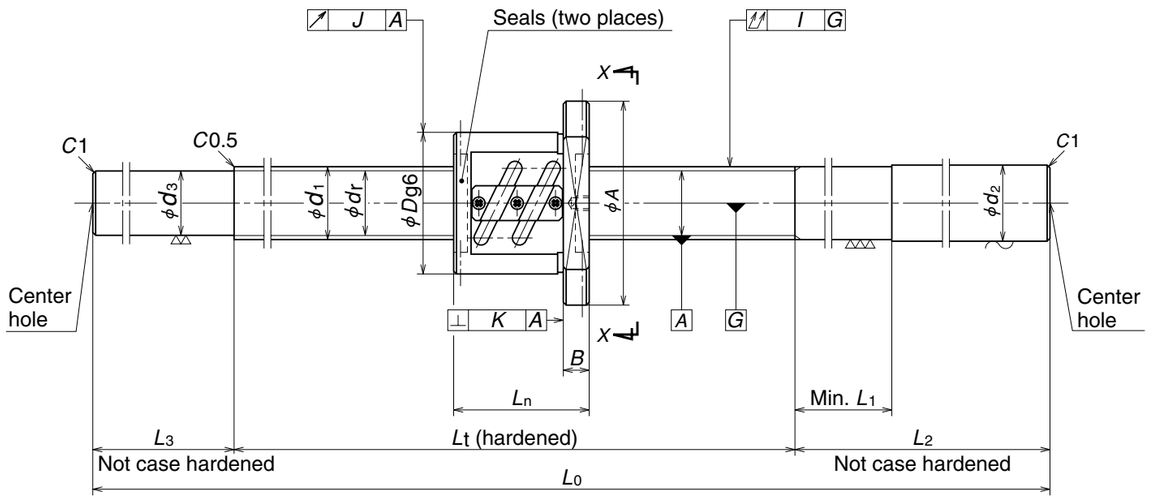
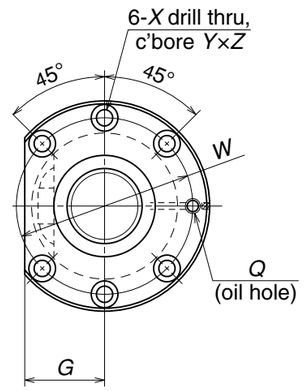
Nut Model: PFT



Nut type code: PFT



View *X-X*

Screw Shaft ϕ20 Lead 4, 5

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		20 × 4 / Right	20 × 5 / Right
Preload / Ball recirculation		P-preload / Return tube	
Ball dia. / Ball circle dia.		2.381 / 20.3	3.175 / 20.5
Root dia.		17.8	17.2
Effective turns of balls		2.5 × 2	
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	5 420	9 410
	Static C_{0a}	10 700	17 100
Axial play		0	
Preload(N)		290	490
Dynamic friction torque (N·cm)		3.9	7.8
Internal spatial volume of nut (cm^3)		2.7	4.3

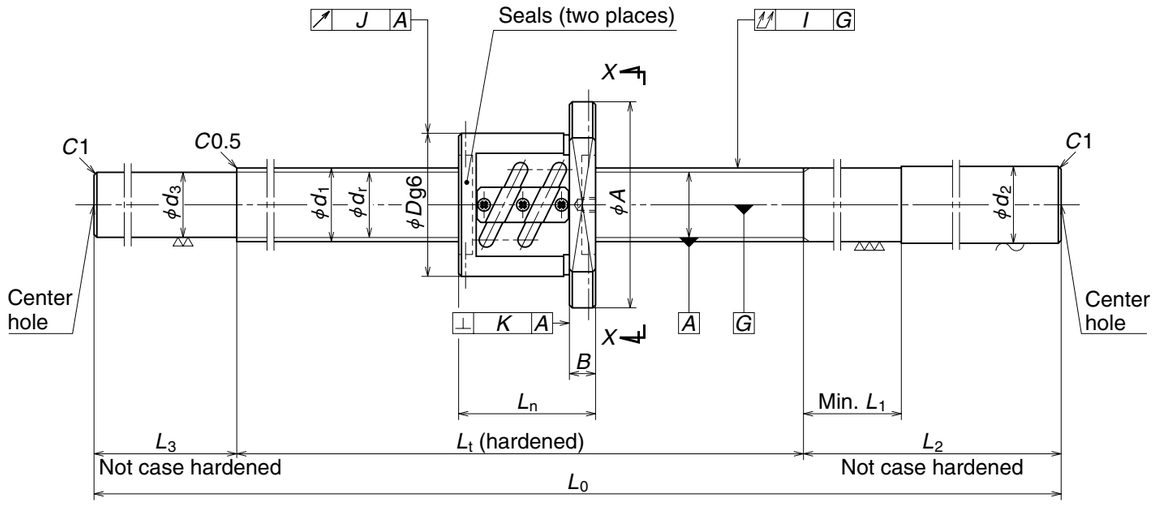
Recommended Support Unit	Fixed side	Simple support side
WBK15-01A (square)	○	
WBK15S-01 (square)		○
WBK15-11 (round)	○	

Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K		N (min^{-1})
W2003SS-1P-C5Z4	251	20	4	40	63	24	11	49	51	5.5	9.5	5.5	M6×1	300	20.2	40	150	17.8	—	450	-0.007	0.023	0.018	0.055	0.015	0.011	1.5	3 000
W2005SS-1P-C5Z4	451													500			150		50	700	-0.012	0.027	0.020	0.085			2.0	
W2008SS-1P-C5Z4	751													800			200		100	1 100	-0.019	0.035	0.025	0.140			2.9	
W2003SS-2P-C5Z5	244	20	5	44	67	26	11	56	55	5.5	9.5	5.5	M6×1	300	20.2	40	150	17.2	—	450	-0.007	0.023	0.018	0.055	0.015	0.011	1.6	3 000
W2005SS-2P-C5Z5	444													500			150		50	700	-0.012	0.027	0.020	0.085			2.2	
W2007SS-1P-C5Z5	644													700			200		100	1 000	-0.017	0.035	0.025	0.110			2.8	
W2010SS-1P-C5Z5	944													1 000			200		100	1 300	-0.024	0.040	0.027	0.180			3.5	

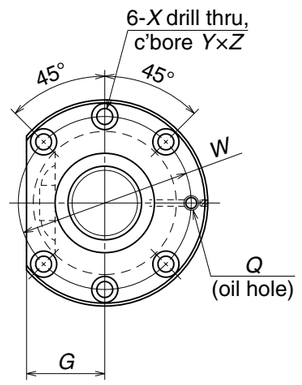
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: PFT



Nut type code: PFT

Screw Shaft ϕ25 Lead 4, 5, 6



View X-X

Unit: mm

Ball Screw Specifications				
Shaft dia. × Lead / Direction of turn		25 × 4 / Right	25 × 5 / Right	25 × 6 / Right
Preload / Ball recirculation		P-preload / Return tube		
Ball dia. / Ball circle dia.		2.381 / 25.3	3.175 / 25.5	3.969 / 25.5
Root dia.		22.8	22.2	21.4
Effective turns of balls		2.5 × 2		
Accuracy grade / Preload		C5 / Z		
Basic load rating (N)	Dynamic C_a	6 020	10 400	14 100
	Static C_{0a}	13 600	21 900	26 800
Axial play		0		
Preload (N)		290	540	690
Dynamic friction torque (N·cm)		4.9	8.8	13.8
Internal spatial volume of nut (cm^3)		3.2	5.2	7.0

