

# STANDARD ROLLED BALL SCREWS

# GY series (Shaft end unfinished)

Screw Shaft diameter Ø8-Ø40, Accuracy grade C10

Rolled ball screws of accuracy grade C10 are available as standardized and stocked items.

## FEATURES

### High transmission efficiency

Rolled ball screws have high transmission efficiency, as compared with the conventional Acme screws, and the required torque is only 1/3 or less.

This makes it possible to convert linear motion to rotary motion easily.

In addition, both thread groove and nut have a Gothic-arch-shape like the ground ball screw.

### Outstanding durability

Careful selection of materials, heat treatment under optimum conditions, and advanced machining techniques ensure outstanding durability.

### Rustproofing

The surface of both screw shaft and nut are phosphate-coated for rust proofing.

### Reasonable price

Mass production and precision thread roll die result in considerable cost reduction.

### Short delivery time

This series of ball screws with unfinished shaft ends are standardized and stocked for short delivery time.

The shaft and the nut, excepting those of the miniature type, are separately sold.



## ⚠ Operating Cautions

### •Lubrication

Use lithium soap-based grease with excellent watertightness and heat resistance as lubricating grease and use spindle oil or turbine oil (#90-#180) as lubricating oil.

### •Shaft-end machining

When using the ball screw, the shaft end requires an additional machining.

As the fixed side bearing unit is not hardened, post-machining can be easily performed. The unhardened shaft end is coated with white paint for discrimination.

As the supported side is hardened to surface hardness of HRC56 to 62, lathe-turning or grinding by using a cutting tool for quench-hardened steel is recommended.

This series of ball screws of Ø12 or less has a center hole, but concentricity with the thread groove is not yet attained. Therefore, perform centering on the basis of the outside diameter in the case of additional machining.

In order to facilitate shaft-end machining, the ball screw is supplied with the nut assembly incorporated in a jig and the screw shaft disjoined.

This series of ball screws of Ø8, Ø10, Ø12 are supplied with the screw shaft and the nut joined.

For detailed instructions for additional machining, refer to Operation Manual.

KURODA takes on the machining of the shaft end. Specify the intended size by to the attached shaft end finish ordering sheet.

If the shaft-end machining is held by other than KURODA, the accuracy of the products is not guaranteed.

## Table of optional specifications for each model

Additional machining of shaft end	Surface treatment (Note1)	Difference of grease	Direction of nut	Wiper removal (Note2)
○	○	○	○	○

(Note1) The above-mentioned surface treatment is LD treatment (coating thickness:1 to 2µm).

(Note2) The above-mentioned wiper removal is except M and E nut.

# COMBINATION OF LEAD AND DIAMETER OF SCREW SHAFT

# NUT VARIATION

STANDARD BALL SCREWS  
(FOR TRANSFER)

		Lead (mm)											
		2	2.5	4	5	6	8	10	16	20	25	32	40
Screw shaft diameter (mm)	Ø8	M 34		M 36	M 38		M 40						
	Ø10	M 42	M 44	M 46	M 48		M 50						
	Ø12			M 52			M 54	U 56					
	Ø15				U 58 T 60 K 62			U 64 T 66 K 68	U 70	U 72 T 74			
	Ø16										E 76		
	Ø20				U 78 T 80 K 82			U 84 T 86 K 88		U 90 T 92			E 94
	Ø25				U 96 T 98 K 100			U 102 T 104 K 106			U 108 T 110		
	Ø28					U 112 T 114							
	Ø32							U 116 T 118 K 120				U 122 T 124	
	Ø36							U 126 T 128		U 130 T 132			
Ø40							U 134 T 136		U 138 T 140			U 142 T 144	



**•M Nut**  
Applied to 8 to 12 mm shaft diameter miniature Rolled Ball Screw



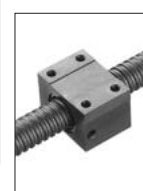
**•U Nut**  
Nut with inlaid tube and two face-flat flange for your low profile design



**•T Nut**  
Small nut diameter for your space-saving design



**•E Nut**  
Nut with end-cap method for large-lead ball screw suitable for High-speed application



**•K Nut**  
Cubic shaped nut with tapped holes and height controlled surface (±0.05mm) for your compact design and easy assembly

M:M nut U:U nut T:T nut K:K nut E:E nut

Each number on the right side in the frame shows a page corresponding to that item.

## TOTAL RUNOUT OF SCREW SHAFT

More strict value (based on KURODA's inspection standards) than JIS B1192 is applied.

Screw shaft dia	Overall length	Total runout	Total runout of old JIS
8	200	0.10	0.14
	400	0.20	0.29
	600	0.15	0.21
10	400	0.15	0.21
	600	0.25	0.35
12	400	0.15	0.21
	800	0.32	0.46
15	600	0.20	0.25
	1200	0.40	0.55
16	600	0.20	0.25
	1200	0.40	0.55
20	600	0.20	0.25
	1200	0.40	0.55
	2000	0.70	1.00

(Unit:mm)

Screw shaft dia	Overall length	Total runout	Total runout of old JIS
25	1000	0.20	0.30
	2000	0.50	0.69
	2500	0.80	0.93
28	1000	0.20	0.30
	2000	0.50	0.69
	2500	0.80	0.93
32	1000	0.20	0.30
	2000	0.50	0.69
	3000	0.94	1.30
36	1000	0.16	0.22
	2000	0.33	0.46
	3000	0.63	0.82
40	2000	0.33	0.46
	3000	0.63	0.82
	4000	0.88	1.10