
RM4020	39.6	20	6000	P5, T7
RM4040	39.6	40	6000	P5, T7
RM5010	49.5	10	6000	P5, T7
RM5020	49.5	20	6000	P5, T7
RM5050T	50	50	6000	T7
RM6310	62.5	10	6000	P5, T7
RM6010	79.5	10	7000	T7

* SBC follows DIN and JIS Standards.

DIN Standard	JIS Standard
P5	C5
T7	C7

Ball Screw

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Ordering Example

[Nut Only Part Numbers]

32 20 SLK - S
 [1] [2] [3] [4]

- [1] Diameter
- [2] Lead
- [3] Nut Type : STK, SLK
- [4] Preload : S (Clearance Type)

- ※ MBS type must be ordered as a screw and nut assembly.
- ※ When ordering only a nut, the preload is only S type (Clearance type).

[Screw Shaft Only Part Numbers]

RM 3220T - 1500L - T7
 [1] [2] [3]

- [1] Model No.
- [2] Screw shaft length
- [3] Accuracy
- ※ Refer to the specifications for the Model No.
- ※ Individual screw shafts are only available in the T7 precision grade.
- ※ MBS type must be ordered as a screw and nut assembly.

[Nut and Screw Assembly Part Numbers]

3220 SLK - A - 1 - 1300 / 1500 - T7 - R
 [1] [2] [3] [4] [5] [6] [7]

- [1] Model No. : STK, SLK, MBS
- [2] Preload : S (Clearance Type), A (Non-backlash Type)
- [3] Nut Quantity : Nut Quantity on Screw shaft
- [4] Thread Length : No Symbol (No processing)
- [5] Total Length
- [6] Accuracy : P5, T7
- [7] Surface treatment : No Symbol (Standard), R (Surface treatment)

- ※ A screw-nut assembly is recommended if high accuracy or rigidity is required.
- ※ For surface treatment, mark the type of surface treatment.
- ※ If end machining is required, please attach a drawing.
- ※ Refer to the specifications for the Accuracy.
- ※ MBS type can only be ordered as a screw-nut assembly.

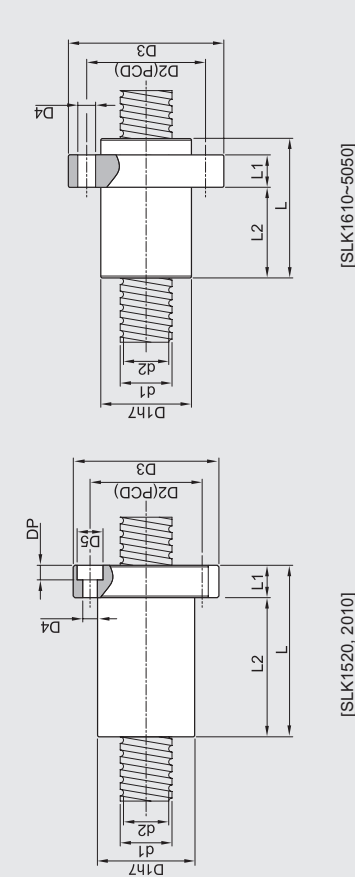
Ball Screw

SBC Precision Rolled Ball Screw

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SBC Precision Rolled Ball Screw