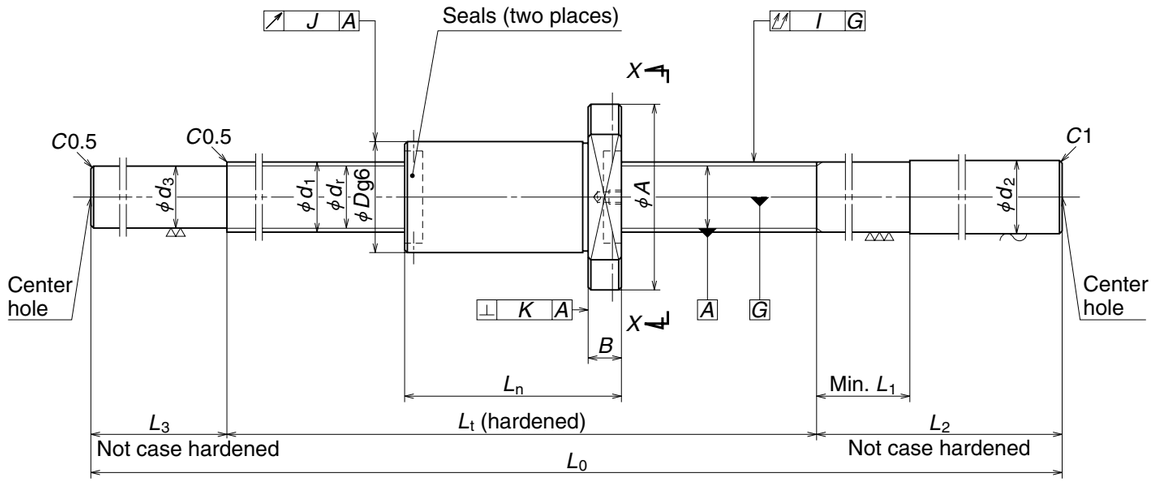
Recommended Support Unit	Fixed side	Simple support side
WBK20-01 (square)	○	○
WBK20S-01 (square)		○
WBK20-11 (round)	○	○

Unit: mm

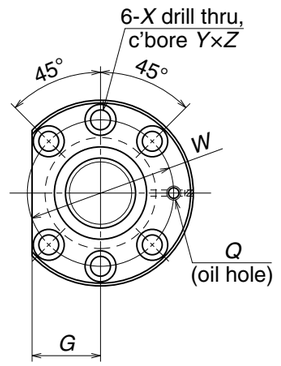
Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K	(kg)	N (min^{-1})
W2503SS-1P-C5Z4	252	25	4	46	69	26	11	48	57	5.5	9.5	5.5	M6×1	300	25.2	40	150	22.8	—	450	-0.007	0.023	0.018	0.040	0.015	0.011	2.2	2 800
W2506SS-1P-C5Z4	552													600			200		100	900	-0.014	0.030	0.023	0.075			3.8	
W2510SS-1P-C5Z4	952													1 000			200		100	1 300	-0.024	0.040	0.027	0.120			5.2	
W2503SS-2P-C5Z5	245	25	5	50	73	28	11	55	61	5.5	9.5	5.5	M6×1	300	25.2	40	200	22.2	—	500	-0.007	0.023	0.018	0.040	0.015	0.011	2.5	2 800
W2505SS-1P-C5Z5	445													500			200		50	750	-0.012	0.027	0.020	0.060			3.4	
W2508SS-1P-C5Z5	745													800			250		100	1 150	-0.019	0.035	0.025	0.090			4.8	
W2512SS-1P-C5Z5	1 145													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			6.3	
W2504SS-1P-C5Z6	338	25	6	53	76	29	11	62	64	5.5	9.5	5.5	M6×1	400	25.2	40	200	21.4	—	600	-0.010	0.025	0.020	0.050	0.019	0.013	3.0	2 800
W2508SS-2P-C5Z6	738													800			250		100	1 150	-0.019	0.035	0.025	0.090			4.8	
W2512SS-2P-C5Z6	1 138													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			6.3	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFD



Nut type code: ZFD



View *X-X*

Screw Shaft ϕ25 Lead 5, 10

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		25 × 5 / Right	25 × 10 / Right
Preload / Ball recirculation		P-preload / Deflector	
Ball dia. / Ball circle dia.		3.175 / 25.75	4.762 / 26.25
Root dia.		22.4	21.3
Effective turns of balls		1 × 3	1 × 2
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	9 790	11 400
	Static C_{0a}	22 900	21 400
Axial play		0	
Preload (N)		740	880
Dynamic friction torque (N·cm)		13.8	21.5
Internal spatial volume of nut (cm^3)		5.4	9.0

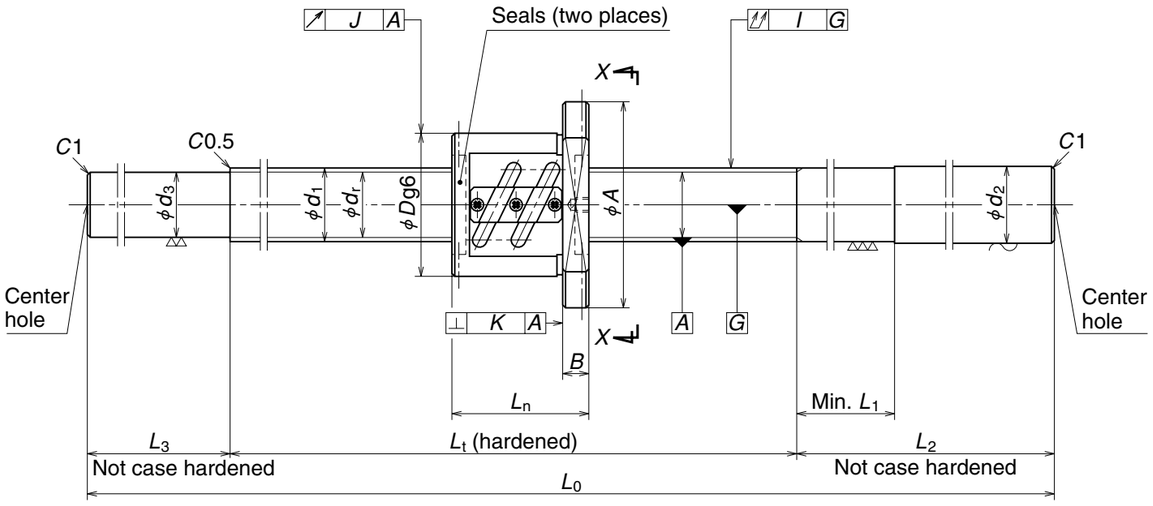
Recommended Support Unit	Fixed side	Simple support side
WBK20-01 (square)	○	○
WBK20S-01 (square)		○
WBK20-11 (round)	○	○

Unit: mm

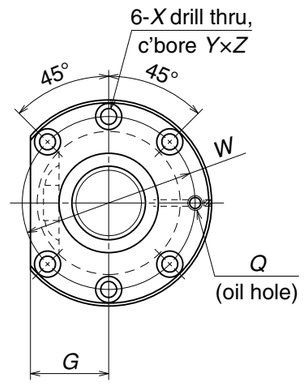
Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K		N (min^{-1})
W2502SS-1ZY-C5Z5	184	25	5	40	63	24	11	66	51	5.5	9.5	5.5	M6×1	250	25.2	40	200	22.4	—	450	-0.005	0.023	0.018	0.040	0.015	0.011	2.1	2 800
W2504SS-3ZY-C5Z5	334													400			200		50	650	-0.009	0.025	0.020	0.060			2.8	
W2506SS-2ZY-C5Z5	534													600			250		100	950	-0.013	0.030	0.023	0.075			3.9	
W2509SS-1ZY-C5Z5	834													900			250		100	1 250	-0.021	0.040	0.027	0.090			4.9	
W2512SS-3ZY-C5Z5	1 134													1 200			300		100	1 600	-0.028	0.046	0.030	0.120			6.2	
W2504SS-4ZY-C5Z10	312	25	10	42	69	26	15	88	55	6.6	11	6.5	M6×1	400	25.2	60	200	21.3	50	650	-0.008	0.025	0.020	0.060	0.015	0.011	3.0	2 800
W2506SS-3ZY-C5Z10	512													600			250		100	950	-0.012	0.030	0.023	0.075			4.1	
W2508SS-3ZY-C5Z10	712													800			250		100	1 150	-0.017	0.035	0.025	0.090			4.8	
W2511SS-1ZY-C5Z10	1 012													1 100			300		100	1 500	-0.024	0.046	0.030	0.120			6.0	
W2515SS-2ZY-C5Z10	1 412													1 200			300		100	1 900	-0.034	0.054	0.035	0.150			7.4	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: PFT



Nut type code: PFT



View *X-X*

Screw Shaft ϕ25 Lead 10
Screw Shaft ϕ28 Lead 5, 6

Unit: mm

Ball Screw Specifications				
Shaft dia. × Lead / Direction of turn		25 × 10 / Right	28 × 5 / Right	28 × 6 / Right
Preload / Ball recirculation		P-preload / Return tube		
Ball dia. / Ball circle dia.		4.762 / 25.5	3.175 / 28.5	
Root dia.		20.5	25.2	
Effective turns of balls		1.5 × 2	2.5 × 2	
Accuracy grade / Preload		C5 / Z		
Basic load rating (N)	Dynamic C_a	11 600	11 000	
	Static C_{0a}	19 000	24 400	
Axial play		0		
Preload (N)		590	540	
Dynamic friction torque (N·cm)		13.8	9.8	10.8
Internal spatial volume of nut (cm^3)		9.7	6.1	

