

Unit: mm

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	4 x 1 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	0.800 / 4.2	
Effective turns of balls	1 x 2	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	315
	Static C_{0a}	370
Axial play	0	
Dynamic friction torque (N·cm)	1.0 or less	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

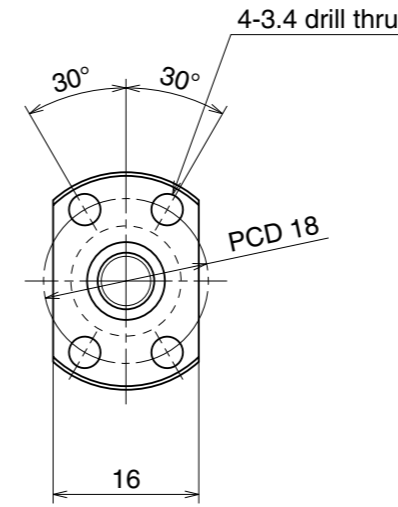
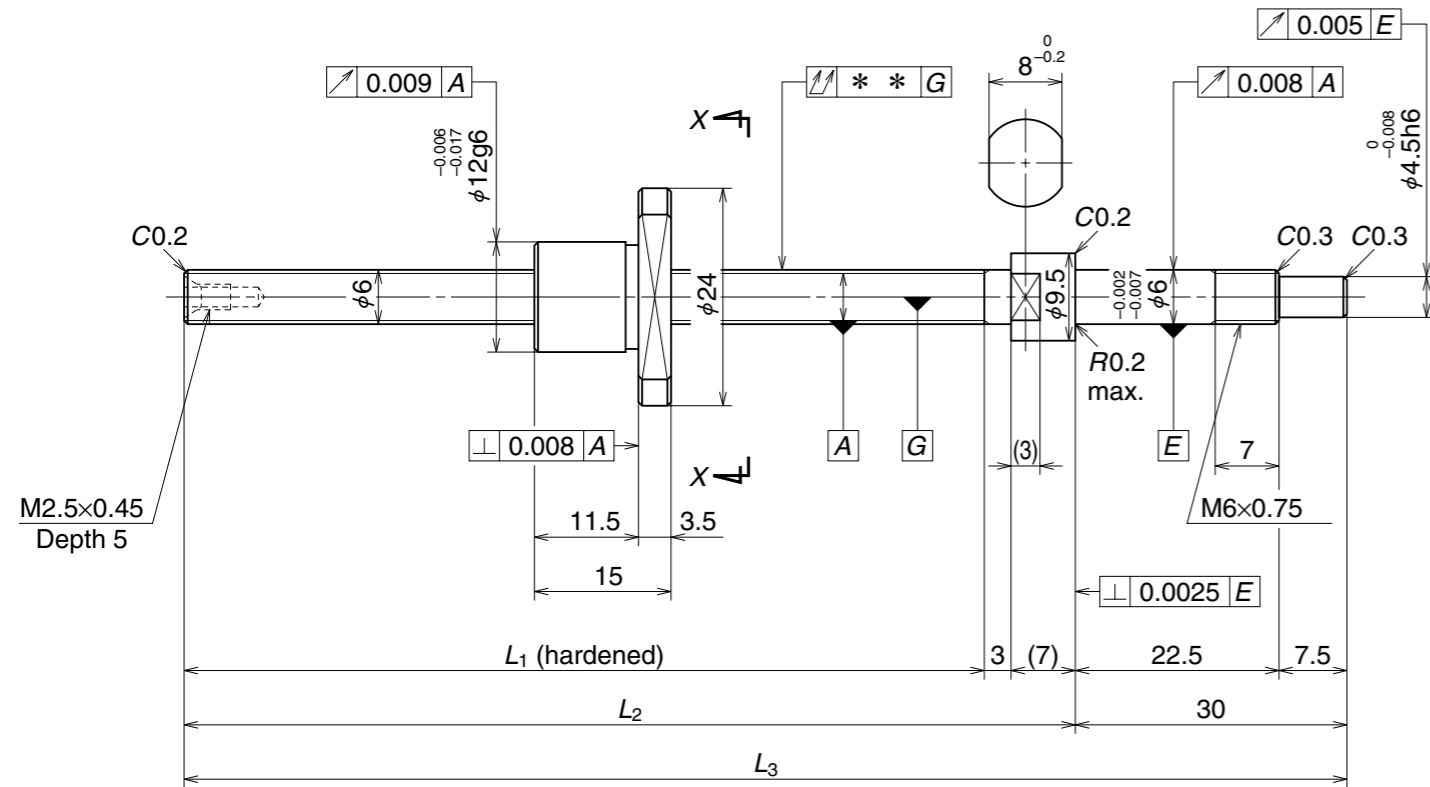
Recommended Support Unit	
WBK06-01A (square)	
WBK06-11 (round)	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
W0400MA-1PY-C3Z1	20	32	44	55	85	0	0.008	0.008	0.015	0.024	3 000
W0400MA-3PY-C3Z1	40	52	64	75	105	0	0.008	0.008	0.020	0.026	3 000
W0401MA-1PY-C3Z1	70	82	94	105	135	0	0.008	0.008	0.025	0.028	3 000

Note 1: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.
 Note 2: Nut does not have seal.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	6 x 1 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	0.800 / 6.2	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	575
	Static C_{0a}	925
Axial play	0	
Dynamic friction torque (N·cm)	1.3 or less	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

Recommended Support Unit	
WBK06-01A (square)	
WBK06-11 (round)	

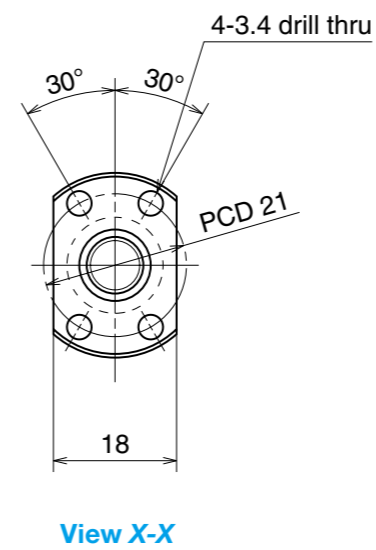
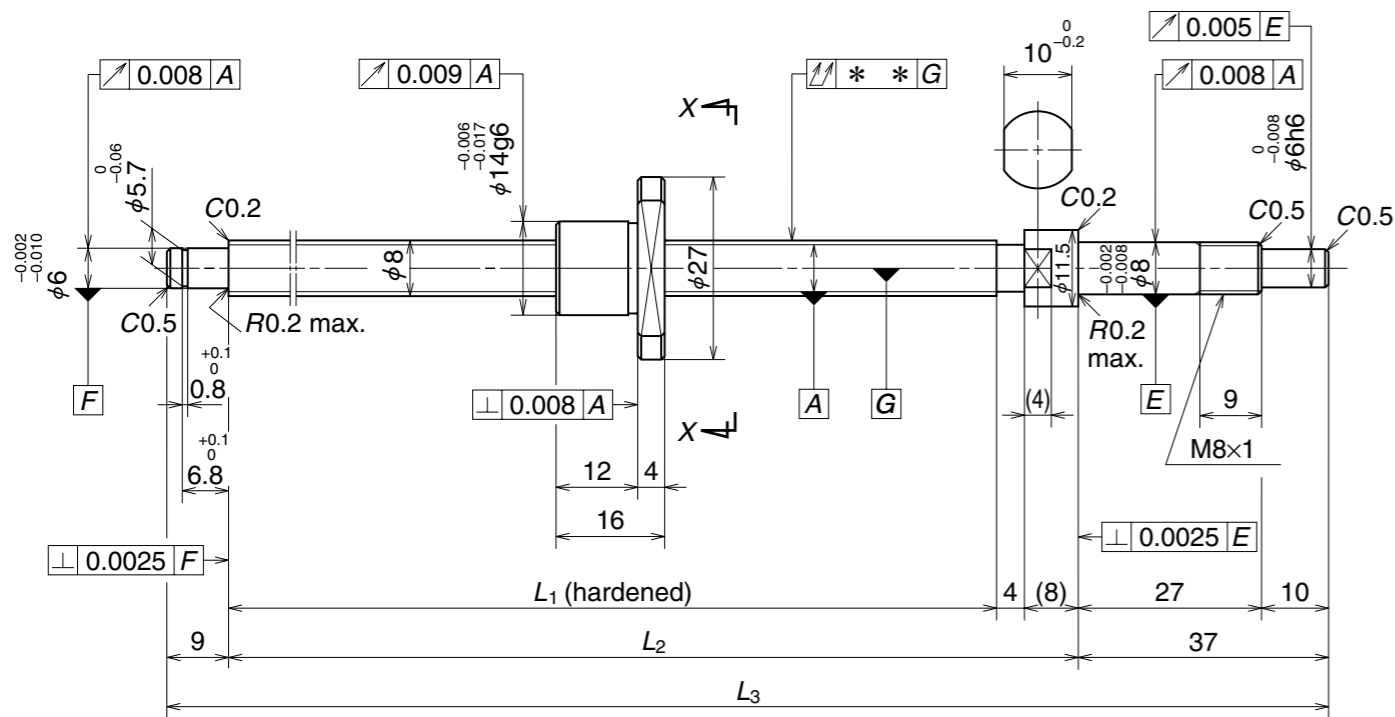
Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
W0600MA-1PY-C3Z1	40	50	65	75	105	0	0.008	0.008	0.015	0.039	3 000
W0601MA-1PY-C3Z1	70	80	95	105	135	0	0.008	0.008	0.020	0.045	3 000
W0601MA-3PY-C3Z1	100	110	125	135	165	0	0.010	0.008	0.025	0.051	3 000

Note 1: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Note 2: Nut does not have seal.

Unit: mm



Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	8 x 1 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	0.800 / 8.2	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	670
	Static C_{0a}	1 290
Axial play	0	
Dynamic friction torque (N·cm)	1.8 or less	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

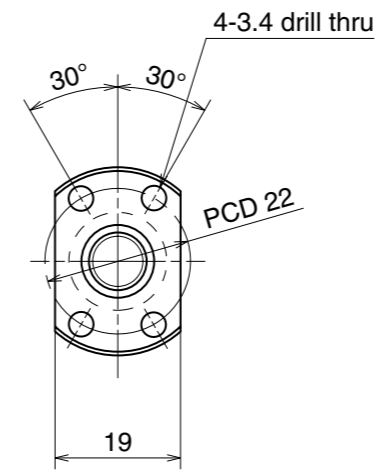
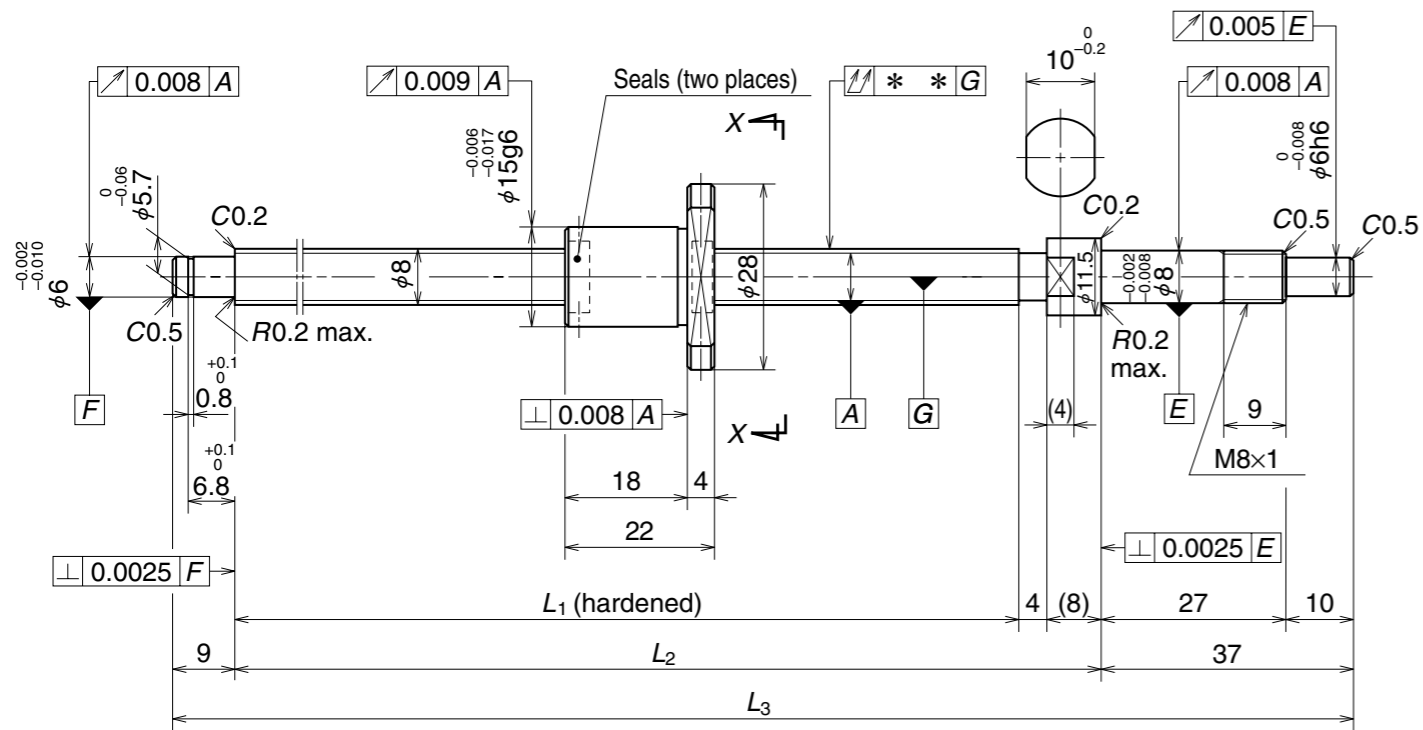
Recommended Support Unit	Fixed side	Simple support side
	WBK08-01A (square)	○
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
											Fixed - Simple support
W0800MA-1PY-C3Z1	40	64	80	92	138	0	0.008	0.008	0.025	0.073	3 000
W0801MA-1PY-C3Z1	70	94	110	122	168	0	0.010	0.008	0.030	0.084	3 000
W0801MA-3PY-C3Z1	100	124	140	152	198	0	0.010	0.008	0.030	0.095	3 000
W0802MA-1PY-C3Z1	150	174	190	202	248	0	0.010	0.008	0.035	0.11	3 000

Note 1: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.
 Note 2: Nut does not have seal.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	8 x 1.5 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.000 / 8.3	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	1 080
	Static C_{0a}	1 980
Axial play	0	
Dynamic friction torque (N·cm)	2.0 or less	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

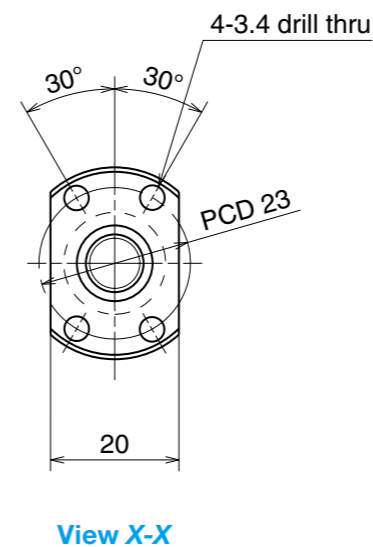
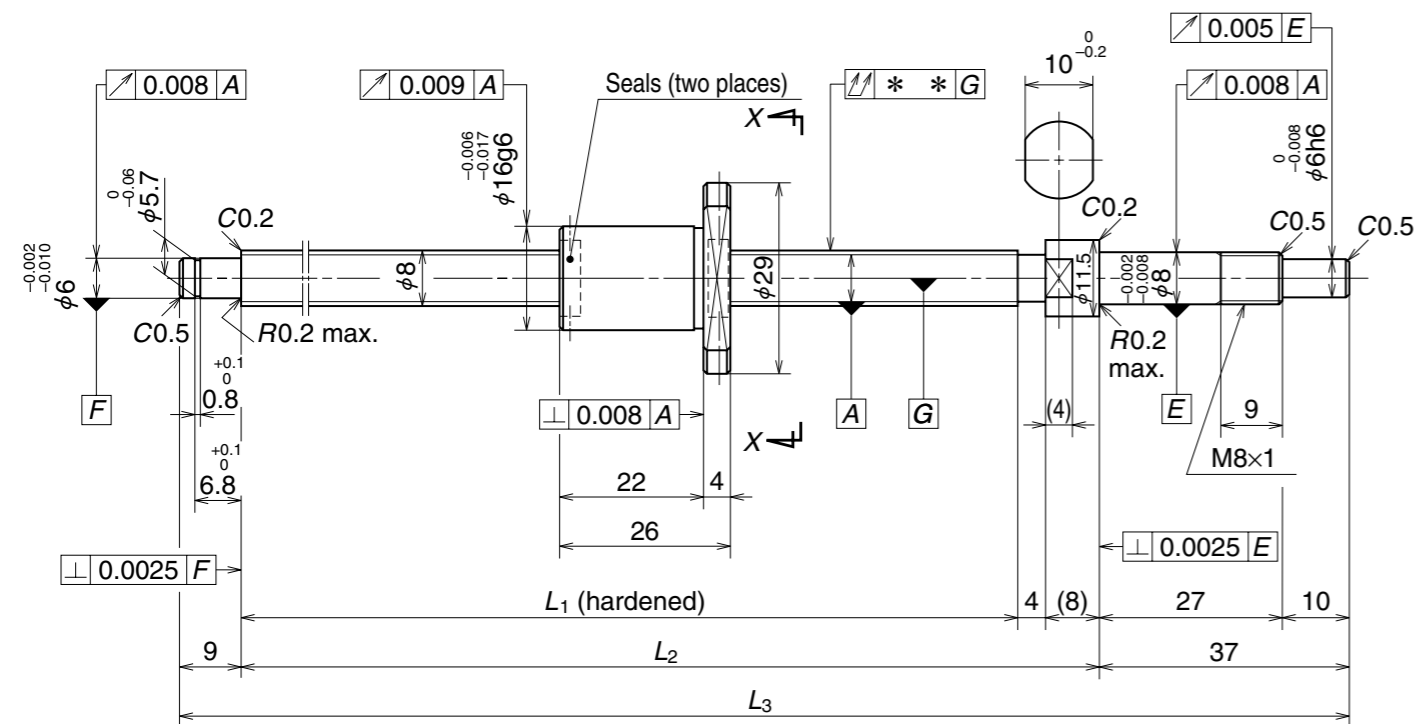
Recommended Support Unit	Support Unit	
	Fixed side	Simple support side
WBK08-01A (square)	○	
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e _p	Variation v _u			Supporting condition
											Fixed - Simple support
W0800MA-3PY-C3Z1.5	40	58	80	92	138	0	0.008	0.008	0.025	0.082	3 000
W0801MA-5PY-C3Z1.5	70	88	110	122	168	0	0.010	0.008	0.030	0.093	3 000
W0801MA-7PY-C3Z1.5	100	118	140	152	198	0	0.010	0.008	0.030	0.10	3 000
W0802MA-3PY-C3Z1.5	150	168	190	202	248	0	0.010	0.008	0.035	0.12	3 000

