Rolled Ball Screws Standard Nut (Shaft Diameter 20, Lead 5, 10, 20)

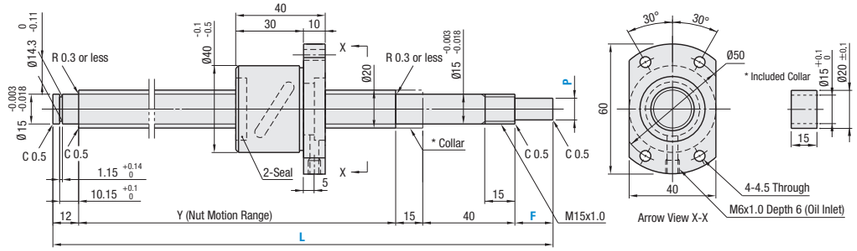
Accuracy Grade C7, C10

Rolled Ball Screws Standard Nut (Shaft Diameter 20, Lead 5, 10, 20) – Accuracy Grade C7, C10

RoHS10

Nut Type	Type: Standard	Type: F, P Configurable	Accuracy Grade	Shaft Diameter	Lead	Screw Shaft: Material	Screw Shaft: Hardness	Screw Shaft: Surface Treatment	Nut: Material	Nut: Hardness	Nut: Surface Treatment
Standard Nut	BSST	—	C7	20	5, 10, 20	1055 Carbon Steel	Induction Hardened 56–62 HRC min.	—	JIS SCM420	Carburized 58–62 HRC min.	ⓘ Phosphate Conversion Coating
	BSSR	BSSRK	C10					Phosphate Conversion Coating			Low Temp. Black Chrome
	BSSZ	BSSZK						—			

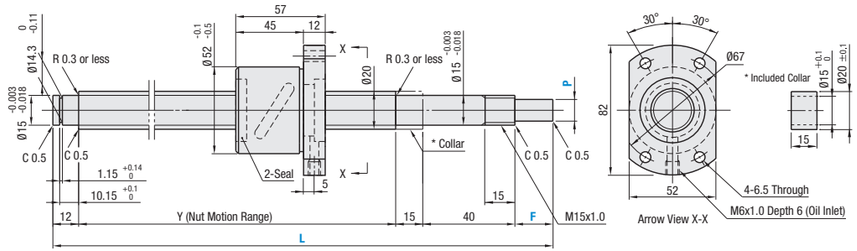
BSST2005, BSSR (K) 2005, BSSZ (K) 2005



*Included Collar
Material: 1045 Carbon Steel
Surface Treatment: Black Oxide

P	Tolerance
8–10	0 -0.009
11, 12	0 -0.011

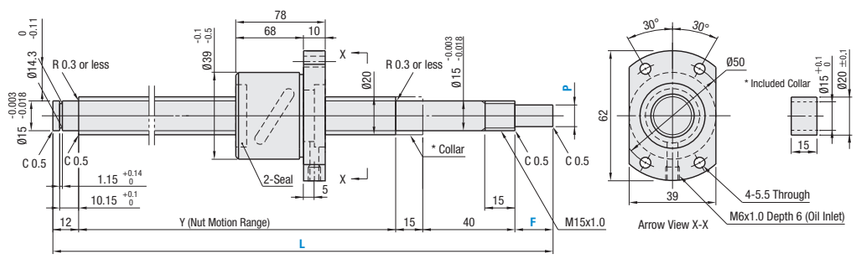
BSST2010, BSSR (K) 2010, BSSZ (K) 2010



*Included Collar
Material: 1045 Carbon Steel
Surface Treatment: Black Oxide

P	Tolerance
8–10	0 -0.009
11, 12	0 -0.011

BSST2020, BSSR (K) 2020, BSSZ (K) 2020



*Included Collar
Material: 1045 Carbon Steel
Surface Treatment: Black Oxide

P	Tolerance
8–10	0 -0.009
11, 12	0 -0.011

Nut Type	Accuracy Grade	Part Number: Type	Part Number: Screw Shaft O.D.	Part Number: Lead	1 mm Increment: L	1 mm Increment: *F	1 mm Increment: *P	Y	Ball Dia.	Ball Center Dia.	Screw Root Dia.	Number of Circuits	Basic Load Rating: C (Dynamic) kN	Basic Load Rating: Co (Static) kN	Axial Play	Twisting Direction
Standard Nut	C7	BSST	20	05	200–1200	20	12	L-87	3.175	20.8	(17.5)	2.5 Turns 1 Row	6.2	14.7	0.03 or Less	Right
	C10	BSSR BSSZ			200–2000										0.10 or Less	
		BSSRK BSSZK				20–36	8–12	L–(67+F)								
	C7	BSST		10	250–2000	20	12	L-87	4.7625	21	(16.3)		10.6	22.7	0.05 or Less	
	C10	BSSR BSSZ													0.15 or Less	
		BSSRK BSSZK				20–36	8–12	L–(67+F)								
	C7	BSST		20	250–2000	20	12	L-87	3.175	20.8	(17.5)		6.2	14.7	0.03 or Less	
	C10	BSSR BSSZ													0.10 or Less	
		BSSRK BSSZK				20–36	8–12	L–(67+F)								

*F and P are configurable for BSSRK and BSSZK only. ⓘ F≤Px3. kgf=Nx0.101972

Rolled Ball Screws Standard Nut (Shaft Diameter 20, Lead 5, 10, 20)

Accuracy Grade C7, C10, *continued*

Nut Type	Accuracy Grade	Part Number	Available Types: L200–400	L401–600	L601–800	L801–1000	L1001–1200	L1201–1500	L1501–2000
Standard Nut	C7	BSST2005	•	•	•	•	•	—	—
	C10	BSSR2005	•	•	•	•	•	•	•
		BSSZ2005	•	•	•	•	•	•	•
	C7	BSST2010	•	•	•	•	•	•	•
	C10	BSSR2010	•	•	•	•	•	•	•
		BSSZ2010	•	•	•	•	•	•	•
	C7	BSST2020	•	•	•	•	•	•	•
	C10	BSSR2020	•	•	•	•	•	•	•
		BSSZ2020	•	•	•	•	•	•	•

Part Number Example

Part Number - L - F - P

BSSC2005 - 200
BSSZK2010 - 370 - F21 - P10
BSSR2020L - 370 L Type Greased
BSSR2010G - 370 G Type Greased)

Part Number Alterations

Part Number - L - F - P - (FC, KC, etc.)

