

# Rolled Ball Screws Standard Nut - Shaft Dia. 15; Lead 5, 10, 16, 20

## Accuracy Grade C7, C10

Part Number & Spec. Change  
Printed in Purple

### Points of comparison between similar products

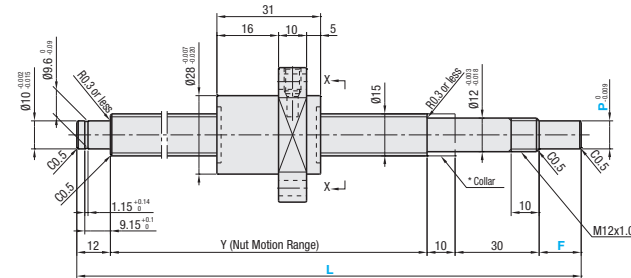
- Due to the difference in load rating and positioning accuracy (lead accuracy + axial play), the price is lower than that of similar products.
- When considering adopting C-VALUE parts, select them by comparing against similar products in the specifications. P. 705 - P. 708.



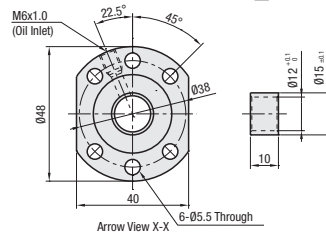
RoHS 10

Nut Type	Type		Accuracy Grade	Shaft Dia.	Lead	Screw Shaft			Nut		
	Standard	F, P Configurable				Material	Hardness	Surface Treatment	Material	Hardness	Surface Treatment
Standard Nut	C-BSSTA	C-BSSTAK	C7	15	5, 10, 16, 20	EN 1.1203 Equiv.	Induction Hardened 58 to 62 HRC	-	EN 1.7242 Equiv.	Carburized 58 to 62 HRC	-
	C-BSSCA	C-BSSCAK	C10								

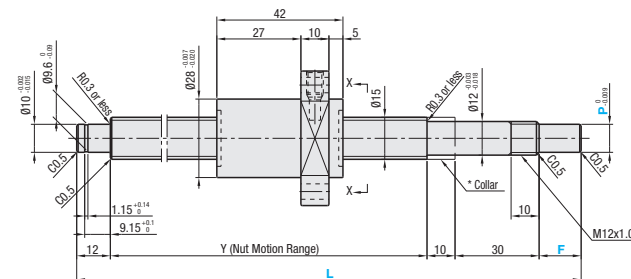
### C-BSSTA(K), C-BSSCA(K)1505



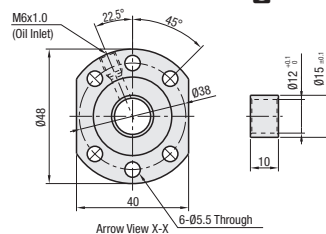
- \*Included Collar (1 pc.)
- M Material: EN 1.1191 Equiv.
- S Surface Treatment: Black Oxide



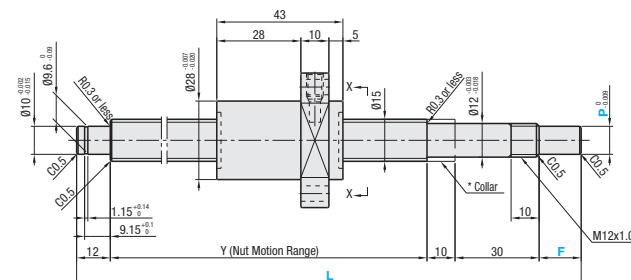
### C-BSSTA(K), C-BSSCA(K)1510



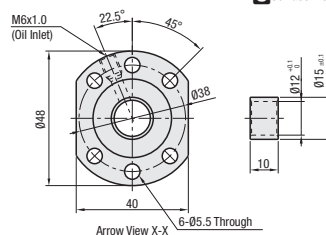
- \*Included Collar (1 pc.)
- M Material: EN 1.1191 Equiv.
- S Surface Treatment: Black Oxide