Note: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Unit: mm



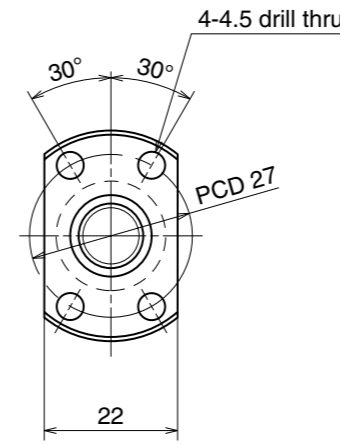
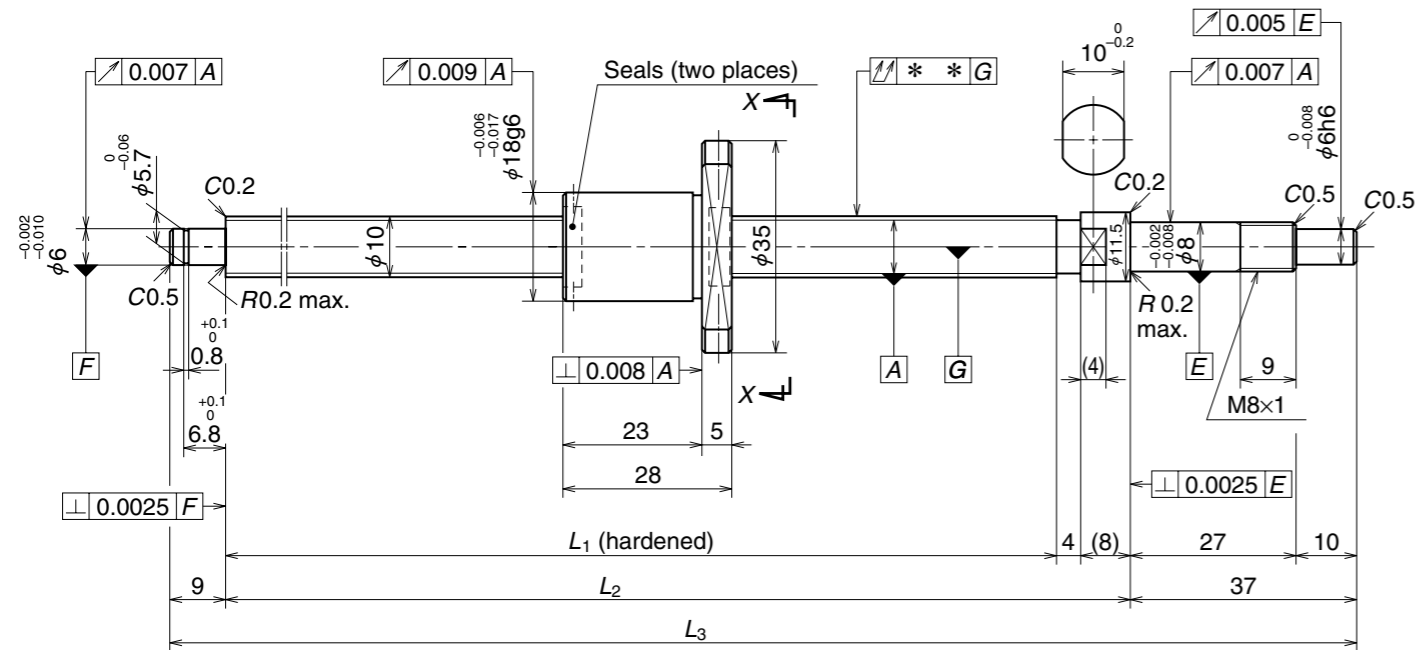
Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	8 x 2 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.200 / 8.3	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	1 320
	Static C_{0a}	2 210
Axial play	0	
Dynamic friction torque (N·cm)	2.0 or less	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

Recommended Support Unit	Unit: mm	
	Fixed side	Simple support side
WBK08-01A (square)	○	
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
											Fixed - Simple support
W0800MA-5PY-C3Z2	40	54	80	92	138	0	0.008	0.008	0.025	0.09	3 000
W0801MA-9PY-C3Z2	70	84	110	122	168	0	0.010	0.008	0.030	0.10	3 000
W0801MA-11PY-C3Z2	100	114	140	152	198	0	0.010	0.008	0.030	0.11	3 000
W0802MA-5PY-C3Z2	150	164	190	202	248	0	0.010	0.008	0.035	0.13	3 000

Note: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Unit: mm



Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	10 x 2 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.200 / 10.3	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	1 490
	Static C_{0a}	2 850
Axial play	0	
Dynamic friction torque (N·cm)	0.1 - 2.4	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

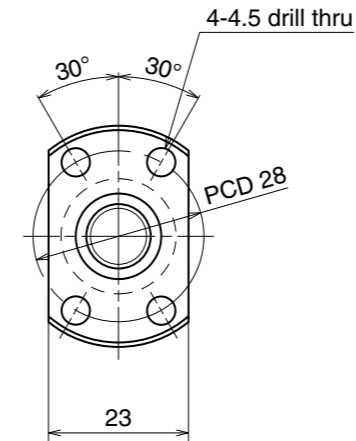
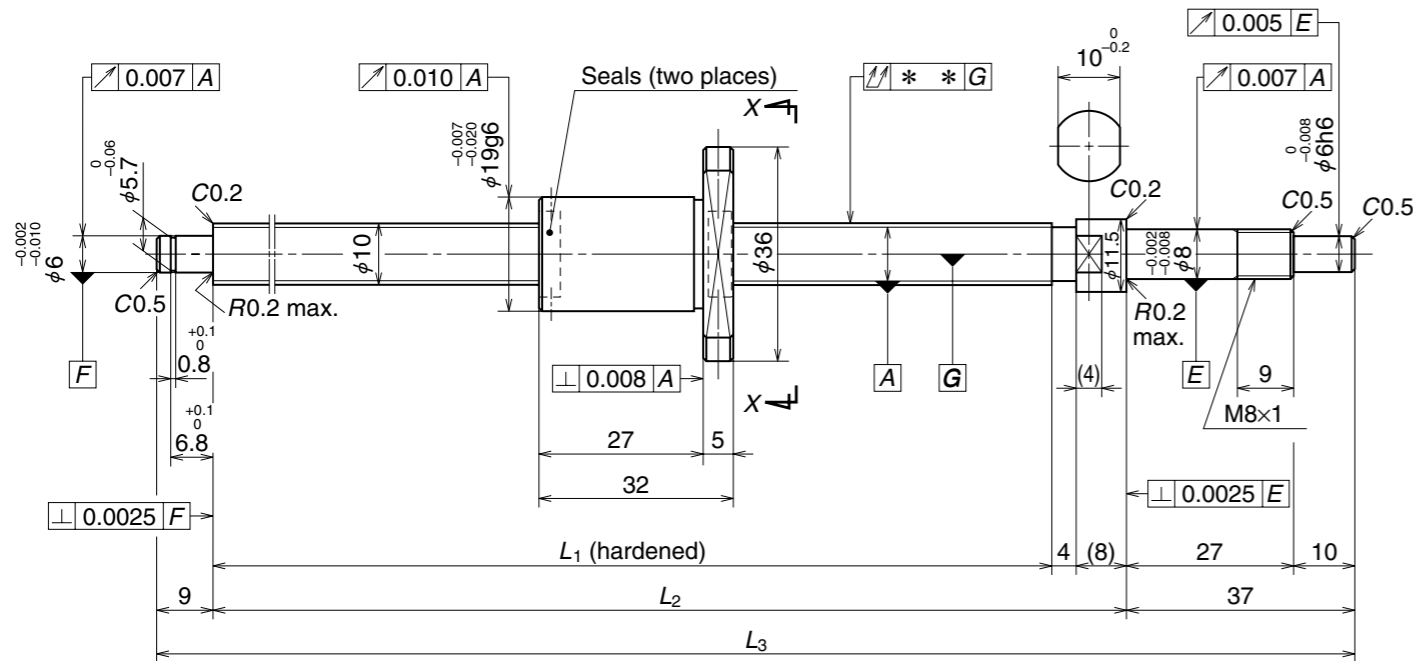
Recommended Support Unit	Fixed side	Simple support side
	WBK08-01A (square)	○
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
W1001MA-1PY-C3Z2	50	72	100	112	158	0	0.008	0.008	0.020	0.13	3 000
W1001MA-3PY-C3Z2	100	122	150	162	208	0	0.010	0.008	0.030	0.16	3 000
W1002MA-1PY-C3Z2	150	172	200	212	258	0	0.010	0.008	0.030	0.19	3 000
W1002MA-3PY-C3Z2	200	222	250	262	308	0	0.012	0.008	0.030	0.22	3 000

Note: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	10 x 2.5 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.588 / 10.4	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	2 130
	Static C_{0a}	3 640
Axial play	0	
Dynamic friction torque (N·cm)	0.2 - 2.9	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

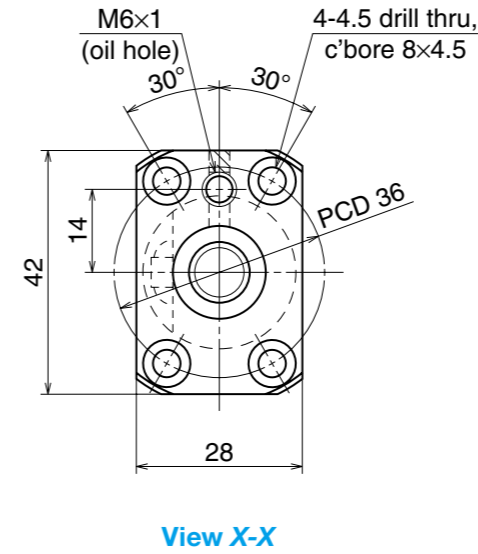
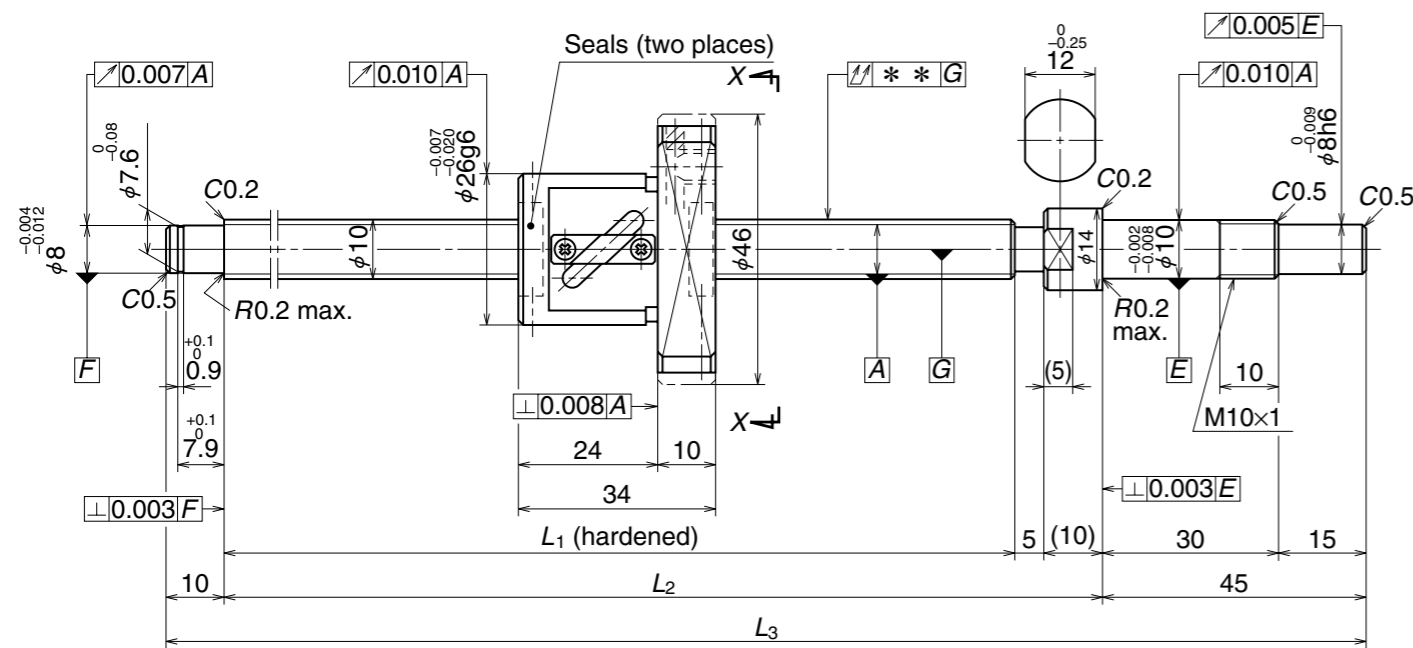
Recommended Support Unit	Fixed side	Simple support side
	WBK08-01A (square)	○
WBK08S-01 (square)		○
WBK08-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L_1 -Nut length)	L_1	L_2	L_3	Target value T	Error e_p	Variation v_u			Supporting condition
											Fixed - Simple support
W1001MA-5PY-C3Z2.5	50	68	100	112	158	0	0.008	0.008	0.020	0.14	3 000
W1001MA-7PY-C3Z2.5	100	118	150	162	208	0	0.010	0.008	0.030	0.17	3 000
W1002MA-5PY-C3Z2.5	150	168	200	212	258	0	0.010	0.008	0.030	0.20	3 000
W1002MA-7PY-C3Z2.5	200	218	250	262	308	0	0.012	0.008	0.030	0.23	3 000

Note: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Unit: mm



Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	10 x 4 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	2.000 / 10.3	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	1 730
	Static C_{0a}	2 230
Axial play	0	
Dynamic friction torque (N-cm)	0.5 - 3.9	
Spacer ball	Yes	
Factory-packed grease	NSK grease PS2	
Internal spatial volume of nut (cm ³)	0.8	

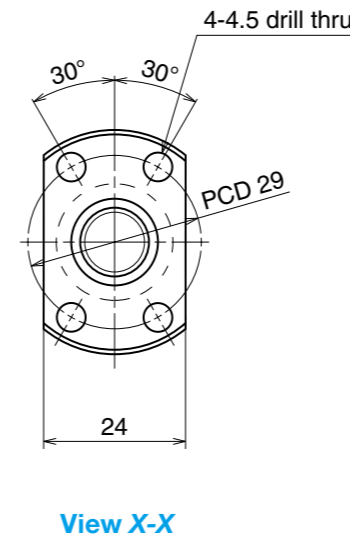
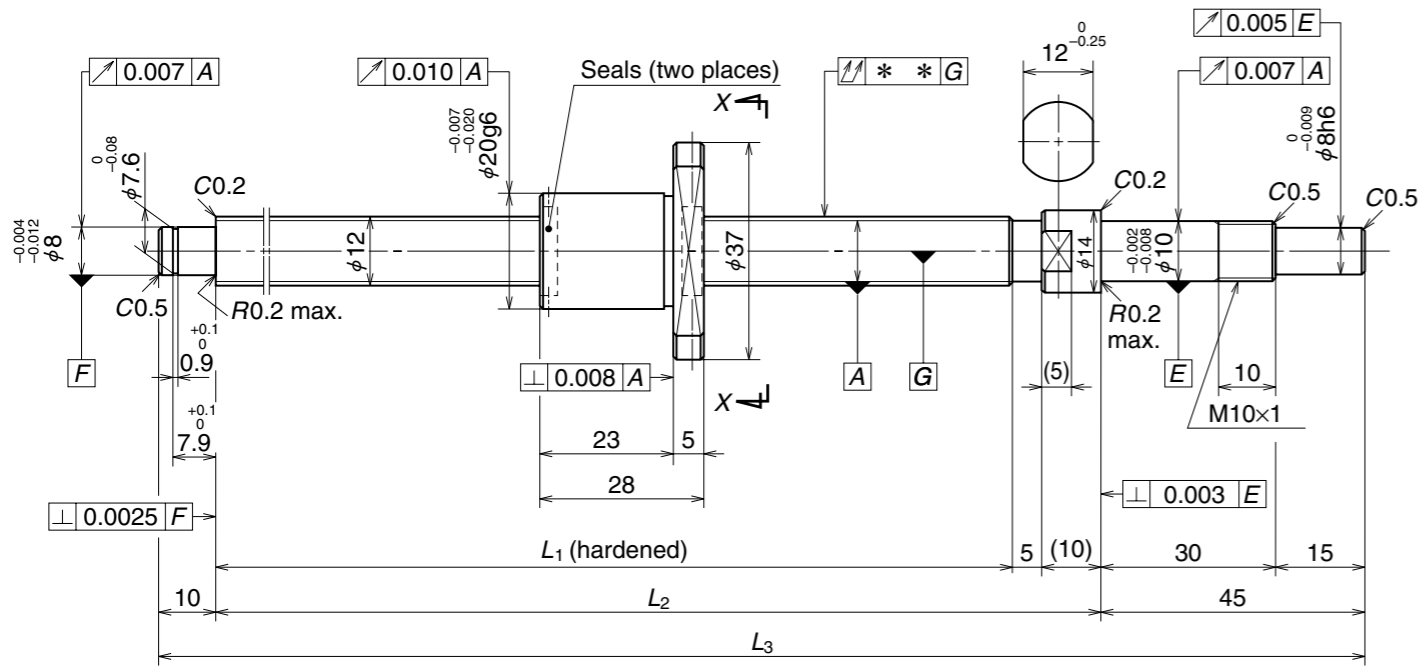
Recommended Support Unit	Fixed side	Simple support side
	WBK10-01A (square)	○
WBK10S-01 (square)		○
WBK10-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
											Fixed - Simple support
W1001FA-1P-C3Z4	50	76	110	125	180	0	0.010	0.008	0.020	0.26	3 000
W1001FA-3P-C3Z4	100	126	160	175	230	0	0.010	0.008	0.030	0.28	3 000
W1002FA-1P-C3Z4	150	176	210	225	280	0	0.012	0.008	0.030	0.31	3 000
W1002FA-3P-C3Z4	200	226	260	275	330	0	0.012	0.008	0.040	0.34	3 000
W1003FA-1P-C3Z4	250	276	310	325	380	0	0.012	0.008	0.040	0.37	3 000
W1003FA-3P-C3Z4	300	326	360	375	430	0	0.013	0.010	0.050	0.39	3 000