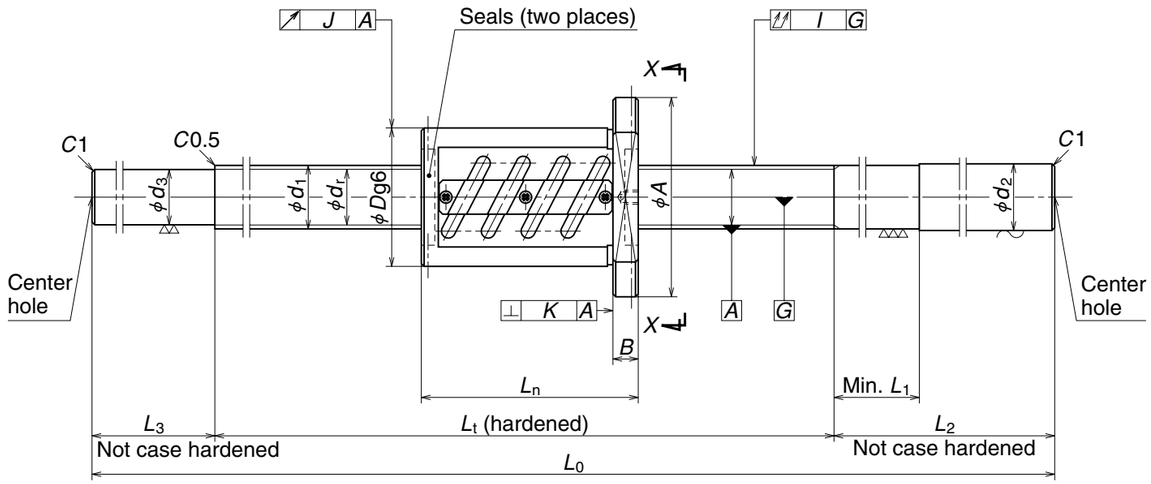
Recommended Support Unit	Fixed side	Simple support side
WBK20-01 (square)	○	○
WBK20S-01 (square)		○
WBK20-11 (round)	○	○

Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass (kg)	Permissible rotational speed N (min^{-1})
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	l	J	K		
W2504SS-2P-C5Z10	319	25	10	58	85	32	15	81	71	6.6	11	6.5	M6×1	400	25.2	60	200	20.5	50	650	-0.010	0.025	0.020	0.060	0.019	0.013	3.8	2 800
W2507SS-1P-C5Z10	619													700			250		100	1 050	-0.017	0.035	0.025	0.090			5.1	
W2510SS-2P-C5Z10	919													1 000			250		100	1 350	-0.024	0.040	0.027	0.120			6.1	
W2515SS-1P-C5Z10	1 419													1 500			300		100	1 900	-0.036	0.054	0.035	0.150			8.0	
W2804SS-1P-C5Z5	344	28	5	55	85	31	12	56	69	6.6	11	6.5	M6×1	400	28.2	40	200	25.2	—	600	-0.010	0.025	0.020	0.050	0.019	0.013	3.7	2 500
W2806SS-1P-C5Z5	544													600			250		100	950	-0.014	0.030	0.023	0.075			5.2	
W2808SS-1P-C5Z5	744													800			250		100	1 150	-0.019	0.035	0.025	0.090			6.1	
W2812SS-1P-C5Z5	1 144													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			8.1	
W2804SS-3P-C5Z6	337	28	6	55	85	31	12	63	69	6.6	11	6.5	M6×1	400	28.2	40	200	25.2	—	600	-0.010	0.025	0.020	0.050	0.019	0.013	3.8	2 500
W2806SS-3P-C5Z6	537													600			250		100	950	-0.014	0.030	0.023	0.075			5.3	
W2808SS-3P-C5Z6	737													800			250		100	1 150	-0.019	0.035	0.025	0.090			6.2	
W2812SS-3P-C5Z6	1 137													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			8.2	

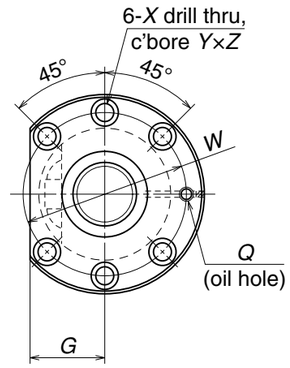
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFT



Nut type code: ZFT

Screw Shaft ϕ28 Lead 5, 6



View *X-X*

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		28 × 5 / Right	28 × 6 / Right
Preload / Ball recirculation		Z-preload / Return tube	
Ball dia. / Ball circle dia.		3.175 / 28.5	
Root dia.		25.5	25.2
Effective turns of balls		2.5 × 2	
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	17 400	
	Static C_{0a}	48 800	
Axial play		0	
Preload (N)		1 225	
Dynamic friction torque (N·cm)		21.5	22.5
Internal spatial volume of nut (cm^3)		9.2	9.5

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

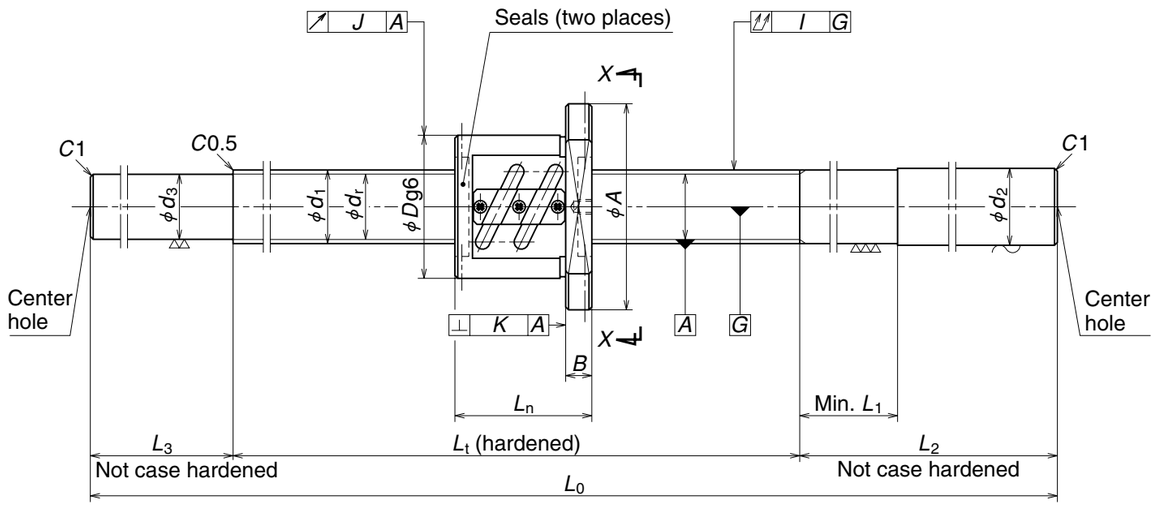
Unit: mm

Part number	Stroke max. L_t-L_n	Screw shaft dia. d_1	Lead l	Nut dimensions: Outside dia. D	Flange A	Flange G	Flange B	Overall length L_n	Bolt hole W	Bolt hole X	Bolt hole Y	Bolt hole Z	Oil hole Q	Screw shaft dimensions: Threaded length L_t	Shaft end, right d_2	Shaft end, right L_1	Shaft end, right L_2	Shaft end, left d_3	Shaft end, left L_3	Overall length L_0	Lead accuracy: Target value T	Error e_p	Variation v_U	Run-out: Shaft straightness I	Nut O.D. eccentricity J	Flange perpendicularity K	Mass (kg)	Permissible rotational speed N (min^{-1})
W2804SS-2Z-C5Z5	314	28	5	55	85	31	12	86	69	6.6	11	6.5	M6×1	400	28.2	40	200	25.2	—	600	-0.010	0.025	0.020	0.050	0.019	0.013	4.7	2 500
W2806SS-2Z-C5Z5	514													600			250		100	950	-0.014	0.030	0.023	0.075			5.5	
W2808SS-2Z-C5Z5	714													800			250		100	1 150	-0.019	0.035	0.025	0.090			6.4	
W2812SS-2Z-C5Z5	1 114													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			8.4	
W2804SS-4Z-C5Z6	301	28	6	55	85	31	12	99	69	6.6	11	6.5	M6×1	400	28.2	40	200	25.2	—	600	-0.010	0.025	0.020	0.050	0.019	0.013	4.2	2 500
W2806SS-4Z-C5Z6	501													600			250		100	950	-0.014	0.030	0.023	0.075			5.7	
W2808SS-4Z-C5Z6	701													800			250		100	1 150	-0.019	0.035	0.025	0.090			6.6	
W2812SS-4Z-C5Z6	1 101													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			8.6	