SLK Long Lead Rolled Ball Screw

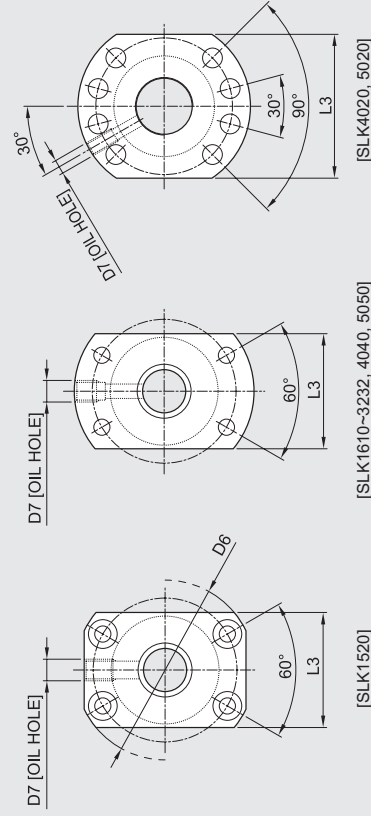


Model No.	d1 (Nominal diameter)	Ph (Lead)	do (Ball circle diameter)	Da (Ball diameter)	d2 (Root diameter)	i (No. of circuits)	D1	D2 (PCD)	D3	D4
SLK 1520	15	20	15.5	3.175	12.4	1.5x1	34	45	50	6
SLK 1610	15.9	10	16.6	3.175	13.4	3x1	34	45	57	5.5
SLKN 1616	15.9	16	16.6	3.175	13.4	1.8x2	32	42	53	4.5
SLKN 2010	20	10	21	3.969	17	2x1	46	59	74	6.6
SLK 2020	19.6	20	20	3.5	16.7	1.8x2	39	50	62	5.5
SLK 2525	24.6	25	25	3.5	21.7	1.8x2	47	60	74	6.6
SLK 3220	32	20	32.7	3.969	28.7	3x1	50	65	80	9
SLKN 3232	32	32	33	4.762	28.2	1.8x2	58	74	92	9
SLK 4020	39.6	20	40	5.556	35.2	3x1	63	78	93	9
SLK 4040	39.6	40	40	7.144	34	1.8x2	73	93	114	11
SLK 5020	49.5	20	50	6.35	44.6	5x1	75	93	110	11
SLK 5050	50	50	52.2	7.938	44.3	1.8x2	90	112	135	14

① Ca (Basic Dynamic load rating), Coa (Basic static load rating)

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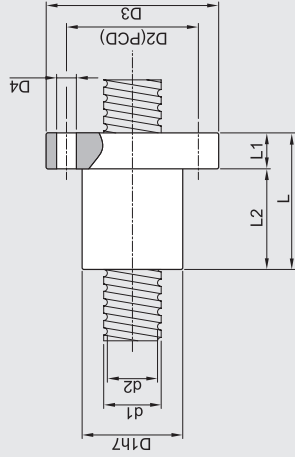
(Unit : mm)

D5	DP	D6	D7	L	L1	L2	L3	Ca [kN]	Coa [kN]	Max. Length
-	-	55	M4x0.7	57	7	50	34	4.56	7.23	3000
-	-	-	M6x1	48	10	27.5	40	7	12	3600
-	-	-	M6x1	48	10	27.5	38	7.1	14	3600
11	5.5	-	M6x1	54	13	41	46	12.2	15.2	3000
-	-	-	M6x1	55	10	34	46	11.5	17.5	4000
-	-	-	M6x1	64	12	40.8	56	13	22.6	5000
-	-	-	M6x1	78	13	45	62	20.9	57.7	6000
-	-	-	M6x1	82	15	53	68	17.2	53.9	6000
-	-	-	M8x1	82	15	47.5	70	52.2	103.6	6000
-	-	-	M8x1	99	17	63	84	59.7	108.9	6000
-	-	-	M8x1	120	18	80	85	78.8	188.7	6000
-	-	-	M6x1	123	20	81.5	92	50	135.3	6000

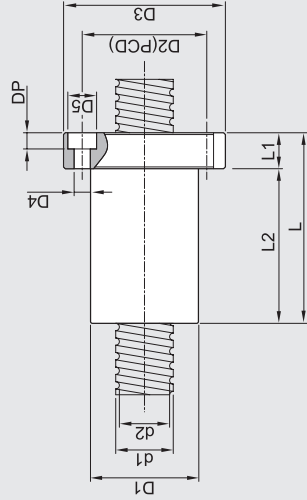
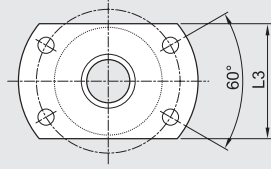
Ball Screw

SBC Precision Rolled Ball Screw

MBS Miniature Rolled Ball Screw



[MBS0601~1205]



[MBS1210]

Model No.	d1 (Nominal diameter)	Ph (Lead)	do (Ball circle diameter)	Da (Ball diameter)	d2 (Root diameter)	i (No. of circuits)	D1	D2 (PCD)	D3	D4
MBS 0601	6	1	6.3	0.8	5.5	3x1	13	21.5	27	3.4
MBS 0801	8	1	8.2	0.8	7.4	4x1	16	24	30	3.4
MBS 0802	8	2	8.4	1.2	7.2	3x1	16	24	30	3.4
MBS 0802.5	8	2.5	8.4	1.2	7.2	2.5x1	20	30	38	4.5
MBS 1002	10	2	10.4	1.2	8.4	3x1	18	27	35	4.5
MBS 1004	10	4	10.6	2	8.6	3x1	26	36	46	4.5
MBS 1204	12	4	12.4	2.381	10	3.5x1	28	39	48	5.5
MBS 1205	12	5	12.4	2	10.4	3.5x1	28	39	48	5.5
MBS 1210	12	10	12	2	10	2x1	30	40	45	4.5