Note: NSK grease PS2 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	12 x 2 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.200 / 12.3	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C _a	1 660
	Static C _{0a}	3 620
Axial play	0	
Dynamic friction torque (N·cm)	0.4 - 3.4	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

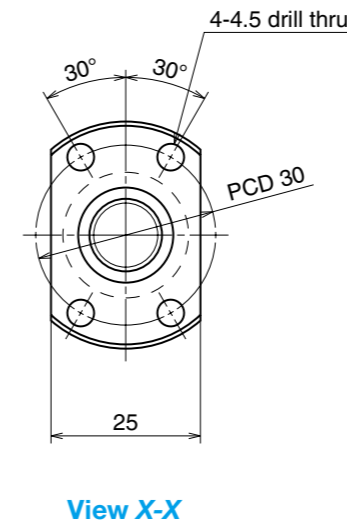
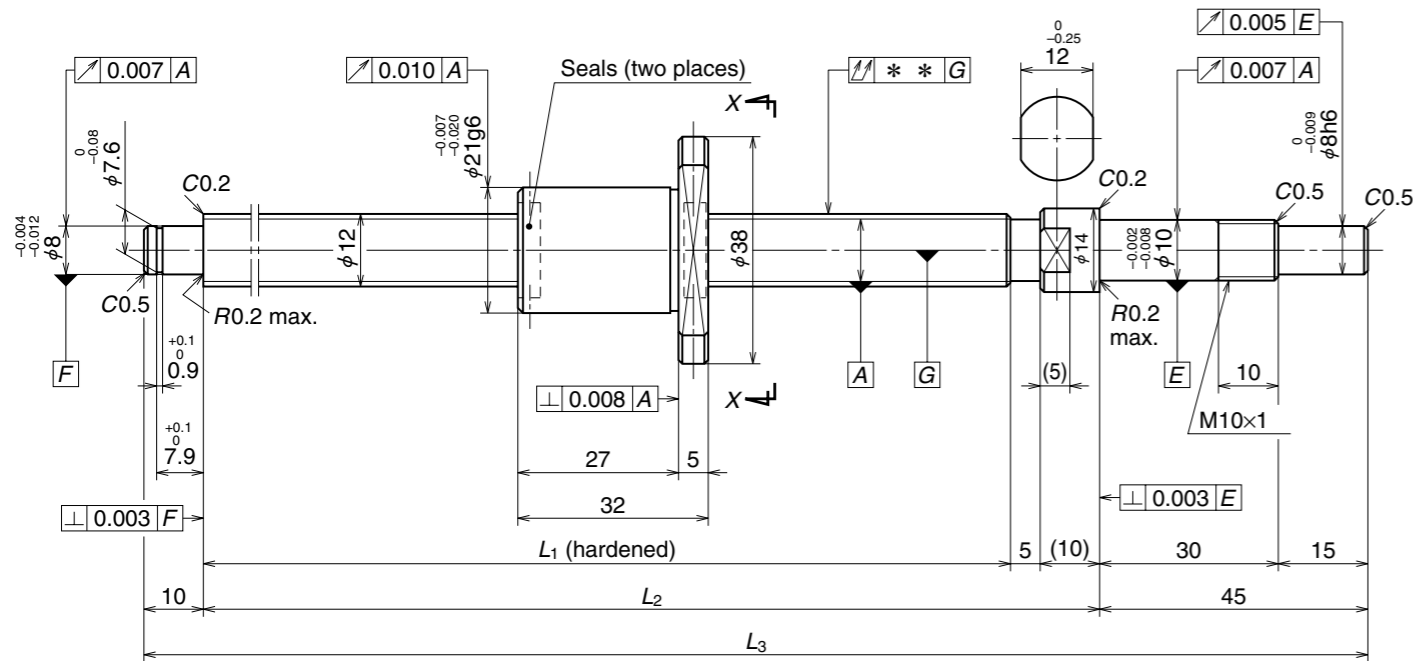
Recommended Support Unit	Fixed side		Simple support side	
	○	○	○	○
WBK10-01A (square)	○			
WBK10S-01 (square)			○	
WBK10-11 (round)	○			

Ball Screws A Series

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e _p	Variation v _u			Supporting condition
											Fixed - Simple support
W1201MA-1PY-C3Z2	50	82	110	125	180	0	0.010	0.008	0.020	0.20	3 000
W1201MA-3PY-C3Z2	100	132	160	175	230	0	0.010	0.008	0.030	0.24	3 000
W1202MA-1PY-C3Z2	150	182	210	225	280	0	0.012	0.008	0.030	0.28	3 000
W1202MA-3PY-C3Z2	200	232	260	275	330	0	0.012	0.008	0.040	0.32	3 000
W1203MA-1PY-C3Z2	250	282	310	325	380	0	0.012	0.008	0.040	0.36	3 000

Note: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Unit: mm



Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	12 x 2.5 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.588 / 12.4	
Effective turns of balls	1 x 3	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	2 360
	Static C_{0a}	4 540
Axial play	0	
Dynamic friction torque (N·cm)	0.4 - 3.4	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	

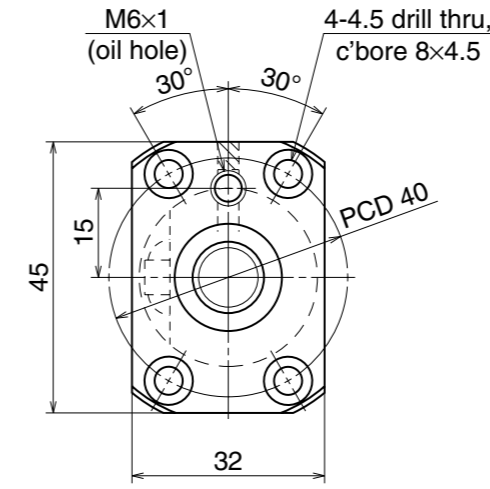
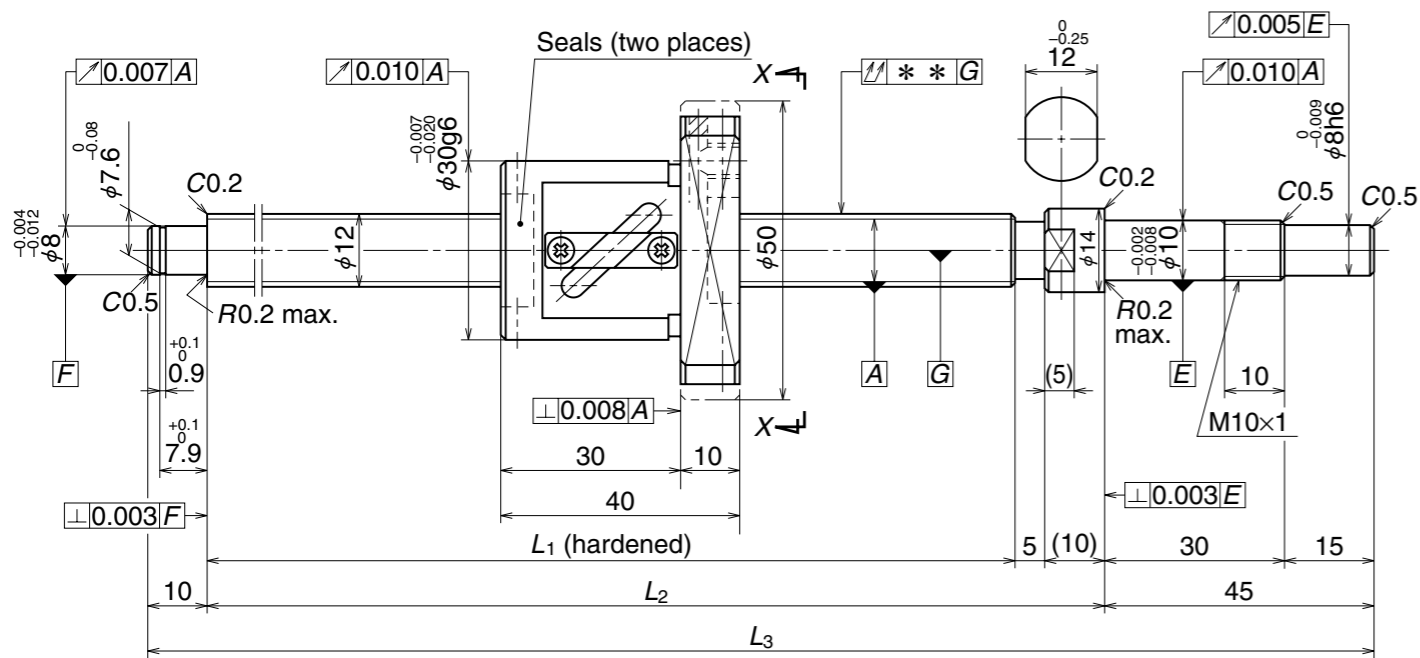
Recommended Support Unit	Fixed side	Simple support side
	WBK10-01A (square)	○
WBK10S-01 (square)		○
WBK10-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e _p	Variation v _u			Supporting condition
											Fixed - Simple support
W1201MA-5PY-C3Z2.5	50	78	110	125	180	0	0.010	0.008	0.020	0.21	3 000
W1201MA-7PY-C3Z2.5	100	128	160	175	230	0	0.010	0.008	0.030	0.25	3 000
W1202MA-5PY-C3Z2.5	150	178	210	225	280	0	0.012	0.008	0.030	0.29	3 000
W1202MA-7PY-C3Z2.5	200	228	260	275	330	0	0.012	0.008	0.040	0.33	3 000
W1203MA-3PY-C3Z2.5	250	278	310	325	380	0	0.012	0.008	0.040	0.37	3 000

Note: NSK grease PS2 is recommended. Apply to screw shaft surface when replenishing.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	12 x 5 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	2.381 / 12.3	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	2 370
	Static C_{0a}	3 160
Axial play	0	
Dynamic friction torque (N·cm)	1.0 - 4.4	
Spacer ball	Yes	
Factory-packed grease	NSK grease PS2	
Internal spatial volume of nut (cm ³)	1.2	

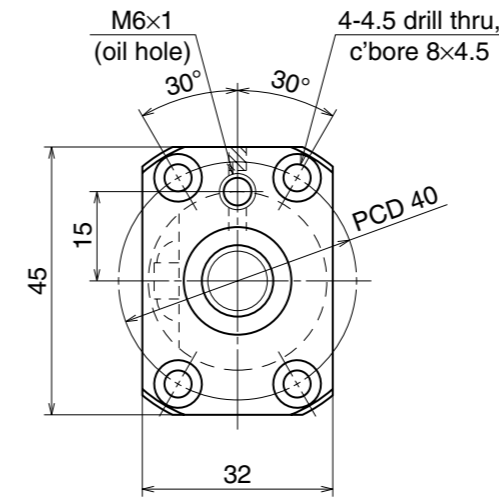
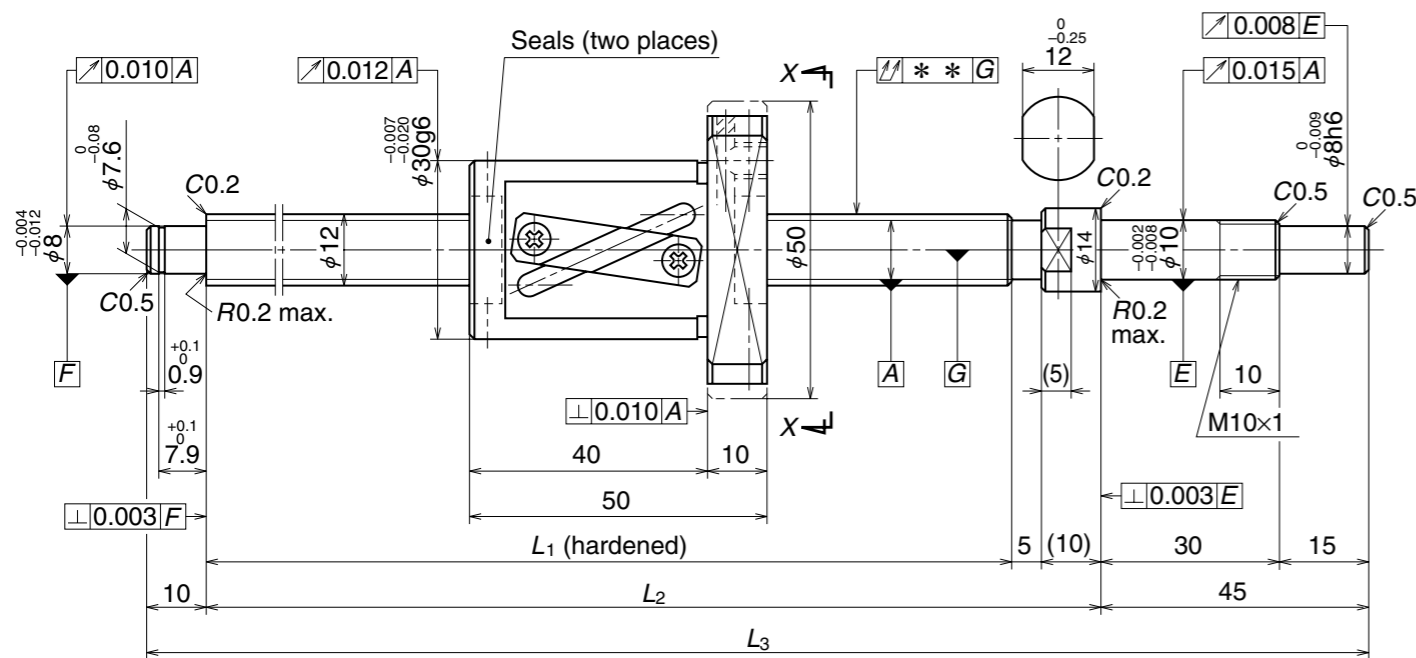
Recommended Support Unit	Fixed side	Simple support side
	WBK10-01A (square)	○
WBK10S-01 (square)		○
WBK10-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
											Fixed - Simple support
W1201FA-1P-C3Z5	50	70	110	125	180	0	0.010	0.008	0.020	0.35	3 000
W1201FA-3P-C3Z5	100	120	160	175	230	0	0.010	0.008	0.030	0.38	3 000
W1202FA-1P-C3Z5	150	170	210	225	280	0	0.012	0.008	0.030	0.42	3 000
W1202FA-3P-C3Z5	200	220	260	275	330	0	0.012	0.008	0.040	0.46	3 000
W1203FA-1P-C3Z5	250	270	310	325	380	0	0.012	0.008	0.040	0.50	3 000
W1204FA-1P-C3Z5	350	370	410	425	480	0	0.015	0.010	0.050	0.58	3 000
W1205FA-1P-C3Z5	450	470	510	525	580	0	0.016	0.012	0.065	0.66	3 000

Note: NSK grease PS2 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	12 x 10 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	2.381 / 12.5	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	2 360
	Static C_{0a}	3 240
Axial play	0	
Dynamic friction torque (N·cm)	1.0 - 4.9	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	1.4	

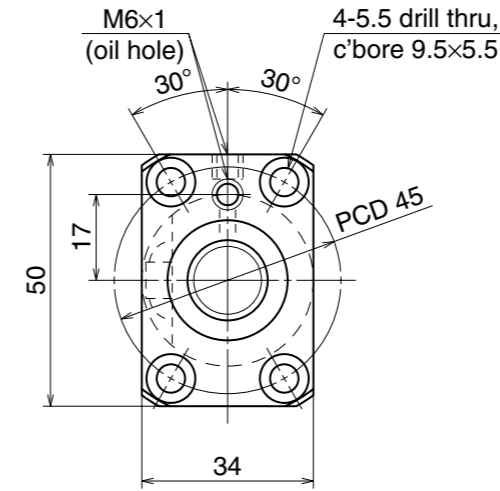
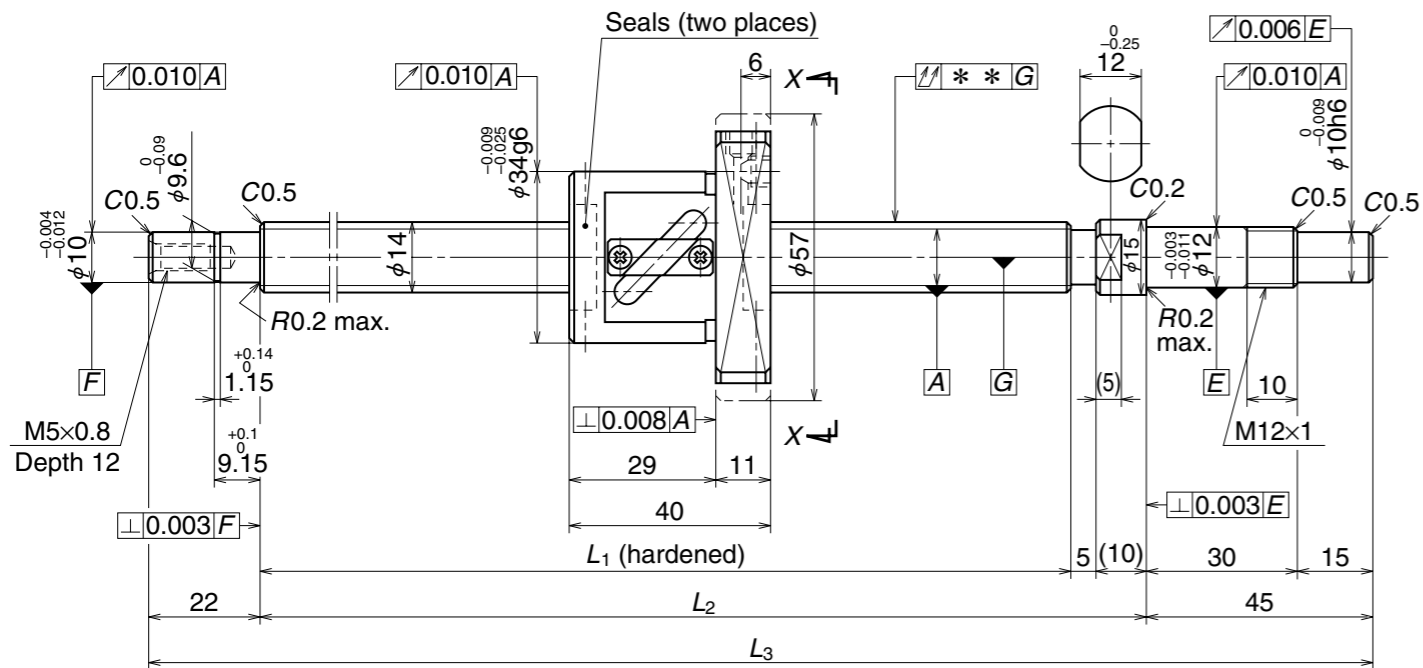
Recommended Support Unit	Fixed side	Simple support side
	WBK10-01A (square)	○
WBK10S-01 (square)		○
WBK10-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error e_p	Variation v_u			Supporting condition
											Fixed - Simple support
W1201FA-5P-C5Z10	100	110	160	175	230	0	0.020	0.018	0.035	0.43	3 000
W1202FA-5P-C5Z10	150	160	210	225	280	0	0.023	0.018	0.035	0.47	3 000
W1203FA-3P-C5Z10	250	260	310	325	380	0	0.023	0.018	0.050	0.56	3 000
W1204FA-3P-C5Z10	350	360	410	425	480	0	0.027	0.020	0.060	0.64	3 000
W1205FA-3P-C5Z10	450	460	510	525	580	0	0.030	0.023	0.075	0.72	3 000

