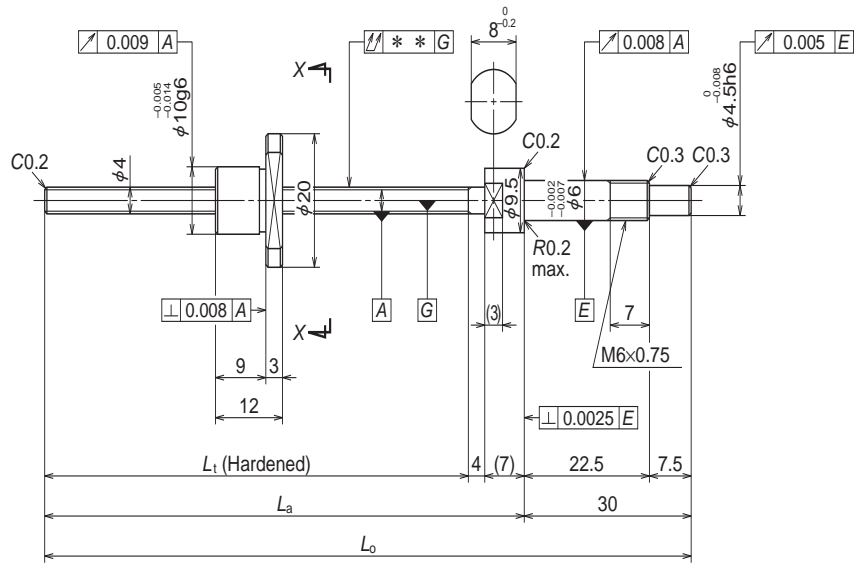


Finished shaft end MA Type

(Fine lead) Dia. 4, Lead 1

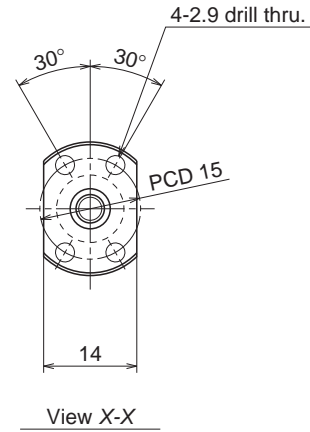


Nut models: MPFD, MSFD

NSK

ø4×1

Unit: mm



Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	4×1/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	0.800/4.2	
Screw shaft root diameter	3.2	
Effective turns of balls	1×2	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C_a	315
	Static C_{0a}	370
Axial play	0	0.005 or less
Preload (N)	19.6	—
Dynamic friction torque, (N-cm)	1.0 or less	0.3 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

Recommended support unit	
WBK06-01A	(square)
WBK06-11	(round)

Unit: mm

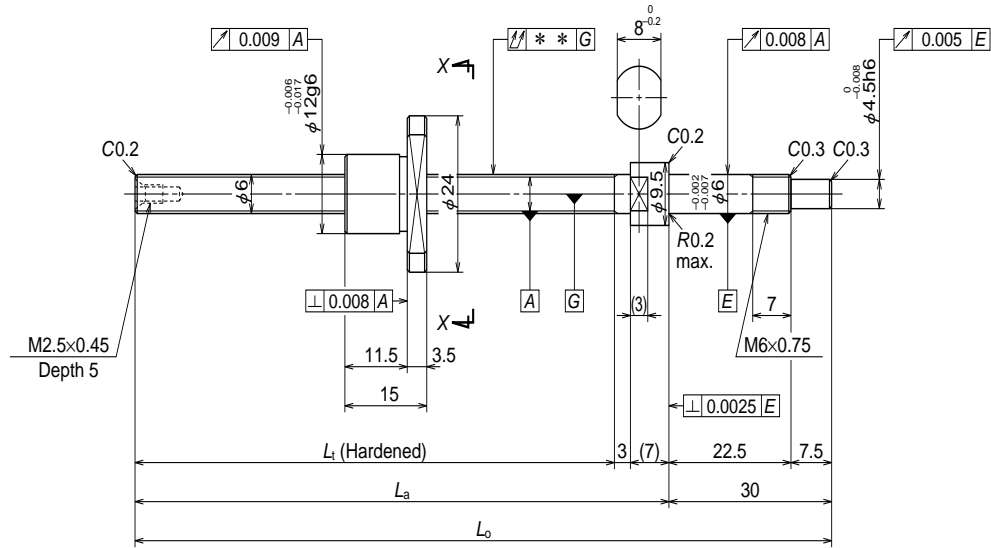
Ball screw No.		Stroke	
		Nominal	Maximum (L_t —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W0400MA-1PY-C3Z1	W0400MA-2Y-C3T1	20	32
W0400MA-3PY-C3Z1	W0400MA-4Y-C3T1	40	52
W0401MA-1PY-C3Z1	W0401MA-2Y-C3T1	70	82

- Remarks:
1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Nut does not have a seal.
 4. Contact NSK if permissible rotational speed is to be exceeded.

