Standard precision ball screws

Features

- GP, GG, GE series: Various screw shaft diameters, leads, and accuracy grades available for your selection
- An optimal size can be selected from a variety of screw shaft diameters, leads, and accuracy grades eliminating unnecessary compromise in product selection.

• FG, FE series: High rotational speed

- Delivers higher rotational speed up to 5,000 min⁻¹ through our unique recirculation system.
- In consideration of the load rating, the products have higher specifications than previous KURODA products.

• DP series: The industry's smallest compact nut class

- Utilizes a deflector recirculation system which realizes minimal nut dimensions.
- With leads from 1 mm, the DP series is suitable for machines and equipment that requires fine pitch forwarding and precise positioning.
- HG series: Optimal for high-speed conveyance achieved by larger leads
- · Larger leads enable a higher feed rate at a low rotational speed.
- With the adoption of multi-start thread, we have achieved a more compact nut with an improved load rating.

□ Summary of the specifications

Screw shaft diameter	ø6 to ø32 mm
Lead	1 to 60 mm
	C3 grade: GP, DP
Accuracy grade	C5 grade: FG, GG, HG
	C7 grade: FE, GE
Axial clearance	Refer to each product specification table.
	One shaft end finished (C3 grade: GP, DP)
Shaft end type	Unfinished shaft ends
Product line	Standard product

□ Options available

Series	Additional shaft- end machining	Surface treatment	Change of grease type	Change of nut direction	LUBSEAL
GP, DP FG, GG, HG FE, GE	0	0	0	0	See the notes below.

• The GP and DP series have one shaft end finished.

• The surface treatment is anticorrosive black coating (coating thickness: 1 to 2 μ m).

· Contact KURODA regarding the inclusion of grease types other than the standard grease.

• Please refer to the LUBSEAL series and size reference chart or the option specifications on each product's page to determine whether or not LUBSEAL is supported.

□ Model numbers of each series

Series	Shaft diameter	Lead				Flange type	Ball recir- culation system	Wiper material	Thread direction		Overall screw shaft length	Shaft end type	Thread length			Axial clearance	
FG	15	10	Р	S	-	Н	Р	N	R	-	0900	Х	0840	-	C5	F	
DP	6 to 14	1 to 4	J			Н	D	Ν			To he	B, X	To he		C3	F, S	
FG	10 to 25	5 to 25	Б		_	ы	Б	N	R -		shown		shown with a 4-digit number in metric		C5	F	
FE	10 10 25	5 10 25	Р				F	IN		-	4-digit number in metric units B, 2	A, A			C7	М	
GG	0 +0 22	2 to 25	See	S			See	_				A.X nu		-	C5	F	
GE	0 10 32	2 10 25	specifi-				cations.								C7	Μ	
GP	0 to 20	2 to 5	cations.			cations.	A	cations.				B, X	units		C3	F, S	
HG	0 10 20	12 to 60	Q				Q				(mm)	A, X	(mm)		C5	F, H	
	FG DP FG FE GG GE GP	Series diameter FG 15 DP 6 to 14 FG 10 to 25 GG 8 to 32 GP 8 to 20	Series diameter Lead FG 15 10 DP 6 to 14 1 to 4 FG 10 to 25 5 to 25 GG 8 to 32 2 to 25 GP 8 to 32 2 to 25	Series diameter Lead of circuits FG 15 10 P DP 6 to 14 1 to 4 J FG 10 to 25 5 to 25 P GG 8 to 32 2 to 25 See specifi- cations. GP 8 to 20 2 to 5 Atom	Genesities claude cf circuits tion FG 15 10 P S DP 6 to 14 1 to 4 J FG 10 to 25 5 to 25 P FG 10 to 25 5 to 25 P GG 8 to 32 2 to 25 See specifications. GP 8 to 20 2 to 5 12 to 60	Series diameter Lead of circuits tion FG 15 10 P S DP 6 to 14 1 to 4 J FG 10 to 25 5 to 25 P GG 8 to 32 2 to 25 See specifi- cations. S HG 8 to 20 2 to 5 cations. S	Series Statt diameter Lead Number Combina- of circuits Parage tion FG 15 10 P S - H DP 6 to 14 1 to 4 J - H FG 10 to 25 5 to 25 P - H GG 8 to 32 2 to 25 See specifi- 12 to 60 S - See specifications. -	Series Stratt diameter Lead Number Contoina- of circuits Plange tion culation type culation system FG 15 10 P – H P DP 6 to 14 1 to 4 J – H D FG 10 to 25 5 to 25 P – H D GG 8 to 32 2 to 25 See specifi- GE S – See specifi- cations. See specifi- A – HG 8 to 20 2 to 5 cations. A Q –	Setting diameter Lead of circuits tion type Culation system material FG 15 10 P S - H P N DP 6 to 14 1 to 4 J - H P N FG 10 to 25 5 to 25 P - H P N GG 8 to 32 2 to 25 See specifi- GP S See specifi- cations. See specifi- cations. 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· For more details, refer to the specifications and data for each size.