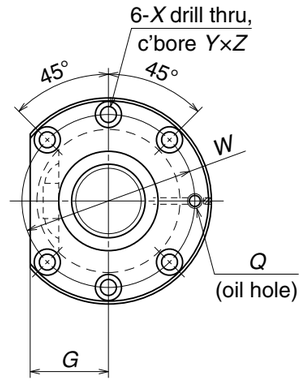
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: PFT

Screw Shaft ϕ32 Lead 5, 6



Nut type code: PFT



View X-X

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		32 × 5 / Right	32 × 6 / Right
Preload / Ball recirculation		P-preload / Return tube	
Ball dia. / Ball circle dia.		3.175 / 32.5	3.969 / 32.5
Root dia.		29.2	28.4
Effective turns of balls		2.5 × 2	
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	11 600	15 500
	Static C_{0a}	28 000	34 700
Axial play		0	
Preload (N)		590	780
Dynamic friction torque (N·cm)		10.8	15.6
Internal spatial volume of nut (cm^3)		6.9	9.4

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

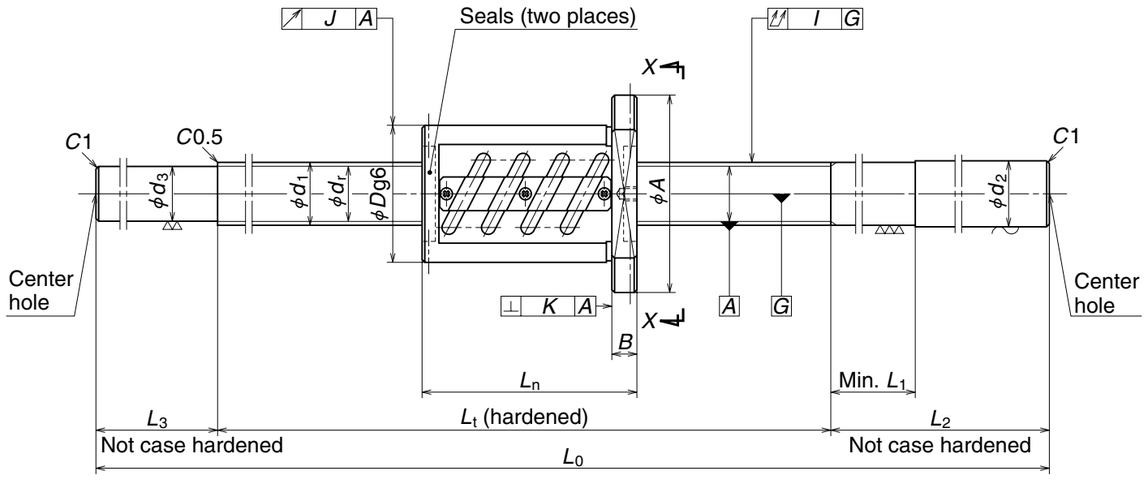
Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions									Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		N (min^{-1})
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	l	J	K		
W3204SS-1P-C5Z5	344	32	5	58	85	32	12	56	71	6.6	11	6.5	M6×1	400	32.3	40	200	29.2	50	650	-0.010	0.025	0.020	0.060	0.019	0.013	4.8	2 180
W3206SS-1P-C5Z5	544													600			250		100	950	-0.014	0.030	0.023	0.075			6.5	
W3208SS-1P-C5Z5	744													800			250		100	1 150	-0.019	0.035	0.025	0.090			7.7	
W3212SS-1P-C5Z5	1 144													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			10.3	
W3215SS-1P-C5Z5	1 444													1 500			300		100	1 900	-0.036	0.054	0.035	0.150			12.1	
W3206SS-3P-C5Z6	537	32	6	62	89	34	12	63	75	6.6	11	6.5	M6×1	600	32.3	40	250	28.4	100	950	-0.014	0.030	0.023	0.075	0.019	0.013	6.7	2 180
W3210SS-1P-C5Z6	937													1 000			300			1 400	-0.024	0.040	0.027	0.120			9.2	
W3215SS-3P-C5Z6	1 437													1 500			300			1 900	-0.036	0.054	0.035	0.150			12.1	

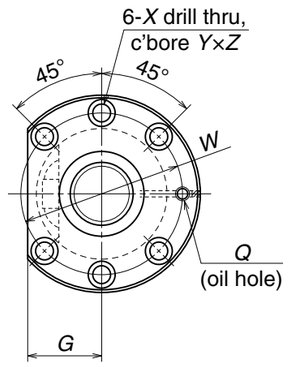
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFT

Screw Shaft ϕ32 Lead 5, 6, 8



Nut type code: ZFT



View *X-X*

Unit: mm

Ball Screw Specifications				
Shaft dia. × Lead / Direction of turn		32 × 5 / Right	32 × 6 / Right	32 × 8 / Right
Preload / Ball recirculation		Z-preload / Return tube		
Ball dia. / Ball circle dia.		3.175 / 32.5	3.969 / 32.5	4.762 / 32.5
Root dia.		29.2	28.4	27.5
Effective turns of balls		2.5 × 2		2.5 × 1
Accuracy grade / Preload		C5 / Z		
Basic load rating (N)	Dynamic C_a	18 500	24 700	17 500
	Static C_{0a}	56 100	69 400	41 000
Axial play		0		
Preload (N)		1 270	1 720	1 320
Dynamic friction torque (N·cm)		22.5	34.5	30.5
Internal spatial volume of nut (cm^3)		10	15	7.9

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

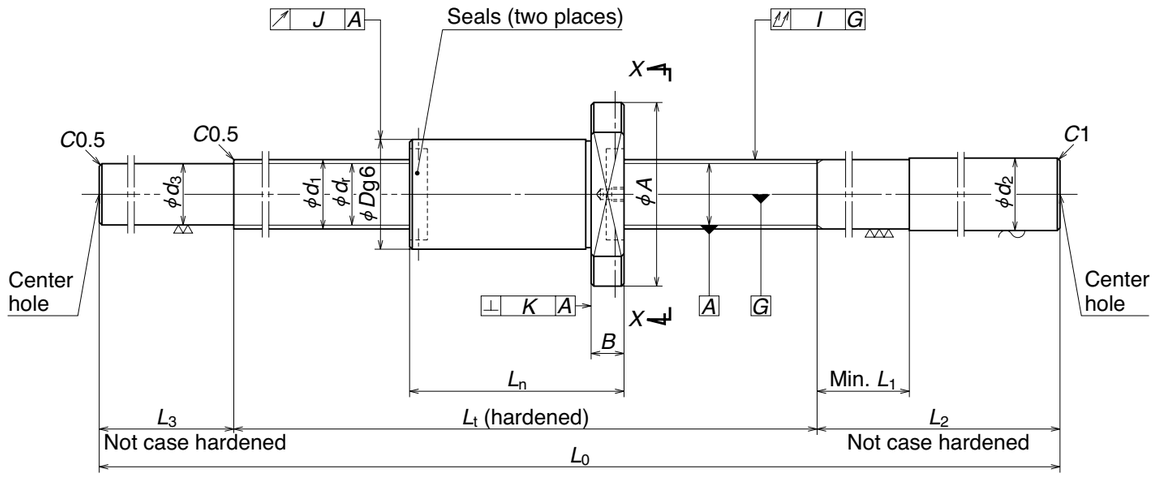
Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass (kg)	Permissible rotational speed N (min^{-1})
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	l	J	K		
W3204SS-2Z-C5Z5	314	32	5	58	85	32	12	86	71	6.6	11	6.5	M6×1	400	32.3	40	200	29.2	50	650	-0.010	0.025	0.020	0.060	0.019	0.013	5.1	2 180
W3206SS-2Z-C5Z5	514													600			250		100	950	-0.014	0.030	0.023	0.075			6.9	
W3208SS-2Z-C5Z5	714													800			250		100	1 150	-0.019	0.035	0.025	0.090			8.0	
W3212SS-2Z-C5Z5	1 114													1 200			300		100	1 600	-0.029	0.046	0.030	0.120			10.1	
W3215SS-2Z-C5Z5	1 414													1 500			300		100	1 900	-0.036	0.054	0.035	0.150			12.4	
W3206SS-4Z-C5Z6	501	32	6	62	89	34	12	99	75	6.6	11	6.5	M6×1	600	32.3	40	250	28.4	100	950	-0.014	0.030	0.023	0.075	0.019	0.013	7.1	2 180
W3210SS-2Z-C5Z6	901													1 000			300			1 400	-0.024	0.040	0.027	0.120			9.7	
W3215SS-4Z-C5Z6	1 401													1 500			300			1 900	-0.036	0.054	0.035	0.150			12.6	
W3206SS-5Z-C5Z8	518	32	8	66	100	38	15	82	82	9	14	8.5	M6×1	600	32.3	50	250	27.5	100	950	-0.014	0.030	0.023	0.075	0.019	0.013	7.3	2 180
W3210SS-3Z-C5Z8	918													1 000			300			1 400	-0.024	0.040	0.027	0.120			9.8	
W3215SS-5Z-C5Z8	1 418													1 500			300			1 900	-0.036	0.054	0.035	0.150			12.6	