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L_t	L_a	L_o	T	e_p	v_u			Supporting condition
								Fixed - Free
44	55	85	0	0.008	0.008	0.015	0.024	3000
64	75	105	0	0.008	0.008	0.020	0.026	3000
94	105	135	0	0.008	0.008	0.025	0.028	3000

Finished shaft end MA Type

(Fine lead) Dia. 6, Lead 1

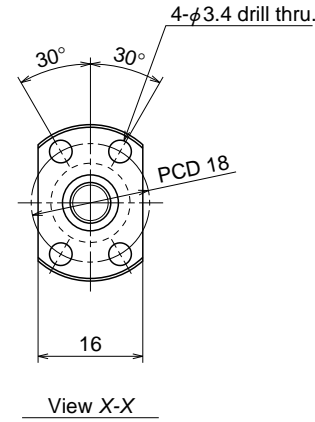


Nut models: MPFD, MSFD

NSK

ø6×1

Unit: mm



Ball screw specifications

Product classification		Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn		6x1/Right	
Preload / Ball recirculation		P preload / Deflector	
Ball dia. / Ball circle dia.		0.800/6.2	
Screw shaft root diameter		5.2	
Effective turns of balls		1x3	
Accuracy grade / Preload / Axial play		C3/Z	C3/T
Basic load rating (N)	Dynamic C _a	575	
	Static C _{0a}	925	
Axial play		0	0.005 or less
Preload (N)		24.5	—
Dynamic friction torque, (N-cm)		1.3 or less	0.3 or less
Spacer ball		None	
Factory packed grease		NSK grease PS2	

Recommended support unit

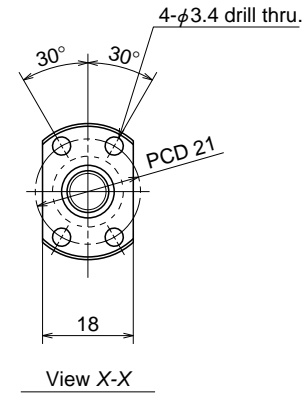
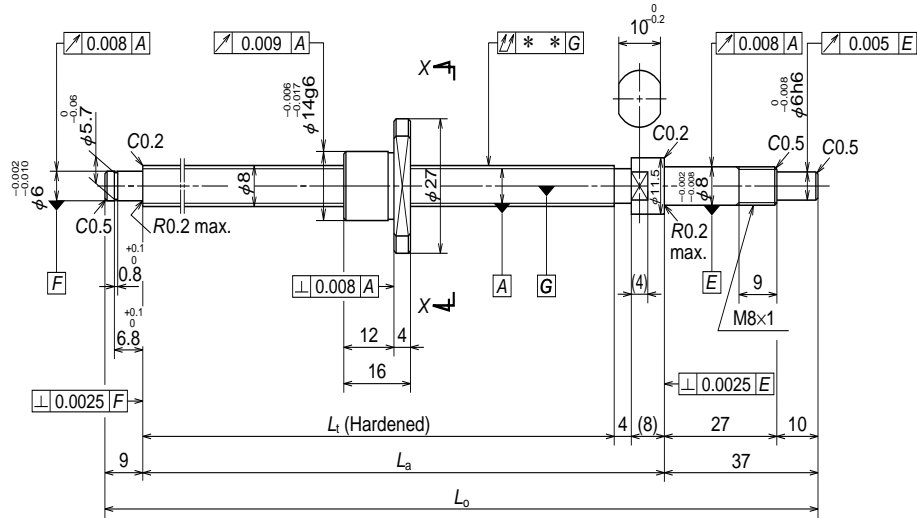
WBK06-01A	(square)
WBK06-11	(round)

Unit: mm

Ball screw No.		Stroke	
		Nominal	Maximum (L _i —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W0600MA-1PY-C3Z1	W0600MA-2Y-C3T1	40	50
W0601MA-1PY-C3Z1	W0601MA-2Y-C3T1	70	80
W0601MA-3PY-C3Z1	W0601MA-4Y-C3T1	100	110

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L _i	L _a	L _o	T	e _p	v _u			Supporting condition
								Fixed - Free
65	75	105	0	0.008	0.008	0.015	0.039	3000
95	105	135	0	0.008	0.008	0.020	0.045	3000
125	135	165	0	0.010	0.008	0.025	0.051	3000

- Remarks:
1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Nut does not have a seal.
 4. Contact NSK if permissible rotational speed is to be exceeded.