Screw shaft diameter and lead combinations

								Le	ead (mr	m)						
		1	2	3	4	5	10	12	15	16	20	25	30	32	40	60
	6	0														
	8	0	• 0		•											
	10		• 0		٠		• •									
Screw	12		• 0	0	•	•	• •				• •					
shaft	14				0											
diam- eter	15		•		•	• •	• •		•		• • •					
(mm)	16									•						
()	20				•	•	• •				• • •					
	25					• •	• •				•	• •				
	32					•	•									

•: GP, GG, GE series

 $\circ: \text{DP}$ series (small lead)

□: HG series (large lead)

♦: FG, FE series (high rotational speed)

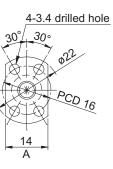
DP series (Accuracy grade C3)

Screw shaft diameter ø6, Lead 1

• Ball screw specifications

ew shaft meter of

Shaft diameter (mm) - Lead (mm)	6	- 1		
Number of circuits /	1 turn 3 circuits /			
Thread direction	Right	-hand		
Ball diameter (mm)	0.8			
Root diameter (mm)	5	.3		
Series	C	P		
Basic dynamic load rating C (N)	5	50		
Basic static load rating C0 (N)	11	50		
Accuracy grade /	C3 / S	C3 / F		
Axial clearance symbol	0373	037F		
Axial clearance (mm)	0	0.005 or less		
Preload torque (N·cm)	Up to 1.3	Up to 0.5		
Spacer ball	No	one		
Recirculation system	n system Deflector m			
Wiper	No	one		
Lubricant	Multer	np PS2		



• Shaft end finish type

Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, KURODA's recommended shaft end finish types are not available. Regarding additional machining of the overall length, please contact KURODA with your orders.

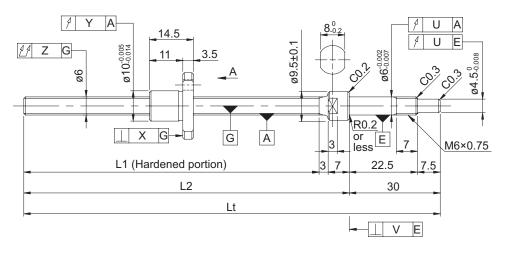
Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP0601JS-HDNR-0210B-C3F → DP0601JS-HDNR-0210X0170-C3F └→Thread length →Overall screw shaft length

Applicable supported end support unit	Applicable fixed end support unit
	BUK-6 (Square type)
	BUM-6, BUM-6F (Round type)

Optional specifications

• Anticorrosive black coating (coating thickness: 1 to 2 µm) is available.



Model No.	Screw shaft length			Maximum stroke	Lead accuracy		
(One shaft end finished)	L1	L2	Lt	(L1 - nut length)	±Ε _c	ec	e ₃₀₀
DP0601JS-HDNR-0130B-C3S	90	100	130	75	0.012	0.008	0.008
DP0601JS-HDNR-0130B-C3F	90	100	130	75	0.012		0.006
DP0601JS-HDNR-0210B-C3S	170	100	210	455	0.010	0.000	0.000
DP0601JS-HDNR-0210B-C3F	170	180	∠10	155	0.012	0.008	0.008

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

• Preload torque is a value before applying grease.