BSSR2005 - 350 - KC10

Note:

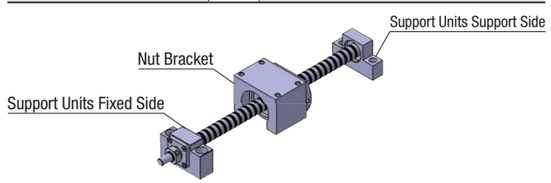
- ⓘ Mounting surface of BSST ball nut flange is not surface-treated.
- ⓘ Filled with lithium soap based grease (Alvania Grease S2 made by Showa Shell Sekiyu K.K).
- ⓘ Various grease options are available. For specifications, **P.752**.
- ⓘ For accuracy of Ball Screws, see **P.752–754**.
- ⓘ For details of Support Units, see **P.792–802**.
- ⓘ Caution: Do not remove any nuts from their screw shafts or allow nuts to overrun the stroke. It may cause the balls to fall out or damage the ball recirculation parts.
- ⓘ Included Collar is packaged together with main body of Ball Screws. Store this Included Collar with care. It is required when mating with Support Units.
- ⓘ Do not tilt the ball screw assembly. Due to its weight, the nut may rotate off of the shaft.

Alterations	Code	Spec.
No Machining on Support Side Shaft End	NC	No machining added on the support side shaft end. **Ordering Code:** NC
Ball Nut Orientation Reversed (Support Side) (Fixed Side) Standard Changed	RLC	Changes the nut direction. **Ordering Code:** RLC
No Retaining Ring Groove on Support Side Shaft End	RNC	Retaining ring groove in not machined on the support side shaft end. **Ordering Code:** RNC ⓘ Combination with FC is not available.
Change Support Side Shaft End Machining	GC	Changes the machining on the support side. Q is selectable from 10, 12, 15. G = 1 mm Increment **Ordering Code:** GC-Q10-G20 ⓘ 5≤G≤Qx3 ⓘ Y dimension is shortened.
Change Support Side Shaft End Length	FC	Changes the length of the support side shaft end. FC = 1 mm Increment **Ordering Code:** FC20 ⓘ 13≤FC≤30 ⓘ Y dimension is shortened.
Tapped Hole on Support Side Shaft End	MC	Adds a tapped hole on the support side shaft end. MC = 1 mm Increment **Ordering Code:** MC25 ⓘ 21≤MC≤30 ⓘ Y dimension is shortened. M: M6 x 1.0; ℓ: 15

Alterations	Code	Spec.
Wrench Flats on Fixed Side Incomplete Hardened Area	SZC	Adds wrench flats on the fixed side shaft end. **Ordering Code:** SZC ⓘ Ball bearings will fall out if the ball nut crosses the wrench flats.
Keyway on Fixed Side Shaft End Detailed Keyway Dimensions **P.752**.	KC	Adds a keyway on the fixed side shaft end. KC = 1 mm Increment **Ordering Code:** KC15 ⓘ 4≤KC≤Px3 KC≤F-1
Keyway on Fixed Side Shaft End	KLC	Adds a keyway at a customer specified area on the fixed side shaft end. (Key groove dim. is the same as KC.) **Ordering Code:** KLC-K7-S2 ⓘ 5≤K+S≤Px3 K+S≤F-1
Flat Machined on Fixed Side Shaft End	SC	Adds a flat on the fixed side shaft end. SC = 1 mm Increment **Ordering Code:** SC7 ⓘ 5≤SC≤Px3 SC≤F-1
2 Flat Machined on Fixed Side Shaft End	SWC SGC	Adds two flats on the fixed side shaft end. SWC: 90° Position SGC: 120° Position 1 mm Increment **Ordering Code:** SWC10 ⓘ 5≤SWC, SGC≤Px3 SWC, SGC≤F-1
Installing Special Temporary Shaft	TAS	Special Temporary Shaft used for installing Ball Screw Nut. Always use Special Temporary Shaft when removing or installing Ball Screw Nut.

Peripherals: Combination of the following parts are available.

Support Units (Square) | Support Units (Round) | Nut Brackets (Block Type)



Combination with Support Units

Ball Screw Part Number: Type	Screw Shaft Outer Diameter	Lead	Recommended Support Units: Part Number Type	Part Number No.	Shape	Fixed Side	Support Side	Page
BSST BSSR BSSZ	20	05 10 20	BRW	15	Round	○	—	800
			BUR	15		—	○	802
			BSW	15	Square	○	—	794
			BUN	15		—	○	798

ⓘ Aside from the part numbers shown above, there are a variety of other Support Units available. (**P.792–802**).

Combination with Nut Brackets

Ball Screw Part Number: Type	Screw Shaft O.D.	Lead	Recommended Nut Brackets: Part Number Type	Part Number No.	Page
BSST BSSR BSSZ	20	05	BNFB BNFM BNFR BNFA	2005R	810
		10		2010R	810
		20		2020S	810