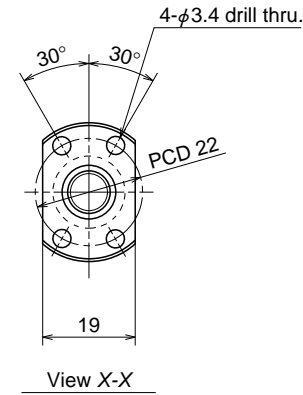
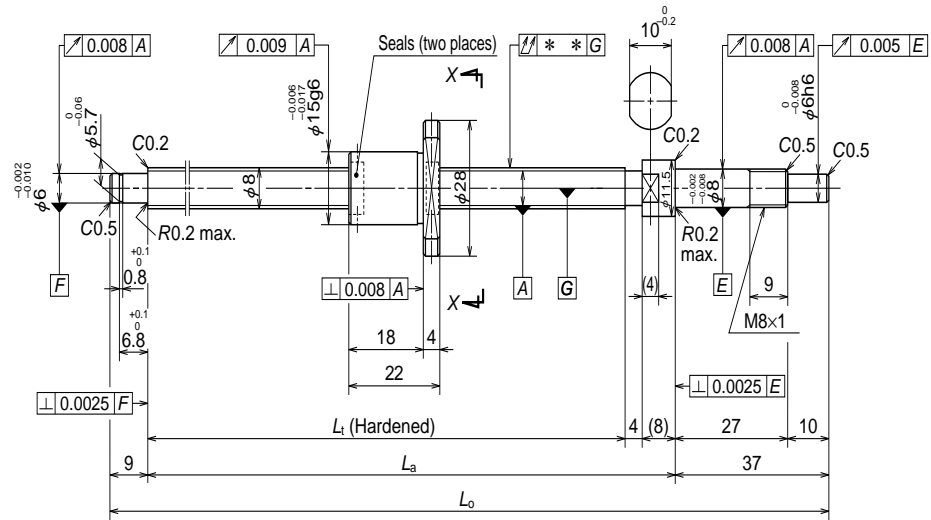
Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	8×1/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	0.800/8.2	
Screw shaft root diameter	7.2	
Effective turns of balls	1×3	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C_a	670
	Static C_{0a}	1290
Axial play	0	0.005 or less
Preload (N)	29.4	—
Dynamic friction torque, (N-cm)	1.8 or less	0.5 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

Recommended support unit		For drive side	For opposite to drive side
		WBK08-01A (square)	○
WBK08S-01 (square)			○
WBK08-11 (round)		○	

Ball screw No.		Stroke	
		Nominal	Maximum (L_1 —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W0800MA-1PY-C3Z1	W0800MA-2Y-C3T1	40	64
W0801MA-1PY-C3Z1	W0801MA-2Y-C3T1	70	94
W0801MA-3PY-C3Z1	W0801MA-4Y-C3T1	100	124
W0802MA-1PY-C3Z1	W0802MA-2Y-C3T1	150	174

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L_1	L_a	L_o	T	e_p	v_u			Supporting condition
80	92	138	0	0.008	0.008	0.025	0.073	3000
110	122	168	0	0.010	0.008	0.030	0.084	3000
140	152	198	0	0.010	0.008	0.030	0.095	3000
190	202	248	0	0.010	0.008	0.035	0.11	3000

- Remarks:
1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Nut does not have a seal.
 4. Contact NSK if permissible rotational speed is to be exceeded.