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• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied.

Before and during use, apply lubricant where appropriate.

	Accura	acy of ead	ch part	Preload tor	que (N·cm)	Mass	
Х	Y	Z	U	V	Without clearance	With clearance	(kg)
0.008	0.008	0.025	0.008 0.0025		Up to 1.3		0.04
0.000	0.006	0.025	0.000	0.0025		Up to 0.5	0.04
0.000	0.008	0.025	0.000	0.0025	Up to 1.3		0.05
0.008	0.008	0.035	0.008	0.0025		Up to 0.5	0.05

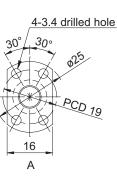


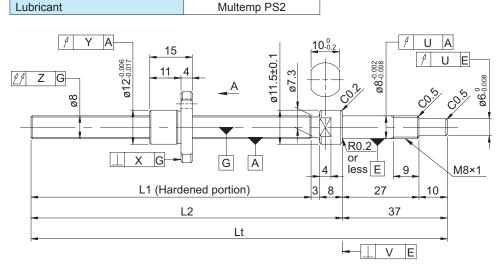
Ball screw specifications

Screw shaft diameter ø8

Wiper

Shaft diameter (mm) - Lead (mm) 8 - 1 Number of circuits / 1 turn 3 circuits / Thread direction Right-hand Ball diameter (mm) 8.0 Root diameter (mm) 7.3 Series DP Basic dynamic load rating C (N) 650 Basic static load rating C0 (N) 1600 Accuracy grade / C3 / S C3 / F Axial clearance symbol Axial clearance (mm) 0 0.005 or less Up to 0.5 Preload torque (N·cm) Up to 1.8 Spacer ball None Recirculation system Deflector method





None

Model No.	Screw	/ shaft	length	Maximum stroke	Lead accuracy			
(One shaft end finished)	L1	L2	Lt	(L1 - nut length)	±Ε _c	ec	e ₃₀₀	
DP0801JS-HDNR-0180B-C3S	132	143	180	117	0.010	0.008	0.008	
DP0801JS-HDNR-0180B-C3F	132	143	100	117	0.010			
DP0801JS-HDNR-0260B-C3S	212	223	260	197	0.010	0.008	0.000	
DP0801JS-HDNR-0260B-C3F	212	223	260	197	0.010		0.008	

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

• Preload torque is a value before applying grease.

• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied.

Before and during use, apply lubricant where appropriate.

Shaft end finish type

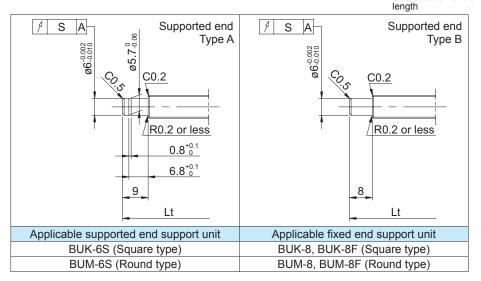
Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, additional machining to KURODA's recommended shaft end finish type described below is available. Please contact KURODA with your orders. Model examples for finished shaft ends are described below.

Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP0801JS-HDNR-0260B-C3F → DP0801JS-HDNR-0260X0203-C3F





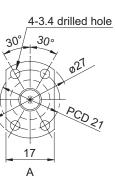
Optional specifications

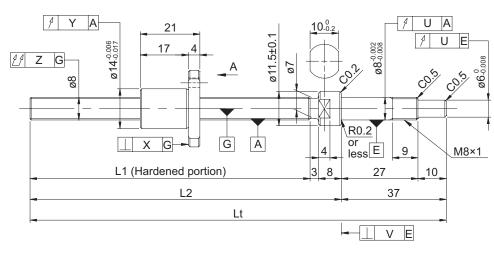
Anticorrosive black coating (coating thickness: 1 to 2 µm) is available.