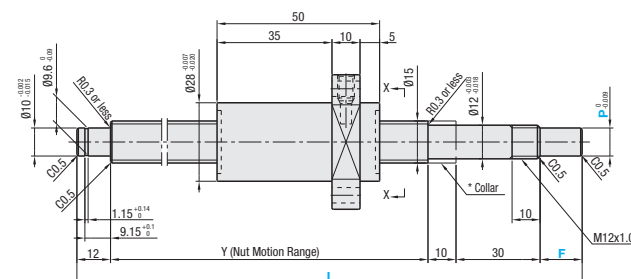
### C-BSSTA(K), C-BSSCA(K)1516



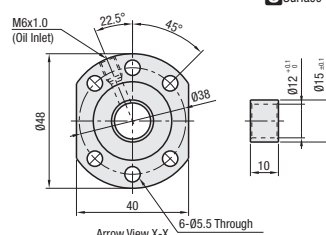
- \*Included Collar (1 pc.)
- M Material: EN 1.1191 Equiv.
- S Surface Treatment: Black Oxide



### C-BSSTA(K), C-BSSCA(K)1520



- \*Included Collar (1 pc.)
- M Material: EN 1.1191 Equiv.
- S Surface Treatment: Black Oxide



Nut Type	Accuracy Grade	Part Number		1 mm Increments			Y	Ball Dia.	Ball Center Dia.	Screw Root Dia.	Number of Circuits	Basic Load Rating		Axial Play	Twisting Direction	
		Type	Screw Shaft O.D.	L	*F	*P						C (Dynamic) kN	Co (Static) kN			
Standard Nut	C7	C-BSSTA	15	5	150-1200	15	10	L - 67	2.778	15.672	(12.894)	3.8 turns, 1 row	3.6	7.4	0.10 or less	Right
						C-BSSCA	15-30	6-10								
	C-BSSTA	15	10			L - 67										
	C-BSSCA	15-30	6-10			L - (52 + F)										
	C-BSSTA	15	10			L - 67										
	C-BSSCA	15-30	6-10			L - (52 + F)										
	C10	C-BSSTA	15	10	200-1200	15	10	L - 67								
						C-BSSCA	15-30	6-10	L - (52 + F)							
	C-BSSTA	15	10			L - 67										
	C-BSSCA	15-30	6-10			L - (52 + F)										
	C-BSSTA	15	10			L - 67										
	C-BSSCA	15-30	6-10			L - (52 + F)										
C7	C-BSSTA	15	16	200-1200	15	10	L - 67									
					C-BSSCA	15-30	6-10	L - (52 + F)								
C-BSSTA	15	10			L - 67											
C-BSSCA	15-30	6-10			L - (52 + F)											
C-BSSTA	15	10			L - 67											
C-BSSCA	15-30	6-10			L - (52 + F)											
C10	C-BSSTA	15	20	200-1200	15	10	L - 67									
					C-BSSCA	15-30	6-10	L - (52 + F)								
C-BSSTA	15	10			L - 67											
C-BSSCA	15-30	6-10			L - (52 + F)											
C-BSSTA	15	10			L - 67											
C-BSSCA	15-30	6-10			L - (52 + F)											

\*F and P are configurable for C-BSSCHK and C-BSTHK only. \*F ≤ P x 3 \*Y (Nut Motion Range) > (Nut Overall Length) kgf = N x 0.101972

Nut Type	Accuracy Grade	Part Number	JPY Unit Price: 1 to 4 pc(s).					
			L150-200	L201-400	L401-600	L601-800	L801-900	L901-1200
Standard Nut	C7	C-BSSTA1505						
	C10	C-BSSCA1505						
	C7	C-BSSTA1510						
	C10	C-BSSCA1510						
	C7	C-BSSTA1516						
	C10	C-BSSCA1516						
	C7	C-BSSTA1520						

\*For the price of F, P Configurable Type, add JPY1,550 to the standard type price. E.g.) C-BSSCAK1505 - 300 - F25 - P9 → JPY11,860 + JPY1,550 = JPY13,410