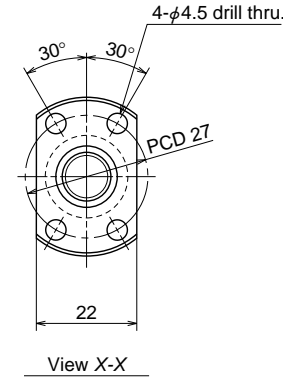
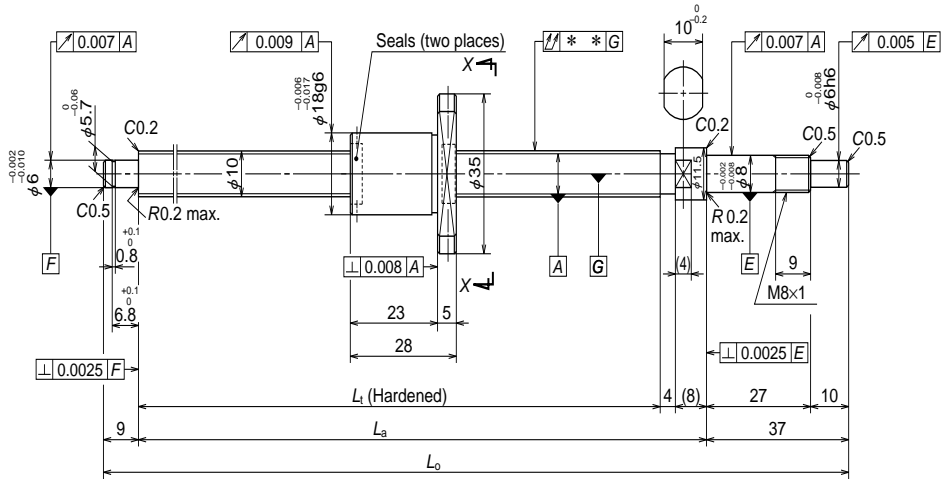
Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	8×1.5/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.000/8.3	
Screw shaft root diameter	7.0	
Effective turns of balls	1×3	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C _a	1080
	Static C _{0a}	1980
Axial play	0	0.005 or less
Preload (N)	49.0	—
Dynamic friction torque, (N-cm)	2.0 or less	0.5 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

Recommended support unit	Unit: mm	
	For drive side	For opposite to drive side
WBK08-01A (square)	○	
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Ball screw No.		Stroke	
		Nominal	Maximum (L _i —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W0800MA-3PY-C3Z1.5	W0800MA-4Y-C3T1.5	40	58
W0801MA-5PY-C3Z1.5	W0801MA-6Y-C3T1.5	70	88
W0801MA-7PY-C3Z1.5	W0801MA-8Y-C3T1.5	100	118
W0802MA-3PY-C3Z1.5	W0802MA-4Y-C3T1.5	150	168

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L _i	L _a	L _o	T	e _p	v _u			
80	92	138	0	0.008	0.008	0.025	0.082	3000
110	122	168	0	0.010	0.008	0.030	0.093	3000
140	152	198	0	0.010	0.008	0.030	0.10	3000
190	202	248	0	0.010	0.008	0.035	0.12	3000

- Remarks:
1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.



Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	10×2/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.200/10.3	
Screw shaft root diameter	8.9	
Effective turns of balls	1×3	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C_a	1490
	Static C_{0a}	2850
Axial play	0	0.005 or less
Preload (N)	58.8	—
Dynamic friction torque, (N-cm)	0.1 – 2.4	0.5 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

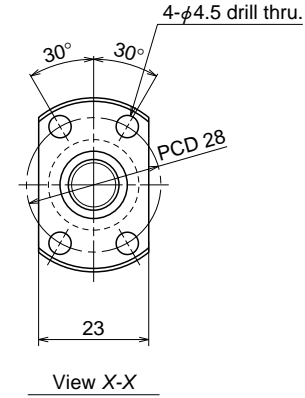
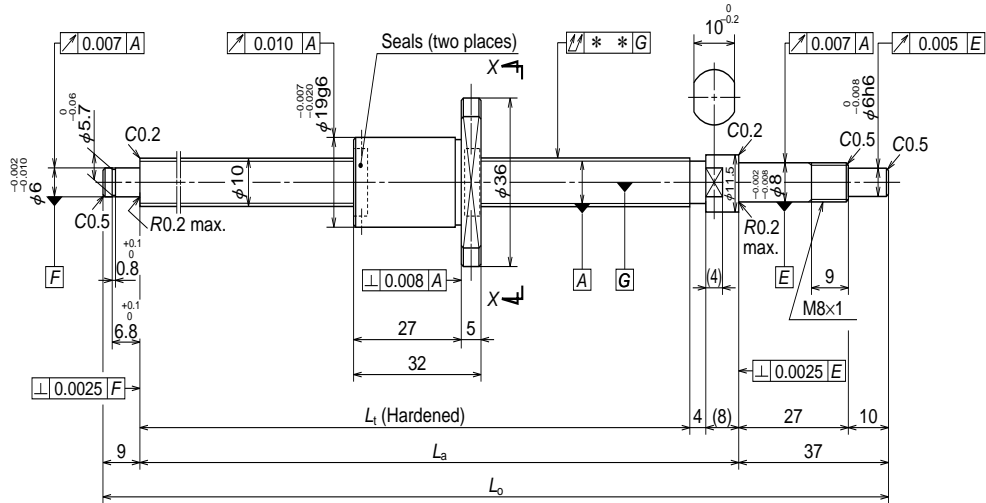
Recommended support unit	For drive side	For opposite to drive side
	WBK08-01A (square)	○
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Unit: mm