	A	ccuracy c	of each pa	Preload tor	que (N·cm)	Mass		
Х	Y	Z	S	U V V		Without clearance	With clearance	(kg)
0.008	0.008	0.030	0.010	0.008 0.0025		Up to 1.8		0.08
0.000	0.006	0.030	0.010	0.006	0.0025		Up to 0.5	0.00
0.000	0.008	0.025	0.010	0.008	0.0025	Up to 1.8		0.11
0.008	0.008	0.035	0.010	0.008	0.0025		Up to 0.5	0.11

Ball screw specifications

	Shaft diameter (mm) - Lead (mm)	8 -	- 2
_	Number of circuits /	1 turn 3	circuits /
	Thread direction	Right	-hand
	Ball diameter (mm)	1.	2
	Root diameter (mm)	7.	0
	Series	D	Р
	Basic dynamic load rating C (N)	13	50
	Basic static load rating C0 (N)	23	00
	Accuracy grade /	C3 / S	C3 / F
	Axial clearance symbol	0373	C37F
	Axial clearance (mm)	0	0.005 or less
	Preload torque (N·cm)	Up to 2.0	Up to 0.5
	Spacer ball	No	ne
	Recirculation system	Deflector	r method
	Wiper	No	ne
	Lubricant	Multer	ip PS2





Model No.	Screw	/ shaft	length	Maximum stroke	Lead accuracy			
(One shaft end finished)	L1	L2	Lt	(L1 - nut length)	±Ε _c	ec	e ₃₀₀	
DP0802JS-HDNR-0180B-C3S	132	143	180	111	0.012	0.008	0.008	
DP0802JS-HDNR-0180B-C3F	152	143	100	111	0.012			
DP0802JS-HDNR-0260B-C3S	212	223	260	101	0.010	0.008	0.000	
DP0802JS-HDNR-0260B-C3F	212	223	260	191	0.012		0.008	

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

• Preload torque is a value before applying grease.

• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied.

Before and during use, apply lubricant where appropriate.

Shaft end finish type

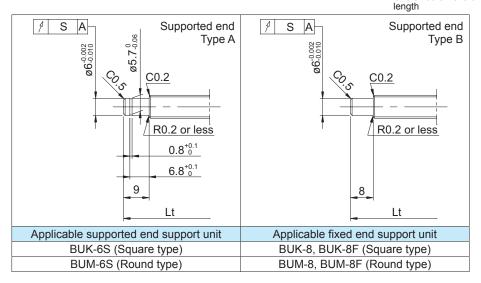
Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, additional machining to KURODA's recommended shaft end finish type described below is available. Please contact KURODA with your orders. Model examples for finished shaft ends are described below.

Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP0802JS-HDNR-0260B-C3F → DP0802JS-HDNR-0260X0203-C3F →Thread length





Optional specifications

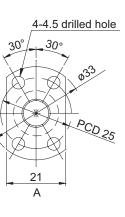
• Anticorrosive black coating (coating thickness: 1 to 2 µm) is available.

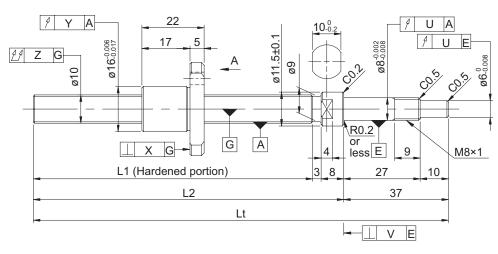
	A	ccuracy o	f each pa	Preload tor	Mass				
Х	Y	Z	S	U	V	Without clearance	With clearance	(kg)	
0.008	0.009	0.030	0.010	0.008 0.0025		Up to 2.0		0.09	
0.000	0.009	0.030	0.010	0.006	0.0025		Up to 0.5	0.09	
0.000	0.000	0.025	0.010	0.000	0.0005	Up to 2.0		0.11	
0.008	0.009	0.035	0.010	0.008	0.0025		Up to 0.5	0.11	

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<u>KURO</u>DA **W///I JENATEC** shaft ar a10

Ball screw specifications Shaft diameter (mm) - Lead (mm) 10 - 2 Number of circuits / 1 turn 3 circuits / Thread direction Right-hand Ball diameter (mm) 1.2 Root diameter (mm) 9.0 DP Series 1550 Basic dynamic load rating C (N) Basic static load rating C0 (N) 3000 Accuracy grade / C3 / S C3 / F Axial clearance symbol Axial clearance (mm) 0 0.005 or less Preload torque (N·cm) 0.1 to 2.4 Up to 0.5 Spacer ball None Recirculation system Deflector method Wiper None Lubricant Multemp PS2