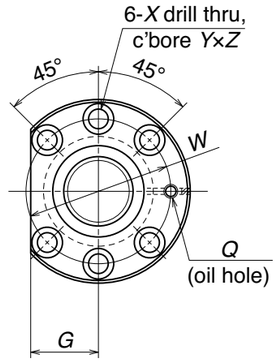
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFD

Screw Shaft ϕ32 Lead 5, 10



Nut type code: ZFD



View X-X

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		32 × 5 / Right	32 × 10 / Right
Preload / Ball recirculation		Z-preload / Deflector	
Ball dia. / Ball circle dia.		3.175 / 32.75	6.35 / 33.75
Root dia.		29.4	27.1
Effective turns of balls		4	3
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	14 200	25 900
	Static C_{0a}	40 700	52 800
Axial play		0	
Preload (N)		1 080	1 860
Dynamic friction torque (N·cm)		19.6	49
Internal spatial volume of nut (cm^3)		22	23

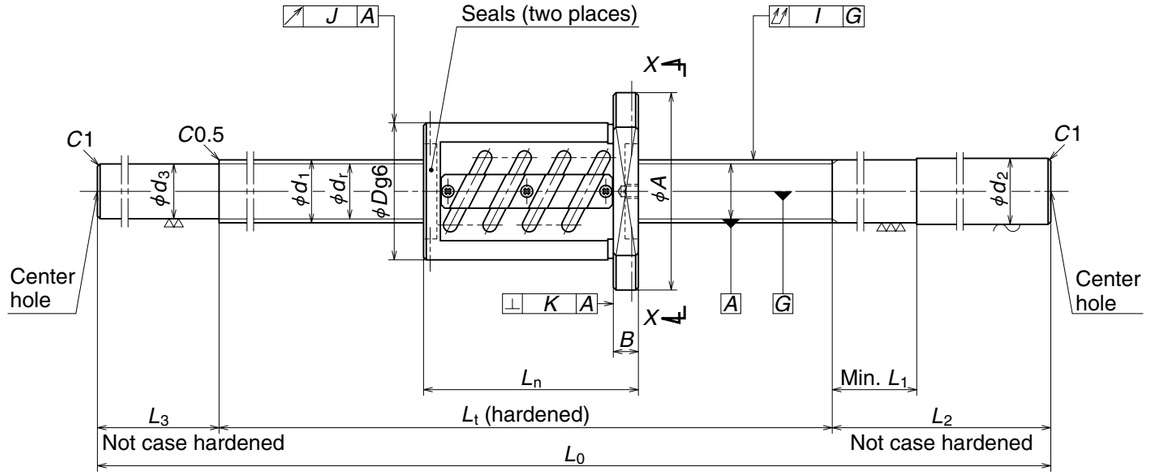
Recommended Support Unit
WBK25DF-31 (round)

Unit: mm

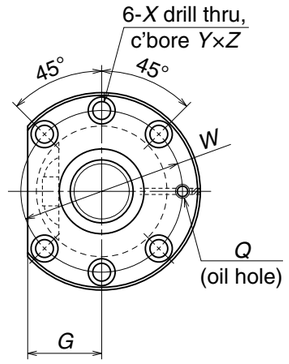
Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K	(kg)	N (min^{-1})
W3204SS-3ZY-C5Z5	323	32	5	48	75	29	12	77	61	6.6	11	6.5	M6×1	400	32.3	40	200	29.4	50	650	-0.009	0.025	0.020	0.060	0.015	0.011	4.6	2 180
W3206SS-6ZY-C5Z5	523													600			250		100	950	-0.013	0.030	0.023	0.075			6.4	
W3209SS-1ZY-C5Z5	823													900			250		100	1 250	-0.021	0.040	0.027	0.090			8.1	
W3212SS-3ZY-C5Z5	1 123													1 200			300		100	1 600	-0.028	0.046	0.030	0.120			10.2	
W3216SS-1ZY-C5Z5	1 523													1 600			300		100	2 000	-0.037	0.054	0.035	0.150			12.6	
W3205SS-3ZY-C5Z10	380	32	10	54	88	34	15	120	70	9	14	8.5	M6×1	500	32.3	60	250	27.1	100	850	-0.010	0.027	0.020	0.075	0.019	0.013	6.2	2 180
W3207SS-3ZY-C5Z10	580													700			250		100	1 050	-0.015	0.035	0.025	0.090			7.3	
W3210SS-6ZY-C5Z10	880													1 000			300		100	1 400	-0.022	0.040	0.027	0.120			9.3	
W3214SS-3ZY-C5Z10	1 280													1 400			350		120	1 870	-0.032	0.054	0.035	0.150			11.9	
W3218SS-3ZY-C5Z10	1 680													1 800			350		120	2 270	-0.041	0.065	0.040	0.200			14.1	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFT



Nut type code: ZFT



View *X-X*

Screw Shaft ϕ32, 36 Lead 10
Screw Shaft ϕ40 Lead 5

Unit: mm

Ball Screw Specifications				
Shaft dia. × Lead / Direction of turn		32 × 10 / Right	36 × 10 / Right	40 × 5 / Right
Preload / Ball recirculation		Z-preload / Return tube		
Ball dia. / Ball circle dia.		6.350 / 33	6.350 / 37	3.175 / 40.5
Root dia.		26.4	30.4	37.2
Effective turns of balls		2.5 × 1		2.5 × 2
Accuracy grade / Preload		C5 / Z		
Basic load rating (N)	Dynamic C_a	25 500	27 200	20 200
	Static C_{0a}	54 000	61 300	70 600
Axial play		0		
Preload (N)		1 960	2 060	1 420
Dynamic friction torque (N·cm)		50	56	28.5
Internal spatial volume of nut (cm^3)		22	27	14

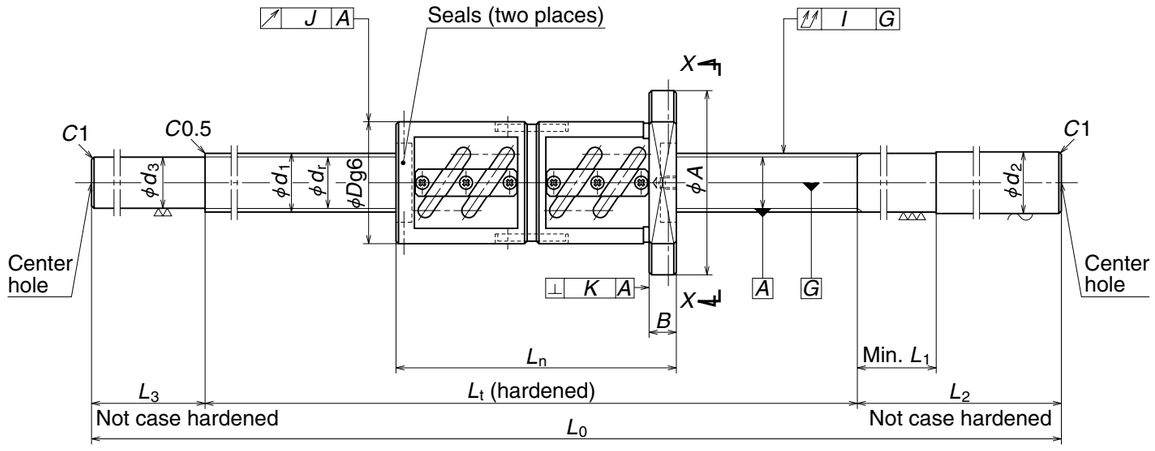
Recommended Support Unit		Fixed side	Simple support side
Screw shaft dia. 32	WBK25DF-31 (round)	○	○
Screw shaft dia. 36	WBK30DF-31 (round)	○	
	WBK25DF-31 (round)		○
Screw shaft dia. 40	WBK30DF-31 (round)	○	○