Ball screw No.		Stroke	
		Nominal	Maximum (L_1 —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W1001MA-1PY-C3Z2	W1001MA-2Y-C3T2	50	72
W1001MA-3PY-C3Z2	W1001MA-4Y-C3T2	100	122
W1002MA-1PY-C3Z2	W1002MA-2Y-C3T2	150	172
W1002MA-3PY-C3Z2	W1002MA-4Y-C3T2	200	222

- Remarks: 1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L_1	L_a	L_o	T	e_p	v_u			Supporting condition
								Fixed - Simple support
100	112	158	0	0.008	0.008	0.020	0.13	3000
150	162	208	0	0.010	0.008	0.030	0.16	3000
200	212	258	0	0.010	0.008	0.030	0.19	3000
250	262	308	0	0.012	0.008	0.030	0.22	3000



Ball screw specifications

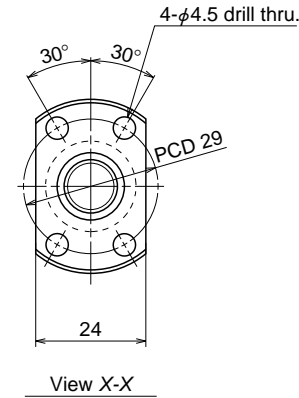
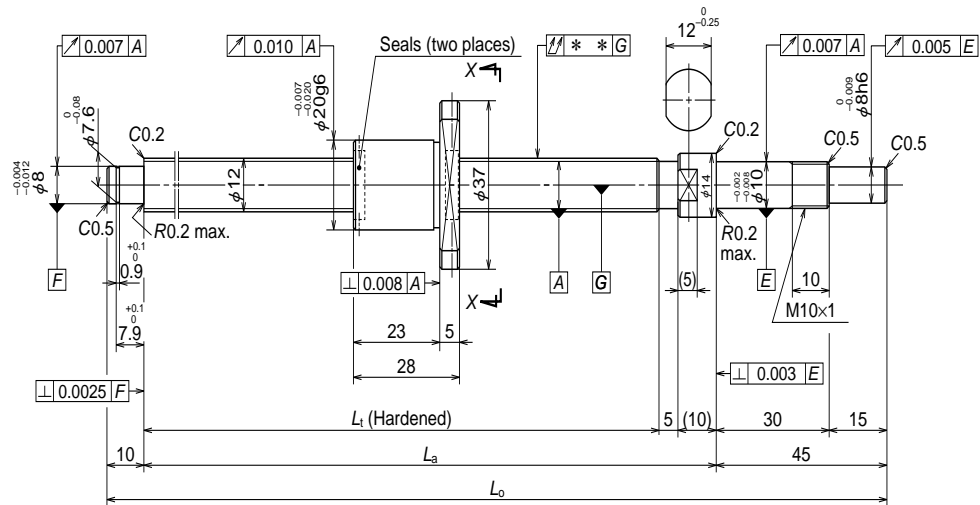
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	10x2.5/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.588/10.4	
Screw shaft root diameter	8.6	
Effective turns of balls	1x3	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C_a	2130
	Static C_{0a}	3640
Axial play	0	0.005 or less
Preload (N)	98.1	—
Dynamic friction torque, (N-cm)	0.2 - 2.9	0.5 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

Recommended support unit	Unit: mm	
	For drive side	For opposite to drive side
WBK08-01A (square)	○	
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Ball screw No.		Stroke	
		Nominal	Maximum (L_1 —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W1001MA-5PY-C3Z2.5	W1001MA-6Y-C3T2.5	50	68
W1001MA-7PY-C3Z2.5	W1001MA-8Y-C3T2.5	100	118
W1002MA-5PY-C3Z2.5	W1002MA-6Y-C3T2.5	150	168
W1002MA-7PY-C3Z2.5	W1002MA-8Y-C3T2.5	200	218

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L_1	L_a	L_0	T	e_p	v_u			
100	112	158	0	0.008	0.008	0.020	0.14	3000
150	162	208	0	0.010	0.008	0.030	0.17	3000
200	212	258	0	0.010	0.008	0.030	0.20	3000
250	262	308	0	0.012	0.008	0.030	0.23	3000

- Remarks: 1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.