Model No.		Screw	/ shaft	length	Maximum stroke	Lead accuracy		
(One shaft end finis	shed)	L1	L2	Lt	(L1 - nut length)	±Ε _c	ec	e ₃₀₀
DP1002JS-HDNR-022	0B-C3S	172	183	220	150	0.010	0.008	0.008
DP1002JS-HDNR-022	20B-C3F	1/2		220	150			
DP1002JS-HDNR-032	0B-C3S	272	202	220	250	0.010	0.000	0.000
DP1002JS-HDNR-032	20B-C3F	212	283	320	250	0.012	0.008	0.008

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

Preload torque is a value before applying grease.

• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied.

Before and during use, apply lubricant where appropriate.

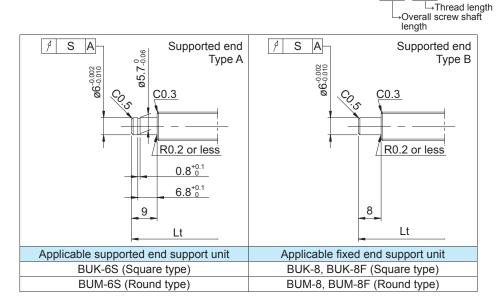
Shaft end finish type

Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, additional machining to KURODA's recommended shaft end finish type described below is available. Please contact KURODA with your orders. Model examples for finished shaft ends are described below.

Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP1002JS-HDNR-0320B-C3F → DP1002JS-HDNR-0320X0263-C3F



• Optional specifications

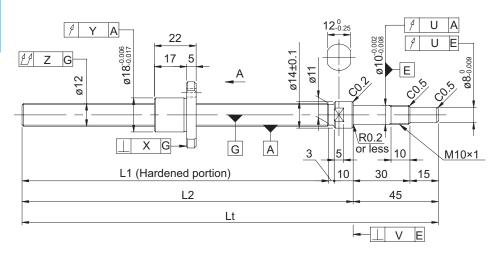
• Anticorrosive black coating (coating thickness: 1 to 2 μ m) is available.

	A	ccuracy o	of each pa	Preload tor	Mass				
Х	Y	Z	S	U	V	Without clearance	With clearance	(kg)	
0.008	0.009	0.030	0.011	0.007 0.0025		0.1 to 2.4		0.15	
0.000	0.009	0.030	0.011	0.007	0.0025		Up to 0.5	0.15	
0.000	0.000	0.040	0.011	0.007 0.0005		0.1 to 2.4		0.00	
0.008	0.009	0.040	0.011	0.007	0.0025		Up to 0.5	0.20	

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Ball screw specifications Shaft diameter (mm) - Lead (mm) 12 - 2 Number of circuits / 1 turn 3 circuits / Thread direction Right-hand Ball diameter (mm) 1.2 Root diameter (mm) 11.0 DP Series 1650 Basic dynamic load rating C (N) Basic static load rating C0 (N) 3600 Accuracy grade / C3 / S C3 / F Axial clearance symbol 0 0.005 or less Axial clearance (mm) Preload torque (N·cm) 0.4 to 3.4 Up to 0.5 Spacer ball None Recirculation system Deflector method Wiper None Lubricant Multemp PS2





Model No.	Screw	/ shaft	length	Maximum stroke	Le	ad accura	асу
(One shaft end finished)	L1	L2	Lt	(L1 - nut length)	±Ε _c	ec	e ₃₀₀
DP1202JS-HDNR-0300B-C3S	242	255	300	220	0.012	0.008	0.008
DP1202JS-HDNR-0300B-C3F	242	200	300	220	0.012	0.008	0.008
DP1202JS-HDNR-0400B-C3S	342	355	400	320	0.013	0.010	0.008
DP1202JS-HDNR-0400B-C3F	342	355	400	520	0.015	0.010	0.000

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

• Preload torque is a value before applying grease.

• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied.