Ordering Example

Part Number - L - F - P

C-BSSCA1520 - 500

C-BSSCAK1505 - 1084 - F15 - P6

Alterations

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

C-BSSCA1505 - 350 - KC10

Alterations	Code	Spec.
No Machining on Both Shaft Ends (Annealing Range) 4-C Nut	WNC	Does not machine any of the both shaft ends. [Ordering Code] WNC-S20-F80 *Annealing may lower hardness on the annealed area + 25 mm fore and aft. *S + F ≤ L/2 *L - (S + F) ≤ Y + 50 *On the annealed area + 25 mm fore and aft, axis run-out may be larger than indicated by the catalog standard.
No Machining on Support Side Shaft End	NC	No machining added on the support side shaft end. [Ordering Code] NC
Ball Nut Orientation Reversed	RLC	Changes the nut direction. [Ordering Code] RLC
No Retaining Ring Groove on Support Side Shaft End	RNC	No retaining ring groove is machined on the support side shaft end. [Ordering Code] RNC *Combination with FC is not available.
Change Support Side Shaft End Length	FC	Changes the length of the support side shaft end. FC = 1 mm Increments [Ordering Code] FC20 *13 ≤ FC ≤ 30 *Y dimension is shortened. *Combination with GC is not available.
Change Support Side Shaft End Machining	GC	Changes the machining on the support side. G is selectable from 8, 10 or 12. G = 1 mm Increments [Ordering Code] GC - Q8 - G20 *5 ≤ G ≤ 0 x 3 *Y dimension is shortened. *No Retaining Ring Groove *Combination with FC is not available.
Tapped Hole on Support Side Shaft End	MC	Adds a tapped hole on the support side shaft end. MC = 1 mm Increments [Ordering Code] MC20 M d *Y dimension is shortened. M5 x 0.8 12 *18 ≤ MC ≤ 30

### Combination with Support Units

Ball Screw Part Number	Recommended Support Unit			
	Type	Screw Shaft O.D.	Lead	Part Number
C-BSSCA C-BSSTA	15	05 10 16 20	12	C-BSW
				C-BUN
				C-BRW
				C-BUR

\*Nut Brackets for C-Value Ball Screws are not available.

- ### Notes
- \*Filled with lithium soap based grease (Alvania Grease S2 made by Showa Shell Sekiyu K.K.).
  - \*For accuracy of Ball Screws, see P. 2285, 2286.
  - \*For details of Support Units, see P. 771 - P. 796.
  - \*Cautions: Do not let the nuts overrun or remove the nuts from the screw shafts. It may cause the balls to fall out or damage the ball recirculation parts.
  - \*The collar included with this product should be installed in the same position as indicated with the "Collar" text on the drawing. In addition, the collar included with the Support Unit product should be installed and tightened on the nut side of the ball screw.
  - \*Note that, when a ball screw shaft or ball screw nut is tilted, it may be fallen out by its own weight.

Alterations	Code	Spec.
Wrench Flats on Fixed Side	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. 684)	KC	Adds a keyway on the fixed side shaft end. KC = 1 mm Increments [Ordering Code] KC10 *3 ≤ KC ≤ P x 3, KC ≤ F - 1
Keyway on Fixed Side Shaft End	KLC	Adds a keyway at a customer specified area on the fixed side shaft end. (Keyway dim. is same as that of KC.) K, S = 1 mm Increments [Ordering Code] KLC - K5 - S3 *4 ≤ K + S ≤ P x 3, K + S ≤ F - 1
Flat Machined on Fixed Side Shaft End	SC	Adds a flat on the fixed side shaft end. SC = 1 mm Increments [Ordering Code] SC10 *5 ≤ SC ≤ P x 3, SC ≤ F - 1
2 Flats 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 Increments [Ordering Code] SWC10 *5 ≤ SWC/SGC ≤ P x 3, SWC/SGC ≤ F - 1
Installing Special Temporary Shaft	TAS	Special Temporary Shafts suitable with Ball Screws are installed. When removing Nut from Screw Shaft, always use Special Temporary Shaft. *For installation method, see P. 685.

\*Other than the part numbers shown above, a rich variety of Support Units are also available. (P. 761 - P. 780)