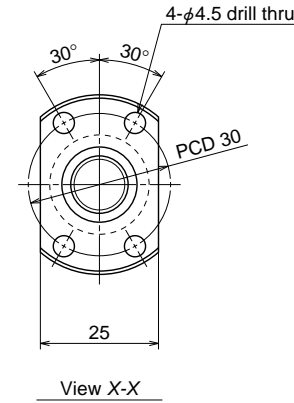
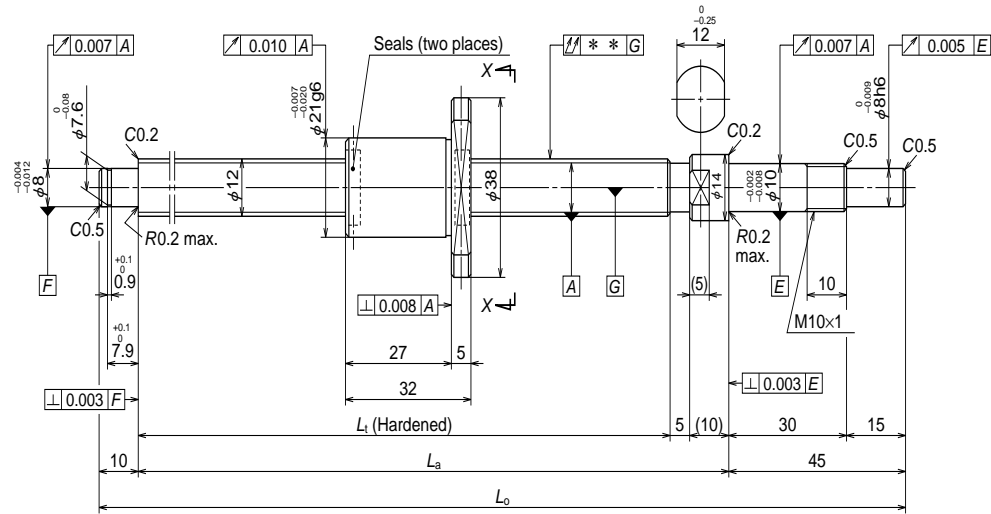
Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	12×2/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.200/12.3	
Screw shaft root diameter	10.9	
Effective turns of balls	1×3	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C_a	1660
	Static C_{0a}	3620
Axial play	0	0.005 or less
Preload (N)	98.1	—
Dynamic friction torque, (N·cm)	0.4 - 3.4	1.0 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

Recommended support unit		For drive side	For opposite to drive side
		WBK10-01A (square)	○
WBK10S-01 (square)			○
WBK10-11 (round)		○	

Ball screw No.		Stroke	
		Nominal	Maximum (L_1 —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W1201MA-1PY-C3Z2	W1201MA-2Y-C3T2	50	82
W1201MA-3PY-C3Z2	W1201MA-4Y-C3T2	100	132
W1202MA-1PY-C3Z2	W1202MA-2Y-C3T2	150	182
W1202MA-3PY-C3Z2	W1202MA-4Y-C3T2	200	232
W1203MA-1PY-C3Z2	W1203MA-2Y-C3T2	250	282

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
								Supporting condition
L_1	L_a	L_o	T	e_p	v_u		Fixed - Simple support	
110	125	180	0	0.010	0.008	0.020	0.20	3000
160	175	230	0	0.010	0.008	0.030	0.24	3000
210	225	280	0	0.012	0.008	0.030	0.28	3000
260	275	330	0	0.012	0.008	0.040	0.32	3000
310	325	380	0	0.012	0.008	0.040	0.36	3000

- Remarks: 1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.