D5	DP	D6	D7	L	L1	L2	L3	Ca [kN]	Coa [kN]	Max. Length
-	-	-	-	15	3.5	11.5	17	0.71	1.18	900
-	-	-	-	16	4	12	18	0.95	1.91	1200
-	-	-	-	16	4	12	18	1.13	1.87	1200
-	-	-	-	21	5	16	23	1.48	2.27	1200
-	-	-	-	28	5	23	22	1.81	2.99	1200
-	-	-	-	34	10	24	28	3.87	5.78	1200
-	-	-	-	30	6	24	30	4.16	7.23	1400
-	-	-	-	35	6	29	30	6.49	10.15	1400
8	4.5	50	M6x1	40	10	30	32	2.5	3.59	3000

(Unit : mm)

- ① Ca (Basic Dynamic load rating), Coa (Basic static load rating)
- ② MBS0601~1205 do not contain a seal. It is necessary to use a dust-prevention device.

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DIN Standard SBC Precision Rolled Ball Screw

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Types and features

SBC Precision Rolled Ball Screw follows European DIN standards.

The screw shaft is rolled with high accuracy and then the raceways are ground to meet the P3(JIS: C3) grade.

These ball screws provide high rigidity, high accuracy, and smooth motion.

(1) European DIN standards

European DIN standard products follow the DIN 69 051/5 standard.

(2) High accuracy lead (P3, P5, T7)

High Accuracy lead s are available in P3, P5, and T7 grades.

(3) The ball raceways of the ball screw nut are all thread-ground

The thread form is finish ground to provide high rigidity, high accuracy and smooth motion.

(4) Always in stock

Ball Screws are always available for fast delivery time.

(5) High quality control

SBC provides high Quality Control to ensure the ball screws meet your expectations.



SDK (Precision rolled Ball Screw)

SDH (Long lead rolled Ball Screw)

Screw Shaft Model No.

Model No.	Diameter	Lead	Max. Length	Accuracy	(Unit : mm)
RM1605	15.6	05	3000	P3, P5, T7	
RM2005	19.6	05	4000	P3, P5, T7	
RM2020	19.6	20	4000	P3, P5, T7	
RM2505	24.6	05	5000	P3, P5, T7	
RM2510	24.6	10	5000	P3, P5, T7	
RM2525	24.6	25	5000	P3, P5, T7	
RM3205	31.6	05	6000	P3, P5, T7	
RM3210	31.6	10	6000	P3, P5, T7	
RM3220	31.6	20	6000	P3, P5, T7	
RM4005	39.6	05	6000	P3, P5, T7	
RM4010	39.6	10	6000	P3, P5, T7	
RM4020	39.6	20	6000	P3, P5, T7	
RM4040	39.6	40	6000	P3, P5, T7	
RM5010	49.5	10	6000	P3, P5, T7	
RM5020	49.5	20	6000	P3, P5, T7	
RM6310	62.5	10	6000	P3, P5, T7	
RM6320	62.5	20	6000	P3, P5, T7	
RM8010	79.5	10	7000	P3, P5, T7	
RM8020	80	20	7000	P3, P5, T7	

※ SBC follows DIN and JIS Standards.

DIN Standard	JIS Standard
P3	C3
P5	C5
T7	C7

Ball Screw

DIN Standard SBC Precision Rolled Ball Screw

Ordering Example

[The Nut Ordering]

20 05 SDK - S
 [1] [2] [3] [4]

- [1] Diameter
- [2] Lead
- [3] Nut Type : SDK, SDH
- [4] Preload : S (Clearance Type)

※ When ordering only a nut, the preload is only S type (Clearance type).

[The Screw shaft Ordering]

RM 2005 - 1500L - T7
 [1] [2] [3]

- [1] Model No.
 - [2] Screw shaft length
 - [3] Accuracy
- ※ Refer to the specifications for the Model No.
 ※ Individual screw shafts are only available in the T7 precision grade.