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

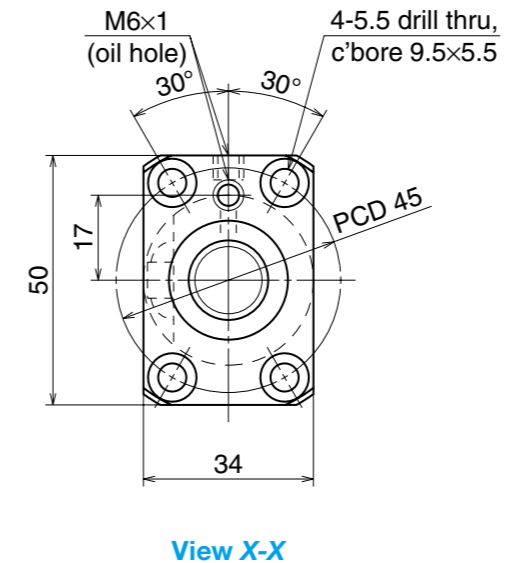
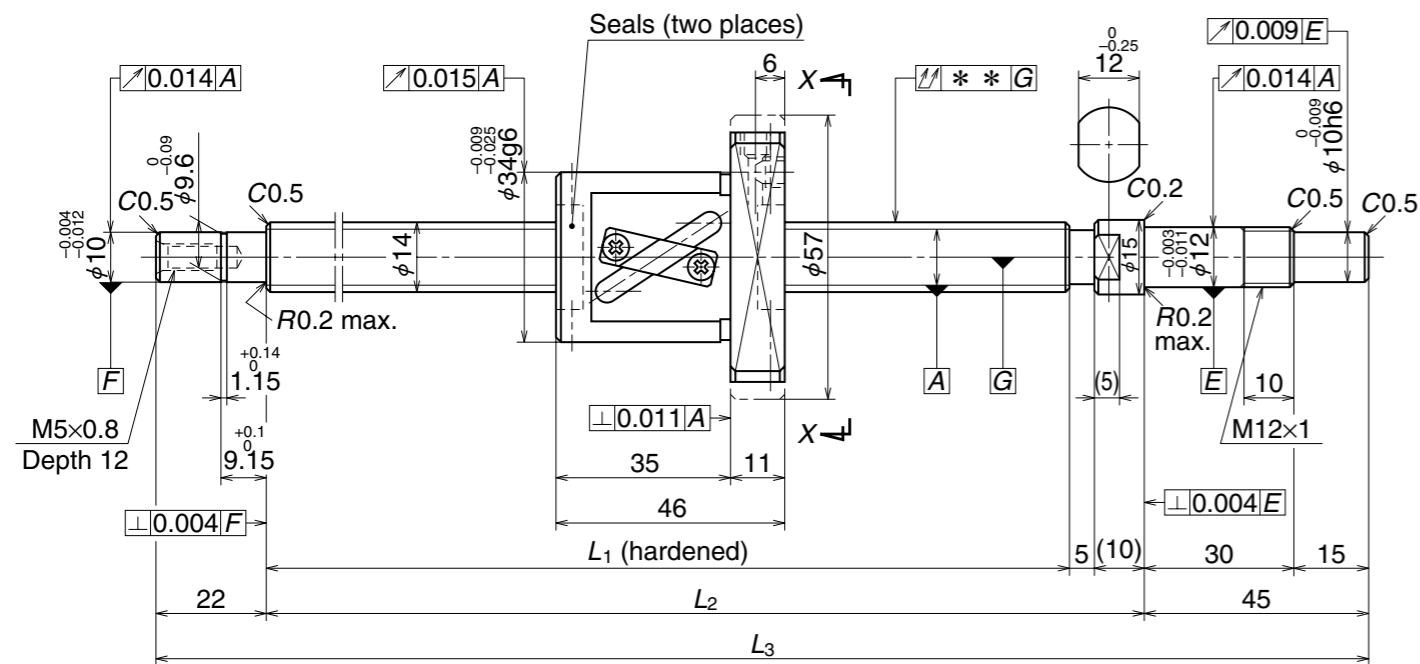
Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	14 x 5 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.175 / 14.5	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	4 280
	Static C_{0a}	5 840
Axial play	0	
Dynamic friction torque (N·cm)	1.5 - 6.9	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.2	

Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1401FA-1P-C3Z5	100	149	189	204	271	0	0.010	0.008	0.020	0.52	3 000	3 000
W1402FA-1P-C3Z5	150	199	239	254	321	0	0.012	0.008	0.030	0.57	3 000	3 000
W1403FA-1P-C3Z5	250	299	339	354	421	0	0.013	0.010	0.035	0.67	3 000	3 000
W1404FA-1P-C3Z5	350	399	439	454	521	0	0.015	0.010	0.045	0.77	3 000	3 000
W1405FA-1P-C3Z5	450	499	539	554	621	0	0.016	0.012	0.045	0.87	3 000	3 000
W1406FA-1P-C3Z5	600	649	689	704	771	0	0.018	0.013	0.055	1.0	3 000	3 000

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.



Unit: mm

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	14 x 8 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.175 / 14.5	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	4 280
	Static C_{0a}	5 840
Axial play	0	
Dynamic friction torque (N·cm)	1.5 - 7.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.1	

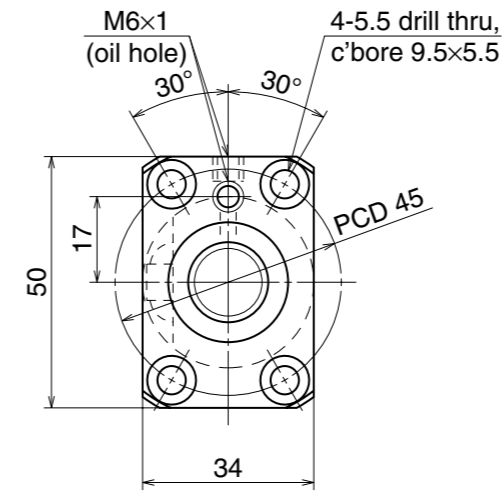
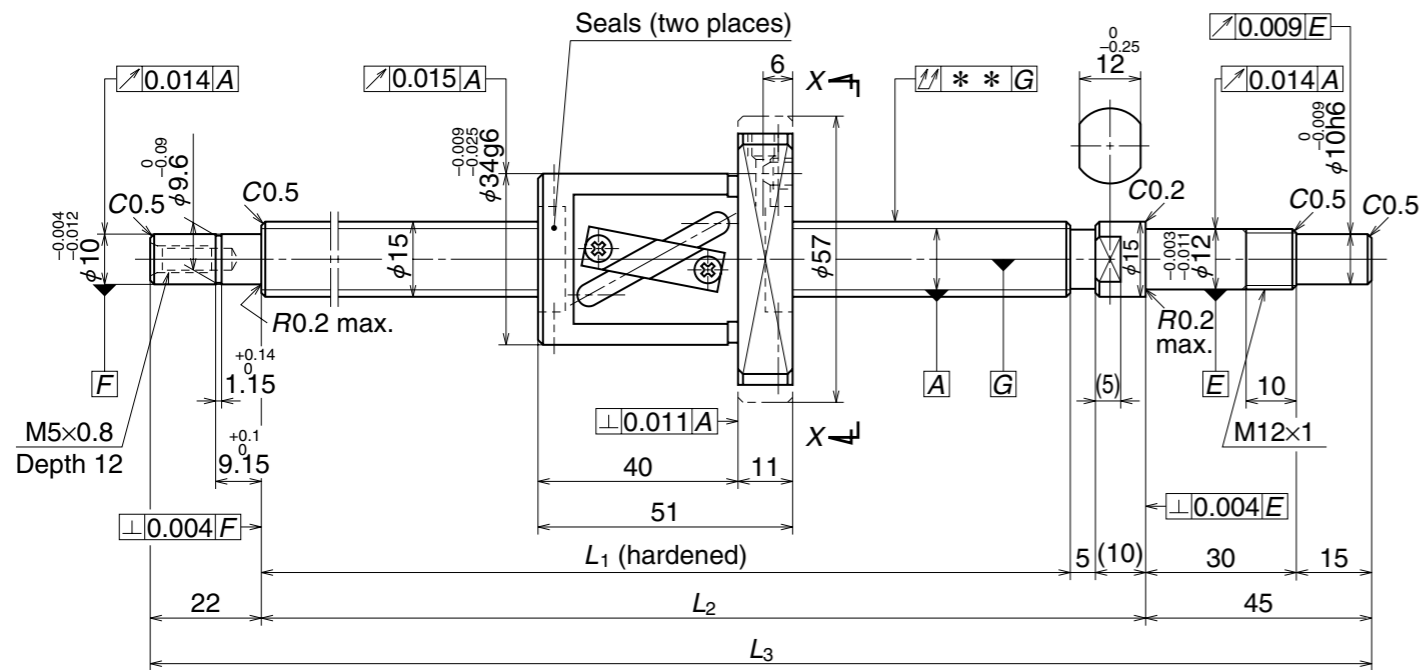
Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1401FA-3P-C5Z8	100	143	189	204	271	0	0.020	0.018	0.025	0.56	3 000	3 000
W1402FA-3P-C5Z8	150	193	239	254	321	0	0.023	0.018	0.035	0.61	3 000	3 000
W1402FA-5P-C5Z8	200	243	289	304	371	0	0.023	0.018	0.035	0.67	3 000	3 000
W1403FA-3P-C5Z8	250	293	339	354	421	0	0.025	0.020	0.040	0.72	3 000	3 000
W1403FA-5P-C5Z8	300	343	389	404	471	0	0.025	0.020	0.040	0.78	3 000	3 000
W1404FA-3P-C5Z8	350	393	439	454	521	0	0.027	0.020	0.050	0.83	3 000	3 000
W1404FA-5P-C5Z8	400	443	489	504	571	0	0.027	0.020	0.050	0.88	3 000	3 000
W1405FA-3P-C5Z8	450	493	539	554	621	0	0.030	0.023	0.050	0.94	3 000	3 000
W1405FA-5P-C5Z8	500	543	589	604	671	0	0.030	0.023	0.065	0.99	3 000	3 000
W1406FA-3P-C5Z8	550	593	639	654	721	0	0.035	0.025	0.065	1.0	3 000	3 000
W1406FA-5P-C5Z8	600	643	689	704	771	0	0.035	0.025	0.065	1.1	3 000	3 000
W1407FA-1P-C5Z8	700	743	789	804	871	0	0.035	0.025	0.085	1.2	2 800	3 000

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

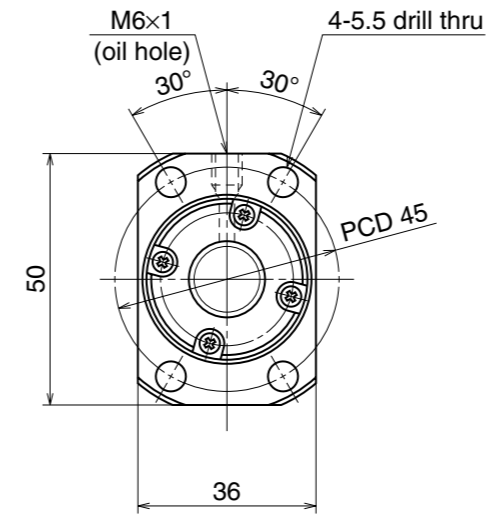
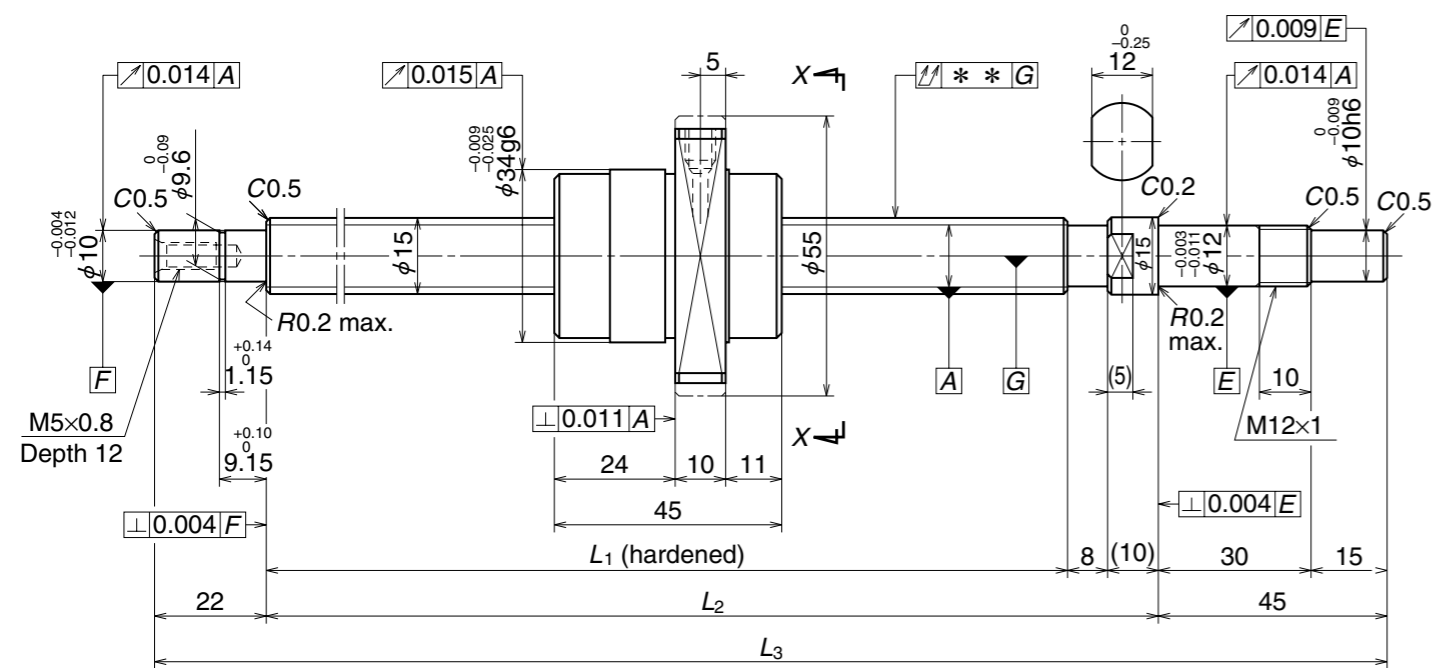
Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	15 x 10 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.175 / 15.5	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	4 450
	Static C_{0a}	6 380
Axial play	0	
Dynamic friction torque (N·cm)	1.5 - 7.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.3	

Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1501FA-1P-C5Z10	100	138	189	204	271	0	0.020	0.018	0.025	0.61	3 000	3 000
W1502FA-1P-C5Z10	150	188	239	254	321	0	0.023	0.018	0.035	0.67	3 000	3 000
W1502FA-3P-C5Z10	200	238	289	304	371	0	0.023	0.018	0.035	0.74	3 000	3 000
W1503FA-1P-C5Z10	250	288	339	354	421	0	0.025	0.020	0.040	0.80	3 000	3 000
W1503FA-3P-C5Z10	300	338	389	404	471	0	0.025	0.020	0.040	0.86	3 000	3 000
W1504FA-1P-C5Z10	350	388	439	454	521	0	0.027	0.020	0.050	0.93	3 000	3 000
W1504FA-3P-C5Z10	400	438	489	504	571	0	0.027	0.020	0.050	1.0	3 000	3 000
W1505FA-1P-C5Z10	450	488	539	554	621	0	0.030	0.023	0.050	1.1	3 000	3 000
W1505FA-3P-C5Z10	500	538	589	604	671	0	0.030	0.023	0.065	1.1	3 000	3 000
W1506FA-1P-C5Z10	550	588	639	654	721	0	0.035	0.025	0.065	1.2	3 000	3 000
W1506FA-3P-C5Z10	600	638	689	704	771	0	0.035	0.025	0.065	1.2	3 000	3 000
W1507FA-1P-C5Z10	700	738	789	804	871	0	0.035	0.025	0.085	1.4	3 000	3 000
W1508FA-1P-C5Z10	800	838	889	904	971	0	0.040	0.027	0.085	1.5	2 400	3 000
W1510FA-1P-C5Z10	1 000	1 038	1 089	1 104	1 171	0	0.046	0.030	0.110	1.8	1 590	2 250

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.