Unit: mm

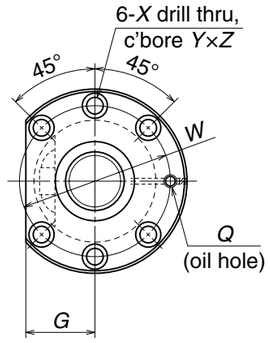
Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass (kg)	Permissible rotational speed N (min^{-1})
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K		
W3205SS-1Z-C5Z10	400	32	10	74	108	41	15	100	90	9	11	8.5	M6×1	500	32.3	60	250	26.2	100	850	-0.012	0.027	0.020	0.075	0.019	0.013	7.5	2 180
W3207SS-1Z-C5Z10	600													700			250		100	1 050	-0.017	0.035	0.025	0.090			8.5	
W3210SS-4Z-C5Z10	900													1 000			300		100	1 400	-0.024	0.040	0.027	0.120			10.5	
W3214SS-1Z-C5Z10	1 300													1 400			350		120	1 870	-0.034	0.054	0.035	0.150			13.1	
W3218SS-1Z-C5Z10	1 700													1 800			350		120	2 270	-0.043	0.065	0.040	0.200			15.2	
W3607SS-1Z-C5Z10	597	36	10	75	120	45	18	103	98	11	17.5	11	M6×1	700	36.3	60	300	30.4	100	1 100	-0.017	0.035	0.025	0.065	0.019	0.013	10.9	1 940
W3612SS-1Z-C5Z10	1 097													1 200			350		120	1 670	-0.029	0.046	0.030	0.100			14.9	
W3620SS-1Z-C5Z10	1 897													2 000			350		120	2 470	-0.048	0.065	0.040	0.130			20.4	
W4006SS-1Z-C5Z5	511	40	5	67	101	39	15	89	83	9	14	8.5	Rc1/8	600	40.3	50	300	37.2	100	1 000	-0.014	0.030	0.023	0.050	0.019	0.013	11.1	1 750
W4010SS-1Z-C5Z5	911													1 000			300			1 400	-0.024	0.040	0.027	0.080			14.8	
W4016SS-1Z-C5Z5	1 511													1 600			350			2 050	-0.038	0.054	0.035	0.130			20.8	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: DFT



Nut type code: DFT



View X-X

Screw Shaft φ32, 36 Lead 10

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		32 × 10 / Right	36 × 10 / Right
Preload / Ball recirculation		D-preload / Return tube	
Ball dia. / Ball circle dia.		6.350 / 33	6.350 / 37
Root dia.		26.4	30.4
Effective turns of balls		2.5 × 2	
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	46 300	49 300
	Static C_{0a}	108 000	123 000
Axial play		0	
Preload (N)		3 240	3 430
Internal spatial volume of nut (cm^3)		57	67

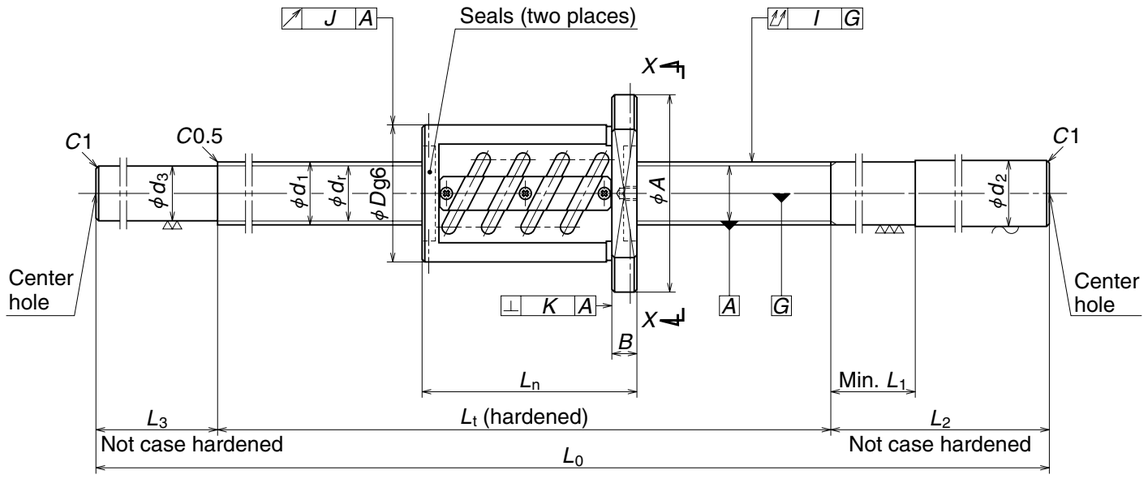
Recommended Support Unit		Fixed side	Simple support side
Screw shaft dia. 32	WBK25DF-31 (round)	○	○
Screw shaft dia. 36	WBK30DF-31 (round)	○	
	WBK25DF-31 (round)		○

Unit: mm

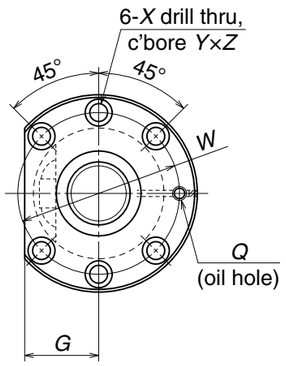
Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass (kg)	Permissible rotational speed N (min^{-1})
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K		
W3205SS-2D-C5Z10	310	32	10	74	108	41	15	190	90	9	14	8.5	M6×1	500	32.3	60	250	26.2	100	850	-0.012	0.027	0.020	0.075	0.019	0.013	9.5	2 180
W3207SS-2D-C5Z10	510													700			250		100	1 050	-0.017	0.035	0.025	0.090			10.6	
W3210SS-5D-C5Z10	810													1 000			300		100	1 400	-0.024	0.040	0.027	0.120			12.5	
W3214SS-2D-C5Z10	1 210													1 400			350		120	1 870	-0.034	0.054	0.035	0.150			15.1	
W3218SS-2D-C5Z10	1 610													1 800			350		120	2 270	-0.043	0.065	0.040	0.200			17.2	
W3607SS-2D-C5Z10	507	36	10	75	120	45	18	193	98	11	17.5	11	M6×1	700	36.3	60	300	30.4	100	1 100	-0.017	0.035	0.025	0.065	0.019	0.013	12.8	1 940
W3612SS-2D-C5Z10	1 007													1 200			350		120	1 670	-0.029	0.046	0.030	0.100			16.8	
W3620SS-2D-C5Z10	1 807													2 000			350		120	2 470	-0.048	0.065	0.040	0.130			22.3	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFT



Nut type code: ZFT



View *X-X*

Screw Shaft φ40 Lead 8, 10, 12

Unit: mm

Ball Screw Specifications				
Shaft dia. × Lead / Direction of turn		40 × 8 / Right	40 × 10 / Right	40 × 12 / Right
Preload / Ball recirculation		Z-preload / Return tube		
Ball dia. / Ball circle dia.		4.762 / 40.5	6.350 / 41	7.144 / 41.5
Root dia.		35.5	34.4	34.1
Effective turns of balls		2.5 × 2	2.5 × 1	
Accuracy grade / Preload		C5 / Z		
Basic load rating (N)	Dynamic C_a	34 900	28 600	33 600
	Static C_{0a}	103 000	68 600	77 500
Axial play		0		
Preload (N)		2 460	2 160	2 550
Dynamic friction torque (N·cm)		64		83
Internal spatial volume of nut (cm^3)		27	30	35

Recommended Support Unit
WBK30DF-31 (round)