[Ordering]

2005 SDK - A - 1 - 1300 / 1500 - T7 - R
 [1] [2] [3] [4] [5] [6] [7]

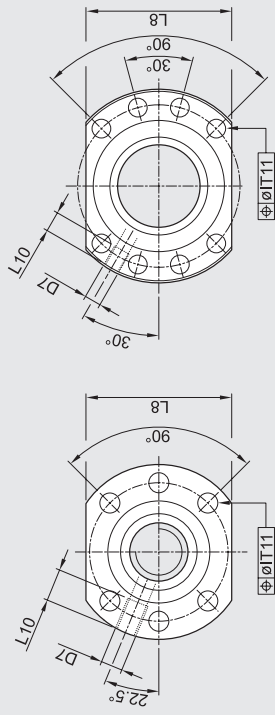
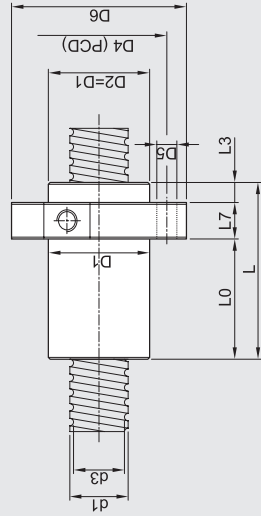
- [1] Model No. : SDK, SDH
- [2] Preload : S (Clearance Type), A (Non-backlash Type)
- [3] Nut Quantity : Nut Quantity on Screw shaft
- [4] Thread Length : No Symbol (No processing)
- [5] Total Length
- [6] Accuracy : P3, P5, T7
- [7] Surface treatment : No Symbol (Standard), R (Surface treatment)

- ※ A screw-nut assembly is recommended if high accuracy or rigidity is required.
- ※ For surface treatment, mark the type of surface treatment.
- ※ If end machining is required, please attach a drawing.
- ※ Refer to the specifications for the Accuracy.

Ball Screw

DIN Standard SBC Precision Rolled Ball Screw

SDK Type Precision Rolled Ball Screw



[SDK1605-3210]

[SDK4005-8010]

Model No.	d1 (Screw shaft outer diameter)	Ph (Lead)	do (Ball circle diameter)	Da (Ball Diameter)	d3 (Root diameter)	i (No. of circuits)	Sa	D1g6	D4 (PCD)	D5	D6
SDK 1605	15.6	5	16.5	3.5	12.7	3	0.05	28	38	5.5	48
SDK 2005	19.6	5	20.5	3.5	16.7	3	0.05	36	47	6.6	58
SDK 2010	19.9	10	21	3.969	16.9	3	0.05	36	47	6.6	58
SDK 2505	24.6	5	25.5	3.5	21.7	3	0.05	40	51	6.6	62
SDK 2510	24.6	10	25.5	3.5	21.7	4	0.05	40	51	6.6	62
SDK 3205	31.6	5	32.5	3.5	28.7	4	0.05	50	65	9	80
SDK 3210	31.6	10	33	5.556	27.1	3	0.06	50	65	9	80
SDK 4005	39.6	5	40.5	3.5	36.7	5	0.06	63	78	9	93
SDK 4010	39.6	10	41.6	7.144	34.0	4	0.06	63	78	9	93
SDK 5010	49.5	10	51.5	7.144	43	4	0.06	75	93	11	110
SDK 6310	62.5	10	64.5	7.144	56.9	5	0.06	90	108	11	125
SDK 8010	79.5	10	80	7.144	73.9	6	0.06	105	125	13.5	145

L±1	L0±1	L3-0.5	L7	L8	D7	L10	Ca [kN]	Coa [kN]	Max. Length	Nut Mass [kg]	Screw shaft Mass [kg/m]	Screw shaft Moment of Inertia [kg·m ² /m]
48.5	33	5.5	10	40	M6x1	8	9.5	10.9	3000	0.25	1.2	32
48.5	33	5.5	10	44	M6x1	8	11.5	15.5	4000	0.35	2.0	85
69	53	6.0	10	44	M6x1	8	13.6	19	4000	0.35	2.0	85
49	33	6.0	10	48	M6x1	8	13.1	20.2	5000	0.37	3.3	225
80	64	6.0	10	48	M6x1	8	19	38	5000	0.45	3.3	225
57	39	6.0	12	62	M6x1	8	19.3	36.3	6000	0.7	5.6	645
73	55	6.0	12	62	M6x1	8	26.4	39	6000	0.8	5.3	580
66	45	7.0	14	70	M8x1	10	26.3	59.2	6000	1.2	9.0	1650
88.5	67.5	7.0	14	70	M8x1	10	64.9	109	6000	1.4	8.3	1400
92	69	7.0	16	85	M8x1	10	66.4	134.3	6000	2	13.5	3700
103.5	78.5	7.0	18	95	M8x1	10	93.8	229.7	6000	3	22	9870
121	92	9.0	20	110	M8x1	10	121.9	374.9	7000	3.9	36.4	28850