Before and during use, apply lubricant where appropriate.

Shaft end finish type

4-4.5 drilled hole

1CD 27

300

22

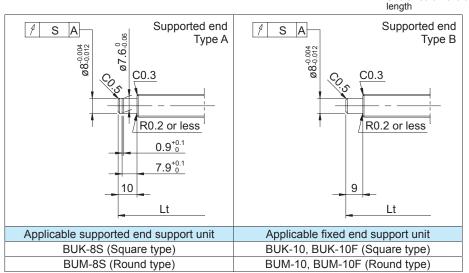
A

Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, additional machining to KURODA's recommended shaft end finish type described below is available. Please contact KURODA with your orders. Model examples for finished shaft ends are described below.

Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP1202JS-HDNR-0400B-C3F → DP1202JS-HDNR-0400X0332-C3F



Optional specifications

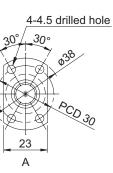
• Anticorrosive black coating (coating thickness: 1 to 2 μ m) is available.

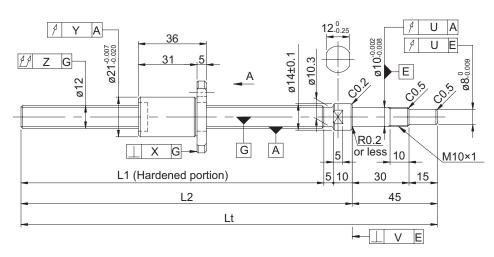
	A	ccuracy c	of each pa	Preload tor	Mass			
Х	Y	Z	S	U	V	Without clearance	With clearance	(kg)
0.008	0.009	0.030	0.011	0.007 0.003		0.4 to 3.4		0.28
0.000	0.009	0.030	0.011	0.007	0.003		Up to 0.5	0.20
0.008	0.009	0.040	0.011	0.007	0.003	0.4 to 3.4		0.26
0.008	0.009	0.040	0.011	0.007	0.003		Up to 0.5	0.36

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• Ball screw specifications

• Dan Screw Specifications			
Shaft diameter (mm) - Lead (mm)	12	- 3	
Number of circuits /	1 turn 3	circuits /	
Thread direction	Right	-hand	
Ball diameter (mm)	2	2	
Root diameter (mm)	10).3	
Series	D	P	
Basic dynamic load rating C (N)	3450		
Basic static load rating C0 (N)	6100		
Accuracy grade / Axial clearance symbol	C3 / S	C3 / F	
Axial clearance (mm)	0	0.005 or less	
Preload torque (N·cm)	0.4 to 3.4	Up to 1.0	
Spacer ball	None		
Recirculation system	Deflector method		
Wiper	Plastic wiper		
Lubricant	Multen	np PS2	





Model No.	Screv	v shaft	length	Maximum stroke	Lead accuracy		
(One shaft end finished)	L1	L2	Lt	(L1 - nut length)	±Ε _c	ec	e ₃₀₀
DP1203JS-HDPR-0300B-C3	S 240	255	300	204	0.012	0.008	0.008
DP1203JS-HDPR-0300B-C3	F 240	255	300				
DP1203JS-HDPR-0400B-C3	S 340	355	400	204	0.012	0.010	0.000
DP1203JS-HDPR-0400B-C3	F 340	300	400	304	0.013	0.010	0.008

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

• Preload torque is a value before applying grease.

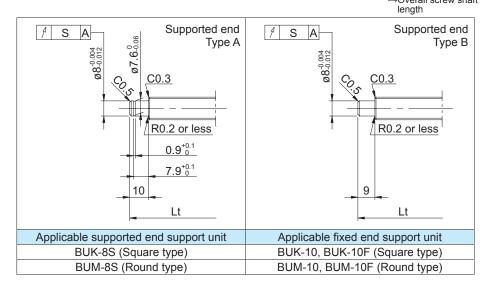
• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied. Before and during use, apply lubricant where appropriate. Shaft end finish type

Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, additional machining to KURODA's recommended shaft end finish type described below is available. Please contact KURODA with your orders. Model examples for finished shaft ends are described below.

Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP1203JS-HDPR-0400B-C3F → DP1203JS-HDPR-0400X0330-C3F

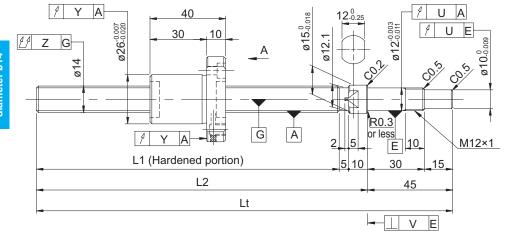


Optional specifications

• Anticorrosive black coating (coating thickness: 1 to 2 μ m) is available.

• Ball screw specifications

- Ball ooron opeenieatiene			
Shaft diameter (mm) - Lead (mm)	14	- 4	4-4.5 drilled hole,
Number of circuits /		circuits /	8 spot facing, depth 4.5
Thread direction	Right	-hand	
Ball diameter (mm)	2.3	812	<u>30°/30°</u>
Root diameter (mm)	12	2.1	045
Series	C	P	$\left \left(\Omega \left[\left(\Omega \right) \right] \right\rangle \right $
Basic dynamic load rating C (N)	46	00	PCD 35
Basic static load rating C0 (N)	86	00	
Accuracy grade /	C3 / S	C3 / F	9 2
Axial clearance symbol	0373	C3/F	
Axial clearance (mm)	0	0.005 or less	M6×1
Preload torque (N·cm)	1.0 to 6.9	Up to 1.5	Plug 29 (Oil hole)
Spacer ball	No	ne	A
Recirculation system	Deflector method		
Wiper	Plastic wiper		
Lubricant	Multer	np PS2	



Model No.	Screw	/ shaft	length	Maximum stroke	Lead accuracy		
(One shaft end finished)	L1	L2	Lt	(L1 - nut length)	±E _c	ec	e ₃₀₀
DP1404JS-HDPR-0330B-C3S	270	285	220	220	0.012	0.008	0.008
DP1404JS-HDPR-0330B-C3F	270		330	230			
DP1404JS-HDPR-0530B-C3S	470	405	E20	420	0.015	0.010	0.000
DP1404JS-HDPR-0530B-C3F	470	485	530	430	0.015	0.010	0.008

• Product with axial clearance of 0.005 or less (F) shown may be partially preloaded.

Preload torque is a value before applying grease.

• At the time of delivery, grease is inserted inside of the nut, with rust-preventive oil also applied.

Before and during use, apply lubricant where appropriate.

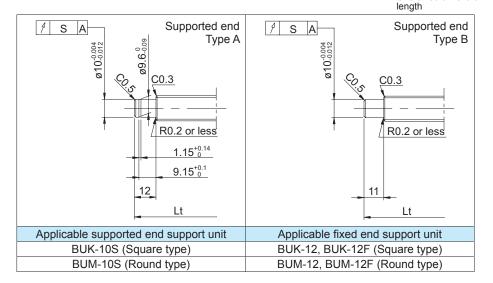
Shaft end finish type

Standard precision ball screws are available with KURODA's recommended shaft end finish types for each size. The fixed end type is finished beforehand.

Regarding the supported shaft end, additional machining to KURODA's recommended shaft end finish type described below is available. Please contact KURODA with your orders. Model examples for finished shaft ends are described below.

Model example: Finished fixed end (See left figure) \rightarrow Both shaft ends finished

DP1404JS-HDPR-0530B-C3F → DP1404JS-HDPR-0530X0458-C3F → Thread length → Overall screw shaft



Optional specifications

 \bullet Anticorrosive black coating (coating thickness: 1 to 2 $\mu m)$ is available.

	A	ccuracy c	of each pa	Preload tor	Mass			
Х	Y	Z	S	U	V	Without clearance	With clearance	(kg)
0.008	0.010	0.030	0.012	0.009	0.004	1.0 to 6.9	.0 to 6.9	
0.000	0.010	0.030	0.012	0.009	0.004		Up to 1.5	0.48
0.000	0.010	0.045	0.012	0.000	0.004	1.0 to 6.9		0.60
0.008	0.010	0.045	0.012	0.009	0.004		Up to 1.5	0.69

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