Unit: mm

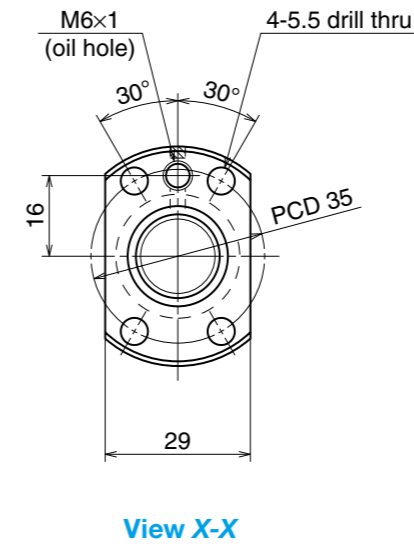
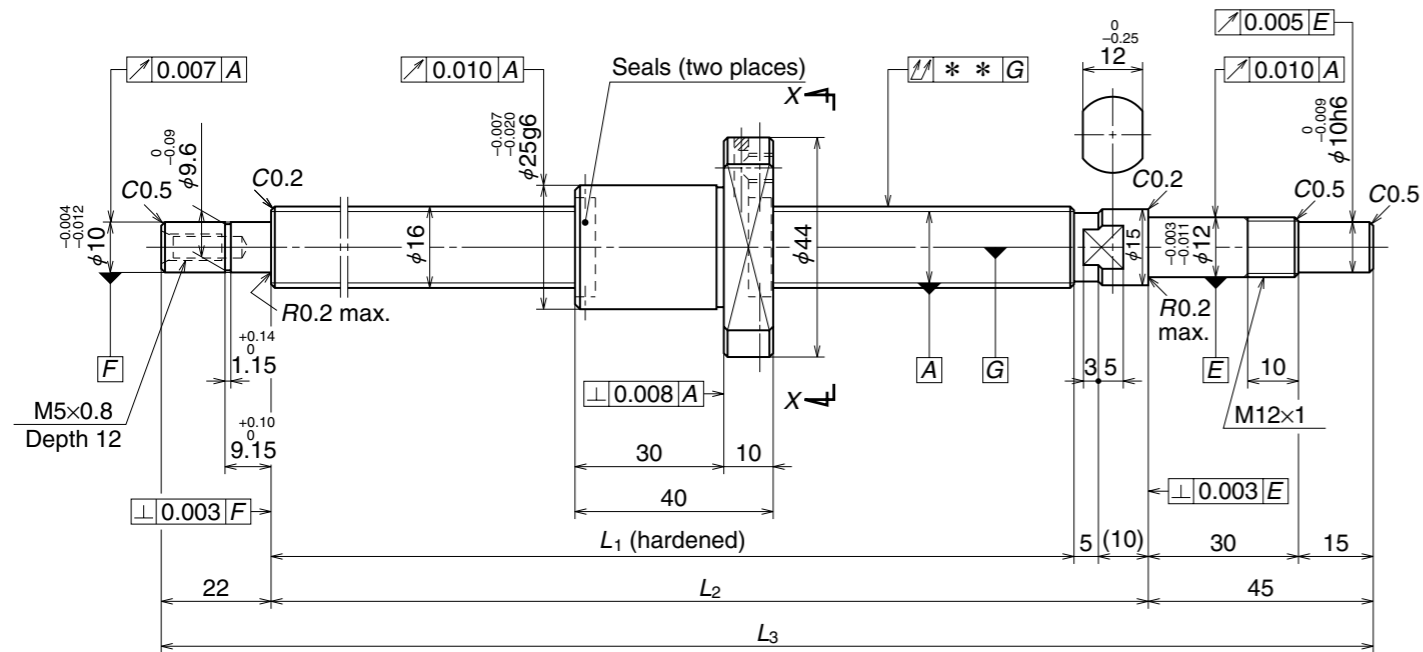
Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	15 x 20 / Right	
Preload / Ball recirculation	P-preload / End cap	
Ball dia. / Ball circle dia.	3.175 / 15.5	
Effective turns of balls	1.7 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	3 870
	Static C_{0a}	5 820
Axial play	0	
Dynamic friction torque (N·cm)	1.5 - 7.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	1.9	

Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1501FA-3PG-C5Z20	100	141	186	204	271	0	0.020	0.018	0.025	0.61	3 000	3 000
W1502FA-5PG-C5Z20	150	191	236	254	321	0	0.023	0.018	0.035	0.68	3 000	3 000
W1502FA-7PG-C5Z20	200	241	286	304	371	0	0.023	0.018	0.035	0.75	3 000	3 000
W1503FA-5PG-C5Z20	250	291	336	354	421	0	0.025	0.020	0.040	0.81	3 000	3 000
W1503FA-7PG-C5Z20	300	341	386	404	471	0	0.025	0.020	0.040	0.88	3 000	3 000
W1504FA-5PG-C5Z20	350	391	436	454	521	0	0.027	0.020	0.050	0.95	3 000	3 000
W1504FA-7PG-C5Z20	400	441	486	504	571	0	0.027	0.020	0.050	1.0	3 000	3 000
W1505FA-5PG-C5Z20	450	491	536	554	621	0	0.030	0.023	0.050	1.1	3 000	3 000
W1505FA-7PG-C5Z20	500	541	586	604	671	0	0.030	0.023	0.065	1.1	3 000	3 000
W1506FA-5PG-C5Z20	550	591	636	654	721	0	0.035	0.025	0.065	1.2	3 000	3 000
W1506FA-7PG-C5Z20	600	641	686	704	771	0	0.035	0.025	0.065	1.3	3 000	3 000
W1507FA-3PG-C5Z20	700	741	786	804	871	0	0.035	0.025	0.085	1.4	3 000	3 000
W1508FA-3PG-C5Z20	800	841	886	904	971	0	0.040	0.027	0.085	1.5	2 400	3 000
W1510FA-3PG-C5Z20	1 000	1 041	1 086	1 104	1 171	0	0.046	0.030	0.110	1.8	1 590	2 240

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.



Unit: mm

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	16 x 2 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.588 / 16.4	
Effective turns of balls	1 x 4	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	3 510
	Static C_{0a}	8 450
Axial play	0	
Dynamic friction torque (N·cm)	0.5 - 4.9	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	
Internal spatial volume of nut (cm ³)	1.6	

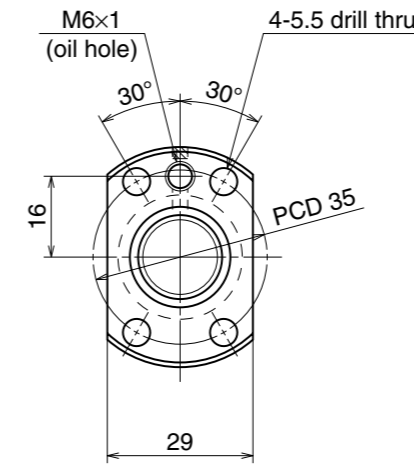
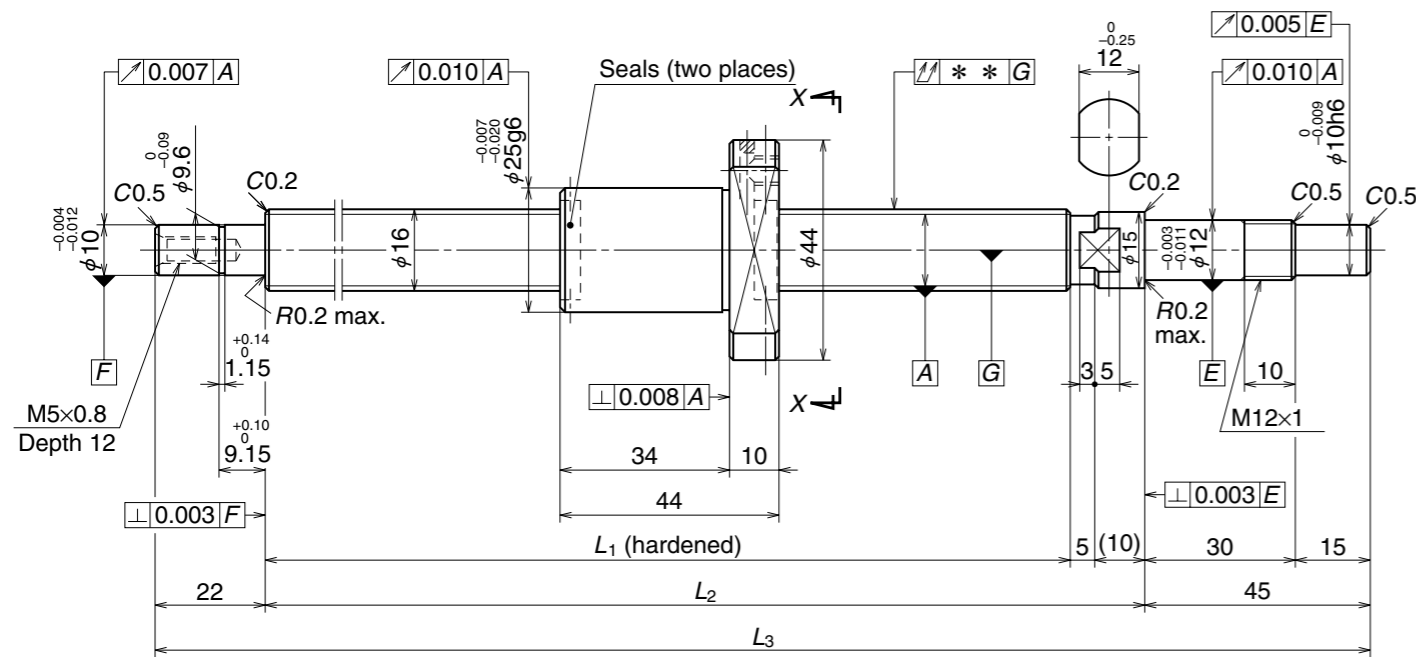
Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1601MA-1PY-C3Z2	50	99	139	154	221	0	0.010	0.008	0.020	0.41	3 000	3 000
W1601MA-3PY-C3Z2	100	149	189	204	271	0	0.010	0.008	0.020	0.48	3 000	3 000
W1602MA-1PY-C3Z2	150	199	239	254	321	0	0.012	0.008	0.030	0.55	3 000	3 000
W1602MA-3PY-C3Z2	200	249	289	304	371	0	0.012	0.008	0.030	0.62	3 000	3 000
W1603MA-1PY-C3Z2	300	349	389	404	471	0	0.013	0.010	0.035	0.77	3 000	3 000

Note: NSK grease PS2 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	16 x 2.5 / Right	
Preload / Ball recirculation	P-preload / Deflector	
Ball dia. / Ball circle dia.	1.588 / 16.4	
Effective turns of balls	1 x 4	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	3 510
	Static C_{0a}	8 450
Axial play	0	
Dynamic friction torque (N·cm)	0.5 - 4.9	
Spacer ball	None	
Factory-packed grease	NSK grease PS2	
Internal spatial volume of nut (cm ³)	1.6	

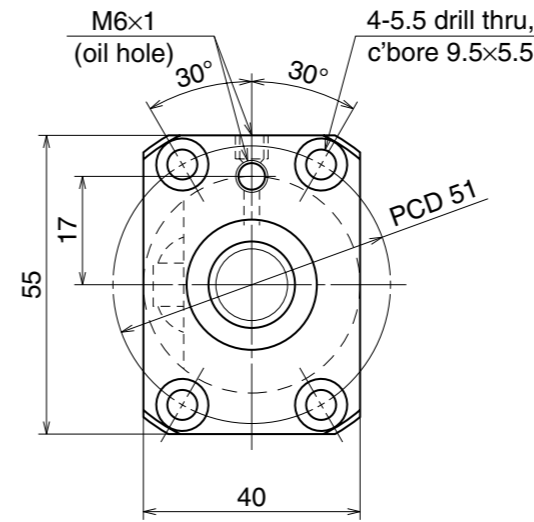
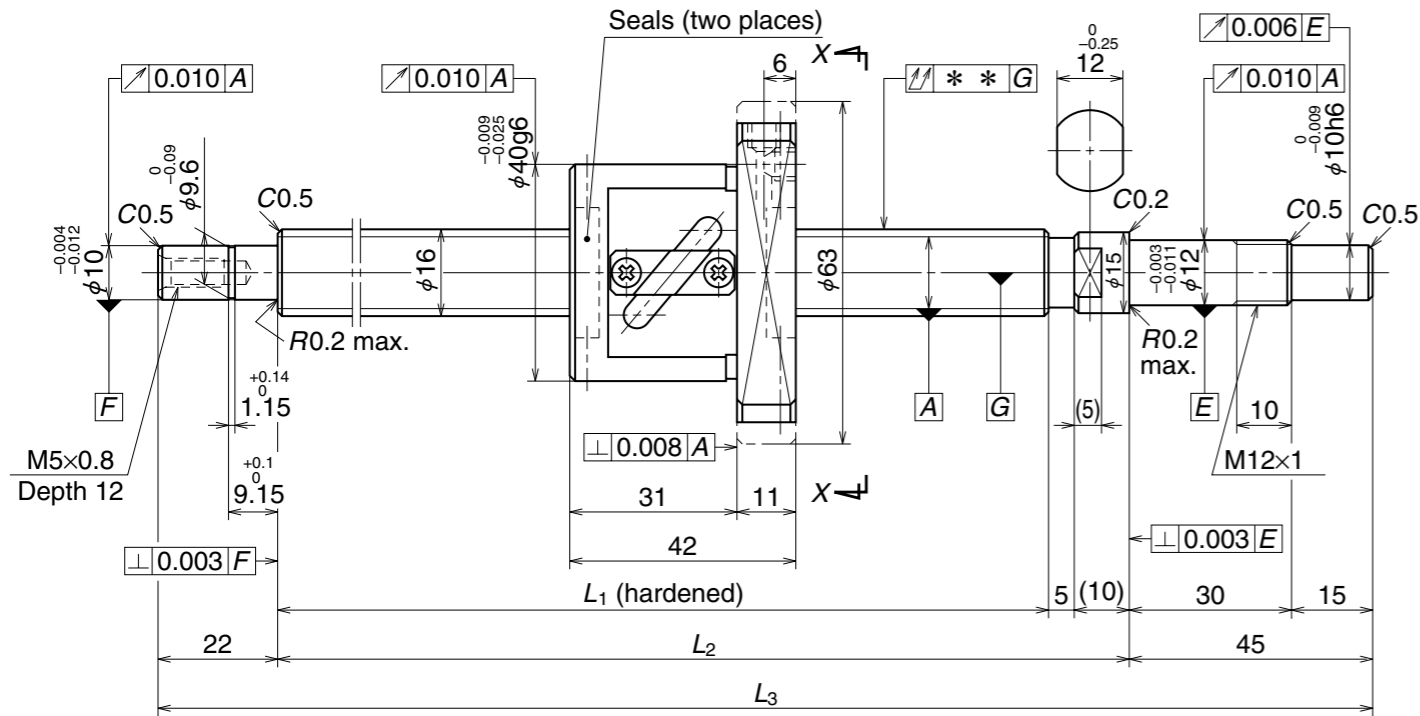
Recommended Support Unit	Fixed side		Simple support side	
	Fixed side	Simple support side	Fixed side	Simple support side
WBK12-01A (square)	○			
WBK12S-01 (square)			○	
WBK12-11 (round)	○			

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1601MA-5PY-C3Z2.5	50	95	139	154	221	0	0.010	0.008	0.020	0.42	3 000	3 000
W1601MA-7PY-C3Z2.5	100	145	189	204	271	0	0.010	0.008	0.020	0.49	3 000	3 000
W1602MA-5PY-C3Z2.5	150	195	239	254	321	0	0.012	0.008	0.030	0.57	3 000	3 000
W1602MA-7PY-C3Z2.5	200	245	289	304	371	0	0.012	0.008	0.030	0.64	3 000	3 000
W1603MA-3PY-C3Z2.5	300	345	389	404	471	0	0.013	0.010	0.035	0.79	3 000	3 000

Note: NSK grease PS2 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	16 x 5 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.175 / 16.5	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C3 / Z	
Basic load rating (N)	Dynamic C_a	4 620
	Static C_{0a}	6 750
Axial play	0	
Dynamic friction torque (N·cm)	1.5 – 7.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.6	

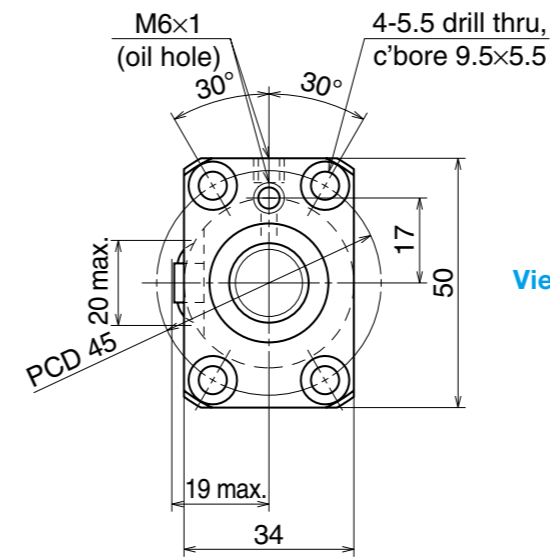
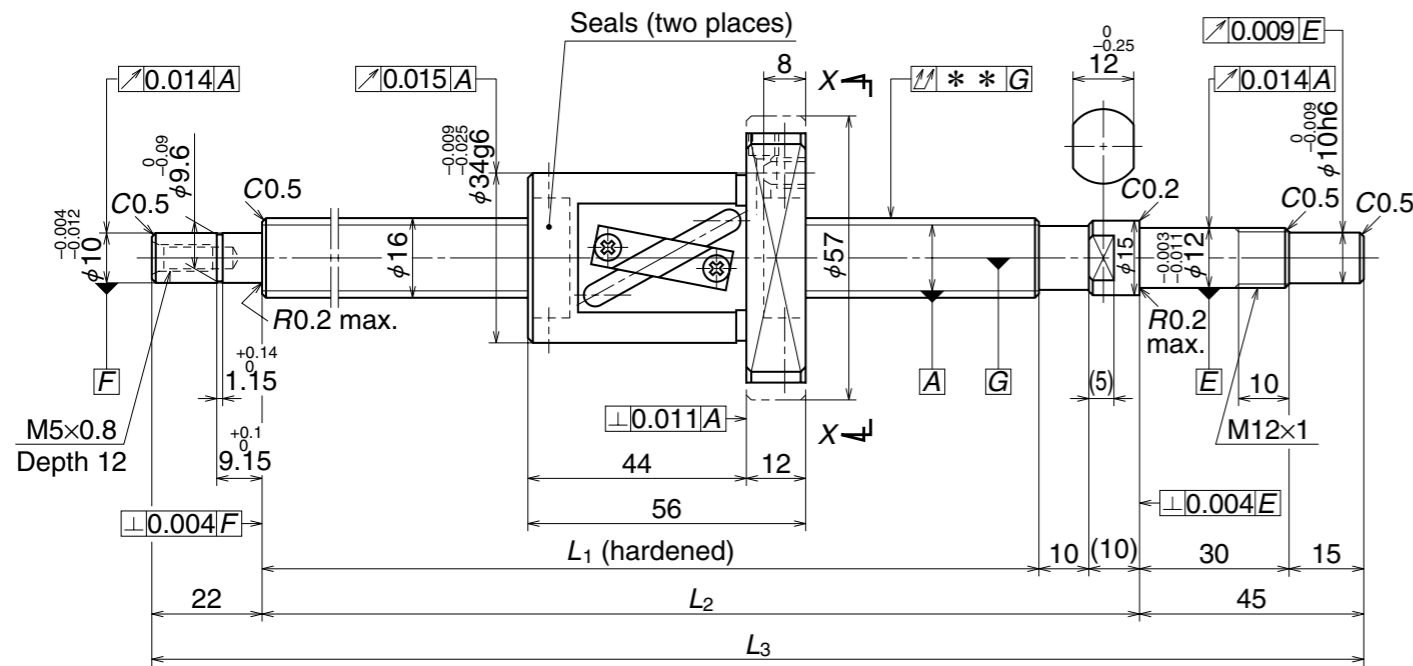
Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