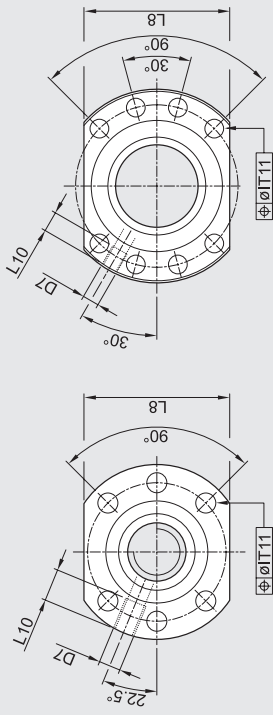
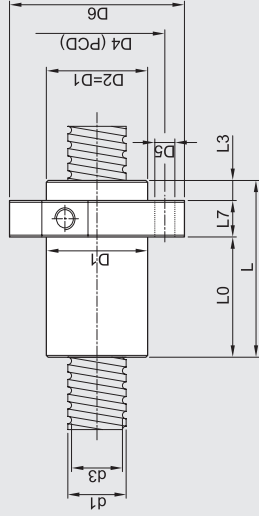
① Ca (Basic Dynamic load rating), Coa (Basic static load rating)

② Sa (Axial Backlash)

Ball Screw

DIN Standard SBC Precision Rolled Ball Screw

SDH Type Long Lead Rolled Ball Screw



[SDH1610~3232]

[SDH4020~6320]

Model No.	d1 (Screw shaft outer diameter)	Ph (Lead)	do (Ball circle diameter)	da (Ball diameter)	d3 (Root diameter)	i (No. of circuits)	Sa	D1g6	D4 (PCD)	D5	D6
SDH 1610	15.9	10	16.6	3.175	13.4	2.8	0.05	28	38	5.5	48
SDH 1616	15.9	16	16.6	3.175	13.4	3.6	0.05	28	38	5.5	48
SDH 2020	19.6	20	20.5	3.5	16.7	3.6	0.05	36	47	6.6	58
SDH 2525	24.6	25	25.5	3.5	21.7	3.6	0.05	40	51	6.6	62
SDH 3220	31.6	20	33	5.6	27.1	5.6	0.06	56	71	9	86
SDH 3232	32	32	33	4.7625	28.2	3.6	0.06	56	71	9	86
SDH 4020	39.6	20	41.4	5.55	35.2	5.6	0.06	63	78	9	93
SDH 4040	39.6	40	41.6	7.144	34	3.6	0.06	70	85	9	100
SDH 5020	49.5	20	51.4	6.35	44.6	5.6	0.06	75	93	11	110
SDH 6320	62.5	20	64.5	7.144	56.9	5.6	0.06	95	115	13.5	135

1 Ca (Basic Dynamic load rating), Coa (Basic static load rating)

2 Sa (Axial Backlash)

		(Unit : mm)												
L±1	L0±1	L3-0.5	L7	L8	D7	L10	Ca [kN]	Coa [kN]	Max. Length	Nut Mass [kg]	Screw shaft Mass [kg/m]	Screw shaft Moment of inertia [kg·m ² /m]		
45	26	9	10	40	M6x1	8	7	12	3000	0.29	1.3	37		
48	28	10	10	40	M6x1	8	7.1	14	3000	0.29	1.3	37		
54	33	11	10	44	M6x1	8	10.8	18.6	4000	0.45	1.9	73		
64	41	11	12	48	M6x1	8	13.1	26	5000	0.55	3.3	225		
83	57	14	12	68	M6x1	8	47.2	83.2	6000	1.4	5.3	580		
83	54	17	12	68	M6x1	8	17.2	53.9	6000	1.4	5.3	580		
83	56	13	14	70	M8x1	10	52.2	103.6	6000	1.6	8.6	1520		
102	67	21	14	77	M8x1	10	59.7	108.9	6000	2.4	8.4	1430		
85	56	13	16	85	M8x1	10	78.8	188.7	6000	2.2	13.6	3730		
92	48	24	20	100	M8x1	10	103.1	270.8	6000	3.8	22	9050		