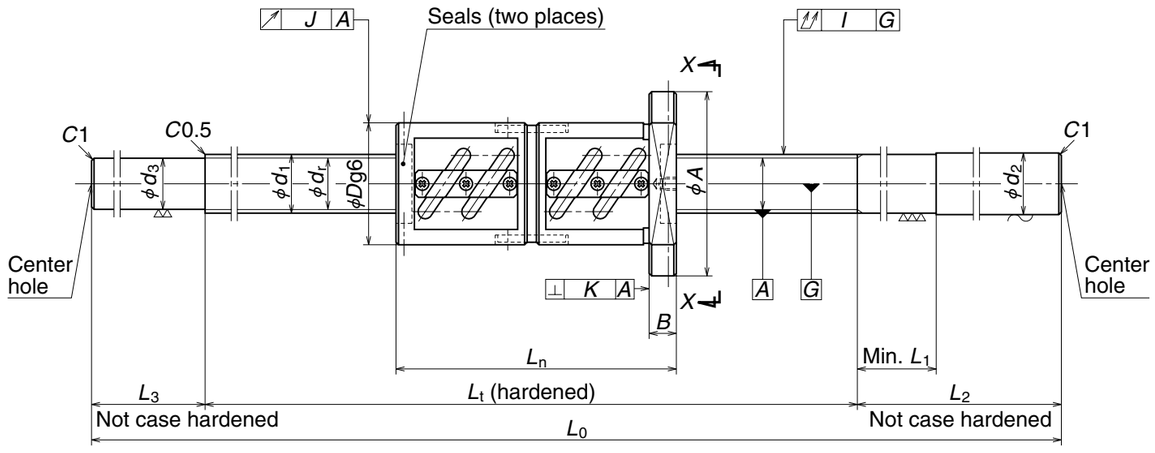
Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	l	J	K	(kg)	N (min^{-1})
W4007SS-1Z-C5Z8	570	40	8	74	108	41	15	130	90	9	14	8.5	Rc1/8	700	40.3	50	300	35.5	100	1 100	-0.017	0.035	0.025	0.065			13.0	1 750
W4012SS-1Z-C5Z8	1 070													1 200			350		100	1 650	-0.029	0.046	0.030	0.100	0.019	0.013	18.0	
W4018SS-1Z-C5Z8	1 670													1 800			350		120	2 270	-0.043	0.065	0.040	0.130			23.5	
W4007SS-2Z-C5Z10	597	40	10	82	124	47	18	103	102	11	17.5	11	Rc1/8	700	40.3	60	300	34.4	100	1 100	-0.017	0.035	0.025	0.065	0.025	0.015	13.3	1 750
W4010SS-2Z-C5Z10	897													1 000			300		100	1 400	-0.024	0.040	0.027	0.080			15.9	
W4014SS-1Z-C5Z10	1 297													1 400			350		120	1 870	-0.034	0.054	0.035	0.100			20.0	
W4018SS-2Z-C5Z10	1 697													1 800			350		120	2 270	-0.043	0.065	0.040	0.130			23.4	
W4024SS-1Z-C5Z10	2 297													2 400			400		150	2 950	-0.058	0.077	0.046	0.170			29.4	
W4010SS-4Z-C5Z12	883	40	12	86	128	48	18	117	106	11	17.5	11	Rc1/8	1 000	40.3	70	300	34.1	100	1 400	-0.024	0.040	0.027	0.080	0.025	0.015	16.7	1 750
W4016SS-2Z-C5Z12	1 483													1 600			350		150	2 100	-0.038	0.054	0.035	0.130			22.9	
W4025SS-1Z-C5Z12	2 383													2 500			400		150	3 050	-0.060	0.077	0.046	0.170			31.1	

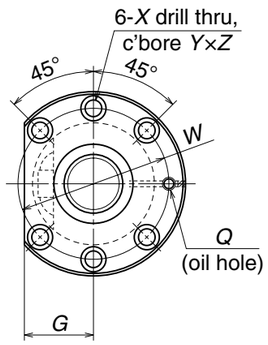
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: DFT

Screw Shaft ϕ40 Lead 10, 12



Nut type code: DFT



View X-X

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		40 × 10 / Right	40 × 12 / Right
Preload / Ball recirculation		D-preload / Return tube	
Ball dia. / Ball circle dia.		6.350 / 41	7.144 / 41.5
Root dia.		34.4	34.1
Effective turns of balls		2.5 × 2	
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	52 000	61 000
	Static C_{0a}	137 000	155 000
Axial play		0	
Preload (N)		3 630	4 310
Dynamic friction torque (N·cm)		108	138
Internal spatial volume of nut (cm^3)		740	93

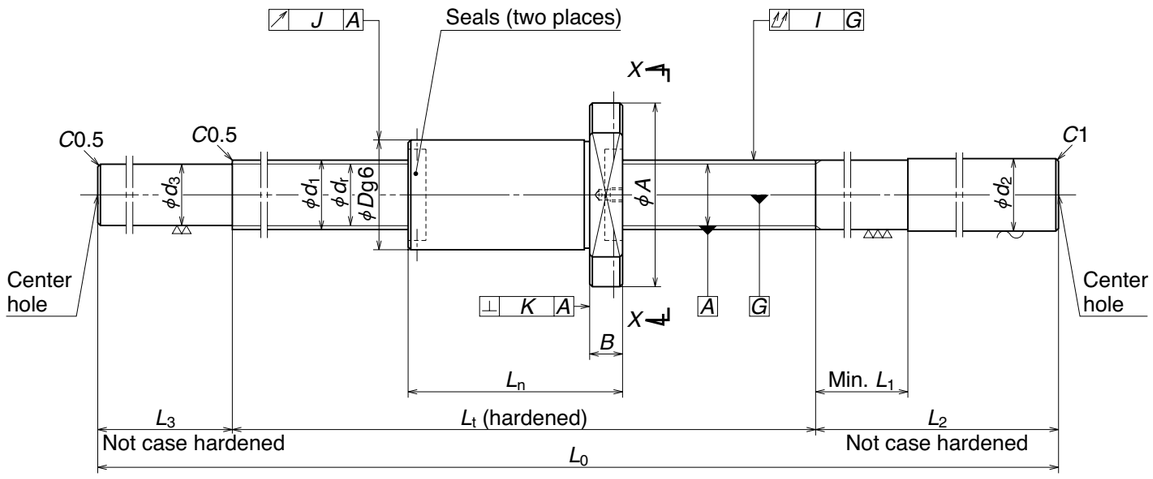
Recommended Support Unit
WBK30DF-31 (round)

Unit: mm

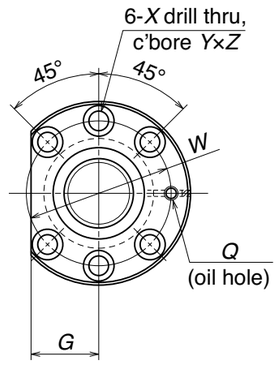
Part number	Stroke max. L_t-L_n	Screw shaft dia. d_1	Lead l	Nut dimensions: Outside dia. D	Flange A	Flange G	Flange B	Overall length L_n	Bolt hole W	Bolt hole X	Bolt hole Y	Bolt hole Z	Oil hole Q	Screw shaft dimensions: Threaded length L_t	Shaft end, right d_2	Shaft end, right L_1	Shaft end, right L_2	Shaft end, left d_3	Shaft end, left L_3	Overall length L_0	Lead accuracy: Target value T	Error e_p	Variation v_U	Run-out: Shaft straightness I	Nut O.D. eccentricity J	Flange perpendicularity K	Mass (kg)	Permissible rotational speed N (min^{-1})
W4007SS-3D-C5Z10	507	40	10	82	124	47	18	193	102	11	17.5	11	Rc1/8	700	40.3	60	300	34.4	100	1 100	-0.017	0.035	0.025	0.065	0.025	0.015	15.5	1 750
W4010SS-3D-C5Z10	807													1 000			300		100	1 400	-0.024	0.040	0.027	0.080			18.1	
W4014SS-2D-C5Z10	1 207													1 400			350		120	1 870	-0.034	0.054	0.035	0.100			22.2	
W4018SS-3D-C5Z10	1 607													1 800			350		120	2 270	-0.043	0.065	0.040	0.130			25.6	
W4024SS-2D-C5Z10	2 207													2 400			400		150	2 950	-0.058	0.077	0.046	0.170			31.6	
W4010SS-5D-C5Z12	775	40	12	86	128	48	18	225	106	11	17.5	11	Rc1/8	1 000	40.3	70	300	34.1	100	1 400	-0.024	0.040	0.027	0.080	0.025	0.015	19.7	1 750
W4016SS-3D-C5Z12	1 375													1 600			350		150	2 100	-0.038	0.054	0.035	0.130			25.8	
W4025SS-2D-C5Z12	2 275													2 500			400		150	3 050	-0.060	0.077	0.046	0.170			34.0	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFD



Nut type code: ZFD



View X-X

Screw Shaft φ40, 50 Lead 10

Unit: mm

Ball Screw Specifications			
Shaft dia. × Lead / Direction of turn		40 × 10 / Right	50 × 10 / Right
Preload / Ball recirculation		Z-preload / Deflector	
Ball dia. / Ball circle dia.		6.350 / 41.75	6.350 / 51.75
Root dia.		35.1	45.1
Effective turns of balls		4	
Accuracy grade / Preload		C5 / Z	
Basic load rating (N)	Dynamic C_a	38 400	43 600
	Static C_{0a}	93 300	122 000
Axial play		0	
Preload (N)		2 840	3 240
Dynamic friction torque (N·cm)		83	108
Internal spatial volume of nut (cm^3)		32	39

Recommended Support Unit	
Screw shaft dia. 40	WBK30DFD-31 (round)
Screw shaft dia. 50	WBK40DFD-31 (round)

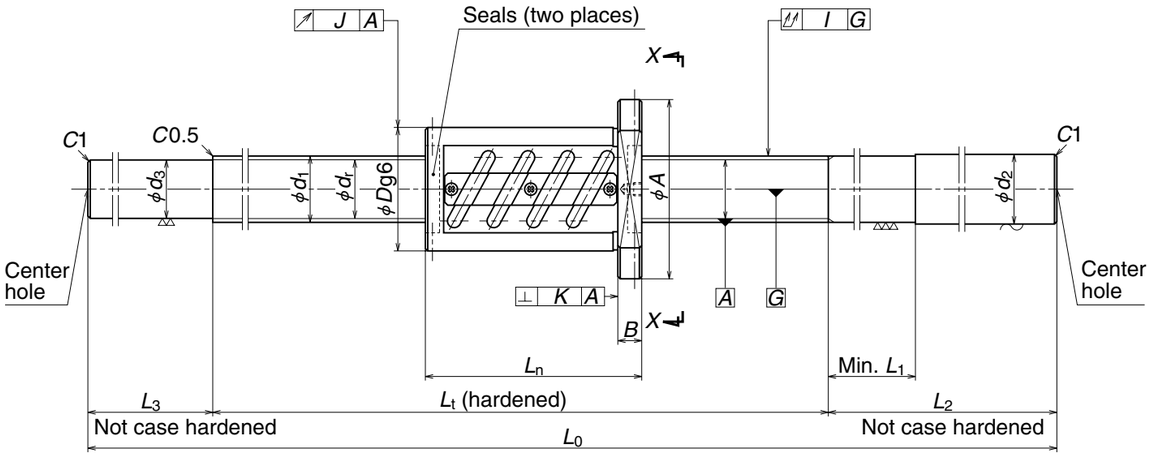
Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass (kg)	Permissible rotational speed N (min^{-1})
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K		
W4007SS-4ZY-C5Z10	557	40	10	62	104	40	18	143	82	11	17.5	11	Rc1/8	700	40.3	60	300	35.1	100	1 100	-0.015	0.035	0.025	0.065	0.019	0.013	12.1	1 750
W4010SS-6ZY-C5Z10	857													1 000			300		100	1 400	-0.022	0.040	0.027	0.080			14.7	
W4014SS-3ZY-C5Z10	1 257													1 400			350		120	1 870	-0.032	0.054	0.035	0.100			18.9	
W4018SS-4ZY-C5Z10	1 657													1 800			350		120	2 270	-0.041	0.065	0.040	0.170			22.5	
W4024SS-3ZY-C5Z10	2 257													2 400			400		150	2 950	-0.056	0.077	0.046	0.170			28.5	
W5007SS-1ZY-C5Z10	557	50	10	72	114	44	18	143	92	11	17.5	11	Rc1/8	700	50.3	60	300	45.1	100	1 100	-0.015	0.035	0.025	0.065	0.019	0.013	18.3	1 400
W5010SS-3ZY-C5Z10	857													1 000			300		100	1 400	-0.022	0.040	0.027	0.080			22.5	
W5015SS-3ZY-C5Z10	1 357													1 500			400		150	2 050	-0.034	0.054	0.035	0.130			31.8	
W5020SS-3ZY-C5Z10	1 857													2 000			400		150	2 550	-0.046	0.065	0.040	0.170			38.9	
W5026SS-3ZY-C5Z10	2 457													2 600			500		200	3 300	-0.060	0.093	0.054	0.220			49.5	

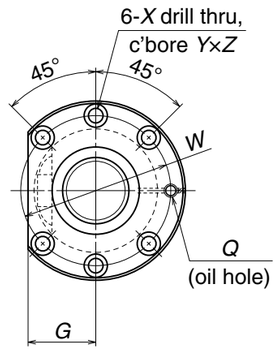
Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.

Nut Model: ZFT

Screw Shaft ϕ45, 50 Lead 10



Nut type code: ZFT



View X-X

Unit: mm

Ball Screw Specifications				
Shaft dia. × Lead / Direction of turn		45 × 10 / Right	50 × 10 / Right	
Preload / Ball recirculation		Z-preload / Return tube		
Ball dia. / Ball circle dia.		6.350 / 40	6.350 / 51	
Root dia.		39.4	44.4	
Effective turns of balls		2.5 × 1		2.5 × 2
Accuracy grade / Preload		C5 / Z		
Basic load rating (N)	Dynamic C_a	29 900	31 800	57 700
	Static C_{0a}	77 300	87 400	175 000
Axial play		0		
Preload (N)		2 260	2 450	4 020
Dynamic friction torque (N·cm)		69	78	138
Internal spatial volume of nut (cm^3)		34	37	59

Recommended Support Unit	
Screw shaft dia. 45	WBK35DFD-31 (round)
Screw shaft dia. 50	WBK40DFD-31 (round)

Unit: mm

Part number	Stroke max.	Screw shaft dia.	Lead	Nut dimensions										Screw shaft dimensions							Lead accuracy			Run-out			Mass	Permissible rotational speed
				Outside dia.	Flange			Overall length	Bolt hole				Oil hole	Threaded length	Shaft end, right			Shaft end, left		Overall length	Target value	Error	Variation	Shaft straightness	Nut O.D. eccentricity	Flange perpendicularity		
	L_t-L_n	d_1	l	D	A	G	B	L_n	W	X	Y	Z	Q	L_t	d_2	L_1	L_2	d_3	L_3	L_0	T	e_p	υ_U	I	J	K	(kg)	N (min^{-1})
W4510SS-1Z-C5Z10	897	45	10	88	132	50	18	103	110	11	17.5	11	Rc1/8	1 000	45.3	60	300	39.4	100	1 400	-0.024	0.040	0.027	0.080	0.025	0.015	19.7	1 550
W4516SS-1Z-C5Z10	1 497													1 600			400		150	2 150	-0.038	0.054	0.035	0.130			28.1	
W4525SS-1Z-C5Z10	2 397													2 500			450		150	3 100	-0.060	0.077	0.046	0.170			38.8	
W5010SS-1Z-C5Z10	897	50	10	93	135	51	18	103	113	11	17.5	11	Rc1/8	1 000	50.3	60	300	44.4	100	1 400	-0.024	0.040	0.027	0.080	0.025	0.015	23.8	1 400
W5015SS-1Z-C5Z10	1 397													1 500			400		150	2 050	-0.036	0.054	0.035	0.130			32.9	
W5020SS-1Z-C5Z10	1 897													2 000			400		150	2 550	-0.048	0.065	0.040	0.170			39.8	
W5026SS-1Z-C5Z10	2 497													2 600			450		150	3 200	-0.062	0.093	0.054	0.220			48.9	
W5010SS-2Z-C5Z10	867	50	10	93	135	51	18	163	113	11	17.5	11	Rc1/8	1 000	50.3	60	300	44.4	100	1 400	-0.024	0.040	0.027	0.080	0.025	0.015	25.5	1 400
W5015SS-2Z-C5Z10	1 337													1 500			400		150	2 050	-0.036	0.054	0.035	0.130			34.6	
W5020SS-2Z-C5Z10	1 837													2 000			400		150	2 550	-0.048	0.065	0.040	0.170			41.5	
W5026SS-2Z-C5Z10	2 437													2 600			450		150	3 200	-0.062	0.093	0.054	0.220			50.7	

Note 1: Only rust preventive agent is applied at time of delivery. Please apply lubricant (oil or grease) before use.
Amount for replenishing should be about 50% of nut internal space capacity.
Note 2: Permissible maximum rotational speed is determined by critical speed or permissible rotational speed shown in table.