Ball screw specifications

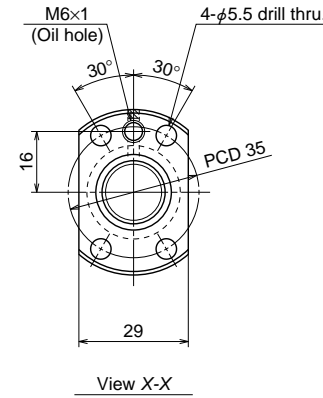
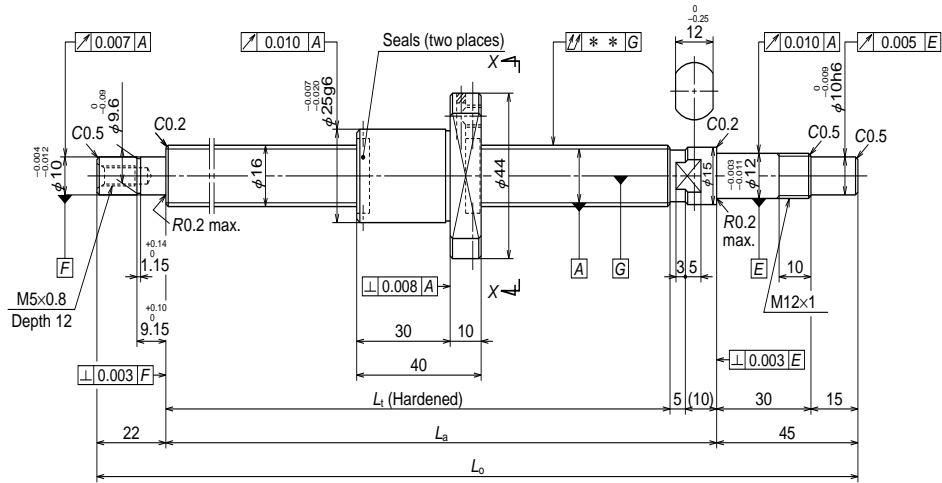
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	12x2.5/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.588/12.4	
Screw shaft root diameter	10.6	
Effective turns of balls	1x3	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C _a	2360
	Static C _{0a}	4540
Axial play	0	0.005 or less
Preload (N)	98.1	—
Dynamic friction torque, (N·cm)	0.4 - 3.4	1.0 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	

Recommended support unit	Unit: mm	
	For drive side	For opposite to drive side
WBK10-01A (square)	○	
WBK10S-01 (square)		○
WBK10-11 (round)	○	

Ball screw No.		Stroke	
		Nominal	Maximum (L _t —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W1201MA-5PY-C3Z2.5	W1201MA-6Y-C3T2.5	50	78
W1201MA-7PY-C3Z2.5	W1201MA-8Y-C3T2.5	100	128
W1202MA-5PY-C3Z2.5	W1202MA-6Y-C3T2.5	150	178
W1202MA-7PY-C3Z2.5	W1202MA-8Y-C3T2.5	200	228
W1203MA-3PY-C3Z2.5	W1203MA-4Y-C3T2.5	250	278

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
L _t	L _a	L _o	T	e _p	v _u			
110	125	180	0	0.010	0.008	0.020	0.21	3000
160	175	230	0	0.010	0.008	0.030	0.25	3000
210	225	280	0	0.012	0.008	0.030	0.29	3000
260	275	330	0	0.012	0.008	0.040	0.33	3000
310	325	380	0	0.012	0.008	0.040	0.37	3000

- Remarks: 1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. Apply to the screw shaft surface when replenishing. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.



Ball screw specifications

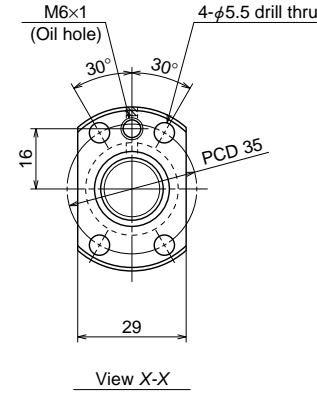
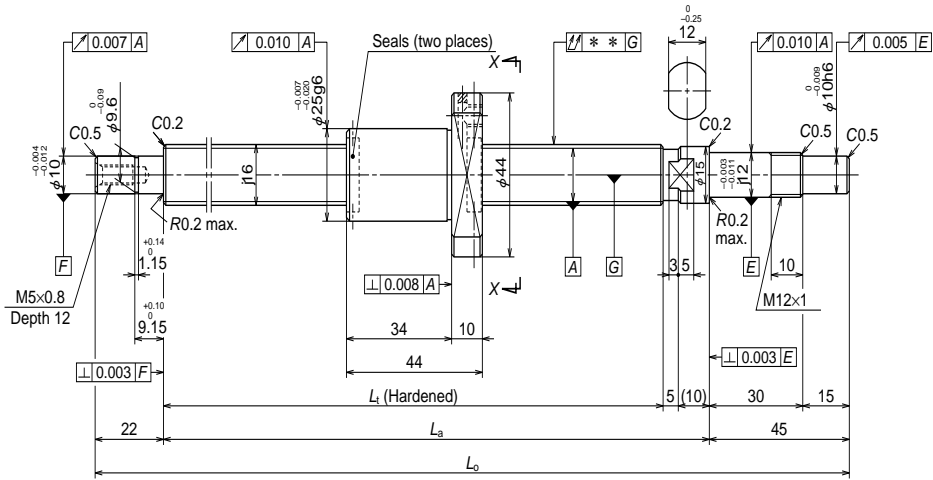
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	16x2/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.588/16.4	
Screw shaft root diameter	14.6	
Effective turns of balls	1x4	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C _a	3510
	Static C _{0a}	8450
Axial play	0	0.005 or less
Preload (N)	147	—
Dynamic friction torque, (N-cm)	0.5 - 4.9	1.5 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	
Internal spatial volume of nut (cm ³)	1.6	
Standard volume of grease replenishing (cm ³)	0.8	