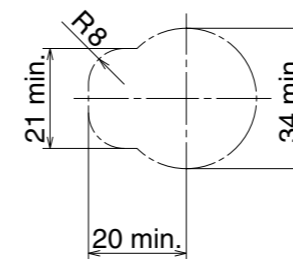
Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1601FA-1P-C3Z5	100	147	189	204	271	0	0.010	0.008	0.020	0.70	3 000	3 000
W1602FA-1P-C3Z5	200	247	289	304	371	0	0.012	0.008	0.030	0.83	3 000	3 000
W1603FA-1P-C3Z5	300	347	389	404	471	0	0.013	0.010	0.035	0.97	3 000	3 000
W1604FA-1P-C3Z5	400	447	489	504	571	0	0.015	0.010	0.045	1.1	3 000	3 000
W1606FA-1P-C3Z5	600	647	689	704	771	0	0.018	0.013	0.055	1.4	3 000	3 000
W1608FA-1P-C3Z5	800	847	889	904	971	0	0.021	0.015	0.075	1.6	2 570	3 000

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X



Housing hole and clearance

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	16 x 16 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.175 / 16.75	
Effective turns of balls	1.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	3 600
	Static C_{0a}	5 410
Axial play	0	
Dynamic friction torque (N·cm)	1.5 - 7.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.1	

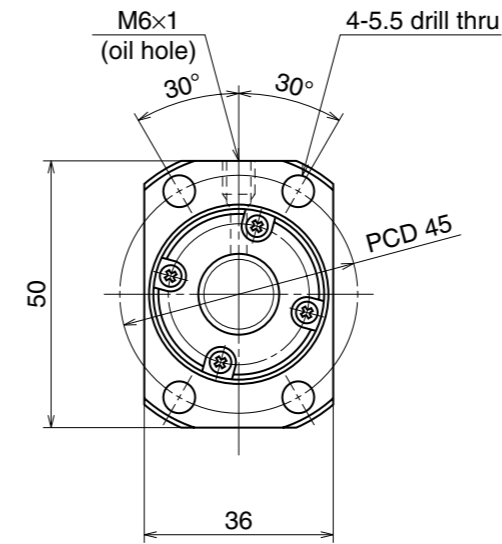
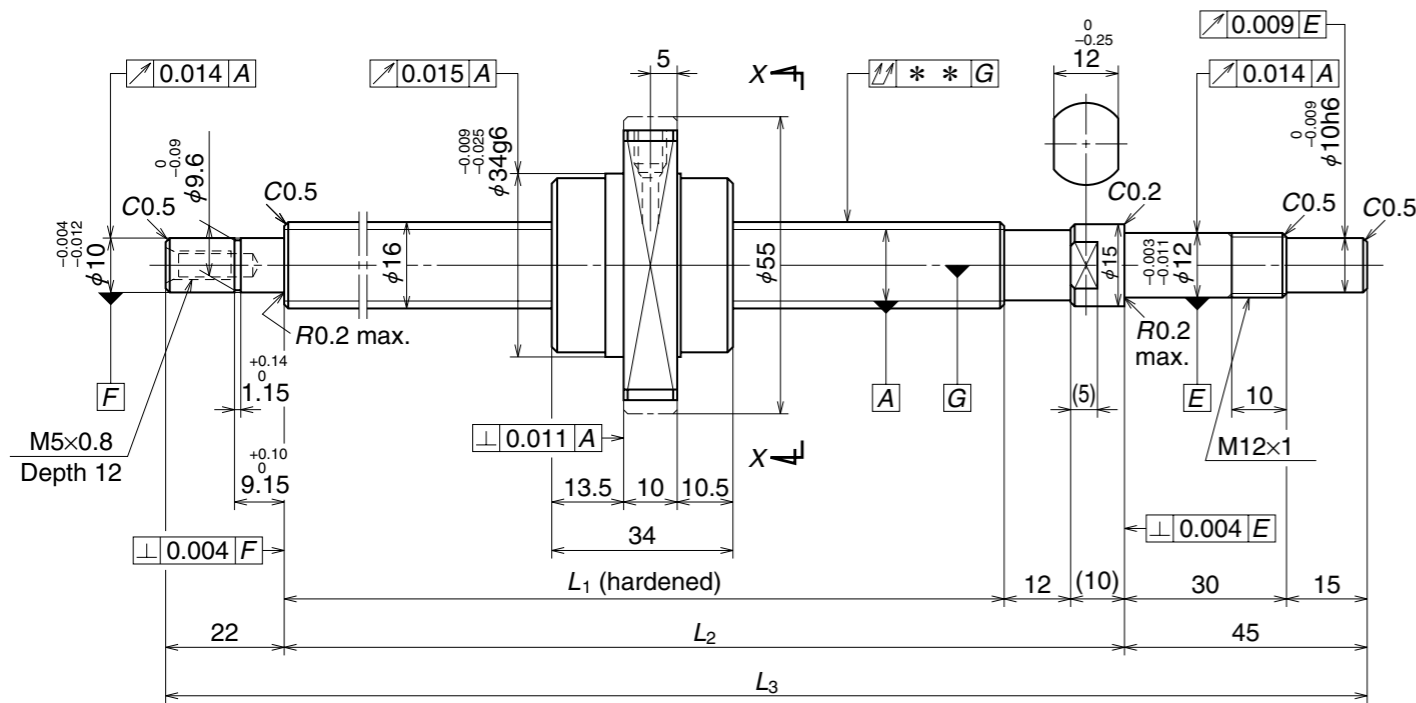
Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1601FA-3P-C5Z16	100	128	184	204	271	0	0.020	0.018	0.025	0.69	3 000	3 000
W1602FA-3P-C5Z16	150	178	234	254	321	0	0.023	0.018	0.035	0.77	3 000	3 000
W1602FA-5P-C5Z16	200	228	284	304	371	0	0.023	0.018	0.035	0.84	3 000	3 000
W1603FA-3P-C5Z16	250	278	334	354	421	0	0.025	0.020	0.040	0.92	3 000	3 000
W1603FA-5P-C5Z16	300	328	384	404	471	0	0.025	0.020	0.040	0.99	3 000	3 000
W1604FA-3P-C5Z16	350	378	434	454	521	0	0.027	0.020	0.050	1.1	3 000	3 000
W1604FA-5P-C5Z16	400	428	484	504	571	0	0.027	0.020	0.050	1.1	3 000	3 000
W1605FA-1P-C5Z16	450	478	534	554	621	0	0.030	0.023	0.050	1.2	3 000	3 000
W1605FA-3P-C5Z16	500	528	584	604	671	0	0.030	0.023	0.065	1.3	3 000	3 000
W1606FA-3P-C5Z16	550	578	634	654	721	0	0.035	0.025	0.065	1.4	3 000	3 000
W1606FA-5P-C5Z16	600	628	684	704	771	0	0.035	0.025	0.065	1.4	3 000	3 000
W1607FA-1P-C5Z16	700	728	784	804	871	0	0.035	0.025	0.085	1.6	3 000	3 000
W1608FA-3P-C5Z16	800	828	884	904	971	0	0.040	0.027	0.085	1.7	2 690	3 000
W1610FA-1P-C5Z16	1 000	1 028	1 084	1 104	1 171	0	0.046	0.030	0.110	2.0	1 770	2 480

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	16 x 32 / Right	
Preload / Ball recirculation	P-preload / End cap	
Ball dia. / Ball circle dia.	3.175 / 16.75	
Effective turns of balls	0.7 x 2	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	4 000
	Static C_{0a}	6 690
Axial play	0	
Dynamic friction torque (N·cm)	1.5 - 9.8	
Spacer ball	None	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.0	

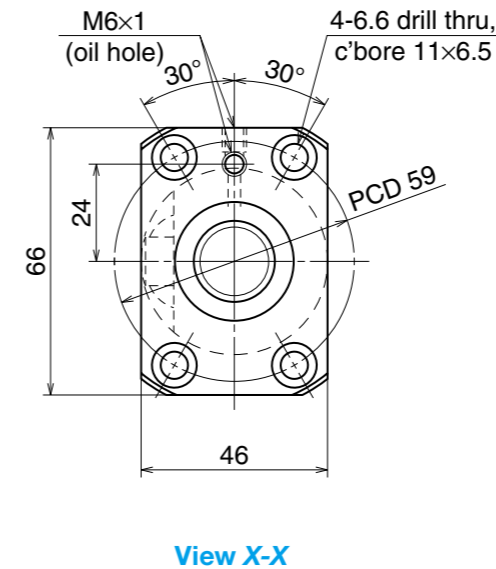
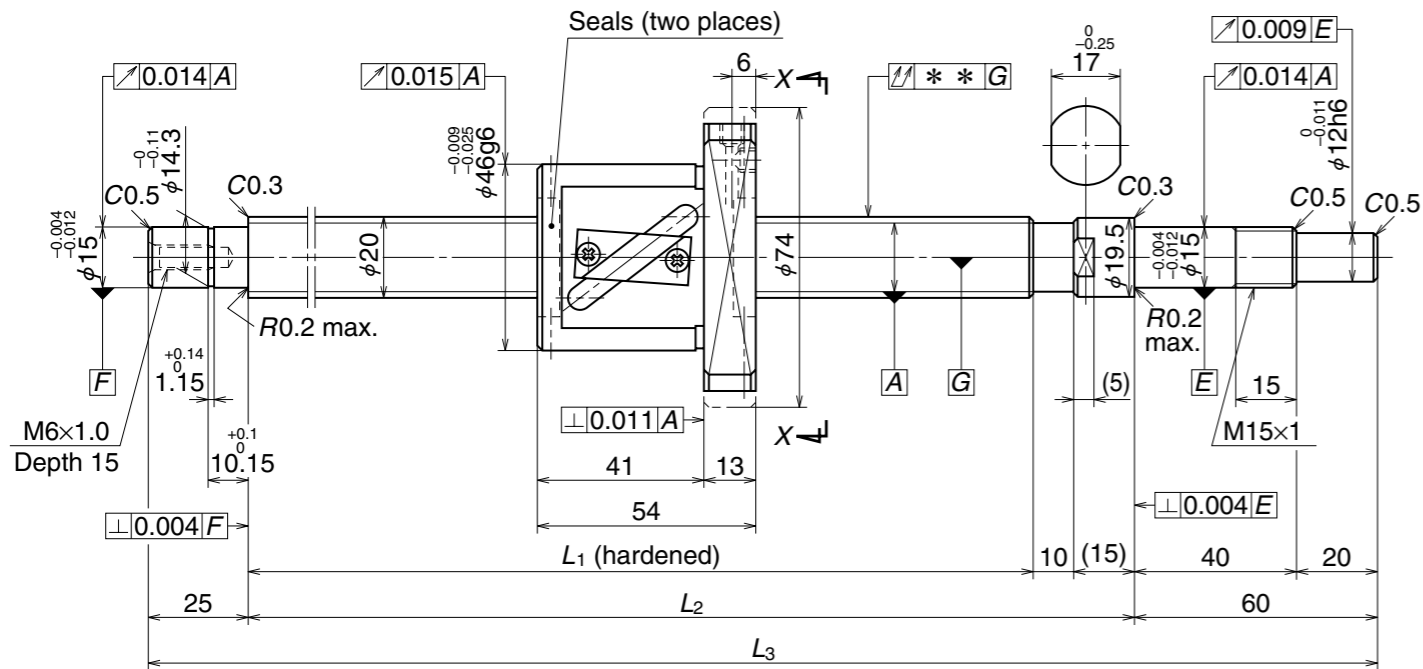
Recommended Support Unit	Fixed side	Simple support side
	WBK12-01A (square)	○
WBK12S-01 (square)		○
WBK12-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W1603FA-7PGX-C5Z32	300	348	382	404	471	0	0.025	0.020	0.040	0.90	3 000	3 000
W1605FA-5PGX-C5Z32	500	548	582	604	671	0	0.030	0.023	0.065	1.2	3 000	3 000
W1608FA-5PGX-C5Z32	800	848	882	904	971	0	0.040	0.027	0.085	1.7	2 630	3 000
W1612FA-1PGX-C5Z32	1 200	1 248	1 282	1 304	1 371	0	0.054	0.035	0.150	2.3	1 240	1 740

Note 1: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.
 Note 2: Nut does not have seal.

Unit: mm



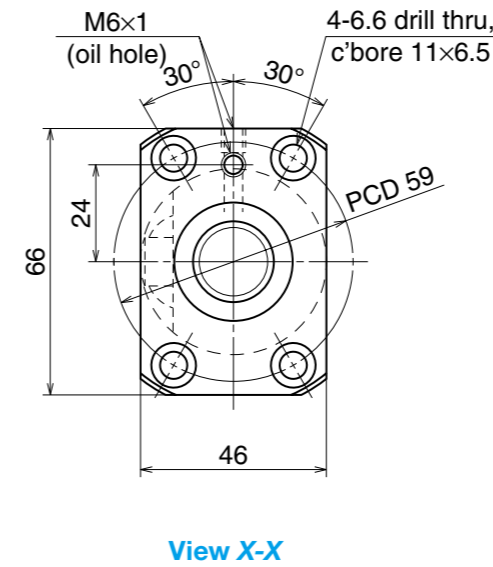
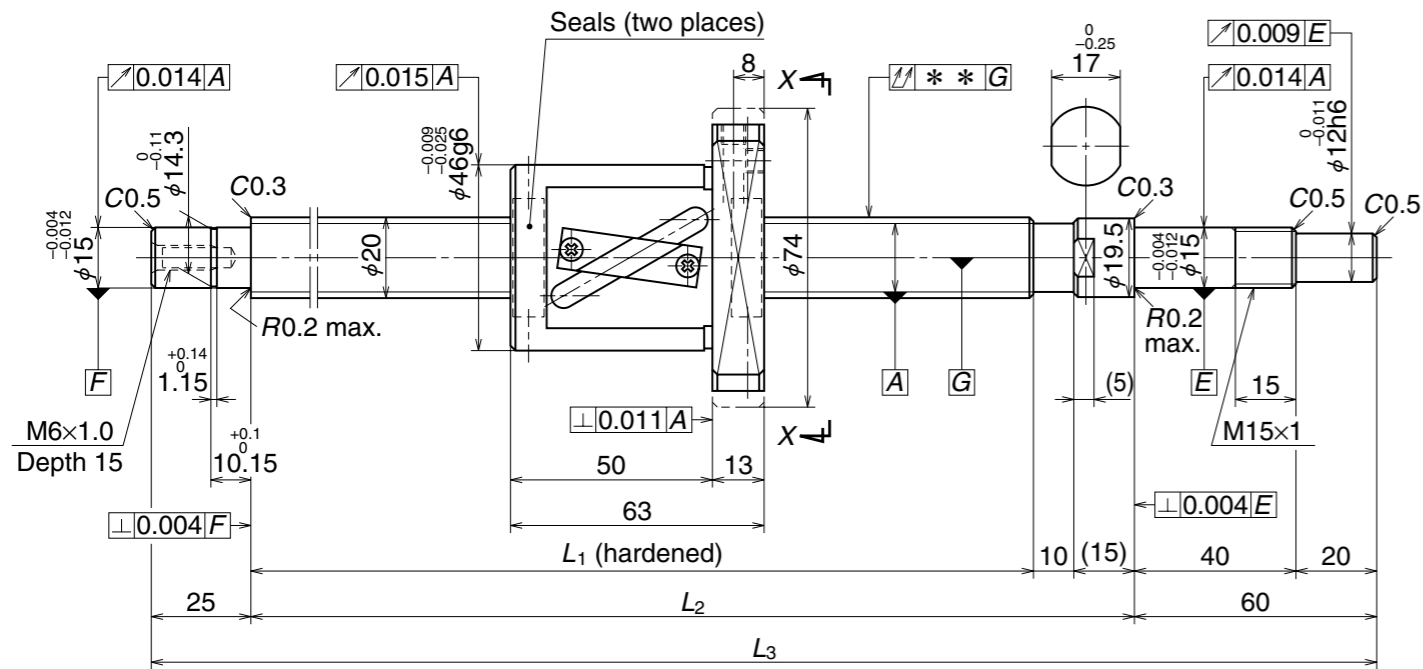
Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	20 x 10 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.969 / 21	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	6 880
	Static C_{0a}	10 800
Axial play	0	
Dynamic friction torque (N·cm)	2.0 - 11.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	4.7	

Recommended Support Unit	Fixed side	Simple support side
	WBK15-01A (square)	○
WBK15S-01 (square)		○
WBK15-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L_1 -Nut length)	L_1	L_2	L_3	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W2002FA-1P-C5Z10	200	235	289	314	399	0	0.023	0.018	0.035	1.4	3 000	3 000
W2003FA-1P-C5Z10	300	335	389	414	499	0	0.025	0.020	0.040	1.6	3 000	3 000
W2004FA-1P-C5Z10	400	435	489	514	599	0	0.027	0.020	0.050	1.9	3 000	3 000
W2005FA-1P-C5Z10	500	535	589	614	699	0	0.030	0.023	0.065	2.1	3 000	3 000
W2006FA-1P-C5Z10	600	635	689	714	799	0	0.035	0.025	0.065	2.3	3 000	3 000
W2007FA-1P-C5Z10	700	735	789	814	899	0	0.035	0.025	0.085	2.5	3 000	3 000
W2008FA-1P-C5Z10	800	835	889	914	999	0	0.040	0.027	0.085	2.8	3 000	3 000
W2009FA-1P-C5Z10	900	935	989	1 014	1 099	0	0.040	0.027	0.110	3.0	2 680	3 000
W2010FA-1P-C5Z10	1 000	1 035	1 089	1 114	1 199	0	0.046	0.030	0.110	3.2	2 210	3 000
W2011FA-1P-C5Z10	1 100	1 135	1 189	1 214	1 299	0	0.046	0.030	0.150	3.4	1 840	2 570
W2012FA-1P-C5Z10	1 200	1 235	1 289	1 314	1 399	0	0.054	0.035	0.150	3.7	1 570	2 190

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.



