

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

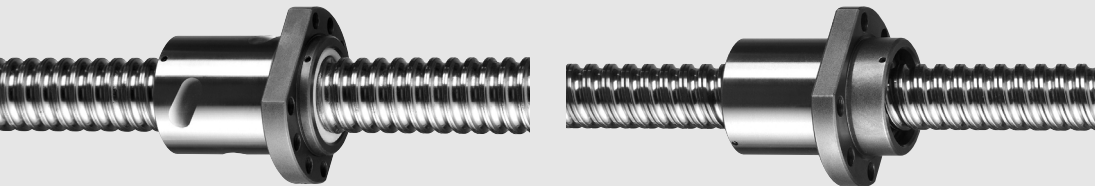
The thread form is finish ground to provide high rigidity, high accuracy and smooth motion.

(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.

(Unit : mm)				
Model No.	Diameter	Lead	Max. Length	Accuracy
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

Ordering Example

[The Nut Ordering]

**20**  
[1]

**05**  
[2]

**SDK**  
[3]

**-**

**S**  
[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**  
[1]

**2005**  
[2]

**-**

**1500L**  
[2]

**-**

**T7**  
[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**  
[1]

**SDK**  
[2]

**-**

**A**  
[3]

**-**

**1**  
[3]

**-**

**1300**  
[4]

**/**

**1500**  
[5]

**-**

**T7**  
[6]

**-**

**R**  
[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.

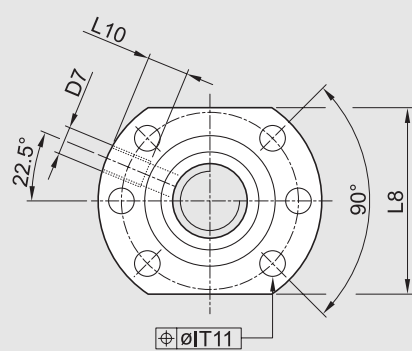
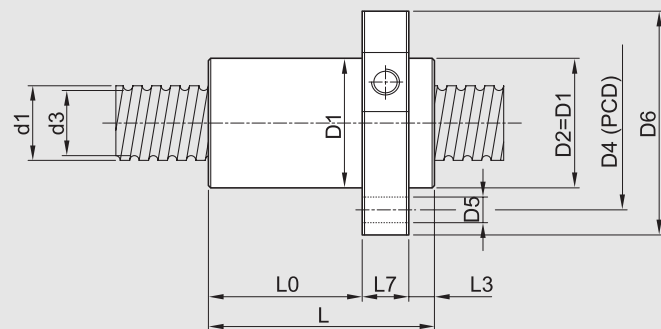
Ball Screw

DIN Standard SBC Precision Rolled Ball Screw

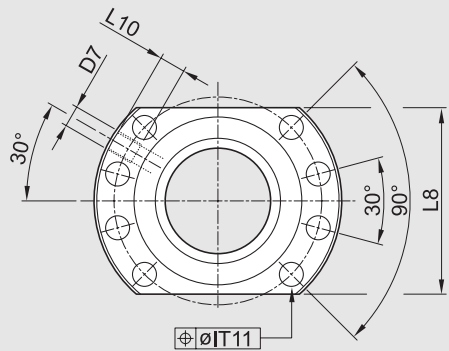
Ball Screw

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

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 m <sup>2</sup> /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	26850

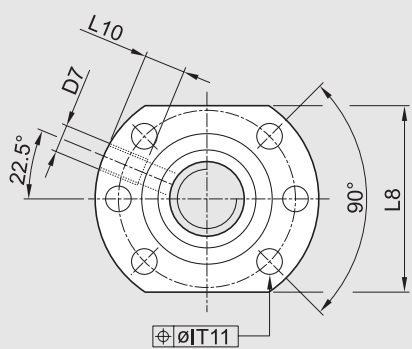
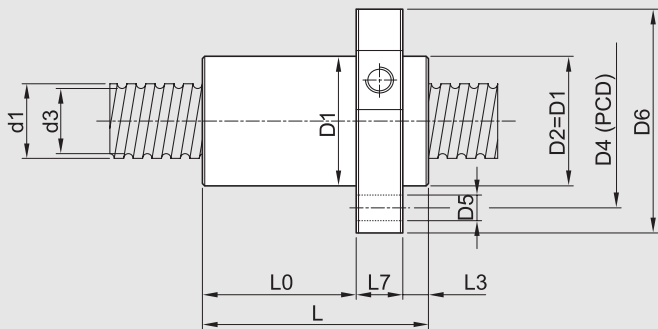
Ball Screw

DIN Standard SBC Precision Rolled Ball Screw

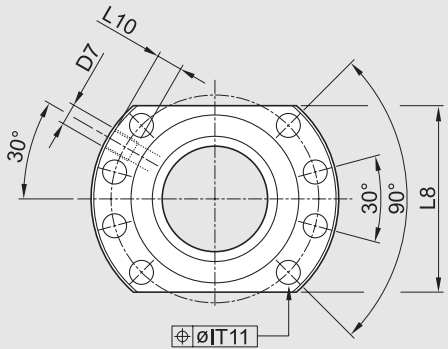
Ball Screw

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 m <sup>2</sup> /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