Recommended support unit	For drive side	For opposite to drive side
WBK12-01A (square)	○	
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Ball screw No.		Stroke	
		Nominal	Maximum (L ₁ —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W1601MA-1PY-C3Z2	W1601MA-2Y-C3T2	50	99
W1601MA-3PY-C3Z2	W1601MA-4Y-C3T2	100	149
W1602MA-1PY-C3Z2	W1602MA-2Y-C3T2	150	199
W1602MA-3PY-C3Z2	W1602MA-4Y-C3T2	200	249
W1603MA-1PY-C3Z2	W1603MA-2Y-C3T2	300	349

- Remarks: 1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. The amount for replenishing should be about 50% of the nut internal space capacity. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
L ₁	L _a	L _o	T	e _p	v _u			Supporting condition	
								Fixed - Simple support	Fixed - Fixed
139	154	221	0	0.010	0.008	0.020	0.41	3000	3000
189	204	271	0	0.010	0.008	0.020	0.48	3000	3000
239	254	321	0	0.012	0.008	0.030	0.55	3000	3000
289	304	371	0	0.012	0.008	0.030	0.62	3000	3000
389	404	471	0	0.013	0.010	0.035	0.77	3000	3000



Ball screw specifications		
Product classification	Preloaded	Precise clearance
Shaft dia. x Lead / Direction of turn	16x2.5/Right	
Preload / Ball recirculation	P preload / Deflector	
Ball dia. / Ball circle dia.	1.588/16.4	
Screw shaft root diameter	14.6	
Effective turns of balls	1x4	
Accuracy grade / Preload / Axial play	C3/Z	C3/T
Basic load rating (N)	Dynamic C_a	3510
	Static C_{0a}	8450
Axial play	0	0.005 or less
Preload (N)	147	—
Dynamic friction torque, (N-cm)	0.5 - 4.9	1.5 or less
Spacer ball	None	
Factory packed grease	NSK grease PS2	
Internal spatial volume of nut (cm ³)	1.6	
Standard volume of grease replenishing (cm ³)	0.8	

Recommended support unit	For drive side	For opposite to drive side
	WBK12-01A (square)	○
WBK12S-01 (square)	○	○
WBK12-11 (round)	○	○

Ball screw No.		Stroke	
		Nominal	Maximum (L_1 —Nut length)
Preloaded (MPFD)	Precise clearance (MSFD)		
W1601MA-5PY-C3Z2.5	W1601MA-6Y-C3T2.5	50	95
W1601MA-7PY-C3Z2.5	W1601MA-8Y-C3T2.5	100	145
W1602MA-5PY-C3Z2.5	W1602MA-6Y-C3T2.5	150	195
W1602MA-7PY-C3Z2.5	W1602MA-8Y-C3T2.5	200	245
W1603MA-3PY-C3Z2.5	W1603MA-4Y-C3T2.5	300	345

- Remarks: 1. We recommend NSK support unit. Refer to Page B433 for details.
 2. NSK grease PS2 is recommended. The amount for replenishing should be about 50% of the nut internal space capacity. Refer to Page D16 for details.
 3. Contact NSK if permissible rotational speed is to be exceeded.

Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
L_1	L_a	L_o	T	e_p	v_u			Supporting condition	
								Fixed - Simple support	Fixed - Fixed
139	154	221	0	0.010	0.008	0.020	0.42	3000	3000
189	204	271	0	0.010	0.008	0.020	0.49	3000	3000
239	254	321	0	0.012	0.008	0.030	0.57	3000	3000
289	304	371	0	0.012	0.008	0.030	0.64	3000	3000
389	404	471	0	0.013	0.010	0.035	0.79	3000	3000