Unit: mm

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	20 x 20 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	3.969 / 21	
Effective turns of balls	1.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	5 370
	Static C_{0a}	8 450
Axial play	0	
Dynamic friction torque (N·cm)	2.0 - 11.8	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	4.2	

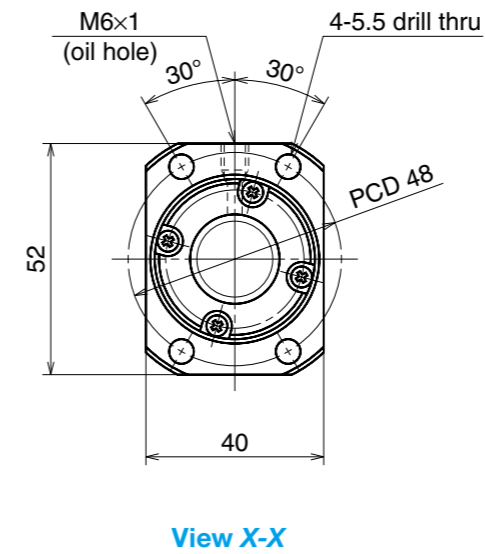
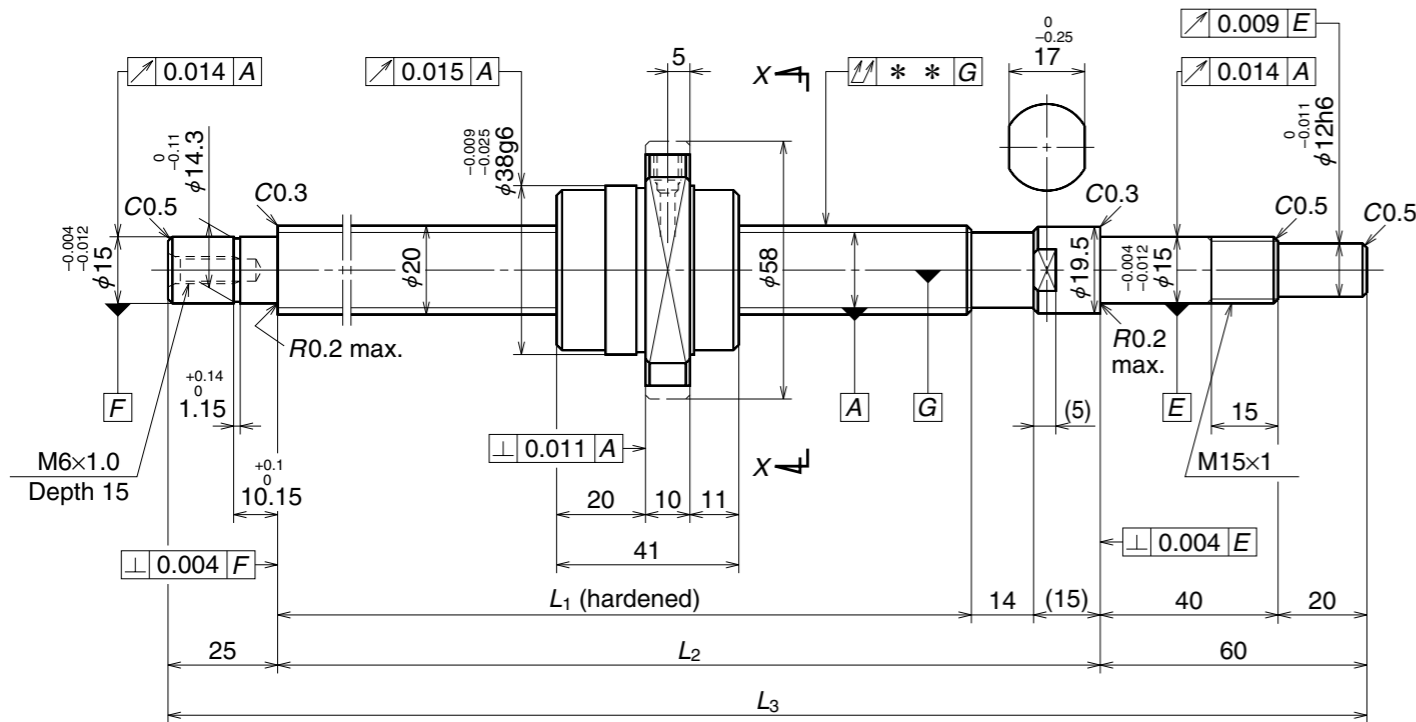
Recommended Support Unit	Fixed side	Simple support side
	WBK15-01A (square)	○
WBK15S-01 (square)		○
WBK15-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W2003FA-3P-C5Z20	200	247	310	335	420	0	0.023	0.018	0.040	1.6	3 000	3 000
W2004FA-3P-C5Z20	300	347	410	435	520	0	0.027	0.020	0.050	1.8	3 000	3 000
W2005FA-3P-C5Z20	400	447	510	535	620	0	0.030	0.023	0.050	2.0	3 000	3 000
W2006FA-3P-C5Z20	500	547	610	635	720	0	0.030	0.023	0.065	2.3	3 000	3 000
W2007FA-3P-C5Z20	600	647	710	735	820	0	0.035	0.025	0.085	2.5	3 000	3 000
W2008FA-3P-C5Z20	700	747	810	835	920	0	0.040	0.027	0.085	2.7	3 000	3 000
W2009FA-3P-C5Z20	800	847	910	935	1 020	0	0.040	0.027	0.110	3.0	3 000	3 000
W2010FA-3P-C5Z20	900	947	1 010	1 035	1 120	0	0.046	0.030	0.110	3.2	2 590	3 000
W2011FA-3P-C5Z20	1 000	1 047	1 110	1 135	1 220	0	0.046	0.030	0.110	3.4	2 140	2 970
W2012FA-3P-C5Z20	1 100	1 147	1 210	1 235	1 320	0	0.046	0.030	0.150	3.7	1 790	2 500
W2015FA-1P-C5Z20	1 400	1 447	1 510	1 535	1 620	0	0.054	0.035	0.180	4.4	1 140	1 610

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	20 x 40 / Right	
Preload / Ball recirculation	P-preload / End cap	
Ball dia. / Ball circle dia.	3.175 / 20.75	
Effective turns of balls	0.7 x 2	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	4 490
	Static C_{0a}	8 640
Axial play	0	
Dynamic friction torque (N·cm)	2.0 - 11.8	
Spacer ball	None	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	2.8	

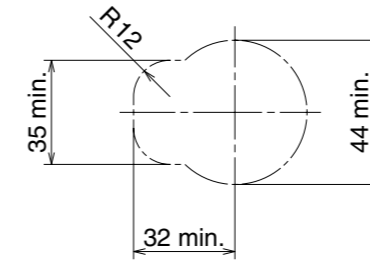
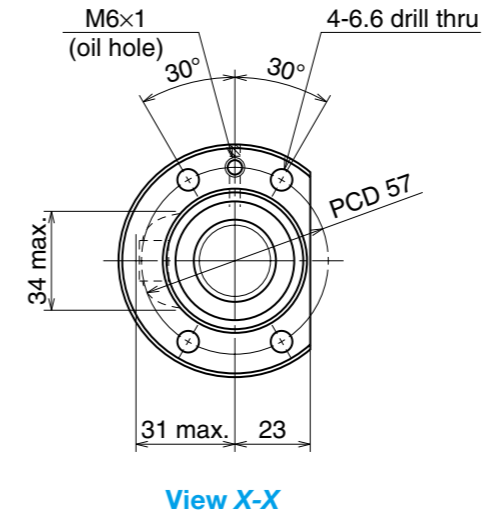
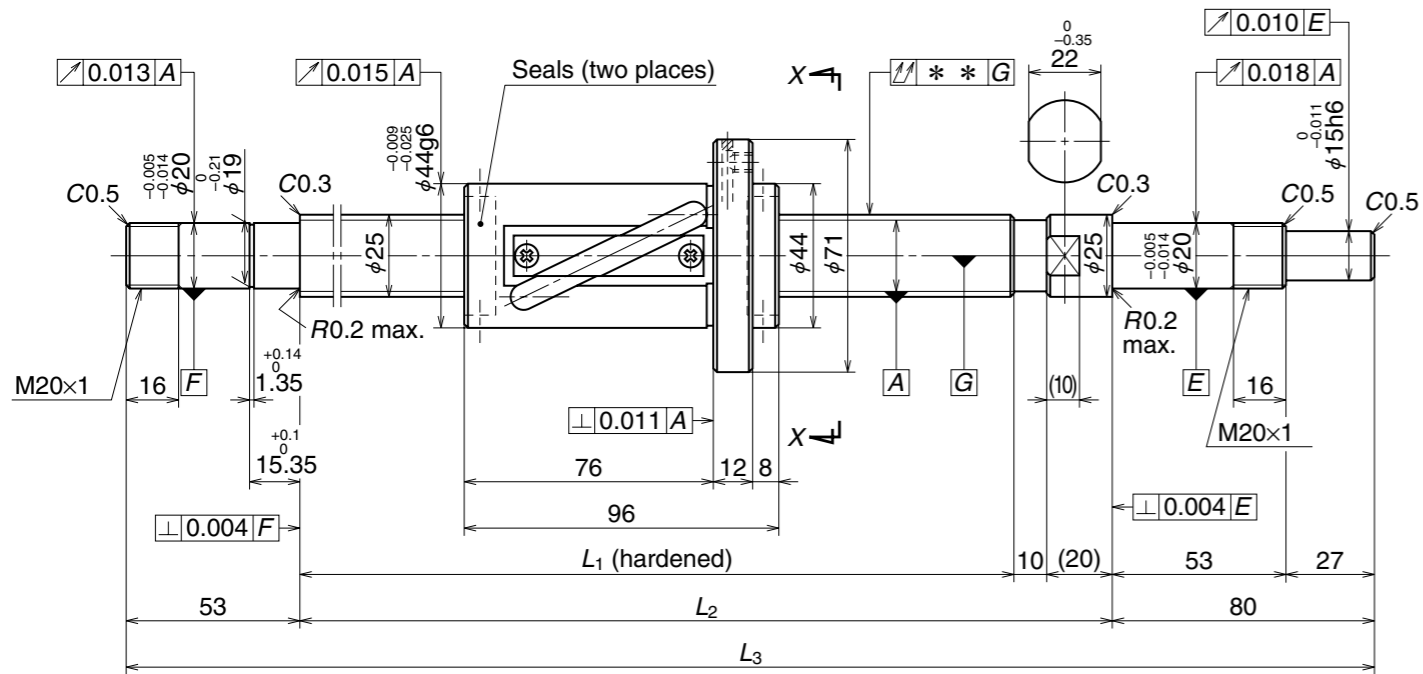
Recommended Support Unit	Fixed side	Simple support side
	WBK15-01A (square)	○
WBK15S-01 (square)		○
WBK15-11 (round)	○	

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W2005FA-5PGX-C5Z40	400	465	506	535	620	0	0.030	0.023	0.050	1.7	3 000	3 000
W2007FA-5PGX-C5Z40	600	665	706	735	820	0	0.035	0.025	0.085	2.2	3 000	3 000
W2009FA-5PGX-C5Z40	800	865	906	935	1 020	0	0.040	0.027	0.110	2.7	3 000	3 000
W2011FA-5PGX-C5Z40	1 000	1 065	1 106	1 135	1 220	0	0.046	0.030	0.110	3.1	2 170	3 000
W2013FA-1PGX-C5Z40	1 200	1 265	1 306	1 335	1 420	0	0.054	0.035	0.150	3.6	1 550	2 160
W2017FA-1PGX-C5Z40	1 600	1 665	1 706	1 735	1 820	0	0.065	0.040	0.230	4.6	910	1 270

Note 1: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.
 Note 2: Nut does not have seal.

Unit: mm



Housing hole and clearance

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	25 x 20 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	4.762 / 26.25	
Effective turns of balls	2.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	9 900
	Static C_{0a}	16 400
Axial play	0	
Dynamic friction torque (N·cm)	3.9 – 24.5	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	12	

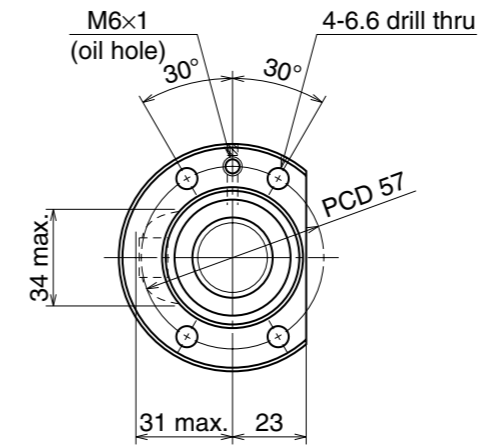
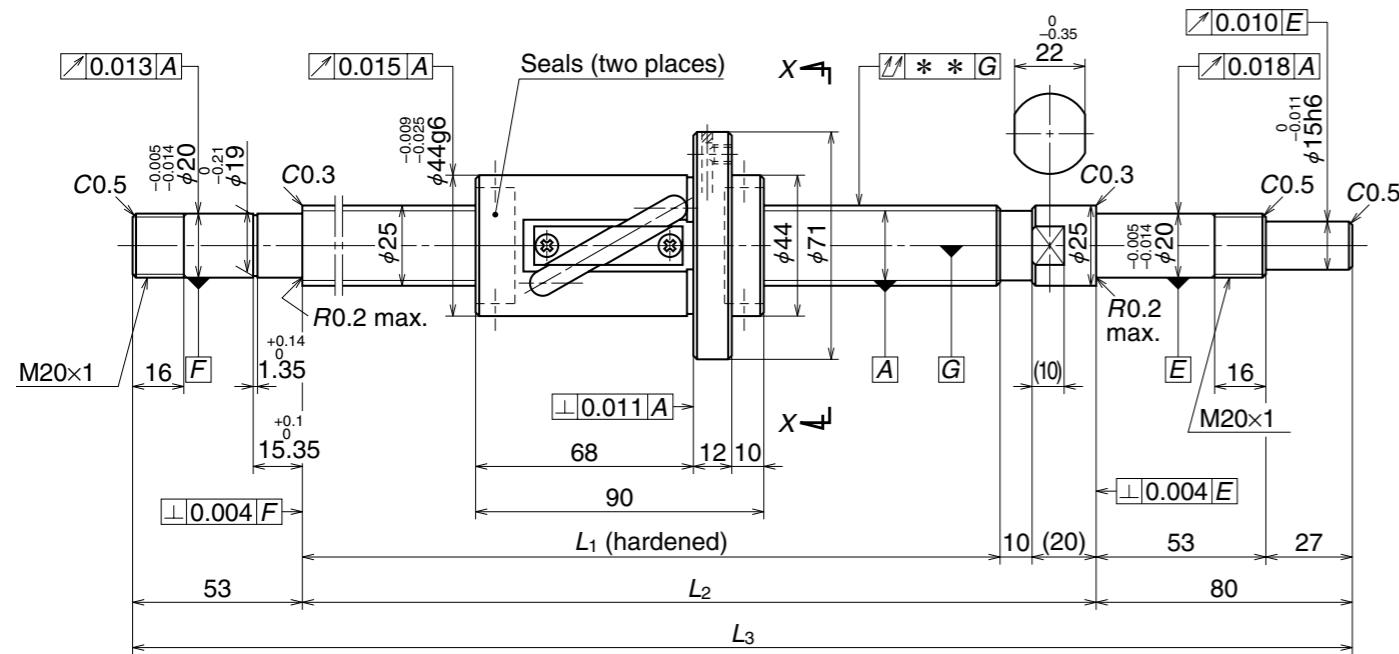
Recommended Support Unit	Fixed side	Simple support side
	WBK20-01 (square)	○
WBK20S-01 (square)		○
WBK20-11 (round)	○	○

Unit: mm

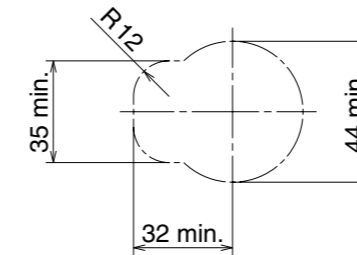
Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W2507FA-1P-C5Z20	600	654	750	780	913	0	0.035	0.025	0.055	4.0	2 800	2 800
W2509FA-1P-C5Z20	800	854	950	980	1 113	0	0.040	0.027	0.070	4.7	2 800	2 800
W2511FA-1P-C5Z20	1 000	1 054	1 150	1 180	1 313	0	0.046	0.030	0.090	5.4	2 560	2 800
W2513FA-1P-C5Z20	1 200	1 254	1 350	1 380	1 513	0	0.054	0.035	0.090	6.2	1 840	2 550
W2515FA-1P-C5Z20	1 400	1 454	1 550	1 580	1 713	0	0.054	0.035	0.120	6.9	1 390	1 940
W2517FA-1P-C5Z20	1 600	1 654	1 750	1 780	1 913	0	0.065	0.040	0.120	7.6	1 080	1 520
W2521FA-1P-C5Z20	2 000	2 054	2 150	2 180	2 313	0	0.077	0.046	0.160	9.1	710	1 000

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X



Housing hole and clearance

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	25 x 25 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	4.762 / 26.25	
Effective turns of balls	1.5 x 1	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	7 730
	Static C_{0a}	12 700
Axial play	0	
Dynamic friction torque (N·cm)	3.9 – 24.5	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	7.5	

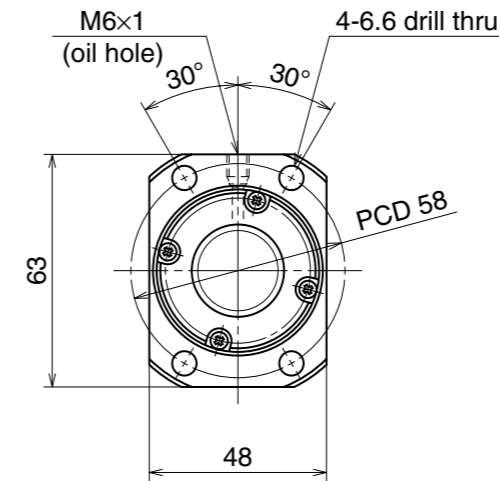
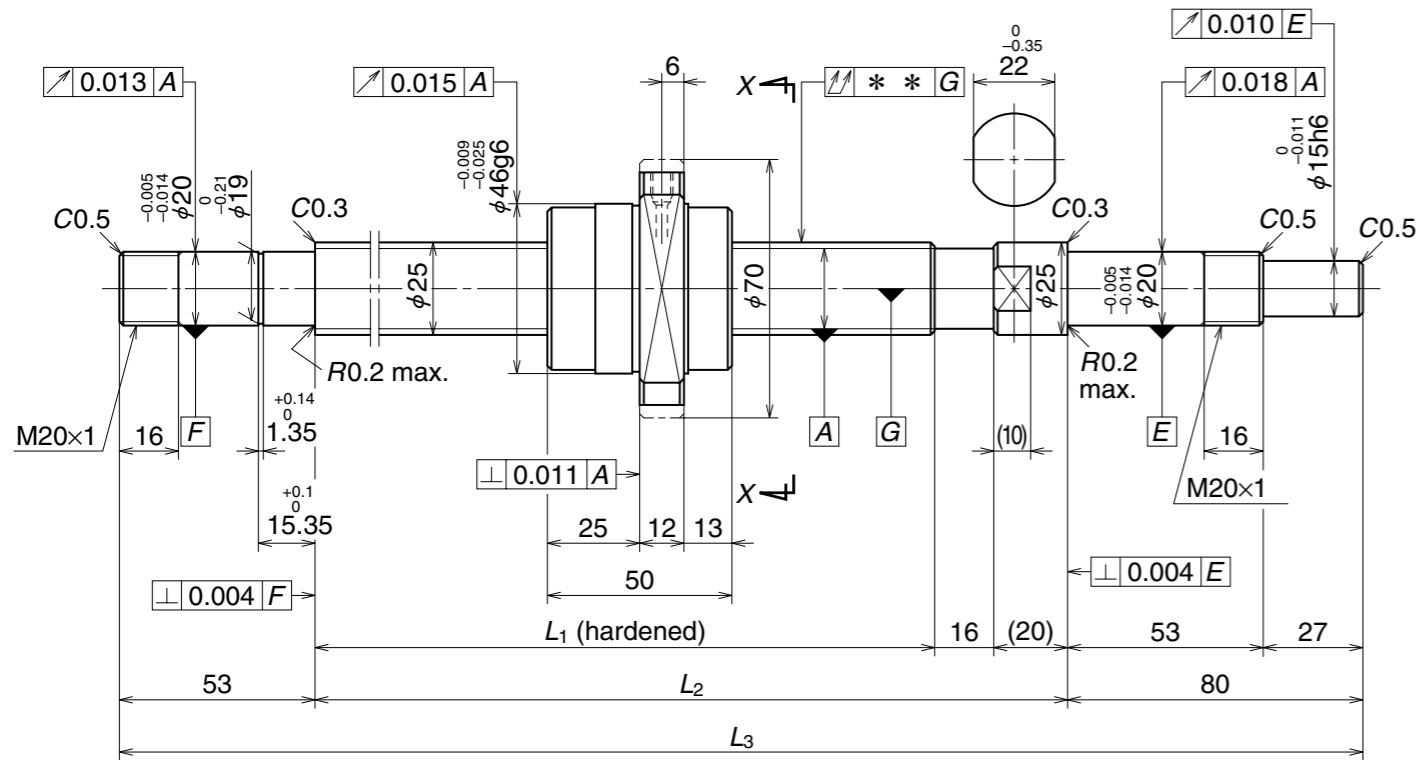
Recommended Support Unit	Fixed side	Simple support side
	WBK20-01 (square)	○
WBK20S-01 (square)		○
WBK20-11 (round)	○	○

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W2507FA-3P-C5Z25	600	660	750	780	913	0	0.035	0.025	0.055	4.0	2 800	2 800
W2509FA-3P-C5Z25	800	860	950	980	1 113	0	0.040	0.027	0.070	4.7	2 800	2 800
W2511FA-3P-C5Z25	1 000	1 060	1 150	1 180	1 313	0	0.046	0.030	0.090	5.4	2 540	2 800
W2513FA-3P-C5Z25	1 200	1 260	1 350	1 380	1 513	0	0.054	0.035	0.090	6.2	1 830	2 540
W2515FA-3P-C5Z25	1 400	1 460	1 550	1 580	1 713	0	0.054	0.035	0.120	7.0	1 380	1 930
W2517FA-3P-C5Z25	1 600	1 660	1 750	1 780	1 913	0	0.065	0.040	0.120	7.7	1 080	1 510
W2521FA-3P-C5Z25	2 000	2 060	2 150	2 180	2 313	0	0.077	0.046	0.160	9.1	710	1 000

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	25 x 50 / Right	
Preload / Ball recirculation	P-preload / End cap	
Ball dia. / Ball circle dia.	3.969 / 26	
Effective turns of balls	0.7 x 2	
Accuracy grade / Preload	C5 / Z	
Basic load rating (N)	Dynamic C_a	6 690
	Static C_{0a}	13 500
Axial play	0	
Dynamic friction torque (N·cm)	2.9 - 21.5	
Spacer ball	None	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	4.2	

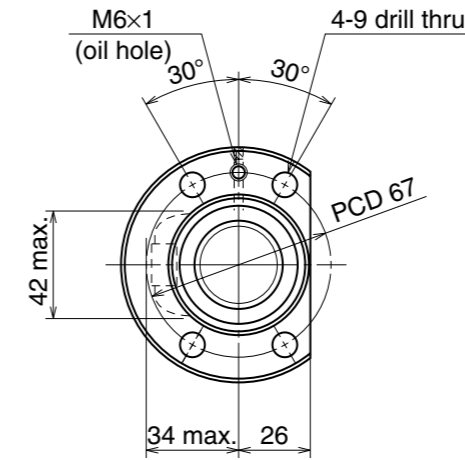
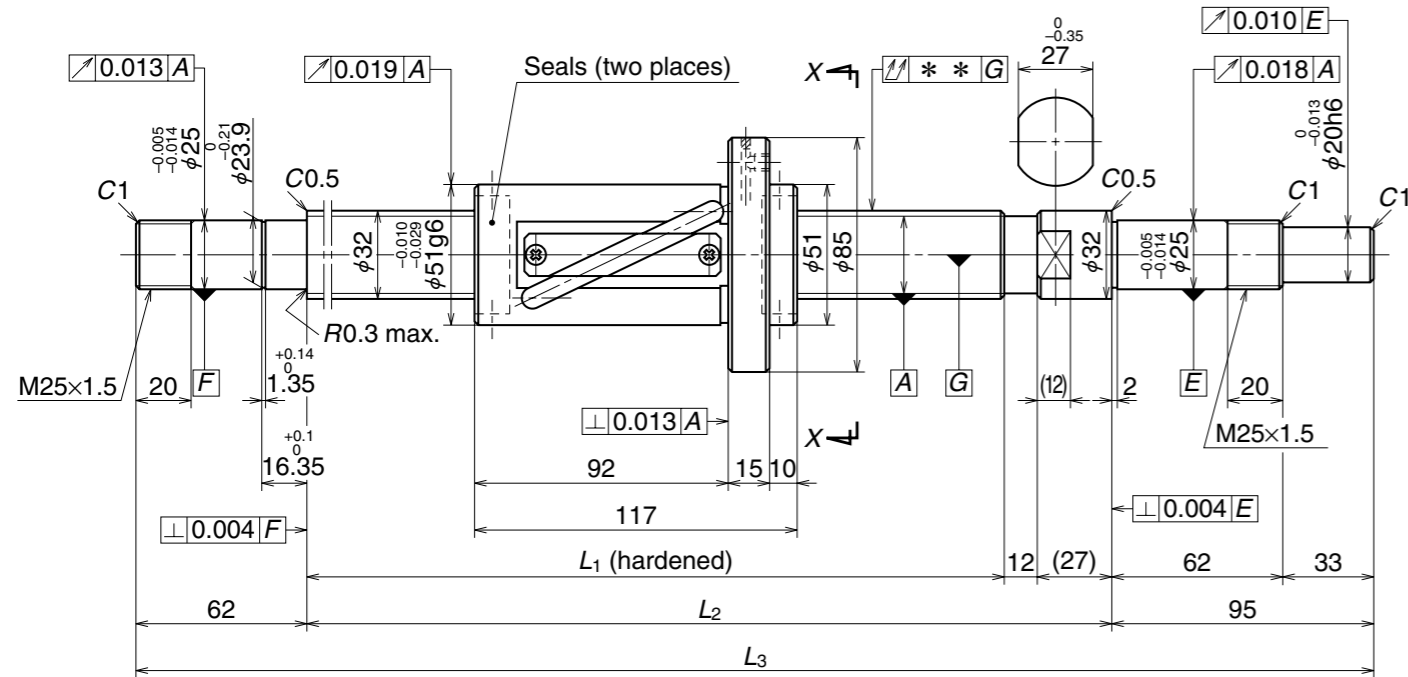
Recommended Support Unit	Fixed side	Simple support side
	WBK20-01 (square)	○
WBK20S-01 (square)		○
WBK20-11 (round)	○	○

Unit: mm

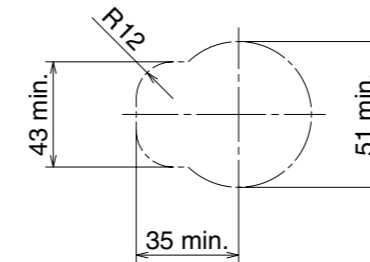
Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W2508FA-1PGX-C5Z50	700	794	844	880	1013	0	0.040	0.027	0.070	4.1	2 800	2 800
W2511FA-5PGX-C5Z50	1 000	1 094	1 144	1 180	1 313	0	0.046	0.030	0.090	5.3	2 550	2 800
W2516FA-1PGX-C5Z50	1 500	1 594	1 644	1 680	1 813	0	0.065	0.040	0.120	7.2	1 230	1 710
W2521FA-5PGX-C5Z50	2 000	2 094	2 144	2 180	2 313	0	0.077	0.046	0.160	9.1	720	1 010

Note 1: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.
 Note 2: Nut does not have seal.

Unit: mm



View X-X



Housing hole and clearance

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	32 x 25 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	4.762 / 33.25	
Effective turns of balls	2.5 x 1	
Accuracy grade	C5 / Z	
Basic load rating (N)	Dynamic C_a	11 300
	Static C_{0a}	20 900
Axial play	0	
Dynamic friction torque (N·cm)	6.8 – 31.5	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	17.5	

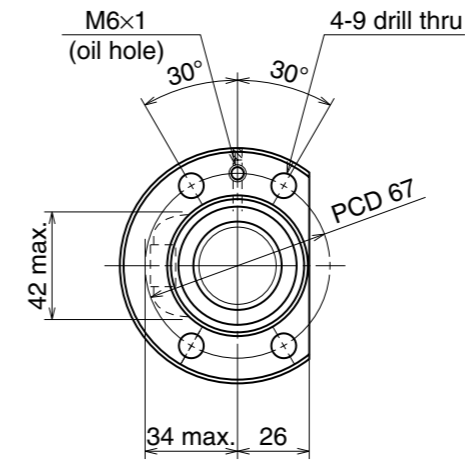
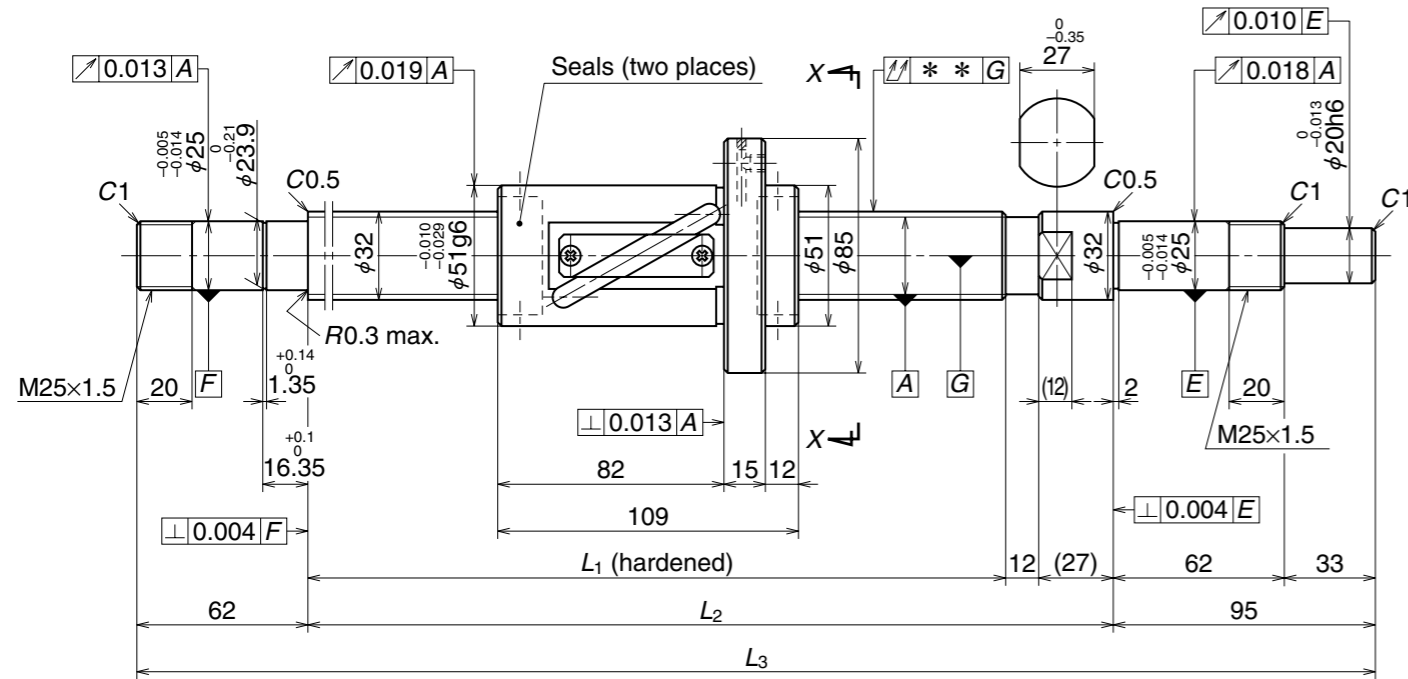
Recommended Support Unit	Fixed side	Simple support side
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WBK25S-01W (square)		○
WBK25-11 (round)	○	○

Unit: mm

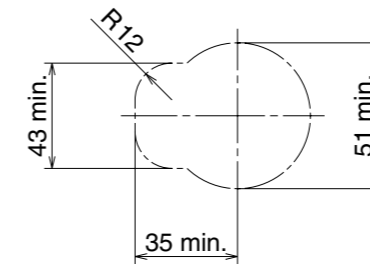
Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W3211FA-1P-C5Z25	1 000	1 063	1 180	1 219	1 376	0	0.046	0.030	0.090	9.3	2 180	2 180
W3216FA-1P-C5Z25	1 500	1 563	1 680	1 719	1 876	0	0.065	0.040	0.120	12.3	1 580	2 180
W3221FA-1P-C5Z25	2 000	2 063	2 180	2 219	2 376	0	0.077	0.046	0.160	15.4	930	1 300
W3227FA-1P-C5Z25	2 600	2 663	2 780	2 819	2 976	0	0.093	0.054	0.200	19.1	560	800

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.

Unit: mm



View X-X



Housing hole and clearance

Ball Screw Specifications		
Shaft dia. x Lead / Direction of turn	32 x 32 / Right	
Preload / Ball recirculation	P-preload / Return tube	
Ball dia. / Ball circle dia.	4.762 / 33.25	
Effective turns of balls	1.5 x 1	
Accuracy grade	C5 / Z	
Basic load rating (N)	Dynamic C_a	8 800
	Static C_{0a}	16 600
Axial play	0	
Dynamic friction torque (N·cm)	6.9 – 31.5	
Spacer ball	Yes	
Factory-packed grease	NSK grease LR3	
Internal spatial volume of nut (cm ³)	14	

Recommended Support Unit	Fixed side	Simple support side
	WBK25-01W (square)	○
WBK25S-01W (square)		○
WBK25-11 (round)	○	○

Unit: mm

Part number	Stroke		Screw shaft length			Lead accuracy			Shaft run-out **	Mass (kg)	Permissible rotational speed N (min ⁻¹)	
	Nominal	Maximum (L ₁ -Nut length)	L ₁	L ₂	L ₃	Target value T	Error ϵ_p	Variation ν_u			Supporting condition	
											Fixed - Simple support	Fixed - Fixed
W3211FA-3P-C5Z32	1 000	1 071	1 180	1 219	1 376	0	0.046	0.030	0.090	9.3	2 180	2 180
W3216FA-3P-C5Z32	1 500	1 571	1 680	1 719	1 876	0	0.065	0.040	0.120	12.3	1 570	2 180
W3221FA-3P-C5Z32	2 000	2 071	2 180	2 219	2 376	0	0.077	0.046	0.160	15.4	920	1 290
W3227FA-3P-C5Z32	2 600	2 671	2 780	2 819	2 976	0	0.093	0.054	0.200	19.1	560	790

Note: NSK grease LR3 is recommended. Amount for replenishing should be about 50% of nut internal space capacity.